

HILLS RESIDENTIAL

FIVEWAYS FRUIT FARM SITE, STANWAY, COLCHESTER, ESSEX

TRANSPORT ASSESSMENT
Volume 2: Appendices

REPORT REF. F960-01
PROJECT NO. F960
JUNE 2009

FIVEWAYS FRUIT FARM SITE, STANWAY, COLCHESTER, ESSEX

**TRANSPORT ASSESSMENT
Volume 2: Appendices**

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APPENDICES

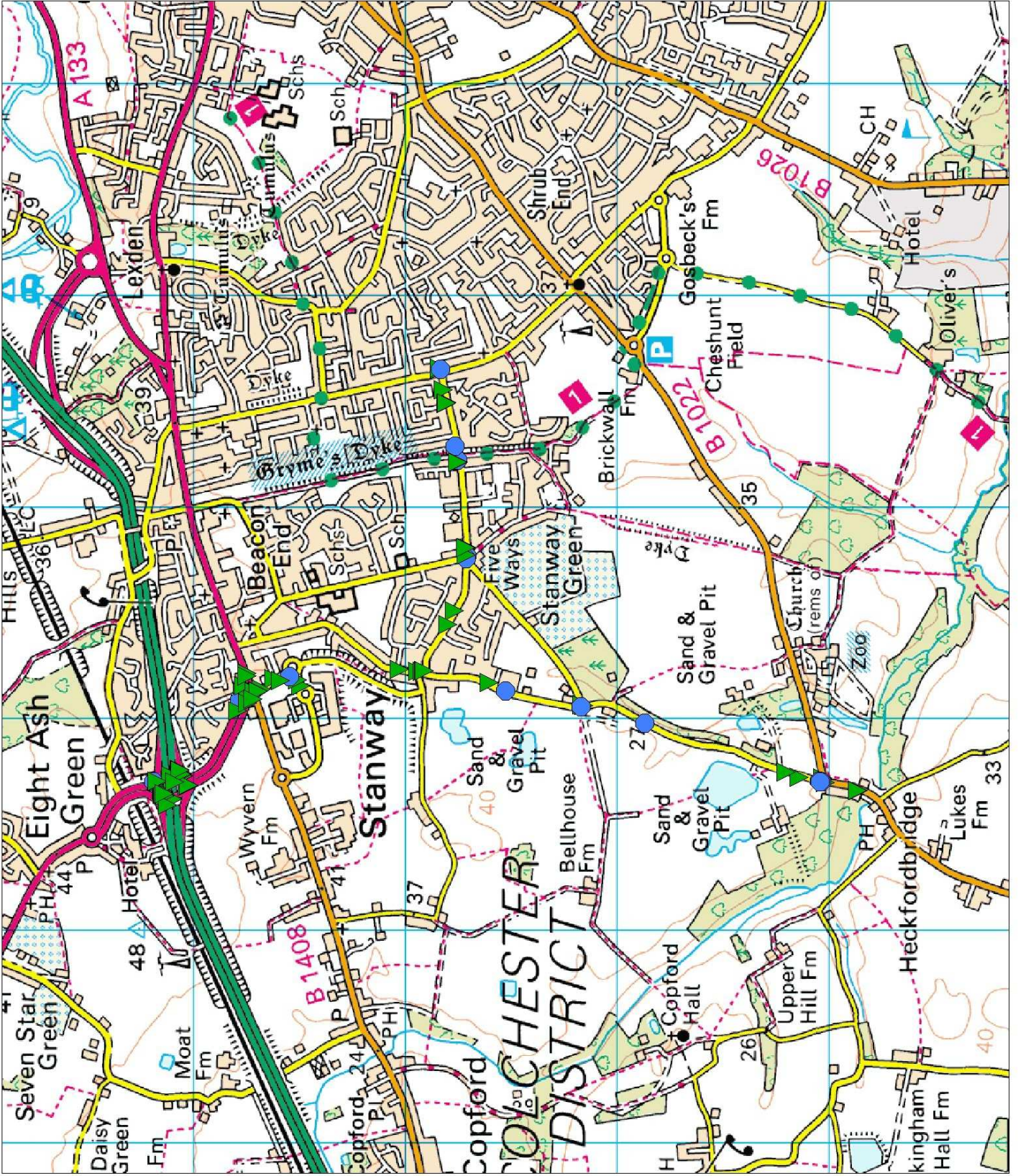
- A. Accident Data**
- B. Outline Residential Travel Plan**
- C. Census data**
- D. 2009 Traffic Survey Results**
- E. Results of PICADY capacity assessment: Blackberry Road/Dyers Road junction**
- F. Results of PICADY capacity assessment: Blackberry Road/Winstree Road/Peartree Road/Heath Road junction**
- G. Results of PICADY capacity assessment: proposed Dyers Road/Heath Road (realigned)/northern site access junction**
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- O. Results of ARCADY capacity assessment: Stanway Western Bypass/Stane Park/Danny Watts site roundabout**
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DOCUMENT CONTROL SHEET

REV	ISSUE PURPOSE	AUTHOR	CHECKED	REVIEWED	APPROVED	DATE
	1 st Draft for client review	ML/RMA	SAF	SAF	ML	23/06/09
	2 nd Draft with client comments	ML/RMA	SAF	SAF	ML	24/06/09
	Final with further client comments	ML/RMA	SAF	SAF	ML	25/06/09

Appendix A

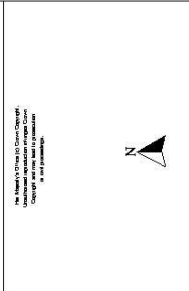
Accident Data



Colour coding by SEVERITY

★ Fatal	(0)
● Serious	(14)
▲ Slight	(77)

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Mouchel
 Essex County Council

DRAWING TITLE
Stanway, Colchester

SCALE	1 : 17070
DATE	14/05/2009
DRAWING No.	
DRAWN BY	

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

E01890404 12/04/2004 Time 1245 Vehicles 2 Casualties 1 Slight
 E:94,720 N: 122,140 First Road: U Road Type Dual carriageway
 Speed limit: 40 Junction Detail: T & Stag Jct 5 Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight: street lighting unknown Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Inattention		Possible
2nd: Failed to look		Possible
3rd: Lack of judgement of own path		C
4th: Surroundings - stationary or parked vehicle		C
5th:		
6th:		
Other Cause:	Precipitating Factor: Failed to Give Way	

VEH 2 (CAR) WAS TRAVELLING ALONG WARREN LANE TOWARDS TOLLGATE. THE TRAFFIC IN THE OPPOSITE LANE WAS STATIONARY. THE STATIONARY TRAFFIC HAD LEFT A GAP FOR VEH 1 (CAR) TO PULL OUT OF A JUNCTION. VEH 1 PULLED OUT OF THE JUNCTION TO GO IN THE SAME DIRECTION AS VEH 2. VEH 2 HAD TO TAKE EVASIVE ACTION AND SKIDDED AND WENT UP THE KERB TO AVOID HITTING VEH 1. VEH 1 WAS DISPLAYING L PLATES.

Occurred on WARREN LANE APPROX 100M FROM B1022 MALDON ROAD JCN

Vehicle Reference 1 Car Turning right
 Vehicle movement from E to N No tow / articulation Entering the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Did not impact Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver
 Non-stop, not hit Breath test Driver not contacted
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from S to N No tow / articulation On the main road
 On main carriageway Skidded
 Location at impact Cleared junction or waiting/parked First impact Hit vehicle:
 Hit object in road None Off road: Oth perm objects
 Did not leave carr Age of Driver 32 Male
 Hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 32 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

E02610404 24/04/2004 Time 955 Vehicles 2 Casualties 1 Slight
 E:94,650 N:125,150 First Road: A 12 Road Type 1
 Speed limit: 70 Junction Detail: Roundabout 5 A 604
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look		Very Likely
2nd: Lack of judgement of own path		Very Likely
3rd: Behaviour - in a hurry		C
4th: Following too close		C
5th:		
6th:		
Other Cause:	Precipitating Factor: Failed to avoid Vehicle or Object in carriageway	

VEH 2 (CAR) APPROACHED THE ROUNDABOUT ON THE SLIP ROAD ON THE A12 NORTHBOUND J/W HALSTEAD ROAD AND YEOMANRY WAY A604. VEH 2 WAITED AT THE ROUNDABOUT TO TURN LEFT. VEH 1 (CAR) DID NOT STOP AND COLLIDED INTO THE REAR OF VEH 2.

Occurred on A12 NORTHBOUND ONSLIP ROAD ROUNDABOUT J/W HALSTEAD ROAD AND ESSEXYEOMANR

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from W to E No tow / articulation Entering the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Leaving roundabout First impact Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver Male
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from W to E No tow / articulation On the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Leaving roundabout First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 34 Female
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 34 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

E01910404 26/04/2004 Time 1505 Vehicles 2 Casualties 1 Slight
 E:95,060 N:123,160 First Road: U Road Type Single carriageway
 Speed limit: 60 Junction Detail: T & Stag Jct Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Looked but did not see		Possible
2nd: Inattention		Possible
3rd: Lack of judgement of own path		
4th:		
5th:		
6th:		
Other Cause:	Precipitating Factor: Failed to avoid Vehicle or Object in carriageway	

VEH 2 STATIONARY IN WARREN LANE WAITING TO TURN RIGHT INTO DYERS RD. VEH 1 TRAVELLING WARREN LANE TOWARDS TOLLGATE VEH 1 COLLIDED WITH REAR OF VEH 2.

Occurred on WARREN LANE AT IT J/W DYERS RD

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from N to S No tow / articulation On the main road
 On main carriageway Skidded
 Location at impact Jct Approach First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 55 Female
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Vehicle Reference 2 Car Waiting to turn right
 Vehicle movement from S to NE No tow / articulation On the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Cleared junction or waiting/parke First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 31 Female
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 31 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E02110404 28/04/2004 Time 1930 Vehicles 2 Casualties 1 Slight
 E:95,070 N: 124,780 First Road: A 1124 Road Type 1
 Speed limit: 30 Junction Detail: Roundabout 5 B 1408
 Crossing: Control None Facilities: Central reservation Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look		Possible
2nd: Lack of judgement of own path		Possible
3rd:		
4th:		
5th:		
6th:		
Other Cause:	Precipitating Factor: Failed to avoid Vehicle or Object in carriageway	

VEH 2 (CAR) WAS IN THE LEFT HAND LANE OF ESSEX YEOMANRY WAS STATIONARY AT THE ROUNDABOUT JUNCTION WITH LONDON ROAD. VEH 1 WAS TRAVELLING IN THE SAME DIRECTION BEHIND VEH 2 AND COLLIDED WITH THE REAR OF VEH 2, FAILING TO STOP.

Occurred on ON ROUNDABOUT AT JCN WITH A1124 AND B1408 LONDON ROAD

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from NW to SE No tow / articulation On the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Cleared junction or waiting/parke First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver
 Hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from NW to SE No tow / articulation On the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Cleared junction or waiting/parke First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 53 Female
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 53 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

E02100504 01/05/2004 Time 1138 Vehicles 2 Casualties 1 Slight
 E:95,210 N: 124,750 First Road: A 1124 Road Type Single carriageway
 Speed limit: 30 Junction Detail: Pri Drive 5 Unclassified
 Crossing: Control None Facilities: Zebra crossing Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Faiaure to judge other person's path or speed		Very Likely
2nd: Failed to look		Very Likely
3rd: Looked but did not see		Possible
4th: Inexperience of driving		Possible
5th:		
6th:		
Other Cause:	Precipitating Factor: Failed to avoid Vehicle or Object in carriageway	

VEH 2 (CAR) TRAVELLING OUTSIDE LANE OF LONDON ROAD IN DIRECTION OF A12. VEH 1 (MOPED) PULLED OUT OF A DRIVEWAY ONTO LONDON ROAD. TRAFFIC WAS STATIONARY IN THE INSIDE LANE BUT MOVING SLOWING IN OUTSIDE LANE. VEH 1 PULLED INTO THE OUTSIDE LANE AND WAS HIT IN THE SIDE BY VEH 2 CAUSING RIDER TO FALL OFF VEH 1.

Occurred on LONDON ROAD BY TOLLGATE RAB

Vehicle Reference 1 Motorcycle 50cc and under Turning right
 Vehicle movement from S to W No tow / articulation Entering the main road
 9 No skidding, jack-knifing or overturning
 Location at impact Cleared junction or waiting/parke First impact Offside Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 17 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 17 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Vehicle Reference 2 Car Overtaking stat vehicle O/S
 Vehicle movement from E to W No tow / articulation On the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Cleared junction or waiting/parke First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 22 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

E02660604 01/06/2004 Time 1849 Vehicles 2 Casualties 1 Slight
 E:95,230 N: 124,030 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: Other 5 Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Impairment - drugs		Very Likely
2nd:		
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor: Failed to avoid Vehicle or Object in carriageway

VEH 2 (CAR) TRAVELLING ALONG VILLA ROAD IN DIRECTION OF LONDON ROAD SLOWS DUE TO A PARKED VEH ON THE O/S. WHILST IT WAS SLOWING VEH 1 (CAR) CAME OUT OF THE JCN OF HOLLY ROAD AND CONNECTED WITH THE FRONT O/S OF VEH 2.

Occurred on VILLA ROAD TWDS LONDON ROAD 5 YARDS FROM J/W HOLLY ROAD

Vehicle Reference 1 Car Turning left
 Vehicle movement from E to N No tow / articulation Leaving the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Leaving roundabout First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 24 Female
 Hit and run Breath test Failed to provide
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 24 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from S to N No tow / articulation On the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 40 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E02650604 01/06/2004 Time 1854 Vehicles 3 Casualties 2 Slight
 E:95,180 N:124,510 First Road: U Road Type 1
 Speed limit: 30 Junction Detail: Roundabout 5 Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Impairment - drugs		Very Likely
2nd:		
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor: Failed to avoid Vehicle or Object in carriageway

WHILST VEHS 2 AND 3 (CARS) WERE ALREADY COMMITTED ON R/ABOUT VEH 1 (CAR) ENTERED R/ABOUT AND COLLIDED WITH REAR OF VEH 2, WHICH IN TURN COLLIDED WITH REAR O/S OF VEH 3 CAUSING IT TO LEAVE THE ROAD.

Occurred on TOLLGATE ROAD TWDS LONDON ROAD, 5 YDS WEST OF TOLLGATE R/ABOUT.

Vehicle Reference 1 Car Going ahead right bend
 Vehicle movement from W to E No tow / articulation On the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Cleared junction or waiting/parke First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 24 Female
 Hit and run Breath test Failed to provide
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 24 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from W to E No tow / articulation On the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Cleared junction or waiting/parke First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 28 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 2 Vehicle: 2 Age: 28 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
Selection: Notes:
Selected using Build Query : Stanway, Colchester
Vehicle Reference 3 Car Going ahead other
Vehicle movement from W to E No tow / articulation On the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Cleared junction or waiting/parked First impact Back Hit vehicle:
Hit object in road Kerb Off road: None
Did not leave carr Age of Driver 56 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

E03010604 23/06/2004 Time 1540 Vehicles 2 Casualties 1 Slight
 E:95,060 N: 123,160 First Road: U Road Type Single carriageway
 Speed limit: 60 Junction Detail: T & Stag Jct 5 Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight: no street lighting Fine with high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Inattention		Very Likely
2nd: Failure to judge other person's path or speed		Very Likely
3rd: Looked but did not see		C
4th: Behaviour - in a hurry		C
5th:		
6th:		
Other Cause:	Precipitating Factor: Failed to avoid Vehicle or Object in carriageway	

VEH 2 (CAR) STATIONARY WAITING TO TURN RIGHT INTO DYERS ROAD. VEH 1 (LGV) TRAVELLING TOWARDS TOLLGATE COLLIDES WITH REAR OF VEH 2.

Occurred on WARREN LANE JCN DYERS ROAD

Vehicle Reference 1 Goods 3.5 tonnes mgw and under Going ahead other
 Vehicle movement from S to N No tow / articulation On the main road
 On main carriageway Skidded
 Location at impact Jct Approach First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 47 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Waiting to turn right
 Vehicle movement from S to NE No tow / articulation On the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 63 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 63 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

E03560704 15/07/2004 Time 1632 Vehicles 3 Casualties 5 Slight
 E:95,810 N: 123,710 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: Not within 20m of junction
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Faure to judge other person's path or speed		Possible
2nd: Following too close		C
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor: Failed to avoid Vehicle or Object in carriageway

ALL VEHS TRAVELLING TOWARDS STRAIGHT ROAD IN A LINE OF TRAFFIC. VEH 2 AND 3 BEGAN SLOWING AND VEH 2 WAS HIT FROM BEHIND BY VEH 1 AND SHUNTED INTO VEH 3.

Occurred on PEARTREE ROAD 50YARDS FROM J/W FIVEWAYS, TRAVELLING FROM BLACKBERRYROAD

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from E to W No tow / articulation On the main road
 On main carriageway Skidded
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 56 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection:

Notes:

Selected using Build Query :

Stanway, Colchester

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from E to W No tow / articulation On the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 31 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 31 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Casualty Reference: 2 Vehicle: 2 Age: 07 Male Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Back seat

Casualty Reference: 3 Vehicle: 2 Age: 26 Female Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Front seat

Casualty Reference: 4 Vehicle: 2 Age: 07 Male Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Back seat

Vehicle Reference 3 Car Going ahead but held up
 Vehicle movement from E to W No tow / articulation On the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 52 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 5 Vehicle: 3 Age: 52 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

E03650704 31/07/2004 Time 1700 Vehicles 2 Casualties 1 Slight
 E:94,740 N: 125,060 First Road: A 12 Road Type Dual carriageway
 Speed limit: 70 Junction Detail: T & Stag Jct 5 A 1124
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Looked but did not see		Possible
2nd: Failed to look		Possible
3rd: Following too close		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor: Failed to avoid Vehicle or Object in carriageway

VEH 1 EXITING A12 ON OFFSLIP STATIONARY AT J/W A1124 (J26) SOUTHBOUND. VEH 2 IN FRONT OF VEH 1. VEH 1 PULLS AWAY AND HITS REAR OF VEH 2.

Occurred on A12 OFFSLIP J/W A1124

Vehicle Reference 1 Car Turning left
 Vehicle movement from E to W No tow / articulation Leaving the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 22 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Turning left
 Vehicle movement from E to W No tow / articulation Leaving the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 61 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 61 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

E03830804 09/08/2004 Time 1930 Vehicles 2 Casualties 1 Slight
 E:94,730 N: 125,050 First Road: A 12 Road Type 1
 Speed limit: 60 Junction Detail: Roundabout 5 A 1124
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Daylight: street lighting unknown Raining without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Faure to judge other person's path or speed		Possible
2nd: Inattention		Possible
3rd:		
4th:		
5th:		
6th:		
Other Cause:	Precipitating Factor: Failed to avoid Vehicle or Object in carriageway	

VEH 2 STATIONARY ON SLIP RD STANWAY, J/W ESSEX YEOMANRY WAY WHEN IT WAS HIT FROM BEHIND BY VEH 1.

Occurred on A12 SLIP RD STANWAY EXIT J/W ESSEX YEOMANRY WAY

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from E to W No tow / articulation Leaving the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver Male
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from E to W No tow / articulation Leaving the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 55 Male
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 55 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E04520904 21/09/2004 Time 1406 Vehicles 2 Casualties 1 Slight
 E:94,700 N:125,170 First Road: A 1124 Road Type 1
 Speed limit: 60 Junction Detail: Roundabout Give way or controlled A 12
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Faure to judge other person's path or speed		Very Likely
2nd: Looked but did not see		Very Likely
3rd: Lack of judgement of own path		
4th:		
5th:		
6th:		
Other Cause:	Precipitating Factor: Failed to avoid Vehicle or Object in carriageway	

VEH 2 STATIONARY AT THE RBT WAITING TO GET ONTO THE SLIP RD OF A12 WHEN VEH 1 FAILED TO STOP IN TIME AND COLLIDED WITH THE REAR OF VEH 2.

Occurred on ESSEX YEOMANARY WAY J/W A12 ON SLIP ON A112

Vehicle Reference 1 Car Waiting to turn left
 Vehicle movement from N to S No tow / articulation On the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Cleared junction or waiting/parke First impact Offside Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 24 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Waiting to turn left
 Vehicle movement from N to S No tow / articulation On the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Cleared junction or waiting/parke First impact Offside Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 69 Female Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Front seat

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

E04981004 17/10/2004 Time 1435 Vehicles 1 Casualties 2 Serious
 E:94,700 N: 125,190 First Road: A 12 Road Type Single carriageway
 Speed limit: 60 Junction Detail: Not within 20m of junction
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Daylight: no street lighting Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Behaviour - careless/thoughtless/reckless		Very Likely
2nd: Excessive Speed		Very Likely
3rd: Aggressive driving		Possible
4th: Lack of judgement of own path		Possible
5th:		
6th:		

Other Cause: Precipitating Factor: Loss of Control of Vehicle

VEH 1 MOVED OUT INT LANE 3 TO OVERTAKE A VEH IN LANE 2 DURING THE MANOUVERE VEH 1 LEFT THE CARRAIGEWAY TO THE N/S AFTER LOSING CONTROL.

Occurred on A12 IPSWITCH TRACK DIRECTLY UNDER JUNCTION 26

Vehicle Reference 1 Car Overtaking nearside
 Vehicle movement from N to S No tow / articulation On the main road
 On main carriageway Skidded and overturned
 Location at impact Not at, or within 20M of Jct First impact Nearside Hit vehicle:
 Hit object in road None Off road: None
 Nearside Age of Driver 22 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 19 Male Passenger Severity: Serious
 Not a pupil Postcode Seatbelt
 Back seat

Casualty Reference: 2 Vehicle: 1 Age: 22 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Selected using Build Query : Notes: Stanway, Colchester

E05231004 30/10/2004 Time 1610 Vehicles 2 Casualties 1 Slight
 E:94,620 N: 125,100 First Road: A 12 Road Type 1
 Speed limit: 70 Junction Detail: Roundabout 5 A 1124
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Faivre to judge other person's path or speed		Possible
2nd: Lack of judgement of own path		Possible
3rd: Inattention		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor: Loss of Control of Vehicle

VEH 2 STATIONARY AT RBT INDICATING TO TURN RIGHT ONTO A12 TOWARDS CHELMSFORD.VEH 1 THEN COLLIDED WITH THE REAR OF VEH 2 SHUNTING IT FORWARD

Occurred on HALSTEAD RD J/W A12 RBT

Vehicle Reference 1 Car Starting
 Vehicle movement from N to E No tow / articulation On the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver Female
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from N to E No tow / articulation On the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 38 Male
 Not hit and run Breath test Not applicable
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 38 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

E05641104 22/11/2004 Time 1129 Vehicles 1 Casualties 1 Serious
 E:95,770 N: 123,710 First Road: U Road Type 1
 Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified
 Crossing: Control None Facilities: Central reservation Road surface Dry
 Daylight: no street lighting Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Faiaure to judge other person's path or speed		Very Likely
2nd:		
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor: Failed to avoid Pedestrian (Pedestrian not to blame)

VEH 1 TRAVELLING WEST ALONG AGARTREE RD TURNS RIGHT (NORTH)INTO FIVE WAYS PETROL STATION AND HITS CAS WHO WAS CROSSING THE ENTRANCE TO THE PETROL STATION.

Occurred on AGARTREE RD J/W FIVEWAYS PETROL STATION

Vehicle Reference 1 Car Turning right
 Vehicle movement from E to W No tow / articulation On the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Leaving roundabout First impact Offside Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 59 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 83 Female Pedestrian Severity: Serious
 Not a pupil Postcode Seatbelt
 In cent carr Direction Unknown
 Driver's offside

Accidents between dates **01/04/2004 and 31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E05831204 01/12/2004 Time 2120 Vehicles 3 Casualties 1 Slight
 E:95,120 N: 24,770 First Road: A 1124 Road Type 1
 Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Darkness: street lights present and lit Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Impairment - illness		Very Likely
2nd: Distraction - stress/emotional state of mind		Very Likely
3rd: Behaviour - careless/thoughtless/reckless		Very Likely
4th: Aggressive driving		Very Likely
5th:		
6th:		
Other Cause:	Precipitating Factor: Failed to avoid Vehicle or Object in carriageway	

VEH 1 CONTAINING A SUSPECT (ARMED) FOR RAPE HAD BEEN STOPPED BY VEH 2 AND VEH 3. DRIVER OF VEH 1 THEN REVERSED INTO VEH 2 AND THEN DROVE FORWARD INTO VEH 3.

Occurred on TOLLGATE RBT LONDON RD J/W TOLLGATE RD

Vehicle Reference 1 Goods 3.5 tonnes mgw and under Reversing
 Vehicle movement from S to N No tow / articulation On the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Cleared junction or waiting/parke First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 35 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Stopping
 Vehicle movement from S to N No tow / articulation On the main road
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Cleared junction or waiting/parke First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 32 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: Male Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Front seat

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
Selection: Notes:
Selected using Build Query : Stanway, Colchester
Vehicle Reference 3 Car Stopping
Vehicle movement from S to N No tow / articulation On the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Cleared junction or waiting/parke First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 37 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

E00370205 01/02/2005 Time 0822 Vehicles 2 Casualties 2 Serious
 E:95,758 N:123,714 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
 Crossing: Control None Facilities: Zebra crossing Road surface Wet/Damp
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Very Likely
2nd:		
3rd:		
4th:		
5th:		
6th:		
Other Cause: 1	Precipitating Factor:	

VEH 1 THE PEDAL CYCLIST ENTERED THE ZEBRA PEDESTRIAL CROSSING FROM THE STH SIDE INTO PATH OF VEH 2 WHICH WAS TRAVELLING IN A WESTERLY DIRECTION

Occurred on BLACKBERRY ROAD J/W DYERS ROAD

Vehicle Reference 1 Pedal Cycle Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Offside Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 12 Male
 Not hit and run Breath test Not applicable
 Driver Postcode: VRM:
 Casualty Reference: 1 Vehicle: 1 Age: 12 Male Driver/rider Severity: Serious
 Not a pupil Postcode Seatbelt

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Front Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 24 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 2 Vehicle: 2 Age: 24 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E00430205 02/02/2005 Time 1300 Vehicles 3 Casualties 1 Slight
 E:94,748 N:125,066 First Road: A 12 Road Type 1
 Speed limit: 40 Junction Detail: Roundabout Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to judge other persons path or speed	Vehicle 1	Very Likely
2nd:		
3rd:		
4th:		
5th:		
6th:		
Other Cause: 1	Precipitating Factor:	

VEHS INVOLVED WERE ALL ON THE A12 OFF SLIP AT SPRING LANE WAITING TO ENTER ON TO THE RBT, VEH 2 STOPPED BEHIND VEH 3 AT WHICH POINT VEH 1 COLLIDED WITH THE REAR OF VEH 2 PUSHING VEH 2 INTO THE REAR OF VEH 3.

Occurred on A12 OFF SLIP J/W SPRING LANE RBT

Vehicle Reference 1 Car Stopping
 Vehicle movement from NW to SE No tow / articulation
 Tram/Light rail track No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Nearside Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 30 Female
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from NW to SE No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Back Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 41 Male
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 41 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection:

Notes:

Selected using Build Query :

Stanway, Colchester

Vehicle Reference 3 Car

Stopping

Vehicle movement from NW to SE

No tow / articulation

On main carriageway

No skidding, jack-knifing or overturning

Location at impact Jct Approach

First impact Back

Hit vehicle: 2

Hit object in road None

Off road: None

Did not leave carr

Age of Driver

Not traced

Not hit and run

Breath test

Driver not contacted

Driver Postcode:

VRM:

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E00510205 08/02/2005 Time 1721 Vehicles 3 Casualties 1 Slight
 E:94,745 N: 122,203 First Road: U Road Type Single carriageway
 Speed limit: 60 Junction Detail: Not within 20m of junction
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Darkness: no street lighting Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Loss of control	Vehicle 1	Very Likely
2nd:	Careless/Reckless/In a hurry	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

Other Cause: 1 Precipitating Factor:

VEH 1 TRAVELLING SOUTH ON WARREN LANE LOSES CONTROL WHEN APPROACHING STATIONARY TRAFFIC, RIDER COMES OFF, VEH 1 SLIDES INTO NORTH CARRIAGEWAY AND COLLIDES WITH VEH 2, RIDER OF VEH 1 SLIDES ALONG AND HITS REAR OF VEH 3 WHICH WAS STATIONARY.

Occurred on WARREN LANE 150 METRES NORTH OF B1022 MALDON ROAD

Vehicle Reference 1 Motor Cycle over 125 cc and up to 500cc Going ahead other
 Vehicle movement from N to SW No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 22 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 22 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from SW to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 51 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
Selection: Notes:
Selected using Build Query : Stanway, Colchester
Vehicle Reference 3 Car Going ahead other
Vehicle movement from N to SW No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 52 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E00570205 08/02/2005 Time 1435 Vehicles 2 Casualties 1 Slight
 E:94,728 N:125,050 First Road: A 12 Road Type 1
 Speed limit: 30 Junction Detail: Roundabout Give way or controlled A 1124
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Junction overshoot	Vehicle 1	Possible
2nd:	Loss of control	Vehicle 1	Possible
3rd:	Careless/Reckless/In a hurry	Vehicle 1	
4th:			
5th:			
6th:			

Other Cause: 1 Precipitating Factor:

VEH 2 STATIONARY ON THE A12 SLIP ROAD WAITING TO TURN RIGHT DIRECTION, ESSEX YEOMANRY WAY WHEN VEH 1 TRAVELLING IN THE SAME DIRECTION COLLIDED INTO THE REAR OF VEH 2, DETAILS EXCHANGED AT THE SCENE.

Occurred on A12 J/W A1124 ESSEX YEOMANRY WAY

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway Skidded
 Location at impact Entering roundabout First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver Female
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Vehicle Reference 2 Car Stopping
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Back Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 35 Female
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 35 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

E00960305 15/03/2005 Time 1855 Vehicles 2 Casualties 1 Slight
 E:95,775 N: 123,715 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: Crossroads Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Darkness: street lights present and lit Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Very Likely
2nd: Careless/Reckless/In a hurry	Vehicle 1	Very Likely
3rd: Following too close	Vehicle 1	Possible
4th: Failed to judge other persons path or speed	Vehicle 1	Possible
5th:		
6th:		

Other Cause: 1 Precipitating Factor:

VEH 2 WAS STATIONARY ON WINSTREE ROAD J/W PEARTREE ROAD, WAITIGN TO TURN LEFT. VEH 1 COLLIDED INTO REAR OF VEH 2.

Occurred on WINSTREE ROAD AT J/W PEARTREE ROAD

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from N to S No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver Female
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Vehicle Reference 2 Car Waiting to turn left
 Vehicle movement from N to S No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Back Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 32 Female
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 32 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E01260305 24/03/2005 Time 1610 Vehicles 2 Casualties 3 Slight
 E:94,695 N: 122,018 First Road: B 1022 Road Type Single carriageway
 Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Junction restart	Vehicle 1	Very Likely
2nd:	Failed to look properly	Vehicle 1	Possible
3rd:			
4th:			
5th:			
6th:			

Other Cause: 1 Precipitating Factor:

DRIVER OF VEH 12 TRAVELLING FROM BIRCH TOWARDS COLCHESTER, BEING FOLLOWED BY VEH 1 AS THE DRIVER DROVE INTO WARREN LANE FROM MALDON ROAD HE BRAKED AT A GIVE WAY JUNCTION ALLOWING TRAFFIC TO ENTER WARREN LANE COMING FROM COLCHESTER. DRIVER OF VEH 1 FAILED TO STOP AND COLLIDED WITH THE REAR OF VEH 2

Occurred on B1022 MALDON ROAD J/W WARREN LANE, COLCHESTER

Vehicle Reference 1 Car Starting
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 63 Female
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection:

Notes:

Selected using Build Query :

Stanway, Colchester

Vehicle Reference 2 Car

Stopping

Vehicle movement from S to N

No tow / articulation

On main carriageway

No skidding, jack-knifing or overturning

Location at impact Jct Approach

First impact Back

Hit vehicle:

Hit object in road None

Off road: None

Did not leave carr

Age of Driver 64 Male

Not hit and run

Breath test Not requested

Driver Postcode:

VRM:

Casualty Reference: 1 Vehicle: 2 Age: 63 Female Passenger Severity: Slight
Not a pupil Postcode Seatbelt
Back seat

Casualty Reference: 2 Vehicle: 2 Age: 66 Male Passenger Severity: Slight
Not a pupil Postcode Seatbelt
Front seat

Casualty Reference: 3 Vehicle: 2 Age: 67 Female Passenger Severity: Slight
Not a pupil Postcode Seatbelt
Back seat

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

E01270305 26/03/2005 Time 1510 Vehicles 2 Casualties 1 Slight
 E:95,447 N: 123,802 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: Not within 20m of junction
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

Other Cause: 1 Precipitating Factor:

VEH 1 DROVE HIS VEH OUT OF HIS DRIVEWAY ON BLACKBERRY ROAD 50 METERS FROM ROSE AVE TO REVERSE BACK INTO HIS DRIVE. WHEN VEH 2 WAS DRIVING ALONG BLACKBERRY ROAD. VEH 2 COLLIDED INTO VEH 1 CAUSING DAMAGE AND INJURY TO DRIVER OF VEH 1.

Occurred on BLACKBERRY ROAD 50 METERS EAST OF ROSE AVE

Vehicle Reference 1 Car Reversing
 Vehicle movement from N to S No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 68 Male
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 68 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 19 Male
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E04200405 19/04/2005 Time 1320 Vehicles 2 Casualties 1 Slight
 E:94,679 N:125,032 First Road: A 1124 Road Type Dual carriageway
 Speed limit: 60 Junction Detail: Roundabout Give way or controlled A 12
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to judge other persons path or speed	Vehicle 1	Possible
2nd:			
3rd:			
4th:			
5th:			
6th:			
Other Cause:	Precipitating Factor:		

VEH 2 WAS DRIVING OFF THE A12 ONTO DUEL CARRIAGEWAY WHILST PASSING VEH 1 VEH 1 CHANGED LANE COLLIDING WITH VEH 2 BOTH DRIVERS STOPPED & EXCHANGED DETAILS

Occurred on ESSEX YEOMANRY WAY, STANWAY J/W A12

Vehicle Reference 1 Car Changing lane to right
 Vehicle movement from S to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Leaving roundabout First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Straight ahead at Jun Age of Driver Male
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Leaving roundabout First impact Nearside Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 45 Female
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 45 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

E01570405 27/04/2005 Time 0708 Vehicles 2 Casualties 1 Slight
 E:94,719 N: 122,029 First Road: B 1022 Road Type Single carriageway
 Speed limit: 30 Junction Detail: Multi Jct Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Inexperienced or learner driver/rider	Vehicle 1	Possible
2nd: Failed to look properly	Vehicle 1	Possible
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 1 TRAVELLING SOUTH WEST ALONG MALDON ROAD TURNED RIGHT INTO WARREN LANE WITHOUT NOTICING A CYCLIST TRAVELLING NORTH EAST ALONG B1022 MALDON ROAD. THE CYCLIST COULD NOT AVOID THE CAR AND COLLIDED WITH THE REAR NEAR SIDE.

Occurred on B1022 MALDON ROAD AT J/W WARREN LANE

Vehicle Reference 1 Car Turning right
 Vehicle movement from E to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Offside Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 19 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Pedal Cycle Going ahead other
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Front Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 35 Male
 Not hit and run Breath test Not applicable
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 35 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E02470605 11/06/2005 Time 0753 Vehicles 2 Casualties 4 Slight
 E:94,638 N: 125,139 First Road: A 12 Road Type 1
 Speed limit: 60 Junction Detail: Roundabout Give way or controlled A 1124
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Loss of control	Vehicle 1	Possible
2nd: Careless/Reckless/In a hurry	Vehicle 1	Possible
3rd: Careless/Reckless/In a hurry	Vehicle 1	
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 2 EXITED A12 UP SLIP & STOPPED AT ROUNDABOUT GIVING WAY TO TRAFFIC .VEH 1 THROUGH DRIVER ERROR FAILED TO STOP COLLIDING WITH REAR OF VEH 2 SHUNTING IT ONTO ROUNDABOUT

Occurred on A1124 ESSEX YEOMANRY WAY J/W A12 JUNCTION 26,COLCHESTER

Vehicle Reference 1 Goods 3.5 tonnes mgw and under Stopping
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 40 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection:

Notes:

Selected using Build Query :

Stanway, Colchester

Vehicle Reference 2 Car

Going ahead but held up

Vehicle movement from S to N

No tow / articulation

On main carriageway

No skidding, jack-knifing or overturning

Location at impact Entering roundabout

First impact Back

Hit vehicle: 1

Hit object in road None

Off road: None

Did not leave carr

Age of Driver 65 Male

Not hit and run

Breath test Negative

Driver Postcode:

VRM:

Casualty Reference: 1	Vehicle: 2	Age: 65	Male	Driver/rider	Severity: Slight
Not a pupil		Postcode		Seatbelt	
Casualty Reference: 2	Vehicle: 2	Age: 77	Male	Passenger	Severity: Slight
Not a pupil		Postcode		Seatbelt	
Front seat					
Casualty Reference: 3	Vehicle: 2	Age: 60	Female	Passenger	Severity: Slight
Not a pupil		Postcode		Seatbelt	
Back seat					
Casualty Reference: 4	Vehicle: 2	Age: 72	Female	Passenger	Severity: Slight
Not a pupil		Postcode		Seatbelt	
Back seat					

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E03220705 14/07/2005 Time 1140 Vehicles 2 Casualties 1 Serious
 E:95,083 N: 124,785 First Road: A 1124 Road Type 1
 Speed limit: 30 Junction Detail: Roundabout Give way or controlled A 1124
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Junction restart	Vehicle 1	Very Likely
2nd:	Failed to look properly	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

Other Cause: Precipitating Factor:

VEH 2 TRAVELLING FROM LONDON ROAD HAVING TRAVELLED FROM DIRECTION OF COPFORD. WHILST CYCLING AROUND TOLGATE ROUNDABOUT VEH 1, WHICH WAS TRAVELLING ALONG ESSEX YEOMANRY WAY FROM DIRECTION OF A12 FAILED TO SEE CYCLIST AND COLLIDED WITH VEH 2 ON ROUNDABOUT.

Occurred on A1124 ESSEX YEOMANRY WAY AT J/W A1124 TOLLGATE ROUNDABOUT

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from NW to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 41 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Pedal Cycle Going ahead other
 Vehicle movement from SW to NE No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or r First impact Nearside Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 49 Male
 Not hit and run Breath test Not applicable
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 49 Male Driver/rider Severity: Serious
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E03060705 20/07/2005 Time 1400 Vehicles 1 Casualties 1 Slight
 E:94,760 N: 125,070 First Road: A 12 Road Type Slip road
 Speed limit: 70 Junction Detail: Roundabout Give way or controlled A 1124
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Tyres illegal, defective or under inflated	Vehicle 1	Very Likely
2nd:	Other	Vehicle 0	Very Likely
3rd:			
4th:			
5th:			
6th:			

Other Cause: SUDDEN Precipitating Factor:
 TYRE
 DEFLATION
 (BLOWOUT)

VEH1 ONLY VEH INVOLVED, TRAVELLING A12 LONDON BOUND, LEAVES A12 ONTO OFFSLIP TO A1124 R/ABOUT. SUFFERS F/N/S TYRE DEFLATION AND LEAVES C/WAY TO O/S GOING DOWN EMBANKMENT AND COMES TO REST IN LANE 1 OFF MAIN A12 C/WAY.

Occurred on A12 OFFSIP LONDON BOUND TO A1124

Vehicle Reference 1 Goods over 3.5 tonnes and under 7.5 tonn Going ahead other
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Offside Hit vehicle:
 Hit object in road None Off road: Near / off crash barrier
 O/S Age of Driver 54 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 35 Male Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Not car passenger

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E03670805 30/08/2005 Time 1400 Vehicles 2 Casualties 1 Slight
 E:94,701 N: 125,174 First Road: A 12 Road Type Slip road
 Speed limit: 70 Junction Detail: Roundabout Give way or controlled A 1124
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Careless/Reckless/In a hurry	Vehicle 1	Possible
2nd:		
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 2 WAS TRAVELLING ALONG THE A12 SOUTHBOUND ON THE SLIP RD J/W ESSEX YEOMANRY WAY A1124 COLCHESTER WHEN DRIVER OF VEH 1 COLLIDED INTO REAR OF VEH 2

Occurred on A12 SLIP RD J/W ESSEX YEOMANRY WAY (A1124)

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from N to S No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver Not traced
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from N to S No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Back Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 20 Female
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 20 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E03730805 31/08/2005 Time 2015 Vehicles 2 Casualties 2 Slight
 E:95,124 N: 124,735 First Road: A 1124 Road Type 1
 Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified
 Crossing: Control None Facilities: Zebra crossing Road surface Dry
 Darkness: street lights present and lit Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to judge other persons path or speed	Vehicle 1	Possible
2nd: Inexperienced or learner driver/rider	Vehicle 1	Possible
3rd:		
4th:		
5th:		
6th:		
Other Cause:	Precipitating Factor:	

VEH 2 ON ROUNDABOUT PASSING LONDON ROAD EXIT WHEN VEH 1 ENTERED ROUNDABOUT FROM LONDON ROAD CAUSING VEH 2 TO HIT REAR OFFSIDE OF VEH 1.VEH 1 SPUN COMING TO REST ON (LONDON ROAD B1408)

Occurred on A1124 LONDON ROAD J/W TOLLGATE ROAD,COLCHESTER

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from W to SE No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Back Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 17 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from E to SW No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle: 1
 Hit object in road None Off road: None
 Nearside Age of Driver 33 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 08 Female Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Back seat

Casualty Reference: 2 Vehicle: 2 Age: 33 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E04120905 17/09/2005 Time 1150 Vehicles 2 Casualties 1 Slight
 E:94,682 N: 125,026 First Road: A 12 Road Type 1
 Speed limit: 40 Junction Detail: Roundabout Give way or controlled A 1124
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Very Likely
2nd: Careless/Reckless/In a hurry	Vehicle 1	Possible
3rd: Failed to look properly	Vehicle 1	Possible
4th: Careless/Reckless/In a hurry	Vehicle 1	Possible
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 2 WAS TRAVELLING ALONG ESSEX YEOMANRY WAY JUNCTION WITH A12 ROUNDABOUT.VEH 2 WAS STATIONARY WAITING FOR TRAFFIC WHICH WAS ON THE ROUNDABOUT.VEH 1 THOUGHT THAT VEH 2 HAD GONE.VEH 1 MOVED OFF COLLIDING WITH VEH 2

Occurred on A1124 ESSEX YEOMANRY WAY J/W A12 ROUNDABOUT,COLCHESTER

Vehicle Reference 1 Car Starting
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 40 Female
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 37 Female
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 37 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E04281005 05/10/2005 Time 1140 Vehicles 2 Casualties 1 Slight
 E: 94,700 N: 125,099 First Road: A 12 Road Type Dual carriageway
 Speed limit: 70 Junction Detail: Not within 20m of junction Not applicable
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight: no street lighting Fine without high winds
 Special Conditions at Site None Carriageway Hazards: Other object in carriageway
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Animal or object in carriageway	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			
Other Cause:	Precipitating Factor:		

UNKNOWN VEH 1 DROPPED LOAD OF TIMBER IN CARRIAGEWAY.VEH 2 SKIDDED ON TIMBER & CRASHED INTO NEARSIDE BANK.BOTH VEH's TRAVELLING LONDON BOUND

Occurred on A12 LONDON TRACK UNDER A1124 ROAD BRIDGE,COLCHESTER

Vehicle Reference 1 Goods over 3.5 tonnes and under 7.5 tonn Going ahead other
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Did not impact Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver Unknown
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from E to W No tow / articulation
 On main carriageway Skidded
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
 Hit object in road Other object Off road: None
 Nearside Age of Driver 29 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 29 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E04551005 20/10/2005 Time 1155 Vehicles 2 Casualties 1 Slight
 E:94,658 N: 125,153 First Road: A 1124 Road Type 1
 Speed limit: 60 Junction Detail: Roundabout Give way or controlled A 12
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Very Likely
2nd:		
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 1 ENTERING SPRING LANE R/A/B FROM A12 SLIP RD DRIVER FAILS TO OBSERVE VEH 2 CYCLIST APPROACHING JUNC & ENTERS R/A/B ACROSS HIS PATH VEH'S COLLIDE

Occurred on EXIT SLIP RD A12 J/W SPRING LANE R/A/B

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Offside Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 45 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Pedal Cycle Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 67 Male
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 67 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E05821105 08/11/2005 Time 1545 Vehicles 2 Casualties 1 Slight
 E:95,036 N: 124,793 First Road: A 1124 Road Type Single carriageway
 Speed limit: 30 Junction Detail: Not within 20m of junction Not applicable
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Possible
2nd:	Following too close	Vehicle 1	Possible
3rd:	Sudden braking	Vehicle 2	
4th:			
5th:			
6th:			
Other Cause:	Precipitating Factor:		

VHE 2 WAS STATIONARY AT THE ABOVE JUNC WAITING TO TRAVEL ROUND THE R/A/B TO GO DOWN THE A1124 LONDON RD VEH 1 COLLIDED WITH THE REAR OF VEH 2 CAUSING DAMAGE

Occurred on ESSEX YOMANARY WAY COLCHESTER 50 M WEST FROM JUNC ON R/A/B LEADING TO A1124 I

Vehicle Reference 1 Car Stopping
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver Male
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 44 Female
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 44 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E05131105 18/11/2005 Time 0956 Vehicles 2 Casualties 2 Slight
 E:95,061 N: 23,169 First Road: U Road Type Single carriageway
 Speed limit: 60 Junction Detail: T & Stag Jet Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight: no street lighting Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Poor turn or manoeuvre	Vehicle 1	Very Likely
2nd:		
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 2 TRAVELLING ALONG WARREN LANE FROM DIRECTION OF COLCHESTER.VEH 1 TRAVELLING ALONG WARREN LANE FROM DIRECTION OF TIPTREE.AS VEH 2 REACHES JUNCTION WITH DYERS ROAD,VEH 1 TURNS RIGHT INTO DYERS ROAD INTO PATH OF VEH 2 & COLLIDES HEAD ON WITH VEH 2

Occurred on WARREN LANE J/W DYERS ROAD,COLCHESTER

Vehicle Reference 1 Car Turning right
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Leaving main road First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 35 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 35 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 19 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 2 Vehicle: 2 Age: 19 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

E05091105 19/11/2005 Time 1500 Vehicles 2 Casualties 2 Slight
 E:94,634 N: 125,136 First Road: A 1124 Road Type 1
 Speed limit: 60 Junction Detail: Roundabout Give way or controlled A 12
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Very Likely
2nd: Inexperienced or learner driver/rider	Vehicle 1	Very Likely
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

V2 & V1 ON OFF SLIP FROM A12 TO JUNC 26 (SOUTH BOUND) V2 PULLED ONTO R/A/B BRAKED SUDDENLY FOR VEH ALREADY ON R/A/B AT SPEED FROM V2'S RIGHT V1 THOUGHT V2 HAD PULLED AWAY & FOLLOWING OUT ONTO R/A/B & RAN INTO REAR OF V2

Occurred on ESSEX YEOMANRY WAY J/W A12 OFF SLIP SOUTH BOUND JUNC 26 (A1124)

Vehicle Reference 1 Car Starting
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 18 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Stopping
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Back Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 26 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 26 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Casualty Reference: 2 Vehicle: 2 Age: 18 Female Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Front seat

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Selected using Build Query : Notes: Stanway, Colchester

E05691205 22/12/2005 Time 0700 Vehicles 2 Casualties 1 Slight
 E:95,511 N: 123,771 First Road: U Road Type 2
 Speed limit: 30 Junction Detail: Pri Drive Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Darkness: street lights present and lit Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Slippery road (due to weather)	Vehicle 2	Possible
2nd: Poor turn or manoeuvre	Vehicle 1	Very Likely
3rd: Failed to look properly	Vehicle 1	Possible
4th: Stationary or parked vehicle	Vehicle 1	Possible
5th: Failed to look properly	Vehicle 1	Very Likely
6th:		

Other Cause: Precipitating Factor:

VEH 2 TRAVELLING TWDS DUGARD AVE FROM DIRECTION OF VILLA RD. VEH 1 HAD BEEN VISITING A LOCAL BAKERY AND PARKED AT THE SIDE OF POST OFFICE. VEH 1 THEN PULLED OUT OF PARKING AREA ONTO BLACKBERRY ROAD FAILING TO SEE VEH 2. VEH 2 COLLIDED WITH O/S OF VEH 1.

Occurred on BLACKBERRY ROAD APP 250 METRES WEST OF WINSTREE ROAD

Vehicle Reference 1 Goods 3.5 tonnes mgw and under Starting
 Vehicle movement from N to S No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or r First impact Offside Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 23 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Motor Cycle over 50 cc and up to 125cc Going ahead other
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 18 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 18 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

E00190106 25/01/2006 Time 1940 Vehicles 1 Casualties 1 Slight
 E:94,658 N: 121,862 First Road: B 1022 Road Type Single carriageway
 Speed limit: 30 Junction Detail: Not within 20m of junction Not applicable
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Darkness: no street lighting Other
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Animal or object in carriageway	Vehicle 1	Possible
2nd:	Swerved	Vehicle 1	Very Likely
3rd:	Nervous/Uncertain/Panic	Vehicle 1	
4th:			
5th:			
6th:			
Other Cause:		Precipitating Factor:	

VEH 1 WAS TRAVELLING ALONG THE MALDON ROAD IN THE DIRECTION OF COLCHESTER.THE DRIVER CLIPPED THE KERB NEAR HILL ROYAL BUNGALOW.THE VEH THEN STRUCK THE BUNGALOW WALL ROLLED ONTO ITS ROOF THEN CAME TO A HALT BLOCKING THE ROAD

Occurred on B1022 HECKFORD BRIDGE ,MALDON ROAD

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from SW to NE No tow / articulation
 On main carriageway Overturned
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
 Hit object in road None Off road: Oth perm objects
 Did not leave carr Age of Driver 33 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 33 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E00280106 31/01/2006 Time 1711 Vehicles 2 Casualties 1 Serious
 E:94,699 N: 122,036 First Road: B 1022 Road Type Single carriageway
 Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Darkness: street lighting unknown Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Junction overshoot	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

Other Cause: Precipitating Factor:

VEH 1 AT JUNCTION OF NARROW LANE TURNING RIGHT ONTO B1022 TO MALDON, CONTINUED OVER GIVE WAY LINE ONTO B1022. VEH 2 APPROACHING JUNCTION FROM HECKFORD BRIDGE & COLLIDED WITH OFFSIDE OF VEH 1 AS VEH 1 HAD PULLED ONTO MAIN CARRIAGEWAY

Occurred on WARREN LANE J/W B1022 MALDON ROAD

Vehicle Reference 1 Car Turning right
 Vehicle movement from N to S No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Cleared junction or waiting/parked First impact Offside Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 58 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Motor Cycle over 125 cc and up to 500cc Going ahead right bend
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Front Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 35 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 35 Male Driver/rider Severity: Serious
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E00710206 11/02/2006 Time 0730 Vehicles 2 Casualties 1 Slight
 E:95,220 N: 123,944 First Road: U Road Type 1
 Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Possible
2nd: Failed to judge other persons path or speed	Vehicle 1	Possible
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 2 DRIVING FORM CHURCH LANE INDICATING RIGTH TURN INTO WARREN LANE WHEN HALFWAY ACROSS THE R/A/B WHEN VEH 1 APPROACHING FROM WARREN LANE DROVE OVER TOP OF MINI R/A/B & COLLIDED WITH F/O/S OF VEH 2

Occurred on R/A/B VILLA RD / CHURCH LANE STANWAY COLCHESTER ESSEX

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver Male
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Vehicle Reference 2 Car Turning right
 Vehicle movement from W to S No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Leaving roundabout First impact Offside Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 22 Female
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 22 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

E00770206 27/02/2006 Time 0915 Vehicles 2 Casualties 1 Slight
 E:94,740 N: 125,056 First Road: A 12 Road Type 1
 Speed limit: 70 Junction Detail: Roundabout Give way or controlled A 1124
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to judge other persons path or speed	Vehicle 1	Very Likely
2nd:		
3rd:		
4th:		
5th:		
6th:		
Other Cause:	Precipitating Factor:	

VEH 2 STOPPED AT TOP OF OFF SLIP FROM A12(S).VEH 1 FAILED TO STOP & COLLIDED WITH REAR OF VEH 2

Occurred on TOP OF OFF SLIP A12(S) J/W ESSEX YEOMANRY WAY

Vehicle Reference 1 Car Waiting to turn left
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 61 Female
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Vehicle Reference 2 Car Waiting to turn left
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Back Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 40 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 40 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

E02290606 30/06/2006 Time 1730 Vehicles 3 Casualties 2 Slight
 E: 96,494 N: 123,807 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight: street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Very Likely
2nd: Road layout (eg bend, hill crest)	Vehicle 1	Very Likely
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 1 TURNED RIGHT FROM PARR DRIVE INTO DUGARD AVE AND WAS IN COLLISION WITH VEH 2 BEING DRIVING ALONG DUGARD AVE FROM HIS LEFT TWDS PEARTREE RD. THE FORCE OF THE COLLISION PUSHED VEH 1 INTO THE OTHER LANE OF DUGARD AVE WHERE IT WAS INVOLVED IN A HEAD ON COLLISION WITH VEH 3 TRAVELLING DUGARD AVE TWDS STRAIGHT RD.

Occurred on DUGARD AVE J/W PARR DRIVE

Vehicle Reference 1 Car Turning right
 Vehicle movement from N to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering main road First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 35 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 35 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Casualty Reference: 2 Vehicle: 1 Age: 09 Male Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Back seat

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from E to W No tow / articulation
 On main carriageway Skidded
 Location at impact Jct Approach First impact Front Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 23 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
Selection: Notes:
Selected using Build Query : Stanway, Colchester
Vehicle Reference 3 Goods 3.5 tonnes mgw and under Going ahead other
Vehicle movement from W to E No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Front Hit vehicle: 1
Hit object in road None Off road: None
Did not leave carr Age of Driver 52 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

I29350606 30/06/2006 Time 2135 Vehicles 2 Casualties 1 Serious
 E:95,197 N: 24,547 First Road: U Road Type 1
 Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Road layout (eg bend, hill etc.)	Vehicle 1	Very Likely
2nd: Cyclist entering road from pavement	Vehicle 1	Very Likely
3rd: Loss of control	Vehicle 1	Possible
4th: Distraction outside vehicle	Vehicle 1	Possible
5th: Careless/Reckless/In a hurry	Vehicle 1	Possible
6th: Vegetation	Vehicle 1	Possible

VEH 1 WAS RIDEN DOWN GRASS EMBANKMENT ALONG TOLLGATE RD UNABLE TO STOP CAME OFF PAVEMENT INTO RD VEH 2 WHO HAD JUST COME FROM TOLLGATE WEST ONTO THE R/A/B AT TOLLGATE RD SAW VEH 1 COME INTO HIS PATH VEH 2 SWERVED TO AVOID HITTING VEH 1 CAUSING RIDER OF VEH 2 TO COME OFF HIS VEH

Occurred on TOLLGATE RD COLCHESTER R/A/B 15 YRDS FROM J/W TOLLGATE WEST HEADING ALONG TOI

Vehicle Reference 1 Pedal Cycle Going ahead other
 Vehicle movement from NE to SW No tow / articulation
 On main carriageway Skidded
 Location at impact Entering main road First impact Did not impact Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 15 Male
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Vehicle Reference 2 Motor Cycle over 50 cc and up to 125cc Going ahead other
 Vehicle movement from N to S No tow / articulation
 On main carriageway Skidded
 Location at impact Cleared junction or waiting/parke First impact Did not impact Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 17 Male
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 17 Male Driver/rider Severity: Serious
 Not a pupil Postcode Seatbelt

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

I34560806 29/08/2006 Time 1645 Vehicles 2 Casualties 1 Slight
 E:96,553 N: 123,821 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: Not within 20m of junction Not applicable
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Daylight:street lights present Raining without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Slippery road (due to weather)	Vehicle 1	Very Likely
2nd:		
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 1 TRAVELLING ALONG DUGARD AVE TWDS STRAIGHT ROAD. AS VEH 1 APPROACHED A QUEUE OF STATIONARY TRAFFIC THE DRIVER APPLIED BRAKES, WHICH LOCKED AND VEH 1 SKIDDED ON WET SURFACE INTO REAR OF VEH 2.

Occurred on DUGARD AVE APP 100YDS J/W STRAIGHT ROAD

Vehicle Reference 1 Car Stopping
 Vehicle movement from W to E No tow / articulation
 On main carriageway Skidded
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 17 Male
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 17 Male Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Front seat

Vehicle Reference 2 Car Stopping
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 25 Female
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

136010906 11/09/2006 Time 1432 Vehicles 2 Casualties 2 Slight
 E:95,775 N: 123,714 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: T & Stag Jet Give way or controlled Unclassified
 Crossing: Control None Facilities: Zebra crossing Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Very Likely
2nd:		
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 1 TRAVELLING NORTH ALONG HEATH ROAD WHEN IT CROSSED THE JCN OF BLACKBERRY AND PEARTREE ROAD TRAVELLING INTO WINSTREE ROAD WHEN VEH 2 TRAVELLING EAST ALONG BLACKBERRY ROAD AND PEARTREE ROAD IN GEN DIRECTION OF SHRUB END COULD NOT AVOID COLLIDING WITH THE SIDE OF VEH 1.

Occurred on WINSTREE ROAD JCN BLACKBERRY ROAD

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or r First impact Nearside Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 72 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 2 Vehicle: 1 Age: 72 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 85 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 83 Female Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Front seat

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

I40791006 09/10/2006 Time 1055 Vehicles 2 Casualties 1 Slight
 E:94,736 N: 125,056 First Road: A 1124 Road Type 1
 Speed limit: 70 Junction Detail: Roundabout Give way or controlled A 1124
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
2nd:	Failed to look properly	Vehicle 1	Very Likely
3rd:	Following too close	Vehicle 1	
4th:			
5th:			
6th:			

Other Cause: Precipitating Factor:

VEH 2 STATIONARY NEARSIDE LANE ON OFFSLIP JUNCTION TO A1124.VEH 1 DRIVES INTO REAR OF VEH 2

Occurred on A1124 JTN CHERRYTREE ROUNDABOUT LONDON BOUND OFFSLIP

Vehicle Reference 1 Goods 3.5 tonnes mgw and under Going ahead other
 Vehicle movement from E to W No tow / articulation
 On main carriageway Skidded
 Location at impact Jct Approach First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 37 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 37 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Vehicle Reference 2 Goods 7.5 tonnes mgw and over Going ahead other
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 59 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

I45301006 23/10/2006 Time 1253 Vehicles 2 Casualties 1 Slight
 E:95,188 N: 124,622 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: T & Stag Jet Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Careless/Reckless/In a hurry	Vehicle 1	Very Likely
2nd:	Aggressive driving	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

Other Cause: Precipitating Factor:

CAS 1 CLIPPED BY VEH 1 LEAVING CAR PARK OF FENN WRIGHTS IN TOLLGATE EAST KNOCKING HER OVER THEN MAKES OFF TURNS RIGHT INTO TOLLGATE RD AGAINST NO RIGHT TURN & KEEP LEFT RD DIRECTIONS SCRAPS O/S TO O/S WITH VEH 2 AS IT ENTERS TOLLGATE EAST VEH 1 FAILS TO STOP DAMAGE TO R/O/S DOOR 1/4 & BUMPER & WHEEL VEH 1

Occurred on STANWAY TOLLGATE EAST J/W TOLLGATE RD

Vehicle Reference 1 Car Going ahead right bend
 Vehicle movement from E to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or r First impact Offside Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver Male
 Hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 43 Female Pedestrian Severity: Slight
 Not a pupil Postcode Seatbelt
 Location U/K Standing still

In carr not crossing

Vehicle Reference 2 Car Going ahead left bend
 Vehicle movement from N to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or r First impact Offside Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 41 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

I44601006 29/10/2006 Time 1350 Vehicles 2 Casualties 2 Slight
 E:95,137 N:124,681 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: Not within 20m of junction Not applicable
 Crossing: Control None Facilities: Zebra crossing Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Possible
2nd:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd:	Swerved	Vehicle 2	Possible
4th:	Failed to signal/Misleading signal	Vehicle 2	Possible
5th:	Poor turn or manoevre	Vehicle 1	Possible
6th:	Poor turn or manoevre	Vehicle 2	Possible

VEH 2 TRAVELLING NORTH ALONG TOLLGATE ROAD TWDS A1124 AND B1408 LONDON ROAD. VEH 1 TRAVELLING SAME DIRECTION FILTERING ON OUTSIDE OF TRAFFIC. VEH 2 MOVES TO CENTRE OF LAND. VEH 1 COLLIDES WITH VEH 2.

Occurred on TOLLGATE ROAD 50 M SOUTH J/W A1124 AND B1408 LONDON ROAD.

Vehicle Reference 1 Motorcycle over 500cc Going ahead other
 Vehicle movement from S to N No tow / articulation

On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle: 2
 Hit object in road None Off road: None

Did not leave carr Age of Driver 24 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 24 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Casualty Reference: 2 Vehicle: 1 Age: 26 Female Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Not car passenger

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from S to N No tow / articulation

On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Offside Hit vehicle: 1
 Hit object in road None Off road: None

Did not leave carr Age of Driver 78 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

152871206 18/12/2006 Time 1553 Vehicles 3 Casualties 6 Serious
 E:95,054 N: 123,172 First Road: U Road Type Single carriageway
 Speed limit: 60 Junction Detail: T & Stag Jet Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Daylight: no street lighting Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Slippery road (due to weather)	Vehicle 1	Possible
2nd: Defective brakes	Vehicle 1	Possible
3rd: Travelling too fast for conditions	Vehicle 1	Possible
4th: Failed to judge other persons path or speed	Vehicle 1	Possible
5th: Sudden braking	Vehicle 1	Possible
6th: Careless/Reckless/In a hurry	Vehicle 1	Very Likely

VEH 1 TRAVELLING WARREN LANE TOWARDS VILLA RD VEH 2 TRAVELLING OPPOSITE DIRECTION VEH 3
 STATIC WARREN LANE WAITING TO TURN RIGHT INTO DYERS RD VEH 1 APPROACHES REAR OF VEH 3
 BRAKING SHARPLY VEH 1 LOSES CONTROL VEH 3 CLEARS JUNC VEH 1 PASSINTO OPPOSIT
 E CARRIAGEWAY & COLLIDES WITH VEH 2 HEAD ON

Occurred on WARREN LANE J/W DYERS RD 1/2 MILE NRTH OF B1022 MALDON RD

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from S to N Single trailer
 On main carriageway Skidded
 Location at impact Jct Approach First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 23 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1	Vehicle: 1	Age: 22	Female	Passenger	Severity: Serious
Not a pupil		Postcode		Seatbelt	
Back seat					
Casualty Reference: 2	Vehicle: 1	Age: 23	Male	Driver/rider	Severity: Slight
Not a pupil		Postcode		Seatbelt	
Casualty Reference: 3	Vehicle: 1	Age: 01	Male	Passenger	Severity: Slight
Not a pupil		Postcode		Seatbelt	
Front seat					
Casualty Reference: 4	Vehicle: 1	Age: 00	Female	Passenger	Severity: Slight
Not a pupil		Postcode		Seatbelt	
Back seat					

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection:

Notes:

Selected using Build Query :

Stanway, Colchester

Vehicle Reference 2 Car
Vehicle movement from N to S

Going ahead other

No tow / articulation

On main carriageway

No skidding, jack-knifing or overturning

Location at impact Jct Approach

First impact Front

Hit vehicle: 1

Hit object in road None

Off road: None

Did not leave carr

Age of Driver 36 Female

Not hit and run

Breath test Negative

Driver Postcode:

VRM:

Casualty Reference: 5 Vehicle: 2 Age: 36 Female Driver/rider Severity: Slight
Not a pupil Postcode Seatbelt

Casualty Reference: 6 Vehicle: 2 Age: 01 Male Passenger Severity: Serious
Not a pupil Postcode Seatbelt
Front seat

Vehicle Reference 3 Car
Vehicle movement from S to E

Waiting to turn right

No tow / articulation

On main carriageway

No skidding, jack-knifing or overturning

Location at impact Jct Approach

First impact Did not impact

Hit vehicle:

Hit object in road None

Off road: None

Did not leave carr

Age of Driver Female

Not hit and run

Breath test Driver not contacted

Driver Postcode:

VRM:

Accidents between dates **01/04/2004 and 31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

155691206 20/12/2006 Time 0730 Vehicles 2 Casualties 1 Slight
 E:95,107 N:124,727 First Road: A 1124 Road Type 1
 Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Frost/Ice
 Daylight:street lights present Fog or mist
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Slippery road (due to weather)	Vehicle 1	Very Likely
2nd: Rain, sleet, snow, or fog	Vehicle 1	Possible
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 2 STATIONARY AT ENTRANCE TO ROUNDABOUT. VEH 1 BEHIND VEH 2. VEH 1 MOVED OFF AND STRUCK REAR OF VEH 2.

