

TRL VIEWER 3.1 AD i:\... \Seelshield Way - A41 East - Gravenhill Road North - A41 West - B4100 London Road P.

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	I	I	I	I	I	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	A	I	726.7	I 484.5	I 43.0	I 0.06	I 43.0	I 0.06
I	B	I	1896.4	I 1264.3	I 209.1	I 0.11	I 209.1	I 0.11
I	C	I	108.3	I 72.2	I 13.8	I 0.13	I 13.8	I 0.13
I	D	I	1539.9	I 1026.6	I 149.9	I 0.10	I 149.9	I 0.10
I	E	I	895.4	I 596.9	I 79.3	I 0.09	I 79.3	I 0.09
I	ALL	I	5166.7	I 3444.5	I 495.1	I 0.10	I 495.1	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 JOB

*** ARCADY 6 run completed.

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

[Printed at 15:21:27 on 02/09/2010]

TRL TRL VIEWER 3.1 AD i:\.. \2010 adj Seelshield Way - A41 East - Gravenhill Road North - A41 West - B4100 London Road AM Peak.nc

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"i:\18578-01-X Gavray Drive, Bicester\3. Project\3.2 Analysis\Junction Capacity Tests\Old TA Reproduced TA\PCU\
Copy of Seelshield Way\
2010 adj Seelshield Way - A41 East - Gravenhill Road North - A41 West - B4100 London Road AM Peak.vai"
(drive-on-the-left) at 14:51:00 on Thursday, 2 September 2010

FILE PROPERTIES

RUN TITLE: Seelshield Way/A41 East/Gravenhill Road North/A41 West/B4100 London Road AM Peak
LOCATION: Bicester
DATE: 13/07/10
CLIENT: JJ Gallagher Ltd
ENUMERATOR: Alexanders [CS5DG3J]
JOB NUMBER: 18578-01-1
STATUS: TIA
DESCRIPTION:

INPUT DATA

ARM A - Seelshield Way
ARM B - A41 East
ARM C - Gravenhill Road North
ARM D - A41 West
ARM E - B4100 London Road

RL TRL VIEWER 3.1 AD i:\.. \2010 adj Seelshield Way - A41 East - Gravenhill Road North - A41 West - B4100 Lond

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	7.00	I	7.00	I	0.00	I	20.00	I	70.00	I	31.0	I	0.570	I	30.227	I *
I ARM B	I	5.25	I	8.50	I	20.00	I	20.00	I	70.00	I	31.0	I	0.588	I	37.181	I
I ARM C	I	3.50	I	7.00	I	5.00	I	20.00	I	70.00	I	20.0	I	0.472	I	23.933	I
I ARM D	I	5.00	I	9.00	I	20.00	I	20.00	I	70.00	I	42.0	I	0.568	I	36.003	I
I ARM E	I	7.00	I	7.00	I	0.00	I	20.00	I	70.00	I	39.0	I	0.554	I	34.246	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

WARNING One or more intercept values (flagged * in the table) have been adjusted according to local values input from a previous run and listed below -

I	I	ADJUSTMENT TO	I
I	I	INTERCEPT (PCU/MIN)	I
I	A I	-5.000	I

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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
I E	I	100	I

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DL J FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: 2010 AM Peak

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 IF FALLING	I	PEAK I OF PEAK I PEAK I	I
I ARM A	I	15.00 I 45.00 I 75.00	I	12.18 I 18.26 I 12.18	I
I ARM B	I	15.00 I 45.00 I 75.00	I	12.45 I 18.67 I 12.45	I
I ARM C	I	15.00 I 45.00 I 75.00	I	0.50 I 0.75 I 0.50	I
I ARM D	I	15.00 I 45.00 I 75.00	I	12.31 I 18.47 I 12.31	I
I ARM E	I	15.00 I 45.00 I 75.00	I	8.40 I 12.60 I 8.40	I

DEMAND SET TITLE: 2010 AM Peak

TRL

TRL VIEWER

3.1 AD 1:\... \2010 adj Seelshield Way - A41 East - Gravenhill Road North - A41 West - B410 and

TIME	TURNING PROPORTIONS TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S)									
	FROM/TO	ARM A	ARM B	ARM C	ARM D	ARM E				
07.45 - 09.15	ARM A	0.000	0.424	0.004	0.477	0.094				
		0.0	413.0	4.0	465.0	92.0				
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)				
	ARM B	0.142	0.000	0.016	0.605	0.237				
		141.0	0.0	16.0	603.0	236.0				
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)				
	ARM C	0.175	0.600	0.000	0.225	0.000				
		7.0	24.0	0.0	9.0	0.0				
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)				
	ARM D	0.241	0.578	0.026	0.000	0.155				
		237.0	569.0	26.0	0.0	153.0				
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)				
	ARM E	0.092	0.571	0.015	0.321	0.000				
		62.0	384.0	10.0	216.0	0.0				
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)				

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

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)
07.45-08.00									
ARM A	12.18	21.50	0.566		0.0	1.3	18.3		
ARM B	12.45	31.24	0.399		0.0	0.7	9.6		
ARM C	0.50	13.63	0.037		0.0	0.0	0.6		
ARM D	12.31	32.47	0.379		0.0	0.6	8.9		
ARM E	8.40	27.32	0.307		0.0	0.4	6.5		