Occurred on TOLLGATE ROAD ROUNDABOUT J/W A1124

Vehicle Reference 1 Car Starting
 Vehicle movement from S to N No tow / articulation
 On main carriageway Skidded
 Location at impact Entering roundabout First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 40 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Back Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 42 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 17 Female Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Front seat

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Selected using Build Query : Notes: Stanway, Colchester

I04760107 05/01/2007 Time 1905 Vehicles 1 Casualties 1 Serious
 E:94,977 N: 22,870 First Road: U Road Type Single carriageway
 Speed limit: 60 Junction Detail: Not within 20m of junction Not applicable
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Darkness: no street lighting Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Casualty 1	Very Likely
2nd: Failed to judge vehicles path or speed	Casualty 1	Very Likely
3rd:		
4th:		
5th:		
6th:		
Other Cause:	Precipitating Factor:	

VEH 1 WAS TRAVELLING NORTH ALONG WARREN LANE TWDS J/W DYERS ROAD. CAS 1 WAS CROSSING WARREN LANE FROM EAST TO WEST. CAS 1 CROSSED TO THE CENTRE OF THE ROAD FOLLOWING TWO OTHER PEDESTRIANS. VEH 1 SAW THESE PEDESTRIANS AND SLOWED. AS VEH 1 NEARED CAS 1 SHE DARTED ACROSS THE ROAD AND WAS STRUCK BY VEH 1.

Occurred on WARREN LANE, 300 M SOUTH OF J/W DYERS ROAD

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from SE to NW No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 25 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 16 Female Pedestrian Severity: Serious
 Not a pupil Postcode Seatbelt
 In cent carr SW bound
 Driver's offside

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

I04220107 30/01/2007 Time 1130 Vehicles 2 Casualties 1 Slight
 E:95,130 N: 124,700 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: Not within 20m of junction Not applicable
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

Other Cause: Precipitating Factor:

VEH 2 STATIONARY IN QUE OF TRAFFIC TRAVELLING TOLLGATE RD DIRECTION OF TOLLGATE VEH 1 TRAVELLING BEHIND VEH 2 VEH 1 STRIKED REAR OF VHE 2

Occurred on TOLLGATE RD 30 M TOLGATE SIDE J/W A1124

Vehicle Reference 1 Goods 3.5 tonnes mgw and under Going ahead other
 Vehicle movement from N to S No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 20 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from N to S No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 49 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 49 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

I10840307 22/03/2007 Time 1309 Vehicles 3 Casualties 2 Serious
 E:96,223 N: 123,754 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Very Likely
2nd: Failed to judge vehicles path or speed	Vehicle 1	Very Likely
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 1 TRAVELLING TOWARDS WINSTREE RD THEN TURNED RIGHT INTO INDUSTRIAL ESTATE OPPOSITE MOSS RD INTO PATH OF VEH 2 VEH 2 COLLIDED WITH REAR N/S OF VEH 1 SPINNING IT AROUND CONTINUING ON THEN HAVING HEAD ON WITH VEH 3

Occurred on DUGARD AVE J/W MOSS RD

Vehicle Reference 1 Car Turning right
 Vehicle movement from E to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Leaving main road First impact Nearside Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 37 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Front Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 60 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 60 Female Driver/rider Severity: Serious
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection:

Notes:

Selected using Build Query :

Stanway, Colchester

Vehicle Reference 3 Car

Going ahead other

Vehicle movement from E to W

No tow / articulation

On main carriageway

No skidding, jack-knifing or overturning

Location at impact Jct Approach

First impact Front

Hit vehicle: 2

Hit object in road None

Off road: None

Did not leave carr

Age of Driver 47

Female

Not hit and run

Breath test Negative

Driver Postcode:

VRM:

Casualty Reference: 2

Vehicle: 3

Age: 47 Female

Driver/rider

Severity: Serious

Not a pupil

Postcode

Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

113610307 31/03/2007 Time 1400 Vehicles 2 Casualties 2 Slight
 E:95,137 N: 124,742 First Road: A 1124 Road Type 1
 Speed limit: 30 Junction Detail: Roundabout Give way or controlled B 1408
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Possible
2nd: Driver using mobile phone	Vehicle 1	Possible
3rd: Careless/Reckless/In a hurry	Vehicle 1	
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 2 WAS STATIONARY ON A1124 INTENDING TO TURN LEFT INTO TOLLGATE RD VEH 1 HAS FAILED TO BRAKE & HAS RUN INTO THE REAR OF VHE 2

Occurred on R/A/B JUNC OF A1124/B1408

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver Female
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Back Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 41 Female
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 41 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Casualty Reference: 2 Vehicle: 2 Age: 70 Female Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Front seat

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

I13160407 05/04/2007 Time 1309 Vehicles 2 Casualties 2 Slight
 E:95,200 N:124,750 First Road: A 1124 Road Type Single carriageway
 Speed limit: 30 Junction Detail: Not within 20m of junction Not applicable
 Crossing: Control None Facilities: Zebra crossing Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Following too close	Vehicle 1	Possible
2nd: Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd: Careless/Reckless/In a hurry	Vehicle 1	
4th:		
5th:		
6th:		
Other Cause:	Precipitating Factor:	

VEH 2 TRAVELLING ALONG A1124 TWDS COLCHESTER WHEN VEH 1 STRUCK REAR OF VEH 2 WHILST TRAVELLING IN THE SAME DIRECTION.

Occurred on A1124 LONDON ROAD 80 M WEST J/W BARN FIELDS

Vehicle Reference 1 Goods over 3.5 tonnes and under 7.5 tonn Going ahead other
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 50 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 43 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 43 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Casualty Reference: 2 Vehicle: 2 Age: 10 Male Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Front seat

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

I14890407 19/04/2007 Time 0600 Vehicles 2 Casualties 1 Slight
 E:96,651 N:123,842 First Road: U Road Type 1
 Speed limit: 30 Junction Detail: Mini roundabout Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Disobeyed Give Way or Stop sign or markings	Vehicle 1	Very Likely
2nd:		
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 1 TRAVELLING STRAIGHT ROAD TOWARDS LONDON ROAD.VEH 1 TURNING RIGHT FROM DUGARD AVENUE INTO STRAIGHT ROAD.COLLISION OCCURS BETWEEN OFFSIDE OF VEH 2 & FRONT OF VEH 1

Occurred on STRAIGHT ROAD J/W DUGARD AVENUE

Vehicle Reference 1 Goods 7.5 tonnes mgw and over Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway Skidded
 Location at impact Entering roundabout First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 34 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Turning right
 Vehicle movement from W to S No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Offside Hit vehicle: 1
 Hit object in road None Off road: Oth perm objects
 Nearside Age of Driver 19 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 19 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

I16380407 30/04/2007 Time 1720 Vehicles 1 Casualties 1 Slight
 E:95,177 N: 124,592 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: Not within 20m of junction Not applicable
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Dangerous action in carriageway	Casualty 1	Very Likely
2nd: Careless/Reckless/In a hurry	Casualty 1	Very Likely
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 1 PULLED AWAY IN THE ROAD WHILST CASUALTY ONE WAS STANDING IN THE ROAD AND VEH 1 WING MIRROR COLLIDED WITH CAS 1 VEH 1 TRAVELLING N/W ALONG TOLLGATE ROAD IN GENERAL DIRECTION OF EIGHT ASH GREEN

Occurred on TOLLGATE ROAD 150 YRDS SOUTH OF J/W A1124

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from SE to NW No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Did not impact Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 37 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 34 Female Pedestrian Severity: Slight
 Not a pupil Postcode Seatbelt
 In carr not crossing Standing still
 In carr not crossing

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

117350507 07/05/2007 Time 1620 Vehicles 2 Casualties 1 Slight
 E:95,152 N:124,765 First Road: A 1124 Road Type Single carriageway
 Speed limit: 30 Junction Detail: Roundabout Give way or controlled A 1124
 Crossing: Control None Facilities: Zebra crossing Road surface Wet/Damp
 Daylight:street lights present Raining without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Possible
2nd:	Inexperienced or learner driver/rider	Vehicle 1	Possible
3rd:	Failed to judge other persons path or speed	Vehicle 1	
4th:			
5th:			
6th:			

Other Cause: Precipitating Factor:

VEH 2 STOPPED TO AFFORD PRESEDENCE TO PEDESTRIAN ON ZEBRA CROSSING.VEH 1 COLLIDED WITH REAR OF VEH 2

Occurred on A1124 LONDON ROAD 15yds COLCHESTER SIDE J/W ESSEX YEOMANRY WAY

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from W to E No tow / articulation
 On main carriageway Skidded
 Location at impact Leaving roundabout First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 20 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 61 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 61 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

I16790507 08/05/2007 Time 1700 Vehicles 1 Casualties 1 Serious
 E:96,288 N: 123,765 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: Not within 20m of junction Not applicable
 Crossing: Control None Facilities: Central reservation Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Possible
2nd: Failed to judge other persons path or speed	Vehicle 1	Possible
3rd: Failed to look properly	Casualty 1	Possible
4th: Failed to judge vehicles path or speed	Casualty 1	Possible
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 1 TRAVELLING ALONG DUGARD AVENUE TOWARDS LEFT HAND JUNCTION WITH OAKLANDS AVENUE.CASUALTY 1 CROSSING DUGARD AVENUE FROM FOOTPATH TO THE RIGHT OF VEH 1.VEH 1 STRUCK CASUALTY 1 CAUSING SERIOUS INJURIES

Occurred on DUGARD AVENUE 50m WEST OF J/W OAKLANDS AVENUE

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from W to E No tow / articulation
 On main carriageway Skidded
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 19 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 79 Female Pedestrian Severity: Serious
 Not a pupil Postcode Seatbelt
 In cent carr N bound
 Driver's offside

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

119470507 23/05/2007 Time 1148 Vehicles 2 Casualties 4 Serious
 E:95,129 N: 23,528 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: Not within 20m of junction Not applicable
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Exceeding speed limit	Vehicle 1	Very Likely
2nd: Impaired by alcohol	Vehicle 1	Very Likely
3rd: Impaired by drugs (illicit or medicinal)	Vehicle 1	
4th:		
5th:		
6th:		
Other Cause:	Precipitating Factor:	

VEH 1 TRAVELLING WARREN LANE NORTH TWDS TOLLGATE. VEH 2 TRAVELLING IN OPPOSITE DIRECTION. WHILST NEGOTIATING A RIGHT HAND BEND DRIVER OF VEH 1 LOST CONTROL, CROSSED TO O/S OF ROAD AND COLLIDED WITH VEH 2.

Occurred on WARREN LANE APPROX 400 M NORTH DYERS ROAD

Vehicle Reference 1 Car Going ahead right bend
 Vehicle movement from S to N No tow / articulation
 On main carriageway Skidded
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 22 Male
 Not hit and run Breath test Positive
 Driver Postcode: VRM:

Casualty Reference: 1	Vehicle: 1	Age: 22	Male	Driver/rider	Severity: Serious
Not a pupil		Postcode		Seatbelt	
Casualty Reference: 2	Vehicle: 1	Age: 23	Male	Passenger	Severity: Serious
Not a pupil		Postcode		Seatbelt	
Back seat					
Casualty Reference: 3	Vehicle: 1	Age: 19	Male	Passenger	Severity: Serious
Not a pupil		Postcode		Seatbelt	
Front seat					

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
Selection: Notes:
Selected using Build Query : Stanway, Colchester
Vehicle Reference 2 Car Going ahead other
Vehicle movement from N to S No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 61 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Casualty Reference: 4 Vehicle: 2 Age: 61 Male Driver/rider Severity: Serious
Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

125290607 23/06/2007 Time 0519 Vehicles 2 Casualties 1 Slight
 E:96,214 N:123,752 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Careless/Reckless/In a hurry	Vehicle 1	Very Likely
2nd: Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd:		
4th:		
5th:		
6th:		
Other Cause:	Precipitating Factor:	

VEH 1 PULLED OUT FROM TRAFFIC QUEUE AND A COLLISION OCCURRED AS VEH 1 MADE ITS WAY ALONG OUTSIDE OF QUEUE AND VEH 2 TURNED RIGHT AT FRONT OF QUEUE.

Occurred on PEARTREE ROAD J/W MOSS ROAD

Vehicle Reference 1 Car Overtaking stat vehicle O/S
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 29 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Other motor vehicle Waiting to turn right
 Vehicle movement from S to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Offside Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 30 Male
 Not hit and run Breath test Not applicable
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 30 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

128120707 17/07/2007 Time 1530 Vehicles 2 Casualties 1 Slight
 E:95,125 N:24,714 First Road: A 1124 Road Type 1
 Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Poor turn or manoeuvre	Vehicle 1	Very Likely
2nd:	Inexperienced or learner driver/rider	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

Other Cause: Precipitating Factor:

VEHICLE 1 TURNING LEFT ONTO TOLLGATE ROAD FROM LONDON ROAD. VEHICLE 2 TRAVELLING TOLLGATE ROAD TOWARDS LONDON ROAD ROUNDABOUT. VEHICLE 1 VEERS WIDE ON LEAVING ROUNDABOUT AND STRIKES FRONT OF VEHICLE.

Occurred on TOLLGATE ROAD, 15 METERS TOLLGATE SIDE J/W LONDON ROAD.

Vehicle Reference 1 Motorcycle 50cc and under Turning left
 Vehicle movement from E to S No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Cleared junction or waiting/parked First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 16 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 16 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Front Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 65 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

129320707 24/07/2007 Time 0800 Vehicles 2 Casualties 1 Serious
 E:94,703 N: 122,044 First Road: B 1022 Road Type Single carriageway
 Speed limit: 30 Junction Detail: Multi Jct Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Very Likely
2nd: Dazzling sun	Vehicle 1	Possible
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEHICLE 2 WARREN LANE TOWARDS STANWAY AFTER TURNING RIGHT FROM MALDON ROAD. VEHICLE 1 AT GIVE WAY ON WARREN LANE FACING TOWARDS STANWAY. VEHICLE 1 MOVES OUT FROM GIVE WAY COLLIDING WITH VEHICLE 2.

Occurred on WARREN LANE JUNCTION B1022 MALDON ROAD.

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering from slip road First impact Offside Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 41 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Motorcycle over 500cc Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering main road First impact Nearside Hit vehicle: 1
 Hit object in road None Off road: None
 O/S Age of Driver 37 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 37 Male Driver/rider Severity: Serious
 Not a pupil Postcode Seatbelt

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

I34840807 29/08/2007 Time 0940 Vehicles 2 Casualties 1 Slight
 E:94,734 N:125,055 First Road: A 12 Road Type Slip road
 Speed limit: 40 Junction Detail: Roundabout Give way or controlled A 1124
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Very Likely
2nd: Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEHICLE 1 EXITING A12 COLLIDED WITH REAR OF VEHICLE 2 AT THE TOP OF THE SLIP ROAD WHERE VEHICLE 2 WAS INTENDING TO TURN LEFT TOWARDS TOLLGATE.

Occurred on A1124 ESSEX YEOMANRY WAY J/W A12 (S) SLIP ROAD (EXIT)

Vehicle Reference 1 Car Going ahead but held up
 Vehicle movement from NE to SW No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering from slip road First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 34 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from NE to SW No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Leaving main road First impact Back Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 50 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 50 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

136100907 08/09/2007 Time 1210 Vehicles 2 Casualties 1 Slight
 E: 94,653 N: 125,149 First Road: A 12 Road Type Slip road
 Speed limit: 60 Junction Detail: Slip Road Give way or controlled A 1124
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight: street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st:		
2nd:		
3rd:		
4th:		
5th:		
6th:		
Other Cause:	Precipitating Factor:	

VEHS 1 AND 2 WERE TRAVELLING EASTBOUND ALONG ABOVE LOCATION. VEH 2 WAS WAITING TO JOIN RAB. VEH 1 WAS DIRECTLY BEHIND VEH 2. VEH 1 PULLED AWAY COLLIDING WITH REAR OF VEH 2.

Occurred on A12 AT J/W E A1124 ESSEX YEOMANRY WAY

Vehicle Reference 1 Car Starting
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering from slip road First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver Male
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering from slip road First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 49 Female
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 49 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

I41881007 12/10/2007 Time 2056 Vehicles 2 Casualties 1 Slight
 E:96,655 N: 123,841 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: Mini roundabout Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Darkness: street lights present and lit Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Disobeyed automatic traffic signal	Vehicle 1	Very Likely
2nd: Junction overshoot	Vehicle 1	Possible
3rd: Failed to judge other persons path or speed	Vehicle 1	
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 1 TRAVELLING LEXDEN STRAIGHT ROAD TOWARDS LONDON ROAD.VEH 2 LEXDEN STRAIGHT ROAD TOWARDS SHRUB END.AT THE MINI ROUNDABOUT JUNCTION WITH DUGARD AVENUE VEH 2 STOPS GIVES WAY TO RIGHT TO LET A SMALL SILVER CAR ACROSS MINI ROUNDABOUT.VEH RIGHT WAS CLEAR VEH 2 PROGRESSED RIGHT ONTO ROUNDABOUT.VEH 1 FAILED TO GIVE WAY HITTING VEH 2 ON THE NEAR SIDE PASSENGER SIDE

Occurred on STRAIGHT RD J/W DUGARD AVENUE

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 33 Male
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Vehicle Reference 2 Car Turning right
 Vehicle movement from N to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Nearside Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 38 Female
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 38 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

I45331007 30/10/2007 Time 1545 Vehicles 2 Casualties 1 Slight
 E:94,683 N: 125,025 First Road: A 12 Road Type 1
 Speed limit: 40 Junction Detail: Roundabout Give way or controlled A 1124
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight: street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to judge other persons path or speed	Vehicle 1	Very Likely
2nd: Failed to look properly	Vehicle 1	Very Likely
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEHICLE 1 WAS TRAVELLING BEHIND VEHICLE 2. VEHICLE 2 STOPPED AT ROUNDABOUT, AND VEHICLE 1 COLLIDED WITH REAR END OF VEHICLE 2.

Occurred on A1124 AT ROUNDABOUT WITH J/W A12.

Vehicle Reference 1 Car Stopping
 Vehicle movement from Park to Parked No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 71 Male
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from Park to Parked No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Back Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 57 Female
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 57 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

I46071107 12/11/2007 Time 0711 Vehicles 2 Casualties 1 Slight
 E:94,731 N: 125,110 First Road: A 12 Road Type 1
 Speed limit: 30 Junction Detail: Roundabout Give way or controlled A 1124
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Darkness: street lights present and lit Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Following too close	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

Other Cause: Precipitating Factor:

VEHICLE 2 TRAVELS UP A12 SLIP AND GOES ONTO ROUNDABOUT HEADING SOUTH IN LANE ONE. VEHICLE 1 TRAVELS SAME DIRECTION WHEN VEHICLE 2 BRAKES DUE TO TRAFFIC CONGESTION. VEHICLE 1 FAILS TO SEE VEHICLE 2 STOPPING AND VEHICLE 1 COLLIDES INTO THE REAR OF VEHICLE 2 CAUSING DAMAGE AND INJURY TO VEHICLE AND DRIVER 1.

Occurred on ESSEX YEOMANRY WAY AT THE JUNCTION WITH THE A12, STANWAY, COLCHESTER.

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering from slip road First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 49 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or r First impact Back Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 36 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 36 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

I48291107 23/11/2007 Time 0830 Vehicles 2 Casualties 1 Slight
 E:95,220 N: 23,922 First Road: U Road Type 1
 Speed limit: 30 Junction Detail: Mini roundabout Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight: no street lighting Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Possible
2nd: Failed to judge other persons path or speed	Vehicle 1	Possible
3rd: Sudden braking	Vehicle 2	Possible
4th: Swerved	Vehicle 2	Possible
5th: Inexperienced or learner driver/rider	Vehicle 2	Possible
6th:		

Other Cause: Precipitating Factor:

VEHICLE 2 TRAVELLING ALONG VILLA ROAD IN DIRECTION OF BEACON END. VEHICLE 2 RODE OVER MINI ROUNDABOUT, IT WAS CLEAR, APPROACHED 2ND MINI ROUNDABOUT, IT WAS CLEAR TO THE RIGHT AND PROCEEDED TO GO STRIAIGHT OVER ROUNDABOUT. VEHICLE 1 PULLED OUT FROM VEHICLE 2'S LEFT SIDE CAUSING VEHICLE 2 TO BRAKE AND SLIDE ACROSS ROAD. NO IMPACT BETWEEN VEHICLES.

Occurred on VILLA ROAD, J/W CHURCH LANE ROUNDABOUT.

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Did not impact Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver Male
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Vehicle Reference 2 Motorcycle 50cc and under Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway Skidded
 Location at impact Mid Junction - on roundabout or r First impact Did not impact Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 16 Male
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 16 Male Driver/rider Severity: Slight
 School pupil to/from school Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

I49091207 01/12/2007 Time 2035 Vehicles 2 Casualties 1 Slight
 E:96,490 N: 123,809 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Darkness: street lights present and lit Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Cyclist wearing dark clothing at night	Vehicle 2	Very Likely
2nd:	Failed to look properly	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

Other Cause: Precipitating Factor:

VEH 1 TRAVELLING WEST ALONG DUGARD AVENUE IN DIRECTION OF TOLLGATE.VEH 2 TRAVELLING IN THE OPPOSITE DIRECTION IN DIRECTION OF SHRUB END WHEN VEH 1 TURNED IN FRONT OF VEH 2 INTO PARR DRIVE & VEH 2 COLLIDED WITH NEARSIDE OF VEH 1

Occurred on DUGARD AVENUE J/W PARR DRIVE

Vehicle Reference 1 Car Turning right
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or r First impact Nearside Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 45 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Motorcycle 50cc and under Going ahead other
 Vehicle movement from W to E No tow / articulation
 On main carriageway Skidded
 Location at impact Jct Approach First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 17 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 17 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

150801207 11/12/2007 Time 1700 Vehicles 2 Casualties 1 Slight
 E:96,492 N: 123,808 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: Other Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Very Likely
2nd:		
3rd:		
4th:		
5th:		
6th:		
Other Cause:	Precipitating Factor:	

VEH 2 WAS TRAVELLING ALONG DUGARD AVENUE TOWARDS STRAIGHT ROAD.VEH 1 WAS TRAVELLING DIRECTLY BEHIND VEH 2.VEH 2 STOPPED IN QUEUE OF TRAFFIC.VEH 1 FAILED TO STOP BEHIND VEH 2 & COLLIDED WITH THE REAR END.BOTH VEH's STOPPED,DETAILS EXCHANGED ALTHOUGH POSSIBLY FALSE

Occurred on DUGARD AVENUE J/W PARR DRIVE

Vehicle Reference 1 Car Going ahead but held up
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver Male
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or r First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 19 Male
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 19 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Selected using Build Query : Notes: Stanway, Colchester

I00930108 11/01/2008 Time 1715 Vehicles 2 Casualties 1 Slight
 E:96,214 N: 123,755 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: Other Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Darkness: street lights present and lit Raining without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Very Likely
2nd: Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd: Slippery road (due to weather)	Vehicle 2	
4th:		
5th:		
6th:		
Other Cause:	Precipitating Factor:	

VEH 2 TRAVELLING TWDS STANWAY. VEH 1 PULLED OUT OF JCN. VEH 2 HAS SWERVED TO AVOID COLLIDING WITH VEH 1 RESULTING IN RIDER COMING OFF VEH.

Occurred on PEARTREE WAY 2 METRES FORM JCN OF MOSS ROAD

Vehicle Reference 1 Car Starting
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Did not impact Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 33 Female
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Vehicle Reference 2 Motorcycle 50cc and under Going ahead other
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
 Hit object in road Kerb Off road: None
 Did not leave carr Age of Driver 16 Male
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 16 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

I03140108 31/01/2008 Time 1430 Vehicles 3 Casualties 1 Serious
 E:96,651 N: 123,835 First Road: U Road Type 1
 Speed limit: 30 Junction Detail: Mini roundabout Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Failed to judge other persons path or speed	Vehicle 1	Possible
3rd:			
4th:			
5th:			
6th:			

Other Cause: Precipitating Factor:

VEHICLE 1 CROSSED A ROUNDABOUT COLLIDING WITH VEHICLE 2 PULLING OUT FROM VEHICLE 1'S RIGHT. VEHICLE 1 THEN ACCELERATED OFF AFTER THE COLLISION DRIVING HEAD ON INTO VEHICLE 3.

Occurred on STRAIGHT ROAD J/W DUGARD AVENUE.

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Offside Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 77 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 77 Female Driver/rider Severity: Serious
 Not a pupil Postcode Seatbelt

Vehicle Reference 2 Car Turning right
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Front Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 53 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
Selection: Notes:
Selected using Build Query : Stanway, Colchester
Vehicle Reference 3 Bus or coach Stopping
Vehicle movement from N to S No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Front Hit vehicle: 1
Hit object in road None Off road: None
Did not leave carr Age of Driver 35 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

I07430208 25/02/2008 Time 0500 Vehicles 2 Casualties 1 Slight
 E:95,225 N:123,916 First Road: U Road Type 1
 Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Darkness: street lights present and lit Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Junction overshoot	Vehicle 1	Very Likely
2nd: Poor turn or manoeuvre	Vehicle 1	Very Likely
3rd: Failed to judge other persons path or speed	Vehicle 1	
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 2 WAS TRAVELLING FROM COLCHESTER -> ON VILLA ROAD TWDS WARREN LANE. AS VEH JOINED THE MINI ROUNDABOUT WITH BLACKBERRY ROAD VEH 1, WHICH WAS TRAVELLING ON BLACKBERRY ROAD ONTO WARREN, FAILED TO GIVE WAY AND COLLIDED WITH N/S OF VEH 2 CAUSING IT TO COLLIDE WITH LIT KEEP LEFT BOLLARD AND ROUNDABOUT GIVE WAY SIGN.

Occurred on BLACKBERRY ROAD J/W WARREN LANE

Vehicle Reference 1 Car Turning right
 Vehicle movement from E to W No tow / articulation
 On main carriageway Skidded
 Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 59 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from N to S No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or r First impact Nearside Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 26 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 26 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

123470408 06/04/2008 Time 2044 Vehicles 1 Casualties 1 Slight
 E:94,660 N: 121,865 First Road: B 1022 Road Type Single carriageway
 Speed limit: 30 Junction Detail: Not within 20m of junction Not applicable
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Darkness: no street lighting Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Travelling too fast for conditions	Vehicle 1	Very Likely
2nd:	Careless/Reckless/In a hurry	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

Other Cause: Precipitating Factor:

VEHICLE 1 TRAVELLING ALONG MALDON ROAD IN THE DIRECTION OF COLCHESTER. VEHICLE DOING IN THE EXCESS OF THE SPEED LIMIT AND DRIVER LOSES CONTROL OF THE VEHICLE WHICH WENT OFF ROAD TO THE NEAR SIDE THROUGH A WALL AND INTO THE GARDEN OF A PRIVATE HOUSE. VEHICLE ON ITS ROOF, DRIVER GETS OUT WHO IS ONLY OCCUPANT AND VEHICLE CATCHES FIRE.

Occurred on HILL ROYAL HOUSE, B1022, MALDON ROAD, 100 METERS NORTH OF J/W BIRCH ROAD HECKFC

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway Overturned
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
 Hit object in road Kerb Off road: Tree
 Nearside Age of Driver 19 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 19 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

I13160408 17/04/2008 Time 2001 Vehicles 2 Casualties 2 Slight
 E:94,645 N: 125,145 First Road: A 12 Road Type 1
 Speed limit: 40 Junction Detail: Roundabout Give way or controlled A 1124
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Darkness: street lights present and lit Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Very Likely
2nd:		
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEHICLE 2 TRAVELLING ALONG A12 NORTHBOUND OFF SLIP TOWARDS CHERRY TREE WITH VEHICLE 1 TRAVELLING BEHIND. VEHICLE 2 AND VEHICLE 1 STOP AT ROUNDABOUT. VEHICLE 1 MOVES OFF AND COLLIDES WITH THE REAR OF VEHICLE 2.

Occurred on A12 JUNCTION 26 NORTHBOUND OFFSLIP JUNCTION WITH CHERRY TREE ROUNDABOUT.

Vehicle Reference 1 Goods 3.5 tonnes mgw and under Going ahead other
 Vehicle movement from SW to NE No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 42 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from SW to NE No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Back Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 42 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 42 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt
 Casualty Reference: 2 Vehicle: 2 Age: 42 Female Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Front seat

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

113870408 21/04/2008 Time 2119 Vehicles 1 Casualties 1 Slight
 E:95,151 N: 124,496 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: Not within 20m of junction Not applicable
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Darkness: street lights present and lit Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Careless/Reckless/In a hurry	Vehicle 1	Very Likely
2nd:		
3rd:		
4th:		
5th:		
6th:		
Other Cause:	Precipitating Factor:	

VEHICLE 1 TRAVELLING FROM LONDON ROAD TOWARDS SAINSBURY'S, WHEN CLIPPED KERB, SKIDDED AND COLLIDED WITH LAMP POST.

Occurred on TOLLGATE WEST 300 YARDS SOUTH OF LONDON ROAD.

Vehicle Reference 1 Car Going ahead left bend
 Vehicle movement from E to SW No tow / articulation
 On main carriageway Skidded
 Location at impact Not at, or within 20M of Jct First impact Nearside Hit vehicle:
 Hit object in road None Off road: Lamp post
 Nearside Age of Driver 29 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 29 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates **01/04/2004 and 31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

I14980408 27/04/2008 Time 1110 Vehicles 2 Casualties 1 Slight
 E:94,703 N: 125,174 First Road: A 1124 Road Type 1
 Speed limit: 60 Junction Detail: Roundabout Give way or controlled A 12
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

Other Cause: Precipitating Factor:

VEH 2 DROVE UP TO ROUNDABOUT & STOPPED.VEH 1 TRAVELLING BEHIND VEH 2.DRIVER OF VEH 1
 LOOKING TO RIGHT MOVES FORWARD & COLLIDES WITH REAR OF VEH 2 WHICH HAD NOT MOVED

Occurred on A1124 HALSTEAD ROAD J/W RAB JTN 26 A12

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from NW to SE No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 72 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 72 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Vehicle Reference 2 Car Going ahead other
 Vehicle movement from NW to SE No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Back Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 39 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

118390508 26/05/2008 Time 1941 Vehicles 1 Casualties 3 Serious
 E:94,700 N: 22,041 First Road: B 1022 Road Type Single carriageway
 Speed limit: 60 Junction Detail: T & Stag Jct Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Daylight:street lights present Raining without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Slippery road (due to weather)	Vehicle 1	Very Likely
2nd: Rain, sleet, snow, or fog	Vehicle 1	Very Likely
3rd:		
4th:		
5th:		
6th:		
Other Cause:	Precipitating Factor:	

VEH 1 TRAVELLING ALONG WARREN LANE IN A SOUTHERLY DIRECTION TOWARDS B1022 MALDON ROAD.DRIVER BRAKED ON APPROACH TO JUNCTION,SKIDDED ON WET ROAD & SLID ONTO CENTRAL RESERVATION HITTING ROAD SIGN

Occurred on WARREN LANE J/W B1022

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from N to S No tow / articulation
 On main carriageway Skidded
 Location at impact Jct Approach First impact Front Hit vehicle:
 Hit object in road None Off road: Road sign / ATS
 O/S Age of Driver 21 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1	Vehicle: 1	Age: 21	Female	Driver/rider	Severity: Slight
Not a pupil		Postcode		Seatbelt	
Casualty Reference: 2	Vehicle: 1	Age: 20	Female	Passenger	Severity: Slight
Not a pupil		Postcode		Seatbelt	
Front seat					
Casualty Reference: 3	Vehicle: 1	Age: 17	Female	Passenger	Severity: Serious
Not a pupil		Postcode		Seatbelt	
Back seat					

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

124730708 10/07/2008 Time 0850 Vehicles 2 Casualties 1 Slight
 E: 94,738 N: 125,060 First Road: A 12 Road Type Slip road
 Speed limit: 60 Junction Detail: Roundabout Give way or controlled A 1124
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight: no street lighting Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Junction restart	Vehicle 1	Very Likely
2nd: Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 2 WAS STATIONARY AWAITING TO GO ONTO THE A1124 YEOMANRY WAY ON THE OFFSLIP FROM THE A12. VEH 1 WAS BEHIND HER & EXPECTING VEH 2 TO MOVE FORWARD SHE HAS MOVED & UNEXPECTEDLY HIT VEH 2

Occurred on A1124 RAB ON ESSEX YEOMANRY WAY J/W OFFSLIP FROM A12 JTN 27

Vehicle Reference 1 Car Going ahead but held up
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 57 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Back Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 43 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 43 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

126610708 12/07/2008 Time 2020 Vehicles 2 Casualties 2 Slight
 E: 94,754 N: 125,066 First Road: A 12 Road Type 1
 Speed limit: 30 Junction Detail: Roundabout Give way or controlled A 1124
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight: no street lighting Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Very Likely
2nd: Sudden braking	Vehicle 1	Possible
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEHICLE 2 WAS STOPPED WAITING TO ENTER ROUNDABOUT. VEHICLE 1 APPROACHED ROUNDABOUT BEHIND VEHICLE 2. VEHICLE 1 COLLIDED WITH VEHICLE 2.

Occurred on A12 STANWAY SLIP ROAD J/W A12

Vehicle Reference 1 Car Stopping
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver Male
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from Park to Parked No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Back Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 46 Male
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 46 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Casualty Reference: 2 Vehicle: 2 Age: Female Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Front seat

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

125670708 14/07/2008 Time 2040 Vehicles 1 Casualties 1 Slight
 E:95,128 N: 24,697 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: Not within 20m of junction
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Other	Vehicle 1	Very Likely
2nd:		
3rd:		
4th:		
5th:		
6th:		
Other Cause: CHAIN LOCK ON REAR WHEEL FAULTY	Precipitating Factor:	

DRIVER OF VEH 1 TRAVELLING ALONG TOLLGATE WEST TOWARDS THE DIRECTION OF MARKS TEY.THE VEH's CHAIN HAS LOCKED IN PLACE & THE DRIVER HAS LOST CONTROL HE HAS SKIDDED ALONG THE ROAD & COME TO A STOP ON GRASS VERGE

Occurred on TOLLGATE WEST APPROX 30m FROM J/W B1408 LONDON ROAD

Vehicle Reference 1 Car Going ahead right bend
 Vehicle movement from SE to NW No tow / articulation
 On main carriageway Skidded and overturned
 Location at impact Not at, or within 20M of Jct First impact Did not impact Hit vehicle:
 Hit object in road None Off road: None
 Nearside Age of Driver 26 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 26 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

126970708 27/07/2008 Time 0305 Vehicles 2 Casualties 2 Slight
 E: 95,198 N: 124,748 First Road: A 1124 Road Type Single carriageway
 Speed limit: 30 Junction Detail: Roundabout Give way or controlled B 1308
 Crossing: Control None Facilities: Pelican, puffin, toucan etc. Road surface Dry
 Darkness: street lights present and lit Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Aggressive driving	Vehicle 1	Very Likely
2nd:		
3rd:		
4th:		
5th:		
6th:		
Other Cause:	Precipitating Factor:	

VEHICLES 1 AND 2 TRAVELLING WEST ALONG A1124. VEHICLE 2 IN FRONT OF VEHICLE 1. VEHICLE 1 OVERTAKES VEHICLE 2 AND PULLS IN SHARPLY COLLIDING WITH VEHICLE 2 CAUSING VEHICLE 2 TO LEAVE ROAD OFFSIDE COLLIDING WITH BRICK WALL AND LAMP POST.

Occurred on A1124 LONDON ROAD, 15 METERS EAST ROUNDABOUT B1408 AND ESSEX YEOMANRY WAY.

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Jct Approach First impact Nearside Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver Not traced
 Hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Vehicle Reference 2 Taxi/Private hire car Going ahead other
 Vehicle movement from S to N No tow / articulation
 On main carriageway Skidded
 Location at impact Jct Approach First impact Front Hit vehicle: 1
 Hit object in road None Off road: Oth perm objects
 O/S Age of Driver 35 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 35 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt
 Casualty Reference: 2 Vehicle: 2 Age: 24 Male Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Front seat

Accidents between dates **01/04/2004 and 31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

130870808 03/08/2008 Time 2014 Vehicles 1 Casualties 1 Slight
 E:94,700 N: 125,091 First Road: A 12 Road Type Dual carriageway
 Speed limit: 70 Junction Detail: Not within 20m of junction Not applicable
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Darkness: no street lighting Raining without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Slippery road (due to weather)	Vehicle 1	Very Likely
2nd:		
3rd:		
4th:		
5th:		
6th:		
Other Cause:	Precipitating Factor:	

VEH 1 TRAVELLING A12 TOWARDS LONDON IN LANE ONE OF TWO.VEH 1 LOST CONTROL TO NEARSIDE COLLIDED WITH NEARSIDE VERGE & ROLLED OVER

Occurred on A12 LONDON BOUND UNDERNEATH J/W A1124

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from E to W No tow / articulation
 On main carriageway Skidded and overturned
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
 Hit object in road None Off road: Oth perm objects
 Nearside Age of Driver 59 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 59 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

I33500908 18/09/2008 Time 0742 Vehicles 2 Casualties 1 Slight
 E:94,591 N: 125,125 First Road: A 12 Road Type Slip road
 Speed limit: 70 Junction Detail: Not within 20m of junction Not applicable
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight: no street lighting Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Possible
2nd: Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd: Sudden braking	Vehicle 1	Very Likely
4th: Careless/Reckless/In a hurry	Vehicle 1	Very Likely
5th:		
6th:		
Other Cause:	Precipitating Factor:	

VEHICLE 1 AND 2 TRAVELLING ON SLIP ROAD IN LANE 2 AND APPROACHING ROUNDABOUT. VEHICLE 1 STOPS DUE TO STATIONARY TRAFFIC IN FRONT. VEHICLE 2 SKIDS IN TO THE REAR OF VEHICLE 1.

Occurred on A12 OFFSLIP, IPSWICH BOUND TRACK, STANWAY APPROX 50 YARDS WEST J/W A1124 HALSTE

Vehicle Reference 1 Car Stopping
 Vehicle movement from W to E No tow / articulation
 On main carriageway Skidded
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 19 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Stopping
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 39 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 11 Female Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Front seat

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection: Notes:
Selected using Build Query : Stanway, Colchester

I35821008 09/10/2008 Time 1720 Vehicles 2 Casualties 1 Slight
 E:95,225 N:123,913 First Road: U Road Type 1
 Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Aggressive driving	Vehicle 1	Very Likely
2nd: Illness or disability, mental or physical	Vehicle 2	Possible
3rd:		
4th:		
5th:		
6th:		
Other Cause:	Precipitating Factor:	

VEH 1 ENTERING MINI ROUNDABOUT FROM PEARTREE ROAD.VEH 2 ENTERING ROUNDABOUT FROM CHURCH LANE.COLLISION OCCURS BETWEEN FRONT NEARSIDE VEH 1 & FRONT OFFSIDE VEH 2 IN CENTRE OF ROUNDABOUT

Occurred on VILLA ROAD RAB AT J/W PEARTREE ROAD & CHURCH LANE

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from N to S No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 19 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Vehicle Reference 2 Car Turning right
 Vehicle movement from E to N No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or r First impact Offside Hit vehicle: 1
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 78 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 78 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates **01/04/2004** and **31/03/2009** (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

I01080109 15/01/2009 Time 2236 Vehicles 1 Casualties 1 Slight
 E:95,168 N: 123,606 First Road: U Road Type Single carriageway
 Speed limit: 30 Junction Detail: Not within 20m of junction Not applicable
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Darkness: no street lighting Fine without high winds
 Special Conditions at Site None Carriageway Hazards: Other object in carriageway
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Poor turn or manoeuvre	Vehicle 1	Very Likely
2nd: Loss of control	Vehicle 1	Very Likely
3rd: Travelling too fast for conditions	Vehicle 1	
4th:		
5th:		
6th:		
Other Cause:	Precipitating Factor:	

VEH TRAVELLING TOWARDS STANWAY UPON NEGOTIATING RIGHT HAND BEND LOSES CONTROL EXITING CARRIAGEWAY TO ITS NEARSIDE HITTING TREES COMING TO A HALT IN THE CARRIAGEWAY.

Occurred on WARREN LANE 500 YRDS NORTH J/W DYERS ROAD

Vehicle Reference 1 Car Going ahead right bend
 Vehicle movement from S to NE No tow / articulation
 On main carriageway Skidded
 Location at impact Not at, or within 20M of Jct First impact Nearside Hit vehicle:
 Hit object in road None Off road: Tree
 Nearside Age of Driver 19 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 18 Male Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Front seat

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

I03690109 30/01/2009 Time 0530 Vehicles 2 Casualties 1 Slight
 E: 95,071 N: 124,745 First Road: A 1124 Road Type 1
 Speed limit: 30 Junction Detail: Roundabout Give way or controlled Unclassified
 Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
 Darkness: street lights present and lit Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Possible
2nd:		
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 2 ENTERED R/A FROM LONDON RD TRAVELLING WEST. VEH 1 ENTERED R/A FROM TOLLGATE RD AND COLLIDED WITH REAR WHEEL OF VEH 2 RIDER OF VEH 2 WAS THROWN. BOTH PARTIES EXCHANGED TEL NUMBERS, VEH 1 DROVE RIDER OF VEH 2 HOME. DRIVER 1 FAILED TO CONTACT OR ANSWER HIS PHONE.

Occurred on R/A JNT LONDON RD AND TOLLGATE RD

Vehicle Reference 1 Car Going ahead other
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Front Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver Male
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Vehicle Reference 2 Pedal Cycle Going ahead other
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Entering roundabout First impact Nearside Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 40 Male
 Not hit and run Breath test Driver not contacted
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 40 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

I03450209 03/02/2009 Time 1245 Vehicles 3 Casualties 1 Slight
 E:95,811 N: 123,718 First Road: U Road Type Dual carriageway
 Speed limit: 30 Junction Detail: Not within 20m of junction
 Crossing: Control None Facilities: Pelican, puffin, toucan etc. Road surface Wet/Damp
 Daylight: no street lighting Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Poor turn or manoevre	Vehicle 1	Very Likely
2nd:	Failed to look properly	Vehicle 1	Very Likely
3rd:	Loss of control	Vehicle 1	Possible
4th:	Nervous/Uncertain/Panic	Vehicle 1	Possible
5th:	Careless/Reckless/In a hurry	Vehicle 1	Very Likely
6th:	Poor turn or manoevre	Vehicle 3	Possible

VEH 2 WAS STATIC AT A/C VEH 1 REVERSED AT SPEED DUE TO A LORRY REVERSING INTO A JUNCTION SLOWLY THAT WAS GETTING CLOSE TO HER VEH.
 DETAILS EXCHANGED , PASSENGER IN VEH 2 HAS WHIPLASH. LORRY RECORDED AS VEH 3 ON T28U SHEET.

Occurred on PEARTREE RD, J/W WINSTREE RD 25YRDS

Vehicle Reference 1 Car Reversing
 Vehicle movement from E to W No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 25 Female
 Not hit and run Breath test Not requested
 Driver Postcode: VRM:

Vehicle Reference 2 Car Going ahead but held up
 Vehicle movement from Park to Parked No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 19 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 2 Age: 17 Female Passenger Severity: Slight
 Not a pupil Postcode Seatbelt
 Front seat

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
Selection: Notes:
Selected using Build Query : Stanway, Colchester
Vehicle Reference 3 Goods 7.5 tonnes mgw and over Reversing
Vehicle movement from E to W No tow / articulation
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Did not impact Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 40 Male
Not hit and run Breath test Negative
Driver Postcode: VRM:

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

107380309 11/03/2009 Time 1442 Vehicles 2 Casualties 1 Slight
 E:94,643 N: 25,139 First Road: A 12 Road Type 1
 Speed limit: 70 Junction Detail: Roundabout Give way or controlled A 1124
 Crossing: Control None Facilities: None within 50m Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Poor turn or manoeuvre	Vehicle 1	Very Likely
2nd: Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEH 2 HAVEING ENTERD FROM A12 LONDON TRACK WAS GOING AROUND R/A ABOVE A12 TO REGAIN AT A12 IPSWICH TRACK. VEH 1 CAME UP BEHIND VEH 2 AND AS IT GOES TO PAST 3RD JCT VEH 1 ATTEMPTS TO PASS ON ITS OFFSIDE AND GO INTO JCT 3. VEH 1 HITS VEH 2 IN REAR OFFS IDE DOOR.

Occurred on A1124 CHERRY TREE R/A AT 8 ASH GREEN OFF SLIP

Vehicle Reference 1 Motorcycle over 500cc Overtaking moving vehicle O/S
 Vehicle movement from S to N No tow / articulation
 On main carriageway Skidded
 Location at impact Mid Junction - on roundabout or r First impact Nearside Hit vehicle: 2
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 29 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 29 Female Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Vehicle Reference 2 Car Going ahead right bend
 Vehicle movement from S to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Mid Junction - on roundabout or r First impact Offside Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 44 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Accidents between dates 01/04/2004 and 31/03/2009 (60) months
 Selection: Notes:
 Selected using Build Query : Stanway, Colchester

I08490309 22/03/2009 Time 1330 Vehicles 2 Casualties 1 Slight
 E:95,089 N: 124,720 First Road: A 1124 Road Type Single carriageway
 Speed limit: 30 Junction Detail: Roundabout Give way or controlled A 1124
 Crossing: Control None Facilities: Zebra crossing Road surface Dry
 Daylight:street lights present Fine without high winds
 Special Conditions at Site None Carriageway Hazards: None
 Place accident reported: At scene DfT Special Projects:

Causation

Factor:	Participant:	Confidence:
1st: Failed to look properly	Vehicle 1	Very Likely
2nd: Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd:		
4th:		
5th:		
6th:		

Other Cause: Precipitating Factor:

VEHS 1 AND 2 ENTER LONDON ROAD FROM ESSEX YEOMANRY WAY TOWARD COLCHESTER TOWN CENTRE. VEH 2 IS AHEAD OF VEH 1. VEH 2 STOPS AT ZEBRA CROSSING TO ALLOW PEDESTRIAN TO CROSS FROM NEAR SIDE. VEH 1 CHANGES LANE. LOCKS BRAKES AND FALLS FROM MACHINE. RIDE 1 IS IN COLLISION WITH VEH 2. NO CONTACT BETWEEN VEHICLES.

Occurred on LONDON ROAD AT ROUNDABOUT J/W ESSEX YEOMANRY WAY

Vehicle Reference 1 Motorcycle over 500cc Going ahead left bend
 Vehicle movement from W to E No tow / articulation
 On main carriageway Skidded
 Location at impact Leaving roundabout First impact Did not impact Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 44 Male
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Casualty Reference: 1 Vehicle: 1 Age: 44 Male Driver/rider Severity: Slight
 Not a pupil Postcode Seatbelt

Vehicle Reference 2 Car Going ahead left bend
 Vehicle movement from W to E No tow / articulation
 On main carriageway No skidding, jack-knifing or overturning
 Location at impact Leaving roundabout First impact Did not impact Hit vehicle:
 Hit object in road None Off road: None
 Did not leave carr Age of Driver 25 Female
 Not hit and run Breath test Negative
 Driver Postcode: VRM:

Accidents between dates 01/04/2004 and 31/03/2009 (60) months

Selection:

Notes:

Selected using Build Query :

Stanway, Colchester

Accidents involving:

Casualties:

	Fatal	Serious	Slight	Total
Motor vehicles only (excluding 2-wheels)	0	9	64	73
2-wheeled motor vehicles	0	3	10	13
Pedal cycles	0	3	3	6
Horses & other	0	0	0	0
Total	0	14	77	91

	Fatal	Serious	Slight	Total
Vehicle driver	0	5	61	66
Passenger	0	6	30	36
Motorcycle rider	0	3	10	13
Cyclist	0	2	3	5
Pedestrian	0	3	2	5
Other	0	0	0	0
Total	0	19	106	125

Appendix B

Outline Residential Travel Plan

1.0 INTRODUCTION

- 1.1 Hills Residential is currently seeking the allocation of land at the Fiveways Fruit Farm site at Stanway, Colchester, for residential development in the Site Allocation Development Plan Document (DPD) currently being prepared as part of the emerging Local Development Framework (LDF) by the local planning authority, Colchester Borough Council (CBC).
- 1.1 This Outline Residential Travel Plan (RTP) has been prepared in accordance with guidance set out in *Residential Travel Plans: Making Them Work* published by the Department for Transport (DfT). Its aim is to meet objectives of the local highway authority, Essex County Council (ECC), the local planning authority, Colchester Borough Council (CBC), and the Highways Agency (HA) as highway authority for the A12 which forms part of the Strategic Road Network (SRN).
- 1.2 The aim of the RTP is to reduce car use, in particular single occupancy car trips, by promoting and facilitating the use of alternative modes of travel such as walking, cycling and public transport, amongst residents of the proposed development.
- 1.3 The RTP comprises a package of both "hard" and "soft" measures as both "sticks" and "carrots" to deter car use and encourage the use of other modes.
- 1.4 A Transport Assessment (TA) has also been prepared for submission with the application, and should be read in conjunction with this document in order to provide a fuller description of the development proposal, its accessibility by all modes of travel, and expected weekday peak hour trip generation by each mode.

- 1.5 The site is located within a 10-minute walk of a range of convenience shops on Blackberry Road and Peartree Road. There are also a number of schools (two primaries and one secondary) and leisure and community facilities in the area, all within easy walking and cycling distance of the site.
- 1.6 There are footways along both sides of all roads in the vicinity of the site, apart from Heath Road and Dyers Road which have a footway on one side only.
- 1.7 There are zebra crossings on Blackberry Road between the Dyers Road and Winstree Road/Heath Road junctions, and further west outside the neighbourhood shops. There is also a Toucan crossing on Peartree Road to the east.
- 1.8 There are a number of cycle routes in the vicinity of the site which provide links to the network within Colchester.
- 1.9 The site lies close to bus stops served by routes operating at up to a 10-minute service frequency which provide links to the town centre, North station and retail and employment areas in the town.
- 1.10 Following this introduction, the remainder of this report is structured as follows: -
- **Section 2.0** outlines the proposed development; and
 - **Section 3.0** contains details of the Draft Plan.

2.0 THE PROPOSED DEVELOPMENT

- 2.1 An allocation for up to around 600 residential units is being sought, to be developed in two phases of 400 and 200 units respectively.
- 3.2 At present the mix of dwelling types is not known but the density is relatively low at approximately 35 – 40 dph.

Access

- 2.2 Two accesses are proposed, both on Dyer's Road. The form and layout of these has not been determined at this stage as agreed with ECC, and would be decided following submission of an application. The accesses could be either priority T-junctions or 3-arm mini roundabouts (as proposed by WSP for the Dyers Road access to the Taylor Wimpey development site) located at appropriate spacings from existing junctions and designed to accommodate the size of refuse vehicles used in Colchester, pantechinons and buses.
- 2.3 It is intended that Heath Road would be stopped-up at its junction with Blackberry Road/Peartree Road so that the existing crossroads becomes a T-junction, with a new link road from the north end of the former through the site to join Dyers Road as the minor arm of another priority T-junction. This will provide a highway safety benefit by removing a priority crossroads, widely considered to be the least safe form of junction.
- 2.4 It is proposed that a new footway would be provided on the south side of Dyers Road along the frontage of the site to be developed. There is also scope for the existing 30mph limit to be extended to the south west, possibly as far as the Warren Lane junction.

Parking

- 3.3 The level of on site parking provision for cars, motorcycles and pedal cycles would be determined when any future planning application was made following allocation of the site in accordance with the appropriate standards in place at that time.

Improved bus services

- 3.4 Fiveways is located at the western end of the 65 route, which runs on a 10-minute frequency throughout the daytime on weekdays and Saturdays, reduced to half-hourly in the evenings and all day on Sundays. There is scope to extend the route into the development, also serving the TW site, which would probably require an additional bus to operate the existing daytime service frequency.

3.0 THE TRAVEL PLAN

3.1 The DfT guidance sets out the concept of the "Travel Plan Pyramid", which comprises five elements as follows: -

- Promotional Strategy;
- Services and Facilities;
- Co-ordinator;
- Built Environment; and
- Location.

Promotional Strategy

Residential Travel Packs

3.2 In accordance with current ECC policy it is anticipated that all new households would be issued with Travel Packs upon first occupation, providing details of local public transport services and cycle routes, with replacement bus timetables issued whenever they are revised. Each Pack would contain vouchers redeemable for season tickets for free bus travel in the town for a designated period (currently one year) for all occupants of each household (including children). Packs would be issued by the Sales Office on site to all new occupiers.

Services and Facilities

Pedestrian facilities

3.3 Besides the two proposed vehicle accesses on the Dyers Road frontage of the site, other pedestrian accesses are proposed elsewhere along Dyers Road and on Heath Road and Blackberry Road in order to maximise permeability with existing development in

the surrounding area. It is envisaged that a new footway would be provided on Dyers Road along the frontage of the site.

Cycling

- 3.4 There will be linkage with the existing advisory cycle routes running alongside two sides of the site on Dyers Road and Heath Road which in turn link into the wider network within Colchester.
- 3.5 Secure covered on-site cycle parking for all units without garages will be provided in accordance with the adopted standards= at the time that an application is made.

Bus Stops

- 3.6 The existing bus stops nearest to the site on Peartree Road and Blackberry Road (as shown at **Figure 6**) will be upgraded with new high quality shelters with seating and route/timetable information.
- 3.7 New high quality stops will also be provided within the development itself in conjunction, which it is intended will be served by a diversion of the existing 65 route.

Co-ordinator

- 3.8 Following completion of the development, annual travel monitoring will be undertaken by the management company for a five year period. This will include questionnaire surveys to identify residents' normal and occasional main modes of travel to and from work. The results will be compared to the target modal split based on Census Travel to Work data amongst existing residents of Stanway Ward (Colchester Middle Output Area 012) set out in the TA. This gives the following split by main (not initial/final) mode for trips to/from work: -

- Car driver: 68%;
- Motor cycle: 1%;
- Car passenger: 7%;
- Bus: 6%;
- National Rail: 7%;
- Pedal cycle: 2%; and
- Walking: 7%.

3.9 In the event of the car driver mode share target being exceeded, there will be a period of six months during which the developer will be required to implement additional measures to reduce car use, at the end of which additional surveys will be undertaken to establish if these have been successful in achieving the targets.

Built Environment

Car Parking

3.10 The level of of-street car parking provision within the development will be in accordance with the adopted standard required when an application is made.

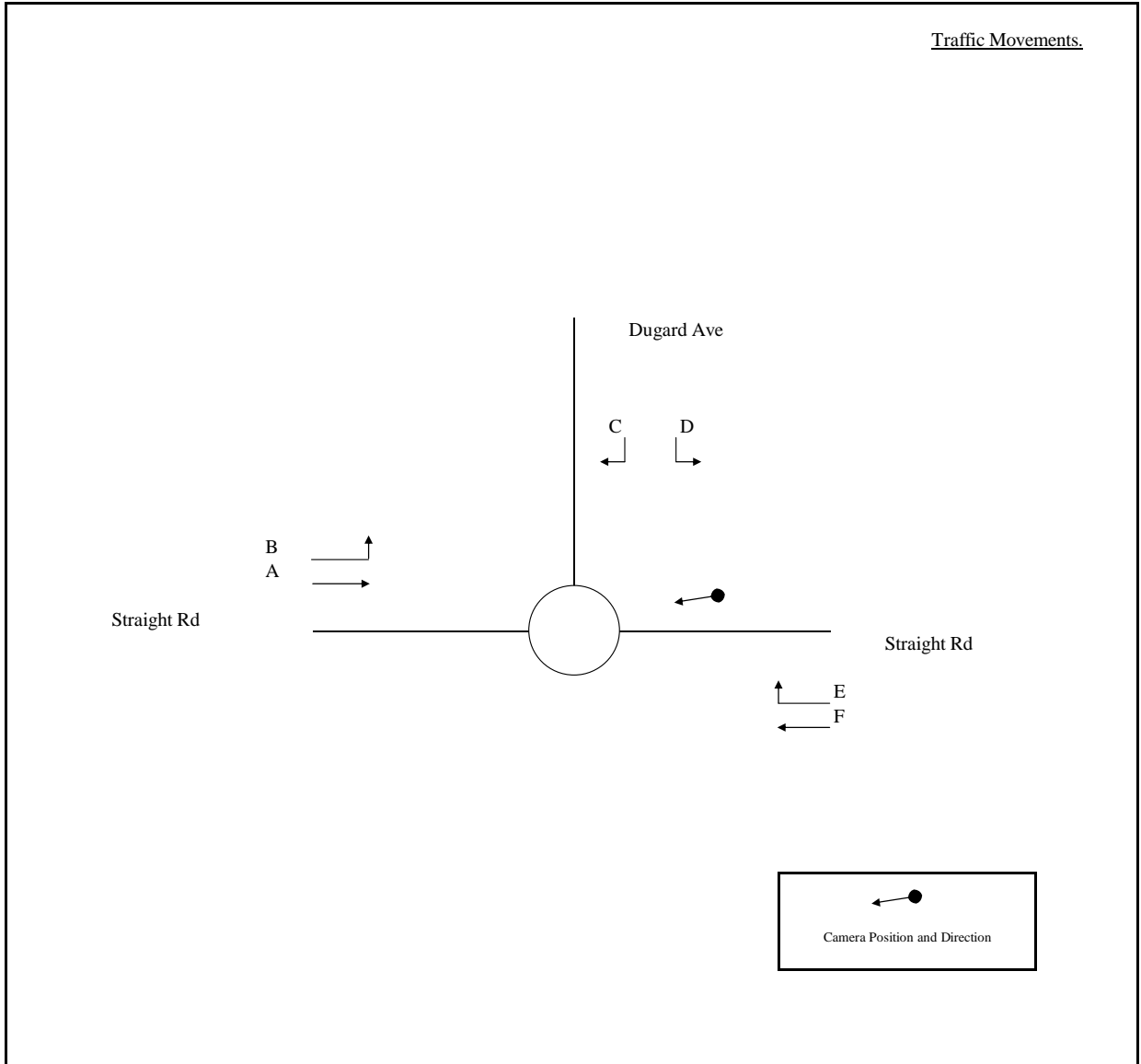
Location

3.11 In addition, pedestrian, cycle and emergency vehicle accesses will be provided from Dyers Road, Blackberry Road and Heath Road. These will provide linkage to the surrounding nearby existing development, including services such as shops, schools and leisure and community facilities, and to bus stops, and so maximise permeability and encourage walking, cycling and use of public transport.

Appendix C

Census data

Traffic Movements.



Job: **Traffic Survey - Colchester, Essex.**
 Junction 1: **Straight Rd/Dugard Ave.**

**Transportation
 Survey
 Services**

Day: **Thursday**

Date: **30/04/2009**

	Movement A					Movement B					Movement C				
	Cars	LGV	MGV	HGV	PSV	Cars	LGV	MGV	HGV	PSV	Cars	LGV	MGV	HGV	PSV
7.30	38	4	4	0	2	70	22	1	0	0	29	18	0	0	0
7.45	39	10	4	1	1	101	24	3	0	0	56	14	4	0	0
Hr Total	77	14	8	1	3	171	46	4	0	0	85	32	4	0	0
8.00	54	6	1	0	2	73	13	2	0	1	59	10	5	0	0
8.15	42	10	4	1	0	97	14	2	0	0	86	10	3	0	1
8.30	67	8	3	4	1	88	11	1	0	0	87	8	1	1	1
8.45	91	11	0	1	0	90	10	1	0	0	79	10	1	0	0
Hr Total	254	35	8	6	3	348	48	6	0	1	311	38	10	1	2
9.00	53	8	3	1	1	95	6	1	0	0	67	6	1	1	0
9.15	44	2	2	2	3	68	10	2	0	0	50	11	3	0	1
Hr Total	97	10	5	3	4	163	16	3	0	0	117	17	4	1	1

16.30	54	8	1	0	3	69	13	0	0	0	74	10	1	0	0
16.45	48	3	3	0	2	75	14	1	0	0	89	17	0	0	0
Hr Total	102	11	4	0	5	144	27	1	0	0	163	27	1	0	0
17.00	53	14	1	0	1	95	7	0	0	0	106	25	1	0	0
17.15	60	5	0	0	1	97	8	1	0	0	106	18	1	0	0
17.30	63	6	0	0	1	80	6	0	0	0	120	20	0	0	0
17.45	54	5	0	0	1	59	4	0	0	0	114	17	1	0	0
Hr Total	230	30	1	0	4	331	25	1	0	0	446	80	3	0	0
18.00	60	7	1	0	2	73	6	0	0	0	122	9	1	0	0
18.15	51	9	0	0	2	70	3	1	0	0	99	9	0	0	0
Hr Total	111	16	1	0	4	143	9	1	0	0	221	18	1	0	0

Job: **Traffic Survey - Colchester, Essex.**
 Junction 1: **Straight Rd/Dugard Ave.**

**Transportation
 Survey
 Services**

Day: **Thursday**

Date: **30/04/2009**

	Movement D					Movement E					Movement F				
	Cars	LGV	MGV	HGV	PSV	Cars	LGV	MGV	HGV	PSV	Cars	LGV	MGV	HGV	PSV
7.30	18	4	0	1	0	20	3	1	0	0	33	12	2	1	2
7.45	12	5	1	0	0	33	10	1	0	0	53	12	3	3	0
Hr Total	30	9	1	1	0	53	13	2	0	0	86	24	5	4	2
8.00	40	4	1	0	0	42	10	0	0	0	50	9	0	2	0
8.15	39	4	0	0	0	55	4	0	1	0	43	10	4	1	0
8.30	43	5	2	0	0	54	7	0	0	0	54	11	3	2	1
8.45	21	5	1	0	0	57	4	2	0	0	89	11	0	1	0
Hr Total	143	18	4	0	0	208	25	2	1	0	236	41	7	6	1
9.00	29	5	1	0	0	49	6	0	0	0	48	10	1	1	0
9.15	35	4	3	0	0	36	8	3	0	0	50	10	2	3	0
Hr Total	64	9	4	0	0	85	14	3	0	0	98	20	3	4	0

16.30	38	1	0	0	0	44	6	0	0	0	64	7	5	0	0
16.45	35	5	0	0	0	43	9	0	0	0	74	3	2	0	0
Hr Total	73	6	0	0	0	87	15	0	0	0	138	10	7	0	0
17.00	43	9	1	0	0	36	5	0	0	0	80	10	3	0	0
17.15	41	3	0	0	0	39	3	0	0	0	72	3	3	0	0
17.30	43	4	0	0	0	44	6	0	0	0	50	6	3	0	0
17.45	42	4	0	0	0	40	2	0	0	0	66	10	2	0	0
Hr Total	169	20	1	0	0	159	16	0	0	0	268	29	11	0	0
18.00	22	2	0	0	0	28	4	0	0	0	53	10	0	0	0
18.15	47	3	0	0	0	41	1	0	0	0	69	6	0	0	0
Hr Total	69	5	0	0	0	69	5	0	0	0	122	16	0	0	0

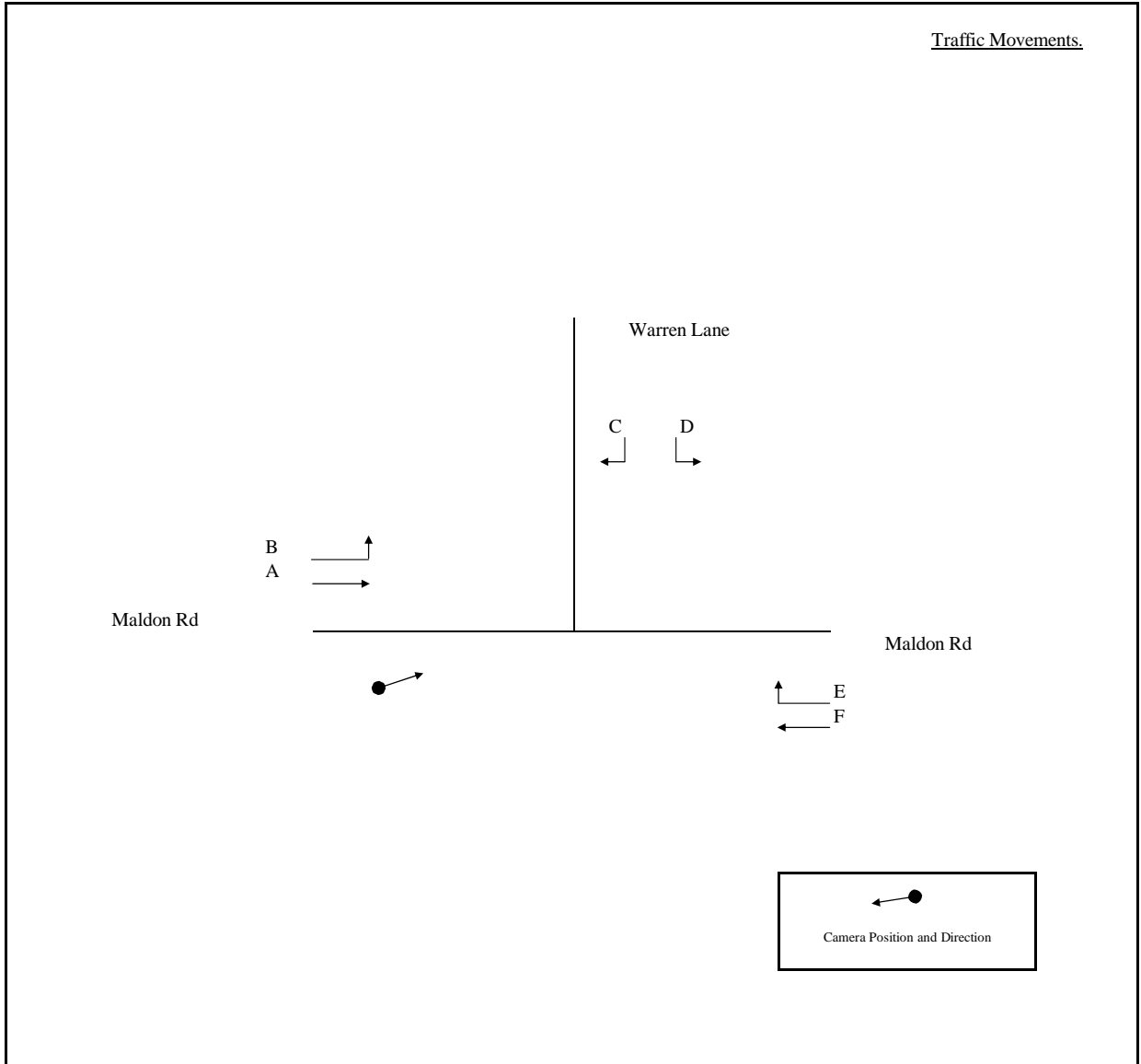
Job: **Traffic Survey - Colchester, Essex.**
 Junction 1: **Straight Rd/Dugard Ave.**
 Day: **Thursday** Date: **30/04/2009**

**Transportation
 Survey
 Services**

	Arm AB	Arm CD	Arm EF
7.30	0	0	2
7.35	0	0	0
7.40	0	1	0
7.45	0	5	2
7.50	0	0	5
7.55	0	1	2
8.00	0	1	2
8.05	1	2	6
8.10	0	0	3
8.15	1	4	0
8.20	0	6	4
8.25	0	2	2
8.30	0	0	0
8.35	0	7	5
8.40	5	8	5
8.45	2	0	5
8.50	2	8	0
8.55	0	7	5
9.00	0	6	4
9.05	0	5	4
9.10	0	5	5
9.15	0	4	4
9.20	0	7	3
9.25	0	0	5

	Arm AB	Arm CD	Arm EF
16.30	3	5	3
16.35	3	3	3
16.40	2	0	4
16.45	2	2	4
16.50	2	4	7
16.55	3	4	7
17.00	2	5	5
17.05	5	4	7
17.10	4	8	7
17.15	2	3	4
17.20	0	2	2
17.25	0	2	2
17.30	2	3	4
17.35	2	4	4
17.40	2	4	4
17.45	2	5	7
17.50	0	8	5
17.55	0	6	4
18.00	0	11	4
18.05	2	3	4
18.10	1	3	3
18.15	1	6	10
18.20	1	4	6
18.25	1	4	4

Traffic Movements.



Job: **Traffic Survey - Colchester, Essex.**
 Junction 2: **Maldon Rd/Warren Lane.**

**Transportation
 Survey
 Services**

Day: **Thursday**

Date: **30/04/2009**

	Movement A					Movement B					Movement C				
	Cars	LGV	MGV	HGV	PSV	Cars	LGV	MGV	HGV	PSV	Cars	LGV	MGV	HGV	PSV
7.30	40	5	2	0	0	37	6	1	0	0	29	12	0	0	0
7.45	72	12	1	0	0	49	7	4	1	0	30	9	0	1	0
Hr Total	112	17	3	0	0	86	13	5	1	0	59	21	0	1	0
8.00	100	6	4	1	2	63	5	2	1	0	25	8	0	0	0
8.15	91	7	0	0	0	75	6	1	4	1	41	9	0	1	0
8.30	76	5	1	0	2	65	6	0	1	0	31	8	0	0	0
8.45	48	8	2	1	0	55	4	1	1	0	50	1	0	1	0
Hr Total	315	26	7	2	4	258	21	4	7	1	147	26	0	2	0
9.00	45	4	1	0	0	53	3	1	0	0	26	4	2	2	0
9.15	45	7	1	0	1	46	2	2	0	0	26	11	3	1	0
Hr Total	90	11	2	0	1	99	5	3	0	0	52	15	5	3	0

16.30	49	12	3	0	1	32	3	0	0	0	52	12	1	0	0
16.45	56	14	1	0	0	48	4	0	0	0	41	8	1	1	0
Hr Total	105	26	4	0	1	80	7	0	0	0	93	20	2	1	0
17.00	68	8	3	1	1	60	9	1	0	0	36	1	0	1	0
17.15	54	8	4	0	1	63	4	0	2	0	62	6	0	0	0
17.30	62	8	0	0	0	61	8	0	0	0	53	8	1	0	0
17.45	74	9	1	0	1	54	5	1	0	0	54	4	0	0	0
Hr Total	258	33	8	1	3	238	26	2	2	0	205	19	1	1	0
18.00	64	5	1	0	0	43	1	0	0	0	54	5	0	0	0
18.15	47	3	0	0	1	37	7	0	0	0	40	3	0	0	0
Hr Total	111	8	1	0	1	80	8	0	0	0	94	8	0	0	0

Job: **Traffic Survey - Colchester, Essex.**
 Junction 2: **Maldon Rd/Warren Lane.**

**Transportation
 Survey
 Services**

Day: **Thursday**

Date: **30/04/2009**

	Movement D					Movement E					Movement F				
	Cars	LGV	MGV	HGV	PSV	Cars	LGV	MGV	HGV	PSV	Cars	LGV	MGV	HGV	PSV
7.30	25	6	2	1	0	36	5	2	0	0	56	12	4	0	1
7.45	37	12	0	3	0	45	13	1	1	0	72	15	2	1	0
Hr Total	62	18	2	4	0	81	18	3	1	0	128	27	6	1	1
8.00	30	5	2	2	0	40	5	0	0	0	87	2	3	0	1
8.15	43	12	2	2	0	46	8	3	0	0	52	9	1	0	1
8.30	32	6	1	2	1	45	6	2	2	0	52	7	2	0	0
8.45	41	3	1	1	0	47	11	2	1	0	34	10	0	0	1
Hr Total	146	26	6	7	1	178	30	7	3	0	225	28	6	0	3
9.00	24	5	0	1	0	46	9	2	2	0	37	4	1	0	0
9.15	30	7	3	3	0	35	6	0	0	0	37	5	2	0	1
Hr Total	54	12	3	4	0	81	15	2	2	0	74	9	3	0	1

16.30	38	11	0	0	1	67	8	0	1	5	64	11	1	0	2
16.45	44	10	2	0	0	59	12	1	1	1	56	8	2	0	1
Hr Total	82	21	2	0	1	126	20	1	2	6	120	19	3	0	3
17.00	41	4	1	1	0	71	11	1	0	0	61	8	1	0	0
17.15	61	10	0	0	0	55	8	0	0	0	77	8	0	0	1
17.30	49	6	0	1	0	32	3	0	0	0	65	4	5	0	0
17.45	50	8	0	0	0	28	6	0	0	0	58	3	1	0	0
Hr Total	201	28	1	2	0	186	28	1	0	0	261	23	7	0	1
18.00	45	6	1	0	0	51	2	1	0	0	43	3	0	0	1
18.15	51	5	0	0	0	23	2	0	0	0	50	1	0	0	1
Hr Total	96	11	1	0	0	74	4	1	0	0	93	4	0	0	2

Job: **Traffic Survey - Colchester, Essex.**
 Junction 2: **Maldon Rd/Warren Lane.**
 Day: **Thursday** Date: **30/04/2009**

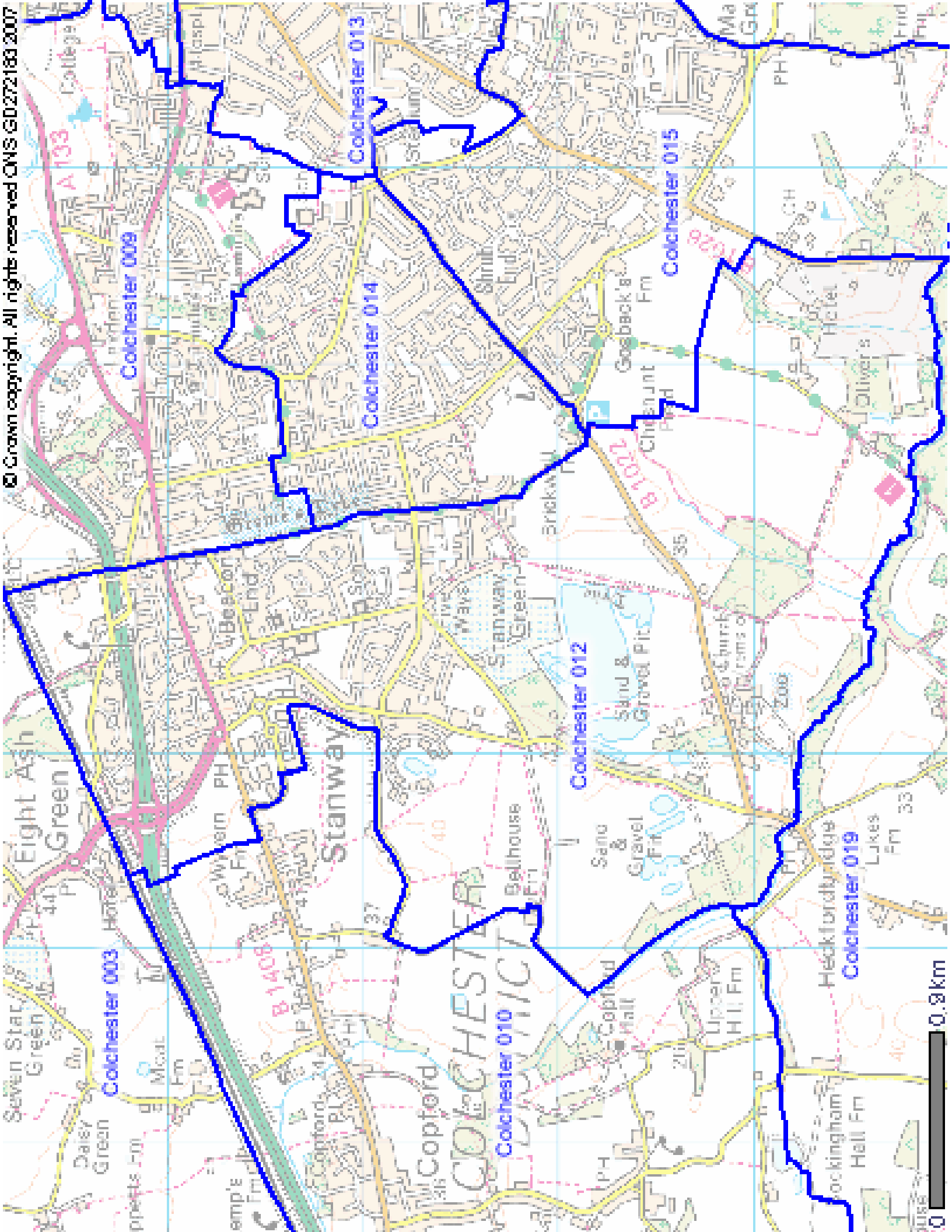
**Transportation
 Survey
 Services**

	Arm AB		Arm CD		Arm EF	
	Movement A	Movement B	Movement C	Movement D	Movement E	Movement F
7.30	na	0	0	0	0	na
7.35	na	0	0	0	0	na
7.40	na	0	0	0	0	na
7.45	na	0	0	0	0	na
7.50	na	0	0	0	0	na
7.55	na	3	8	0	4	na
8.00	na	0	0	0	0	na
8.05	na	0	0	0	0	na
8.10	na	0	0	0	0	na
8.15	na	0	0	0	0	na
8.20	na	0	4	0	6	na
8.25	na	0	6	0	0	na
8.30	na	0	0	0	0	na
8.35	na	0	0	0	0	na
8.40	na	0	0	0	0	na
8.45	na	0	8	0	0	na
8.50	na	0	8	0	0	na
8.55	na	0	8	0	0	na
9.00	na	0	0	0	0	na
9.05	na	0	0	0	0	na
9.10	na	0	0	0	0	na
9.15	na	0	0	0	0	na
9.20	na	0	8	0	0	na
9.25	na	0	4	0	0	na

	Arm AB		Arm CD		Arm EF	
	Movement A	Movement B	Movement C	Movement D	Movement E	Movement F
16.30	na	0	8	0	3	na
16.35	na	0	10	0	3	na
16.40	na	0	12	0	0	na
16.45	na	0	8	0	0	na
16.50	na	0	8	0	0	na
16.55	na	0	4	0	0	na
17.00	na	0	4	0	0	na
17.05	na	0	6	0	0	na
17.10	na	0	22	0	0	na
17.15	na	0	8	0	0	na
17.20	na	0	6	0	0	na
17.25	na	0	6	0	0	na
17.30	na	0	8	0	0	na
17.35	na	0	6	0	0	na
17.40	na	0	6	0	0	na
17.45	na	0	6	0	0	na
17.50	na	0	6	0	0	na
17.55	na	0	6	0	0	na
18.00	na	0	8	0	0	na
18.05	na	0	0	0	0	na
18.10	na	0	0	0	0	na
18.15	na	0	0	0	0	na
18.20	na	0	0	0	0	na
18.25	na	0	0	0	0	na

Appendix D

2009 Traffic Survey Results



DATASET_TITLE	Method of Travel to Work - Resident Population (UV39)							FROM	Apr-2001	Apr-2001	Apr-2001	Apr-2001	Apr-2001	Apr-2001	Apr-2001	Apr-2001	Apr-2001	Apr-2001	Apr-2001	Apr-2001	Apr-2001
AREA_TYPE	Super Output Area Middle Layer							TO	Apr-2001	Apr-2001	Apr-2001	Apr-2001	Apr-2001	Apr-2001	Apr-2001	Apr-2001	Apr-2001	Apr-2001	Apr-2001	Apr-2001	Apr-2001
GEO_HIERARCHY	NeSS Geography Hierarchy							HEADING	Works mainly at or from home		Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	scooter or moped	Bicycle	On foot	Other	Not currently working
GOR_CODE	GOR_NAME	CTY_CODE	CTY_NAME	LA_CODE	LA_NAME	MSOA_CODE	MSOA_NAME	MEASUREMENT_UNIT	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons
AREA_METADATA								STATISTICAL_UNIT	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons
DATA_VALUE								DATA_VALUE	DATA_VALUE	DATA_VALUE	DATA_VALUE	DATA_VALUE	DATA_VALUE	DATA_VALUE	DATA_VALUE	DATA_VALUE	DATA_VALUE	DATA_VALUE	DATA_VALUE	DATA_VALUE	DATA_VALUE
G	East of England	22	Essex	22UG	Colchester	E02004517	Colchester 012		5521	325	5	231	216	9	2362	237	44	140	227	14	1711
											0.1%	6.6%	6.2%	0.3%	67.8%	6.8%	1.3%	4.0%	6.5%	0.4%	

Origin Ward	Destination Ward	Local_Authority_Name	Car – driver: All people	Proportion of total	Assigned route
Stanway	Eastbrook	Barking and Dagenham	3	0.1%	A12 (west)
Stanway	Golders Green	Barnet	3	0.1%	A12 (west)
Stanway	Stonebridge	Brent	3	0.1%	A12 (west)
Stanway	Tokington	Brent	3	0.1%	A12 (west)
Stanway	Holborn and Covent Garden	Camden	3	0.1%	A12 (west)
Stanway	Regent's Park	Camden	3	0.1%	A12 (west)
Stanway	Southgate	Enfield	3	0.1%	A12 (west)
Stanway	Upper Edmonton	Enfield	3	0.1%	A12 (west)
Stanway	Haggerston	Hackney	3	0.1%	A12 (west)
Stanway	Harold Wood	Havering	3	0.1%	A12 (west)
Stanway	Mawneys	Havering	3	0.1%	A12 (west)
Stanway	Romford Town	Havering	4	0.2%	A12 (west)
Stanway	South Hornchurch	Havering	3	0.1%	A12 (west)
Stanway	Heathrow Villages	Hillingdon	3	0.1%	A12 (west)
Stanway	Bishop's	Lambeth	3	0.1%	A12 (west)
Stanway	Stratford and New Town	Newham	3	0.1%	A12 (west)
Stanway	West Ham	Newham	3	0.1%	A12 (west)
Stanway	Cranbrook	Redbridge	3	0.1%	A12 (west)
Stanway	Surrey Docks	Southwark	3	0.1%	A12 (west)
Stanway	Blackwall and Cubitt Town	Tower Hamlets	3	0.1%	A12 (west)
Stanway	Bow East	Tower Hamlets	4	0.2%	A12 (west)
Stanway	Millwall	Tower Hamlets	4	0.2%	A12 (west)
Stanway	St James's	Westminster	3	0.1%	A12 (west)
Stanway	Abercromby	Liverpool	3	0.1%	A12 (west)
Stanway	Beeston	Leeds	3	0.1%	A12 (west)
Stanway	Guildhall	York	3	0.1%	A12 (west)
Stanway	Victoria	Southend-on-Sea	4	0.2%	A12 (west)
Stanway	Grays Thurrock	Thurrock	3	0.1%	A12 (west)
Stanway	Tilbury Riverside and Thurrock Park	Thurrock	3	0.1%	A12 (west)
Stanway	West Thurrock and South Stifford	Thurrock	3	0.1%	A12 (west)
Stanway	Farnham	Slough	3	0.1%	A12 (west)
Stanway	Newtown	Chiltern	3	0.1%	A12 (west)
Stanway	Hambleton Valley	Wycombe	3	0.1%	A12 (west)
Stanway	Littleport East	East Cambridgeshire	3	0.1%	A12 (west)
Stanway	Huntingdon North	Huntingdonshire	3	0.1%	A12 (west)
Stanway	Dalston	Carlisle	3	0.1%	A12 (west)
Stanway	Fryerns	Basildon	4	0.2%	A12 (west)
Stanway	Lairdon Park	Basildon	6	0.3%	A12 (west)
Stanway	Bocking South	Braintree	26	1.1%	A12 (west)
Stanway	Bradwell, Silver End and Rivenhall	Braintree	9	0.4%	A12 (west)
Stanway	Braintree Central	Braintree	12	0.5%	A12 (west)
Stanway	Coggeshall and North Feering	Braintree	11	0.5%	A12 (west)
Stanway	Gosfield and Greenstead Green	Braintree	5	0.2%	A12 (west)
Stanway	Halstead St Andrew's	Braintree	11	0.5%	Halstead Road
Stanway	Kelvedon	Braintree	8	0.3%	A12 (west)
Stanway	Rayne	Braintree	3	0.1%	A12 (west)
Stanway	The Three Colnes	Braintree	18	0.8%	Halstead Road
Stanway	Three Fields	Braintree	3	0.1%	Halstead Road
Stanway	Witham Chipping Hill and Central	Braintree	43	1.8%	A12 (west)
Stanway	Witham South	Braintree	8	0.3%	A12 (west)
Stanway	Witham West	Braintree	3	0.1%	A12 (west)
Stanway	Brentwood North	Brentwood	3	0.1%	A12 (west)
Stanway	Brentwood West	Brentwood	3	0.1%	A12 (west)
Stanway	Warley	Brentwood	4	0.2%	A12 (west)
Stanway	Canvey Island South	Castle Point	3	0.1%	A12 (west)
Stanway	Canvey Island West	Castle Point	3	0.1%	A12 (west)
Stanway	Boreham and The Leighs	Chelmsford	5	0.2%	A12 (west)
Stanway	Broomfield and The Walthams	Chelmsford	7	0.3%	A12 (west)
Stanway	Chelmer Village and Beaulieu Park	Chelmsford	28	1.2%	A12 (west)
Stanway	Chelmsford Rural West	Chelmsford	3	0.1%	A12 (west)
Stanway	Marconi	Chelmsford	21	0.9%	A12 (west)
Stanway	Moulsham and Central	Chelmsford	39	1.7%	A12 (west)
Stanway	Patching Hall	Chelmsford	3	0.1%	A12 (west)
Stanway	South Hanningfield, Stock and Margaretting	Chelmsford	3	0.1%	A12 (west)
Stanway	The Lawns	Chelmsford	3	0.1%	A12 (west)
Stanway	Trinity	Chelmsford	16	0.7%	A12 (west)
Stanway	Waterhouse Farm	Chelmsford	17	0.7%	A12 (west)
Stanway	Berechurch	Colchester	12	0.5%	Straight Road north/Villa Road
Stanway	Birch and Winstree	Colchester	24	1.0%	Straight Road south/Maldon Road east
Stanway	Castle	Colchester	316	13.5%	Straight Road north/Villa Road
Stanway	Christ Church	Colchester	29	1.2%	Straight Road south/Maldon Road east
Stanway	Copford and West Stanway	Colchester	47	2.0%	B1408 London Road (west)
Stanway	Dedham and Langham	Colchester	7	0.3%	A12 (east)
Stanway	East Donyland	Colchester	3	0.1%	Straight Road north/Villa Road
Stanway	Fordham and Stour	Colchester	25	1.1%	Straight Road north/Villa Road
Stanway	Great Tey	Colchester	13	0.6%	Halstead Road
Stanway	Harbour	Colchester	44	1.9%	Straight Road south/Maldon Road east
Stanway	Highwoods	Colchester	112	4.8%	Straight Road north/Villa Road
Stanway	Lexden	Colchester	67	2.9%	Straight Road north/Villa Road
Stanway	Marks Tey	Colchester	26	1.1%	A12 (west)
Stanway	Mill End	Colchester	133	5.7%	Straight Road north/Villa Road
Stanway	New Town	Colchester	90	3.9%	Straight Road south/Maldon Road east
Stanway	Prettygate	Colchester	30	1.3%	Straight Road south/Maldon Road east
Stanway	Pyefleet	Colchester	4	0.2%	Straight Road south/Maldon Road east
Stanway	St Andrew's	Colchester	23	1.0%	Straight Road south/Maldon Road east
Stanway	St Anne's	Colchester	19	0.8%	Straight Road north/Villa Road
Stanway	St John's	Colchester	13	0.6%	Straight Road north/Villa Road
Stanway	Shrub End	Colchester	62	2.7%	Straight Road south/Maldon Road east
Stanway	Stanway	Colchester	418	17.9%	27% Winstree/42% Peartree/25% Tollgate W/5% Church La W
Stanway	Tiptree	Colchester	20	0.9%	Maldon Road (south/west)
Stanway	West Bergholt and Eight Ash Green	Colchester	16	0.7%	Halstead Road
Stanway	West Mersea	Colchester	9	0.4%	Straight Road south/Maldon Road east
Stanway	Wivenhoe Cross	Colchester	13	0.6%	Straight Road south/Maldon Road east
Stanway	Hastingwood, Matching and Sheering Village	Epping Forest	3	0.1%	A12 (west)
Stanway	Great Totham	Maldon	4	0.2%	Maldon Road (south/west)
Stanway	Heybridge East	Maldon	3	0.1%	Maldon Road (south/west)
Stanway	Heybridge West	Maldon	4	0.2%	Maldon Road (south/west)
Stanway	Maldon North	Maldon	13	0.6%	Maldon Road (south/west)
Stanway	Tollesbury	Maldon	3	0.1%	Maldon Road (south/west)
Stanway	Tolleshunt D'Arcy	Maldon	7	0.3%	Maldon Road (south/west)
Stanway	Wickham Bishops and Woodham	Maldon	3	0.1%	Maldon Road (south/west)
Stanway	Wheatley	Rochford	3	0.1%	A12 (west)

Origin Ward	Destination Ward	Local_Authority_Name	Car – driver: All people	Proportion of total	Assigned route
Stanway	Alresford	Tendring	3	0.1%	A12 (east)
Stanway	Alton Park	Tendring	3	0.1%	A12 (east)
Stanway	Ardleigh and Little Bromley	Tendring	12	0.5%	A12 (east)
Stanway	Bockings Elm	Tendring	3	0.1%	A12 (east)
Stanway	Brightlingsea	Tendring	8	0.3%	A12 (east)
Stanway	Burrsville	Tendring	3	0.1%	A12 (east)
Stanway	Great Bentley	Tendring	9	0.4%	A12 (east)
Stanway	Hamford	Tendring	3	0.1%	A12 (east)
Stanway	Harwich East	Tendring	3	0.1%	A12 (east)
Stanway	Harwich East Central	Tendring	3	0.1%	A12 (east)
Stanway	Harwich West	Tendring	3	0.1%	A12 (east)
Stanway	Harwich West Central	Tendring	3	0.1%	A12 (east)
Stanway	Pier	Tendring	18	0.8%	A12 (east)
Stanway	Ramsey and Parkeston	Tendring	3	0.1%	A12 (east)
Stanway	St Pauls	Tendring	3	0.1%	A12 (east)
Stanway	Thorrington, Frating, Elmstead and Great Bromley	Tendring	9	0.4%	A12 (east)
Stanway	Great Dunmow North	Uttlesford	3	0.1%	A12 (west)
Stanway	Great Dunmow South	Uttlesford	4	0.2%	A12 (west)
Stanway	Saffron Walden Audley	Uttlesford	3	0.1%	A12 (west)
Stanway	Stansted North	Uttlesford	3	0.1%	A12 (west)
Stanway	Stansted South	Uttlesford	4	0.2%	A12 (west)
Stanway	Takeley and the Canfields	Uttlesford	13	0.6%	A12 (west)
Stanway	Adeyfield East	Dacorum	3	0.1%	A12 (west)
Stanway	Buntingford	East Hertfordshire	3	0.1%	A12 (west)
Stanway	Symonds Green	Stevenage	3	0.1%	A12 (west)
Stanway	Peartree	Welwyn Hatfield	3	0.1%	A12 (west)
Stanway	Alton	Babergh	3	0.1%	Straight Road north/Villa Road
Stanway	Brook	Babergh	4	0.2%	A12 (east)
Stanway	Bures St Mary	Babergh	3	0.1%	Halstead Road
Stanway	Hadleigh North	Babergh	3	0.1%	A12 (east)
Stanway	Mid Samford	Babergh	3	0.1%	A12 (east)
Stanway	Nayland	Babergh	7	0.3%	Straight Road north/Villa Road
Stanway	South Cosford	Babergh	3	0.1%	A12 (east)
Stanway	Sudbury East	Babergh	7	0.3%	Halstead Road
Stanway	Sudbury South	Babergh	5	0.2%	Halstead Road
Stanway	Alexandra	Ipswich	23	1.0%	A12 (east)
Stanway	Bridge	Ipswich	3	0.1%	A12 (east)
Stanway	Gipping	Ipswich	11	0.5%	A12 (east)
Stanway	Priory Heath	Ipswich	4	0.2%	A12 (east)
Stanway	Westgate	Ipswich	5	0.2%	A12 (east)
Stanway	Whitehouse	Ipswich	3	0.1%	A12 (east)
Stanway	Needham Market	Mid Suffolk	3	0.1%	A12 (east)
Stanway	Ringshall	Mid Suffolk	3	0.1%	A12 (east)
Stanway	Eastgate	St. Edmundsbury	3	0.1%	A12 (east)
Stanway	Fornham	St. Edmundsbury	3	0.1%	A12 (east)
Stanway	Haverhill South	St. Edmundsbury	3	0.1%	A12 (east)
Stanway	Felixstowe North	Suffolk Coastal	3	0.1%	A12 (east)
Stanway	Felixstowe South	Suffolk Coastal	3	0.1%	A12 (east)
Stanway	Felixstowe South East	Suffolk Coastal	3	0.1%	A12 (east)
Stanway	Felixstowe West	Suffolk Coastal	3	0.1%	A12 (east)
Stanway	Kesgrave East	Suffolk Coastal	3	0.1%	A12 (east)
Stanway	Martlesham	Suffolk Coastal	5	0.2%	A12 (east)
Stanway	Seckford	Suffolk Coastal	3	0.1%	A12 (east)
Stanway	Trimleys with Kirton	Suffolk Coastal	3	0.1%	A12 (east)
Stanway	Dorking North	Mole Valley	3	0.1%	A12 (west)
Stanway	Frimley	Surrey Heath	3	0.1%	A12 (west)
Stanway	Chichester East	Chichester	3	0.1%	A12 (west)
Stanway	Three Bridges	Crawley	3	0.1%	A12 (west)
Stanway	Outside of the UK	Outside of the UK	3	0.1%	A12 (west)

2335

Halstead Road	3.3%
A12 (north)	8.5%
A12 (south)	21.4%
sub-total via A1124 EYW	33.2%
London Road (east)	
London Road (west)	2.0%
sub-total via Tollgate Rd N	35.2%
Tollgate West	4.4%
sub-total via Tollgate Rd C	39.6%
Church Lane W	0.9%
sub-total via Tollgate Rd S	40.5%
Churchfields Avenue	
sub-total via Church La E	40.5%
Villa Road	
sub-total via Blackberry Road	40.5%
Wintree Road	5.0%
Heath Road	
Peartree Road/Dugard Avenue	52.0%
Straight Rd (north)/Villa Road	30.4%
Straight Road (south)/Maldon Road (east)	14.0%
Warren Lane (south)	2.4%
Maldon Road (south/west)	2.4%

TOTAL

100.0%

Appendix E

Results of PICADY capacity assessment: Blackberry Road/Dyers Road junction

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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IN NO WAY RELIEVED OF HIS/HER RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"Y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\PICADY\Blackberry-Dyers\
Blackberry-Dyers existing.vpi"
(drive-on-the-left) at 11:06:16 on Friday, 12 June 2009

.RUN INFORMATION

RUN TITLE : Blackberry Road/Dyers Road junction (existing layout)
LOCATION : Stanway
DATE : 18/05/09
CLIENT : Mersea Homes/Hills Residential
ENUMERATOR : mlast [ARDENT23]
JOB NUMBER : F960
STATUS :
DESCRIPTION :

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS Blackberry Road (east)
ARM B IS Dyers Road
ARM C IS Blackberry Road (west)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I (W)	6.00 M.	I
I	CENTRAL RESERVE WIDTH	I (WCR)	0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I (WC-B)	2.20 M.	I
I	- VISIBILITY	I (VC-B)	200.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	21.0 M.	I
I	- VISIBILITY TO RIGHT	I (VB-A)	120.0 M.	I
I	- LANE 1 WIDTH	I (WB-C)	-	I
I	- LANE 2 WIDTH	I (WB-A)	-	I
I	WIDTH AT 0 M FROM JUNCTION	I	10.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	4.50 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	3.30 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	3.00 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	3.00 M.	I
I	- LENGTH OF FLARED SECTION	I DERIVED:	0 PCU	I

.SLOPES AND INTERCEPT

 (NB:Streams may be combined, in which case capacity will be adjusted)

```

-----
I Intercept For Slope For Opposing Slope For Opposing I
I STREAM B-C STREAM A-C STREAM A-B I
-----
I 0.00 0.00 0.00 I
-----
  
```

* Due to the presence of a flare, data is not available

```

-----
I Intercept For Slope For Opposing Slope For Opposing Slope For Opposing Slope For Opposing I
I STREAM B-A STREAM A-C STREAM A-B STREAM C-A STREAM C-B I
-----
I 0.00 0.00 0.00 0.00 0.00 I
-----
  
```

* Due to the presence of a flare, data is not available

```

-----
I Intercept For Slope For Opposing Slope For Opposing I
I STREAM C-B STREAM A-C STREAM A-B I
-----
I 689.79 0.27 0.27 I
-----
  
```

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

```

-----
I ARM I FLOW SCALE(%) I
-----
I A I 100 I
I B I 100 I
I C I 100 I
-----
  
```

.Demand set: 2023 Base Case weekday am peak

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

```

-----
I I NUMBER OF MINUTES FROM START WHEN I RATE OF FLOW (VEH/MIN) I
I ARM I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I
I I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK I
I I I I I I I I I I
-----
I ARM A I 15.00 I 45.00 I 75.00 I 6.15 I 9.23 I 6.15 I
I ARM B I 15.00 I 45.00 I 75.00 I 2.08 I 3.11 I 2.08 I
I ARM C I 15.00 I 45.00 I 75.00 I 7.04 I 10.56 I 7.04 I
-----
  
```

.Demand set: 2023 Base Case weekday am peak

```

-----
I I TURNING PROPORTIONS I
I I TURNING COUNTS I
I I (PERCENTAGE OF H.V.S) I
I I
I TIME I FROM/TO I ARM A I ARM B I ARM C I
-----
I 07.45 - 08.00 I I I I I
I I ARM A I 0.000 I 0.148 I 0.852 I
I I I 0.0 I 73.0 I 419.0 I
I I I ( 0.0)I ( 2.0)I ( 5.0)I
I I I I I I
I I ARM B I 0.819 I 0.000 I 0.181 I
I I I 136.0 I 0.0 I 30.0 I
I I I ( 2.0)I ( 0.0)I ( 0.0)I
I I I I I I
I I ARM C I 0.975 I 0.025 I 0.000 I
I I I 549.0 I 14.0 I 0.0 I
I I I ( 3.0)I ( 0.0)I ( 0.0)I
I I I I I I
-----
  
```

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
 THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
 AND FOR TIME PERIOD 1

```

-----
I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY I
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING I
I I (RFC) (PEDI/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN) I
I 07.45-08.00 I
I B-C 0.38 9.33 0.040 0.00 0.04 0.6 0.11 I
-----
  
```


I	B-A	1.71	6.65	0.257		0.00	0.34	4.8		0.20	I
I	C-AB	0.31	14.16	0.022		0.00	0.03	0.4		0.07	I
I	C-A	6.75									I
I	A-B	0.92									I
I	A-C	5.26									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-C	0.45	8.85	0.051		0.04	0.05	0.8		0.12	I
I	B-A	2.04	6.12	0.333		0.34	0.49	7.0		0.24	I
I	C-AB	0.42	14.68	0.029		0.03	0.04	0.6		0.07	I
I	C-A	8.02									I
I	A-B	1.09									I
I	A-C	6.28									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-C	0.55	8.15	0.068		0.05	0.07	1.1		0.13	I
I	B-A	2.50	5.38	0.464		0.49	0.83	11.7		0.34	I
I	C-AB	0.59	15.39	0.039		0.04	0.05	0.8		0.07	I
I	C-A	9.74									I
I	A-B	1.34									I
I	A-C	7.69									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-C	0.55	8.14	0.068		0.07	0.07	1.1		0.13	I
I	B-A	2.50	5.38	0.464		0.83	0.85	12.6		0.35	I
I	C-AB	0.60	15.39	0.039		0.05	0.05	0.8		0.07	I
I	C-A	9.74									I
I	A-B	1.34									I
I	A-C	7.69									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-C	0.45	8.83	0.051		0.07	0.05	0.8		0.12	I
I	B-A	2.04	6.11	0.333		0.85	0.51	8.1		0.25	I
I	C-AB	0.42	14.69	0.029		0.05	0.04	0.6		0.07	I
I	C-A	8.02									I
I	A-B	1.09									I
I	A-C	6.28									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-C	0.38	9.32	0.040		0.05	0.04	0.6		0.11	I
I	B-A	1.71	6.65	0.257		0.51	0.35	5.5		0.20	I
I	C-AB	0.32	14.16	0.022		0.04	0.03	0.4		0.07	I
I	C-A	6.75									I
I	A-B	0.92									I
I	A-C	5.26									I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT	NO. OF VEHICLES ENDING IN QUEUE
08.00	0.0
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT	NO. OF VEHICLES
-----------------	--------------------

ENDING	IN QUEUE
08.00	0.3
08.15	0.5
08.30	0.8 *
08.45	0.8 *
09.00	0.5 *
09.15	0.4

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.1
08.45	0.1
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I STREAM I	TOTAL DEMAND I	* QUEUEING * I	* INCLUSIVE QUEUEING * I
I I	I I	* DELAY * I	* DELAY * I
I I	(VEH) (VEH/H) I	(MIN) (MIN/VEH) I	(MIN) (MIN/VEH) I
I B-C I	41.3 I 27.5 I	5.0 I 0.12 I	5.0 I 0.12 I
I B-A I	187.2 I 124.8 I	49.7 I 0.27 I	49.7 I 0.27 I
I C-AB I	39.9 I 26.6 I	3.5 I 0.09 I	3.5 I 0.09 I
I C-A I	735.0 I 490.0 I	I I	I I
I A-B I	100.5 I 67.0 I	I I	I I
I A-C I	576.7 I 384.5 I	I I	I I
I ALL I	1680.6 I 1120.4 I	58.3 I 0.03 I	58.3 I 0.03 I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I Intercept For	Slope For	Opposing	Slope For	Opposing
I STREAM B-C	STREAM	A-C	STREAM	A-B
I I	I	I	I	I
I 0.00		0.00		0.00

* Due to the presence of a flare, data is not available

I Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A
I I	I	I	I	I	I	I
I 0.00		0.00		0.00		0.00

* Due to the presence of a flare, data is not available

I Intercept For	Slope For	Opposing	Slope For	Opposing
I STREAM C-B	STREAM	A-C	STREAM	A-B
I I	I	I	I	I
I 689.79		0.27		0.27

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I ARM I	FLOW SCALE(%) I
I A I	100 I
I B I	100 I
I C I	100 I

.Demand set: 2023 Base Case weekday pm peak

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RPC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-C	0.19	9.32	0.021		0.03	0.02	0.3		0.11
B-A	1.27	6.28	0.203		0.39	0.26	4.0		0.20
C-AB	0.98	15.91	0.062		0.17	0.10	1.6		0.07
C-A	8.88								
A-B	1.33								
A-C	5.42								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RPC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-C	0.16	9.69	0.017		0.02	0.02	0.3		0.10
B-A	1.07	6.82	0.156		0.26	0.19	2.9		0.17
C-AB	0.67	14.95	0.045		0.10	0.07	1.0		0.07
C-A	7.59								
A-B	1.12								
A-C	4.54								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.1
18.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	NO. OF VEHICLES (VEH/H)	* QUEUEING * * DELAY * (MIN)	* INCLUSIVE QUEUEING * * DELAY * (MIN/VEH)
B-C	17.9	11.9	2.0	0.11
B-A	117.0	78.0	24.5	0.21
C-AB	93.1	62.1	10.0	0.11
C-A	812.6	541.7		
A-B	122.5	81.7		
A-C	498.3	332.2		
ALL	1661.3	1107.6	36.5	0.02

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-

"Y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\PICADY\Blackberry-Dyers\
Blackberry-Dyers prop.vpi"
(drive-on-the-left) at 11:13:10 on Friday, 12 June 2009

.RUN INFORMATION

RUN TITLE : Blackberry Road/Dyers Road junction (prop improved layout, Heath Rd realigned)
LOCATION : Stanway
DATE : 18/05/09
CLIENT : Mersea Homes/Hills Residential
ENUMERATOR : mlast [ARDENT23]
JOB NUMBER : F960
STATUS :
DESCRIPTION :

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS Blackberry Road (east)
ARM B IS Dyers Road
ARM C IS Blackberry Road (west)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I (W)	6.00 M.	I
I	CENTRAL RESERVE WIDTH	I (WCR)	0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I (WC-B)	2.20 M.	I
I	- VISIBILITY	I (VC-B)	200.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	21.0 M.	I
I	- VISIBILITY TO RIGHT	I (VB-A)	110.0 M.	I
I	- LANE 1 WIDTH	I (WB-C)	-	I
I	- LANE 2 WIDTH	I (WB-A)	-	I
I	WIDTH AT 0 M FROM JUNCTION	I	10.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	7.30 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	6.00 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	5.50 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	5.00 M.	I
I	- LENGTH OF FLARED SECTION	I DERIVED:	3 PCU	I

.SLOPES AND INTERCEPT

 (NB:Streams may be combined, in which case capacity will be adjusted)

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-----
I Intercept For Slope For Opposing Slope For Opposing I
I STREAM B-C STREAM A-C STREAM A-B I
-----
I 0.00 0.00 0.00 I
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* Due to the presence of a flare, data is not available

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-----
I Intercept For Slope For Opposing Slope For Opposing Slope For Opposing Slope For OpposingI
I STREAM B-A STREAM A-C STREAM A-B STREAM C-A STREAM C-B I
-----
I 0.00 0.00 0.00 0.00 0.00 I
-----
  
```

* Due to the presence of a flare, data is not available

```

-----
I Intercept For Slope For Opposing Slope For Opposing I
I STREAM C-B STREAM A-C STREAM A-B I
-----
I 689.79 0.27 0.27 I
-----
  
```

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

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-----
I ARM I FLOW SCALE(%) I
-----
I A I 100 I
I B I 100 I
I C I 100 I
-----
  
```

.Demand set: 2023 Dev't Case weekday am peak

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

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-----
I I NUMBER OF MINUTES FROM START WHEN I RATE OF FLOW (VEH/MIN) I
I ARM I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I
I I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK I
I I I I I I I I I I
-----
I ARM A I 15.00 I 45.00 I 75.00 I 6.32 I 9.49 I 6.32 I
I ARM B I 15.00 I 45.00 I 75.00 I 4.30 I 6.45 I 4.30 I
I ARM C I 15.00 I 45.00 I 75.00 I 7.59 I 11.38 I 7.59 I
-----
  
```

.Demand set: 2023 Dev't Case weekday am peak

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-----
I I TURNING PROPORTIONS I
I I TURNING COUNTS I
I I (PERCENTAGE OF H.V.S) I
I I
I TIME I FROM/TO I ARM A I ARM B I ARM C I
-----
I 07.45 - 08.00 I I I I I
I I ARM A I 0.000 I 0.213 I 0.787 I
I I I 0.0 I 108.0 I 398.0 I
I I I ( 0.0)I ( 5.0)I ( 1.0)I
I I I I I I
I I ARM B I 0.843 I 0.000 I 0.157 I
I I I 290.0 I 0.0 I 54.0 I
I I I ( 1.0)I ( 0.0)I ( 0.0)I
I I I I I I
I I ARM C I 0.888 I 0.112 I 0.000 I
I I I 539.0 I 68.0 I 0.0 I
I I I ( 3.0)I ( 0.0)I ( 0.0)I
I I I I I I
-----
  
```

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
 THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
 AND FOR TIME PERIOD 1

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-----
I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY I
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING I
I I (RFC) (PEDI/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN) I
I 07.45-08.00 I
I B-C 0.68 7.68 0.088 0.00 0.10 1.4 0.14 I
-----
  
```

I	B-A	3.64	7.22	0.504		0.00	0.98	13.5		0.27	I
I	C-AB	0.85	9.77	0.087		0.00	0.10	1.5		0.11	I
I	A-B	1.36									I
I	A-C	4.99									I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-C	0.81	6.48	0.125		0.10	0.14	2.0		0.18	I
I	B-A	4.35	6.59	0.660		0.98	1.80	24.4		0.43	I
I	C-AB	1.02	9.43	0.108		0.10	0.13	2.0		0.12	I
I	A-B	1.62									I
I	A-C	5.96									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-C	0.99	2.21	0.447		0.14	0.74	9.6		0.77	I
I	B-A	5.32	5.72	0.931		1.80	6.28	70.1		1.13	I
I	C-AB	1.25	8.97	0.139		0.13	0.18	2.8		0.13	I
I	A-B	1.98									I
I	A-C	7.30									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-C	0.99	1.04	0.957		0.74	3.25	33.7		3.02	I
I	B-A	5.32	5.71	0.931		6.28	7.86	107.3		1.58	I
I	C-AB	1.25	8.97	0.139		0.18	0.19	2.8		0.13	I
I	A-B	1.98									I
I	A-C	7.30									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-C	0.81	5.87	0.138		3.25	0.16	3.8		0.21	I
I	B-A	4.35	6.58	0.660		7.86	2.12	44.8		0.62	I
I	C-AB	1.02	9.43	0.108		0.19	0.13	2.0		0.12	I
I	A-B	1.62									I
I	A-C	5.96									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-C	0.68	7.59	0.089		0.16	0.10	1.5		0.14	I
I	B-A	3.64	7.22	0.504		2.12	1.05	17.1		0.29	I
I	C-AB	0.85	9.77	0.087		0.13	0.10	1.5		0.11	I
I	A-B	1.36									I
I	A-C	4.99									I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.7 *
08.45	3.3 ***
09.00	0.2
09.15	0.1

QUEUE FOR STREAM B-A

TIME SEGMENT	NO. OF VEHICLES IN QUEUE
08.00	1.0 *
08.15	1.8 **
08.30	6.3 *****
08.45	7.9 *****
09.00	2.1 **

09.15 1.1 *

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.2
08.45	0.2
09.00	0.1
09.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I STREAM I	TOTAL DEMAND I	* QUEUEING * I	* INCLUSIVE QUEUEING * I
I I	I I	I * DELAY * I	I * DELAY * I
I I	(VEH) (VEH/H) I	(MIN) (MIN/VEH) I	(MIN) (MIN/VEH) I
I B-C I	74.3 I 49.6 I	52.1 I 0.70 I	52.1 I 0.70 I
I B-A I	399.2 I 266.1 I	277.2 I 0.69 I	277.2 I 0.69 I
I C-AB I	93.6 I 62.4 I	12.6 I 0.13 I	12.6 I 0.13 I
I A-B I	148.7 I 99.1 I	I I	I I
I A-C I	547.8 I 365.2 I	I I	I I
I ALL I	2005.5 I 1337.0 I	341.8 I 0.17 I	341.9 I 0.17 I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I Intercept For	Slope For	Opposing	Slope For	Opposing
I STREAM B-C	STREAM	A-C	STREAM	A-B
I 0.00		0.00		0.00

* Due to the presence of a flare, data is not available

I Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A
I 0.00		0.00		0.00		0.00

* Due to the presence of a flare, data is not available

I Intercept For	Slope For	Opposing	Slope For	Opposing
I STREAM C-B	STREAM	A-C	STREAM	A-B
I 689.79		0.27		0.27

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I ARM I	FLOW SCALE(%) I
I A I	100 I
I B I	100 I
I C I	100 I

Demand set: 2023 Dev't Case weekday pm peak

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I I	NUMBER OF MINUTES FROM START WHEN	I RATE OF FLOW (VEH/MIN)
I ARM I	I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I I
I I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I I I
I I	I I I	I I I

I	ARM	A	I	15.00	I	45.00	I	75.00	I	6.40	I	9.60	I	6.40	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	2.79	I	4.18	I	2.79	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	9.49	I	14.23	I	9.49	I

Demand set: 2023 Dev't Case weekday pm peak

		TURNING PROPORTIONS					
		TURNING COUNTS					
		(PERCENTAGE OF H.V.S)					
TIME	FROM/TO	ARM	A	ARM	B	ARM	C
16.45 - 17.00	ARM A	I	0.000	I	0.316	I	0.684
		I	0.0	I	162.0	I	350.0
		I	(0.0)	I	(0.0)	I	(1.0)
	ARM B	I	0.879	I	0.000	I	0.121
		I	196.0	I	0.0	I	27.0
		I	(0.0)	I	(0.0)	I	(0.0)
	ARM C	I	0.813	I	0.187	I	0.000
		I	617.0	I	142.0	I	0.0
		I	(1.0)	I	(0.0)	I	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT
FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	0.34	8.20	0.041		0.00	0.04	0.6		0.13
B-A	2.46	6.90	0.356		0.00	0.54	7.6		0.22
C-AB	1.78	9.77	0.182		0.00	0.25	3.7		0.12
A-B	2.03								
A-C	4.39								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	0.40	7.56	0.054		0.04	0.06	0.8		0.14
B-A	2.94	6.17	0.476		0.54	0.88	12.4		0.31
C-AB	2.13	9.43	0.226		0.25	0.35	5.2		0.14
A-B	2.43								
A-C	5.24								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	0.50	5.85	0.085		0.06	0.09	1.3		0.19
B-A	3.60	5.16	0.697		0.88	2.04	26.7		0.58
C-AB	2.61	8.97	0.291		0.35	0.55	8.1		0.16
A-B	2.97								
A-C	6.42								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	0.50	5.69	0.087		0.09	0.09	1.4		0.19
B-A	3.60	5.16	0.697		2.04	2.16	31.7		0.63
C-AB	2.61	8.97	0.291		0.55	0.55	8.4		0.16
A-B	2.97								
A-C	6.42								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-C	0.40	7.48	0.054		0.09	0.06	0.9		0.14
B-A	2.94	6.16	0.477		2.16	0.95	15.6		0.33
C-AB	2.13	9.43	0.226		0.55	0.36	5.5		0.14

I A-B 2.43 I
 I A-C 5.24 I
 I I

I TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I 18.00-18.15										I
I B-C	0.34	8.17	0.041		0.06	0.04	0.7		0.13	I
I B-A	2.46	6.89	0.357		0.95	0.57	9.0		0.23	I
I C-AB	1.78	9.77	0.182		0.36	0.26	3.9		0.13	I
I A-B	2.03									I
I A-C	4.39									I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	*
17.15	0.9	**
17.30	2.0	**
17.45	2.2	**
18.00	0.9	*
18.15	0.6	*

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.3	
17.30	0.5	*
17.45	0.6	*
18.00	0.4	
18.15	0.3	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

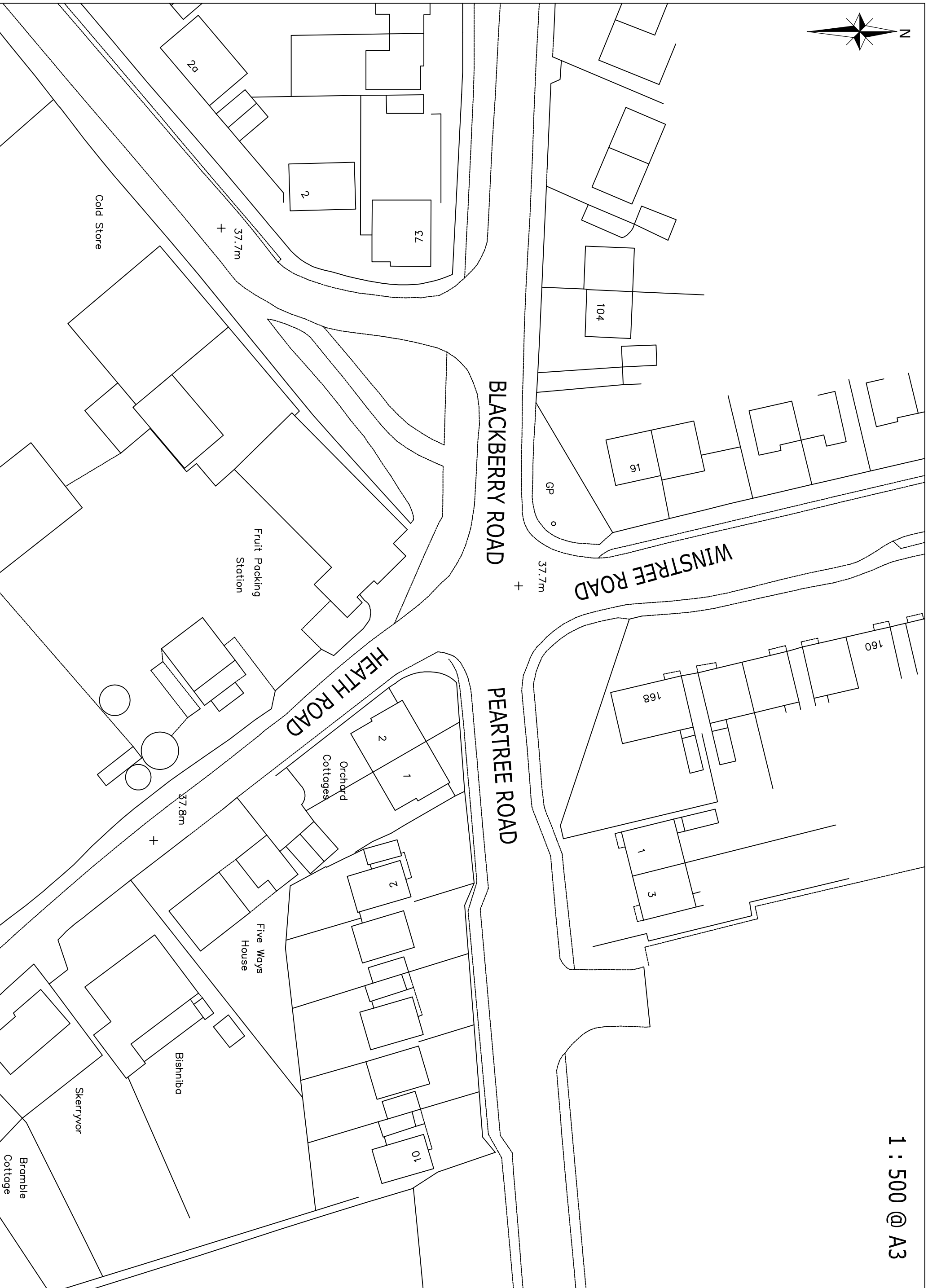
I STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I B-C	I	37.2	I 24.8	I 5.7	I 0.15	I 5.7	I 0.15
I B-A	I	269.8	I 179.9	I 102.9	I 0.38	I 103.0	I 0.38
I C-AB	I	195.5	I 130.3	I 34.9	I 0.18	I 34.9	I 0.18
I A-B	I	223.0	I 148.7	I	I	I	I
I A-C	I	481.7	I 321.2	I	I	I	I
I ALL	I	2056.4	I 1370.9	I 143.5	I 0.07	I 143.5	I 0.07

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

Appendix F

Results of PICADY capacity assessment: Blackberry Road/ Winstree Road/Peartree Road/Heath Road junction



1 : 500 @ A3

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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IN NO WAY RELIEVED OF HIS/HER RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

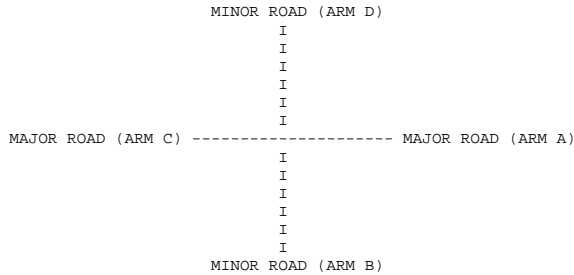
"Y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\PICADY\
Blackberry-Winstree-Peartree\Blackberry-Winstree-Peartree-Heath crossroads.vpi"
(drive-on-the-left) at 12:10:24 on Friday, 12 June 2009

.RUN INFORMATION

RUN TITLE : Blackberry Road/Winstree Road/Peartree Road/Heath Road crossroads (existing)
LOCATION : Stanway
DATE : 19/05/09
CLIENT : Mersea Homes/Hills Residential
ENUMERATOR : mlast [ARDENT23]
JOB NUMBER : F960
STATUS :
DESCRIPTION :

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Blackberry Road (west)
ARM B IS Winstree Road (north)
ARM C IS Peartree Road (east)
ARM D IS Heath Road (south)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 7.20 M.	I	(W) 7.20 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I	(WCR) 0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I	(WA-D) 2.20 M.	I
I	- VISIBILITY	I	(VC-B) 180.00 M.	I	(VA-D) 200.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I	YES	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 75.0 M.	I	(VD-A) 90.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 40.0 M.	I	(VD-C) 14.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I	(WD-A) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I	(WD-C) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	10.00 M.	I	10.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	4.50 M.	I	4.40 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	3.80 M.	I	3.90 M.	I

I	WIDTH AT 15 M FROM JUNCTION	I	3.70 M.	I	3.10 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	3.70 M.	I	3.00 M.	I
I	- LENGTH OF FLARED SECTION	I	DERIVED: 0 PCU	I	DERIVED: 0 PCU	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

STREAM D-A

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM D-A	STREAM C-A	STREAM C-D	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

STREAM B-A

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-D	STREAM D-A	STREAM D-B	I
I	0.00	0.00	0.00	0.00	0.00	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM A-B	STREAM C-A	STREAM C-B	STREAM D-C	I
I	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

STREAM D-C

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-C	STREAM C-A	STREAM C-B	STREAM B-C	STREAM B-D	I
I	0.00	0.00	0.00	0.00	0.00	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM C-D	STREAM A-C	STREAM A-D	STREAM B-A	I
I	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

STREAM C-B

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-C	STREAM A-D	I
I	678.20	0.25	0.36	I

STREAM A-D

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM A-D	STREAM C-A	STREAM C-B	I
I	689.79	0.25	0.36	I

B-D Stream From Left Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM C-A	STREAM C-D	STREAM A-B	STREAM C-B	I
I	0.00	0.00			I

 * Due to the presence of a flare, data is not available

B-D Stream From Right Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM A-C	STREAM A-D	STREAM A-B	STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM C-A	STREAM C-D	STREAM C-B	STREAM A-D	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

D-B Stream From Left Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-B	STREAM C-A	STREAM C-B	STREAM D-C	STREAM A-D	I
I	0.00	0.00	0.00	0.00	0.00	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM A-C	STREAM A-B	STREAM C-B	STREAM A-D	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

D-B Stream From Right Hand Lane

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-D	STREAM C-A	STREAM C-B	STREAM C-D	STREAM A-D	I
I	0.00	0.00	0.00	0.00	0.00	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM A-C	STREAM A-B	STREAM C-B	STREAM A-D	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

.Demand set: 2023 Base Case weekday am peak

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I								
I	I	I	TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	6.91	I	10.37	I	6.91	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	5.81	I	8.72	I	5.81	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	7.30	I	10.95	I	7.30	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	0.63	I	0.94	I	0.63	I

.Demand set: 2023 Base Case weekday am peak

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I	ARM	D	I
I	07.45 - 08.00	I	ARM A	I	0.000	I	0.224	I	0.754	I	0.022	I		I		I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-CD	5.22	8.95	0.583		3.39	1.46	24.2		0.29	I
I	B-AD	1.75	4.74	0.368		1.12	0.60	9.7		0.34	I
I	A-BCD	0.37	14.15	0.026		0.05	0.03	0.5		0.07	I
I	A-B	1.81									I
I	A-C	6.10									I
I	D-AB	0.41	8.80	0.046		0.06	0.05	0.8		0.12	I
I	D-BC	0.34	4.51	0.076		0.13	0.08	1.3		0.24	I
I	C-ABD	5.83	12.84	0.454		2.37	1.23	18.9		0.15	I
I	C-D	0.12									I
I	C-A	2.80									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-CD	4.37	9.50	0.460		1.46	0.87	13.8		0.20	I
I	B-AD	1.47	5.33	0.275		0.60	0.39	6.1		0.26	I
I	A-BCD	0.28	13.70	0.020		0.03	0.02	0.4		0.07	I
I	A-B	1.53									I
I	A-C	5.14									I
I	D-AB	0.34	9.19	0.037		0.05	0.04	0.6		0.11	I
I	D-BC	0.29	5.30	0.054		0.08	0.06	0.9		0.20	I
I	C-ABD	4.39	12.49	0.351		1.23	0.76	11.5		0.12	I
I	C-D	0.12									I
I	C-A	2.82									I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-CD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.3	*
08.30	3.2	***
08.45	3.4	***
09.00	1.5	*
09.15	0.9	*

QUEUE FOR STREAM B-AD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.6	*
08.30	1.1	*
08.45	1.1	*
09.00	0.6	*
09.15	0.4	

QUEUE FOR STREAM A-BCD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM D-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.1
08.45	0.1
09.00	0.0
09.15	0.0

QUEUE FOR STREAM D-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1

09.15 0.1

QUEUE FOR STREAM C-ABD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.2	*
08.30	2.3	**
08.45	2.4	**
09.00	1.2	*
09.15	0.8	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I		
I	I	I	(VEH)	I	(VEH/H)	I	(MIN)	I		
I	I	I	(VEH)	I	(VEH/H)	I	(MIN)	I		
I	I	I	(VEH)	I	(VEH/H)	I	(MIN)	I		
I	B-CD	I	479.7	I	319.8	I	158.6	I	0.33	I
I	B-AD	I	160.3	I	106.9	I	60.2	I	0.38	I
I	A-BCD	I	35.3	I	23.6	I	3.2	I	0.09	I
I	A-B	I	166.4	I	110.9	I		I		I
I	A-C	I	559.5	I	373.0	I		I		I
I	D-AB	I	37.5	I	25.0	I	4.5	I	0.12	I
I	D-BC	I	31.3	I	20.9	I	8.0	I	0.26	I
I	C-ABD	I	551.8	I	367.9	I	129.6	I	0.23	I
I	C-D	I	10.4	I	7.0	I		I		I
I	C-A	I	241.6	I	161.1	I		I		I
I	ALL	I	2273.9	I	1515.9	I	364.2	I	0.16	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

STREAM D-A

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM D-A	STREAM	C-A	STREAM	C-D	I
I	0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

STREAM B-A

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-D	STREAM	D-A	STREAM	B-B	I
I	0.00		0.00		0.00		0.00		0.00	I

I	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM	A-B	STREAM	C-A	STREAM	C-B	STREAM	D-C	I
I		0.00		0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

STREAM D-C

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I	
I	STREAM D-C	STREAM	C-A	STREAM	C-B	STREAM	B-C	STREAM	B-D
I	0.00		0.00		0.00		0.00	I	

I	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM B-A	I
I	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

STREAM C-B

I	Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	I
I	678.20	0.25	0.36	I

STREAM A-D

I	Intercept For STREAM A-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	I
I	689.79	0.25	0.36	I

B-D Stream From Left Hand Lane

I	Intercept For STREAM B-D	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

I	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing STREAM C-B	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

B-D Stream From Right Hand Lane

I	Intercept For STREAM B-D	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-B	I
I	0.00	0.00	0.00	0.00	0.00	I

I	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing STREAM C-B	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

D-B Stream From Left Hand Lane

I	Intercept For STREAM D-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM D-C	Slope For Opposing STREAM A-D	I
I	0.00	0.00	0.00	0.00	0.00	I

I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing STREAM C-B	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

D-B Stream From Right Hand Lane

I	Intercept For STREAM B-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-D	I
I	0.00	0.00	0.00	0.00	0.00	I

I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing STREAM C-B	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

TRAFFIC DEMAND DATA

I ARM I FLOW SCALE(%) I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	B-CD	4.00	9.33	0.428		0.48	0.73	10.6		0.19	I
I	B-AD	0.92	4.05	0.227		0.18	0.29	4.1		0.32	I
I	A-BCD	0.74	13.25	0.056		0.05	0.09	1.3		0.08	I
I	A-B	1.30									I
I	A-C	5.76									I
I	D-AB	0.33	7.52	0.044		0.03	0.05	0.7		0.14	I
I	D-BC	0.35	4.13	0.085		0.06	0.09	1.3		0.26	I
I	C-ABD	9.91	14.54	0.682		1.42	3.01	44.8		0.21	I
I	C-D	0.13									I
I	C-A	2.27									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45										I
I	B-CD	4.00	9.32	0.429		0.73	0.74	11.1		0.19	I
I	B-AD	0.92	4.03	0.228		0.29	0.29	4.3		0.32	I
I	A-BCD	0.74	13.23	0.056		0.09	0.09	1.3		0.08	I
I	A-B	1.30									I
I	A-C	5.76									I
I	D-AB	0.33	7.49	0.044		0.05	0.05	0.7		0.14	I
I	D-BC	0.35	4.10	0.086		0.09	0.09	1.4		0.27	I
I	C-ABD	9.98	14.58	0.684		3.01	3.12	48.2		0.22	I
I	C-D	0.12									I
I	C-A	2.21									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	B-CD	3.26	9.90	0.329		0.74	0.50	7.8		0.15	I
I	B-AD	0.76	4.75	0.159		0.29	0.19	3.0		0.25	I
I	A-BCD	0.49	12.67	0.039		0.09	0.05	0.8		0.08	I
I	A-B	1.08									I
I	A-C	4.80									I
I	D-AB	0.27	8.17	0.032		0.05	0.03	0.5		0.13	I
I	D-BC	0.29	4.98	0.058		0.09	0.06	1.0		0.21	I
I	C-ABD	7.06	13.92	0.507		3.12	1.52	23.6		0.15	I
I	C-D	0.16									I
I	C-A	2.83									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-CD	2.73	10.28	0.265		0.50	0.36	5.6		0.13	I
I	B-AD	0.64	5.31	0.120		0.19	0.14	2.2		0.21	I
I	A-BCD	0.37	12.45	0.030		0.05	0.04	0.6		0.08	I
I	A-B	0.91									I
I	A-C	4.05									I
I	D-AB	0.22	8.66	0.026		0.03	0.03	0.4		0.12	I
I	D-BC	0.24	5.64	0.043		0.06	0.05	0.7		0.19	I
I	C-ABD	5.31	13.42	0.396		1.52	0.93	14.0		0.13	I
I	C-D	0.17									I
I	C-A	2.94									I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-CD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.5
17.30	0.7 *
17.45	0.7 *
18.00	0.5
18.15	0.4

QUEUE FOR STREAM B-AD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.3

17.45	0.3
18.00	0.2
18.15	0.1

 QUEUE FOR STREAM A-BCD

TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
17.00	0.0
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.0

 QUEUE FOR STREAM D-AB

TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

 QUEUE FOR STREAM D-BC

TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
17.00	0.0
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.0

 QUEUE FOR STREAM C-ABD

TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
17.00	0.9 *
17.15	1.4 *
17.30	3.0 ***
17.45	3.1 ***
18.00	1.5 **
18.15	0.9 *

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I	
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I	
I	B-CD	I	299.4	I	199.6	I	47.2	I	0.16
I	B-AD	I	69.4	I	46.3	I	18.2	I	0.26
I	A-BCD	I	47.9	I	31.9	I	5.4	I	0.11
I	A-B	I	99.0	I	66.0	I		I	
I	A-C	I	438.1	I	292.1	I		I	
I	D-AB	I	24.4	I	16.3	I	3.1	I	0.13
I	D-BC	I	26.5	I	17.7	I	5.9	I	0.22
I	C-ABD	I	667.7	I	445.1	I	164.9	I	0.25
I	C-D	I	13.6	I	9.1	I		I	
I	C-A	I	242.3	I	161.5	I		I	
I	ALL	I	1928.4	I	1285.6	I	244.7	I	0.13

 * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-

"Y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\PICADY\
Blackberry-Winstree-Peartree\Blackberry-Winstree-Peartree T-jn.vpi"
(drive-on-the-left) at 11:25:04 on Friday, 12 June 2009

.RUN INFORMATION

RUN TITLE : Blackberry Road/Winstree Road/Peartree Road proposed T-junction
LOCATION : Stanway
DATE : 19/05/09
CLIENT : Mersea Homes/Hills Residential
ENUMERATOR : mlast [ARDENT23]
JOB NUMBER : F960
STATUS :
DESCRIPTION :

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS Blackberry Road (west)
ARM B IS Winstree Road (north)
ARM C IS Peartree Road (east)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

.GEOMETRIC DATA

I DATA ITEM I MINOR ROAD B I

I TOTAL MAJOR ROAD CARRIAGEWAY WIDTH I (W) 7.00 M. I
I CENTRAL RESERVE WIDTH I (WCR) 0.00 M. I
I I I
I MAJOR ROAD RIGHT TURN - WIDTH I (WC-B) 2.20 M. I
I - VISIBILITY I (VC-B)180.00 M. I
I - BLOCKS TRAFFIC I YES I
I I I
I MINOR ROAD - VISIBILITY TO LEFT I (VB-C) 70.0 M. I
I - VISIBILITY TO RIGHT I (VB-A) 42.0 M. I
I - LANE 1 WIDTH I (WB-C) - I
I - LANE 2 WIDTH I (WB-A) - I
I WIDTH AT 0 M FROM JUNCTION I 10.00 M. I
I WIDTH AT 5 M FROM JUNCTION I 4.50 M. I
I WIDTH AT 10 M FROM JUNCTION I 4.10 M. I
I WIDTH AT 15 M FROM JUNCTION I 3.70 M. I
I WIDTH AT 20 M FROM JUNCTION I 3.70 M. I
I - LENGTH OF FLARED SECTION I DERIVED: 1 PCU I

.SLOPES AND INTERCEPT

 (NB:Streams may be combined, in which case capacity will be adjusted)