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)
08.00-08.15									
ARM A	14.54	19.79	0.735		1.3	2.6	36.7		
ARM B	14.87	30.08	0.494		0.7	1.0	14.2		
ARM C	0.60	11.61	0.051		0.0	0.1	0.8		
ARM D	14.70	31.77	0.463		0.6	0.9	12.6		
ARM E	10.03	25.95	0.386		0.4	0.6	9.2		

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)
08.15-08.30									
ARM A	17.81	17.45	1.020		2.6	19.0	185.4		
ARM B	18.21	28.81	0.632		1.0	1.7	24.3		
ARM C	0.73	9.12	0.080		0.1	0.1	1.3		
ARM D	18.01	30.88	0.583		0.9	1.4	20.1		
ARM E	12.28	24.10	0.510		0.6	1.0	15.0		

1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

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1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805 2806 2807 2808 2809 2810 2811 2812 2813 2814 2815 2816 2817

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TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.0	*
08.30	1.7	**
08.45	1.7	**
09.00	1.0	*
09.15	0.7	*

TRL TRL VIEWER 3.1 AD i:\... \2010 adj Seelshield Way - A41 East - Gravenhill Road North - A41 West - B410. and

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES 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 AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.6 *
08.15	0.9 *
08.30	1.4 *
08.45	1.4 *
09.00	0.9 *
09.15	0.6 *

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.4
08.15	0.6 *
08.30	1.0 *
08.45	1.0 *
09.00	0.6 *
09.15	0.4

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	1335.6	I	890.4	I	745.4	I	0.56	I
I	B	I	1365.7	I	910.5	I	100.0	I	0.07	I
I	C	I	54.8	I	36.6	I	5.4	I	0.10	I
I	D	I	1350.6	I	900.4	I	85.2	I	0.06	I
I	E	I	921.5	I	614.3	I	62.7	I	0.07	I
I	ALL	I	5028.2	I	3352.2	I	998.7	I	0.20	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
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 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

***** ARCADY 6 run completed.

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

[Printed at 14:52:28 on 02/09/2010]

Appendix C

Junction Capacity Tests – 2016 Baseline Scenario

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)

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Run with file:-

"I:\18578-01-X_Gavray Drive, Bicester\3. Project\3.2 Analysis\Junction Capacity Tests\Old TA Reproduced TA\PCU\
Copy of Gavray - Mallards\Gavray Mallards.vpi"
(drive-on-the-left) at 12:59:55 on Thursday, 2 September 2010

RUN INFORMATION

RUN TITLE: Gavray Drive - Mallards
LOCATION: Bicester
DATE: 13/07/10
CLIENT: JJ Gallagher
ENUMERATOR: Alexanders [CS5DG3J]
JOB NUMBER: 18578-01-1
STATUS: TIA
DESCRIPTION:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS Gavray Drive East
ARM B IS Mallards Lane
ARM C IS Gavray Drive 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) 9.10 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) 130.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 90.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 85.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C)	I
I	- LANE 2 WIDTH	I	(WB-A)	I
I	- WIDTH AT 0 M FROM JUNC.	I	10.00 M.	I
I	- WIDTH AT 5 M FROM JUNC.	I	5.50 M.	I
I	- WIDTH AT 10 M FROM JUNC.	I	5.00 M.	I
I	- WIDTH AT 15 M FROM JUNC.	I	4.00 M.	I
I	- WIDTH AT 20 M FROM JUNC.	I	4.00 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	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	623.19		0.21		0.08	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	Stream B-A	Stream	A-C	Stream	A-B	Stream	C-A	I
I	505.60		0.20		0.08		0.13	I
							0.29	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	Stream C-B	Stream	A-C	Stream	A-B	I
I	649.25		0.22		0.22	I

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND 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)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15					0.00	0.00	0.1		
B-C	0.04	9.75	0.005						
B-A	0.97	10.45	0.093		0.08	0.10	1.5		
C-A	0.15								
C-B	0.07	10.68	0.007		0.01	0.01	0.1		
A-B	0.51								
A-C	0.12								

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)
08.15-08.30					0.00	0.01	0.1		
B-C	0.06	9.67	0.006						
B-A	1.19	10.43	0.114		0.10	0.13	1.9		
A	0.18								
C-B	0.09	10.65	0.009		0.01	0.01	0.1		
B	0.62								
A-C	0.15								

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)
08.30-08.45					0.01	0.01	0.1		
B-C	0.06	9.67	0.006						
B-A	1.19	10.43	0.114		0.13	0.13	1.9		
C-A	0.18								
C-B	0.09	10.65	0.009		0.01	0.01	0.1		
A-B	0.62								
A-C	0.15								

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)
45-09.00					0.01	0.00	0.1		
B-C	0.04	9.75	0.005						
B-A	0.97	10.45	0.093		0.13	0.10	1.6		
C-A	0.15								
C-B	0.07	10.68	0.007		0.01	0.01	0.1		
A-B	0.51								
A-C	0.12								

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)
09.00-09.15					0.00	0.00	0.1		
B-C	0.04	9.80	0.004						
B-A	0.82	10.48	0.078		0.10	0.09	1.3		
C-A	0.13								
C-B	0.06	10.71	0.006		0.01	0.01	0.1		
A-B	0.43								
A-C	0.10								

TRL

TRL VIEWER

3.1 AD I:\... \Copy of Gavray - Mallards\Gavray Mallards.vpo - Page 5

QUEUE FOR STREAM B-C

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 B-A

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-B

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	STREAM	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	B-C	I	4.1	I 2.8	I 0.4	I 0.10	I 0.4	I 0.10
I	B-A	I	89.5	I 59.6	I 9.4	I 0.11	I 9.4	I 0.11
I	C-A	I	13.8	I 9.2	I	I	I	I
I	C-B	I	6.9	I 4.6	I 0.6	I 0.09	I 0.6	I 0.09
I	A-B	I	46.8	I 31.2	I	I	I	I
I	A-C	I	11.0	I 7.3	I	I	I	I
I	ALL	I	172.1	I 114.7	I 10.5	I 0.06	I 10.5	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.
 * T. 2 WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.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	623.19	0.21	0.08	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	505.60	0.20	0.08	0.13	0.29	I

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	Stream C-B	Stream A-C	Stream A-B	I
I	649.25	0.22	0.22	I

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND 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)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15					0.01	0.01	0.2		
B-C	0.10	10.03	0.010		0.05	0.06	0.9		
B-A	0.61	10.18	0.060						
C-A	0.19				0.00	0.01	0.1		
C-B	0.06	10.45	0.006						
A-B	1.48								
A-C	0.24								

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					0.01	0.01	0.2		
B-C	0.13	9.96	0.013		0.06	0.08	1.2		
B-A	0.75	10.12	0.074						
A	0.24				0.01	0.01	0.1		
C-B	0.07	10.36	0.007						
-B	1.82								
A-C	0.29								

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					0.01	0.01	0.2		
B-C	0.13	9.96	0.013		0.08	0.08	1.2		
B-A	0.75	10.12	0.074						
C-A	0.24				0.01	0.01	0.1		
C-B	0.07	10.36	0.007						
A-B	1.82								
A-C	0.29								

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					0.01	0.01	0.2		
B-C	0.10	10.03	0.010		0.08	0.06	1.0		
B-A	0.61	10.18	0.060						
C-A	0.19				0.01	0.01	0.1		
C-B	0.06	10.45	0.006						
A-B	1.48								
A-C	0.24								

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)
18.00-18.15					0.01	0.01	0.1		
B-C	0.09	10.09	0.009		0.06	0.05	0.8		
B-A	0.51	10.22	0.050						
C-A	0.16				0.01	0.00	0.1		
C-B	0.05	10.51	0.005						
A-B	1.24								
A-C	0.20								

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	0.1
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1

QUEUE FOR STREAM C-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

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-C	I	9.6	I	6.4	I	1.0	I
I	B-A	I	56.4	I	37.6	I	5.9	I
I	C-A	I	17.9	I	11.9	I	0.10	I
I	C-B	I	5.5	I	3.7	I	0.10	I
I	A-B	I	136.3	I	90.8	I	0.5	I
I	A-C	I	22.0	I	14.7	I	0.10	I
I	ALL	I	247.8	I	165.2	I	7.4	I
							0.03	

- * 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

***** PICADY 5 run completed.

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

[Printed at 13:00:52 on 02/09/2010]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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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:-
"i:\18578-01-X_Gavray Drive, Bicester\3. Project\3.2 Analysis\Junction Capacity Tests\Old TA Reproduced TA\PCU\
Copy of Wretchwick - Gavray Drive - Charbridge\Wretchwick - Gavray Drive - Charbridge AM Peak REV.vai"
(drive-on-the-left) at 13:50:51 on Thursday, 2 September 2010

FILE PROPERTIES

RUN TITLE: Wretchwick - Gavray Drive - Charbridge AM Peak
LOCATION: Bicester
DATE: 13/07/10
CLIENT: JJ Gallagher
ENUMERATOR: Alexanders [CS5DG3J]
JOB NUMBER: 18578-01-1
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Wretchwick
ARM - Gavray Drive
ARM - Charbridge

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	6.00	I	8.00	I	15.00	I	20.00	I	45.00	I	49.0	I	0.685	I	34.915	I
I	ARM B	I	3.50	I	7.00	I	10.00	I	20.00	I	45.00	I	44.0	I	0.571	I	24.749	I
I	ARM C	I	5.75	I	7.00	I	10.00	I	35.00	I	45.00	I	34.0	I	0.694	I	33.784	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)

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 TURNING COUNT DATA

DEMAND SET TITLE: 2016+CD Wretchwick - Gavray Drive - Charbridge AM Peak

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	7.70	I	11.55	I	7.70	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	0.95	I	1.42	I	0.95	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	9.68	I	14.51	I	9.68	I

DEMAND SET TITLE: 2016+CD Wretchwick - Gavray Drive - Charbridge AM Peak

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I
I	07.45 - 09.15	I	ARM A	I	0.000	I	0.037	I	0.963	I
I		I		I	0.0	I	23.0	I	593.0	I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I	ARM B	I	0.500	I	0.000	I	0.500	I
I		I		I	38.0	I	0.0	I	38.0	I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I	ARM C	I	0.978	I	0.022	I	0.000	I
I		I		I	757.0	I	17.0	I	0.0	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

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
I	07.45-08.00	I		I		I		I		I		I		I		I		I		I
I	ARM A	I	7.70	I	34.77	I	0.221	I		I	0.0	I	0.3	I	4.2	I		I		I
I	ARM B	I	0.95	I	20.52	I	0.046	I		I	0.0	I	0.0	I	0.7	I		I		I
I	ARM C	I	9.68	I	33.46	I	0.289	I		I	0.0	I	0.4	I	6.0	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)
08.00-08.15					0.3	0.4	5.3		
ARM A	9.19	34.74	0.265		0.0	0.1	0.9		
ARM B	1.13	19.69	0.058		0.4	0.5	7.8		
ARM C	11.55	33.39	0.346						