```

-----
I Intercept For Slope For Opposing Slope For Opposing I
I STREAM B-C STREAM A-C STREAM A-B I
-----
I 0.00 0.00 0.00 I
-----
  
```

* Due to the presence of a flare, data is not available

```

-----
I Intercept For Slope For Opposing Slope For Opposing Slope For Opposing Slope For OpposingI
I STREAM B-A STREAM A-C STREAM A-B STREAM C-A STREAM C-B I
-----
I 0.00 0.00 0.00 0.00 0.00 I
-----
  
```

* Due to the presence of a flare, data is not available

```

-----
I Intercept For Slope For Opposing Slope For Opposing I
I STREAM C-B STREAM A-C STREAM A-B I
-----
I 678.20 0.25 0.25 I
-----
  
```

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

```

-----
I ARM I FLOW SCALE(%) I
-----
I A I 100 I
I B I 100 I
I C I 100 I
-----
  
```

.Demand set: 2023 Dev't Case weekday am peak

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

```

-----
I I NUMBER OF MINUTES FROM START WHEN I RATE OF FLOW (VEH/MIN) I
I ARM I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I
I I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK I
I I I I I I I I I
-----
I ARM A I 15.00 I 45.00 I 75.00 I 8.73 I 13.09 I 8.73 I
I ARM B I 15.00 I 45.00 I 75.00 I 5.90 I 8.85 I 5.90 I
I ARM C I 15.00 I 45.00 I 75.00 I 7.43 I 11.14 I 7.43 I
-----
  
```

.Demand set: 2023 Dev't Case weekday am peak

```

-----
I I TURNING PROPORTIONS I
I I TURNING COUNTS I
I I (PERCENTAGE OF H.V.S) I
I I
I TIME I FROM/TO I ARM A I ARM B I ARM C I
-----
I 07.45 - 08.00 I I I I I
I I ARM A I 0.000 I 0.209 I 0.791 I
I I I 0.0 I 146.0 I 552.0 I
I I I ( 0.0)I ( 6.0)I ( 1.0)I
I I I I I I
I I ARM B I 0.269 I 0.000 I 0.731 I
I I I 127.0 I 0.0 I 345.0 I
I I I ( 5.0)I ( 0.0)I ( 2.0)I
I I I I I I
I I ARM C I 0.626 I 0.374 I 0.000 I
I I I 372.0 I 222.0 I 0.0 I
I I I ( 4.0)I ( 1.0)I ( 0.0)I
I I I I I I
-----
  
```

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
 THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
 AND FOR TIME PERIOD 1

```

-----
I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY I
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING I
I I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN) I
I 07.45-08.00 I
I B-C 4.33 8.62 0.502 0.00 0.98 13.6 0.23 I
-----
  
```


I	B-A	1.59	4.66	0.342		0.00	0.50	6.9		0.32	I
I	C-AB	2.79	8.97	0.311		0.00	0.45	6.6		0.16	I
I	A-B	1.83									I
I	A-C	6.93									I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-C	5.17	7.40	0.698		0.98	2.12	28.4		0.42	I
I	B-A	1.90	3.55	0.536		0.50	1.07	14.4		0.58	I
I	C-AB	3.33	8.54	0.390		0.45	0.63	9.5		0.19	I
I	A-B	2.19									I
I	A-C	8.27									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-C	6.33	5.52	1.148		2.12	17.58	157.2		2.29	I
I	B-A	2.33	2.05	1.139		1.07	8.07	74.8		3.20	I
I	C-AB	4.07	7.94	0.513		0.63	1.07	15.9		0.26	I
I	A-B	2.68									I
I	A-C	10.13									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-C	6.33	5.31	1.192		17.58	33.40	383.1		5.03	I
I	B-A	2.33	2.03	1.148		8.07	13.40	161.7		5.97	I
I	C-AB	4.07	7.94	0.513		1.07	1.09	16.7		0.26	I
I	A-B	2.68									I
I	A-C	10.13									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-C	5.17	6.22	0.831		33.40	20.37	403.3		4.44	I
I	B-A	1.90	2.35	0.809		13.40	9.13	168.9		5.03	I
I	C-AB	3.33	8.54	0.390		1.09	0.66	10.1		0.19	I
I	A-B	2.19									I
I	A-C	8.27									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-C	4.33	7.70	0.562		20.37	1.37	81.6		0.76	I
I	B-A	1.59	3.90	0.409		9.13	0.73	30.1		0.75	I
I	C-AB	2.79	8.97	0.311		0.66	0.46	6.9		0.16	I
I	A-B	1.83									I
I	A-C	6.93									I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT	NO. OF VEHICLES IN QUEUE	
08.00	1.0	*
08.15	2.1	**
08.30	17.6	*****
08.45	33.4	*****
09.00	20.4	*****
09.15	1.4	*

QUEUE FOR STREAM B-A

TIME SEGMENT	NO. OF VEHICLES IN QUEUE	
08.00	0.5	*
08.15	1.1	*
08.30	8.1	*****
08.45	13.4	*****
09.00	9.1	*****

09.15 0.7 *

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.4
08.15	0.6 *
08.30	1.1 *
08.45	1.1 *
09.00	0.7 *
09.15	0.5

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I STREAM I	TOTAL DEMAND I	* QUEUEING * I	* INCLUSIVE QUEUEING * I
I I	I I	I * DELAY * I	I * DELAY * I
I I	(VEH) (VEH/H) I	(MIN) (MIN/VEH) I	(MIN) (MIN/VEH) I
I B-C I	474.9 I 316.6 I	1067.1 I 2.25 I	1067.2 I 2.25 I
I B-A I	174.8 I 116.5 I	456.8 I 2.61 I	456.9 I 2.61 I
I C-AB I	305.6 I 203.7 I	65.7 I 0.21 I	65.7 I 0.21 I
I A-B I	201.0 I 134.0 I	I I	I I
I A-C I	759.8 I 506.5 I	I I	I I
I ALL I	2428.0 I 1618.7 I	1589.6 I 0.65 I	1589.8 I 0.65 I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I Intercept For	Slope For	Opposing	Slope For	Opposing
I STREAM B-C	STREAM	A-C	STREAM	A-B
I 0.00		0.00		0.00

* Due to the presence of a flare, data is not available

I Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing
I STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A
I 0.00		0.00		0.00		0.00

* Due to the presence of a flare, data is not available

I Intercept For	Slope For	Opposing	Slope For	Opposing
I STREAM C-B	STREAM	A-C	STREAM	A-B
I 678.20		0.25		0.25

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I ARM I	FLOW SCALE(%) I
I A I	100 I
I B I	100 I
I C I	100 I

Demand set: 2023 Dev't Case weekday pm peak

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I I	NUMBER OF MINUTES FROM START WHEN	I RATE OF FLOW (VEH/MIN)	I I
I ARM I	I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I I	I I
I I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I I	I I
I I	I I	I I	I I

I	ARM	A	I	15.00	I	45.00	I	75.00	I	6.50	I	9.75	I	6.50	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	3.55	I	5.32	I	3.55	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	8.69	I	13.03	I	8.69	I

Demand set: 2023 Dev't Case weekday pm peak

		TURNING PROPORTIONS					
		TURNING COUNTS					
		(PERCENTAGE OF H.V.S)					
TIME	FROM/TO	ARM	A	ARM	B	ARM	C
16.45 - 17.00	ARM A	I	0.000	I	0.177	I	0.823
		I	0.0	I	92.0	I	428.0
		I	(0.0)	I	(4.0)	I	(1.0)
	ARM B	I	0.261	I	0.000	I	0.739
		I	74.0	I	0.0	I	210.0
		I	(5.0)	I	(0.0)	I	(1.0)
	ARM C	I	0.629	I	0.371	I	0.000
		I	437.0	I	258.0	I	0.0
		I	(0.0)	I	(0.0)	I	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT
FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	2.63	9.87	0.267		0.00	0.36	5.2		0.14
B-A	0.93	5.20	0.179		0.00	0.21	3.0		0.23
C-AB	3.24	9.64	0.336		0.00	0.50	7.4		0.15
A-B	1.15								
A-C	5.37								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	3.15	9.31	0.338		0.36	0.50	7.3		0.16
B-A	1.11	4.54	0.244		0.21	0.32	4.5		0.29
C-AB	3.87	9.32	0.415		0.50	0.71	10.6		0.18
A-B	1.38								
A-C	6.41								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	3.85	8.29	0.465		0.50	0.85	12.0		0.22
B-A	1.36	3.63	0.374		0.32	0.57	8.0		0.43
C-AB	4.73	8.87	0.534		0.71	1.18	17.5		0.24
A-B	1.69								
A-C	7.85								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	3.85	8.26	0.467		0.85	0.86	12.8		0.23
B-A	1.36	3.62	0.375		0.57	0.59	8.7		0.44
C-AB	4.73	8.87	0.534		1.18	1.20	18.4		0.24
A-B	1.69								
A-C	7.85								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-C	3.15	9.29	0.339		0.86	0.52	8.2		0.16
B-A	1.11	4.53	0.245		0.59	0.33	5.3		0.30
C-AB	3.87	9.32	0.415		1.20	0.74	11.3		0.19

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I A-B 1.38 I
I A-C 6.41 I
I I

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I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY I
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING I
I (RFC) (PEDI/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN) I
I 18.00-18.15 I
I B-C 2.63 9.85 0.267 0.52 0.37 5.7 0.14 I
I B-A 0.93 5.18 0.179 0.33 0.22 3.5 0.24 I
I C-AB 3.24 9.64 0.336 0.74 0.52 7.8 0.16 I
I A-B 1.15 I
I A-C 5.37 I
I I

```

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

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-----
QUEUE FOR STREAM B-C
-----
TIME NO. OF
SEGMENT VEHICLES
ENDING IN QUEUE
17.00 0.4
17.15 0.5 *
17.30 0.8 *
17.45 0.9 *
18.00 0.5 *
18.15 0.4

```

```

-----
QUEUE FOR STREAM B-A
-----
TIME NO. OF
SEGMENT VEHICLES
ENDING IN QUEUE
17.00 0.2
17.15 0.3
17.30 0.6 *
17.45 0.6 *
18.00 0.3
18.15 0.2

```

```

-----
QUEUE FOR STREAM C-AB
-----
TIME NO. OF
SEGMENT VEHICLES
ENDING IN QUEUE
17.00 0.5 *
17.15 0.7 *
17.30 1.2 *
17.45 1.2 *
18.00 0.7 *
18.15 0.5 *

```

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

```

I STREAM I TOTAL DEMAND I * QUEUEING * I * INCLUSIVE QUEUEING * I
I I I * DELAY * I I * DELAY * I I
I I I (VEH) (VEH/H) I (MIN) (MIN/VEH) I (MIN) (MIN/VEH) I
I I I I I I I I I I
I B-C I 289.0 I 192.7 I 51.2 I 0.18 I 51.2 I 0.18 I
I B-A I 101.9 I 67.9 I 33.0 I 0.32 I 33.0 I 0.32 I
I C-AB I 355.1 I 236.7 I 72.9 I 0.21 I 72.9 I 0.21 I
I A-B I 126.6 I 84.4 I I I I I I
I A-C I 589.1 I 392.7 I I I I I I
I ALL I 2063.3 I 1375.5 I 157.1 I 0.08 I 157.1 I 0.08 I

```

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

Appendix G

Results of PICADY capacity assessment: proposed Dyers Road/Heath Road (realigned)/northern site access junction

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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

Run with file:-

"Y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\PICADY\
Dyers-Heath (realigned)\Dyers-Heath (realigned).vpi"
(drive-on-the-left) at 11:16:43 on Friday, 12 June 2009

.RUN INFORMATION

RUN TITLE : Proposed junction of Dyers Road with realigned Heath Road/northern site access
LOCATION : Stanway
DATE : 27/05/09
CLIENT : Hills Residential
ENUMERATOR : mlast [ARDENT23]
JOB NUMBER : F960
STATUS :
DESCRIPTION :

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS Dyers Road (north)
ARM B IS Heath Road (realigned)
ARM C IS Dyers Road (south)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I (W)	7.00 M.	I
I	CENTRAL RESERVE WIDTH	I (WCR)	0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I (WC-B)	2.20 M.	I
I	- VISIBILITY	I (VC-B)	35.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	18.0 M.	I
I	- VISIBILITY TO RIGHT	I (VB-A)	18.0 M.	I
I	- LANE 1 WIDTH	I (WB-C)	3.40 M.	I
I	- LANE 2 WIDTH	I (WB-A)	0.00 M.	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I Intercept For Slope For Opposing Slope For Opposing I
I STREAM B-C STREAM A-C STREAM A-B I

```
-----
I 660.71 0.24 0.10 I
-----
```

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-----
I Intercept For Slope For Opposing Slope For Opposing Slope For Opposing Slope For OpposingI
I STREAM B-A STREAM A-C STREAM A-B STREAM C-A STREAM C-B I
-----
I 512.02 0.23 0.09 0.14 0.32 I
-----
```

```
-----
I Intercept For Slope For Opposing Slope For Opposing I
I STREAM C-B STREAM A-C STREAM A-B I
-----
I 594.23 0.22 0.22 I
-----
```

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

```
-----
I ARM I FLOW SCALE(%) I
-----
I A I 100 I
I B I 100 I
I C I 100 I
-----
```

Demand set: 2023 Dev't Case weekday am peak

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

```
-----
I I NUMBER OF MINUTES FROM START WHEN I RATE OF FLOW (VEH/MIN) I
I ARM I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I
I I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK I
I I I I I I I I I I
-----
I ARM A I 15.00 I 45.00 I 75.00 I 2.20 I 3.30 I 2.20 I
I ARM B I 15.00 I 45.00 I 75.00 I 2.53 I 3.79 I 2.53 I
I ARM C I 15.00 I 45.00 I 75.00 I 3.40 I 5.10 I 3.40 I
-----
```

Demand set: 2023 Dev't Case weekday am peak

```
-----
I I TURNING PROPORTIONS I
I I TURNING COUNTS I
I I (PERCENTAGE OF H.V.S) I
I
I TIME I FROM/TO I ARM A I ARM B I ARM C I
-----
I 07.45 - 08.00 I I I I I
I I ARM A I 0.000 I 0.347 I 0.653 I
I I I 0.0 I 61.0 I 115.0 I
I I I ( 0.0)I ( 0.0)I ( 1.0)I
I I I I I I
I I ARM B I 0.564 I 0.000 I 0.436 I
I I I 114.0 I 0.0 I 88.0 I
I I I ( 0.0)I ( 0.0)I ( 0.0)I
I I I I I I
I I ARM C I 0.846 I 0.154 I 0.000 I
I I I 230.0 I 42.0 I 0.0 I
I I I ( 1.0)I ( 0.0)I ( 0.0)I
I I I I I I
-----
```

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT
FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

```
-----
I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY I
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING I
I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN) I
I 07.45-08.00
I B-AC 2.53 8.63 0.294 0.00 0.41 5.8 0.16 I
I C-AB 0.70 11.37 0.061 0.00 0.10 1.4 0.09 I
I C-A 2.71 I
I A-B 0.77 I
I A-C 1.44 I
I
-----
```

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-AC	3.03	8.46	0.358		0.41	0.55	7.9		0.18	I
I	C-AB	0.88	11.66	0.076		0.10	0.12	1.9		0.09	I
I	C-A	3.20									I
I	A-B	0.91									I
I	A-C	1.72									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-AC	3.71	8.23	0.450		0.55	0.80	11.4		0.22	I
I	C-AB	1.18	12.10	0.098		0.12	0.17	2.6		0.09	I
I	C-A	3.81									I
I	A-B	1.12									I
I	A-C	2.11									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-AC	3.71	8.23	0.450		0.80	0.81	12.1		0.22	I
I	C-AB	1.18	12.10	0.098		0.17	0.17	2.6		0.09	I
I	C-A	3.81									I
I	A-B	1.12									I
I	A-C	2.11									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-AC	3.03	8.46	0.358		0.81	0.57	8.9		0.19	I
I	C-AB	0.88	11.66	0.076		0.17	0.13	1.9		0.09	I
I	C-A	3.19									I
I	A-B	0.91									I
I	A-C	1.72									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-AC	2.53	8.63	0.294		0.57	0.42	6.5		0.16	I
I	C-AB	0.70	11.37	0.062		0.13	0.10	1.5		0.09	I
I	C-A	2.71									I
I	A-B	0.77									I
I	A-C	1.44									I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT	NO. OF VEHICLES IN QUEUE
08.00	0.4
08.15	0.5 *
08.30	0.8 *
08.45	0.8 *
09.00	0.6 *
09.15	0.4

QUEUE FOR STREAM C-AB

TIME SEGMENT	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.2
08.45	0.2
09.00	0.1
09.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I

I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	B-AC	I	278.0	I	185.4	I	52.7	I	0.19	I
I	C-AB	I	82.9	I	55.3	I	11.9	I	0.14	I
I	C-A	I	291.5	I	194.3	I		I		I
I	A-B	I	84.0	I	56.0	I		I		I
I	A-C	I	158.3	I	105.5	I		I		I
I	ALL	I	894.7	I	596.5	I	64.5	I	0.07	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	660.71		0.24		0.10	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	512.02		0.23		0.09		0.14		0.32	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	594.23		0.22		0.22	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

.Demand set: 2023 Dev't Case weekday pm peak

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	ARM	I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER	I	I	I
I	I	I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK	I	I	I
I	I	I	I	I	I
I	ARM A	I 15.00 I 45.00 I 75.00 I 3.80 I 5.70 I 3.80 I			
I	ARM B	I 15.00 I 45.00 I 75.00 I 1.45 I 2.18 I 1.45 I			
I	ARM C	I 15.00 I 45.00 I 75.00 I 2.89 I 4.33 I 2.89 I			

.Demand set: 2023 Dev't Case weekday pm peak

I	I	TURNING PROPORTIONS	I
I	I	TURNING COUNTS	I
I	I	(PERCENTAGE OF H.V.S)	I
I	I		I
I	TIME	I FROM/TO I ARM A I ARM B I ARM C I	I
I	16.45 - 17.00	I I I I I I I	
I		I ARM A I 0.000 I 0.395 I 0.605 I	
I		I I I 0.0 I 120.0 I 184.0 I	
I		I I (0.0)I (0.0)I (0.0)I	
I		I I I I I I I	
I		I ARM B I 0.698 I 0.000 I 0.302 I	
I		I I I 81.0 I 0.0 I 35.0 I	
I		I I (0.0)I (0.0)I (0.0)I	

```

I           I           I           I           I           I
I           I ARM C I 0.610 I 0.390 I 0.000 I
I           I           I 141.0 I 90.0 I 0.0 I
I           I           I ( 0.0)I ( 0.0)I ( 0.0)I
I           I           I           I           I

```

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
 THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
 AND FOR TIME PERIOD 2

I TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I 16.45-17.00										I
I B-AC	1.46	7.97	0.183		0.00	0.22	3.2		0.15	I
I C-AB	1.36	10.29	0.132		0.00	0.18	2.7		0.11	I
I C-A	1.54									I
I A-B	1.51									I
I A-C	2.31									I

I TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I 17.00-17.15										I
I B-AC	1.74	7.74	0.225		0.22	0.29	4.2		0.17	I
I C-AB	1.69	10.39	0.163		0.18	0.24	3.6		0.11	I
I C-A	1.77									I
I A-B	1.80									I
I A-C	2.76									I

I TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I 17.15-17.30										I
I B-AC	2.13	7.41	0.287		0.29	0.40	5.7		0.19	I
I C-AB	2.19	10.52	0.209		0.24	0.33	5.0		0.12	I
I C-A	2.05									I
I A-B	2.20									I
I A-C	3.38									I

I TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I 17.30-17.45										I
I B-AC	2.13	7.41	0.287		0.40	0.40	6.0		0.19	I
I C-AB	2.19	10.52	0.209		0.33	0.33	5.1		0.12	I
I C-A	2.04									I
I A-B	2.20									I
I A-C	3.38									I

I TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I 17.45-18.00										I
I B-AC	1.74	7.74	0.225		0.40	0.29	4.6		0.17	I
I C-AB	1.70	10.39	0.163		0.33	0.25	3.7		0.12	I
I C-A	1.76									I
I A-B	1.80									I
I A-C	2.76									I

I TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I 18.00-18.15										I
I B-AC	1.46	7.97	0.183		0.29	0.23	3.5		0.15	I
I C-AB	1.36	10.30	0.132		0.25	0.19	2.8		0.11	I
I C-A	1.54									I
I A-B	1.51									I
I A-C	2.31									I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

NO. OF

SEGMENT	VEHICLES
ENDING	IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

QUEUE FOR STREAM C-AB

TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.2

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	
I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	
I	B-AC	I	159.7	I	106.4	I	27.1	I	0.17
I	C-AB	I	157.5	I	105.0	I	22.9	I	0.15
I	C-A	I	160.5	I	107.0	I	I	I	I
I	A-B	I	165.2	I	110.1	I	I	I	I
I	A-C	I	253.3	I	168.8	I	I	I	I
I	ALL	I	896.1	I	597.4	I	49.9	I	0.06

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

Appendix H

Results of ARCADY capacity assessment: Straight Road/Dugard Avenue mini roundabout



1 : 500 @ A3

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\
Dugard Avenue - Straight Road Mini\Dugard-Straight am.vai"
(drive-on-the-left) at 09:54:08 on Friday, 12 June 2009

.FILE PROPERTIES

RUN TITLE: Dugard Avenue / Straight Road Mini Roundabout weekday am peak
LOCATION: Stanway
DATE: 20/05/09
CLIENT: Hills Residential
ENUMERATOR: ramey [ARDENT18]
JOB NUMBER: F960
STATUS: Preliminary
DESCRIPTION:

.INPUT DATA

ARM A - Straight Road (south)
ARM B - Dugard Avenue (west)
ARM C - Straight Road (north)

.MINI-ROUNDABOUT GEOMETRIC DATA

LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

I	ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I
I		I		I		I		I		I		I		I		I		I	(PCU/MIN)	I
I	ARM A	I	3.00	I	3.00	I	2.00	I	3.50	I	9.00	I	4.00	I	0.00	I	0.404	I	6.451	I
I	ARM B	I	3.50	I	3.10	I	2.00	I	4.10	I	7.20	I	5.00	I	0.00	I	0.643	I	19.871	I
I	ARM C	I	3.00	I	3.00	I	3.20	I	3.40	I	14.80	I	13.10	I	0.00	I	0.509	I	12.229	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

.LENGTH OF TIME PERIOD -(90) MINUTES

.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

.DEMAND SET TITLE: 2023 Base Case weekday am peak

T15

		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
ARM		FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER
		TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK
ARM A	I	15.00	45.00	75.00	9.57	14.36	9.57
ARM B	I	15.00	45.00	75.00	7.13	10.69	7.13
ARM C	I	15.00	45.00	75.00	8.48	12.71	8.48

DEMAND SET TITLE: 2023 Base Case weekday am peak

T33

		TURNING PROPORTIONS		
		TURNING COUNTS		
		(PERCENTAGE OF H.V.S)		
TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.493	0.507
		0.0	378.0	388.0
		(0.0)	(6.0)	(1.0)
	ARM B	0.623	0.000	0.377
		355.0	0.0	215.0
		(3.0)	(0.0)	(2.0)
	ARM C	0.537	0.463	0.000
		364.0	314.0	0.0
		(5.0)	(1.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00								
ARM A	9.61	4.75	2.024	-	0.0	73.9	560.4	8.217
ARM B	7.15	17.86	0.400	-	0.0	0.7	9.6	0.093
ARM C	8.51	9.61	0.886	-	0.0	5.5	63.7	0.584
08.00-08.15								
ARM A	11.48	4.60	2.495	-	73.9	177.1	1882.3	27.576
ARM B	8.54	17.89	0.477	-	0.7	0.9	13.1	0.107
ARM C	10.16	9.16	1.109	-	5.5	23.7	226.8	1.964
08.15-08.30								
ARM A	14.06	4.67	3.008	-	177.1	317.8	3711.7	53.227
ARM B	10.46	17.87	0.585	-	0.9	1.4	19.9	0.134
ARM C	12.44	8.56	1.454	-	23.7	82.2	795.0	6.429
08.30-08.45								
ARM A	14.06	4.67	3.008	-	317.8	458.6	5822.9	85.850
ARM B	10.46	17.87	0.585	-	1.4	1.4	20.9	0.135
ARM C	12.44	8.55	1.456	-	82.2	140.7	1671.6	12.809
08.45-09.00								
ARM A	11.48	4.56	2.514	-	458.6	562.2	7656.1	113.674
ARM B	8.54	17.90	0.477	-	1.4	0.9	14.4	0.108
ARM C	10.16	9.14	1.111	-	140.7	156.0	2224.9	16.321

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15									I
I	ARM A	9.61	4.49	2.139	--	562.2	639.0	9009.5	133.989	I
I	ARM B	7.15	17.92	0.399	--	0.9	0.7	10.3	0.093	I
I	ARM C	8.51	9.59	0.887	--	156.0	140.7	2224.9	15.574	I

 .QUEUE AT ARM A

TIME SEGMENT NO. OF
 ENDING VEHICLES
 IN QUEUE

08.00	73.9	*****
08.15	177.1	*****
08.30	317.8	*****
08.45	458.6	*****
09.00	562.2	*****
09.15	639.0	*****

 .QUEUE AT ARM B

TIME SEGMENT NO. OF
 ENDING VEHICLES
 IN QUEUE

08.00	0.7	*
08.15	0.9	*
08.30	1.4	*
08.45	1.4	*
09.00	0.9	*
09.15	0.7	*

 .QUEUE AT ARM C

TIME SEGMENT NO. OF
 ENDING VEHICLES
 IN QUEUE

08.00	5.5	*****
08.15	23.7	*****
08.30	82.2	*****
08.45	140.7	*****
09.00	156.0	*****
09.15	140.7	*****

 .QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

										T75				
I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	I	I				
I	I	I	I	I	* DELAY *	I	* DELAY *	I	I	I				
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	I	I				
I	A	I	1054.3	I	702.9	I	28642.9	I	27.17	I	74074.6	I	70.26	I
I	B	I	784.6	I	523.0	I	88.1	I	0.11	I	88.2	I	0.11	I
I	C	I	933.2	I	622.1	I	7207.0	I	7.72	I	8239.3	I	8.83	I
I	ALL	I	2772.1	I	1848.1	I	35938.0	I	12.96	I	82402.1	I	29.73	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\
Dugard Avenue - Straight Road Mini\Dugard-Straight am.vai"
(drive-on-the-left) at 09:55:47 on Friday, 12 June 2009

.FILE PROPERTIES

RUN TITLE: Dugard Avenue / Straight Road Mini Roundabout weekday am peak
LOCATION: Stanway
DATE: 20/05/09
CLIENT: Hills Residential
ENUMERATOR: ramey [ARDENT18]
JOB NUMBER: F960
STATUS: Preliminary
DESCRIPTION:

.INPUT DATA

ARM A - Straight Road (south)
ARM B - Dugard Avenue (west)
ARM C - Straight Road (north)

.MINI-ROUNDABOUT GEOMETRIC DATA

LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

I ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I SLOPE	I INTERCEPT	I	
I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I (PCU/MIN)	I	
I ARM A	I	3.00	I	3.00	I	2.00	I	3.50	I	9.00	I	4.00	I	0.00	I 0.404	I	6.451	I
I ARM B	I	3.50	I	3.10	I	2.00	I	4.10	I	7.20	I	5.00	I	0.00	I 0.643	I	19.871	I
I ARM C	I	3.00	I	3.00	I	3.20	I	3.40	I	14.80	I	13.10	I	0.00	I 0.509	I	12.229	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K = entry corner kerb line G=gradient over 50 m

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I ARM	I FLOW SCALE(%)	I
I A	I 100	I
I B	I 100	I
I C	I 100	I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

.LENGTH OF TIME PERIOD -(90) MINUTES

.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Dev't Case weekday am peak

T15

I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	ARM	I FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	I BEFORE I AT TOP I AFTER	I
I	I	I TO RISE I IS REACHED I FALLING	I	I PEAK I OF PEAK I PEAK	I
I	ARM A	I 15.00 I 45.00 I 75.00	I	I 9.57 I 14.36 I 9.57	I
I	ARM B	I 15.00 I 45.00 I 75.00	I	I 8.29 I 12.43 I 8.29	I
I	ARM C	I 15.00 I 45.00 I 75.00	I	I 8.48 I 12.71 I 8.48	I

DEMAND SET TITLE: 2023 Dev't Case weekday am peak

T33

I	I	TURNING PROPORTIONS	I
I	I	TURNING COUNTS	I
I	I	(PERCENTAGE OF H.V.S)	I
I	TIME	I FROM/TO I ARM A I ARM B I ARM C	I
I	07.45 - 09.15	I I I I I	I
I		I ARM A I 0.000 I 0.493 I 0.507	I
I		I I 0.0 I 378.0 I 388.0	I
I		I (0.0)I (1.0)I (6.0)I	I
I		I I I I I	I
I		I ARM B I 0.535 I 0.000 I 0.465	I
I		I I 355.0 I 0.0 I 308.0	I
I		I I (3.0)I (0.0)I (2.0)I	I
I		I I I I I	I
I		I ARM C I 0.537 I 0.463 I 0.000	I
I		I I 364.0 I 314.0 I 0.0	I
I		I I (5.0)I (1.0)I (0.0)I	I
I		I I I I I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	07.45-08.00								
I	ARM A	9.61	4.75	2.026	--	0.0	73.9	560.7	8.232
I	ARM B	8.32	17.80	0.467	--	0.0	0.9	12.4	0.104
I	ARM C	8.51	9.61	0.885	--	0.0	5.5	63.7	0.582
I									
I	08.00-08.15								
I	ARM A	11.48	4.60	2.497	--	73.9	177.2	1883.4	27.592
I	ARM B	9.93	17.83	0.557	--	0.9	1.2	17.8	0.126
I	ARM C	10.16	9.16	1.109	--	5.5	23.7	226.6	1.964
I									
I	08.15-08.30								
I	ARM A	14.06	4.67	3.010	--	177.2	318.0	3713.5	53.264
I	ARM B	12.17	17.81	0.683	--	1.2	2.1	29.4	0.173
I	ARM C	12.44	8.56	1.453	--	23.7	82.1	794.1	6.422
I									
I	08.30-08.45								
I	ARM A	14.06	4.67	3.010	--	318.0	458.8	5825.5	85.910
I	ARM B	12.17	17.81	0.683	--	2.1	2.1	31.6	0.177
I	ARM C	12.44	8.55	1.456	--	82.1	140.6	1670.1	12.798
I									
I	08.45-09.00								
I	ARM A	11.48	4.56	2.515	--	458.8	562.5	7659.3	113.726
I	ARM B	9.93	17.84	0.557	--	2.1	1.3	20.1	0.128
I	ARM C	10.16	9.14	1.112	--	140.6	155.9	2223.9	16.319

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15									I
I	ARM A	9.61	4.49	2.140	--	562.5	639.3	9013.1	134.064	I
I	ARM B	8.32	17.87	0.466	--	1.3	0.9	13.7	0.105	I
I	ARM C	8.51	9.58	0.888	--	155.9	140.7	2224.7	15.588	I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	73.9	*****
08.15	177.2	*****
08.30	318.0	*****
08.45	458.8	*****
09.00	562.5	*****
09.15	639.3	*****

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.9	*
08.15	1.2	*
08.30	2.1	**
08.45	2.1	**
09.00	1.3	*
09.15	0.9	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	5.5	*****
08.15	23.7	*****
08.30	82.1	*****
08.45	140.6	*****
09.00	155.9	*****
09.15	140.7	*****

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	T75
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I	
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I	
I	A	I	1054.3	I	702.9	I	28655.5	I	27.18
I	B	I	912.6	I	608.4	I	125.0	I	0.14
I	C	I	933.2	I	622.1	I	7203.0	I	7.72
I	ALL	I	2900.1	I	1933.4	I	35983.5	I	12.41

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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RG40 3GA,UK	

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\
Dugard Avenue - Straight Road Mini\Dugard-Straight pm.vai"
(drive-on-the-left) at 09:59:23 on Friday, 12 June 2009

.FILE PROPERTIES

RUN TITLE: Dugard Avenue / Straight Road Mini Roundabout weekday pm peak
LOCATION: Stanway
DATE: 20/05/09
CLIENT: Hills Residential
ENUMERATOR: ramey [ARDENT18]
JOB NUMBER: F960
STATUS: Preliminary
DESCRIPTION:

.INPUT DATA

ARM A - Straight Road (south)
ARM B - Dugard Avenue (west)
ARM C - Straight Road (north)

.MINI-ROUNDABOUT GEOMETRIC DATA

LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

I ARM	I V (M)	I E (M)	I Lm(M)	I Vm(M)	I A (M)	I K (M)	I G (%)	I SLOPE	I INTERCEPT	T5
I	I	I	I	I	I	I	I	I	I (PCU/MIN)	I
I ARM A	I 3.00	I 3.00	I 2.00	I 3.50	I 9.00	I 4.00	I 0.00	I 0.404	I 6.451	I
I ARM B	I 3.50	I 3.10	I 2.00	I 4.10	I 7.20	I 5.00	I 0.00	I 0.643	I 19.871	I
I ARM C	I 3.00	I 3.00	I 3.20	I 3.40	I 14.80	I 13.10	I 0.00	I 0.509	I 12.229	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13
IARM I FLOW SCALE(%) I

I A I 100 I
I B I 100 I
I C I 100 I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

.DEMAND SET TITLE: 2023 Base Case weekday pm peak

T15

		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
ARM		FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER
		TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK
ARM A	I	15.00	45.00	75.00	9.10	13.65	9.10
ARM B	I	15.00	45.00	75.00	8.24	12.36	8.24
ARM C	I	15.00	45.00	75.00	8.04	12.06	8.04

DEMAND SET TITLE: 2023 Base Case weekday pm peak

T33

		TURNING PROPORTIONS		
		TURNING COUNTS		
		(PERCENTAGE OF H.V.S)		
TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.544	0.456
		0.0	396.0	332.0
		(0.0)	(1.0)	(3.0)
	ARM B	0.651	0.000	0.349
		429.0	0.0	230.0
		(1.0)	(0.0)	(2.0)
	ARM C	0.613	0.387	0.000
		394.0	249.0	0.0
		(4.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00								
ARM A	9.13	5.14	1.776	-	0.0	61.1	466.1	6.312
ARM B	8.27	18.10	0.457	-	0.0	0.8	12.0	0.101
ARM C	8.07	9.25	0.872	-	0.0	5.1	59.0	0.570
17.00-17.15								
ARM A	10.91	5.02	2.171	-	61.1	149.4	1578.8	21.007
ARM B	9.87	18.11	0.545	-	0.8	1.2	17.1	0.121
ARM C	9.63	8.72	1.105	-	5.1	22.2	211.8	1.953
17.15-17.30								
ARM A	13.36	5.10	2.618	-	149.4	273.2	3169.6	41.768
ARM B	12.09	18.09	0.669	-	1.2	2.0	27.7	0.164
ARM C	11.80	8.00	1.474	-	22.2	79.3	761.3	6.600
17.30-17.45								
ARM A	13.36	5.10	2.618	-	273.2	397.1	5027.3	67.571
ARM B	12.09	18.09	0.669	-	2.0	2.0	29.6	0.167
ARM C	11.80	7.99	1.477	-	79.3	136.5	1618.3	13.154
17.45-18.00								
ARM A	10.91	4.99	2.184	-	397.1	485.8	6621.3	89.725
ARM B	9.87	18.12	0.545	-	2.0	1.2	19.1	0.123
ARM C	9.63	8.69	1.108	-	136.5	150.6	2153.4	16.586

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15									I
I	ARM A	9.13	4.92	1.856	--	485.8	549.0	7760.4	105.378	I
I	ARM B	8.27	18.14	0.456	--	1.2	0.8	13.1	0.102	I
I	ARM C	8.07	9.23	0.874	--	150.6	134.2	2135.9	15.532	I

 .QUEUE AT ARM A

TIME SEGMENT NO. OF
 ENDING VEHICLES
 IN QUEUE

17.00	61.1	*****
17.15	149.4	*****
17.30	273.2	*****
17.45	397.1	*****
18.00	485.8	*****
18.15	549.0	*****

 .QUEUE AT ARM B

TIME SEGMENT NO. OF
 ENDING VEHICLES
 IN QUEUE

17.00	0.8	*
17.15	1.2	*
17.30	2.0	**
17.45	2.0	**
18.00	1.2	*
18.15	0.8	*

 .QUEUE AT ARM C

TIME SEGMENT NO. OF
 ENDING VEHICLES
 IN QUEUE

17.00	5.1	*****
17.15	22.2	*****
17.30	79.3	*****
17.45	136.5	*****
18.00	150.6	*****
18.15	134.2	*****

 .QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

										T75				
I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	I	I				
I	I	I	I	I	* DELAY *	I	* DELAY *	I	I	I				
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	I	I				
I	A	I	1002.0	I	668.0	I	24623.4	I	24.57	I	55237.2	I	55.12	I
I	B	I	907.1	I	604.7	I	118.5	I	0.13	I	118.5	I	0.13	I
I	C	I	885.0	I	590.0	I	6939.8	I	7.84	I	7915.0	I	8.94	I
I	ALL	I	2794.1	I	1862.8	I	31681.7	I	11.34	I	63270.7	I	22.64	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\
Dugard Avenue - Straight Road Mini\Dugard-Straight pm.vai"
(drive-on-the-left) at 09:59:53 on Friday, 12 June 2009

.FILE PROPERTIES

RUN TITLE: Dugard Avenue / Straight Road Mini Roundabout weekday pm peak
LOCATION: Stanway
DATE: 20/05/09
CLIENT: Hills Residential
ENUMERATOR: ramey [ARDENT18]
JOB NUMBER: F960
STATUS: Preliminary
DESCRIPTION:

.INPUT DATA

ARM A - Straight Road (south)
ARM B - Dugard Avenue (west)
ARM C - Straight Road (north)

.MINI-ROUNDABOUT GEOMETRIC DATA

LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

I ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I (PCU/MIN)	I
I ARM A	I	3.00	I	3.00	I	2.00	I	3.50	I	9.00	I	4.00	I	0.00	I	0.404	I	6.451	I
I ARM B	I	3.50	I	3.10	I	2.00	I	4.10	I	7.20	I	5.00	I	0.00	I	0.643	I	19.871	I
I ARM C	I	3.00	I	3.00	I	3.20	I	3.40	I	14.80	I	13.10	I	0.00	I	0.509	I	12.229	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I ARM	I	FLOW SCALE(%)	I
I A	I	100	I
I B	I	100	I
I C	I	100	I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

.LENGTH OF TIME PERIOD -(90) MINUTES

.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Dev't Case weekday pm peak

T15

I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I	I	I	I	I
I	ARM	I FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	I BEFORE I AT TOP I AFTER	I	I	I	I	I
I	I	I TO RISE I IS REACHED I FALLING	I	I PEAK I OF PEAK I PEAK	I	I	I	I	I
I	ARM A	I 15.00 I 45.00 I 75.00	I	I 9.10 I 13.65 I 9.10	I	I	I	I	I
I	ARM B	I 15.00 I 45.00 I 75.00	I	I 9.10 I 13.65 I 9.10	I	I	I	I	I
I	ARM C	I 15.00 I 45.00 I 75.00	I	I 8.04 I 12.06 I 8.04	I	I	I	I	I

DEMAND SET TITLE: 2023 Dev't Case weekday pm peak

T33

I	I	TURNING PROPORTIONS	I
I	I	TURNING COUNTS	I
I	I	(PERCENTAGE OF H.V.S)	I
I	TIME	I FROM/TO I ARM A I ARM B I ARM C	I
I	16.45 - 18.15	I I I I I	I I I I I
I		I ARM A I 0.000 I 0.544 I 0.456	I I I I I
I		I I 0.0 I 396.0 I 332.0	I I I I I
I		I (0.0)I (1.0)I (3.0)I	I I I I I
I		I I I I I	I I I I I
I		I ARM B I 0.620 I 0.000 I 0.380	I I I I I
I		I I 451.0 I 0.0 I 277.0	I I I I I
I		I I (1.0)I (0.0)I (2.0)I	I I I I I
I		I I I I I	I I I I I
I		I ARM C I 0.613 I 0.387 I 0.000	I I I I I
I		I I 394.0 I 249.0 I 0.0	I I I I I
I		I I (4.0)I (0.0)I (0.0)I	I I I I I
I		I I I I I	I I I I I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	16.45-17.00								
I	ARM A	9.13	5.15	1.775	--	0.0	61.1	465.7	6.299
I	ARM B	9.13	18.09	0.505	--	0.0	1.0	14.4	0.110
I	ARM C	8.07	9.12	0.885	--	0.0	5.5	62.5	0.605

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.00-17.15								
I	ARM A	10.91	5.04	2.163	--	61.1	149.0	1575.7	20.874
I	ARM B	10.91	18.10	0.603	--	1.0	1.5	21.3	0.138
I	ARM C	9.63	8.56	1.126	--	5.5	24.4	230.8	2.145

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.15-17.30								
I	ARM A	13.36	5.13	2.603	--	149.0	272.4	3161.1	41.416
I	ARM B	13.36	18.07	0.739	--	1.5	2.7	37.4	0.205
I	ARM C	11.80	7.81	1.511	--	24.4	84.4	816.8	7.225

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.30-17.45								
I	ARM A	13.36	5.13	2.602	--	272.4	395.8	5012.0	67.024
I	ARM B	13.36	18.07	0.739	--	2.7	2.8	41.1	0.211
I	ARM C	11.80	7.79	1.516	--	84.4	144.7	1718.1	14.228

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.45-18.00								
I	ARM A	10.91	5.02	2.172	--	395.8	484.1	6599.4	89.030
I	ARM B	10.91	18.11	0.602	--	2.8	1.5	24.5	0.142
I	ARM C	9.63	8.52	1.131	--	144.7	161.4	2295.4	17.936

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15									I
I	ARM A	9.13	4.94	1.848	--	484.1	547.0	7733.2	104.573	I
I	ARM B	9.13	18.13	0.504	--	1.5	1.0	16.0	0.112	I
I	ARM C	8.07	9.09	0.888	--	161.4	147.0	2312.7	17.074	I

 .QUEUE AT ARM A

TIME SEGMENT NO. OF
 ENDING VEHICLES
 IN QUEUE

17.00	61.1	*****
17.15	149.0	*****
17.30	272.4	*****
17.45	395.8	*****
18.00	484.1	*****
18.15	547.0	*****

 .QUEUE AT ARM B

TIME SEGMENT NO. OF
 ENDING VEHICLES
 IN QUEUE

17.00	1.0	*
17.15	1.5	*
17.30	2.7	***
17.45	2.8	***
18.00	1.5	**
18.15	1.0	*

 .QUEUE AT ARM C

TIME SEGMENT NO. OF
 ENDING VEHICLES
 IN QUEUE

17.00	5.5	*****
17.15	24.4	*****
17.30	84.4	*****
17.45	144.7	*****
18.00	161.4	*****
18.15	147.0	*****

 .QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

										T75				
I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	I	I				
I	I	I	I	I	* DELAY *	I	* DELAY *	I	I	I				
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	I	I				
I	A	I	1002.0	I	668.0	I	24547.1	I	24.50	I	54813.2	I	54.70	I
I	B	I	1002.0	I	668.0	I	154.7	I	0.15	I	154.8	I	0.15	I
I	C	I	885.0	I	590.0	I	7436.3	I	8.40	I	8624.8	I	9.75	I
I	ALL	I	2889.1	I	1926.1	I	32138.2	I	11.12	I	63592.7	I	22.01	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

Appendix I

Results of PICADY capacity assessment: Warren Lane/Dyers Road junction



WARREN LANE

WARREN LANE

DYERS ROAD

Cottages

GP
35.3m +

1 : 500 @ A3

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-

"Y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\PICADY\Warren-Dyers\
Warren-Dyers existing.vpl"
(drive-on-the-left) at 16:23:05 on Thursday, 11 June 2009

.RUN INFORMATION

RUN TITLE : Warren Lane/Dyers Road T-junction
LOCATION : Stanway
DATE : 22/05/09
CLIENT : Hills Residential
ENUMERATOR : mlast [ARDENT23]
JOB NUMBER : F960
STATUS :
DESCRIPTION :

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS Warren Lane (north)
ARM B IS Dyers Road
ARM C IS Warren Lane (south)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I (W)	7.40 M.	I
I	CENTRAL RESERVE WIDTH	I (WCR)	0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I (WC-B)	2.20 M.	I
I	- VISIBILITY	I (VC-B)	250.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	53.0 M.	I
I	- VISIBILITY TO RIGHT	I (VB-A)	77.0 M.	I
I	- LANE 1 WIDTH	I (WB-C)	-	I
I	- LANE 2 WIDTH	I (WB-A)	-	I
I	WIDTH AT 0 M FROM JUNCTION	I	10.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	6.80 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	2.80 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	2.30 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	2.40 M.	I
I	- LENGTH OF FLARED SECTION	I DERIVED:	1 PCU	I

.SLOPES AND INTERCEPT

 (NB:Streams may be combined, in which case capacity will be adjusted)

```

-----
I Intercept For Slope For Opposing Slope For Opposing I
I STREAM B-C STREAM A-C STREAM A-B I
-----
I 0.00 0.00 0.00 I
-----
  
```

* Due to the presence of a flare, data is not available

```

-----
I Intercept For Slope For Opposing Slope For Opposing Slope For Opposing Slope For OpposingI
I STREAM B-A STREAM A-C STREAM A-B STREAM C-A STREAM C-B I
-----
I 0.00 0.00 0.00 0.00 0.00 I
-----
  
```

* Due to the presence of a flare, data is not available

```

-----
I Intercept For Slope For Opposing Slope For Opposing I
I STREAM C-B STREAM A-C STREAM A-B I
-----
I 718.74 0.26 0.26 I
-----
  
```

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

```

-----
I ARM I FLOW SCALE(%) I
-----
I A I 100 I
I B I 100 I
I C I 100 I
-----
  
```

.Demand set: 2023 Base Case weekday am peak

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

```

-----
I I NUMBER OF MINUTES FROM START WHEN I RATE OF FLOW (VEH/MIN) I
I ARM I FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I
I I TO RISE I IS REACHED I FALLING I PEAK I OF PEAK I PEAK I
I I I I I I I I I
-----
I ARM A I 15.00 I 45.00 I 75.00 I 9.79 I 14.68 I 9.79 I
I ARM B I 15.00 I 45.00 I 75.00 I 1.00 I 1.50 I 1.00 I
I ARM C I 15.00 I 45.00 I 75.00 I 12.27 I 18.41 I 12.27 I
-----
  
```

.Demand set: 2023 Base Case weekday am peak

```

-----
I I TURNING PROPORTIONS I
I I TURNING COUNTS I
I I (PERCENTAGE OF H.V.S) I
I I
I TIME I FROM/TO I ARM A I ARM B I ARM C I
-----
I 07.45 - 08.00 I I I I I
I I ARM A I 0.000 I 0.010 I 0.990 I
I I I 0.0 I 8.0 I 775.0 I
I I I ( 0.0)I ( 0.0)I ( 11.0)I
I I I I I I
I I ARM B I 0.038 I 0.000 I 0.962 I
I I I 3.0 I 0.0 I 77.0 I
I I I ( 0.0)I ( 0.0)I ( 2.0)I
I I I I I I
I I ARM C I 0.863 I 0.137 I 0.000 I
I I I 847.0 I 135.0 I 0.0 I
I I I ( 4.0)I ( 2.0)I ( 0.0)I
I I I I I I
-----
  
```

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
 THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
 AND FOR TIME PERIOD 1

```

-----
I TIME DEMAND CAPACITY DEMAND/ PEDESTRIAN START END DELAY GEOMETRIC DELAY AVERAGE DELAY I
I (VEH/MIN) (VEH/MIN) CAPACITY FLOW QUEUE QUEUE (VEH.MIN/ (VEH.MIN/ PER ARRIVING I
I I (RFC) (PEDS/MIN) (VEHS) (VEHS) TIME SEGMENT) TIME SEGMENT) VEHICLE (MIN) I
I 07.45-08.00 I
I B-C 0.97 9.02 0.107 0.00 0.12 1.7 0.12 I
-----
  
```

I	B-A	0.04	4.38	0.009		0.00	0.01	0.1		0.23	I
I	C-AB	4.76	16.20	0.294		0.00	0.85	12.4		0.09	I
I	C-A	7.56									I
I	A-B	0.10									I
I	A-C	9.72									I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-C	1.15	8.47	0.136		0.12	0.16	2.3		0.14	I
I	B-A	0.04	3.42	0.013		0.01	0.01	0.2		0.30	I
I	C-AB	7.38	17.34	0.425		0.85	1.58	23.7		0.10	I
I	C-A	7.34									I
I	A-B	0.12									I
I	A-C	11.61									I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-C	1.41	7.69	0.184		0.16	0.22	3.2		0.16	I
I	B-A	0.06	2.11	0.026		0.01	0.03	0.4		0.49	I
I	C-AB	13.33	19.06	0.700		1.58	4.98	72.4		0.17	I
I	C-A	4.69									I
I	A-B	0.15									I
I	A-C	14.22									I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-C	1.41	7.69	0.184		0.22	0.22	3.3		0.16	I
I	B-A	0.06	2.06	0.027		0.03	0.03	0.4		0.50	I
I	C-AB	13.62	19.19	0.710		4.98	5.36	83.6		0.19	I
I	C-A	4.40									I
I	A-B	0.15									I
I	A-C	14.22									I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-C	1.15	8.47	0.136		0.22	0.16	2.5		0.14	I
I	B-A	0.04	3.37	0.013		0.03	0.01	0.2		0.30	I
I	C-AB	7.67	17.56	0.437		5.36	1.74	29.0		0.11	I
I	C-A	7.04									I
I	A-B	0.12									I
I	A-C	11.61									I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-C	0.97	9.02	0.107		0.16	0.12	1.9		0.12	I
I	B-A	0.04	4.36	0.009		0.01	0.01	0.1		0.23	I
I	C-AB	4.83	16.25	0.297		1.74	0.89	13.7		0.09	I
I	C-A	7.49									I
I	A-B	0.10									I
I	A-C	9.72									I
I											I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.2
08.30	0.2
08.45	0.2
09.00	0.2
09.15	0.1

QUEUE FOR STREAM B-A

TIME SEGMENT	NO. OF VEHICLES
-----------------	--------------------

ENDING IN QUEUE
 08.00 0.0
 08.15 0.0
 08.30 0.0
 08.45 0.0
 09.00 0.0
 09.15 0.0

QUEUE FOR STREAM C-AB

 TIME NO. OF
 SEGMENT VEHICLES
 ENDING IN QUEUE
 08.00 0.8 *
 08.15 1.6 **
 08.30 5.0 *****
 08.45 5.4 *****
 09.00 1.7 **
 09.15 0.9 *

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)
I	B-C	I 106.0	I 70.7	I 14.9	I 0.14	I	14.9	I 0.14
I	B-A	I 4.1	I 2.8	I 1.4	I 0.35	I	1.4	I 0.35
I	C-AB	I 773.9	I 515.9	I 234.7	I 0.30	I	234.7	I 0.30
I	C-A	I 577.8	I 385.2	I	I	I	I	I
I	A-B	I 11.0	I 7.3	I	I	I	I	I
I	A-C	I 1066.7	I 711.2	I	I	I	I	I
I	ALL	I 2539.5	I 1693.0	I 251.0	I 0.10	I	251.1	I 0.10

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	0.00		0.00		0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	718.74		0.26		0.26	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

 I ARM I FLOW SCALE(%) I

 I A I 100 I
 I B I 100 I
 I C I 100 I

.Demand set: 2023 Base Case weekday pm peak

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RPC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-C	1.17	8.46	0.138		0.23	0.16	2.5		0.14
B-A	0.00	3.05	0.000		0.00	0.00	0.0		0.00
C-AB	5.49	18.07	0.304		2.72	1.11	17.5		0.08
C-A	9.45								
A-B	0.06								
A-C	13.57								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RPC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-C	0.98	9.04	0.108		0.16	0.12	1.9		0.12
B-A	0.00	3.93	0.000		0.00	0.00	0.0		0.00
C-AB	3.48	16.79	0.207		1.11	0.62	9.4		0.08
C-A	9.03								
A-B	0.05								
A-C	11.37								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.2
17.45	0.2
18.00	0.2
18.15	0.1

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.6 *
17.15	1.0 *
17.30	2.6 ***
17.45	2.7 ***
18.00	1.1 *
18.15	0.6 *

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL CAPACITY (VEH/H)	* QUEUEING * * DELAY * (MIN)	* INCLUSIVE QUEUEING * * DELAY * (MIN)
B-C	107.4	71.6	15.2	15.2
B-A	0.0	0.0	0.0	0.0
C-AB	571.2	380.8	132.3	132.3
C-A	801.1	534.0		
A-B	5.5	3.7		
A-C	1247.0	831.4		
ALL	2732.2	1821.5	147.5	147.5

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

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Run with file:-

"Y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\PICADY\Warren-Dyers\
Warren-Dyers existing.vpl"
(drive-on-the-left) at 16:20:00 on Thursday, 11 June 2009

.RUN INFORMATION

RUN TITLE : Warren Lane/Dyers Road T-junction
LOCATION : Stanway
DATE : 22/05/09
CLIENT : Hills Residential
ENUMERATOR : mlast [ARDENT23]
JOB NUMBER : F960
STATUS :
DESCRIPTION :

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS Warren Lane (north)
ARM B IS Dyers Road
ARM C IS Warren Lane (south)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

.GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I (W)	7.40 M.	I
I	CENTRAL RESERVE WIDTH	I (WCR)	0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I (WC-B)	2.20 M.	I
I	- VISIBILITY	I (VC-B)	250.00 M.	I
I	- BLOCKS TRAFFIC	I	YES	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	53.0 M.	I
I	- VISIBILITY TO RIGHT	I (VB-A)	77.0 M.	I
I	- LANE 1 WIDTH	I (WB-C)	-	I
I	- LANE 2 WIDTH	I (WB-A)	-	I
I	WIDTH AT 0 M FROM JUNCTION	I	10.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	6.80 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	2.80 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	2.30 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	2.40 M.	I
I	- LENGTH OF FLARED SECTION	I DERIVED:	1 PCU	I

.SLOPES AND INTERCEPT

 (NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For I STREAM B-C	Slope For STREAM	Opposing A-C	Slope For STREAM A-B	Opposing I
I	0.00		0.00	0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For I STREAM B-A	Slope For STREAM	Opposing A-C	Slope For STREAM A-B	Opposing STREAM	C-A	Slope For STREAM	Opposing C-B	I
I	0.00		0.00	0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For I STREAM C-B	Slope For STREAM	Opposing A-C	Slope For STREAM A-B	Opposing I
I	718.74		0.26	0.26	I

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

.Demand set: 2023 Dev't Case weekday am peak

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN I FLOW STARTS I TO RISE	I	TOP OF PEAK I IS REACHED	I	FLOW STOPS I FALLING	I	RATE OF FLOW (VEH/MIN) I BEFORE I PEAK	I	AT TOP I OF PEAK	I	AFTER I PEAK
I	A	I	15.00	I	45.00	I	75.00	I	10.49	I	15.73	I	10.49
I	B	I	15.00	I	45.00	I	75.00	I	3.13	I	4.69	I	3.13
I	C	I	15.00	I	45.00	I	75.00	I	12.57	I	18.86	I	12.57

.Demand set: 2023 Dev't Case weekday am peak

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	07.45 - 08.00	I	ARM A	I	0.000	I	0.076	I	0.924	I		I	
I		I		I	(0.0)	I	(0.0)	I	(11.0)	I		I	
I		I	ARM B	I	0.492	I	0.000	I	0.508	I		I	
I		I		I	123.0	I	0.0	I	127.0	I		I	
I		I		I	(0.0)	I	(0.0)	I	(1.0)	I		I	
I		I	ARM C	I	0.842	I	0.158	I	0.000	I		I	
I		I		I	847.0	I	159.0	I	0.0	I		I	
I		I		I	(4.0)	I	(2.0)	I	(0.0)	I		I	

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
 THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT
 FOR COMBINED DEMAND SETS
 AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	07.45-08.00									
I	B-C	1.59	7.75	0.206		0.00	0.26	3.7		0.16

I	B-A	1.54	4.47	0.345		0.00	0.51	7.0		0.33	I
I	C-AB	5.77	16.14	0.358		0.00	1.09	16.0		0.10	I
I	C-A	6.85									I
I	A-B	0.80									I
I	A-C	9.72									I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-C	1.90	6.15	0.309		0.26	0.44	6.3		0.23	I
I	B-A	1.84	3.34	0.553		0.51	1.13	15.1		0.64	I
I	C-AB	8.97	17.28	0.519		1.09	2.21	33.2		0.12	I
I	C-A	6.10									I
I	A-B	0.96									I
I	A-C	11.61									I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-C	2.33	1.84	1.265		0.44	10.00	85.6		3.86	I
I	B-A	2.26	1.82	1.240		1.13	9.64	86.2		4.05	I
I	C-AB	16.34	18.99	0.861		2.21	10.50	141.4		0.33	I
I	C-A	2.12									I
I	A-B	1.17									I
I	A-C	14.22									I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.30-08.45										I
I	B-C	2.33	1.79	1.304		10.00	18.53	214.4		7.71	I
I	B-A	2.26	1.73	1.306		9.64	17.95	207.4		7.73	I
I	C-AB	17.20	19.33	0.890		10.50	13.65	212.7		0.52	I
I	C-A	1.26									I
I	A-B	1.17									I
I	A-C	14.22									I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-C	1.90	2.86	0.666		18.53	6.38	186.8		4.65	I
I	B-A	1.84	2.77	0.666		17.95	6.25	181.4		4.76	I
I	C-AB	9.61	17.77	0.541		13.65	2.59	54.2		0.15	I
I	C-A	5.46									I
I	A-B	0.96									I
I	A-C	11.61									I
I											I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-C	1.59	7.28	0.219		6.38	0.28	8.4		0.20	I
I	B-A	1.54	4.37	0.354		6.25	0.57	16.4		0.47	I
I	C-AB	5.87	16.22	0.362		2.59	1.17	18.2		0.10	I
I	C-A	6.75									I
I	A-B	0.80									I
I	A-C	9.72									I
I											I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT	NO. OF VEHICLES IN QUEUE
08.00	0.3
08.15	0.4
08.30	10.0
08.45	18.5
09.00	6.4
09.15	0.3

QUEUE FOR STREAM B-A

TIME SEGMENT	NO. OF VEHICLES
-----------------	--------------------

```

ENDING      IN QUEUE
08.00      0.5  *
08.15      1.1  *
08.30      9.6  *****
08.45      17.9 *****
09.00      6.2  *****
09.15      0.6  *

```

QUEUE FOR STREAM C-AB

```

-----
TIME        NO. OF
SEGMENT     VEHICLES
ENDING      IN QUEUE
08.00      1.1  *
08.15      2.2  **
08.30      10.5 *****
08.45      13.6 *****
09.00      2.6  ***
09.15      1.2  *

```

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

```

-----
I STREAM I  TOTAL DEMAND I  * QUEUEING *  I  * INCLUSIVE QUEUEING * I
I         I         I         I  * DELAY *  I         I  * DELAY *  I
I         I         I         I         I         I         I         I
I         I (VEH) (VEH/H) I (MIN) (MIN/VEH) I (MIN) (MIN/VEH) I
-----
I B-C I 174.8 I 116.5 I 505.2 I 2.89 I 505.2 I 2.89 I
I B-A I 169.3 I 112.9 I 513.4 I 3.03 I 513.5 I 3.03 I
I C-AB I 956.7 I 637.8 I 475.7 I 0.50 I 475.7 I 0.50 I
I C-A I 428.0 I 285.3 I         I         I         I         I
I A-B I 88.1 I 58.7 I         I         I         I         I
I A-C I 1066.7 I 711.2 I         I         I         I         I
-----
I ALL I 2883.6 I 1922.4 I 1494.3 I 0.52 I 1494.4 I 0.52 I

```

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

```

-----
I Intercept For Slope For Opposing Slope For Opposing I
I STREAM B-C STREAM A-C STREAM A-B I
-----
I 0.00 0.00 0.00 I
-----

```

* Due to the presence of a flare, data is not available

```

-----
I Intercept For Slope For Opposing Slope For Opposing Slope For Opposing Slope For OpposingI
I STREAM B-A STREAM A-C STREAM A-B STREAM C-A STREAM C-B I
-----
I 0.00 0.00 0.00 0.00 0.00 I
-----

```

* Due to the presence of a flare, data is not available

```

-----
I Intercept For Slope For Opposing Slope For Opposing I
I STREAM C-B STREAM A-C STREAM A-B I
-----
I 718.74 0.26 0.26 I
-----