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)
08.15-08.30					0.4	0.5	7.1		
ARM A	11.26	34.70	0.325		0.1	0.1	1.2		
ARM B	1.39	18.56	0.075		0.5	0.7	10.8		
ARM C	14.15	33.30	0.425						

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)
08.30-08.45					0.5	0.5	7.2		
ARM A	11.26	34.70	0.325		0.1	0.1	1.2		
ARM B	1.39	18.55	0.075		0.7	0.7	11.0		
ARM C	14.15	33.30	0.425						

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)
08.45-09.00					0.5	0.4	5.5		
ARM A	9.19	34.74	0.265		0.1	0.1	0.9		
ARM B	1.13	19.69	0.058		0.7	0.5	8.1		
ARM C	11.55	33.39	0.346						

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)
09.00-09.15					0.4	0.3	4.3		
ARM A	7.70	34.77	0.221		0.1	0.0	0.7		
ARM B	0.95	20.51	0.046		0.5	0.4	6.2		
ARM C	9.68	33.45	0.289						

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	0.0
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

QUEUE AT ARM C

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING *	* INCLUSIVE QUEUEING *
		* DELAY *	* DELAY *
	(VEH) (VEH/H)	(MIN) (MIN/VEH)	(MIN) (MIN/VEH)
A	844.7 563.1	33.6 0.04	33.6 0.04
B	104.2 69.5	5.7 0.05	5.7 0.05
C	1061.3 707.5	49.9 0.05	49.9 0.05
ALL	2010.2 1340.1	89.2 0.04	89.2 0.04

* 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

***** ARCADY 6 run completed.

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

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Nine Mile Ride Email: softwarebureau@trl.co.uk
Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA, UK

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"i:\18578-01-X Gavray Drive, Bicester\3. Project\3.2 Analysis\Junction Capacity Tests\Old TA Reproduced TA\PCU\
Copy of Wretchwick - Gavray Drive - Charbridge\Wretchwick - Gavray Drive - Charbridge PM Peak.vai"
(drive-on-the-left) at 13:57:56 on Thursday, 2 September 2010

FILE PROPERTIES

RUN TITLE: Wretchwick - Gavray Drive - Charbridge PM Peak
LOCATION: Bicester
DATE: 13/07/10
CLIENT: JJ Gallagher
ENUMERATOR: Alexanders [CS5DG3J]
JOB NUMBER: 18578-01-1
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Wretchwick
ARM B - Gavray Drive
ARM C - Charbridge

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	6.00	I	8.00	I	15.00	I	20.00	I	45.00	I	49.0	I	0.685	I	34.915	I
I	ARM B	I	3.50	I	7.00	I	10.00	I	20.00	I	45.00	I	44.0	I	0.571	I	24.749	I
I	ARM C	I	5.75	I	7.00	I	10.00	I	35.00	I	45.00	I	34.0	I	0.694	I	33.784	I

V = approach half-width
E = entry width

L = effective flare length
R = entry radius

D = inscribed circle diameter
PHI = entry angle

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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 TURNING COUNT DATA

DEMAND SET TITLE: 2016+CD Wretchwick - Gavray Drive - Charbridge PM Peak

DEMAND SET TITLE: 2016+CD Wretchwick - Gavray Drive - Charbridge PM Peak

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

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									
ARM A	9.85	34.50	0.285		0.0	0.4	5.9		
ARM B	0.65	19.63	0.033		0.0	0.0	0.5		
ARM C	8.49	33.55	0.253		0.0	0.3	5.0		

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					0.4	0.5	7.6		
ARM A	11.76	34.42	0.342		0.0	0.0	0.6		
ARM B	0.78	18.62	0.042		0.3	0.4	6.4		
ARM C	10.13	33.50	0.302						

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					0.5	0.7	10.6		
ARM A	14.41	34.31	0.420		0.0	0.1	0.9		
ARM B	0.95	17.24	0.055		0.4	0.6	8.7		
ARM C	12.41	33.44	0.371						

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					0.7	0.7	10.8		
ARM A	14.41	34.31	0.420		0.1	0.1	0.9		
ARM B	0.95	17.24	0.055		0.6	0.6	8.8		
ARM C	12.41	33.44	0.371						

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					0.7	0.5	7.9		
ARM A	11.76	34.42	0.342		0.1	0.0	0.7		
ARM B	0.78	18.61	0.042		0.6	0.4	6.6		
ARM C	10.13	33.50	0.302						

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					0.5	0.4	6.1		
ARM A	9.85	34.50	0.285		0.0	0.0	0.5		
ARM B	0.65	19.61	0.033		0.4	0.3	5.2		
ARM C	8.49	33.55	0.253						

QUEUE AT ARM A

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 AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.1
17.45	0.1
18.00	0.0
18.15	0.0

QUEUE AT ARM C

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

ARM	TOTAL DEMAND	* QUEUEING *	* INCLUSIVE QUEUEING *
		* DELAY *	* DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
A	1080.5	49.0	0.05
B	71.3	4.1	0.06
C	931.1	40.7	0.04
ALL	2082.9	93.7	0.04

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
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 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

***** ARCADY 6 run completed.

end of file

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)

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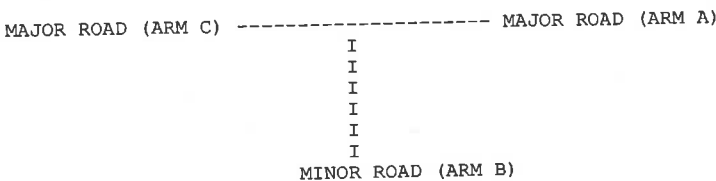
Run th file:-
"I:\18578-01-X Gavray Drive, Bicester\3. Project\3.2 Analysis\Junction Capacity Tests\Old TA Reproduced TA\PCU\
Copy of Wretchwick - Peregrine Priority\Wretchwick Pergrine Priority.vpi"
(drive-on-the-left) at 13:07:19 on Thursday, 2 September 2010

RUN INFORMATION

RUN TITLE: Wretchwick Way - Peregrine Way
LOCATION: Bicester
DATE: 13/07/10
CLIENT: JJ Gallagher
ENUMERATOR: Alexanders [CS5DG3J]
JOB NUMBER: 18578-01-1
STATUS: TIA
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Wretchwick Way SW
ARM B IS Peregrine Way
ARM C IS Wretchwick Way NE

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) 12.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 3.20 M.	I
I	- VISIBILITY	I	(VC-B) 120.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 65.0 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 JUNC.	I	10.00 M.	I
I	- WIDTH AT 5 M FROM JUNC.	I	9.00 M.	I
I	- WIDTH AT 10 M FROM JUNC.	I	6.50 M.	I
I	- WIDTH AT 15 M FROM JUNC.	I	6.00 M.	I
I	- WIDTH AT 20 M FROM JUNC.	I	6.00 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	I
I	643.46	0.18	0.07	I

I	Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I	513.92	0.17	0.07	0.11	0.25	I

I	Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	I
I	713.49	0.20	0.20	I

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

Demand set: 2016+CD Wretchwick Way - Peregrine Way

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 TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
A	15.00	45.00	75.00	6.28	9.41	6.28
B	15.00	45.00	75.00	3.00	4.50	3.00
C	15.00	45.00	75.00	9.94	14.91	9.94

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.060	0.940
		0.0	30.0	472.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.358	0.000	0.642
		86.0	0.0	154.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.886	0.114	0.000
		704.0	91.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)
07.45-08.00									
B-C	1.93	11.36	0.170		0.00	0.20	3.0		
B-A	1.08	6.87	0.157		0.00	0.18	2.6		
C-A	8.83				0.00	0.12	1.7		
C-B	1.14	10.60	0.108						
A-B	0.38								
A-C	5.92								

QUEUE FOR STREAM B-C

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

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.2
08.30	0.4
08.45	0.4
09.00	0.3
09.15	0.2

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING *		* INCLUSIVE QUEUEING *	
			* DELAY *		* DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	212.0	141.3	25.1	0.12	25.1	0.12
B-A	118.4	78.9	24.6	0.21	24.6	0.21
C-A	969.0	646.0				
C-B	125.3	83.5	14.1	0.11	14.1	0.11
A-B	41.3	27.5				
A-C	649.7	433.1				
ALL	2115.6	1410.4	63.8	0.03	63.8	0.03

- * 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

SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
643.46	0.18	0.07

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
513.92	0.17	0.07	0.11	0.25

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
713.49	0.20	0.20

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND 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)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	2.31	11.11	0.208		0.20	0.26	3.8		
B-A	0.52	5.47	0.096		0.08	0.10	1.5		
C-A	7.61								
C-B	2.25	9.46	0.238		0.23	0.31	4.5		
A-B	2.19								
A-C	9.71								

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	2.83	10.42	0.271		0.26	0.37	5.4		
B-A	0.64	4.68	0.137		0.10	0.16	2.3		
C-A	9.32								
C-B	2.75	8.92	0.309		0.31	0.44	6.4		
A-B	2.68								
A-C	11.89								

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	2.83	10.42	0.271		0.37	0.37	5.5		
B-A	0.64	4.68	0.137		0.16	0.16	2.4		
C-A	9.32								
C-B	2.75	8.92	0.309		0.44	0.44	6.6		
A-B	2.68								
A-C	11.89								

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	2.31	11.11	0.208		0.37	0.26	4.1		
B-A	0.52	5.47	0.096		0.16	0.11	1.7		
C-A	7.61								
C-B	2.25	9.46	0.238		0.44	0.32	4.9		
A-B	2.19								
A-C	9.71								

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	1.93	11.59	0.167		0.26	0.20	3.1		
B-A	0.44	6.04	0.073		0.11	0.08	1.2		
C-A	6.37								
C-B	1.88	9.86	0.191		0.32	0.24	3.7		
A-B	1.83								
A-C	8.13								

QUEUE FOR STREAM B-C

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 B-A

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

QUEUE FOR STREAM C-B

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	STREAM	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	B-C	I	212.0	I 141.3	I 24.8	I 0.12	I 24.8	I 0.12
I	B-A	I	48.2	I 32.1	I 10.1	I 0.21	I 10.1	I 0.21
I	C-A	I	699.2	I 466.1	I	I	I	I
I	B	I	206.5	I 137.6	I 29.4	I 0.14	I 29.4	I 0.14
I	B	I	201.0	I 134.0	I	I	I	I
I	C	I	891.9	I 594.6	I	I	I	I
I	ALL	I	2258.7	I 1505.8	I 64.3	I 0.03	I 64.3	I 0.03