```

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

```

-----
I ARM I FLOW SCALE(%) I
-----
I A I 100 I
I B I 100 I
I C I 100 I
-----

```

.Demand set: 2023 Dev't Case weekday pm peak

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-C	1.23	6.95	0.177		1.30	0.22	3.6		0.18
B-A	0.93	2.88	0.322		2.77	0.50	10.3		0.60
C-AB	9.71	18.39	0.528		15.76	2.63	58.3		0.15
C-A	5.99								
A-B	1.90								
A-C	13.57								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-C	1.03	8.19	0.126		0.22	0.15	2.2		0.14
B-A	0.78	4.14	0.188		0.50	0.24	3.8		0.30
C-AB	5.71	16.66	0.343		2.63	1.14	17.9		0.09
C-A	7.44								
A-B	1.59								
A-C	11.37								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.6 *
17.45	1.3 *
18.00	0.2
18.15	0.1

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.4
17.30	2.0 **
17.45	2.8 ***
18.00	0.5 *
18.15	0.2

QUEUE FOR STREAM C-AB

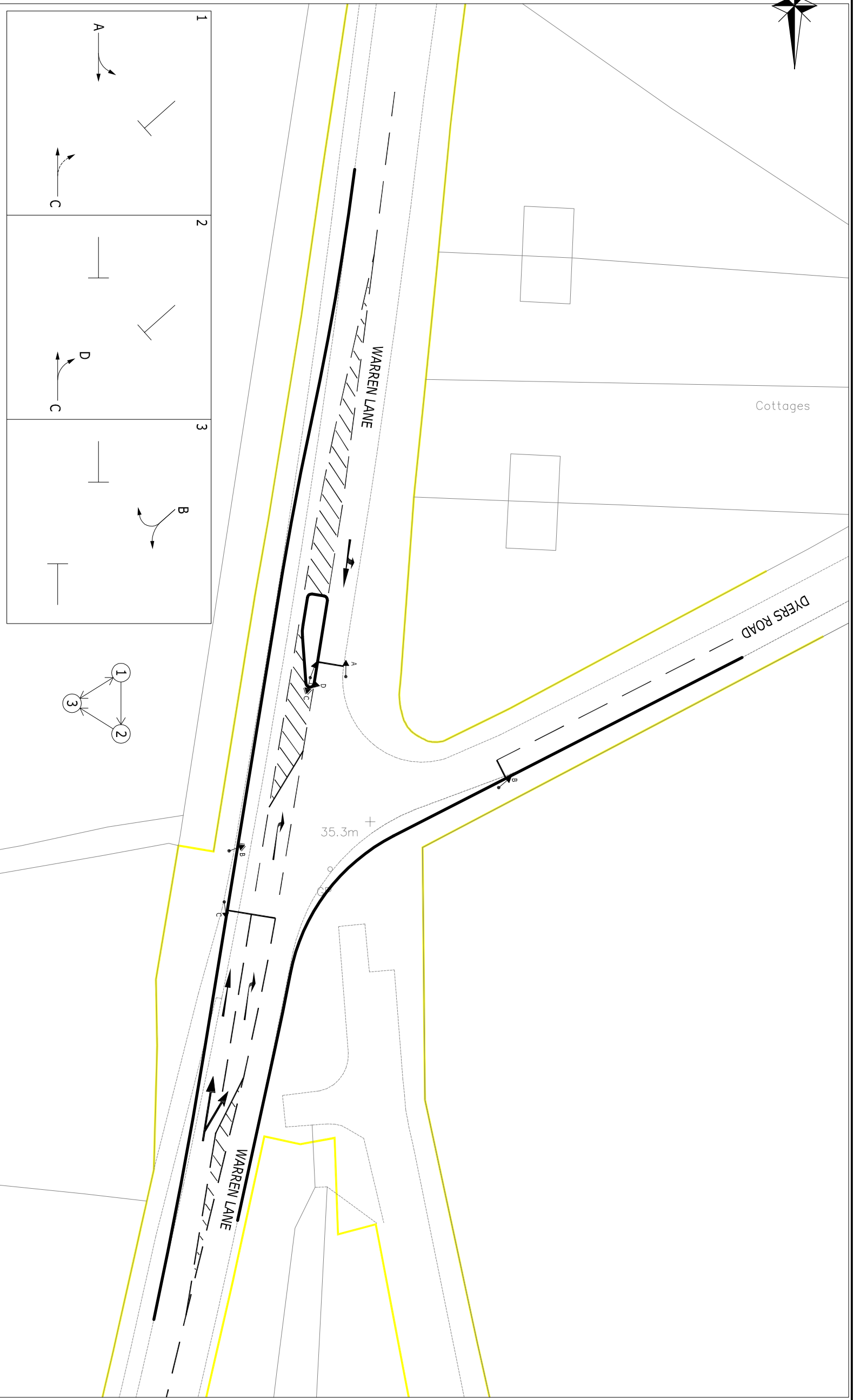
TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	1.1 *
17.15	2.2 **
17.30	11.6 *****
17.45	15.8 *****
18.00	2.6 ***
18.15	1.1 *

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	VEH/H	* QUEUEING * * DELAY * (MIN)	* INCLUSIVE QUEUEING * * DELAY * (MIN)
B-C	112.9	75.2	36.0	0.32
B-A	85.3	56.9	81.9	0.96
C-AB	977.1	651.4	523.2	0.54
C-A	465.4	310.3		
A-B	174.8	116.5		
A-C	1247.0	831.4		
ALL	3062.5	2041.7	641.1	0.21

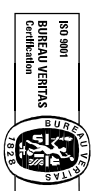
* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****



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KEY:
 HIGHWAY BOUNDARY



REV.	AMENDMENTS	DRN	CHK	APP	DATE

ARDENT
 CONSULTING ENGINEERS

4th Floor, Diamond House, 36/38 Hatton Garden, London, EC1N 8EB
 t 020 7430 1209 f 020 7430 0318
 w www.ardent-ce.co.uk e enquiries@ardent-ce.co.uk

PROJECT TITLE:
 FIVEWAYS FRUIT FARM SITE
 STANWAY

DRAWING TITLE:
 WARREN LANE/DYERS ROAD JUNCTION:
 PROPOSED SIGNALS

CLIENT:
 HILLS RESIDENTIAL

SCALE:
 1:500 @ A3

DATE:
 JUNE 2009

DESIGNED:
 RMA

DRAWN:
 RMA

CHECKED:
 SAF

APPROVED:
 ML

DRAWING NO.:
 F960-011

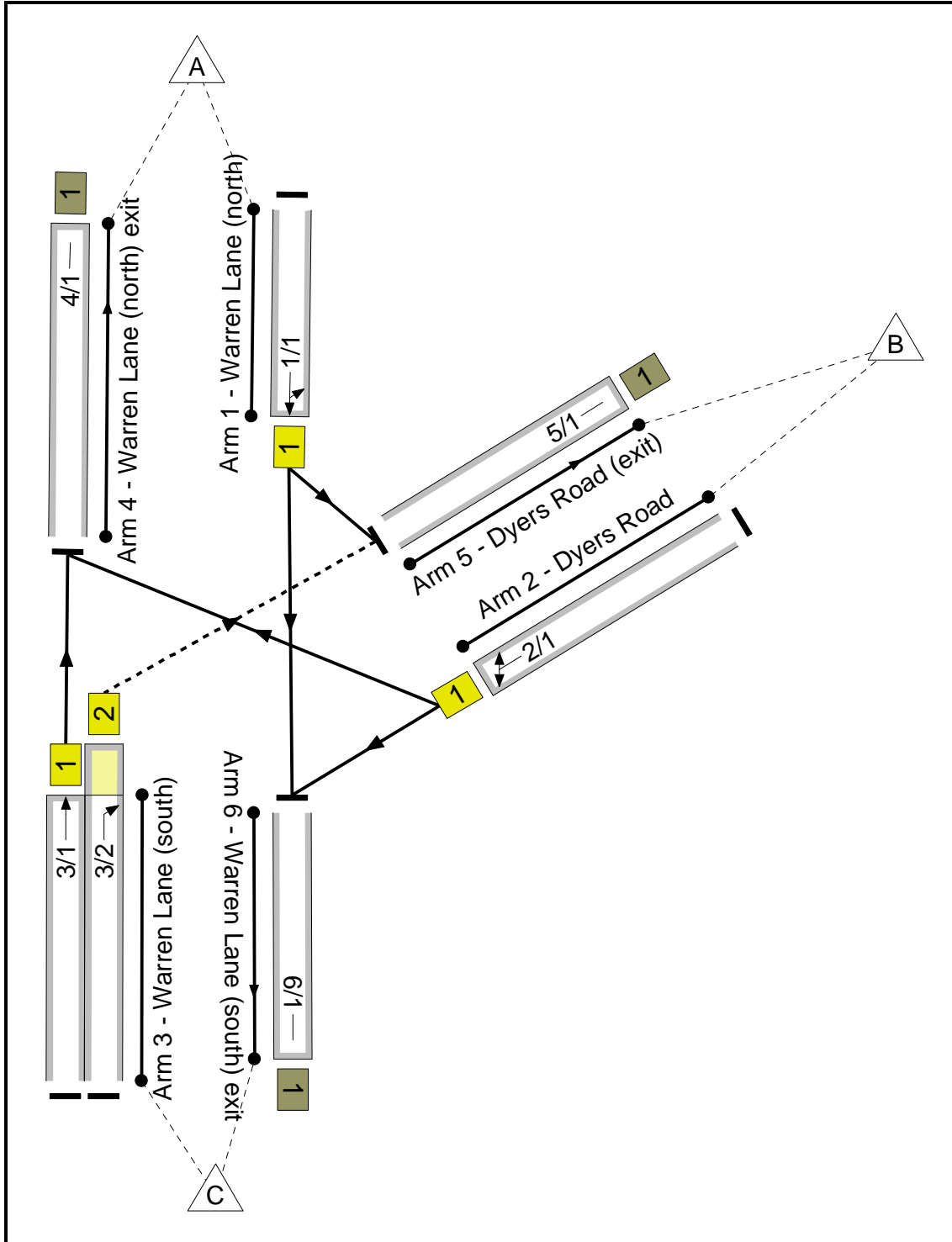
REV:
 -

Full Input Data And Results

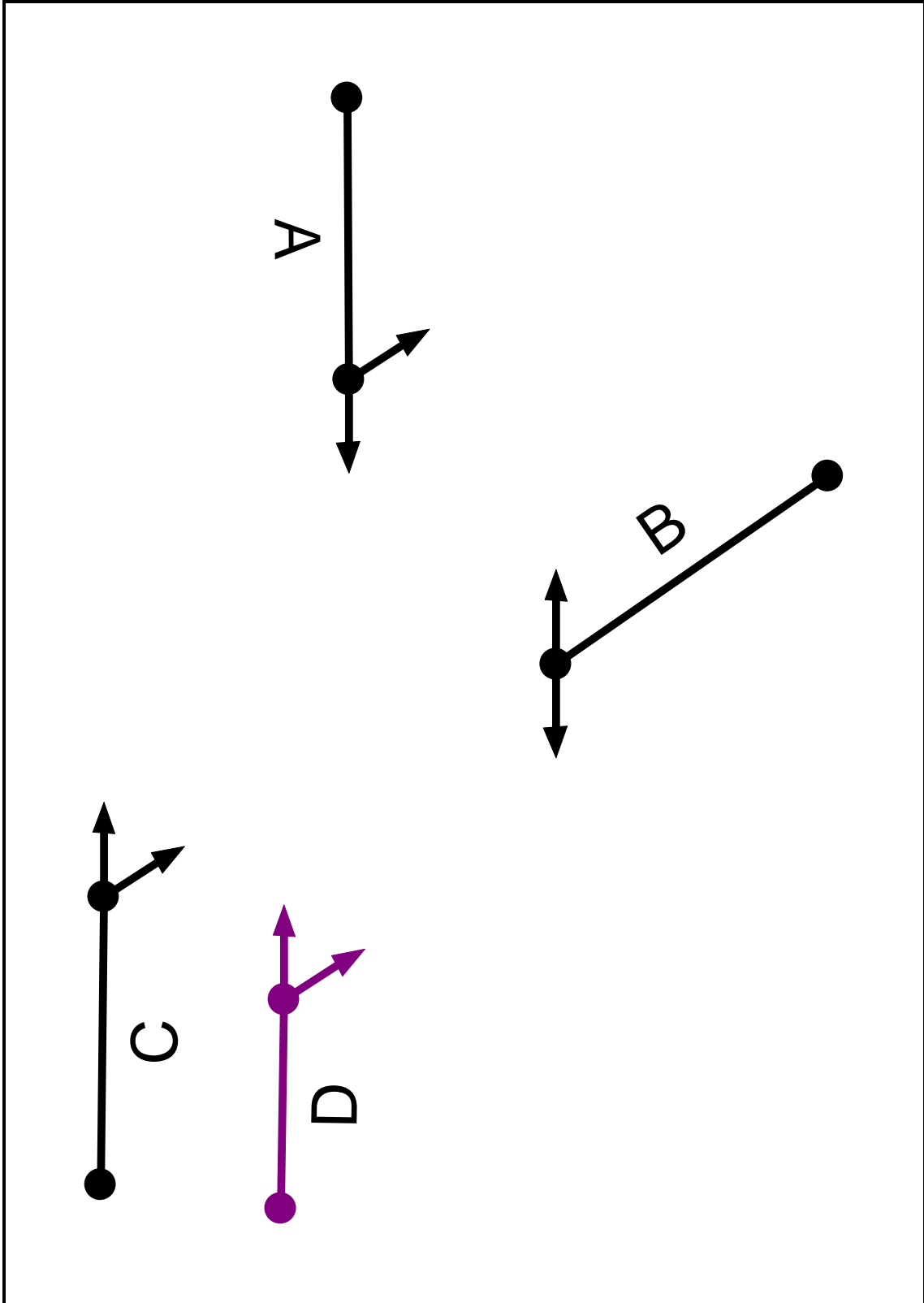
User and Project Details

Project:	
Title:	
Location:	
File name:	Warren-Dyers.lsgx
Author:	
Company:	
Address:	
Controller:	Generic
SCN:	
Notes:	

Junction Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Ind. Arrow	C	4	4

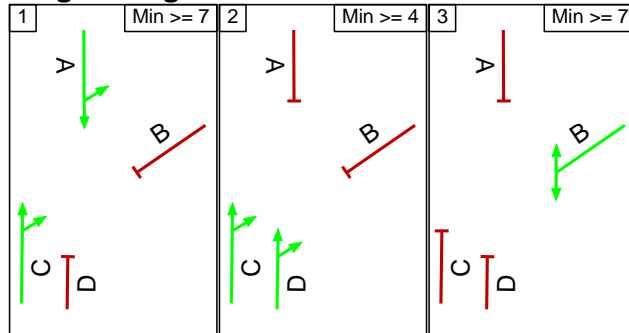
Phase Intergreens Matrix

		Starting Phase			
		A	B	C	D
Terminating Phase	A		5	-	5
	B	6		6	6
	C	-	5		-
	D	5	5	-	

Phases in Stage

Stage No.	Phases in Stage
1	A C
2	C D
3	B

Stages Diagram



Phase Delays

There are no phase delays defined in this stage stream

Prohibited Stage Changes

		To Stage		
		1	2	3
From Stage	1		5	5
	2	5		5
	3	6	6	

Link Input Data

Arm/Link	Link Name	Link Type	Num Lanes	Phases	Start Disp.	End Disp.
1/1	Warren Lane (north) Left Ahead	U	1	A	2	3
2/1	Dyers Road Right Left	U	1	B	2	3
3/1	Warren Lane (south) Ahead	U	1	C D	2	3
3/2	Warren Lane (south) Right	O	1	C D	2	3
4/1	Warren Lane (north) exit	U	1		2	3
5/1	Dyers Road (exit)	U	1		2	3
6/1	Warren Lane (south) exit	U	1		2	3

Full Input Data And Results

Give-Way Link Input Data

Arm/ Link	Link Name	Movement	Max Flow when Giving Way (PCU/Hr)	Opposing Link	Opp. Link Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	RTF	Right Turn Move up time (s)	Max Turns in Intergreen (PCU)
3/2	Warren Lane (south) Right	3/2 to 5/1	1440	1/1	1.09	1/1	2.00	0.50	2	2.00

Lane Input Data

Arm/ Lane	Link Num	Physical Length (PCU)	Expected Usage (PCU)	Sat Flow Type	User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)
1/1 (Warren Lane (north) Lane 1)	Link 1 (Warren Lane (north) Left Ahead)	Inf	Inf	Geom	1800	3.50	0.00	Y	Arm 5 Left (Dyers Road exit))	12.00
									Arm 6 Ahead (Warren Lane (south) exit)	Inf
2/1 (Dyers Road Lane 1)	Link 1 (Dyers Road Right Left)	Inf	Inf	Geom	1800	3.00	0.00	Y	Arm 4 Right (Warren Lane (north) exit)	15.00
									Arm 6 Left (Warren Lane (south) exit)	25.00
3/1 (Warren Lane (south) Lane 1)	Link 1 (Warren Lane (south) Ahead)	Inf	Inf	User	1800	3.25	0.00	Y	Arm 4 Ahead (Warren Lane (north) exit)	Inf
3/2 (Warren Lane (south) Lane 2)	Link 2 (Warren Lane (south) Right)	Inf	Inf	Geom	1800	3.00	0.00	N	Arm 5 Right (Dyers Road exit))	10.00
4/1 (Warren Lane (north) exit Lane 1)	Link 1 (Warren Lane (north) exit)	Inf	Inf	Inf (Exit)	1800	3.25	0.00	Y		
5/1 (Dyers Road exit) Lane 1)	Link 1 (Dyers Road exit))	Inf	Inf	Inf (Exit)	1800	3.25	0.00	Y		
6/1 (Warren Lane (south) exit Lane 1)	Link 1 (Warren Lane (south) exit)	Inf	Inf	Inf (Exit)	1800	3.25	0.00	Y		

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2023 Dev't Case weekday am peak hour'	08:00	09:00	01:00	
2: '2023 Dev't Case weekday pm peak hour'	17:00	18:00	01:00	

Flow Group 1: '2023 Dev't Case weekday am peak hour'

Traffic Flow Matrix

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	64	860	924
	B	123	0	128	251
	C	885	162	0	1047
	Tot.	1008	226	988	2222

Link Traffic Flows

Arm/Link	Flow Group 1: 2023 Dev't Case weekday am peak hour
1/1	924
2/1	251
3/1	885
3/2	162
4/1	1008
5/1	226
6/1	988

Lane Saturation Flows

Arm/ Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Warren Lane (north) Lane 1)	3.50	0.00	Y	Arm 5 Left (Dyers Road (exit)) Arm 6 Ahead (Warren Lane (south) exit)	12.00 Inf	6.9 % 93.1 %	1948
2/1 (Dyers Road Lane 1)	3.00	0.00	Y	Arm 4 Right (Warren Lane (north) exit) Arm 6 Left (Warren Lane (south) exit)	15.00 25.00	49.0 % 51.0 %	1774
3/1 (Warren Lane (south) Lane 1)	This lane uses a directly entered Saturation Flow						1800
3/2 (Warren Lane (south) Lane 2)	3.00	0.00	N	Arm 5 Right (Dyers Road (exit))	10.00	100.0 %	1787
4/1 (Warren Lane (north) exit Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
5/1 (Dyers Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
6/1 (Warren Lane (south) exit Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf

Flow Group 2: '2023 Dev't Case weekday pm peak hour'
Traffic Flow Matrix

Desired Flow :

	Destination				
	A	B	C	Tot.	
Origin	A	0	127	918	1045
	B	62	0	82	144
	C	922	143	0	1065
	Tot.	984	270	1000	2254

Link Traffic Flows

Arm/Link	Flow Group 2: 2023 Dev't Case weekday pm peak hour
1/1	1045
2/1	144
3/1	922
3/2	143
4/1	984
5/1	270
6/1	1000

Lane Saturation Flows

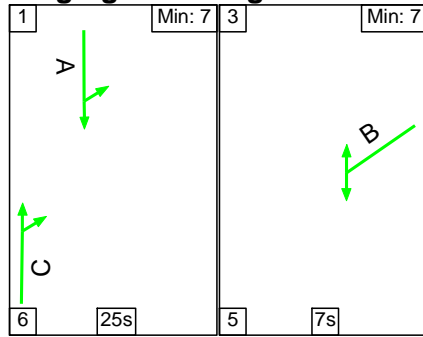
Arm/Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat flow (PCU/Hr)
1/1 (Warren Lane (north) Lane 1)	3.50	0.00	Y	Arm 5 Left (Dyers Road (exit))	12.00	12.2 %	1936
				Arm 6 Ahead (Warren Lane (south) exit)	Inf	87.8 %	
2/1 (Dyers Road Lane 1)	3.00	0.00	Y	Arm 4 Right (Warren Lane (north) exit)	15.00	43.1 %	1778
				Arm 6 Left (Warren Lane (south) exit)	25.00	56.9 %	
3/1 (Warren Lane (south) Lane 1)	This lane uses a directly entered Saturation Flow						1800
3/2 (Warren Lane (south) Lane 2)	3.00	0.00	N	Arm 5 Right (Dyers Road (exit))	10.00	100.0 %	1787
4/1 (Warren Lane (north) exit Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
5/1 (Dyers Road (exit) Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf
6/1 (Warren Lane (south) exit Lane 1)	Infinite Saturation Flow (on Exit Link)						Inf

Scenario 1: 'Am peak'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 1: '2023 Dev't Case weekday am peak hour'

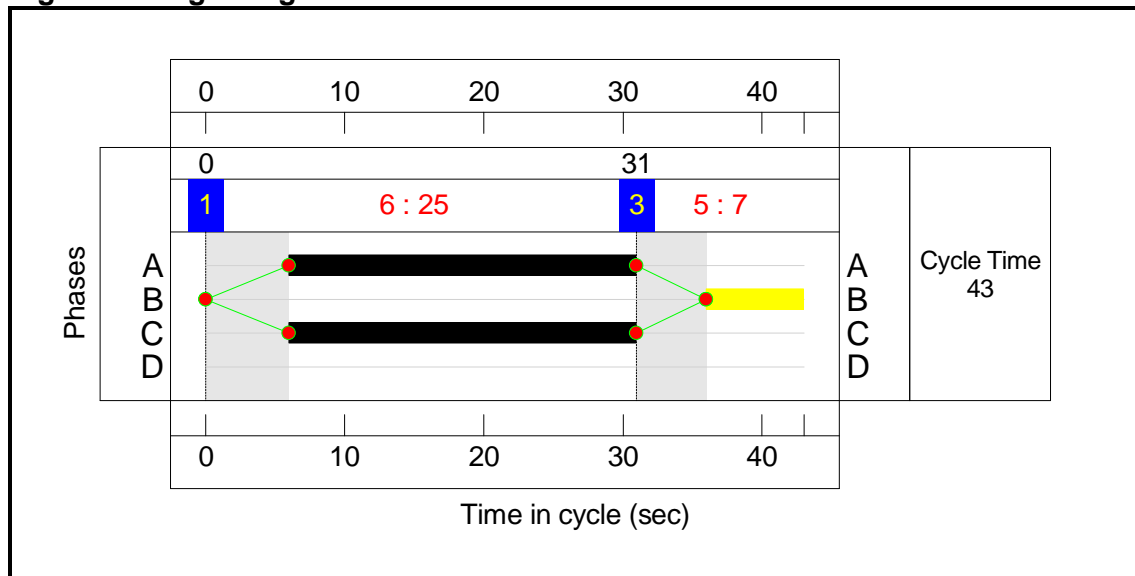
Staging Plan Diagram



Stage Timings

Stage	1	3
Duration	25	7
Change Point	0	31

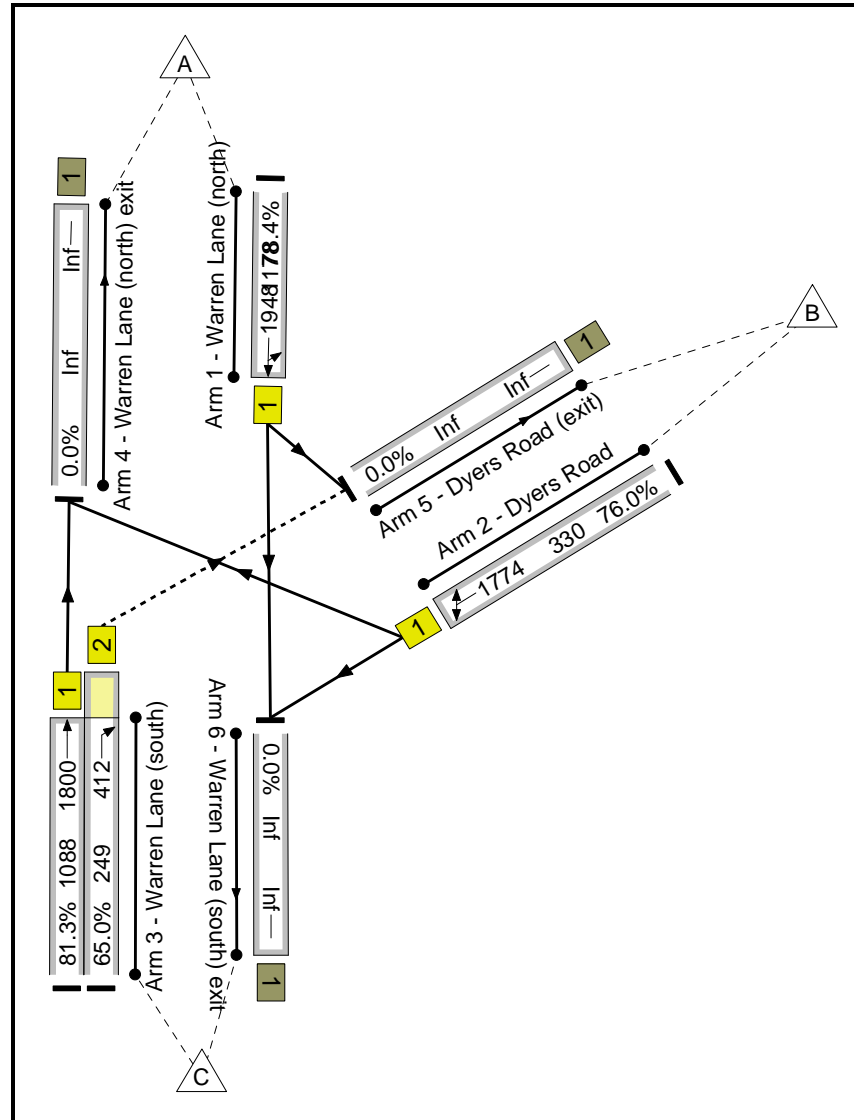
Signal Timings Diagram



Full Input Data And Results

Junction Layout Diagram

Full Input Data And Results



Full Input Data And Results

Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Warren Lane (north) Left Ahead	U	N/A	N/A	A		1	25	-	924	1948	1948	1178	78.4
2/1	Dyers Road Right Left	U	N/A	N/A	B		1	7	-	251	1774	1774	330	76.0
3/1	Warren Lane (south) Ahead	U	N/A	N/A	C	D	1	25	0	885	1800	1800	1088	81.3
3/2	Warren Lane (south) Right	O	N/A	N/A	C	D	1	25	0	162	1787	412	249	65.0
4/1	Warren Lane (north) exit	U	N/A	N/A	-		-	-	-	1008	Inf	Inf	Inf	0.0
5/1	Dyers Road (exit)	U	N/A	N/A	-		-	-	-	226	Inf	Inf	Inf	0.0
6/1	Warren Lane (south) exit	U	N/A	N/A	-		-	-	-	988	Inf	Inf	Inf	0.0

Full Input Data And Results

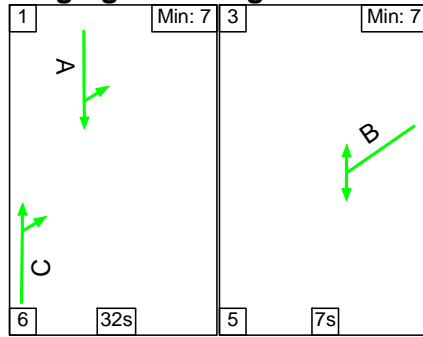
Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)		
1/1	924	924	-	-	-	1.6	1.8	-	3.4	13.4	8.2	1.8	10.0		
2/1	251	251	-	-	-	1.2	1.5	-	2.7	38.5	2.8	1.5	4.3		
3/1	885	885	-	-	-	1.6	2.1	-	3.8	15.3	8.1	2.1	10.2		
3/2	162	162	102	0	60	0.2	0.9	0.7	1.7	38.9	0.8	0.9	1.7		
4/1	1008	1008	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0		
5/1	226	226	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0		
6/1	988	988	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0		
PRC for Signalled Links (%):				10.7	Total Delay for Signalled Links (pcuHr):				11.63						
PRC Over All Links (%):				10.7	Total Delay Over All Links(pcuHr):				11.63	Cycle Time (s): 43					

Scenario 2: 'Pm peak'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 2: '2023 Dev't Case weekday pm peak hour'

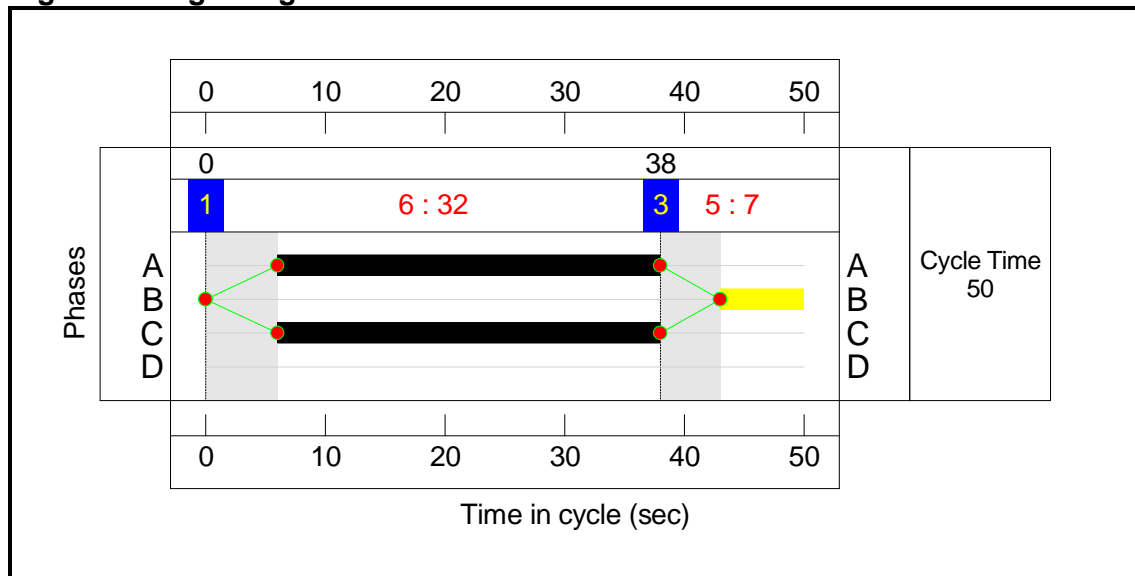
Staging Plan Diagram



Stage Timings

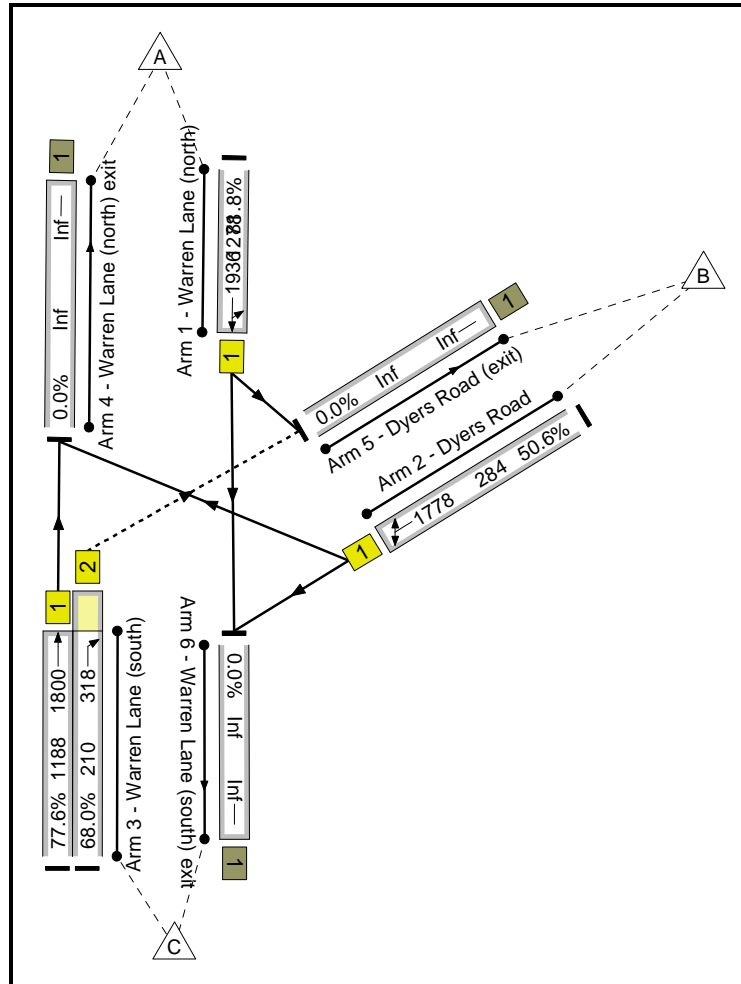
Stage	1	3
Duration	32	7
Change Point	0	38

Signal Timings Diagram



Full Input Data And Results

Junction Layout Diagram



Full Input Data And Results

Link Results

Link Num	Link Desc	Link Type	Stage Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Warren Lane (north) Left Ahead	U	N/A	N/A	A		1	32	-	1045	1936	1936	1278	81.8
2/1	Dyers Road Right Left	U	N/A	N/A	B		1	7	-	144	1778	1778	284	50.6
3/1	Warren Lane (south) Ahead	U	N/A	N/A	C	D	1	32	0	922	1800	1800	1188	77.6
3/2	Warren Lane (south) Right	O	N/A	N/A	C	D	1	32	0	143	1787	318	210	68.0
4/1	Warren Lane (north) exit	U	N/A	N/A	-		-	-	-	984	Inf	Inf	Inf	0.0
5/1	Dyers Road (exit)	U	N/A	N/A	-		-	-	-	270	Inf	Inf	Inf	0.0
6/1	Warren Lane (south) exit	U	N/A	N/A	-		-	-	-	1000	Inf	Inf	Inf	0.0

Full Input Data And Results

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)		
1/1	1045	1045	-	-	-	1.8	2.2	-	4.0	13.9	10.5	2.2	12.7		
2/1	144	144	-	-	-	0.8	0.5	-	1.3	31.9	1.8	0.5	2.3		
3/1	922	922	-	-	-	1.5	1.7	-	3.2	12.6	8.7	1.7	10.4		
3/2	143	143	78	0	65	0.1	1.0	0.7	1.9	48.0	0.7	1.0	1.7		
4/1	984	984	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0		
5/1	270	270	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0		
6/1	1000	1000	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0		
PRC for Signalled Links (%):				10.0	Total Delay for Signalled Links (pcuHr):				10.44						
PRC Over All Links (%):				10.0	Total Delay Over All Links(pcuHr):				10.44	Cycle Time (s): 50					

Appendix J

Results of ARCADY capacity assessment: proposed Warren Lane/Taylor Wimpey site/Western Bypass roundabout

OPTION 1

PROPOSED 40m ICD ROUNDABOUT.

PROPOSED CARRIDGEWAY TIE-IN WITH WARREN LANE.

PROPOSED CARRIDGEWAY TIE-IN WITH WARREN LANE.

SCALE 1:500

OPTION 2

PROPOSED 50/43m ICD ROUNDABOUT.

PROPOSED CARRIDGEWAY TIE-IN WITH WARREN LANE.

PROPOSED CARRIDGEWAY TIE-IN WITH WARREN LANE.

SCALE 1:500

CC \ Western Bypass

CENTRE POINT OF ROUNDABOUT

SCALE 1:1000

DO NOT SCALE

KEY
 — ORIGINAL DESIGN PROPOSAL
 — NEW ROUNDABOUT DESIGN PROPOSAL

REV	DATE	BY	DESCRIPTION	CHK	AID
A	28.07.07	DWG	ISSUED FOR TRANSPORT ASSESSMENT	DWB	PAJ

FOR INFORMATION ONLY



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CLIENT: TAYLOR WIMPEY

PROJECT: LAND AT DYERS ROAD, STANWAY
 TITLE: NEW STANWAY BYPASS ROUNDABOUT WITH WARREN LANE POTENTIAL ACCESS OPTIONS

SCALE @ A1	CHECKED	APPROVED
AS SHOWN	MPB	DWB
DATE: 0844-SK-02A	DESIGN DRAWN: CDH	DATE: JUNE 2007
PROJECT No: 11500844	DRAWING No: 0844/SK/02	REV: A

© WSP Group plc

N:\STANWAY - DYERS RD - v04\DRAWING\AUTOCAD\0844-SK-02A.dwg 04/01/2007 14:45:54 bur.on, Paul

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\Warren-Bypass\
Warren-Bypass am.vai"
(drive-on-the-left) at 15:16:12 on Thursday, 11 June 2009

.FILE PROPERTIES

RUN TITLE: Proposed Warren Lane/Taylor Wimpey site/Western Bypass roundabout weekday am pk
LOCATION: Stanway
DATE: 27/05/09
CLIENT: Hills Residential
ENUMERATOR: mlst [ARDENT23]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Warren Lane (north)
ARM B - Taylor Wimpey site
ARM C - Warren Lane (south)
ARM D - Western Bypass

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	3.50	I	6.75	I	13.00	I	10.00	I	40.00	I	35.0	I	0.582	I	25.018	I
I	ARM B	I	3.65	I	5.00	I	10.00	I	10.00	I	40.00	I	54.0	I	0.504	I	20.128	I
I	ARM C	I	3.50	I	7.00	I	12.00	I	20.00	I	40.00	I	35.0	I	0.613	I	26.352	I
I	ARM D	I	3.65	I	7.50	I	15.00	I	26.00	I	40.00	I	19.0	I	0.683	I	30.547	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Base weekday am peak

T15

I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I	I	I	I	I
I	ARM	I FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	I BEFORE I AT TOP I AFTER I	I	I	I	I	I
I	I	I TO RISE I IS REACHED I FALLING	I	I PEAK I OF PEAK I PEAK	I	I	I	I	I
I	ARM A	I 15.00 I 45.00 I 75.00	I	I 6.00 I 9.00 I 6.00	I	I	I	I	I
I	ARM B	I 15.00 I 45.00 I 75.00	I	I 1.25 I 1.88 I 1.25	I	I	I	I	I
I	ARM C	I 15.00 I 45.00 I 75.00	I	I 10.55 I 15.83 I 10.55	I	I	I	I	I
I	ARM D	I 15.00 I 45.00 I 75.00	I	I 4.18 I 6.26 I 4.18	I	I	I	I	I

DEMAND SET TITLE: 2023 Base weekday am peak

T33

I	I	TURNING PROPORTIONS	I
I	I	TURNING COUNTS	I
I	I	(PERCENTAGE OF H.V.S)	I
I	I		I
I	TIME	I FROM/TO I ARM A I ARM B I ARM C I ARM D	I
I	07.45 - 09.15	I I I I I I I I I I	I
I		I ARM A I 0.000 I 0.038 I 0.962 I 0.000 I	I
I		I I 0.0 I 18.0 I 462.0 I 0.0 I	I
I		I (0.0)I (0.0)I (17.0)I (0.0)I	I
I		I I I I I I I I I I	I
I		I ARM B I 0.400 I 0.000 I 0.100 I 0.500 I	I
I		I I 40.0 I 0.0 I 10.0 I 50.0 I	I
I		I (0.0)I (0.0)I (0.0)I (0.0)I	I
I		I I I I I I I I I I	I
I		I ARM C I 0.475 I 0.006 I 0.000 I 0.519 I	I
I		I I 401.0 I 5.0 I 0.0 I 438.0 I	I
I		I (8.0)I (0.0)I (0.0)I (1.0)I	I
I		I I I I I I I I I I	I
I		I ARM D I 0.000 I 0.069 I 0.931 I 0.000 I	I
I		I I 0.0 I 23.0 I 311.0 I 0.0 I	I
I		I (0.0)I (0.0)I (2.0)I (0.0)I	I
I		I I I I I I I I I I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	07.45-08.00									
I	ARM A	6.02	19.34	0.311	--	0.0	0.4	6.5	-	0.075
I	ARM B	1.25	14.73	0.085	--	0.0	0.1	1.4	-	0.074
I	ARM C	10.59	24.60	0.430	--	0.0	0.7	10.9	-	0.071
I	ARM D	4.19	25.98	0.161	--	0.0	0.2	2.8	-	0.046

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.00-08.15									
I	ARM A	7.19	18.91	0.380	--	0.4	0.6	8.9	-	0.085
I	ARM B	1.50	13.66	0.110	--	0.1	0.1	1.8	-	0.082
I	ARM C	12.65	24.47	0.517	--	0.7	1.1	15.4	-	0.084
I	ARM D	5.00	25.19	0.199	--	0.2	0.2	3.7	-	0.050

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.15-08.30									
I	ARM A	8.81	18.33	0.480	--	0.6	0.9	13.3	-	0.104
I	ARM B	1.84	12.22	0.150	--	0.1	0.2	2.6	-	0.096
I	ARM C	15.49	24.29	0.638	--	1.1	1.7	24.8	-	0.113
I	ARM D	6.13	24.12	0.254	--	0.2	0.3	5.0	-	0.056

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.30-08.45									
I	ARM A	8.81	18.33	0.481	--	0.9	0.9	13.7	-	0.105
I	ARM B	1.84	12.20	0.150	--	0.2	0.2	2.6	-	0.096
I	ARM C	15.49	24.29	0.638	--	1.7	1.7	26.0	-	0.114
I	ARM D	6.13	24.10	0.254	--	0.3	0.3	5.1	-	0.056

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 08.45-09.00										I
I	ARM A	7.19	18.91	0.380	--	0.9	0.6	9.5	-	0.086	I
I	ARM B	1.50	13.64	0.110	--	0.2	0.1	1.9	-	0.082	I
I	ARM C	12.65	24.47	0.517	--	1.7	1.1	16.8	-	0.085	I
I	ARM D	5.00	25.17	0.199	--	0.3	0.2	3.8	-	0.050	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 09.00-09.15										I
I	ARM A	6.02	19.33	0.312	--	0.6	0.5	7.0	-	0.075	I
I	ARM B	1.25	14.70	0.085	--	0.1	0.1	1.4	-	0.074	I
I	ARM C	10.59	24.60	0.431	--	1.1	0.8	11.7	-	0.072	I
I	ARM D	4.19	25.96	0.161	--	0.2	0.2	2.9	-	0.046	I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.4
08.15	0.6 *
08.30	0.9 *
08.45	0.9 *
09.00	0.6 *
09.15	0.5

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.2
08.45	0.2
09.00	0.1
09.15	0.1

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.7 *
08.15	1.1 *
08.30	1.7 **
08.45	1.7 **
09.00	1.1 *
09.15	0.8 *

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.2
08.30	0.3
08.45	0.3
09.00	0.2
09.15	0.2

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I
I	A	I	660.7	I	0.09	I	59.0	I
I		I	440.5	I		I		I
I		I		I	(MIN)	I	(MIN)	I
I		I		I	(MIN/VEH)	I	(MIN/VEH)	I

I	B	I	137.6	I	91.8	I	11.7	I	0.09	I	11.7	I	0.09	I
I	C	I	1161.7	I	774.5	I	105.6	I	0.09	I	105.6	I	0.09	I
I	D	I	459.7	I	306.5	I	23.3	I	0.05	I	23.3	I	0.05	I

I	ALL	I	2419.8	I	1613.2	I	199.6	I	0.08	I	199.6	I	0.08	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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Run with file:-
"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\Warren-Bypass\
Warren-Bypass am.vai"
(drive-on-the-left) at 15:18:13 on Thursday, 11 June 2009

.FILE PROPERTIES

RUN TITLE: Proposed Warren Lane/Taylor Wimpey site/Western Bypass roundabout weekday am pk
LOCATION: Stanway
DATE: 27/05/09
CLIENT: Hills Residential
ENUMERATOR: mlst [ARDENT23]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Warren Lane (north)
ARM B - Taylor Wimpey site
ARM C - Warren Lane (south)
ARM D - Western Bypass

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	3.50	I	6.75	I	13.00	I	10.00	I	40.00	I	35.0	I	0.582	I	25.018	I
I	ARM B	I	3.65	I	5.00	I	10.00	I	10.00	I	40.00	I	54.0	I	0.504	I	20.128	I
I	ARM C	I	3.50	I	7.00	I	12.00	I	20.00	I	40.00	I	35.0	I	0.613	I	26.352	I
I	ARM D	I	3.65	I	7.50	I	15.00	I	26.00	I	40.00	I	19.0	I	0.683	I	30.547	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Dev't Case weekday am peak

T15

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	6.00	I	9.00	I	6.00
I	ARM B	I	15.00	I	45.00	I	75.00	I	1.25	I	1.88	I	1.25
I	ARM C	I	15.00	I	45.00	I	75.00	I	12.05	I	18.08	I	12.05
I	ARM D	I	15.00	I	45.00	I	75.00	I	4.88	I	7.31	I	4.88

DEMAND SET TITLE: 2023 Dev't Case weekday am peak

T33

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D
I	07.45 - 09.15	I	ARM A	I	0.000	I	0.038	I	0.962	I	0.000
I		I		I	0.0	I	18.0	I	462.0	I	0.0
I		I		I	(0.0)	I	(0.0)	I	(17.0)	I	(0.0)
I		I	ARM B	I	0.400	I	0.000	I	0.100	I	0.500
I		I		I	40.0	I	0.0	I	10.0	I	50.0
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I	ARM C	I	0.416	I	0.005	I	0.000	I	0.579
I		I		I	401.0	I	5.0	I	0.0	I	558.0
I		I		I	(8.0)	I	(0.0)	I	(0.0)	I	(1.0)
I		I	ARM D	I	0.000	I	0.059	I	0.941	I	0.000
I		I		I	0.0	I	23.0	I	367.0	I	0.0
I		I		I	(0.0)	I	(0.0)	I	(2.0)	I	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	I	DEMAND (VEH/MIN)	I	CAPACITY (VEH/MIN)	I	DEMAND/CAPACITY (RFC)	I	PEDESTRIAN FLOW (PEDS/MIN)	I	START QUEUE (VEHS)	I	END QUEUE (VEHS)	I	DELAY (VEH.MIN/ TIME SEGMENT)	I	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	07.45-08.00	I		I		I		I		I		I		I		I		I	
I	ARM A	I	6.02	I	18.98	I	0.317	I	--	I	0.0	I	0.5	I	6.7	I	--	I	0.077
I	ARM B	I	1.25	I	14.37	I	0.087	I	--	I	0.0	I	0.1	I	1.4	I	--	I	0.076
I	ARM C	I	12.10	I	24.70	I	0.490	I	--	I	0.0	I	0.9	I	13.7	I	--	I	0.079
I	ARM D	I	4.89	I	25.98	I	0.188	I	--	I	0.0	I	0.2	I	3.4	I	--	I	0.047

I	TIME	I	DEMAND (VEH/MIN)	I	CAPACITY (VEH/MIN)	I	DEMAND/CAPACITY (RFC)	I	PEDESTRIAN FLOW (PEDS/MIN)	I	START QUEUE (VEHS)	I	END QUEUE (VEHS)	I	DELAY (VEH.MIN/ TIME SEGMENT)	I	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.00-08.15	I		I		I		I		I		I		I		I		I	
I	ARM A	I	7.19	I	18.49	I	0.389	I	--	I	0.5	I	0.6	I	9.2	I	--	I	0.088
I	ARM B	I	1.50	I	13.23	I	0.113	I	--	I	0.1	I	0.1	I	1.9	I	--	I	0.085
I	ARM C	I	14.44	I	24.57	I	0.588	I	--	I	0.9	I	1.4	I	20.4	I	--	I	0.098
I	ARM D	I	5.84	I	25.19	I	0.232	I	--	I	0.2	I	0.3	I	4.5	I	--	I	0.052

I	TIME	I	DEMAND (VEH/MIN)	I	CAPACITY (VEH/MIN)	I	DEMAND/CAPACITY (RFC)	I	PEDESTRIAN FLOW (PEDS/MIN)	I	START QUEUE (VEHS)	I	END QUEUE (VEHS)	I	DELAY (VEH.MIN/ TIME SEGMENT)	I	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.15-08.30	I		I		I		I		I		I		I		I		I	
I	ARM A	I	8.81	I	17.81	I	0.495	I	--	I	0.6	I	1.0	I	14.0	I	--	I	0.111
I	ARM B	I	1.84	I	11.69	I	0.157	I	--	I	0.1	I	0.2	I	2.7	I	--	I	0.101
I	ARM C	I	17.69	I	24.39	I	0.725	I	--	I	1.4	I	2.6	I	35.9	I	--	I	0.146
I	ARM D	I	7.16	I	24.12	I	0.297	I	--	I	0.3	I	0.4	I	6.2	I	--	I	0.059

I	TIME	I	DEMAND (VEH/MIN)	I	CAPACITY (VEH/MIN)	I	DEMAND/CAPACITY (RFC)	I	PEDESTRIAN FLOW (PEDS/MIN)	I	START QUEUE (VEHS)	I	END QUEUE (VEHS)	I	DELAY (VEH.MIN/ TIME SEGMENT)	I	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.30-08.45	I		I		I		I		I		I		I		I		I	
I	ARM A	I	8.81	I	17.81	I	0.495	I	--	I	1.0	I	1.0	I	14.5	I	--	I	0.111
I	ARM B	I	1.84	I	11.67	I	0.157	I	--	I	0.2	I	0.2	I	2.8	I	--	I	0.102
I	ARM C	I	17.69	I	24.39	I	0.725	I	--	I	2.6	I	2.6	I	38.7	I	--	I	0.149
I	ARM D	I	7.16	I	24.10	I	0.297	I	--	I	0.4	I	0.4	I	6.3	I	--	I	0.059

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 08.45-09.00										I
I	ARM A	7.19	18.48	0.389	--	1.0	0.6	9.9	-	0.089	I
I	ARM B	1.50	13.21	0.113	--	0.2	0.1	2.0	-	0.085	I
I	ARM C	14.44	24.56	0.588	--	2.6	1.4	22.7	-	0.100	I
I	ARM D	5.84	25.15	0.232	--	0.4	0.3	4.6	-	0.052	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 09.00-09.15										I
I	ARM A	6.02	18.97	0.317	--	0.6	0.5	7.2	-	0.077	I
I	ARM B	1.25	14.34	0.088	--	0.1	0.1	1.5	-	0.076	I
I	ARM C	12.10	24.69	0.490	--	1.4	1.0	15.0	-	0.080	I
I	ARM D	4.89	25.95	0.189	--	0.3	0.2	3.5	-	0.048	I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5
08.15	0.6 *
08.30	1.0 *
08.45	1.0 *
09.00	0.6 *
09.15	0.5

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.2
08.45	0.2
09.00	0.1
09.15	0.1

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.9 *
08.15	1.4 *
08.30	2.6 ***
08.45	2.6 ***
09.00	1.4 *
09.15	1.0 *

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.3
08.30	0.4
08.45	0.4
09.00	0.3
09.15	0.2

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND (VEH)	I	* QUEUEING DELAY (MIN)	I	* INCLUSIVE QUEUEING DELAY (MIN)	I	* INCLUSIVE QUEUEING DELAY (MIN)	I
I	A	I	660.7	I	61.6	I	61.6	I	0.09	I

I	B	I	137.6	I	91.8	I	12.2	I	0.09	I	12.2	I	0.09	I
I	C	I	1326.9	I	884.6	I	146.4	I	0.11	I	146.4	I	0.11	I
I	D	I	536.8	I	357.9	I	28.5	I	0.05	I	28.5	I	0.05	I

I	ALL	I	2662.0	I	1774.7	I	248.7	I	0.09	I	248.7	I	0.09	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\Warren-Bypass\
Warren-Bypass pm.vai"
(drive-on-the-left) at 15:23:51 on Thursday, 11 June 2009

.FILE PROPERTIES

RUN TITLE: Proposed Warren Lane/Taylor Wimpey site/Western Bypass roundabout weekday pm pk
LOCATION: Stanway
DATE: 27/05/09
CLIENT: Hills Residential
ENUMERATOR: mlst [ARDENT23]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Warren Lane (north)
ARM B - Taylor Wimpey site
ARM C - Warren Lane (south)
ARM D - Western Bypass

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	3.50	I	6.75	I	13.00	I	10.00	I	40.00	I	35.0	I	0.582	I	25.018	I
I	ARM B	I	3.65	I	5.00	I	10.00	I	10.00	I	40.00	I	54.0	I	0.504	I	20.128	I
I	ARM C	I	3.50	I	7.00	I	12.00	I	20.00	I	40.00	I	35.0	I	0.613	I	26.352	I
I	ARM D	I	3.65	I	7.50	I	15.00	I	26.00	I	40.00	I	19.0	I	0.683	I	30.547	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Base weekday pm peak

T15

I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I	I	I	I	I
I	ARM	I FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	I BEFORE I AT TOP I AFTER	I	I	I	I	I
I	I	I TO RISE I IS REACHED I FALLING	I	I PEAK I OF PEAK I PEAK	I	I	I	I	I
I	ARM A	I 15.00 I 45.00 I 75.00	I	I 6.29 I 9.43 I 6.29	I	I	I	I	I
I	ARM B	I 15.00 I 45.00 I 75.00	I	I 0.35 I 0.52 I 0.35	I	I	I	I	I
I	ARM C	I 15.00 I 45.00 I 75.00	I	I 10.70 I 16.05 I 10.70	I	I	I	I	I
I	ARM D	I 15.00 I 45.00 I 75.00	I	I 4.54 I 6.81 I 4.54	I	I	I	I	I

DEMAND SET TITLE: 2023 Base weekday pm peak

T33

I	I	TURNING PROPORTIONS				I
I	I	TURNING COUNTS				I
I	I	(PERCENTAGE OF H.V.S)				I
I	I					I
I	TIME	I FROM/TO	I ARM A	I ARM B	I ARM C	I ARM D
I	16.45 - 18.15	I	I	I	I	I
I		I ARM A	I 0.000	I 0.082	I 0.918	I 0.000
I		I	I 0.0	I 41.0	I 462.0	I 0.0
I		I	I (0.0)	I (0.0)	I (17.0)	I (0.0)
I		I	I	I	I	I
I		I ARM B	I 0.036	I 0.000	I 0.036	I 0.929
I		I	I 1.0	I 0.0	I 1.0	I 26.0
I		I	I (0.0)	I (0.0)	I (0.0)	I (0.0)
I		I	I	I	I	I
I		I ARM C	I 0.468	I 0.013	I 0.000	I 0.519
I		I	I 401.0	I 11.0	I 0.0	I 444.0
I		I	I (8.0)	I (0.0)	I (0.0)	I (1.0)
I		I	I	I	I	I
I		I ARM D	I 0.000	I 0.143	I 0.857	I 0.000
I		I	I 0.0	I 52.0	I 311.0	I 0.0
I		I	I (0.0)	I (0.0)	I (2.0)	I (0.0)
I		I	I	I	I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	16.45-17.00									
I	ARM A	6.31	19.24	0.328	--	0.0	0.5	7.1	-	0.077
I	ARM B	0.35	14.73	0.024	--	0.0	0.0	0.4	-	0.070
I	ARM C	10.74	25.08	0.428	--	0.0	0.7	10.8	-	0.069
I	ARM D	4.55	26.30	0.173	--	0.0	0.2	3.1	-	0.046

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.00-17.15									
I	ARM A	7.54	18.77	0.401	--	0.5	0.7	9.7	-	0.089
I	ARM B	0.42	13.66	0.031	--	0.0	0.0	0.5	-	0.076
I	ARM C	12.83	25.04	0.512	--	0.7	1.0	15.2	-	0.082
I	ARM D	5.44	25.56	0.213	--	0.2	0.3	4.0	-	0.050

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.15-17.30									
I	ARM A	9.23	18.13	0.509	--	0.7	1.0	14.8	-	0.112
I	ARM B	0.51	12.22	0.042	--	0.0	0.0	0.6	-	0.085
I	ARM C	15.71	24.98	0.629	--	1.0	1.7	23.9	-	0.107
I	ARM D	6.66	24.56	0.271	--	0.3	0.4	5.5	-	0.056

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.30-17.45									
I	ARM A	9.23	18.13	0.509	--	1.0	1.0	15.4	-	0.112
I	ARM B	0.51	12.20	0.042	--	0.0	0.0	0.7	-	0.086
I	ARM C	15.71	24.98	0.629	--	1.7	1.7	25.1	-	0.108
I	ARM D	6.66	24.55	0.271	--	0.4	0.4	5.6	-	0.056

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 17.45-18.00										I
I	ARM A	7.54	18.77	0.402	--	1.0	0.7	10.5	-	0.089	I
I	ARM B	0.42	13.64	0.031	--	0.0	0.0	0.5	-	0.076	I
I	ARM C	12.83	25.04	0.512	--	1.7	1.1	16.4	-	0.082	I
I	ARM D	5.44	25.54	0.213	--	0.4	0.3	4.1	-	0.050	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 18.00-18.15										I
I	ARM A	6.31	19.23	0.328	--	0.7	0.5	7.5	-	0.078	I
I	ARM B	0.35	14.70	0.024	--	0.0	0.0	0.4	-	0.070	I
I	ARM C	10.74	25.07	0.428	--	1.1	0.8	11.6	-	0.070	I
I	ARM D	4.55	26.27	0.173	--	0.3	0.2	3.2	-	0.046	I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5
17.15	0.7 *
17.30	1.0 *
17.45	1.0 *
18.00	0.7 *
18.15	0.5

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.7 *
17.15	1.0 *
17.30	1.7 **
17.45	1.7 **
18.00	1.1 *
18.15	0.8 *

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I
I	A	I	692.3	I	65.0	I	0.09	I

I	B	I	38.5	I	25.7	I	3.0	I	0.08	I	3.0	I	0.08	I
I	C	I	1178.2	I	785.5	I	103.0	I	0.09	I	103.1	I	0.09	I
I	D	I	499.6	I	333.1	I	25.4	I	0.05	I	25.4	I	0.05	I

I	ALL	I	2408.7	I	1605.8	I	196.5	I	0.08	I	196.5	I	0.08	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\Warren-Bypass\
Warren-Bypass pm.vai"
(drive-on-the-left) at 15:24:41 on Thursday, 11 June 2009

.FILE PROPERTIES

RUN TITLE: Proposed Warren Lane/Taylor Wimpey site/Western Bypass roundabout weekday pm pk
LOCATION: Stanway
DATE: 27/05/09
CLIENT: Hills Residential
ENUMERATOR: mlst [ARDENT23]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Warren Lane (north)
ARM B - Taylor Wimpey site
ARM C - Warren Lane (south)
ARM D - Western Bypass

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	3.50	I	6.75	I	13.00	I	10.00	I	40.00	I	35.0	I	0.582	I	25.018	I
I	ARM B	I	3.65	I	5.00	I	10.00	I	10.00	I	40.00	I	54.0	I	0.504	I	20.128	I
I	ARM C	I	3.50	I	7.00	I	12.00	I	20.00	I	40.00	I	35.0	I	0.613	I	26.352	I
I	ARM D	I	3.65	I	7.50	I	15.00	I	26.00	I	40.00	I	19.0	I	0.683	I	30.547	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Dev't Case weekday pm peak

T15

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	6.29	I	9.43	I	6.29
I	ARM B	I	15.00	I	45.00	I	75.00	I	0.35	I	0.52	I	0.35
I	ARM C	I	15.00	I	45.00	I	75.00	I	11.46	I	17.19	I	11.46
I	ARM D	I	15.00	I	45.00	I	75.00	I	6.07	I	9.11	I	6.07

DEMAND SET TITLE: 2023 Dev't Case weekday pm peak

T33

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D
I	16.45 - 18.15	I	ARM A	I	0.000	I	0.082	I	0.918	I	0.000
I		I		I	0.0	I	41.0	I	462.0	I	0.0
I		I		I	(0.0)	I	(0.0)	I	(17.0)	I	(0.0)
I		I	ARM B	I	0.036	I	0.000	I	0.036	I	0.929
I		I		I	1.0	I	0.0	I	1.0	I	26.0
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I	ARM C	I	0.437	I	0.012	I	0.000	I	0.551
I		I		I	401.0	I	11.0	I	0.0	I	505.0
I		I		I	(8.0)	I	(0.0)	I	(0.0)	I	(1.0)
I		I	ARM D	I	0.000	I	0.107	I	0.893	I	0.000
I		I		I	0.0	I	52.0	I	434.0	I	0.0
I		I		I	(0.0)	I	(0.0)	I	(2.0)	I	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	I	DEMAND (VEH/MIN)	I	CAPACITY (VEH/MIN)	I	DEMAND/CAPACITY (RFC)	I	PEDESTRIAN FLOW (PEDS/MIN)	I	START QUEUE (VEHS)	I	END QUEUE (VEHS)	I	DELAY (VEH.MIN/ TIME SEGMENT)	I	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)				
I	16.45-17.00	I	ARM A	I	6.31	I	18.45	I	0.342	I	-	I	-	I	0.0	I	0.5	I	7.5	I	-	I	0.082
I		I	ARM B	I	0.35	I	13.94	I	0.025	I	-	I	-	I	0.0	I	0.0	I	0.4	I	-	I	0.074
I		I	ARM C	I	11.51	I	25.13	I	0.458	I	-	I	-	I	0.0	I	0.8	I	12.2	I	-	I	0.073
I		I	ARM D	I	6.10	I	26.28	I	0.232	I	-	I	-	I	0.0	I	0.3	I	4.4	I	-	I	0.049

I	TIME	I	DEMAND (VEH/MIN)	I	CAPACITY (VEH/MIN)	I	DEMAND/CAPACITY (RFC)	I	PEDESTRIAN FLOW (PEDS/MIN)	I	START QUEUE (VEHS)	I	END QUEUE (VEHS)	I	DELAY (VEH.MIN/ TIME SEGMENT)	I	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)				
I	17.00-17.15	I	ARM A	I	7.54	I	17.83	I	0.423	I	-	I	-	I	0.5	I	0.7	I	10.6	I	-	I	0.097
I		I	ARM B	I	0.42	I	12.72	I	0.033	I	-	I	-	I	0.0	I	0.0	I	0.5	I	-	I	0.081
I		I	ARM C	I	13.74	I	25.09	I	0.548	I	-	I	-	I	0.8	I	1.2	I	17.4	I	-	I	0.088
I		I	ARM D	I	7.28	I	25.54	I	0.285	I	-	I	-	I	0.3	I	0.4	I	5.9	I	-	I	0.055

I	TIME	I	DEMAND (VEH/MIN)	I	CAPACITY (VEH/MIN)	I	DEMAND/CAPACITY (RFC)	I	PEDESTRIAN FLOW (PEDS/MIN)	I	START QUEUE (VEHS)	I	END QUEUE (VEHS)	I	DELAY (VEH.MIN/ TIME SEGMENT)	I	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)				
I	17.15-17.30	I	ARM A	I	9.23	I	16.97	I	0.544	I	-	I	-	I	0.7	I	1.2	I	16.9	I	-	I	0.128
I		I	ARM B	I	0.51	I	11.06	I	0.046	I	-	I	-	I	0.0	I	0.0	I	0.7	I	-	I	0.095
I		I	ARM C	I	16.83	I	25.04	I	0.672	I	-	I	-	I	1.2	I	2.0	I	28.6	I	-	I	0.120
I		I	ARM D	I	8.92	I	24.54	I	0.363	I	-	I	-	I	0.4	I	0.6	I	8.3	I	-	I	0.064

I	TIME	I	DEMAND (VEH/MIN)	I	CAPACITY (VEH/MIN)	I	DEMAND/CAPACITY (RFC)	I	PEDESTRIAN FLOW (PEDS/MIN)	I	START QUEUE (VEHS)	I	END QUEUE (VEHS)	I	DELAY (VEH.MIN/ TIME SEGMENT)	I	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	I	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)				
I	17.30-17.45	I	ARM A	I	9.23	I	16.97	I	0.544	I	-	I	-	I	1.2	I	1.2	I	17.7	I	-	I	0.129
I		I	ARM B	I	0.51	I	11.04	I	0.047	I	-	I	-	I	0.0	I	0.0	I	0.7	I	-	I	0.095
I		I	ARM C	I	16.83	I	25.03	I	0.672	I	-	I	-	I	2.0	I	2.0	I	30.2	I	-	I	0.122
I		I	ARM D	I	8.92	I	24.53	I	0.364	I	-	I	-	I	0.6	I	0.6	I	8.5	I	-	I	0.064