* 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

***** PICADY 5 run completed. end of file =====

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-

"i:\18578-01-X Gavray Drive, Bicester\3. Project\3.2 Analysis\Junction Capacity Tests\Old TA Reproduced TA\PCU\
Copy of Peregrine Way - Wretchwick Way\Peregrine Way - Wretchwick Way AM Peak.vai"
(drive-on-the-left) at 14:14:11 on Thursday, 2 September 2010

FILE PROPERTIES

RUN TITLE: Peregrine Way/Wretchwick Way AM Peak
LOCATION: Bicester
DATE: 13/07/10
CLIENT: JJ Gallagher
ENUMERATOR: Alexanders [CS5DG3J]
JOB NUMBER: 18578-01-1
STATUS: TIA
DESCRIPTION:

INPUT DATA

ARM A - Neunkirchen Way
ARM B - Peregrine Way
ARM C - Wretchwick Way North

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	7.00	I	10.00	I	10.00	I	45.00	I	49.00	I	31.0	I	0.800	I	44.100	I
I	ARM B	I	3.00	I	7.00	I	8.00	I	60.00	I	50.00	I	17.0	I	0.590	I	24.700	I
I	ARM C	I	5.50	I	8.00	I	10.00	I	35.00	I	50.00	I	38.0	I	0.677	I	34.552	I

V = approach half-width
E = entry width

L = effective flare length
R = entry radius

D = inscribed circle diameter
PHI = entry angle

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

RL

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 TURNING COUNT DATA

DEM SET TITLE: 2016+CD Peregrine Way/Wretchwick Way AM Peak

I	ARM	I	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)				I		
			I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE		I	AT TOP
I		I	TO RISE	I	IS REACHED	I	IF FALLING	I	PEAK	I	OF PEAK	I	PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	6.55	I	9.83	I	6.55
I	ARM B	I	15.00	I	45.00	I	75.00	I	5.51	I	8.27	I	5.51
I	ARM C	I	15.00	I	45.00	I	75.00	I	9.88	I	14.81	I	9.88

DEMAND SET TITLE: 2016+CD Peregrine Way/Wretchwick Way AM Peak

TIME		TURNING PROPORTIONS TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S)			
FROM/TO	ARM A	ARM B	ARM C		
07.45 - 09.15	ARM A	0.000	0.189	0.811	
		0.0	99.0	425.0	
		(0.0)	(0.0)	(0.0)	
	ARM B	0.832	0.000	0.168	
		367.0	0.0	74.0	
		(0.0)	(0.0)	(0.0)	
	ARM C	0.967	0.033	0.000	
		764.0	26.0	0.0	
		(0.0)	(0.0)	(0.0)	

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

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	07.45-08.00					0.0	0.2	2.6			I
I	ARM A	6.55	43.84	0.149		0.0	0.3	5.0			I
I	ARM B	5.51	21.57	0.256		0.0	0.5	6.7			I
I	ARM C	9.88	31.46	0.314							I

TRL

TRL VIEWER

3.1 AD i:\... \Copy of Peregrine Way - Wretchwick Way\Peregrine Way - Wretchwick Way AM Pea' 30

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	ARM A	7.82	43.79	0.179		0.2	0.2	3.2			I
I	ARM B	6.58	20.96	0.314		0.3	0.5	6.7			I
I	ARM C	11.79	30.85	0.382		0.5	0.6	9.1			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	ARM A	9.58	43.72	0.219		0.2	0.3	4.2			I
I	ARM B	8.06	20.12	0.401		0.5	0.7	9.7			I
I	ARM C	14.44	30.02	0.481		0.6	0.9	13.5			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	ARM A	9.58	43.72	0.219		0.3	0.3	4.2			I
I	ARM B	8.06	20.12	0.401		0.7	0.7	10.0			I
I	ARM C	14.44	30.01	0.481		0.9	0.9	13.8			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	ARM A	7.82	43.79	0.179		0.3	0.2	3.3			I
I	ARM B	6.58	20.96	0.314		0.7	0.5	7.1			I
I	ARM C	11.79	30.83	0.382		0.9	0.6	9.5			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	6.55	43.84	0.149		0.2	0.2	2.7			I
I	ARM B	5.51	21.57	0.256		0.5	0.3	5.3			I
I	ARM C	9.88	31.44	0.314		0.6	0.5	7.0			I

QUEUE AT ARM A

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

TRL VIEWER 3.1 AD i:\..\Copy of Peregrine Way - Wretchwick Way\Peregrine Way - Wretchwick Way AM Peak.vao

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.3
08.15	0.5
08.30	0.7 *
08.45	0.7 *
09.00	0.5
09.15	0.3

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
0 0	0.5
0 15	0.6 *
0 30	0.9 *
0 45	0.9 *
09.00	0.6 *
09.15	0.5

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	(MIN)	I	(MIN)	I
I		I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	A	I	718.5	I	479.0	I	20.2	I
I	B	I	604.7	I	403.1	I	43.7	I
I	C	I	1083.3	I	722.2	I	59.6	I
I	ALL	I	2406.5	I	1604.3	I	123.5	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

***** ARCADY 6 run completed.

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

[Printed at 14:15:05 on 02/09/2010]

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-

"i:\18578-01-X_Gavray Drive, Bicester\3. Project\3.2 Analysis\Junction Capacity Tests\Old TA Reproduced TA\PCU\
Copy of Peregrine Way - Wretchwick Way\Peregrine Way - Wretchwick Way PM Peak GEOM CHANGE.vai"
(drive-on-the-left) at 14:33:51 on Thursday, 2 September 2010