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	ARM A	7.54	17.82	0.423	--	1.2	0.7	11.5	-	0.098	I
I	ARM B	0.42	12.69	0.033	--	0.0	0.0	0.5	-	0.081	I
I	ARM C	13.74	25.09	0.548	--	2.0	1.2	19.1	-	0.089	I
I	ARM D	7.28	25.52	0.285	--	0.6	0.4	6.1	-	0.055	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	ARM A	6.31	18.44	0.342	--	0.7	0.5	8.1	-	0.083	I
I	ARM B	0.35	13.90	0.025	--	0.0	0.0	0.4	-	0.074	I
I	ARM C	11.51	25.13	0.458	--	1.2	0.9	13.1	-	0.074	I
I	ARM D	6.10	26.25	0.232	--	0.4	0.3	4.6	-	0.050	I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5 *
17.15	0.7 *
17.30	1.2 *
17.45	1.2 *
18.00	0.7 *
18.15	0.5 *

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.8 *
17.15	1.2 *
17.30	2.0 **
17.45	2.0 **
18.00	1.2 *
18.15	0.9 *

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.6 *
17.45	0.6 *
18.00	0.4
18.15	0.3

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND (VEH)	I	* QUEUEING DELAY (MIN)	I	* INCLUSIVE QUEUEING DELAY (MIN)	I
I	A	I	692.3	I	72.1	I	0.10	I

I	B	I	38.5	I	25.7	I	3.2	I	0.08	I	3.2	I	0.08	I
I	C	I	1262.2	I	841.5	I	120.6	I	0.10	I	120.6	I	0.10	I
I	D	I	668.9	I	446.0	I	37.9	I	0.06	I	37.9	I	0.06	I

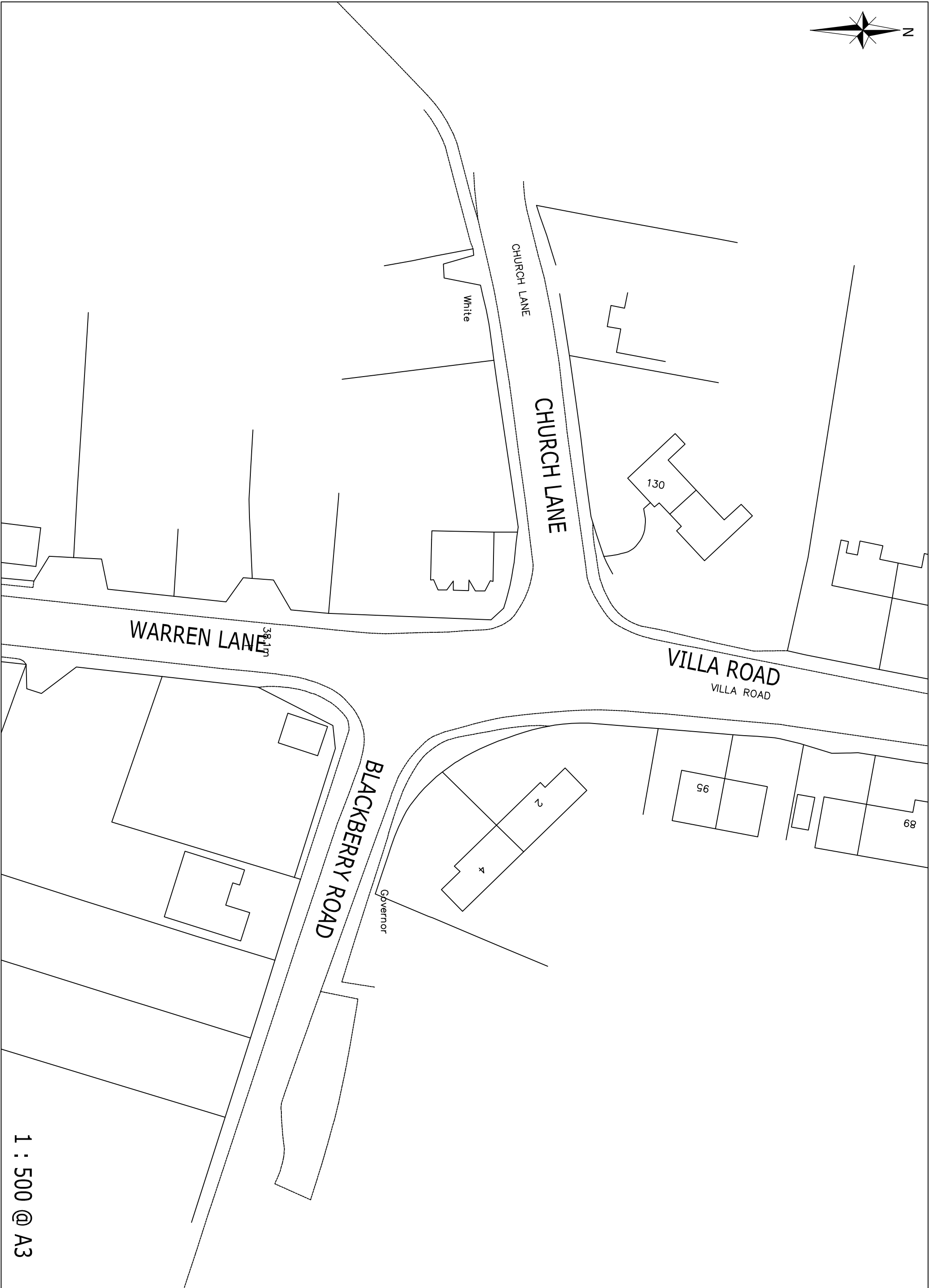
I	ALL	I	2662.0	I	1774.7	I	233.9	I	0.09	I	233.9	I	0.09	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

Appendix K

**Results of ARCADY capacity assessment:
Warren Lane/Blackberry Road mini roundabout**



A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\
Double Minis on Warren Lane\Blackberry Road Warren Lane\Blackberry Road Warren Lane am.vai"
(drive-on-the-left) at 11:43:38 on Friday, 12 June 2009

.FILE PROPERTIES

RUN TITLE: Blackberry Road / Warren Lane mini roundabout weekday am peak
LOCATION: Stanway, Essex
DATE: 28/05/09
CLIENT: Hills Residential
ENUMERATOR: ramey [ARDENT18]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Warren Lane (north)
ARM B - Blackberry Road (east)
ARM C - Warren Lane (south)

.MINI-ROUNDABOUT GEOMETRIC DATA

LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

I	ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I
I		I		I		I		I		I		I		I		I		I	(PCU/MIN)	I
I	ARM A	I	5.46	I	6.02	I	1.80	I	5.46	I	12.60	I	9.90	I	0.00	I	0.645	I	17.571	I
I	ARM B	I	2.88	I	3.13	I	0.60	I	2.88	I	14.05	I	11.28	I	0.00	I	0.511	I	9.721	I
I	ARM C	I	3.54	I	3.01	I	0.00	I	3.01	I	18.47	I	17.63	I	0.00	I	0.681	I	14.034	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

.LENGTH OF TIME PERIOD -(90) MINUTES

.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

.DEMAND SET TITLE: 2023 Base Case weekday am peak

T15

		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
ARM	TO RISE	IS REACHED	FALLING	BEFORE	AT TOP	AFTER	
ARM A	15.00	45.00	75.00	11.02	16.54	11.02	
ARM B	15.00	45.00	75.00	5.63	8.44	5.63	
ARM C	15.00	45.00	75.00	5.46	8.19	5.46	

DEMAND SET TITLE: 2023 Base Case weekday am peak

T33

		TURNING PROPORTIONS		
		TURNING COUNTS		
		(PERCENTAGE OF H.V.S)		
TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.477	0.523
		0.0	421.0	461.0
		(0.0)	(4.0)	(16.0)
	ARM B	0.964	0.000	0.036
		434.0	0.0	16.0
		(4.0)	(0.0)	(17.0)
	ARM C	0.970	0.030	0.000
		424.0	13.0	0.0
		(8.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00								
ARM A	11.07	15.84	0.699	-	0.0	2.2	30.3	0.198
ARM B	5.65	6.07	0.930	-	0.0	6.2	66.0	0.946
ARM C	5.48	9.72	0.564	-	0.0	1.3	17.3	0.227
08.00-08.15								
ARM A	13.21	15.82	0.835	-	2.2	4.5	59.0	0.344
ARM B	6.74	5.43	1.241	-	6.2	27.1	253.2	3.625
ARM C	6.55	9.63	0.680	-	1.3	2.0	27.8	0.315
08.15-08.30								
ARM A	16.18	15.80	1.025	-	4.5	19.2	192.9	1.007
ARM B	8.26	4.80	1.721	-	27.1	79.1	796.3	11.510
ARM C	8.02	9.99	0.803	-	2.0	3.6	47.3	0.459
08.30-08.45								
ARM A	16.18	15.79	1.025	-	19.2	28.8	362.4	1.740
ARM B	8.26	4.70	1.758	-	79.1	132.5	1586.5	22.798
ARM C	8.02	10.05	0.798	-	3.6	3.7	54.8	0.484
08.45-09.00								
ARM A	13.21	15.82	0.835	-	28.8	6.3	218.4	1.084
ARM B	6.74	4.94	1.364	-	132.5	159.5	2189.6	27.296
ARM C	6.55	9.89	0.662	-	3.7	2.1	33.8	0.319

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	09.00-09.15								
I	ARM A	11.07	15.84	0.699	--	6.3	2.4	41.2	0.233
I	ARM B	5.65	5.95	0.949	--	159.5	155.5	2362.3	26.640
I	ARM C	5.48	9.28	0.591	--	2.1	1.5	23.9	0.269

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	2.2 **
08.15	4.5 ****
08.30	19.2 *****
08.45	28.8 *****
09.00	6.3 *****
09.15	2.4 **

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	6.2 *****
08.15	27.1 *****
08.30	79.1 *****
08.45	132.5 *****
09.00	159.5 *****
09.15	155.5 *****

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.3 *
08.15	2.0 **
08.30	3.6 ****
08.45	3.7 ****
09.00	2.1 **
09.15	1.5 **

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I	
I	I	I	I	I	I	I	I	I	
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I	
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I	
I	A	I	1214.0	I	809.3	I	904.1	I	0.74
I	B	I	619.4	I	412.9	I	7253.9	I	11.71
I	C	I	601.5	I	401.0	I	204.8	I	0.34
I	ALL	I	2434.9	I	1623.3	I	8362.8	I	3.43

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\
Double Minis on Warren Lane\Blackberry Road Warren Lane\Blackberry Road Warren Lane am.vai"
(drive-on-the-left) at 11:44:46 on Friday, 12 June 2009

.FILE PROPERTIES

RUN TITLE: Blackberry Road / Warren Lane mini roundabout weekday am peak
LOCATION: Stanway, Essex
DATE: 28/05/09
CLIENT: Hills Residential
ENUMERATOR: ramey [ARDENT18]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Warren Lane (north)
ARM B - Blackberry Road (east)
ARM C - Warren Lane (south)

.MINI-ROUNDABOUT GEOMETRIC DATA

LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

I	ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I
I		I		I		I		I		I		I		I		I		I	(PCU/MIN)	I
I	ARM A	I	5.46	I	6.02	I	1.80	I	5.46	I	12.60	I	9.90	I	0.00	I	0.645	I	17.571	I
I	ARM B	I	2.88	I	3.13	I	0.60	I	2.88	I	14.05	I	11.28	I	0.00	I	0.511	I	9.721	I
I	ARM C	I	3.54	I	3.01	I	0.00	I	3.01	I	18.47	I	17.63	I	0.00	I	0.681	I	14.034	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

.LENGTH OF TIME PERIOD -(90) MINUTES

.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Dev't case weekday am peak

T15

I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	ARM	I FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	I BEFORE I AT TOP I AFTER	I
I	I	I TO RISE I IS REACHED I FALLING	I	I PEAK I OF PEAK I PEAK	I
I	ARM A	I 15.00 I 45.00 I 75.00	I	I 11.57 I 17.36 I 11.57	I
I	ARM B	I 15.00 I 45.00 I 75.00	I	I 5.65 I 8.48 I 5.65	I
I	ARM C	I 15.00 I 45.00 I 75.00	I	I 5.46 I 8.19 I 5.46	I

DEMAND SET TITLE: 2023 Dev't case weekday am peak

T33

I	I	TURNING PROPORTIONS	I
I	I	TURNING COUNTS	I
I	I	(PERCENTAGE OF H.V.S)	I
I	TIME	I FROM/TO I ARM A I ARM B I ARM C	I
I	07.45 - 09.15	I I I I I	I I I I I
I		I ARM A I 0.000 I 0.502 I 0.498	I I I I I
I		I I 0.0 I 465.0 I 461.0	I I I I I
I		I (0.0)I (3.0)I (16.0)I	I I I I I
I		I I I I I	I I I I I
I		I ARM B I 0.965 I 0.000 I 0.035	I I I I I
I		I I 436.0 I 0.0 I 16.0	I I I I I
I		I (4.0)I (0.0)I (17.0)I	I I I I I
I		I I I I I	I I I I I
I		I ARM C I 0.970 I 0.030 I 0.000	I I I I I
I		I I 424.0 I 13.0 I 0.0	I I I I I
I		I (8.0)I (0.0)I (0.0)I	I I I I I
I		I I I I I	I I I I I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	07.45-08.00								
I	ARM A	11.62	15.96	0.728	--	0.0	2.5	34.3	0.214
I	ARM B	5.67	6.07	0.934	--	0.0	6.4	67.0	0.959
I	ARM C	5.48	9.71	0.565	--	0.0	1.3	17.3	0.228
I									
I	08.00-08.15								
I	ARM A	13.87	15.94	0.871	--	2.5	5.6	71.6	0.407
I	ARM B	6.77	5.45	1.244	--	6.4	27.4	256.6	3.657
I	ARM C	6.55	9.62	0.681	--	1.3	2.0	27.8	0.316
I									
I	08.15-08.30								
I	ARM A	16.99	15.91	1.068	--	5.6	27.3	259.3	1.290
I	ARM B	8.29	4.92	1.687	--	27.4	78.2	792.4	11.147
I	ARM C	8.02	9.91	0.809	--	2.0	3.7	48.5	0.472
I									
I	08.30-08.45								
I	ARM A	16.99	15.91	1.068	--	27.3	45.1	544.3	2.479
I	ARM B	8.29	4.84	1.713	--	78.2	130.0	1561.3	21.782
I	ARM C	8.02	9.95	0.806	--	3.7	3.9	56.8	0.506
I									
I	08.45-09.00								
I	ARM A	13.87	15.93	0.871	--	45.1	19.4	483.6	2.146
I	ARM B	6.77	4.90	1.381	--	130.0	158.0	2159.9	27.570
I	ARM C	6.55	9.92	0.660	--	3.9	2.0	33.6	0.318

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	09.00-09.15								
I	ARM A	11.62	15.95	0.728	--	19.4	2.9	83.8	0.404
I	ARM B	5.67	5.71	0.993	--	158.0	158.0	2370.0	27.841
I	ARM C	5.48	9.43	0.582	--	2.0	1.4	22.9	0.259

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	2.5 ***
08.15	5.6 *****
08.30	27.3 *****
08.45	45.1 *****
09.00	19.4 *****
09.15	2.9 ***

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	6.4 *****
08.15	27.4 *****
08.30	78.2 *****
08.45	130.0 *****
09.00	158.0 *****
09.15	158.0 *****

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.3 *
08.15	2.0 **
08.30	3.7 ****
08.45	3.9 ****
09.00	2.0 **
09.15	1.4 *

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	A	I	1274.6	I	849.7	I	1476.9	I	1.16
I	B	I	622.1	I	414.8	I	7207.1	I	11.58
I	C	I	601.5	I	401.0	I	207.0	I	0.34
I	ALL	I	2498.2	I	1665.5	I	8891.0	I	3.56

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

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Run with file:-

"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\
Double Minis on Warren Lane\Blackberry Road Warren Lane\Blackberry Road Warren Lane pm.vai"
(drive-on-the-left) at 09:42:34 on Friday, 12 June 2009

.FILE PROPERTIES

RUN TITLE: Blackberry Road / Warren Lane mini roundabout weekday pm peak
LOCATION: Stanway, Essex
DATE: 28/05/09
CLIENT: Hills Residential
ENUMERATOR: ramey [ARDENT18]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Warren Lane (north)
ARM B - Blackberry Road (east)
ARM C - Warren Lane (south)

.MINI-ROUNDABOUT GEOMETRIC DATA

LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

I	ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT
I		I		I		I		I		I		I		I		I		I	(PCU/MIN)
I	ARM A	I	5.46	I	6.02	I	1.80	I	5.46	I	12.60	I	9.90	I	0.00	I	0.645	I	17.571
I	ARM B	I	2.88	I	3.13	I	0.60	I	2.88	I	14.05	I	11.28	I	0.00	I	0.511	I	9.721
I	ARM C	I	3.54	I	3.01	I	0.00	I	3.01	I	18.47	I	17.63	I	0.00	I	0.681	I	14.034

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

.DEMAND SET TITLE: 2023 Base Case weekday pm peak

T15

		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
ARM	TO RISE	IS REACHED	FALLING	BEFORE	AT TOP	AFTER	
ARM A	15.00	45.00	75.00	8.31	12.47	8.31	
ARM B	15.00	45.00	75.00	4.63	6.94	4.63	
ARM C	15.00	45.00	75.00	6.71	10.07	6.71	

DEMAND SET TITLE: 2023 Base Case weekday pm peak

T33

		TURNING PROPORTIONS		
		TURNING COUNTS		
		(PERCENTAGE OF H.V.S)		
TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15		0.000	0.523	0.477
		0.0	348.0	317.0
		(0.0)	(2.0)	(4.0)
		0.978	0.000	0.022
		362.0	0.0	8.0
		(1.0)	(0.0)	(0.0)
		0.972	0.028	0.000
		522.0	15.0	0.0
		(3.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00								
ARM A	8.34	16.95	0.492	-	0.0	1.0	13.7	0.114
ARM B	4.64	7.55	0.615	-	0.0	1.5	20.2	0.323
ARM C	6.74	10.67	0.632	-	0.0	1.6	22.4	0.242
17.00-17.15								
ARM A	9.96	16.93	0.589	-	1.0	1.4	20.1	0.143
ARM B	5.54	7.14	0.777	-	1.5	3.0	39.3	0.558
ARM C	8.05	10.08	0.798	-	1.6	3.5	45.4	0.439
17.15-17.30								
ARM A	12.20	16.91	0.722	-	1.4	2.5	34.5	0.206
ARM B	6.79	6.58	1.031	-	3.0	11.9	121.1	1.568
ARM C	9.85	9.58	1.028	-	3.5	14.6	147.0	1.289
17.30-17.45								
ARM A	12.20	16.90	0.722	-	2.5	2.5	37.7	0.212
ARM B	6.79	6.57	1.034	-	11.9	17.8	224.6	2.627
ARM C	9.85	9.45	1.043	-	14.6	23.3	285.9	2.316
17.45-18.00								
ARM A	9.96	16.91	0.589	-	2.5	1.5	23.2	0.147
ARM B	5.54	7.11	0.780	-	17.8	4.5	143.3	1.638
ARM C	8.05	9.43	0.853	-	23.3	8.5	235.6	1.890

I TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 18.00-18.15								
I ARM A	8.34	16.94	0.493	--	1.5	1.0	15.3	0.117
I ARM B	4.64	7.53	0.617	--	4.5	1.7	29.8	0.393
I ARM C	6.74	10.48	0.643	--	8.5	1.9	38.6	0.339

.QUEUE AT ARM A

TIME SEGMENT NO. OF
ENDING VEHICLES
IN QUEUE

17.00	1.0	*
17.15	1.4	*
17.30	2.5	**
17.45	2.5	***
18.00	1.5	*
18.15	1.0	*

.QUEUE AT ARM B

TIME SEGMENT NO. OF
ENDING VEHICLES
IN QUEUE

17.00	1.5	**
17.15	3.0	***
17.30	11.9	*****
17.45	17.8	*****
18.00	4.5	*****
18.15	1.7	**

.QUEUE AT ARM C

TIME SEGMENT NO. OF
ENDING VEHICLES
IN QUEUE

17.00	1.6	**
17.15	3.5	***
17.30	14.6	*****
17.45	23.3	*****
18.00	8.5	*****
18.15	1.9	**

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I A	I	915.3	I 610.2	I 144.4	I 0.16	I 144.5	I 0.16
I B	I	509.3	I 339.5	I 578.3	I 1.14	I 578.5	I 1.14
I C	I	739.1	I 492.8	I 774.9	I 1.05	I 775.1	I 1.05
I ALL	I	2163.7	I 1442.5	I 1497.6	I 0.69	I 1498.0	I 0.69

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\
Double Minis on Warren Lane\Blackberry Road Warren Lane\Blackberry Road Warren Lane pm.vai"
(drive-on-the-left) at 09:42:07 on Friday, 12 June 2009

.FILE PROPERTIES

RUN TITLE: Blackberry Road / Warren Lane mini roundabout weekday pm peak
LOCATION: Stanway, Essex
DATE: 28/05/09
CLIENT: Hills Residential
ENUMERATOR: ramey [ARDENT18]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Warren Lane (north)
ARM B - Blackberry Road (east)
ARM C - Warren Lane (south)

.MINI-ROUNDABOUT GEOMETRIC DATA

LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

I ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I (PCU/MIN)	I
I ARM A	I	5.46	I	6.02	I	1.80	I	5.46	I	12.60	I	9.90	I	0.00	I	0.645	I	17.571	I
I ARM B	I	2.88	I	3.13	I	0.60	I	2.88	I	14.05	I	11.28	I	0.00	I	0.511	I	9.721	I
I ARM C	I	3.54	I	3.01	I	0.00	I	3.01	I	18.47	I	17.63	I	0.00	I	0.681	I	14.034	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I ARM	I	FLOW SCALE(%)	I
I A	I	100	I
I B	I	100	I
I C	I	100	I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Dev't case weekday pm peak

T15

I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	ARM	I FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	I BEFORE I AT TOP I AFTER	I
I	I	I TO RISE I IS REACHED I FALLING	I	I PEAK I OF PEAK I PEAK	I
I	ARM A	I 15.00 I 45.00 I 75.00	I	9.52 I 14.29 I 9.52	I
I	ARM B	I 15.00 I 45.00 I 75.00	I	4.65 I 6.98 I 4.65	I
I	ARM C	I 15.00 I 45.00 I 75.00	I	6.71 I 10.07 I 6.71	I

DEMAND SET TITLE: 2023 Dev't case weekday pm peak

T33

I	I	TURNING PROPORTIONS	I
I	I	TURNING COUNTS	I
I	I	(PERCENTAGE OF H.V.S)	I
I	TIME	I FROM/TO I ARM A I ARM B I ARM C	I
I	16.45 - 18.15	I I I I I I	I
I		I ARM A I 0.000 I 0.584 I 0.416	I
I		I I 0.0 I 445.0 I 317.0	I
I		I (0.0)I (2.0)I (4.0)I	I
I		I I I I I I	I
I		I ARM B I 0.978 I 0.000 I 0.022	I
I		I I 364.0 I 0.0 I 8.0	I
I		I (1.0)I (0.0)I (0.0)I	I
I		I I I I I I	I
I		I ARM C I 0.972 I 0.028 I 0.000	I
I		I I 522.0 I 15.0 I 0.0	I
I		I (3.0)I (0.0)I (0.0)I	I
I		I I I I I I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	16.45-17.00								
I	ARM A	9.56	16.97	0.563	--	0.0	1.3	17.9	0.132
I	ARM B	4.67	7.55	0.618	--	0.0	1.5	20.5	0.325
I	ARM C	6.74	10.65	0.633	--	0.0	1.6	22.4	0.243

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.00-17.15								
I	ARM A	11.42	16.95	0.674	--	1.3	2.0	28.2	0.178
I	ARM B	5.57	7.14	0.781	--	1.5	3.1	39.9	0.565
I	ARM C	8.05	10.06	0.800	--	1.6	3.5	45.7	0.443

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.15-17.30								
I	ARM A	13.98	16.93	0.826	--	2.0	4.3	56.4	0.308
I	ARM B	6.83	6.60	1.034	--	3.1	12.1	123.2	1.591
I	ARM C	9.85	9.57	1.030	--	3.5	14.7	148.3	1.300

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.30-17.45								
I	ARM A	13.98	16.92	0.826	--	4.3	4.5	65.9	0.334
I	ARM B	6.83	6.57	1.039	--	12.1	18.5	231.0	2.685
I	ARM C	9.85	9.44	1.044	--	14.7	23.6	289.1	2.335

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.45-18.00								
I	ARM A	11.42	16.93	0.674	--	4.5	2.1	34.9	0.192
I	ARM B	5.57	7.09	0.786	--	18.5	4.8	153.2	1.750
I	ARM C	8.05	9.40	0.856	--	23.6	8.9	242.7	1.942

I TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 18.00-18.15								
I ARM A	9.56	16.96	0.564	--	2.1	1.3	20.7	0.137
I ARM B	4.67	7.52	0.621	--	4.8	1.7	30.6	0.403
I ARM C	6.74	10.45	0.645	--	8.9	1.9	39.7	0.348

.QUEUE AT ARM A

TIME SEGMENT NO. OF
ENDING VEHICLES
IN QUEUE

17.00	1.3	*
17.15	2.0	**
17.30	4.3	****
17.45	4.5	****
18.00	2.1	**
18.15	1.3	*

.QUEUE AT ARM B

TIME SEGMENT NO. OF
ENDING VEHICLES
IN QUEUE

17.00	1.5	**
17.15	3.1	***
17.30	12.1	*****
17.45	18.5	*****
18.00	4.8	*****
18.15	1.7	**

.QUEUE AT ARM C

TIME SEGMENT NO. OF
ENDING VEHICLES
IN QUEUE

17.00	1.6	**
17.15	3.5	****
17.30	14.7	*****
17.45	23.6	*****
18.00	8.9	*****
18.15	1.9	**

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

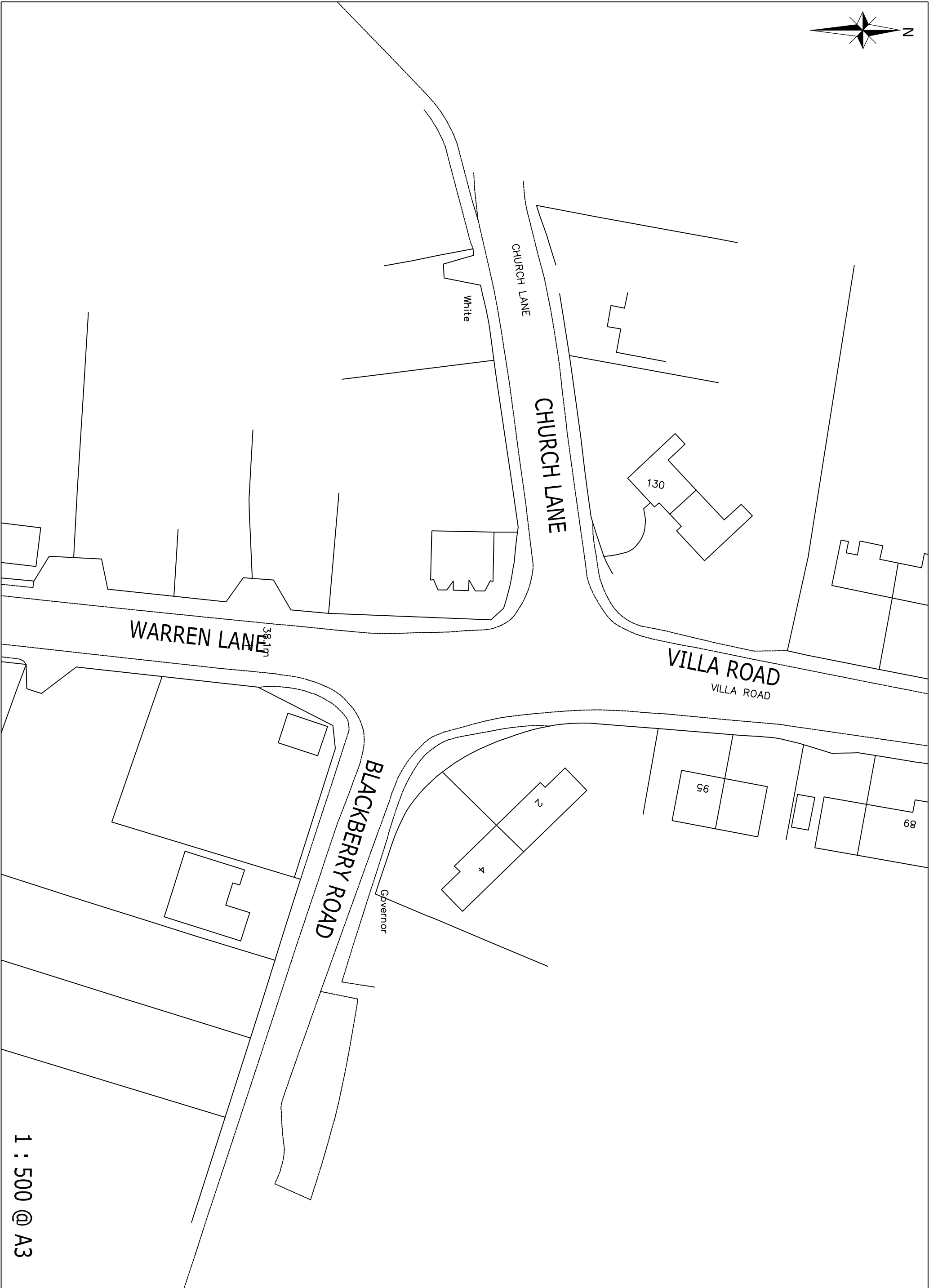
I ARM	I TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	* DELAY *	I	* DELAY *	I
I	I (VEH)	I (VEH/H)	I (MIN)	I (MIN/VEH)	I (MIN)	I (MIN/VEH)
I A	I 1048.8	I 699.2	I 224.0	I 0.21	I 224.0	I 0.21
I B	I 512.0	I 341.4	I 598.3	I 1.17	I 598.5	I 1.17
I C	I 739.1	I 492.8	I 788.0	I 1.07	I 788.2	I 1.07
I ALL	I 2300.0	I 1533.3	I 1610.3	I 0.70	I 1610.7	I 0.70

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

Appendix L

**Results of ARCADY capacity assessment:
Villa Road/Church Road mini roundabout**



1 : 500 @ A3

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\
Double Minis on Warren Lane\Church Lane Villa Road Mini\Church Lane Villa Road am v2.vai"
(drive-on-the-left) at 11:39:07 on Friday, 12 June 2009

.FILE PROPERTIES

RUN TITLE: Church Lane - Villa Road mini roundabout weekday am peak
LOCATION: Stanway, Essex
DATE: 28/05/09
CLIENT: Hills Residential
ENUMERATOR: ramey [ARDENT18]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Villa Road (north)
ARM B - Warren Lane (south)
ARM C - Church Lane (west)

.MINI-ROUNDABOUT GEOMETRIC DATA

LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

I ARM	I V (M)	I E (M)	I Lm(M)	I Vm(M)	I A (M)	I K (M)	I G (%)	I SLOPE	I INTERCEPT
I	I	I	I	I	I	I	I	I	I (PCU/MIN)
I ARM A	I 3.62	I 5.05	I 11.40	I 3.62	I 17.55	I 16.63	I 0.00	I 0.693	I 19.127
I ARM B	I 5.40	I 5.87	I 0.50	I 5.40	I 10.64	I 6.34	I 0.00	I 0.630	I 17.234
I ARM C	I 3.71	I 4.16	I 0.80	I 3.71	I 12.85	I 9.74	I 0.00	I 0.551	I 12.011

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13
I ARM I FLOW SCALE(%) I

I A I 100 I
I B I 100 I
I C I 100 I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

.DEMAND SET TITLE: 2023 Base Case weekday am peak

T15

		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
ARM	TO RISE	IS REACHED	FALLING	BEFORE PEAK	AT TOP	AFTER PEAK	
ARM A	15.00	45.00	75.00	2.83	4.24	2.83	
ARM B	15.00	45.00	75.00	10.73	16.09	10.73	
ARM C	15.00	45.00	75.00	8.86	13.29	8.86	

DEMAND SET TITLE: 2023 Base Case weekday am peak

T33

		TURNING PROPORTIONS		
		TURNING COUNTS		
		(PERCENTAGE OF H.V.S)		
TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.119	0.881
		0.0	27.0	199.0
		(0.0)	(5.0)	(4.0)
	ARM B	0.212	0.000	0.788
		182.0	0.0	676.0
		(1.0)	(0.0)	(7.0)
	ARM C	0.038	0.962	0.000
		27.0	682.0	0.0
		(5.0)	(27.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00								
ARM A	2.84	11.89	0.238	-	0.0	0.3	4.5	0.110
ARM B	10.77	14.76	0.729	-	0.0	2.5	34.1	0.231
ARM C	8.90	8.53	1.043	-	0.0	14.0	129.8	1.185
08.00-08.15								
ARM A	3.39	11.62	0.291	-	0.3	0.4	6.0	0.121
ARM B	12.86	14.46	0.889	-	2.5	6.3	77.7	0.483
ARM C	10.62	8.34	1.274	-	14.0	48.9	473.1	4.087
08.15-08.30								
ARM A	4.15	11.68	0.355	-	0.4	0.5	7.9	0.132
ARM B	15.74	14.04	1.121	-	6.3	35.0	318.6	1.735
ARM C	13.01	8.23	1.582	-	48.9	120.7	1271.5	10.526
08.30-08.45								
ARM A	4.15	11.69	0.355	-	0.5	0.5	8.2	0.133
ARM B	15.74	14.04	1.122	-	35.0	61.3	722.9	3.609
ARM C	13.01	8.21	1.585	-	120.7	192.7	2350.1	19.270
08.45-09.00								
ARM A	3.39	11.71	0.289	-	0.5	0.4	6.3	0.120
ARM B	12.86	14.45	0.890	-	61.3	40.9	766.2	3.623
ARM C	10.62	8.19	1.297	-	192.7	229.2	3163.9	25.795

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15									I
I	ARM A	2.84	11.64	0.244	--	0.4	0.3	5.0	0.114	I
I	ARM B	10.77	14.75	0.730	--	40.9	3.1	244.3	1.229	I
I	ARM C	8.90	8.28	1.075	--	229.2	238.5	3507.5	28.396	I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.3
08.15	0.4
08.30	0.5 *
08.45	0.5 *
09.00	0.4
09.15	0.3

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	2.5 ***
08.15	6.3 *****
08.30	35.0 *****
08.45	61.3 *****
09.00	40.9 *****
09.15	3.1 ***

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	14.0 *****
08.15	48.9 *****
08.30	120.7 *****
08.45	192.7 *****
09.00	229.2 *****
09.15	238.5 *****

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	T75
I	I	I	I	I	* DELAY *	I	* DELAY *	I	I
I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)
I	A	I	311.1	I	207.4	I	37.9	I	0.12
I	B	I	1181.0	I	787.3	I	2163.8	I	1.83
I	C	I	975.9	I	650.6	I	10895.8	I	11.17
I	ALL	I	2467.9	I	1645.3	I	13097.5	I	5.31

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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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:-

"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\
Double Minis on Warren Lane\Church Lane Villa Road Mini\Church Lane Villa Road am v2.vai"
(drive-on-the-left) at 11:40:00 on Friday, 12 June 2009

.FILE PROPERTIES

RUN TITLE: Church Lane - Villa Road mini roundabout weekday am peak
LOCATION: Stanway, Essex
DATE: 28/05/09
CLIENT: Hills Residential
ENUMERATOR: ramey [ARDENT18]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Villa Road (north)
ARM B - Warren Lane (south)
ARM C - Church Lane (west)

.MINI-ROUNDABOUT GEOMETRIC DATA

LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

I	ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I
I		I		I		I		I		I		I		I		I		I	(PCU/MIN)	I
I	ARM A	I	3.62	I	5.05	I	11.40	I	3.62	I	17.55	I	16.63	I	0.00	I	0.693	I	19.127	I
I	ARM B	I	5.40	I	5.87	I	0.50	I	5.40	I	10.64	I	6.34	I	0.00	I	0.630	I	17.234	I
I	ARM C	I	3.71	I	4.16	I	0.80	I	3.71	I	12.85	I	9.74	I	0.00	I	0.551	I	12.011	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

.LENGTH OF TIME PERIOD -(90) MINUTES

.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Dev't Case weekday am peak

T15

DEMAND SET TITLE: 2023 Dev't Case weekday am peak										
I	I	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)				I
I	I	I	I	I	I	I	I	I	I	
I	I	TO RISE	IS REACHED	FALLING	BEFORE	AT TOP	AFTER	PEAK	OF PEAK	
I	I	I	I	I	I	I	I	I	I	
I	ARM A	15.00	45.00	75.00	3.36	5.04	3.36			
I	ARM B	15.00	45.00	75.00	10.76	16.14	10.76			
I	ARM C	15.00	45.00	75.00	8.89	13.33	8.89			

DEMAND SET TITLE: 2023 Dev't Case weekday am peak

T33

DEMAND SET TITLE: 2023 Dev't Case weekday am peak										
TURNING PROPORTIONS										
TURNING COUNTS										
(PERCENTAGE OF H.V.S)										
I	I	FROM/TO				ARM A	ARM B	ARM C	I	I
I	I	TIME	I	I	I	I	I	I	I	
I		07.45 - 09.15	I	I	I	I	I	I	I	
I	ARM A		I	0.000	0.900	0.100				
I			I	0.0	242.0	27.0				
I			I	(0.0)	(3.0)	(5.0)				
I	ARM B		I	0.211	0.000	0.789				
I			I	182.0	0.0	679.0				
I			I	(7.0)	(0.0)	(1.0)				
I	ARM C		I	0.038	0.962	0.000				
I			I	27.0	684.0	0.0				
I			I	(5.0)	(27.0)	(0.0)				

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	AVERAGE DELAY
I	I	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	PER ARRIVING
I	I			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	VEHICLE (MIN)
I	07.45-08.00								
I	ARM A	3.38	12.02	0.281	--	0.0	0.4	5.6	0.115
I	ARM B	10.80	16.63	0.649	--	0.0	1.8	24.9	0.165
I	ARM C	8.92	8.46	1.054	--	0.0	14.9	135.7	1.241
I									
I	08.00-08.15								
I	ARM A	4.03	11.79	0.342	--	0.4	0.5	7.5	0.129
I	ARM B	12.90	16.59	0.778	--	1.8	3.3	44.4	0.258
I	ARM C	10.65	8.26	1.290	--	14.9	51.3	497.8	4.344
I									
I	08.15-08.30								
I	ARM A	4.94	11.97	0.413	--	0.5	0.7	10.0	0.142
I	ARM B	15.80	16.53	0.956	--	3.3	10.8	121.8	0.640
I	ARM C	13.05	8.01	1.629	--	51.3	127.0	1337.3	11.349
I									
I	08.30-08.45								
I	ARM A	4.94	11.99	0.412	--	0.7	0.7	10.4	0.142
I	ARM B	15.80	16.53	0.956	--	10.8	13.3	182.2	0.892
I	ARM C	13.05	7.98	1.636	--	127.0	203.0	2474.9	20.855
I									
I	08.45-09.00								
I	ARM A	4.03	11.82	0.341	--	0.7	0.5	8.1	0.129
I	ARM B	12.90	16.59	0.778	--	13.3	3.8	77.8	0.382
I	ARM C	10.65	8.18	1.302	--	203.0	240.1	3323.4	26.861

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15									I
I	ARM A	3.38	11.61	0.291	--	0.5	0.4	6.4	0.122	I
I	ARM B	10.80	16.63	0.650	--	3.8	1.9	30.7	0.179	I
I	ARM C	8.92	8.44	1.057	--	240.1	247.3	3655.6	29.024	I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.4
08.15	0.5 *
08.30	0.7 *
08.45	0.7 *
09.00	0.5 *
09.15	0.4

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.8 **
08.15	3.3 ***
08.30	10.8 *****
08.45	13.3 *****
09.00	3.8 ****
09.15	1.9 **

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	14.9 *****
08.15	51.3 *****
08.30	127.0 *****
08.45	203.0 *****
09.00	240.1 *****
09.15	247.3 *****

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	T75
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)
I	A	I	370.3	I	246.8	I	48.0	I	0.13
I	B	I	1185.1	I	790.1	I	482.0	I	0.41
I	C	I	978.6	I	652.4	I	11424.7	I	11.67
I	ALL	I	2534.0	I	1689.3	I	11954.6	I	4.72

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\
Double Minis on Warren Lane\Church Lane Villa Road Mini\Church Lane Villa Road pm.vai"
(drive-on-the-left) at 09:25:14 on Friday, 12 June 2009

.FILE PROPERTIES

RUN TITLE: Church Lane - Villa Road mini roundabout weekday pm peak
LOCATION: Stanway, Essex
DATE: 28/05/09
CLIENT: Hills Residential
ENUMERATOR: ramey [ARDENT18]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Villa Road (north)
ARM B - Warren Lane (south)
ARM C - Church Lane (west)

.MINI-ROUNDABOUT GEOMETRIC DATA

LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

I ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I	
I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	(PCU/MIN)	I
I ARM A	I	3.62	I	5.05	I	11.40	I	3.62	I	17.55	I	16.63	I	0.00	I	0.693	I	19.127	I	
I ARM B	I	5.40	I	5.87	I	0.50	I	5.40	I	10.64	I	6.34	I	0.00	I	0.630	I	17.234	I	
I ARM C	I	3.71	I	4.16	I	0.80	I	3.71	I	12.85	I	9.74	I	0.00	I	0.551	I	12.011	I	

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I ARM	I	FLOW SCALE(%)	I
I A	I	100	I
I B	I	100	I
I C	I	100	I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

.LENGTH OF TIME PERIOD - (90) MINUTES

.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

.DEMAND SET TITLE: 2023 Base Case weekday pm peak

T15

I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I	ARM	I FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	BEFORE I AT TOP I AFTER	I
I	I	I TO RISE I IS REACHED I FALLING	I	PEAK I OF PEAK I PEAK	I
I	ARM A	I 15.00 I 45.00 I 75.00	I	2.39 I 3.58 I 2.39	I
I	ARM B	I 15.00 I 45.00 I 75.00	I	11.05 I 16.58 I 11.05	I
I	ARM C	I 15.00 I 45.00 I 75.00	I	6.85 I 10.27 I 6.85	I

DEMAND SET TITLE: 2023 Base Case weekday pm peak

T33

I	I	TURNING PROPORTIONS	I
I	I	TURNING COUNTS	I
I	I	(PERCENTAGE OF H.V.S)	I
I	TIME	I FROM/TO I ARM A I ARM B I ARM C	I
I	16.45 - 18.15	I I I I I	I
I		I ARM A I 0.000 I 0.838 I 0.162	I
I		I I 0.0 I 160.0 I 31.0	I
I		I (0.0)I (1.0)I (0.0)I	I
I		I I I I I	I
I		I ARM B I 0.243 I 0.000 I 0.757	I
I		I I 215.0 I 0.0 I 669.0	I
I		I (1.0)I (0.0)I (3.0)I	I
I		I I I I I	I
I		I ARM C I 0.080 I 0.920 I 0.000	I
I		I I 44.0 I 504.0 I 0.0	I
I		I (0.0)I (4.0)I (0.0)I	I
I		I I I I I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	16.45-17.00								
I	ARM A	2.40	14.54	0.165	--	0.0	0.2	2.9	0.082
I	ARM B	11.09	16.57	0.669	--	0.0	2.0	27.0	0.174
I	ARM C	6.88	10.15	0.677	--	0.0	2.0	26.5	0.283
I									
I	17.00-17.15								
I	ARM A	2.86	13.67	0.209	--	0.2	0.3	3.9	0.092
I	ARM B	13.24	16.53	0.801	--	2.0	3.7	49.9	0.284
I	ARM C	8.21	9.87	0.832	--	2.0	4.2	53.3	0.516
I									
I	17.15-17.30								
I	ARM A	3.50	12.93	0.271	--	0.3	0.4	5.4	0.106
I	ARM B	16.22	16.46	0.985	--	3.7	13.9	149.2	0.767
I	ARM C	10.06	9.56	1.052	--	4.2	17.2	170.3	1.469
I									
I	17.30-17.45								
I	ARM A	3.50	12.80	0.274	--	0.4	0.4	5.6	0.108
I	ARM B	16.22	16.46	0.985	--	13.9	18.6	246.6	1.179
I	ARM C	10.06	9.51	1.058	--	17.2	27.4	336.0	2.640
I									
I	17.45-18.00								
I	ARM A	2.86	12.76	0.224	--	0.4	0.3	4.5	0.101
I	ARM B	13.24	16.53	0.801	--	18.6	4.5	111.8	0.537
I	ARM C	8.21	9.73	0.844	--	27.4	9.0	277.9	2.111

I TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I 18.00-18.15								
I ARM A	2.40	14.15	0.169	--	0.3	0.2	3.1	0.085
I ARM B	11.09	16.57	0.669	--	4.5	2.1	34.1	0.193
I ARM C	6.88	10.12	0.680	--	9.0	2.3	46.3	0.407

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.4
18.00	0.3
18.15	0.2

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	2.0 **
17.15	3.7 ****
17.30	13.9 *****
17.45	18.6 *****
18.00	4.5 ****
18.15	2.1 **

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	2.0 **
17.15	4.2 ****
17.30	17.2 *****
17.45	27.4 *****
18.00	9.0 *****
18.15	2.3 **

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I ARM	I TOTAL DEMAND	I * QUEUEING * * DELAY *	I * INCLUSIVE QUEUEING * * DELAY *
I	I (VEH)	I (MIN)	I (MIN)
I A	I 262.9	I 175.3	I 25.3
I B	I 1216.8	I 811.2	I 618.6
I C	I 754.3	I 502.9	I 910.3
I ALL	I 2233.9	I 1489.3	I 1554.2

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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RG40 3GA,UK	

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\
Double Minis on Warren Lane\Church Lane Villa Road Mini\Church Lane Villa Road pm.vai"
(drive-on-the-left) at 09:26:20 on Friday, 12 June 2009

.FILE PROPERTIES

RUN TITLE: Church Lane - Villa Road mini roundabout weekday pm peak
LOCATION: Stanway, Essex
DATE: 28/05/09
CLIENT: Hills Residential
ENUMERATOR: ramey [ARDENT18]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Villa Road (north)
ARM B - Warren Lane (south)
ARM C - Church Lane (west)

.MINI-ROUNDABOUT GEOMETRIC DATA

LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

I	ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I
I		I		I		I		I		I		I		I		I		I	(PCU/MIN)	I
I	ARM A	I	3.62	I	5.05	I	11.40	I	3.62	I	17.55	I	16.63	I	0.00	I	0.693	I	19.127	I
I	ARM B	I	5.40	I	5.87	I	0.50	I	5.40	I	10.64	I	6.34	I	0.00	I	0.630	I	17.234	I
I	ARM C	I	3.71	I	4.16	I	0.80	I	3.71	I	12.85	I	9.74	I	0.00	I	0.551	I	12.011	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15								
ARM A	3.59	14.01	0.256	--	0.5	0.3	5.3	0.096
ARM B	11.12	16.57	0.671	--	4.6	2.1	34.4	0.195
ARM C	6.91	10.12	0.683	--	11.5	2.3	54.5	0.462

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.5
17.30	0.7 *
17.45	0.7 *
18.00	0.5 *
18.15	0.3

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	2.0 **
17.15	3.7 ****
17.30	14.2 *****
17.45	19.1 *****
18.00	4.6 ****
18.15	2.1 **

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	2.0 **
17.15	4.3 ****
17.30	17.8 *****
17.45	28.7 *****
18.00	11.5 *****
18.15	2.3 **

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND (VEH)	INCLUSIVE QUEUEING (VEH/H)	* QUEUEING * (MIN)	* DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * (MIN)	* DELAY * (MIN/VEH)
A	393.7	262.4	44.7	0.11	44.7	0.11
B	1219.5	813.0	631.4	0.52	631.5	0.52
C	758.4	505.6	962.9	1.27	963.2	1.27
ALL	2371.6	1581.1	1638.9	0.69	1639.3	0.69

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

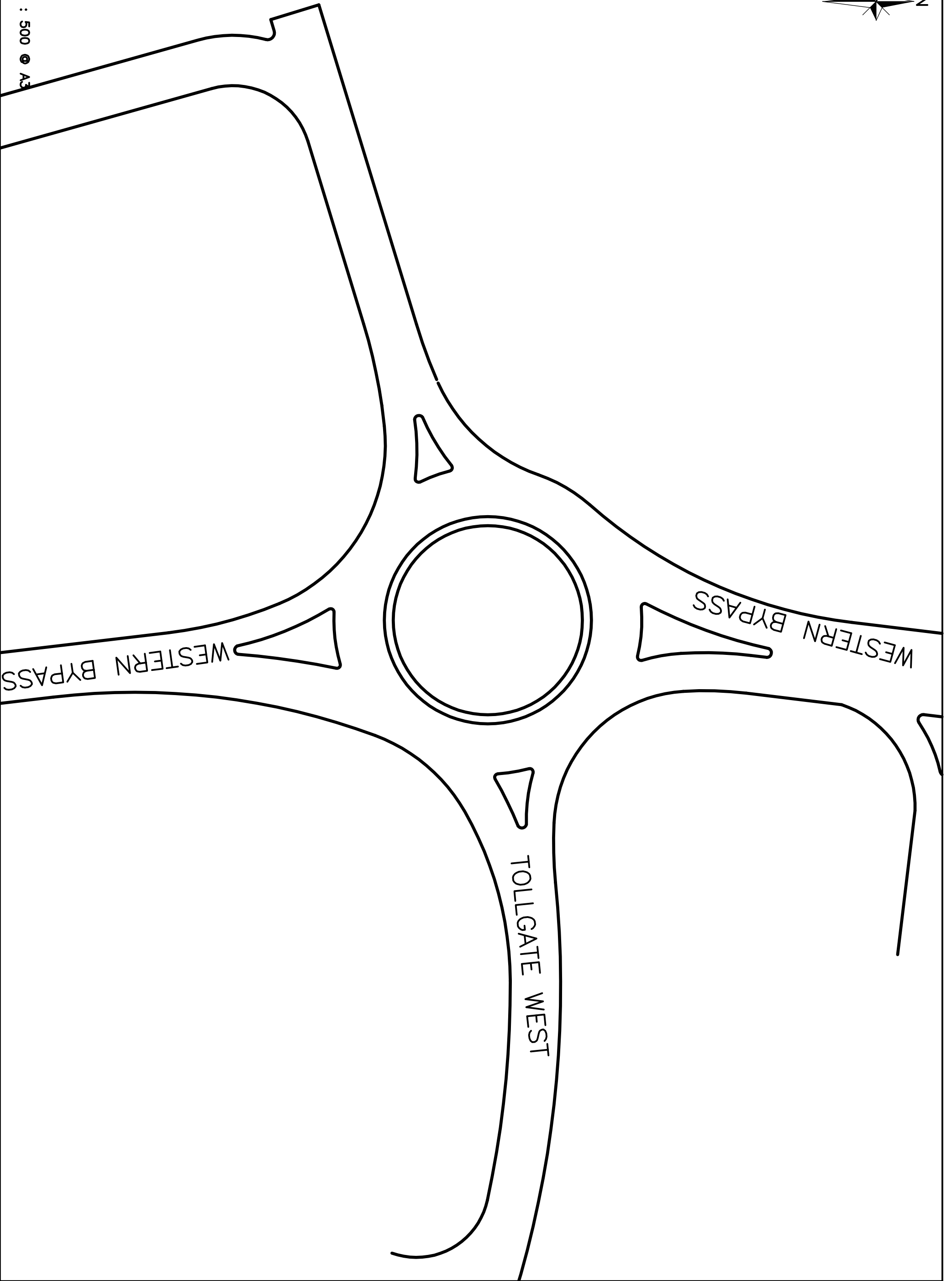
END OF JOB

Appendix M

**Results of ARCADY capacity assessment:
Stanway Western Bypass/Tollgate West roundabout**



1 : 500 @ A3



A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\Bypass-Tollgate\
Bypass-Tollgate am.vai"
(drive-on-the-left) at 15:06:22 on Thursday, 11 June 2009

.FILE PROPERTIES

RUN TITLE: Stanway Western Bypass/Tollgate West/Office access roundabout weekday am peak
LOCATION: Stanway
DATE: 01/06/09
CLIENT: Hills Residential
ENUMERATOR: mlst [ARDENT23]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Western Bypass (north)
ARM B - Tollgate West (east)
ARM C - Western Bypass (south)
ARM D - Office access

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.00	I	6.10	I	23.00	I	20.00	I	44.60	I	47.9	I	0.609	I	28.200	I
I	ARM B	I	3.65	I	6.30	I	12.30	I	25.00	I	44.60	I	43.2	I	0.584	I	25.404	I
I	ARM C	I	3.65	I	4.40	I	6.20	I	25.00	I	44.60	I	49.1	I	0.514	I	19.967	I
I	ARM D	I	3.65	I	5.63	I	5.90	I	25.00	I	44.60	I	43.8	I	0.548	I	22.368	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Base Case weekday am peak

T15

I	I	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
		I	I	I	I	I	I
I	I	TO RISE	IS REACHED	FALLING	BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
I	ARM A	15.00	45.00	75.00	8.93	13.39	8.93
I	ARM B	15.00	45.00	75.00	6.30	9.45	6.30
I	ARM C	15.00	45.00	75.00	8.13	12.19	8.13
I	ARM D	15.00	45.00	75.00	0.32	0.49	0.32

DEMAND SET TITLE: 2023 Base Case weekday am peak

T33

I	I	TURNING PROPORTIONS				
		I	I	I	I	
I	I	TURNING COUNTS				
		I	I	I	I	
I	I	(PERCENTAGE OF H.V.S)				
		I	I	I	I	
I	TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
I	07.45 - 09.15					
I		ARM A	0.000	0.455	0.378	0.167
I			0.0	325.0	270.0	119.0
I			(0.0)	(6.0)	(2.0)	(0.0)
I						
I		ARM B	0.794	0.000	0.196	0.010
I			400.0	0.0	99.0	5.0
I			(5.0)	(0.0)	(2.0)	(0.0)
I						
I		ARM C	0.765	0.223	0.000	0.012
I			497.0	145.0	0.0	8.0
I			(1.0)	(0.0)	(0.0)	(0.0)
I						
I		ARM D	0.846	0.077	0.077	0.000
I			22.0	2.0	2.0	0.0
I			(0.0)	(0.0)	(0.0)	(0.0)
I						

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	07.45-08.00									
I	ARM A	8.96	26.16	0.342	--	0.0	0.5	7.6	-	0.058
I	ARM B	6.32	21.57	0.293	--	0.0	0.4	6.0	-	0.065
I	ARM C	8.16	16.35	0.499	--	0.0	1.0	14.0	-	0.120
I	ARM D	0.33	15.08	0.022	--	0.0	0.0	0.3	-	0.068
I	08.00-08.15									
I	ARM A	10.70	25.94	0.412	--	0.5	0.7	10.2	-	0.065
I	ARM B	7.55	21.02	0.359	--	0.4	0.6	8.2	-	0.074
I	ARM C	9.74	15.66	0.622	--	1.0	1.6	22.7	-	0.167
I	ARM D	0.39	13.64	0.029	--	0.0	0.0	0.4	-	0.075
I	08.15-08.30									
I	ARM A	13.10	25.66	0.511	--	0.7	1.0	15.1	-	0.079
I	ARM B	9.25	20.28	0.456	--	0.6	0.8	12.1	-	0.090
I	ARM C	11.93	14.73	0.810	--	1.6	3.8	50.4	-	0.324
I	ARM D	0.48	11.73	0.041	--	0.0	0.0	0.6	-	0.089
I	08.30-08.45									
I	ARM A	13.10	25.64	0.511	--	1.0	1.0	15.5	-	0.080
I	ARM B	9.25	20.27	0.456	--	0.8	0.8	12.5	-	0.091
I	ARM C	11.93	14.72	0.810	--	3.8	4.0	59.2	-	0.351
I	ARM D	0.48	11.65	0.041	--	0.0	0.0	0.6	-	0.089

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 08.45-09.00										I
I	ARM A	10.70	25.92	0.413	--	1.0	0.7	10.9	-	0.066	I
I	ARM B	7.55	21.01	0.359	--	0.8	0.6	8.7	-	0.074	I
I	ARM C	9.74	15.65	0.622	--	4.0	1.7	27.6	-	0.178	I
I	ARM D	0.39	13.52	0.029	--	0.0	0.0	0.5	-	0.076	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 09.00-09.15										I
I	ARM A	8.96	26.14	0.343	--	0.7	0.5	8.0	-	0.058	I
I	ARM B	6.32	21.56	0.293	--	0.6	0.4	6.4	-	0.066	I
I	ARM C	8.16	16.33	0.500	--	1.7	1.0	15.9	-	0.124	I
I	ARM D	0.33	15.00	0.022	--	0.0	0.0	0.3	-	0.068	I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5 *
08.15	0.7 *
08.30	1.0 *
08.45	1.0 *
09.00	0.7 *
09.15	0.5 *

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.4
08.15	0.6 *
08.30	0.8 *
08.45	0.8 *
09.00	0.6 *
09.15	0.4

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.0 *
08.15	1.6 **
08.30	3.8 ****
08.45	4.0 ****
09.00	1.7 **
09.15	1.0 *

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND (VEH)	I	* QUEUEING DELAY (MIN)	I	* INCLUSIVE QUEUEING DELAY (MIN)	I	* INCLUSIVE QUEUEING DELAY (MIN/VEH)	I
I	A	I	982.8	I	67.3	I	67.3	I	0.07	I

I	B	I	693.7	I	462.5	I	53.9	I	0.08	I	53.9	I	0.08	I
I	C	I	894.7	I	596.5	I	189.8	I	0.21	I	189.9	I	0.21	I
I	D	I	35.8	I	23.9	I	2.8	I	0.08	I	2.8	I	0.08	I

I	ALL	I	2607.0	I	1738.0	I	313.8	I	0.12	I	313.9	I	0.12	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\Bypass-Tollgate\
Bypass-Tollgate am.vai"
(drive-on-the-left) at 15:07:30 on Thursday, 11 June 2009

.FILE PROPERTIES

RUN TITLE: Stanway Western Bypass/Tollgate West/Office access roundabout weekday am peak
LOCATION: Stanway
DATE: 01/06/09
CLIENT: Hills Residential
ENUMERATOR: mlst [ARDENT23]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Western Bypass (north)
ARM B - Tollgate West (east)
ARM C - Western Bypass (south)
ARM D - Office access

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.00	I	6.10	I	23.00	I	20.00	I	44.60	I	47.9	I	0.609	I	28.200	I
I	ARM B	I	3.65	I	6.30	I	12.30	I	25.00	I	44.60	I	43.2	I	0.584	I	25.404	I
I	ARM C	I	3.65	I	4.40	I	6.20	I	25.00	I	44.60	I	49.1	I	0.514	I	19.967	I
I	ARM D	I	3.65	I	5.63	I	5.90	I	25.00	I	44.60	I	43.8	I	0.548	I	22.368	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

.LENGTH OF TIME PERIOD -(90) MINUTES

.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Dev't Case weekday am peak

T15

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	9.55	I	14.33	I	9.55
I	ARM B	I	15.00	I	45.00	I	75.00	I	6.38	I	9.56	I	6.38
I	ARM C	I	15.00	I	45.00	I	75.00	I	9.63	I	14.44	I	9.63
I	ARM D	I	15.00	I	45.00	I	75.00	I	0.32	I	0.49	I	0.32

DEMAND SET TITLE: 2023 Dev't Case weekday am peak

T33

I		I TURNING PROPORTIONS I										
I		I TURNING COUNTS I										
I		I (PERCENTAGE OF H.V.S) I										
I		I										
I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I
I	07.45 - 09.15	I	ARM A	I	0.000	I	0.425	I	0.419	I	0.156	I
I		I		I	0.0	I	325.0	I	320.0	I	119.0	I
I		I		I	(0.0)	I	(6.0)	I	(2.0)	I	(0.0)	I
I		I	ARM B	I	0.784	I	0.000	I	0.206	I	0.010	I
I		I		I	400.0	I	0.0	I	105.0	I	5.0	I
I		I		I	(5.0)	I	(0.0)	I	(2.0)	I	(0.0)	I
I		I	ARM C	I	0.784	I	0.205	I	0.000	I	0.010	I
I		I		I	604.0	I	158.0	I	0.0	I	8.0	I
I		I		I	(1.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I	ARM D	I	0.846	I	0.077	I	0.077	I	0.000	I
I		I		I	22.0	I	2.0	I	2.0	I	0.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	07.45-08.00									
I	ARM A	9.59	26.09	0.367	--	0.0	0.6	8.4	-	0.060
I	ARM B	6.40	21.22	0.302	--	0.0	0.4	6.3	-	0.067
I	ARM C	9.66	16.34	0.591	--	0.0	1.4	19.9	-	0.146
I	ARM D	0.33	14.27	0.023	--	0.0	0.0	0.3	-	0.072

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.00-08.15									
I	ARM A	11.45	25.86	0.443	--	0.6	0.8	11.6	-	0.069
I	ARM B	7.64	20.60	0.371	--	0.4	0.6	8.6	-	0.077
I	ARM C	11.54	15.66	0.737	--	1.4	2.6	36.5	-	0.233
I	ARM D	0.39	12.67	0.031	--	0.0	0.0	0.5	-	0.081

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.15-08.30									
I	ARM A	14.02	25.59	0.548	--	0.8	1.2	17.4	-	0.086
I	ARM B	9.36	19.76	0.474	--	0.6	0.9	12.9	-	0.096
I	ARM C	14.13	14.73	0.959	--	2.6	10.6	116.9	-	0.683
I	ARM D	0.48	10.73	0.044	--	0.0	0.0	0.7	-	0.097

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.30-08.45									
I	ARM A	14.02	25.54	0.549	--	1.2	1.2	18.1	-	0.087
I	ARM B	9.36	19.75	0.474	--	0.9	0.9	13.4	-	0.096
I	ARM C	14.13	14.72	0.960	--	10.6	13.3	181.5	-	0.997
I	ARM D	0.48	10.52	0.045	--	0.0	0.0	0.7	-	0.099

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 08.45-09.00										I
I	ARM A	11.45	25.76	0.444	--	1.2	0.8	12.4	-	0.070	I
I	ARM B	7.64	20.59	0.371	--	0.9	0.6	9.2	-	0.077	I
I	ARM C	11.54	15.64	0.738	--	13.3	3.0	65.3	-	0.344	I
I	ARM D	0.39	12.23	0.032	--	0.0	0.0	0.5	-	0.084	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 09.00-09.15										I
I	ARM A	9.59	26.07	0.368	--	0.8	0.6	9.0	-	0.061	I
I	ARM B	6.40	21.20	0.302	--	0.6	0.4	6.7	-	0.068	I
I	ARM C	9.66	16.32	0.592	--	3.0	1.5	23.6	-	0.155	I
I	ARM D	0.33	14.14	0.023	--	0.0	0.0	0.4	-	0.072	I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.6 *
08.15	0.8 *
08.30	1.2 *
08.45	1.2 *
09.00	0.8 *
09.15	0.6 *

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.4
08.15	0.6 *
08.30	0.9 *
08.45	0.9 *
09.00	0.6 *
09.15	0.4

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.4 *
08.15	2.6 ***
08.30	10.6 *****
08.45	13.3 *****
09.00	3.0 ***
09.15	1.5 *

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND (VEH)	I	* QUEUEING DELAY (MIN)	I	* INCLUSIVE QUEUEING DELAY (MIN)	I	* INCLUSIVE QUEUEING DELAY (MIN)	I
I	A	I	1051.6	I	76.8	I	0.07	I	76.8	I

I	B	I	702.0	I	468.0	I	57.0	I	0.08	I	57.0	I	0.08	I
I	C	I	1059.8	I	706.6	I	443.8	I	0.42	I	443.8	I	0.42	I
I	D	I	35.8	I	23.9	I	3.1	I	0.09	I	3.1	I	0.09	I

I	ALL	I	2849.2	I	1899.5	I	580.7	I	0.20	I	580.7	I	0.20	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\Bypass-Tollgate\
Bypass-Tollgate pm.vai"
(drive-on-the-left) at 15:11:56 on Thursday, 11 June 2009