FILE PROPERTIES

RUN TITLE: Peregrine Way/Wretchwick Way AM Peak
LOCATION: Bicester
DATE: 13/07/10
CLIENT: JJ Gallagher
ENUMERATOR: Alexanders [CS5DG3J]
JOB NUMBER: 18578-01-1
STATUS: TIA
DESCRIPTION:

INPUT DATA

ARM A - Neunkirchen Way
ARM B - Peregrine Way
ARM C - Wretchwick Way North

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	7.00	I	10.00	I	10.00	I	45.00	I	50.00	I	31.0	I	0.794	I	44.100	I
I	ARM B	I	3.00	I	7.00	I	8.00	I	60.00	I	50.00	I	17.0	I	0.590	I	24.700	I
I	ARM C	I	5.50	I	8.00	I	10.00	I	35.00	I	50.00	I	38.0	I	0.677	I	34.552	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)

RL

I

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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									
ARM A	16.55	43.29	0.382		0.5	0.6	9.1		
ARM B	3.06	18.06	0.169		0.2	0.2	3.0		
ARM C	8.30	32.84	0.253		0.3	0.3	5.0		

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									
ARM A	20.27	43.11	0.470		0.6	0.9	13.0		
ARM B	3.75	16.57	0.226		0.2	0.3	4.3		
ARM C	10.16	32.45	0.313		0.3	0.5	6.7		

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									
ARM A	20.27	43.11	0.470		0.9	0.9	13.3		
ARM B	3.75	16.56	0.226		0.3	0.3	4.4		
ARM C	10.16	32.45	0.313		0.5	0.5	6.8		

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									
ARM A	16.55	43.29	0.382		0.9	0.6	9.5		
ARM B	3.06	18.05	0.170		0.3	0.2	3.1		
ARM C	8.30	32.83	0.253		0.5	0.3	5.2		

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)
18.00-18.15									
ARM A	13.86	43.42	0.319		0.6	0.5	7.1		
ARM B	2.56	19.13	0.134		0.2	0.2	2.4		
ARM C	6.95	33.11	0.210		0.3	0.3	4.0		

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5
17.15	0.6 *
17.30	0.9 *
17.45	0.9 *
18.00	0.6 *
18.15	0.5

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES 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

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.3
17.30	0.5
17.45	0.5
18.00	0.3
18.15	0.3

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
A	1520.7	58.9	0.04
B	281.1	19.4	0.07
C	762.4	31.6	0.04
ALL	2564.2	110.0	0.04

* 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

***** ARCADY 6 run completed. ===== end of file =====

TRL * TRL VIEWER 3.1 AD i:\..\2010 adj Seelshield Way - A41 East - Gravenhill Road North - A41 West - B4100 London Road AM Peak

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-

"i:\18578-01-X_Gavray Drive, Bicester\3. Project\3.2 Analysis\Junction Capacity Tests\Old TA Reproduced TA\PCU\
Copy of Seelshield Way\
2010 adj Seelshield Way - A41 East - Gravenhill Road North - A41 West - B4100 London Road AM Peak.vai"
(drive-on-the-left) at 14:53:04 on Thursday, 2 September 2010

FILE PROPERTIES

RUN TITLE: Seelshield Way/A41 East/Gravenhill Road North/A41 West/B4100 London Road AM Peak
LOCATION: Bicester
DATE: 13/07/10
CLIENT: JJ Gallagher Ltd
ENUMERATOR: Alexanders [CS5DG3J]
JOB NUMBER: 18578-01-1
STATUS: TIA
DESCRIPTION:

INPUT DATA

ARM A - Seelshield Way
ARM B - A41 East
ARM C - Gravenhill Road North
ARM D - A41 West
ARM E - B4100 London Road

RL TRL VIEWER 3.1 AD i:\..\2010 adj Seelshield Way - A41 East - Gravenhill Road North - A41 West - B4100 Lond

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	7.00	I	7.00	I	0.00	I	20.00	I	70.00	I	31.0	I	0.570	I	30.227	I
I	ARM B	I	5.25	I	8.50	I	20.00	I	20.00	I	70.00	I	31.0	I	0.588	I	37.181	I
I	ARM C	I	3.50	I	7.00	I	5.00	I	20.00	I	70.00	I	20.0	I	0.472	I	23.933	I
I	ARM D	I	5.00	I	9.00	I	20.00	I	20.00	I	70.00	I	42.0	I	0.568	I	36.003	I
I	ARM E	I	7.00	I	7.00	I	0.00	I	20.00	I	70.00	I	39.0	I	0.554	I	34.246	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

WARNING One or more intercept values (flagged * in the table)
have been adjusted
according to local values input from a previous run and listed below -

I	I	ADJUSTMENT TO	I
I	I	INTERCEPT (PCU/MIN)	I
I	A I	-5.000	I

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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
I	E	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 TURNING COUNT DATA

DEMAND SET TITLE: 2016+CD AM Peak

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 IF FALLING I PEAK I OF PEAK I PEAK I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00 I 14.34 I 21.51 I 14.34 I	I	I
I	ARM B	I	15.00 I 45.00 I 75.00 I 15.09 I 22.63 I 15.09 I	I	I
I	ARM C	I	15.00 I 45.00 I 75.00 I 0.55 I 0.83 I 0.55 I	I	I
I	ARM D	I	15.00 I 45.00 I 75.00 I 14.25 I 21.38 I 14.25 I	I	I
I	ARM E	I	15.00 I 45.00 I 75.00 I 8.80 I 13.20 I 8.80 I	I	I