.FILE PROPERTIES

RUN TITLE: Stanway Western Bypass/Tollgate West/Office access roundabout weekday pm peak
LOCATION: Stanway
DATE: 01/06/09
CLIENT: Hills Residential
ENUMERATOR: mlast [ARDENT23]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Western Bypass (north)
ARM B - Tollgate West (east)
ARM C - Western Bypass (south)
ARM D - Office access

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.00	I	6.10	I	23.00	I	20.00	I	44.60	I	47.9	I	0.609	I	28.200	I
I	ARM B	I	3.65	I	6.30	I	12.30	I	25.00	I	44.60	I	43.2	I	0.584	I	25.404	I
I	ARM C	I	3.65	I	4.40	I	6.20	I	25.00	I	44.60	I	49.1	I	0.514	I	19.967	I
I	ARM D	I	3.65	I	5.63	I	5.90	I	25.00	I	44.60	I	43.8	I	0.548	I	22.368	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Base Case weekday pm peak

T15

I	I	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
		I	I	I	I	I	I
I	I	TO RISE	IS REACHED	FALLING	BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
I	ARM A	15.00	45.00	75.00	15.45	23.17	15.45
I	ARM B	15.00	45.00	75.00	7.75	11.63	7.75
I	ARM C	15.00	45.00	75.00	5.51	8.27	5.51
I	ARM D	15.00	45.00	75.00	1.71	2.57	1.71

DEMAND SET TITLE: 2023 Base Case weekday pm peak

T33

I	I	TURNING PROPORTIONS				
		I	I	I	I	
I	I	TURNING COUNTS				
		I	I	I	I	
I	I	(PERCENTAGE OF H.V.S)				
		I	I	I	I	
I	TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
I	16.45 - 18.15					
I		ARM A	0.000	0.399	0.564	0.037
I			0.0	493.0	697.0	46.0
I			(0.0)	(3.0)	(0.0)	(0.0)
I						
I		ARM B	0.782	0.000	0.197	0.021
I			485.0	0.0	122.0	13.0
I			(5.0)	(0.0)	(0.0)	(0.0)
I						
I		ARM C	0.823	0.159	0.000	0.018
I			363.0	70.0	0.0	8.0
I			(1.0)	(0.0)	(0.0)	(0.0)
I						
I		ARM D	0.803	0.095	0.102	0.000
I			110.0	13.0	14.0	0.0
I			(0.0)	(0.0)	(0.0)	(0.0)
I						

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	16.45-17.00									
I	ARM A	15.51	27.14	0.571	--	0.0	1.3	18.9	-	0.085
I	ARM B	7.78	19.14	0.406	--	0.0	0.7	9.8	-	0.087
I	ARM C	5.53	16.19	0.342	--	0.0	0.5	7.5	-	0.093
I	ARM D	1.72	15.91	0.108	--	0.0	0.1	1.8	-	0.070

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.00-17.15									
I	ARM A	18.52	26.99	0.686	--	1.3	2.1	30.5	-	0.116
I	ARM B	9.29	18.09	0.513	--	0.7	1.0	15.1	-	0.113
I	ARM C	6.61	15.47	0.427	--	0.5	0.7	10.7	-	0.112
I	ARM D	2.05	14.62	0.140	--	0.1	0.2	2.4	-	0.079

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.15-17.30									
I	ARM A	22.68	26.80	0.846	--	2.1	5.0	66.9	-	0.222
I	ARM B	11.38	16.71	0.681	--	1.0	2.1	28.8	-	0.183
I	ARM C	8.09	14.52	0.557	--	0.7	1.2	17.6	-	0.154
I	ARM D	2.51	12.91	0.195	--	0.2	0.2	3.5	-	0.096

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.30-17.45									
I	ARM A	22.68	26.80	0.846	--	5.0	5.2	77.4	-	0.239
I	ARM B	11.38	16.65	0.684	--	2.1	2.1	31.4	-	0.190
I	ARM C	8.09	14.49	0.558	--	1.2	1.2	18.6	-	0.156
I	ARM D	2.51	12.86	0.195	--	0.2	0.2	3.6	-	0.097

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 17.45-18.00										I
I	ARM A	18.52	26.99	0.686	--	5.2	2.2	36.1	-	0.124	I
I	ARM B	9.29	18.01	0.516	--	2.1	1.1	17.0	-	0.117	I
I	ARM C	6.61	15.43	0.428	--	1.2	0.8	11.8	-	0.114	I
I	ARM D	2.05	14.56	0.141	--	0.2	0.2	2.5	-	0.080	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 18.00-18.15										I
I	ARM A	15.51	27.13	0.572	--	2.2	1.4	21.0	-	0.087	I
I	ARM B	7.78	19.09	0.408	--	1.1	0.7	10.7	-	0.089	I
I	ARM C	5.53	16.16	0.342	--	0.8	0.5	8.1	-	0.094	I
I	ARM D	1.72	15.85	0.108	--	0.2	0.1	1.9	-	0.071	I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.3	*
17.15	2.1	***
17.30	5.0	*****
17.45	5.2	*****
18.00	2.2	**
18.15	1.4	*

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.7	*
17.15	1.0	*
17.30	2.1	**
17.45	2.1	**
18.00	1.1	*
18.15	0.7	*

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	*
17.15	0.7	*
17.30	1.2	*
17.45	1.2	*
18.00	0.8	*
18.15	0.5	*

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.1	
17.15	0.2	
17.30	0.2	
17.45	0.2	
18.00	0.2	
18.15	0.1	

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I
I	A	I	1701.3	I	1134.2	I	250.9	I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I	1701.3	I	1134.2	I	250.9	I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I

I	B	I	853.4	I	568.9	I	112.8	I	0.13	I	112.8	I	0.13	I
I	C	I	607.0	I	404.7	I	74.3	I	0.12	I	74.3	I	0.12	I
I	D	I	188.6	I	125.7	I	15.7	I	0.08	I	15.7	I	0.08	I

I	ALL	I	3350.2	I	2233.5	I	453.7	I	0.14	I	453.8	I	0.14	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\Bypass-Tollgate\
Bypass-Tollgate pm.vai"
(drive-on-the-left) at 15:12:38 on Thursday, 11 June 2009

.FILE PROPERTIES

RUN TITLE: Stanway Western Bypass/Tollgate West/Office access roundabout weekday pm peak
LOCATION: Stanway
DATE: 01/06/09
CLIENT: Hills Residential
ENUMERATOR: mlast [ARDENT23]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Western Bypass (north)
ARM B - Tollgate West (east)
ARM C - Western Bypass (south)
ARM D - Office access

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.00	I	6.10	I	23.00	I	20.00	I	44.60	I	47.9	I	0.609	I	28.200	I
I	ARM B	I	3.65	I	6.30	I	12.30	I	25.00	I	44.60	I	43.2	I	0.584	I	25.404	I
I	ARM C	I	3.65	I	4.40	I	6.20	I	25.00	I	44.60	I	49.1	I	0.514	I	19.967	I
I	ARM D	I	3.65	I	5.63	I	5.90	I	25.00	I	44.60	I	43.8	I	0.548	I	22.368	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)

.LENGTH OF TIME PERIOD -(90) MINUTES

.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Dev't Case weekday pm peak

T15

I	I	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
		I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS	I BEFORE	I AT TOP	I AFTER
I	I	I TO RISE	I IS REACHED	I FALLING	I PEAK	I OF PEAK	I PEAK
I ARM A	I	15.00	I 45.00	I 75.00	I 16.81	I 25.22	I 16.81
I ARM B	I	15.00	I 45.00	I 75.00	I 7.93	I 11.89	I 7.93
I ARM C	I	15.00	I 45.00	I 75.00	I 6.28	I 9.41	I 6.28
I ARM D	I	15.00	I 45.00	I 75.00	I 1.71	I 2.57	I 1.71

DEMAND SET TITLE: 2023 Dev't Case weekday pm peak

T33

I	I	TURNING PROPORTIONS					
		I FROM/TO	I ARM A	I ARM B	I ARM C		
I	I	TURNING COUNTS					
I	I	(PERCENTAGE OF H.V.S)					
I	I	TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
I	I	16.45 - 18.15	I	I	I	I	I
I	I		I ARM A	I 0.000	I 0.367	I 0.599	I 0.034
I	I		I	I 0.0	I 493.0	I 806.0	I 46.0
I	I		I	I (0.0)	I (3.0)	I (0.0)	I (0.0)
I	I		I	I	I	I	I
I	I		I ARM B	I 0.765	I 0.000	I 0.215	I 0.021
I	I		I	I 485.0	I 0.0	I 136.0	I 13.0
I	I		I	I (5.0)	I (0.0)	I (0.0)	I (0.0)
I	I		I	I	I	I	I
I	I		I ARM C	I 0.831	I 0.153	I 0.000	I 0.016
I	I		I	I 417.0	I 77.0	I 0.0	I 8.0
I	I		I	I (1.0)	I (0.0)	I (0.0)	I (0.0)
I	I		I	I	I	I	I
I	I		I ARM D	I 0.803	I 0.095	I 0.102	I 0.000
I	I		I	I 110.0	I 13.0	I 14.0	I 0.0
I	I		I	I (0.0)	I (0.0)	I (0.0)	I (0.0)
I	I		I	I	I	I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	I	I	I	I	I	I	I	I	I	I
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	16.45-17.00									
I	ARM A	16.88	27.11	0.622	--	0.0	1.6	23.1	-	0.096
I	ARM B	7.96	18.39	0.432	--	0.0	0.8	10.9	-	0.095
I	ARM C	6.30	16.19	0.389	--	0.0	0.6	9.1	-	0.100
I	ARM D	1.72	15.49	0.111	--	0.0	0.1	1.8	-	0.073

I	I	I	I	I	I	I	I	I	I	I
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.00-17.15									
I	ARM A	20.15	26.96	0.748	--	1.6	2.9	40.2	-	0.144
I	ARM B	9.50	17.20	0.552	--	0.8	1.2	17.4	-	0.129
I	ARM C	7.52	15.48	0.486	--	0.6	0.9	13.5	-	0.125
I	ARM D	2.05	14.12	0.145	--	0.1	0.2	2.5	-	0.083

I	I	I	I	I	I	I	I	I	I	I
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.15-17.30									
I	ARM A	24.68	26.75	0.923	--	2.9	9.1	110.4	-	0.356
I	ARM B	11.63	15.68	0.742	--	1.2	2.7	37.1	-	0.236
I	ARM C	9.21	14.54	0.634	--	0.9	1.7	23.6	-	0.184
I	ARM D	2.51	12.32	0.204	--	0.2	0.3	3.7	-	0.102

I	I	I	I	I	I	I	I	I	I	I
I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY
I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING
I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)
I	17.30-17.45									
I	ARM A	24.68	26.74	0.923	--	9.1	10.2	145.7	-	0.439
I	ARM B	11.63	15.56	0.748	--	2.7	2.9	42.1	-	0.253
I	ARM C	9.21	14.50	0.636	--	1.7	1.7	25.5	-	0.189
I	ARM D	2.51	12.25	0.205	--	0.3	0.3	3.8	-	0.103

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 17.45-18.00										I
I	ARM A	20.15	26.95	0.748	--	10.2	3.1	54.4	-	0.169	I
I	ARM B	9.50	17.00	0.559	--	2.9	1.3	20.5	-	0.137	I
I	ARM C	7.52	15.41	0.488	--	1.7	1.0	15.2	-	0.128	I
I	ARM D	2.05	14.03	0.146	--	0.3	0.2	2.6	-	0.084	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 18.00-18.15										I
I	ARM A	16.88	27.10	0.623	--	3.1	1.7	26.3	-	0.100	I
I	ARM B	7.96	18.32	0.434	--	1.3	0.8	12.0	-	0.097	I
I	ARM C	6.30	16.15	0.390	--	1.0	0.6	10.0	-	0.102	I
I	ARM D	1.72	15.42	0.112	--	0.2	0.1	1.9	-	0.073	I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	1.6 **
17.15	2.9 ***
17.30	9.1 *****
17.45	10.2 *****
18.00	3.1 ***
18.15	1.7 **

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.8 *
17.15	1.2 *
17.30	2.7 ***
17.45	2.9 ***
18.00	1.3 *
18.15	0.8 *

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.6 *
17.15	0.9 *
17.30	1.7 **
17.45	1.7 **
18.00	1.0 *
18.15	0.6 *

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.1

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I
I	A	I	1851.3	I	1234.2	I	400.0	I
I		I		I	0.22	I	400.1	I
I		I	(VEH)	I	(MIN/VEH)	I	(MIN)	I
I		I	(VEH/H)	I	(MIN)	I	(MIN/VEH)	I

I	B	I	872.7	I	581.8	I	140.0	I	0.16	I	140.0	I	0.16	I
I	C	I	691.0	I	460.6	I	96.8	I	0.14	I	96.9	I	0.14	I
I	D	I	188.6	I	125.7	I	16.4	I	0.09	I	16.4	I	0.09	I

I	ALL	I	3603.5	I	2402.3	I	653.3	I	0.18	I	653.4	I	0.18	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

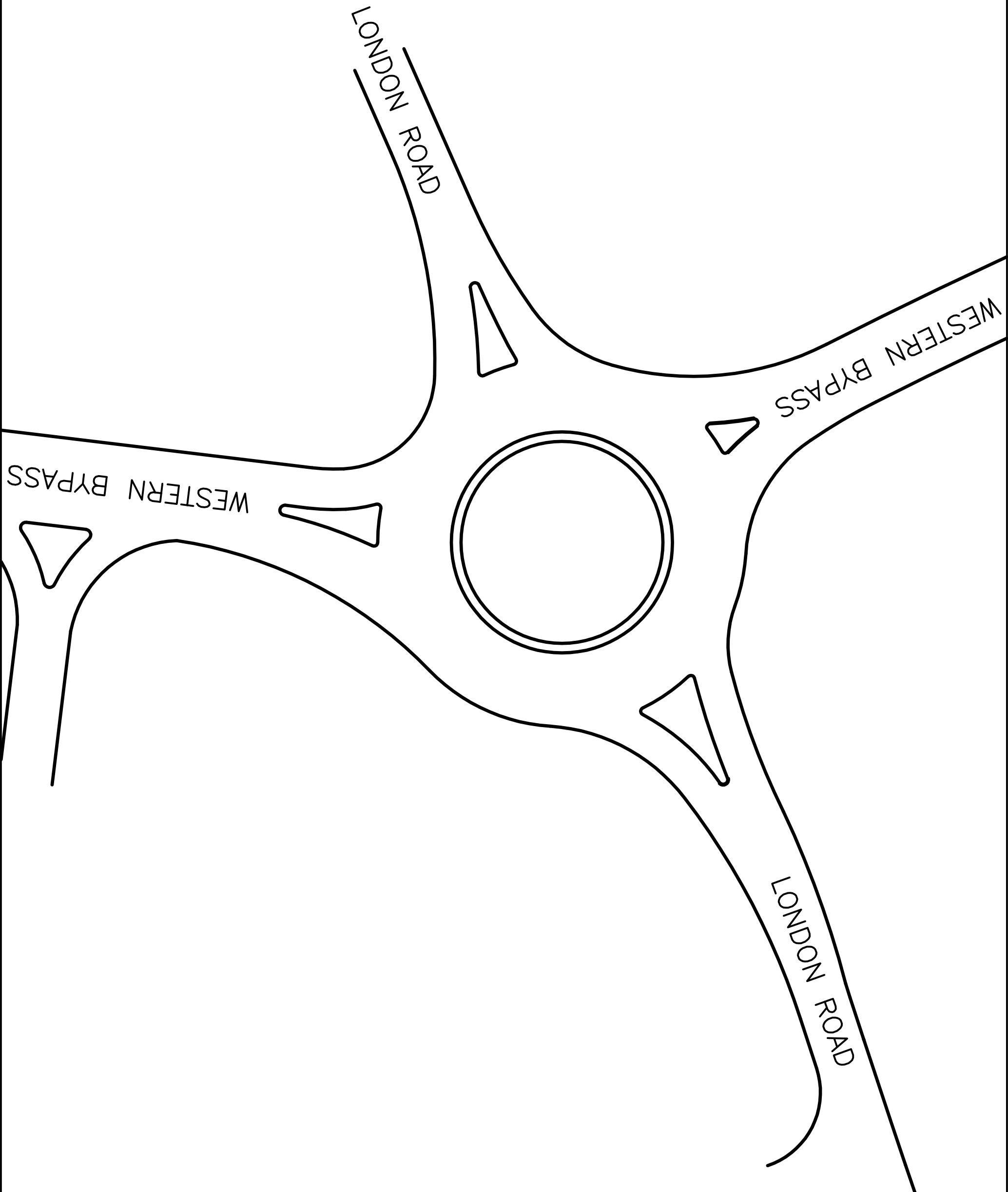
END OF JOB

Appendix N

**Results of ARCADY capacity assessment:
Stanway Western Bypass/B1408 London Road roundabout**



1 : 500 © A3



A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\Bypass-London\
Bypass-London am.vai"
(drive-on-the-left) at 14:55:43 on Thursday, 11 June 2009

.FILE PROPERTIES

RUN TITLE: Stanway Western Bypass/B1408 London Road roundabout weekday am peak
LOCATION: Stanway
DATE: 01/06/09
CLIENT: Hills Residential
ENUMERATOR: mlast [ARDENT23]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Western Bypass (north)
ARM B - London Road (east)
ARM C - Western Bypass (south)
ARM D - London Road (west)

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.00	I	7.25	I	6.50	I	20.00	I	50.00	I	54.5	I	0.581	I	28.036	I
I	ARM B	I	3.65	I	5.00	I	24.00	I	3.00	I	50.00	I	26.0	I	0.414	I	17.837	I
I	ARM C	I	5.00	I	8.67	I	6.20	I	20.00	I	50.00	I	45.0	I	0.613	I	30.006	I
I	ARM D	I	3.65	I	6.40	I	6.60	I	20.00	I	50.00	I	48.9	I	0.527	I	22.785	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE (%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Base Case weekday am peak

T15

I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I	I	I	I	I
I	ARM	I FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	I BEFORE I AT TOP I AFTER	I	I	I	I	I
I	I	I TO RISE I IS REACHED I FALLING	I	I PEAK I OF PEAK I PEAK	I	I	I	I	I
I	ARM A	I 15.00 I 45.00 I 75.00	I	I 9.44 I 14.16 I 9.44	I	I	I	I	I
I	ARM B	I 15.00 I 45.00 I 75.00	I	I 7.31 I 10.97 I 7.31	I	I	I	I	I
I	ARM C	I 15.00 I 45.00 I 75.00	I	I 11.50 I 17.25 I 11.50	I	I	I	I	I
I	ARM D	I 15.00 I 45.00 I 75.00	I	I 10.45 I 15.67 I 10.45	I	I	I	I	I

DEMAND SET TITLE: 2023 Base Case weekday am peak

T33

I	I	TURNING PROPORTIONS	I
I	I	TURNING COUNTS	I
I	I	(PERCENTAGE OF H.V.S)	I
I	TIME	I FROM/TO I ARM A I ARM B I ARM C I ARM D	I
I	07.45 - 09.15	I I I I I I	I
I	I	I ARM A I 0.000 I 0.201 I 0.558 I 0.241	I
I	I	I I 0.0 I 152.0 I 421.0 I 182.0	I
I	I	I (0.0)I (0.0)I (1.0)I (6.0)	I
I	I	I I I I I I	I
I	I	I ARM B I 0.207 I 0.007 I 0.091 I 0.696	I
I	I	I I 121.0 I 4.0 I 53.0 I 407.0	I
I	I	I (0.0)I (0.0)I (0.0)I (1.0)	I
I	I	I I I I I I	I
I	I	I ARM C I 0.571 I 0.093 I 0.005 I 0.330	I
I	I	I I 525.0 I 86.0 I 5.0 I 304.0	I
I	I	I (1.0)I (6.0)I (100.0)I (3.0)	I
I	I	I I I I I I	I
I	I	I ARM D I 0.202 I 0.498 I 0.292 I 0.008	I
I	I	I I 169.0 I 416.0 I 244.0 I 7.0	I
I	I	I (2.0)I (5.0)I (6.0)I (0.0)	I
I	I	I I I I I I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	07.45-08.00									
I	ARM A	9.47	21.77	0.435	--	0.0	0.8	11.1	-	0.081
I	ARM B	7.34	13.14	0.559	--	0.0	1.2	17.3	-	0.168
I	ARM C	11.54	23.77	0.486	--	0.0	0.9	13.5	-	0.081
I	ARM D	10.49	17.03	0.616	--	0.0	1.6	21.9	-	0.148

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.00-08.15									
I	ARM A	11.31	20.65	0.548	--	0.8	1.2	17.3	-	0.107
I	ARM B	8.77	12.24	0.716	--	1.2	2.4	32.6	-	0.275
I	ARM C	13.78	22.69	0.607	--	0.9	1.5	21.9	-	0.111
I	ARM D	12.53	16.09	0.778	--	1.6	3.3	44.1	-	0.264

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.15-08.30									
I	ARM A	13.85	19.56	0.708	--	1.2	2.3	32.7	-	0.171
I	ARM B	10.73	11.14	0.964	--	2.4	9.9	107.1	-	0.838
I	ARM C	16.88	21.46	0.787	--	1.5	3.5	47.2	-	0.207
I	ARM D	15.34	14.89	1.031	--	3.3	19.0	185.0	-	1.017

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.30-08.45									
I	ARM A	13.85	19.40	0.714	--	2.3	2.4	36.0	-	0.179
I	ARM B	10.73	11.07	0.970	--	9.9	13.1	174.6	-	1.282
I	ARM C	16.88	21.29	0.793	--	3.5	3.7	54.0	-	0.225
I	ARM D	15.34	14.82	1.035	--	19.0	30.1	370.2	-	1.870

I	B	I	805.2	I	536.8	I	422.1	I	0.52	I	422.1	I	0.52	I
I	C	I	1266.3	I	844.2	I	177.9	I	0.14	I	177.9	I	0.14	I
I	D	I	1150.7	I	767.1	I	828.2	I	0.72	I	828.3	I	0.72	I

I	ALL	I	4261.4	I	2840.9	I	1558.8	I	0.37	I	1559.0	I	0.37	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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Run with file:-
"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\Bypass-London\
Bypass-London am.vai"
(drive-on-the-left) at 14:56:20 on Thursday, 11 June 2009

.FILE PROPERTIES

RUN TITLE: Stanway Western Bypass/B1408 London Road roundabout weekday am peak
LOCATION: Stanway
DATE: 01/06/09
CLIENT: Hills Residential
ENUMERATOR: mlst [ARDENT23]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Western Bypass (north)
ARM B - London Road (east)
ARM C - Western Bypass (south)
ARM D - London Road (west)

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.00	I	7.25	I	6.50	I	20.00	I	50.00	I	54.5	I	0.581	I	28.036	I
I	ARM B	I	3.65	I	5.00	I	24.00	I	3.00	I	50.00	I	26.0	I	0.414	I	17.837	I
I	ARM C	I	5.00	I	8.67	I	6.20	I	20.00	I	50.00	I	45.0	I	0.613	I	30.006	I
I	ARM D	I	3.65	I	6.40	I	6.60	I	20.00	I	50.00	I	48.9	I	0.527	I	22.785	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE (%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

.LENGTH OF TIME PERIOD -(90) MINUTES

.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Dev't Case weekday am peak

T15

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	10.01	I	15.02	I	10.01
I	ARM B	I	15.00	I	45.00	I	75.00	I	7.31	I	10.97	I	7.31
I	ARM C	I	15.00	I	45.00	I	75.00	I	12.84	I	19.26	I	12.84
I	ARM D	I	15.00	I	45.00	I	75.00	I	10.49	I	15.73	I	10.49

DEMAND SET TITLE: 2023 Dev't Case weekday am peak

T33

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D
I	07.45 - 09.15	I	ARM A	I	0.000	I	0.190	I	0.583	I	0.227
I		I		I	0.0	I	152.0	I	467.0	I	182.0
I		I		I	(0.0)	I	(0.0)	I	(1.0)	I	(6.0)
I		I	ARM B	I	0.207	I	0.007	I	0.091	I	0.696
I		I		I	121.0	I	4.0	I	53.0	I	407.0
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(1.0)
I		I	ARM C	I	0.610	I	0.084	I	0.005	I	0.302
I		I		I	626.0	I	86.0	I	5.0	I	310.0
I		I		I	(1.0)	I	(6.0)	I	(100.0)	I	(3.0)
I		I	ARM D	I	0.201	I	0.496	I	0.294	I	0.008
I		I		I	169.0	I	416.0	I	247.0	I	7.0
I		I		I	(2.0)	I	(5.0)	I	(5.0)	I	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	07.45-08.00									
I	ARM A	10.05	21.78	0.461	--	0.0	0.8	12.3	-	0.084
I	ARM B	7.34	12.90	0.569	--	0.0	1.3	18.0	-	0.175
I	ARM C	12.89	23.81	0.541	--	0.0	1.2	16.7	-	0.090
I	ARM D	10.53	16.44	0.641	--	0.0	1.7	24.1	-	0.163

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.00-08.15									
I	ARM A	12.00	20.68	0.580	--	0.8	1.4	19.6	-	0.114
I	ARM B	8.77	11.95	0.733	--	1.3	2.6	34.9	-	0.298
I	ARM C	15.39	22.74	0.677	--	1.2	2.0	29.0	-	0.134
I	ARM D	12.57	15.37	0.818	--	1.7	4.0	52.9	-	0.323

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.15-08.30									
I	ARM A	14.70	19.87	0.740	--	1.4	2.7	37.7	-	0.187
I	ARM B	10.73	10.87	0.988	--	2.6	11.6	121.5	-	0.960
I	ARM C	18.85	21.55	0.874	--	2.0	6.0	76.0	-	0.311
I	ARM D	15.40	14.04	1.096	--	4.0	29.1	261.9	-	1.447

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.30-08.45									
I	ARM A	14.70	19.78	0.743	--	2.7	2.8	41.7	-	0.196
I	ARM B	10.73	10.82	0.992	--	11.6	16.3	211.2	-	1.545
I	ARM C	18.85	21.38	0.881	--	6.0	6.7	95.9	-	0.374
I	ARM D	15.40	13.93	1.105	--	29.1	51.9	608.4	-	3.083

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	08.45-09.00										I
I	ARM A	12.00	19.49	0.616	--	2.8	1.6	25.9	-	0.136	I
I	ARM B	8.77	11.59	0.756	--	16.3	3.5	92.5	-	0.653	I
I	ARM C	15.39	22.20	0.693	--	6.7	2.3	39.1	-	0.160	I
I	ARM D	12.57	15.15	0.830	--	51.9	17.5	521.0	-	2.416	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	09.00-09.15										I
I	ARM A	10.05	21.22	0.474	--	1.6	0.9	14.1	-	0.090	I
I	ARM B	7.34	12.71	0.578	--	3.5	1.4	23.0	-	0.196	I
I	ARM C	12.89	23.67	0.544	--	2.3	1.2	18.9	-	0.094	I
I	ARM D	10.53	16.36	0.644	--	17.5	1.9	54.4	-	0.255	I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.8 *
08.15	1.4 *
08.30	2.7 ***
08.45	2.8 ***
09.00	1.6 **
09.15	0.9 *

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.3 *
08.15	2.6 ***
08.30	11.6 *****
08.45	16.3 *****
09.00	3.5 ***
09.15	1.4 *

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.2 *
08.15	2.0 **
08.30	6.0 *****
08.45	6.7 *****
09.00	2.3 **
09.15	1.2 *

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.7 **
08.15	4.0 ****
08.30	29.1 *****
08.45	51.9 *****
09.00	17.5 *****
09.15	1.9 **

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND (VEH)	I	* QUEUEING (MIN)	I	* INCLUSIVE QUEUEING (MIN)	I	* DELAY (MIN/VEH)	I
I	A	I	1102.5	I	735.0	I	151.2	I	0.14	I

I	B	I	805.2	I	536.8	I	501.0	I	0.62	I	501.0	I	0.62	I
I	C	I	1413.6	I	942.4	I	275.6	I	0.19	I	275.7	I	0.20	I
I	D	I	1154.8	I	769.9	I	1522.7	I	1.32	I	1522.8	I	1.32	I

I	ALL	I	4476.1	I	2984.1	I	2450.4	I	0.55	I	2450.7	I	0.55	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\Bypass-London\
Bypass-London pm.vai"
(drive-on-the-left) at 15:00:54 on Thursday, 11 June 2009

.FILE PROPERTIES

RUN TITLE: Stanway Western Bypass/B1408 London Road roundabout weekday pm peak
LOCATION: Stanway
DATE: 01/06/09
CLIENT: Hills Residential
ENUMERATOR: mlast [ARDENT23]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Western Bypass (north)
ARM B - London Road (east)
ARM C - Western Bypass (south)
ARM D - London Road (west)

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.00	I	7.25	I	6.50	I	20.00	I	50.00	I	54.5	I	0.581	I	28.036	I
I	ARM B	I	3.65	I	5.00	I	24.00	I	3.00	I	50.00	I	26.0	I	0.414	I	17.837	I
I	ARM C	I	5.00	I	8.67	I	6.20	I	20.00	I	50.00	I	45.0	I	0.613	I	30.006	I
I	ARM D	I	3.65	I	6.40	I	6.60	I	20.00	I	50.00	I	48.9	I	0.527	I	22.785	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Base Case weekday pm peak

T15

I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I	I	I	I
I	ARM	I FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	I BEFORE I AT TOP I AFTER	I	I	I	I
I	I	I TO RISE I IS REACHED I FALLING	I	I PEAK I OF PEAK I PEAK	I	I	I	I
I	ARM A	I 15.00 I 45.00 I 75.00	I	I 16.55 I 24.82 I 16.55	I	I	I	I
I	ARM B	I 15.00 I 45.00 I 75.00	I	I 7.36 I 11.04 I 7.36	I	I	I	I
I	ARM C	I 15.00 I 45.00 I 75.00	I	I 11.95 I 17.92 I 11.95	I	I	I	I
I	ARM D	I 15.00 I 45.00 I 75.00	I	I 12.73 I 19.09 I 12.73	I	I	I	I

DEMAND SET TITLE: 2023 Base Case weekday pm peak

T33

I	I	TURNING PROPORTIONS	I
I	I	TURNING COUNTS	I
I	I	(PERCENTAGE OF H.V.S)	I
I	I		I
I	TIME	I FROM/TO I ARM A I ARM B I ARM C I ARM D	I
I	16.45 - 18.15	I I I I I I I I	I
I		I ARM A I 0.000 I 0.331 I 0.570 I 0.099	I
I		I I 0.0 I 438.0 I 755.0 I 131.0	I
I		I I (0.0)I (0.0)I (0.0)I (2.0)	I
I		I I I I I I I I	I
I		I ARM B I 0.265 I 0.019 I 0.192 I 0.525	I
I		I I 156.0 I 11.0 I 113.0 I 309.0	I
I		I I (0.0)I (0.0)I (0.0)I (0.0)	I
I		I I I I I I I I	I
I		I ARM C I 0.615 I 0.067 I 0.008 I 0.310	I
I		I I 588.0 I 64.0 I 8.0 I 296.0	I
I		I I (1.0)I (9.0)I (83.0)I (3.0)	I
I		I I I I I I I I	I
I		I ARM D I 0.220 I 0.426 I 0.353 I 0.001	I
I		I I 224.0 I 434.0 I 359.0 I 1.0	I
I		I I (2.0)I (2.0)I (2.0)I (0.0)	I
I		I I I I I I I I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	16.45-17.00									
I	ARM A	16.61	21.49	0.773	--	0.0	3.2	43.3	-	0.189
I	ARM B	7.39	11.33	0.652	--	0.0	1.8	24.3	-	0.240
I	ARM C	12.00	24.69	0.486	--	0.0	0.9	13.5	-	0.078
I	ARM D	12.77	16.90	0.756	--	0.0	2.9	38.9	-	0.223

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.00-17.15									
I	ARM A	19.84	20.38	0.974	--	3.2	13.6	147.4	-	0.612
I	ARM B	8.82	10.23	0.863	--	1.8	4.9	61.1	-	0.559
I	ARM C	14.32	23.87	0.600	--	0.9	1.5	21.3	-	0.104
I	ARM D	15.25	15.84	0.963	--	2.9	11.2	123.9	-	0.673

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.15-17.30									
I	ARM A	24.30	20.31	1.196	--	13.6	74.6	665.2	-	2.346
I	ARM B	10.81	9.95	1.087	--	4.9	21.9	210.7	-	1.692
I	ARM C	17.54	23.29	0.753	--	1.5	2.9	40.6	-	0.168
I	ARM D	18.68	14.53	1.286	--	11.2	74.3	644.1	-	3.152

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.30-17.45									
I	ARM A	24.30	20.31	1.196	--	74.6	134.6	1569.2	-	5.283
I	ARM B	10.81	9.93	1.088	--	21.9	36.3	438.2	-	3.203
I	ARM C	17.54	23.21	0.756	--	2.9	3.0	44.7	-	0.176
I	ARM D	18.68	14.47	1.291	--	74.3	137.5	1588.2	-	7.277

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 17.45-18.00										I
I	ARM A	19.84	19.98	0.993	- -	134.6	134.6	2019.1	-	6.815	I
I	ARM B	8.82	9.91	0.890	- -	36.3	24.0	452.5	-	3.178	I
I	ARM C	14.32	23.33	0.614	- -	3.0	1.6	25.5	-	0.113	I
I	ARM D	15.25	15.64	0.975	- -	137.5	133.3	2030.9	-	8.572	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 18.00-18.15										I
I	ARM A	16.61	19.65	0.845	- -	134.6	91.2	1693.8	-	5.804	I
I	ARM B	7.39	9.88	0.748	- -	24.0	3.5	154.7	-	1.248	I
I	ARM C	12.00	23.78	0.504	- -	1.6	1.0	15.9	-	0.085	I
I	ARM D	12.77	16.65	0.767	- -	133.3	77.0	1577.5	-	6.389	I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	3.2	***
17.15	13.6	*****
17.30	74.6	*****
17.45	134.6	*****
18.00	134.6	*****
18.15	91.2	*****

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.8	**
17.15	4.9	*****
17.30	21.9	*****
17.45	36.3	*****
18.00	24.0	*****
18.15	3.5	*****

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.9	*
17.15	1.5	*
17.30	2.9	***
17.45	3.0	***
18.00	1.6	**
18.15	1.0	*

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	2.9	***
17.15	11.2	*****
17.30	74.3	*****
17.45	137.5	*****
18.00	133.3	*****
18.15	77.0	*****

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND (VEH)	I	* QUEUEING (MIN)	I	* INCLUSIVE QUEUEING (MIN)	I	* DELAY (MIN/VEH)	I
I	A	I	1822.4	I	1214.9	I	6138.0	I	3.37	I
I		I		I		I		I	6349.7	I
I		I		I		I		I	3.48	I

I	B	I	810.7	I	540.5	I	1341.5	I	1.65	I	1342.1	I	1.66	I
I	C	I	1315.9	I	877.2	I	161.6	I	0.12	I	161.7	I	0.12	I
I	D	I	1401.2	I	934.1	I	6003.5	I	4.28	I	6181.8	I	4.41	I

I	ALL	I	5350.2	I	3566.8	I	13644.6	I	2.55	I	14035.3	I	2.62	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\Bypass-London\
Bypass-London pm.vai"
(drive-on-the-left) at 15:01:39 on Thursday, 11 June 2009

.FILE PROPERTIES

RUN TITLE: Stanway Western Bypass/B1408 London Road roundabout weekday pm peak
LOCATION: Stanway
DATE: 01/06/09
CLIENT: Hills Residential
ENUMERATOR: mlast [ARDENT23]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Western Bypass (north)
ARM B - London Road (east)
ARM C - Western Bypass (south)
ARM D - London Road (west)

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.00	I	7.25	I	6.50	I	20.00	I	50.00	I	54.5	I	0.581	I	28.036	I
I	ARM B	I	3.65	I	5.00	I	24.00	I	3.00	I	50.00	I	26.0	I	0.414	I	17.837	I
I	ARM C	I	5.00	I	8.67	I	6.20	I	20.00	I	50.00	I	45.0	I	0.613	I	30.006	I
I	ARM D	I	3.65	I	6.40	I	6.60	I	20.00	I	50.00	I	48.9	I	0.527	I	22.785	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE (%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Dev't Case weekday pm peak

T15

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	17.85	I	26.78	I	17.85
I	ARM B	I	15.00	I	45.00	I	75.00	I	7.36	I	11.04	I	7.36
I	ARM C	I	15.00	I	45.00	I	75.00	I	12.64	I	18.96	I	12.64
I	ARM D	I	15.00	I	45.00	I	75.00	I	12.80	I	19.20	I	12.80

DEMAND SET TITLE: 2023 Dev't Case weekday pm peak

T33

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D
I	16.45 - 18.15	I	ARM A	I	0.000	I	0.307	I	0.602	I	0.092
I		I		I	0.0	I	438.0	I	859.0	I	131.0
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(2.0)
I		I	ARM B	I	0.265	I	0.019	I	0.192	I	0.525
I		I		I	156.0	I	11.0	I	113.0	I	309.0
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I	ARM C	I	0.633	I	0.063	I	0.008	I	0.296
I		I		I	640.0	I	64.0	I	8.0	I	299.0
I		I		I	(1.0)	I	(9.0)	I	(83.0)	I	(3.0)
I		I	ARM D	I	0.219	I	0.424	I	0.356	I	0.001
I		I		I	224.0	I	434.0	I	365.0	I	1.0
I		I		I	(2.0)	I	(2.0)	I	(2.0)	I	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	I	DEMAND (VEH/MIN)	I	CAPACITY (VEH/MIN)	I	DEMAND/CAPACITY (RFC)	I	PEDESTRIAN FLOW (PEDS/MIN)	I	START QUEUE (VEHS)	I	END QUEUE (VEHS)	I	DELAY (VEH.MIN/TIME SEGMENT)	I	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	I	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)				
I	16.45-17.00	I	ARM A	I	17.92	I	21.46	I	0.835	I	-	I	-	I	0.0	I	4.6	I	59.1	I	-	I	0.244
I		I	ARM B	I	7.39	I	10.79	I	0.685	I	-	I	-	I	0.0	I	2.1	I	27.5	I	-	I	0.273
I		I	ARM C	I	12.69	I	24.72	I	0.513	I	-	I	-	I	0.0	I	1.0	I	15.0	I	-	I	0.082
I		I	ARM D	I	12.85	I	16.57	I	0.776	I	-	I	-	I	0.0	I	3.2	I	42.4	I	-	I	0.243

I	TIME	I	DEMAND (VEH/MIN)	I	CAPACITY (VEH/MIN)	I	DEMAND/CAPACITY (RFC)	I	PEDESTRIAN FLOW (PEDS/MIN)	I	START QUEUE (VEHS)	I	END QUEUE (VEHS)	I	DELAY (VEH.MIN/TIME SEGMENT)	I	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	I	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)				
I	17.00-17.15	I	ARM A	I	21.40	I	20.42	I	1.048	I	-	I	-	I	4.6	I	27.2	I	257.1	I	-	I	1.001
I		I	ARM B	I	8.82	I	9.82	I	0.899	I	-	I	-	I	2.1	I	6.1	I	72.7	I	-	I	0.681
I		I	ARM C	I	15.15	I	23.97	I	0.632	I	-	I	-	I	1.0	I	1.7	I	24.2	I	-	I	0.112
I		I	ARM D	I	15.34	I	15.45	I	0.993	I	-	I	-	I	3.2	I	14.3	I	149.8	I	-	I	0.818

I	TIME	I	DEMAND (VEH/MIN)	I	CAPACITY (VEH/MIN)	I	DEMAND/CAPACITY (RFC)	I	PEDESTRIAN FLOW (PEDS/MIN)	I	START QUEUE (VEHS)	I	END QUEUE (VEHS)	I	DELAY (VEH.MIN/TIME SEGMENT)	I	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	I	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)				
I	17.15-17.30	I	ARM A	I	26.20	I	20.51	I	1.278	I	-	I	-	I	27.2	I	113.1	I	1053.2	I	-	I	3.562
I		I	ARM B	I	10.81	I	9.72	I	1.112	I	-	I	-	I	6.1	I	25.5	I	244.0	I	-	I	1.964
I		I	ARM C	I	18.55	I	23.47	I	0.791	I	-	I	-	I	1.7	I	3.6	I	48.7	I	-	I	0.194
I		I	ARM D	I	18.79	I	14.07	I	1.336	I	-	I	-	I	14.3	I	85.7	I	752.0	I	-	I	3.754

I	TIME	I	DEMAND (VEH/MIN)	I	CAPACITY (VEH/MIN)	I	DEMAND/CAPACITY (RFC)	I	PEDESTRIAN FLOW (PEDS/MIN)	I	START QUEUE (VEHS)	I	END QUEUE (VEHS)	I	DELAY (VEH.MIN/TIME SEGMENT)	I	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	I	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)				
I	17.30-17.45	I	ARM A	I	26.20	I	20.52	I	1.277	I	-	I	-	I	113.1	I	198.4	I	2336.4	I	-	I	7.736
I		I	ARM B	I	10.81	I	9.71	I	1.113	I	-	I	-	I	25.5	I	42.7	I	512.5	I	-	I	3.784
I		I	ARM C	I	18.55	I	23.40	I	0.793	I	-	I	-	I	3.6	I	3.7	I	54.7	I	-	I	0.205
I		I	ARM D	I	18.79	I	14.00	I	1.342	I	-	I	-	I	85.7	I	157.6	I	1824.4	I	-	I	8.553

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 17.45-18.00										I
I	ARM A	21.40	20.11	1.064	- -	198.4	217.9	3122.4	-	10.486	I
I	ARM B	8.82	9.67	0.913	- -	42.7	33.4	571.2	-	4.059	I
I	ARM C	15.15	23.52	0.644	- -	3.7	1.8	29.3	-	0.123	I
I	ARM D	15.34	15.26	1.006	- -	157.6	159.4	2376.8	-	10.266	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 18.00-18.15										I
I	ARM A	17.92	19.82	0.904	- -	217.9	190.7	3064.4	-	10.361	I
I	ARM B	7.39	9.65	0.766	- -	33.4	4.8	278.8	-	2.168	I
I	ARM C	12.69	23.62	0.537	- -	1.8	1.2	18.3	-	0.092	I
I	ARM D	12.85	16.23	0.792	- -	159.4	110.2	2021.6	-	8.378	I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	4.6	*****
17.15	27.2	*****
17.30	113.1	*****
17.45	198.4	*****
18.00	217.9	*****
18.15	190.7	*****

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	2.1	**
17.15	6.1	*****
17.30	25.5	*****
17.45	42.7	*****
18.00	33.4	*****
18.15	4.8	*****

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.0	*
17.15	1.7	**
17.30	3.6	****
17.45	3.7	****
18.00	1.8	**
18.15	1.2	*

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	3.2	***
17.15	14.3	*****
17.30	85.7	*****
17.45	157.6	*****
18.00	159.4	*****
18.15	110.2	*****

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	
I	I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN/VEH)	
I	A	I	1965.5	I	1310.4	I	9892.6	I	5.03
I		I	10810.2	I		I	5.50	I	

I	B	I	810.7	I	540.5	I	1706.6	I	2.11	I	1707.8	I	2.11	I
I	C	I	1391.6	I	927.7	I	190.2	I	0.14	I	190.2	I	0.14	I
I	D	I	1409.5	I	939.6	I	7167.1	I	5.08	I	7541.3	I	5.35	I

I	ALL	I	5577.3	I	3718.2	I	18956.5	I	3.40	I	20249.5	I	3.63	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

Appendix O

**Results of ARCADY capacity assessment:
Stanway Western Bypass/Stane Park/Danny Watts site roundabout**

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\Bypass-DW-Stane\
Bypass-DW-Stane Pk am.vai"
(drive-on-the-left) at 14:35:49 on Thursday, 11 June 2009

.FILE PROPERTIES

RUN TITLE: Stanway Western Bypass/Sainsbury's/Stane Park roundabout weekday am peak
LOCATION: Stanway
DATE: 01/06/09
CLIENT: Hills Residential
ENUMERATOR: mlst [ARDENT23]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Western Bypass (north)
ARM B - Sainsbury's site (east)
ARM C - Western Bypass (south)
ARM D - Stane Park site (west)

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.00	I	8.00	I	17.30	I	13.80	I	50.00	I	45.8	I	0.632	I	32.306	I
I	ARM B	I	4.00	I	5.00	I	3.50	I	20.00	I	50.00	I	39.0	I	0.529	I	22.125	I
I	ARM C	I	5.00	I	7.00	I	14.90	I	16.10	I	50.00	I	46.7	I	0.608	I	30.060	I
I	ARM D	I	3.65	I	5.00	I	13.50	I	20.00	I	50.00	I	29.6	I	0.556	I	23.630	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Base Case weekday am peak

T15

I	I	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
		I	I	I	I	I	I
I	I	TO RISE	IS REACHED	FALLING	BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
I	ARM A	15.00	45.00	75.00	15.00	22.50	15.00
I	ARM B	15.00	45.00	75.00	4.84	7.26	4.84
I	ARM C	15.00	45.00	75.00	10.25	15.38	10.25
I	ARM D	15.00	45.00	75.00	0.93	1.39	0.93

DEMAND SET TITLE: 2023 Base Case weekday am peak

T33

I	I	TURNING PROPORTIONS				
		I	I	I	I	
I	I	TURNING COUNTS				
		I	I	I	I	
I	I	(PERCENTAGE OF H.V.S)				
		I	I	I	I	
I	TIME	FROM/TO	ARM A	ARM B	ARM C	ARM D
I	07.45 - 09.15	I	I	I	I	I
I		ARM A	0.000	0.288	0.398	0.314
I			0.0	346.0	477.0	377.0
I			(0.0)	(0.0)	(3.0)	(0.0)
I			I	I	I	I
I		ARM B	0.323	0.000	0.677	0.000
I			125.0	0.0	262.0	0.0
I			(0.0)	(0.0)	(0.0)	(0.0)
I			I	I	I	I
I		ARM C	0.556	0.363	0.000	0.080
I			456.0	298.0	0.0	66.0
I			(2.0)	(0.0)	(0.0)	(0.0)
I			I	I	I	I
I		ARM D	0.784	0.000	0.216	0.000
I			58.0	0.0	16.0	0.0
I			(0.0)	(0.0)	(0.0)	(0.0)
I			I	I	I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	07.45-08.00									
I	ARM A	15.06	29.48	0.511	--	0.0	1.0	15.0	-	0.069
I	ARM B	4.86	16.28	0.298	--	0.0	0.4	6.1	-	0.087
I	ARM C	10.29	25.96	0.396	--	0.0	0.7	9.5	-	0.063
I	ARM D	0.93	17.47	0.053	--	0.0	0.1	0.8	-	0.060

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.00-08.15									
I	ARM A	17.98	28.99	0.620	--	1.0	1.6	23.3	-	0.090
I	ARM B	5.80	15.13	0.383	--	0.4	0.6	9.0	-	0.107
I	ARM C	12.29	25.22	0.487	--	0.7	0.9	13.8	-	0.077
I	ARM D	1.11	16.25	0.068	--	0.1	0.1	1.1	-	0.066

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.15-08.30									
I	ARM A	22.02	28.34	0.777	--	1.6	3.3	46.3	-	0.153
I	ARM B	7.10	13.58	0.523	--	0.6	1.1	15.4	-	0.153
I	ARM C	15.05	24.22	0.621	--	0.9	1.6	23.2	-	0.108
I	ARM D	1.36	14.61	0.093	--	0.1	0.1	1.5	-	0.075

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.30-08.45									
I	ARM A	22.02	28.33	0.777	--	3.3	3.4	50.7	-	0.158
I	ARM B	7.10	13.54	0.524	--	1.1	1.1	16.3	-	0.155
I	ARM C	15.05	24.19	0.622	--	1.6	1.6	24.3	-	0.109
I	ARM D	1.36	14.58	0.093	--	0.1	0.1	1.5	-	0.076

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 08.45-09.00										I
I	ARM A	17.98	28.98	0.620	--	3.4	1.7	26.1	-	0.093	I
I	ARM B	5.80	15.07	0.385	--	1.1	0.6	9.8	-	0.109	I
I	ARM C	12.29	25.18	0.488	--	1.6	1.0	14.9	-	0.078	I
I	ARM D	1.11	16.21	0.068	--	0.1	0.1	1.1	-	0.066	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 09.00-09.15										I
I	ARM A	15.06	29.46	0.511	--	1.7	1.1	16.3	-	0.070	I
I	ARM B	4.86	16.24	0.299	--	0.6	0.4	6.6	-	0.088	I
I	ARM C	10.29	25.93	0.397	--	1.0	0.7	10.2	-	0.064	I
I	ARM D	0.93	17.43	0.053	--	0.1	0.1	0.9	-	0.061	I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.0 *
08.15	1.6 **
08.30	3.3 ***
08.45	3.4 ***
09.00	1.7 **
09.15	1.1 *

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.4
08.15	0.6 *
08.30	1.1 *
08.45	1.1 *
09.00	0.6 *
09.15	0.4

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.7 *
08.15	0.9 *
08.30	1.6 **
08.45	1.6 **
09.00	1.0 *
09.15	0.7 *

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I
I	A	I	1651.7	I	1101.1	I	177.6	I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I	(VEH)	I	(MIN/VEH)	I	(MIN)	I
I	A	I	1651.7	I	1101.1	I	177.6	I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I	(VEH)	I	(MIN/VEH)	I	(MIN)	I

I	B	I	532.7	I	355.1	I	63.1	I	0.12	I	63.2	I	0.12	I
I	C	I	1128.7	I	752.4	I	95.8	I	0.08	I	95.8	I	0.08	I
I	D	I	101.9	I	67.9	I	6.9	I	0.07	I	6.9	I	0.07	I

I	ALL	I	3414.9	I	2276.6	I	343.5	I	0.10	I	343.6	I	0.10	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\Bypass-DW-Stane\
Bypass-DW-Stane Pk am.vai"
(drive-on-the-left) at 14:38:04 on Thursday, 11 June 2009

.FILE PROPERTIES

RUN TITLE: Stanway Western Bypass/Sainsbury's/Stane Park roundabout weekday am peak
LOCATION: Stanway
DATE: 01/06/09
CLIENT: Hills Residential
ENUMERATOR: mlast [ARDENT23]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Western Bypass (north)
ARM B - Sainsbury's site (east)
ARM C - Western Bypass (south)
ARM D - Stane Park site (west)

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.00	I	8.00	I	17.30	I	13.80	I	50.00	I	45.8	I	0.632	I	32.306	I
I	ARM B	I	4.00	I	5.00	I	3.50	I	20.00	I	50.00	I	39.0	I	0.529	I	22.125	I
I	ARM C	I	5.00	I	7.00	I	14.90	I	16.10	I	50.00	I	46.7	I	0.608	I	30.060	I
I	ARM D	I	3.65	I	5.00	I	13.50	I	20.00	I	50.00	I	29.6	I	0.556	I	23.630	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

.LENGTH OF TIME PERIOD -(90) MINUTES

.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Dev't Case weekday am peak

T15

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	A	I	15.00	I	45.00	I	75.00	I	15.59	I	23.38	I	15.59
I	B	I	15.00	I	45.00	I	75.00	I	4.84	I	7.26	I	4.84
I	C	I	15.00	I	45.00	I	75.00	I	11.51	I	17.27	I	11.51
I	D	I	15.00	I	45.00	I	75.00	I	0.93	I	1.39	I	0.93

DEMAND SET TITLE: 2023 Dev't Case weekday am peak

T33

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D
I	07.45 - 09.15	I	ARM A	I	0.000	I	0.277	I	0.420	I	0.302
I		I		I	0.0	I	346.0	I	524.0	I	377.0
I		I		I	(0.0)	I	(0.0)	I	(3.0)	I	(0.0)
I		I	ARM B	I	0.323	I	0.000	I	0.677	I	0.000
I		I		I	125.0	I	0.0	I	262.0	I	0.0
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I	ARM C	I	0.605	I	0.324	I	0.000	I	0.072
I		I		I	557.0	I	298.0	I	0.0	I	66.0
I		I		I	(1.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I	ARM D	I	0.784	I	0.000	I	0.216	I	0.000
I		I		I	58.0	I	0.0	I	16.0	I	0.0
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	07.45-08.00									
I	ARM A	15.65	29.46	0.531	--	0.0	1.1	16.2	-	0.072
I	ARM B	4.86	15.96	0.304	--	0.0	0.4	6.3	-	0.090
I	ARM C	11.56	26.09	0.443	--	0.0	0.8	11.5	-	0.068
I	ARM D	0.93	16.79	0.055	--	0.0	0.1	0.9	-	0.063
I	08.00-08.15									
I	ARM A	18.68	28.97	0.645	--	1.1	1.8	25.7	-	0.096
I	ARM B	5.80	14.75	0.393	--	0.4	0.6	9.3	-	0.111
I	ARM C	13.80	25.34	0.544	--	0.8	1.2	17.2	-	0.086
I	ARM D	1.11	15.44	0.072	--	0.1	0.1	1.1	-	0.070
I	08.15-08.30									
I	ARM A	22.88	28.32	0.808	--	1.8	4.0	54.2	-	0.175
I	ARM B	7.10	13.13	0.541	--	0.6	1.2	16.4	-	0.164
I	ARM C	16.90	24.34	0.694	--	1.2	2.2	31.3	-	0.132
I	ARM D	1.36	13.63	0.100	--	0.1	0.1	1.6	-	0.082
I	08.30-08.45									
I	ARM A	22.88	28.31	0.808	--	4.0	4.1	60.6	-	0.183
I	ARM B	7.10	13.07	0.543	--	1.2	1.2	17.5	-	0.167
I	ARM C	16.90	24.31	0.695	--	2.2	2.2	33.5	-	0.135
I	ARM D	1.36	13.59	0.100	--	0.1	0.1	1.7	-	0.082

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 08.45-09.00										I
I	ARM A	18.68	28.96	0.645	--	4.1	1.9	29.3	-	0.100	I
I	ARM B	5.80	14.67	0.395	--	1.2	0.7	10.3	-	0.114	I
I	ARM C	13.80	25.30	0.545	--	2.2	1.2	18.9	-	0.088	I
I	ARM D	1.11	15.39	0.072	--	0.1	0.1	1.2	-	0.070	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
-	I 09.00-09.15										I
I	ARM A	15.65	29.44	0.531	--	1.9	1.1	17.7	-	0.073	I
I	ARM B	4.86	15.91	0.305	--	0.7	0.4	6.8	-	0.091	I
I	ARM C	11.56	26.06	0.443	--	1.2	0.8	12.4	-	0.069	I
I	ARM D	0.93	16.74	0.055	--	0.1	0.1	0.9	-	0.063	I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.1 *
08.15	1.8 **
08.30	4.0 ****
08.45	4.1 ****
09.00	1.9 **
09.15	1.1 *

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.4
08.15	0.6 *
08.30	1.2 *
08.45	1.2 *
09.00	0.7 *
09.15	0.4

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.8 *
08.15	1.2 *
08.30	2.2 **
08.45	2.2 **
09.00	1.2 *
09.15	0.8 *

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I
I	A	I	1716.4	I	1144.3	I	203.9	I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I	(VEH)	I	(MIN/VEH)	I	(MIN)	I
I	A	I	1716.4	I	1144.3	I	203.9	I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I	(VEH)	I	(MIN/VEH)	I	(MIN)	I

I	B	I	532.7	I	355.1	I	66.6	I	0.13	I	66.6	I	0.13	I
I	C	I	1267.7	I	845.1	I	124.7	I	0.10	I	124.7	I	0.10	I
I	D	I	101.9	I	67.9	I	7.4	I	0.07	I	7.4	I	0.07	I

I	ALL	I	3618.6	I	2412.4	I	402.6	I	0.11	I	402.6	I	0.11	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\Bypass-DW-Stane\
Bypass-DW-Stane Pk pm.vai"
(drive-on-the-left) at 14:43:45 on Thursday, 11 June 2009

.FILE PROPERTIES

RUN TITLE: Stanway Western Bypass/Sainsbury's/Stane Park roundabout weekday pm peak
LOCATION: Stanway
DATE: 01/06/09
CLIENT: Hills Residential
ENUMERATOR: mlast [ARDENT23]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Western Bypass (north)
ARM B - Sainsbury's site (east)
ARM C - Western Bypass (south)
ARM D - Stane Park site (west)

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.00	I	8.00	I	17.30	I	13.80	I	50.00	I	45.8	I	0.632	I	32.306	I
I	ARM B	I	4.00	I	5.00	I	3.50	I	20.00	I	50.00	I	39.0	I	0.529	I	22.125	I
I	ARM C	I	5.00	I	7.00	I	14.90	I	16.10	I	50.00	I	46.7	I	0.608	I	30.060	I
I	ARM D	I	3.65	I	5.00	I	13.50	I	20.00	I	50.00	I	29.6	I	0.556	I	23.630	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Base Case weekday pm peak

T15

I	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I	I	I	I
I	ARM	I FLOW STARTS I TOP OF PEAK I FLOW STOPS	I	I BEFORE I AT TOP I AFTER	I	I	I	I
I	I	I TO RISE I IS REACHED I FALLING	I	I PEAK I OF PEAK I PEAK	I	I	I	I
I	ARM A	I 15.00 I 45.00 I 75.00	I	I 14.43 I 21.64 I 14.43	I	I	I	I
I	ARM B	I 15.00 I 45.00 I 75.00	I	I 13.39 I 20.08 I 13.39	I	I	I	I
I	ARM C	I 15.00 I 45.00 I 75.00	I	I 12.10 I 18.15 I 12.10	I	I	I	I
I	ARM D	I 15.00 I 45.00 I 75.00	I	I 3.92 I 5.89 I 3.92	I	I	I	I

DEMAND SET TITLE: 2023 Base Case weekday pm peak

T33

I	I	TURNING PROPORTIONS	I
I	I	TURNING COUNTS	I
I	I	(PERCENTAGE OF H.V.S)	I
I	I		I
I	TIME	I FROM/TO I ARM A I ARM B I ARM C I ARM D	I
I	16.45 - 18.15	I I I I I I I I	I
I		I ARM A I 0.000 I 0.493 I 0.458 I 0.049	I
I		I I 0.0 I 569.0 I 529.0 I 56.0	I
I		I I (0.0)I (0.0)I (1.0)I (0.0)	I
I		I I I I I I I I	I
I		I ARM B I 0.320 I 0.000 I 0.680 I 0.000	I
I		I I 343.0 I 0.0 I 728.0 I 0.0	I
I		I I (0.0)I (0.0)I (0.0)I (0.0)	I
I		I I I I I I I I	I
I		I ARM C I 0.499 I 0.491 I 0.000 I 0.010	I
I		I I 483.0 I 475.0 I 0.0 I 10.0	I
I		I I (2.0)I (0.0)I (0.0)I (0.0)	I
I		I I I I I I I I	I
I		I ARM D I 0.783 I 0.000 I 0.217 I 0.000	I
I		I I 246.0 I 0.0 I 68.0 I 0.0	I
I		I I (0.0)I (0.0)I (0.0)I (0.0)	I
I		I I I I I I I I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	16.45-17.00									
I	ARM A	14.48	27.90	0.519	--	0.0	1.1	15.5	-	0.074
I	ARM B	13.44	17.78	0.756	--	0.0	2.9	39.2	-	0.212
I	ARM C	12.15	26.79	0.453	--	0.0	0.8	12.0	-	0.068
I	ARM D	3.94	14.56	0.271	--	0.0	0.4	5.3	-	0.094

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.00-17.15									
I	ARM A	17.29	27.05	0.639	--	1.1	1.7	25.0	-	0.102
I	ARM B	16.05	16.92	0.948	--	2.9	10.2	115.7	-	0.591
I	ARM C	14.50	26.26	0.552	--	0.8	1.2	17.7	-	0.085
I	ARM D	4.70	12.82	0.367	--	0.4	0.6	8.3	-	0.123

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.15-17.30									
I	ARM A	21.18	25.92	0.817	--	1.7	4.2	56.3	-	0.197
I	ARM B	19.65	15.78	1.245	--	10.2	69.3	600.1	-	2.723
I	ARM C	17.76	26.12	0.680	--	1.2	2.1	29.6	-	0.118
I	ARM D	5.76	11.00	0.524	--	0.6	1.1	15.2	-	0.189

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.30-17.45									
I	ARM A	21.18	25.89	0.818	--	4.2	4.3	64.0	-	0.211
I	ARM B	19.65	15.74	1.249	--	69.3	128.2	1481.3	-	6.287
I	ARM C	17.76	26.11	0.680	--	2.1	2.1	31.4	-	0.120
I	ARM D	5.76	10.97	0.525	--	1.1	1.1	16.3	-	0.192

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	ARM A	17.29	27.02	0.640	--	4.3	1.8	28.9	-	0.106	I
I	ARM B	16.05	16.86	0.952	--	128.2	118.0	1846.0	-	7.278	I
I	ARM C	14.50	26.03	0.557	--	2.1	1.3	19.8	-	0.088	I
I	ARM D	4.70	12.57	0.374	--	1.1	0.6	9.5	-	0.128	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	ARM A	14.48	27.86	0.520	--	1.8	1.1	16.9	-	0.075	I
I	ARM B	13.44	17.74	0.758	--	118.0	55.7	1302.3	-	4.978	I
I	ARM C	12.15	25.95	0.468	--	1.3	0.9	13.7	-	0.073	I
I	ARM D	3.94	13.74	0.287	--	0.6	0.4	6.3	-	0.102	I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	1.1 *
17.15	1.7 **
17.30	4.2 ****
17.45	4.3 ****
18.00	1.8 **
18.15	1.1 *

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	2.9 ***
17.15	10.2 *****
17.30	69.3 *****
17.45	128.2 *****
18.00	118.0 *****
18.15	55.7 *****

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.8 *
17.15	1.2 *
17.30	2.1 **
17.45	2.1 **
18.00	1.3 *
18.15	0.9 *

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.6 *
17.30	1.1 *
17.45	1.1 *
18.00	0.6 *
18.15	0.4

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND (VEH)	I	* QUEUEING DELAY (MIN)	I	* INCLUSIVE QUEUEING DELAY (MIN)	I
I	A	I	1588.4	I	206.6	I	0.13	I

I	B	I	1474.2	I	982.8	I	5384.7	I	3.65	I	5472.0	I	3.71	I
I	C	I	1332.4	I	888.3	I	124.2	I	0.09	I	124.2	I	0.09	I
I	D	I	432.2	I	288.1	I	60.9	I	0.14	I	60.9	I	0.14	I

I	ALL	I	4827.1	I	3218.1	I	5776.3	I	1.20	I	5863.7	I	1.21	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 5.0 (JANUARY 2009)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\ARCADY\Bypass-DW-Stane\
Bypass-DW-Stane Pk pm.vai"
(drive-on-the-left) at 14:44:28 on Thursday, 11 June 2009

.FILE PROPERTIES

RUN TITLE: Stanway Western Bypass/Sainsbury's/Stane Park roundabout weekday pm peak
LOCATION: Stanway
DATE: 01/06/09
CLIENT: Hills Residential
ENUMERATOR: mlst [ARDENT23]
JOB NUMBER: F960
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Western Bypass (north)
ARM B - Sainsbury's site (east)
ARM C - Western Bypass (south)
ARM D - Stane Park site (west)

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.00	I	8.00	I	17.30	I	13.80	I	50.00	I	45.8	I	0.632	I	32.306	I
I	ARM B	I	4.00	I	5.00	I	3.50	I	20.00	I	50.00	I	39.0	I	0.529	I	22.125	I
I	ARM C	I	5.00	I	7.00	I	14.90	I	16.10	I	50.00	I	46.7	I	0.608	I	30.060	I
I	ARM D	I	3.65	I	5.00	I	13.50	I	20.00	I	50.00	I	29.6	I	0.556	I	23.630	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

TIME PERIOD BEGINS(16.45)AND ENDS(18.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2023 Dev't Case weekday pm peak

T15

I	I	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
		I FLOW STARTS	I TOP OF PEAK	I FLOW STOPS	I BEFORE	I AT TOP	I AFTER
I	I	I TO RISE	I IS REACHED	I FALLING	I PEAK	I OF PEAK	I PEAK
I ARM A	I	15.00	45.00	75.00	15.71	23.57	15.71
I ARM B	I	15.00	45.00	75.00	13.39	20.08	13.39
I ARM C	I	15.00	45.00	75.00	12.75	19.13	12.75
I ARM D	I	15.00	45.00	75.00	3.92	5.89	3.92

DEMAND SET TITLE: 2023 Dev't Case weekday pm peak

T33

I	I	TURNING PROPORTIONS				
		TURNING COUNTS				
		(PERCENTAGE OF H.V.S)				
I	I	I FROM/TO	I ARM A	I ARM B	I ARM C	I ARM D
I	16.45 - 18.15	I	I	I	I	I
I		I ARM A	0.000	0.453	0.503	0.045
I		I	0.0	569.0	632.0	56.0
I		I	(0.0)	(0.0)	(1.0)	(0.0)
I		I	I	I	I	I
I		I ARM B	0.320	0.000	0.680	0.000
I		I	343.0	0.0	728.0	0.0
I		I	(0.0)	(0.0)	(0.0)	(0.0)
I		I	I	I	I	I
I		I ARM C	0.525	0.466	0.000	0.010
I		I	535.0	475.0	0.0	10.0
I		I	(2.0)	(0.0)	(0.0)	(0.0)
I		I	I	I	I	I
I		I ARM D	0.783	0.000	0.217	0.000
I		I	246.0	0.0	68.0	0.0
I		I	(0.0)	(0.0)	(0.0)	(0.0)
I		I	I	I	I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	16.45-17.00									
I	ARM A	15.77	27.88	0.566	-	0.0	1.3	18.5	-	0.082
I	ARM B	13.44	17.09	0.786	-	0.0	3.4	44.8	-	0.245
I	ARM C	12.80	26.78	0.478	-	0.0	0.9	13.2	-	0.071
I	ARM D	3.94	14.20	0.277	-	0.0	0.4	5.5	-	0.097

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.00-17.15									
I	ARM A	18.83	27.04	0.696	-	1.3	2.2	31.8	-	0.120
I	ARM B	16.05	16.10	0.997	-	3.4	15.1	157.0	-	0.822
I	ARM C	15.28	26.30	0.581	-	0.9	1.4	19.8	-	0.090
I	ARM D	4.70	12.44	0.378	-	0.4	0.6	8.7	-	0.129

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.15-17.30									
I	ARM A	23.07	25.91	0.890	-	2.2	6.9	87.0	-	0.292
I	ARM B	19.65	14.82	1.326	-	15.1	88.1	775.7	-	3.674
I	ARM C	18.72	26.29	0.712	-	1.4	2.4	34.0	-	0.130
I	ARM D	5.76	10.63	0.542	-	0.6	1.2	16.3	-	0.202

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	17.30-17.45									
I	ARM A	23.07	25.88	0.891	-	6.9	7.4	108.2	-	0.340
I	ARM B	19.65	14.74	1.334	-	88.1	161.9	1875.0	-	8.370
I	ARM C	18.72	26.29	0.712	-	2.4	2.4	36.3	-	0.132
I	ARM D	5.76	10.60	0.543	-	1.2	1.2	17.4	-	0.206

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	ARM A	18.83	27.01	0.697	-	7.4	2.4	39.7	-	0.133	I
I	ARM B	16.05	15.98	1.004	-	161.9	163.5	2440.1	-	10.051	I
I	ARM C	15.28	26.16	0.584	-	2.4	1.4	22.2	-	0.093	I
I	ARM D	4.70	12.26	0.384	-	1.2	0.6	9.9	-	0.134	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	ARM A	15.77	27.85	0.566	-	2.4	1.3	20.6	-	0.084	I
I	ARM B	13.44	17.04	0.789	-	163.5	111.0	2058.1	-	8.125	I
I	ARM C	12.80	26.06	0.491	-	1.4	1.0	15.0	-	0.076	I
I	ARM D	3.94	13.49	0.292	-	0.6	0.4	6.4	-	0.105	I

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	1.3 *
17.15	2.2 **
17.30	6.9 *****
17.45	7.4 *****
18.00	2.4 **
18.15	1.3 *

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	3.4 ***
17.15	15.1 *****
17.30	88.1 *****
17.45	161.9 *****
18.00	163.5 *****
18.15	111.0 *****

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.9 *
17.15	1.4 *
17.30	2.4 **
17.45	2.4 **
18.00	1.4 *
18.15	1.0 *

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.6 *
17.30	1.2 *
17.45	1.2 *
18.00	0.6 *
18.15	0.4

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND (VEH)	I	* QUEUEING DELAY (MIN)	I	* INCLUSIVE QUEUEING DELAY (MIN)	I
I	A	I	1730.2	I	1153.4	I	305.8	I
I		I		I	0.18	I	305.9	I
I		I		I		I	0.18	I

I	B	I	1474.2	I	982.8	I	7350.6	I	4.99	I	7711.8	I	5.23	I
I	C	I	1404.0	I	936.0	I	140.7	I	0.10	I	140.7	I	0.10	I
I	D	I	432.2	I	288.1	I	64.2	I	0.15	I	64.3	I	0.15	I

I	ALL	I	5040.5	I	3360.3	I	7861.3	I	1.56	I	8222.6	I	1.63	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

Appendix P

**Results of TRANSYT capacity assessment:
Eight Ash Green roundabout with full signalisation**

SIGNAL INSTALLATION IN THIS LOCATION TO BE FUNDED BY GARRISON DEVELOPMENT SECTION 106 AGREEMENT. FUNDING ALREADY SECURED.

PROPOSED SIGNAL INSTALLATION

PROPOSED SIGNAL INSTALLATION

HATCHED SEPARATION ISLAND

PROVIDE HATCHED MARKING TO EFFECTIVELY REDUCE EXIT TO A SINGLE LANE

TOP OF EMBANKMENT

REMOVE / AMEND EXISTING CARRIAGEWAY MARKINGS AS REQUIRED

PROPOSED SIGNAL INSTALLATION

Essex Yeomanry Way

IT Project: STANE PARK INCUBATOR AND BUSINESS DEVELOPMENT		Rev: -
Drawing Title: IMPROVEMENTS AT EIGHT ASH GREEN INTERCHANGE PROPOSED IN CONJUNCTION WITH STANE PARK PROPOSAL		Sheet 1 of 1
Drawing No: IT557/SK/02	CAD File: IT557_SK_02.dwg	Date: JAN 2007
Client: MRS R BURWOOD AND MR J WARREN	Drawn by: MS	Approved by: JB
A1		Notes: Dimensions should not be scaled from this drawing. The contents of this drawing are unclassified, should you provide this drawing to any other person, please return it to Intermodal Transportation at the address above. Reproduced from Ordnance Survey Supermap Data Crown Copyright 2007. All Rights Reserved. Licence No. 10003662



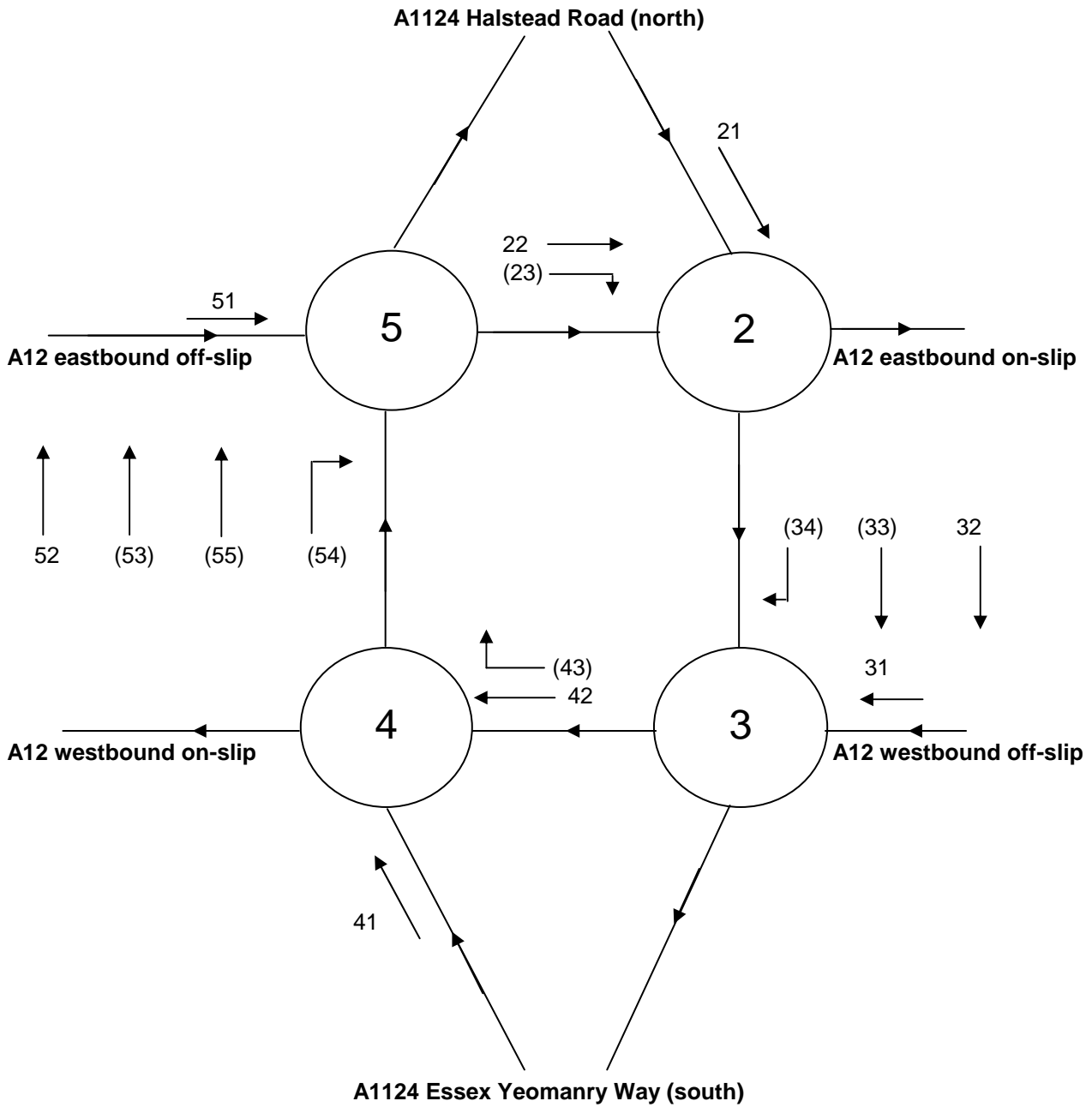
Intermodal TRANSPORTATION
 Hunters Court
 Debden Road
 Saffron Walden
 Essex CB11 4AA

Tel: +44 (0)1799 529529
 Fax: +44 (0)1799 529530
 e: enquiries@inter-modal.co.uk

A12(T)/A1124 EIGHT ASH GREEN INTERCHANGE, STANWAY

ARDENT TRANSYT MODEL NETWORK DIAGRAM

BASED ON INTERMODAL TRANSPORTATION DRAWING NO IT557/SK/02 (JANUARY 2007)



TRANSYT 13	
Version: 13.0.4.53 [03/12/08 - 12:00] Copyright © 2008, by TRL. All rights reserved.	
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Last run: 18/06/2009 12:44:24

Analysis Set used for last run: Analysis Set 2 - 2023 Base Case weekday am peak hour

File: Y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\TRANSYT\8 Ash Gn Base am.t13

Report generation date: 18/06/2009 12:44:44

Analysis Set 2 - 2023 Base Case weekday am peak hour

Summary

Data Errors and Warnings

Severity	Area	Description
Info	Link Source Data	Link 21: downstream flow apparent loss = 729 (59.11%).
Info	Link Source Data	Link 31: downstream flow apparent loss = 1149 (35.08%).

File summary

File Description

Title	A12/A1124 Eight Ash Green interchange (full signalisation)
Location	Stanway
Driving Side	Left
Date	11/06/2009
Status	(new file)
Client	Hills Residential
Jobnumber	F960
Enumerator	ARDENTCE\cbull

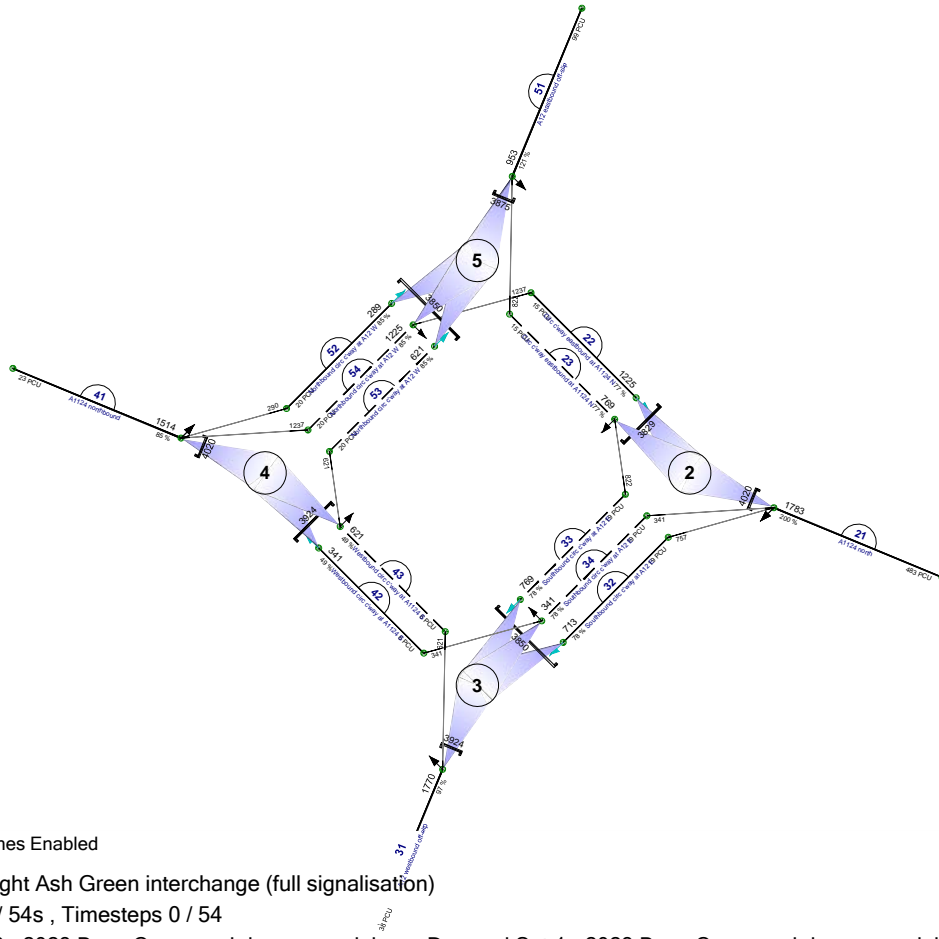
Units

Speed Units	Distance Units
kph	m

Sorting

Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
Ascending	Numerical		Normal	Normal

Network Diagram



Node Traffic Cones Enabled

A12/A1124 Eight Ash Green interchange (full signalisation)

Cycletime 0s / 54s , Timesteps 0 / 54

Analysis Set 2 - 2023 Base Case weekday am peak hour, Demand Set 1 - 2023 Base Case weekday am peak hour

Diagram produced using TRANSYT 13 Network Construction Editor

Signal Timings

Stage Timings (TRANSYT 12 timings)

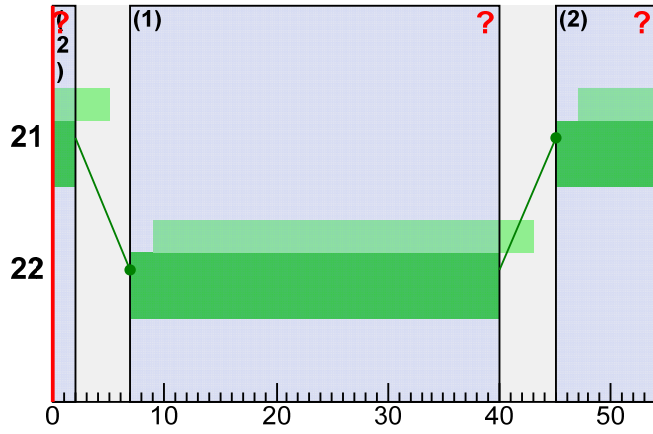
54s cycle time; 54 steps

Node ID	Number of stages	Stage 1	Stage 2
2	2	2	40
3	2	53	28
4	2	6	32
5	2	8	23

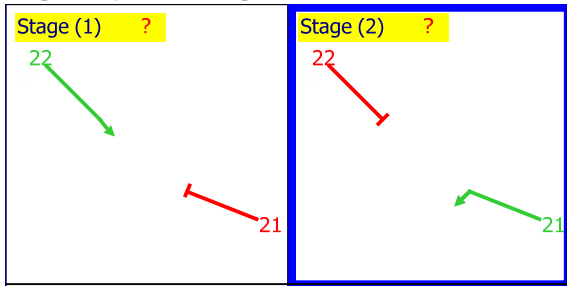
Intergreen Matrix for Node 2

		To	
		21	22
From	21	-	5
	22	5	-

Link Timings Diagram for Node 2



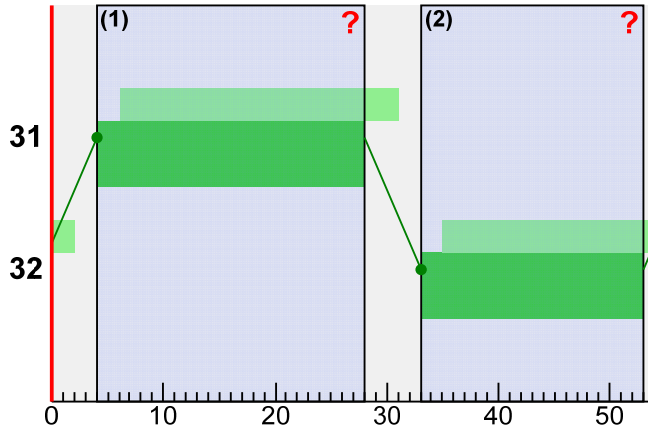
Stage Sequence Diagram for Node 2



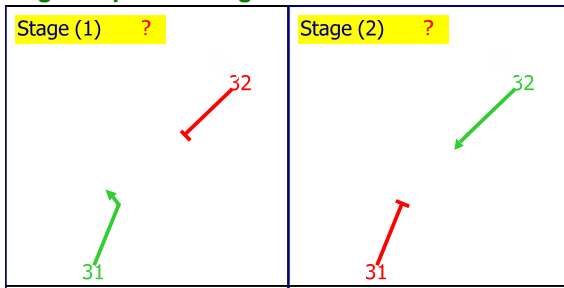
Intergreen Matrix for Node 3

		To	
		31	32
From	31	-	5
	32	5	-

Link Timings Diagram for Node 3



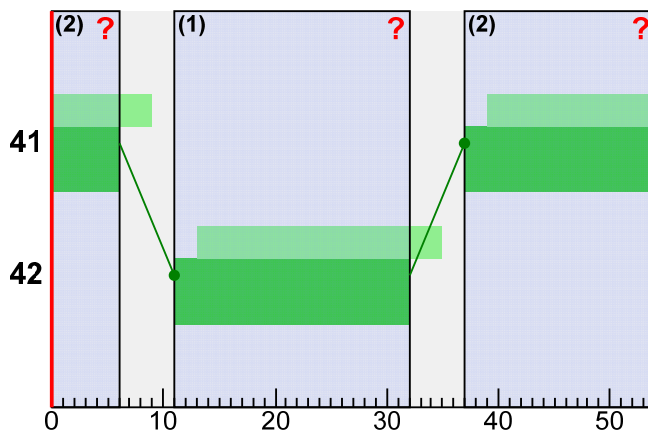
Stage Sequence Diagram for Node 3



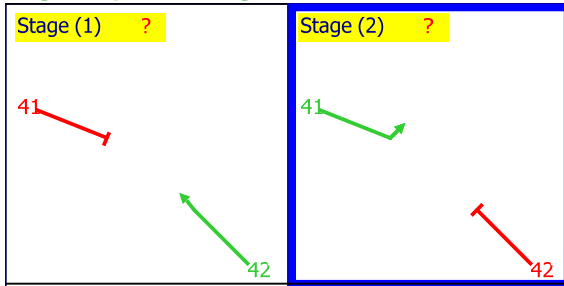
Intergreen Matrix for Node 4

		To	
		41	42
From	41	-	5
	42	5	-

Link Timings Diagram for Node 4



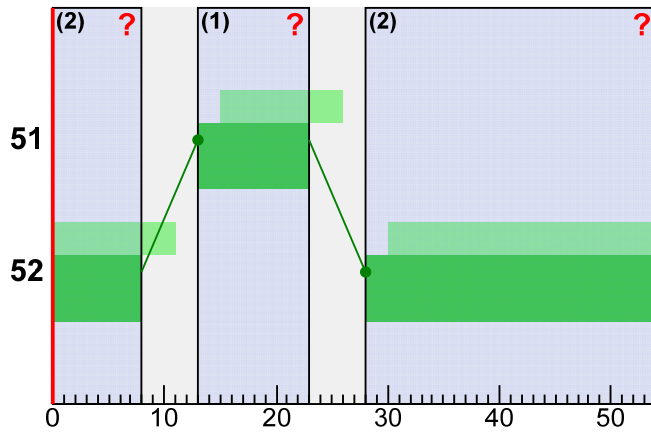
Stage Sequence Diagram for Node 4



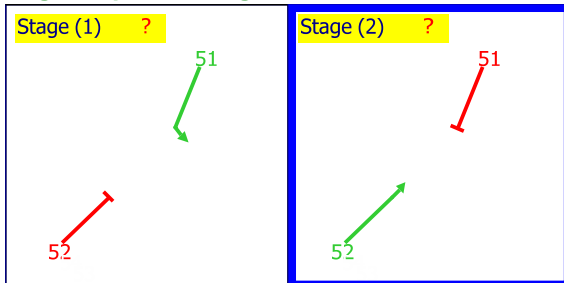
Intergreen Matrix for Node 5

		To	
		51	52
From	51	-	5
	52	5	-

Link Timings Diagram for Node 5



Stage Sequence Diagram for Node 5



Link green times

Link ID	Traffic Node	Signals Node	Green Period 1		Green Period 2		Green Period 3		Green Period 4	
			Start	End	Start	End	Start	End	Start	End
21	2	2	45	2						
22	2	2	7	40						
31	3	3	4	28						
32	3	3	33	53						
41	4	4	37	6						
42	4	4	11	32						
51	5	5	13	23						
52	5	5	28	8						

Run Summary

Analysis Set Used	Run Start Time	Run Finish Time	Modelling Start Time (HH:mm)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	Link With Highest DOS	Number Of Oversaturated Links	Percentage Of Oversaturated Links (%)	Network Within Capacity
Analysis Set 2 - 2023 Base Case weekday am peak hour	18/06/2009 12:44:24	18/06/2009 12:44:24	08:00:00	54	609.05	200	21	3	21	

Link Results

Link ID	Major Link	Calculated Flow Into Link (PCU/hr)	Calculated Sat Flow (PCU/hr)	Degree Of Saturation (%)	MEAN TIMES		DELAY			STOPS		QUEUES		P.I.
					Mean Cruise Time Per PCU (s)	Mean Delay Per PCU (s)	Uniform Delay (PCU-hr/hr)	Random Plus Oversat Delay (PCU-hr/hr)	Weighted Cost Of Delay (£ per hr)	Mean Stops Per PCU (%)	Weighted Cost Of Stops (£ per hr)	Mean Max Queue (PCU)	Average Limit Excess Queue (PCU)	P.I. (£ per hr)
21		1783	4020	200 !	17.00	948.86	24.12	445.83	6673.29	250	114.67	483 +	0.00	6787.96
22	(22)	1226	3829	77	6.00	8.11	1.65	1.11	39.24	69	15.21	15	1.70	906.31
23	22	636 <	(3829)	(77)	6.00	3.31	0.01	0.58	8.30	6	0.88	(15)	(0.00)	9.19
31		1770	3924	97 !	17.00	39.38	6.98	12.39	274.96	132	60.02	38	0.00	334.98
32	(32)	357 <	3850	78	11.00	32.98	2.74	0.53	46.48	55	7.07	19	0.00	53.55
33	32	636 <	(3850)	(78)	11.00	13.18	1.38	0.95	33.07	85	11.83	(19)	(0.00)	44.90
34	32	172 <	(3850)	(78)	11.00	32.98	1.32	0.26	22.31	55	3.39	(19)	(0.00)	25.70
41		1514	4020	85	17.00	19.84	5.62	2.72	118.49	94	36.58	23	0.00	155.07
42	(42)	172 <	3924	49	6.00	25.59	1.11	0.11	17.31	52	3.22	6	0.01	34.09
43	42	619	(3924)	(49)	6.00	5.34	0.54	0.38	13.05	25	2.83	(6)	(0.00)	15.88
51		953	3875	121 !	17.00	347.07	7.24	84.64	1304.64	272	66.76	99 +	0.00	1371.40
52	(52)	288	3850	85	12.00	11.77	0.55	0.39	13.36	47	2.47	20	0.00	15.83
53	52	619	(3850)	(85)	12.00	10.97	1.05	0.84	26.82	86	9.58	(20)	(0.00)	36.40
54	52	1226	(3850)	(85)	12.00	11.77	2.34	1.67	56.94	48	10.53	(20)	(0.00)	67.47

- BL = at least one source for this link carries buses
- TL = at least one source for this link carries trams
- PL = this link is a pedestrian link
- < = adjusted flow warning (upstream links are over-saturated)
- ! = DOS threshold exceeded
- f = average saturation flow for flared link
- * = stops/delay weighting has been set to a value other than 100%
- + = average link excess queue is greater than 0
- P.I. = PERFORMANCE INDEX

Network Totals

	Distance Travelled (PCU-km/hr)	Time Spent (PCU-hr/hr)	Mean Journey Speed (kph)	Uniform Delay (PCU-hr/hr)	Random Plus Oversat Delay (PCU-hr/hr)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Excess Queue Penalty (£ per hr)	TOTAL PERFORMANCE INDEX (£ per hr)
TOTAL	1748.75	652.56	2.68	56.65	552.40	8648.26	345.04	865.43	9858.73
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER	1748.75	652.56	2.68	56.65	552.40	8648.26	345.04	865.43	9858.73

Fuel Consumption

Fuel Consumption Cruise (litres/hr)	Fuel Consumption Delay (litres/hr)	Fuel Consumption Stops (litres/hr)	Fuel Consumption Total (litres/hr)
95.89	700.39	157.52	953.81

TRANSYT 13

Version: 13.0.4.53 [03/12/08 - 12:00]
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Last run: 18/06/2009 12:47:21

Analysis Set used for last run: Analysis Set 3 - 2023 Dev't Case weekday am peak hour

File: Y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\TRANSYT\8 Ash Gn Base am.t13

Report generation date: 18/06/2009 12:47:26

Analysis Set 3 - 2023 Dev't Case weekday am peak hour

Summary

Data Errors and Warnings

Severity	Area	Description
Info	Link Source Data	Link 21: downstream flow apparent loss = 729 (59.23%).
Info	Link Source Data	Link 31: downstream flow apparent loss = 1161 (34.85%).

File summary

File Description

Title	A12/A1124 Eight Ash Green interchange (full signalisation)
Location	Stanway
Driving Side	Left
Date	11/06/2009
Status	(new file)
Client	Hills Residential
Jobnumber	F960
Enumerator	ARDENTCE\cbull

Units

Speed Units	Distance Units
kph	m

Sorting

Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
Ascending	Numerical		Normal	Normal

Signal Timings

Stage Timings (TRANSYT 12 timings)

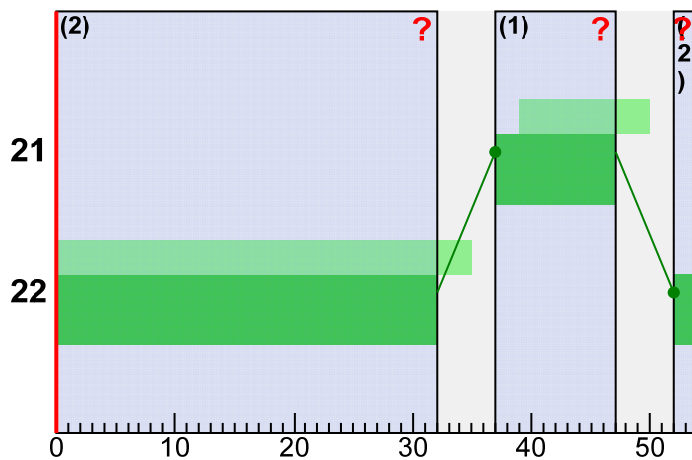
54s cycle time; 54 steps

Node ID	Number of stages	Stage 1	Stage 2
2	2	32	47
3	2	18	42
4	2	50	22
5	2	0	16

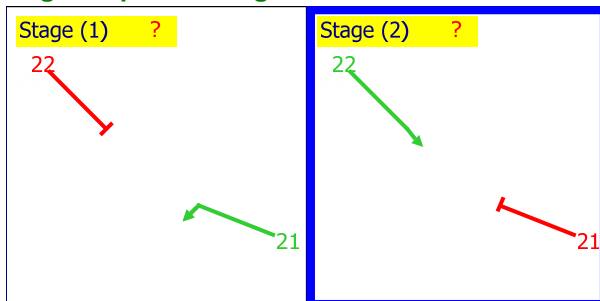
Intergreen Matrix for Node 2

		To	
		21	22
From	21	-	5
	22	5	-

Link Timings Diagram for Node 2



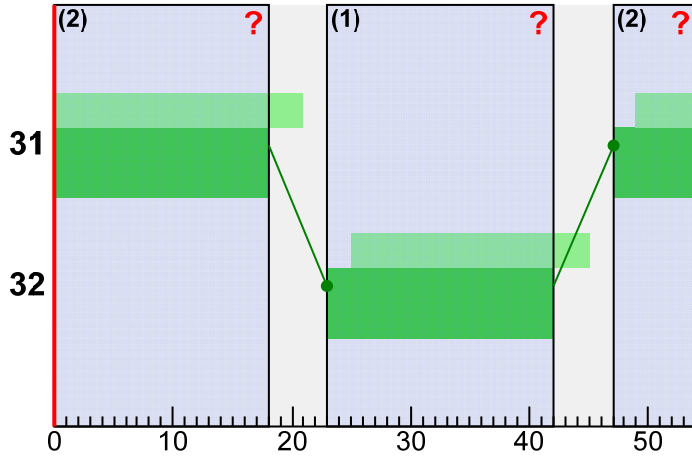
Stage Sequence Diagram for Node 2



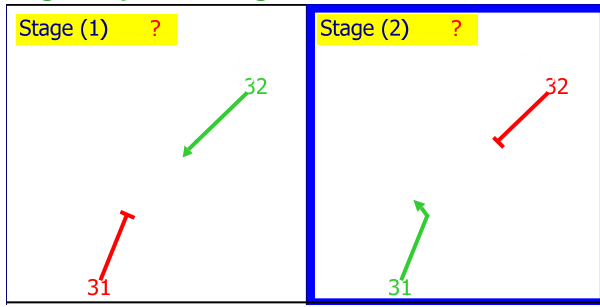
Intergreen Matrix for Node 3

		To	
		31	32
From	31	-	5
	32	5	-

Link Timings Diagram for Node 3



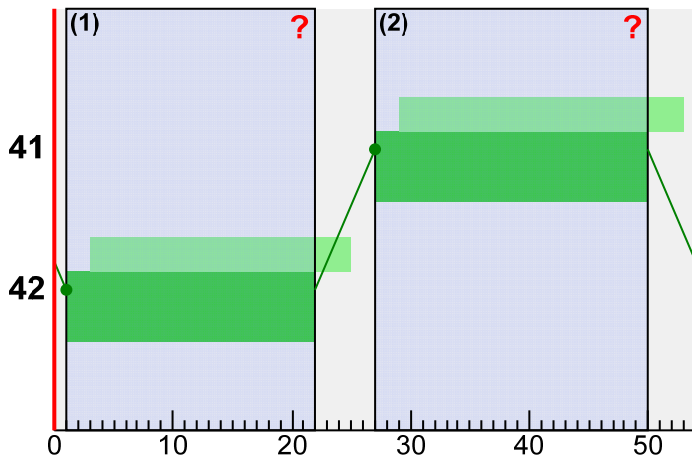
Stage Sequence Diagram for Node 3



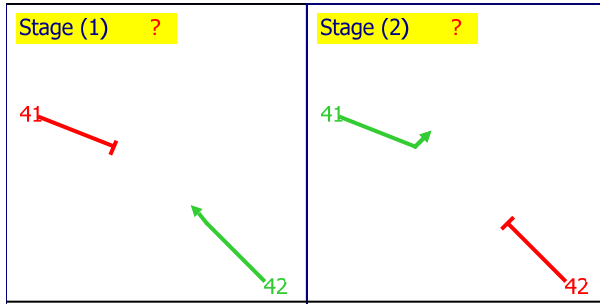
Intergreen Matrix for Node 4

		To	
		41	42
From	41	-	5
	42	5	-

Link Timings Diagram for Node 4



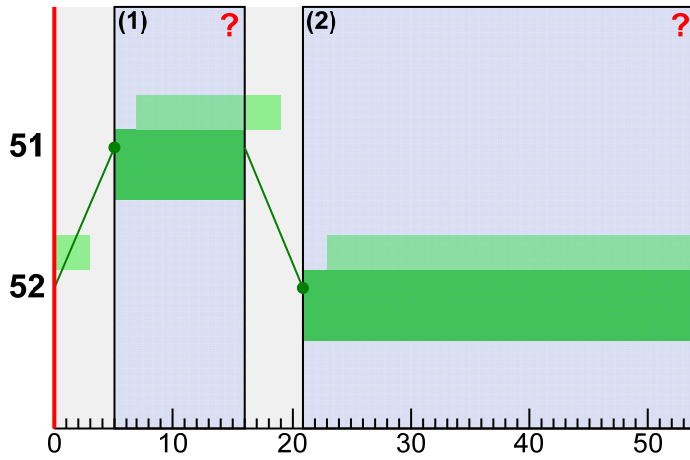
Stage Sequence Diagram for Node 4



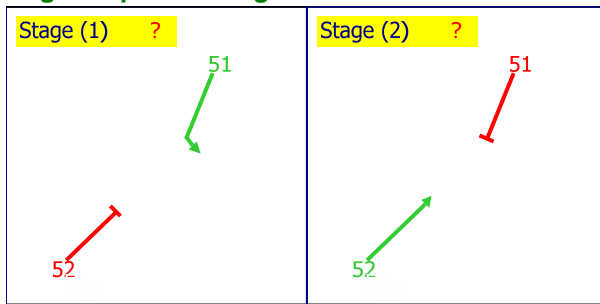
Intergreen Matrix for Node 5

		To	
		51	52
From	51	-	5
	52	5	-

Link Timings Diagram for Node 5



Stage Sequence Diagram for Node 5



Link green times

Link ID	Traffic Node	Signals Node	Green Period 1		Green Period 2		Green Period 3		Green Period 4	
			Start	End	Start	End	Start	End	Start	End
21	2	2	37	47						
22	2	2	52	32						
31	3	3	47	18						
32	3	3	23	42						
41	4	4	27	50						
42	4	4	1	22						
51	5	5	5	16						
52	5	5	21	0						

Run Summary

Analysis Set Used	Run Start Time	Run Finish Time	Modelling Start Time (HH:mm)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	Link With Highest DOS	Number Of Oversaturated Links	Percentage Of Oversaturated Links (%)	Network Within Capacity
Analysis Set 3 - 2023 Dev't Case weekday am peak hour	18/06/2009 12:47:21	18/06/2009 12:47:21	08:00:00	54	626.72	218	21	6	43	

Link Results

Link ID	Major Link	Calculated Flow Into Link (PCU/hr)	Calculated Sat Flow (PCU/hr)	Degree Of Saturation (%)	MEAN TIMES		DELAY			STOPS		QUEUES		P.I.
					Mean Cruise Time Per PCU (s)	Mean Delay Per PCU (s)	Uniform Delay (PCU-hr/hr)	Random Plus Oversat Delay (PCU-hr/hr)	Weighted Cost Of Delay (£ per hr)	Mean Stops Per PCU (%)	Weighted Cost Of Stops (£ per hr)	Mean Max Queue (PCU)	Average Limit Excess Queue (PCU)	P.I. (£ per hr)
21		1788	4020	218 !	17.00	1029.66	25.92	485.48	7261.83	246	113.02	527 +	0.00	7374.86
22	(22)	1252	3829	79	6.00	8.45	1.77	1.17	41.75	75	16.96	17	2.36	1240.04
23	22	699 <	(3829)	(79)	6.00	3.44	0.01	0.65	9.49	8	1.11	(17)	(0.00)	10.60
31		1782	3924	94 !	17.00	28.06	6.58	7.31	197.24	113	51.72	33	0.00	248.96
32	(32)	329 <	3850	83	11.00	33.20	2.37	0.67	43.11	52	6.71	20	0.00	49.82
33	32	699 <	(3850)	(83)	11.00	13.05	1.12	1.42	35.99	86	12.44	(20)	(0.00)	48.43
34	32	156 <	(3850)	(83)	11.00	33.20	1.12	0.32	20.38	52	3.17	(20)	(0.00)	23.55
41		1550	4020	87	17.00	20.97	5.84	3.19	128.21	97	38.60	24	0.00	166.81
42	(42)	156 <	3924	49	6.00	25.50	1.01	0.09	15.65	47	2.92	5	0.01	29.18
43	42	620	(3924)	(49)	6.00	4.87	0.46	0.38	11.92	26	2.95	(5)	(0.00)	14.87
51		983	3875	114 !	17.00	263.24	7.14	64.74	1020.69	265	66.98	80 +	0.00	1087.67
52	(52)	298	3850	90 !	12.00	12.64	0.48	0.57	14.83	44	2.35	20	0.00	17.18
53	52	620	(3850)	(90) !	12.00	14.59	1.33	1.18	35.70	98	10.96	(20)	(0.00)	46.66
54	52	1252	(3850)	(90) !	12.00	12.64	2.01	2.39	62.42	44	9.88	(20)	(0.00)	72.30

- BL = at least one source for this link carries buses
- TL = at least one source for this link carries trams
- PL = this link is a pedestrian link
- < = adjusted flow warning (upstream links are over-saturated)
- ! = DOS threshold exceeded
- f = average saturation flow for flared link
- * = stops/delay weighting has been set to a value other than 100%
- + = average link excess queue is greater than 0
- P.I. = PERFORMANCE INDEX

Network Totals

	Distance Travelled (PCU-km/hr)	Time Spent (PCU-hr/hr)	Mean Journey Speed (kph)	Uniform Delay (PCU-hr/hr)	Random Plus Oversat Delay (PCU-hr/hr)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Excess Queue Penalty (£ per hr)	TOTAL PERFORMANCE INDEX (£ per hr)
TOTAL	1775.98	670.92	2.65	57.16	569.56	8899.21	339.77	1191.94	10430.93
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER	1775.98	670.92	2.65	57.16	569.56	8899.21	339.77	1191.94	10430.93

Fuel Consumption

Fuel Consumption Cruise (litres/hr)	Fuel Consumption Delay (litres/hr)	Fuel Consumption Stops (litres/hr)	Fuel Consumption Total (litres/hr)
97.40	720.70	155.11	973.23

TRANSYT 13

Version: 13.0.4.53 [03/12/08 - 12:00]
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Last run: 19/06/2009 09:07:59

Analysis Set used for last run: Analysis Set 4 - 2023 Base Case weekday pm peak hour

File: Y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\TRANSYT\8 Ash Gn Base am.t13

Report generation date: 19/06/2009 09:08:07

Analysis Set 4 - 2023 Base Case weekday pm peak hour

Summary

Data Errors and Warnings

Severity	Area	Description
Info	Link Source Data	Link 21: downstream flow apparent loss = 541 (58.13%).
Info	Link Source Data	Link 31: downstream flow apparent loss = 960 (42.38%).
Info	Link Source Data	Link 51: downstream flow apparent loss = 261 (67.94%).

File summary

File Description

Title	A12/A1124 Eight Ash Green interchange (full signalisation)
Location	Stanway
Driving Side	Left
Date	11/06/2009
Status	(new file)
Client	Hills Residential
Jobnumber	F960
Enumerator	ARDENTCE\cbull

Units

Speed Units	Distance Units
kph	m

Sorting

Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
Ascending	Numerical		Normal	Normal

Signal Timings

Stage Timings (TRANSYT 12 timings)

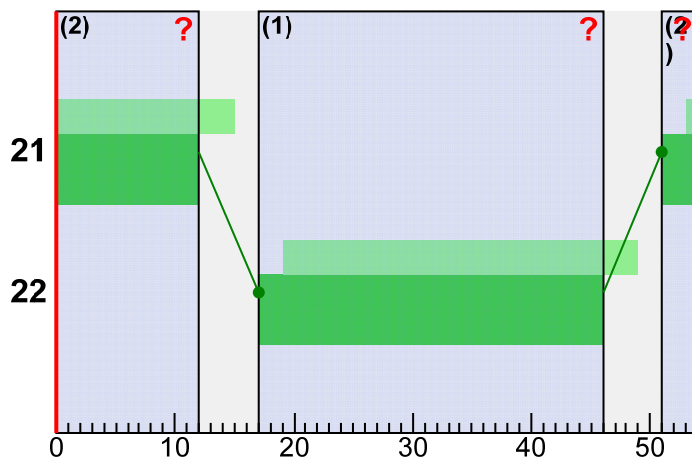
54s cycle time; 54 steps

Node ID	Number of stages	Stage 1	Stage 2
2	2	12	46
3	2	2	24
4	2	0	29
5	2	1	42

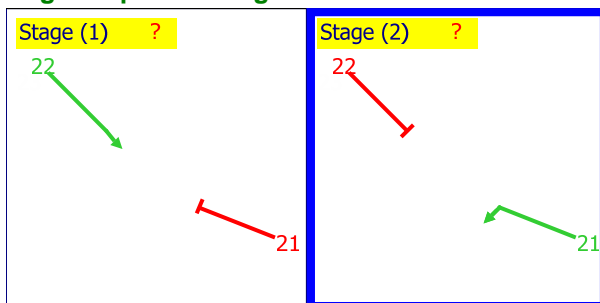
Intergreen Matrix for Node 2

		To	
		21	22
From	21	-	5
	22	5	-

Link Timings Diagram for Node 2



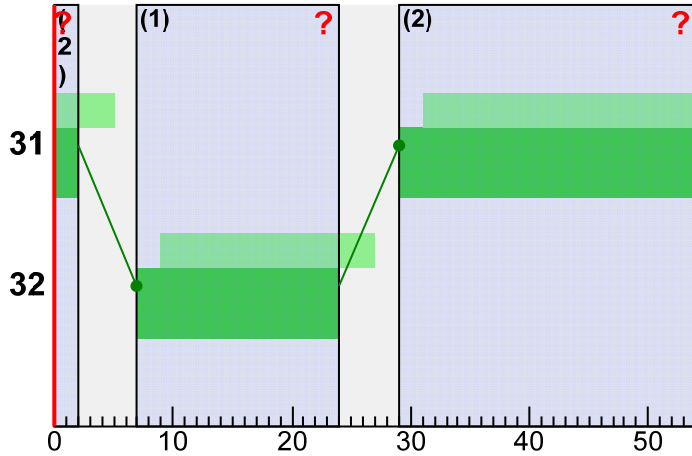
Stage Sequence Diagram for Node 2



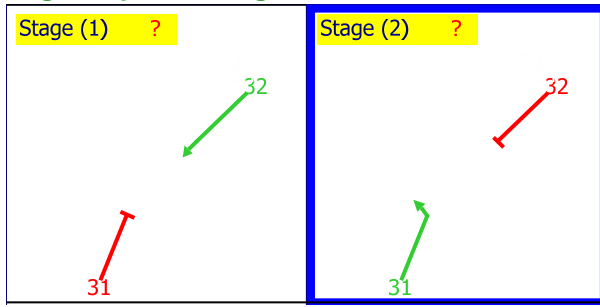
Intergreen Matrix for Node 3

		To	
		31	32
From	31	-	5
	32	5	-

Link Timings Diagram for Node 3



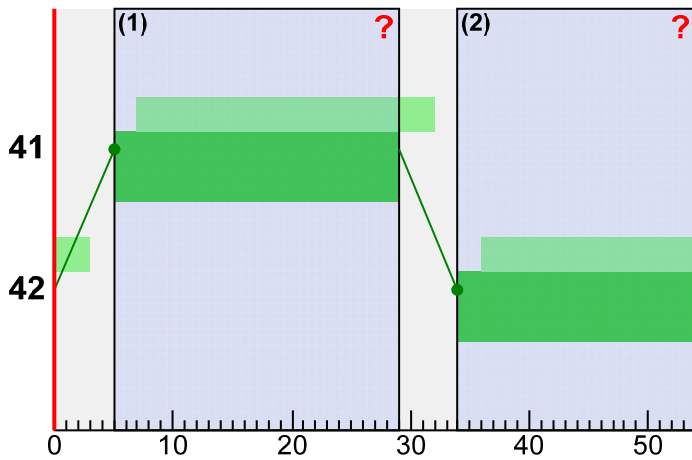
Stage Sequence Diagram for Node 3



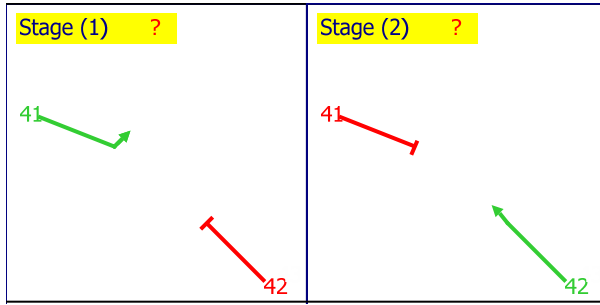
Intergreen Matrix for Node 4

		To	
		41	42
From	41	-	5
	42	5	-

Link Timings Diagram for Node 4



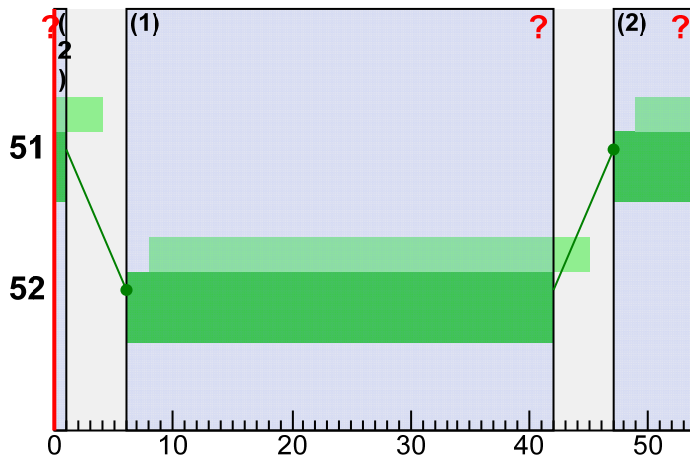
Stage Sequence Diagram for Node 4



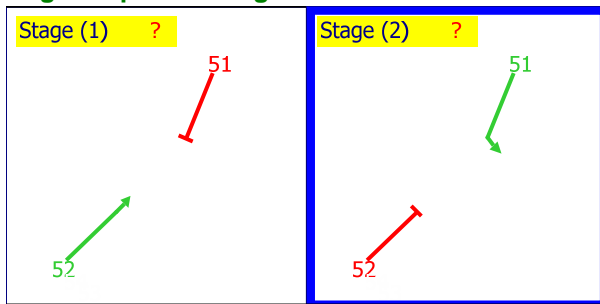
Intergreen Matrix for Node 5

		To	
		51	52
From	51	-	5
	52	5	-

Link Timings Diagram for Node 5



Stage Sequence Diagram for Node 5



Link green times

Link ID	Traffic Node	Signals Node	Green Period 1		Green Period 2		Green Period 3		Green Period 4	
			Start	End	Start	End	Start	End	Start	End
21	2	2	51	12						
22	2	2	17	46						
31	3	3	29	2						
32	3	3	7	24						
41	4	4	5	29						
42	4	4	34	0						
51	5	5	47	1						
52	5	5	6	42						

Run Summary

Analysis Set Used	Run Start Time	Run Finish Time	Modelling Start Time (HH:mm)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	Link With Highest DOS	Number Of Oversaturated Links	Percentage Of Oversaturated Links (%)	Network Within Capacity
Analysis Set 4 - 2023 Base Case weekday pm peak hour	19/06/2009 09:07:59	19/06/2009 09:07:59	17:00:00	54	207.65	126	51	6	43	

Link Results

Link ID	Major Link	Calculated Flow Into Link (PCU/hr)	Calculated Sat Flow (PCU/hr)	Degree Of Saturation (%)	MEAN TIMES		DELAY			STOPS		QUEUES		P.I.
					Mean Cruise Time Per PCU (s)	Mean Delay Per PCU (s)	Uniform Delay (PCU-hr/hr)	Random Plus Oversat Delay (PCU-hr/hr)	Weighted Cost Of Delay (£ per hr)	Mean Stops Per PCU (%)	Weighted Cost Of Stops (£ per hr)	Mean Max Queue (PCU)	Average Limit Excess Queue (PCU)	P.I. (£ per hr)
21		1292	4020	108 !	17.00	179.28	8.15	56.19	913.66	244	81.07	76	0.00	994.73
22	(22)	1316	3829	83	6.00	7.12	0.86	1.75	36.94	29	6.89	14	2.71	1397.90
23	22	439 <	(3829)	(83)	6.00	21.89	2.09	0.58	37.92	86	8.60	(14)	(0.00)	46.52
31		1666	3924	82	17.00	15.70	5.03	2.23	103.19	85	36.45	23	0.00	139.65
32	(32)	534 <	3850	88	11.00	16.37	0.76	1.66	34.46	74	7.72	19	0.00	42.19
33	32	439 <	(3850)	(88)	11.00	42.46	3.81	1.37	73.56	95	9.48	(19)	(0.00)	83.04
34	32	157 <	(3850)	(88)	11.00	16.37	0.22	0.49	10.15	74	2.28	(19)	(0.00)	12.43
41		1783	4020	96 !	17.00	32.63	6.93	9.23	229.51	121	55.31	35	0.00	284.82
42	(42)	157 <	3924	57	6.00	15.11	0.54	0.12	9.37	95	2.94	7	0.07	82.21
43	42	706	(3924)	(57)	6.00	8.36	1.11	0.53	23.28	32	4.13	(7)	(0.00)	27.42
51		814	3875	126 !	17.00	416.14	7.66	86.44	1336.14	274	57.26	100 +	0.00	1393.40
52	(52)	467	3850	94 !	12.00	11.91	0.12	1.43	21.95	31	2.59	21	0.02	47.15
53	52	706	(3850)	(94) !	12.00	20.33	1.83	2.16	56.63	112	14.31	(21)	(0.00)	70.94
54	52	1316	(3850)	(94) !	12.00	11.91	0.34	4.02	61.84	31	7.31	(21)	(0.00)	69.14

- BL = at least one source for this link carries buses
- TL = at least one source for this link carries trams
- PL = this link is a pedestrian link
- < = adjusted flow warning (upstream links are over-saturated)
- ! = DOS threshold exceeded
- f = average saturation flow for flared link
- * = stops/delay weighting has been set to a value other than 100%
- + = average link excess queue is greater than 0
- P.I. = PERFORMANCE INDEX

Network Totals

	Distance Travelled (PCU-km/hr)	Time Spent (PCU-hr/hr)	Mean Journey Speed (kph)	Uniform Delay (PCU-hr/hr)	Random Plus Oversat Delay (PCU-hr/hr)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Excess Queue Penalty (£ per hr)	TOTAL PERFORMANCE INDEX (£ per hr)
TOTAL	1694.80	249.98	6.78	39.45	168.20	2948.60	296.34	1446.58	4691.54
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER	1694.80	249.98	6.78	39.45	168.20	2948.60	296.34	1446.58	4691.54

Fuel Consumption

Fuel Consumption Cruise (litres/hr)	Fuel Consumption Delay (litres/hr)	Fuel Consumption Stops (litres/hr)	Fuel Consumption Total (litres/hr)
93.16	238.81	135.29	467.23

TRANSYT 13

Version: 13.0.4.53 [03/12/08 - 12:00]
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Last run: 19/06/2009 10:14:26

Analysis Set used for last run: Analysis Set 8 - 2023 Dev't Case weekday pm peak hour

File: Y:\ARDENT PROJECTS\F960 - Fiveways Fruit Farm site, Stanway, Colchester\Transport\TRANSYT\8 Ash Gn Base am.t13

Report generation date: 19/06/2009 10:14:32

Analysis Set 8 - 2023 Dev't Case weekday pm peak hour

Summary

Data Errors and Warnings

Severity	Area	Description
Info	Link Source Data	Link 21: downstream flow apparent loss = 541 (58.45%).
Info	Link Source Data	Link 31: downstream flow apparent loss = 987 (41.7%).
Info	Link Source Data	Link 51: downstream flow apparent loss = 261 (70.37%).

File summary

File Description

Title	A12/A1124 Eight Ash Green interchange (full signalisation)
Location	Stanway
Driving Side	Left
Date	11/06/2009
Status	(new file)
Client	Hills Residential
Jobnumber	F960
Enumerator	ARDENTCE\cbull

Units

Speed Units	Distance Units
kph	m

Sorting

Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
Ascending	Numerical		Normal	Normal

Signal Timings

Stage Timings (TRANSYT 12 timings)

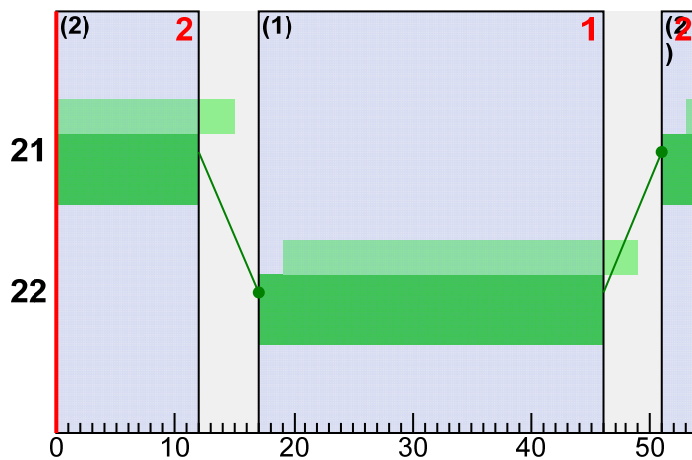
54s cycle time; 54 steps

Node ID	Number of stages	Stage 1	Stage 2
2	2	12	46
3	2	1	24
4	2	0	29
5	2	1	42

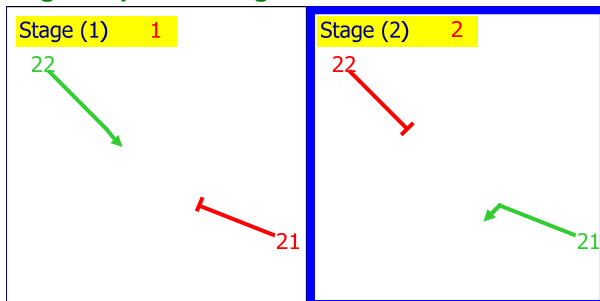
Intergreen Matrix for Node 2

		To	
		21	22
From	21	-	5
	22	5	-

Link Timings Diagram for Node 2



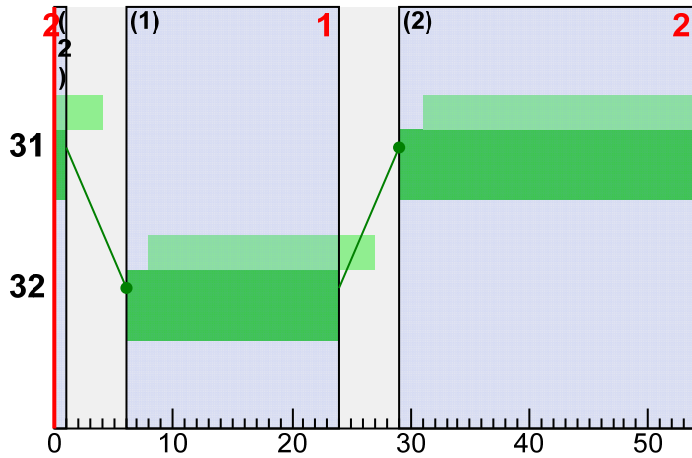
Stage Sequence Diagram for Node 2



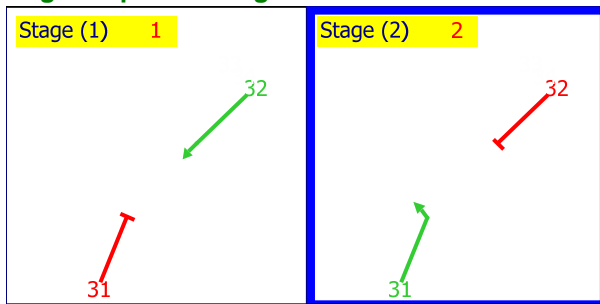
Intergreen Matrix for Node 3

		To	
		31	32
From	31	-	5
	32	5	-

Link Timings Diagram for Node 3



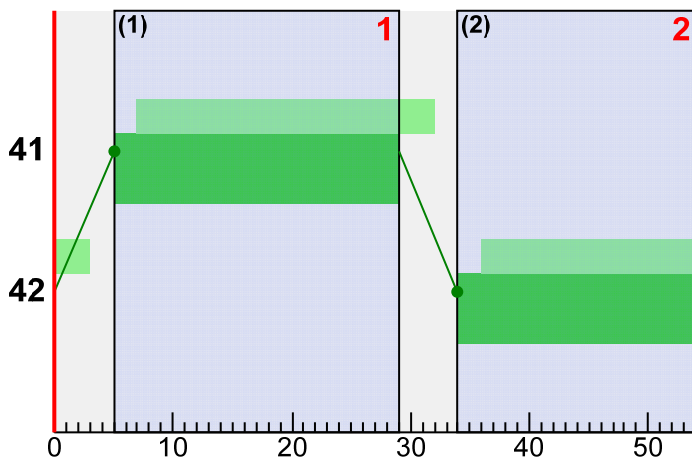
Stage Sequence Diagram for Node 3



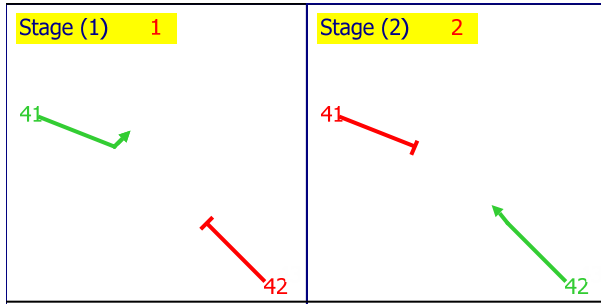
Intergreen Matrix for Node 4

		To	
		41	42
From	41	-	5
	42	5	-

Link Timings Diagram for Node 4



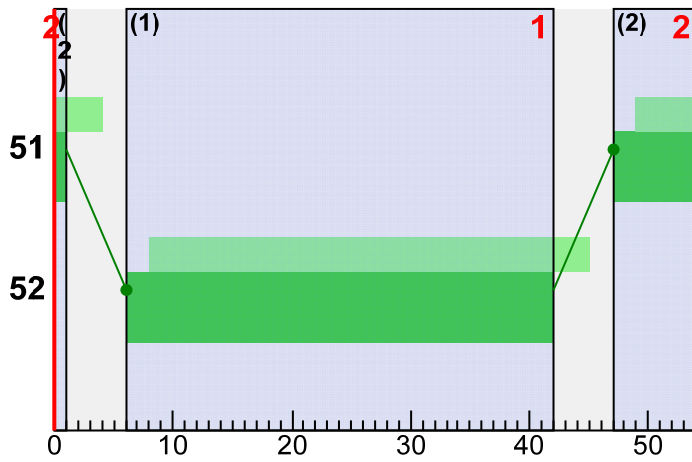
Stage Sequence Diagram for Node 4



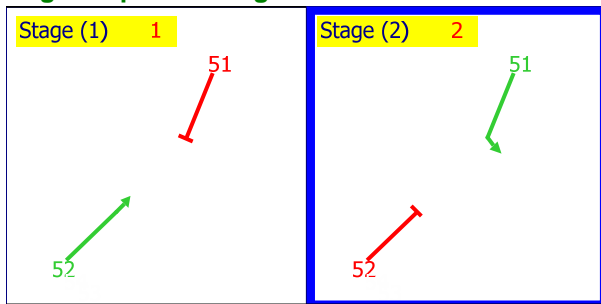
Intergreen Matrix for Node 5

		To	
		51	52
From	51	-	5
	52	5	-

Link Timings Diagram for Node 5



Stage Sequence Diagram for Node 5



Link green times

Link ID	Traffic Node	Signals Node	Green Period 1		Green Period 2		Green Period 3		Green Period 4	
			Start	End	Start	End	Start	End	Start	End
21	2	2	51	12						
22	2	2	17	46						
31	3	3	29	1						
32	3	3	6	24						
41	4	4	5	29						
42	4	4	34	0						
51	5	5	47	1						
52	5	5	6	42						

Run Summary

Analysis Set Used	Run Start Time	Run Finish Time	Modelling Start Time (HH:mm)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	Link With Highest DOS	Number Of Oversaturated Links	Percentage Of Oversaturated Links (%)	Network Within Capacity
Analysis Set 8 - 2023 Dev't Case weekday pm peak hour	19/06/2009 10:14:26	19/06/2009 10:14:26	17:00:00	54	250.65	136	51	6	43	

Link Results

Link ID	Major Link	Calculated Flow Into Link (PCU/hr)	Calculated Sat Flow (PCU/hr)	Degree Of Saturation (%)	MEAN TIMES		DELAY			STOPS		QUEUES		P.I.
					Mean Cruise Time Per PCU (s)	Mean Delay Per PCU (s)	Uniform Delay (PCU-hr/hr)	Random Plus Oversat Delay (PCU-hr/hr)	Weighted Cost Of Delay (£ per hr)	Mean Stops Per PCU (%)	Weighted Cost Of Stops (£ per hr)	Mean Max Queue (PCU)	Average Limit Excess Queue (PCU)	P.I. (£ per hr)
21		1302	4020	109 !	17.00	191.15	8.33	60.80	981.69	248	83.11	81 +	0.00	1064.80
22	(22)	1326	3829	84	6.00	7.62	0.92	1.89	39.88	32	7.64	16	3.16	1626.33
23	22	455 <	(3829)	(84)	6.00	22.40	2.18	0.65	40.18	80	8.95	(16)	(0.00)	49.13
31		1693	3924	86	17.00	18.42	5.58	3.08	122.99	92	40.22	25	0.00	163.20
32	(32)	541 <	3850	85	11.00	13.20	0.68	1.30	28.15	61	6.49	17	0.00	34.64
33	32	455 <	(3850)	(85)	11.00	38.87	3.81	1.10	69.71	85	9.46	(17)	(0.00)	79.17
34	32	157 <	(3850)	(85)	11.00	13.20	0.20	0.38	8.18	61	1.89	(17)	(0.00)	10.07
41		1802	4020	97 !	17.00	36.26	7.07	11.08	257.74	127	58.79	37	0.00	316.53
42	(42)	157 <	3924	57	6.00	15.71	0.57	0.12	9.74	95	2.94	6	0.07	78.78
43	42	708	(3924)	(57)	6.00	8.35	1.11	0.53	23.31	32	4.05	(6)	(0.00)	27.36
51		881	3875	136 !	17.00	525.19	9.10	119.43	1825.08	271	61.43	135 +	0.00	1886.51
52	(52)	472	3850	95 !	12.00	13.07	0.13	1.59	24.33	33	2.81	22	0.06	87.03
53	52	708	(3850)	(95) !	12.00	21.35	1.82	2.38	59.60	114	14.53	(22)	(0.00)	74.13
54	52	1326	(3850)	(95) !	12.00	13.07	0.36	4.46	68.35	33	7.89	(22)	(0.00)	76.25

- BL = at least one source for this link carries buses
- TL = at least one source for this link carries trams
- PL = this link is a pedestrian link
- < = adjusted flow warning (upstream links are over-saturated)
- ! = DOS threshold exceeded
- f = average saturation flow for flared link
- * = stops/delay weighting has been set to a value other than 100%
- + = average link excess queue is greater than 0
- P.I. = PERFORMANCE INDEX

Network Totals

	Distance Travelled (PCU-km/hr)	Time Spent (PCU-hr/hr)	Mean Journey Speed (kph)	Uniform Delay (PCU-hr/hr)	Random Plus Oversat Delay (PCU-hr/hr)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Excess Queue Penalty (£ per hr)	TOTAL PERFORMANCE INDEX (£ per hr)
TOTAL	1725.48	293.74	5.87	41.86	208.79	3558.93	310.20	1704.79	5573.93
BUSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRAMS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER	1725.48	293.74	5.87	41.86	208.79	3558.93	310.20	1704.79	5573.93

Fuel Consumption

Fuel Consumption Cruise (litres/hr)	Fuel Consumption Delay (litres/hr)	Fuel Consumption Stops (litres/hr)	Fuel Consumption Total (litres/hr)
94.81	288.23	141.61	524.66