DEMAND SET TITLE: 2016+CD AM Peak

TRL

TRL VIEWER 3.1 AD i:\... \2010 adj Seelshield Way - A41 East - Gravenhill Road North - A41 West - B410C

TIME	TURNING PROPORTIONS TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S)									
	FROM/TO	ARM A	ARM B	ARM C	ARM D	ARM E				
07.45 - 09.15	ARM A	0.000 0.0 (0.0)	0.380 436.0 (0.0)	0.003 4.0 (0.0)	0.532 610.0 (0.0)	0.085 97.0 (0.0)				
	ARM B	0.130 157.0 (0.0)	0.000 0.0 (0.0)	0.013 16.0 (0.0)	0.652 787.0 (0.0)	0.205 247.0 (0.0)				
	ARM C	0.182 8.0 (0.0)	0.568 25.0 (0.0)	0.000 0.0 (0.0)	0.250 11.0 (0.0)	0.000 0.0 (0.0)				
	ARM D	0.254 290.0 (0.0)	0.579 660.0 (0.0)	0.026 30.0 (0.0)	0.000 0.0 (0.0)	0.140 160.0 (0.0)				
	ARM E	0.092 65.0 (0.0)	0.571 402.0 (0.0)	0.014 10.0 (0.0)	0.322 227.0 (0.0)	0.000 0.0 (0.0)				

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

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)
07.45-08.00									
ARM A	14.34	20.62	0.695						
ARM B	15.09	30.05	0.502		0.0	2.2	30.6		
ARM C	0.55	11.47	0.048		0.0	1.0	14.5		
ARM D	14.25	32.23	0.442		0.0	0.1	0.7		
ARM E	8.80	26.18	0.336		0.0	0.8	11.5		
					0.0	0.5	7.4		

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)
08.00-08.15									
ARM A	17.12	18.73	0.914		2.2	7.9	94.0		
ARM B	18.02	28.74	0.627		1.0	1.7	23.9		
ARM C	0.66	9.09	0.072		0.1	0.1	1.1		
ARM D	17.02	31.50	0.540		0.8	1.2	17.0		
ARM E	10.51	24.59	0.427		0.5	0.7	10.9		

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)
08.15-08.30									
ARM A	20.97	16.17	1.297		7.9	80.9	670.3		
ARM B	22.06	28.45	0.776		1.7	3.3	46.0		
ARM C	0.80	7.06	0.114		0.1	0.1	1.8		
ARM D	20.84	30.71	0.679		1.2	2.1	29.6		
ARM E	12.87	22.44	0.574		0.7	1.3	19.1		

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)
08.30-08.45					80.9	153.6	1759.2		
ARM A	20.97	16.13	1.300		3.3	3.4	50.4		
ARM B	22.06	28.43	0.776		0.1	0.1	1.9		
ARM C	0.80	7.00	0.115		2.1	2.1	31.3		
ARM D	20.84	30.69	0.679		1.3	1.3	20.0		
ARM E	12.87	22.40	0.575						

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)
08.45-09.00					153.6	132.2	2143.6		
ARM A	17.12	18.67	0.917		3.4	1.8	28.7		
ARM B	18.02	28.06	0.642		0.1	0.1	1.3		
ARM C	0.66	8.48	0.077		2.1	1.2	18.5		
ARM D	17.02	31.39	0.542		1.3	0.8	11.7		
ARM E	10.51	24.54	0.428						

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)
09.00-09.15					132.2	41.1	1299.5		
ARM A	14.34	20.57	0.697		1.8	1.2	18.6		
ARM B	15.09	27.77	0.543		0.1	0.1	0.9		
ARM C	0.55	9.60	0.057		1.2	0.8	12.5		
ARM D	14.25	31.91	0.447		0.8	0.5	7.8		
ARM E	8.80	26.13	0.337						

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	2.2	**
08.15	7.9	*****
08.30	80.9	*****
08.45	153.6	*****
09.00	132.2	*****
09.15	41.1	*****

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.0	*
08.15	1.7	**
08.30	3.3	***
08.45	3.4	***
09.00	1.8	**
09.15	1.2	*

TRL TRL VIEWER 3.1 AD i:\.. \2010 adj Seelshield Way - A41 East - Gravenhill Road North - A41 West - B4100 on

QUEUE AT ARM C

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 AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.8 *
08.15	1.2 *
08.30	2.1 **
08.45	2.1 **
09.00	1.2 *
09.15	0.8 *

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5 *
08.15	0.7 *
08.30	1.3 *
08.45	1.3 *
09.00	0.8 *
09.15	0.5 *

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING *	* INCLUSIVE QUEUEING *
		* DELAY *	* DELAY *
	(VEH)	(MIN)	(MIN)
	(VEH/H)	(MIN/VEH)	(MIN/VEH)
A	1572.8	5997.1	6038.2
B	1655.1	182.1	182.1
C	60.3	7.9	7.9
D	1563.2	120.4	120.4
E	965.3	76.8	76.8
ALL	5816.7	6384.3	6425.3

* 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

***** ARCADY 6 run completed.

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

[Printed at 14:53:57 on 02/09/2010]

RL TRL VIEWER 3.1 AD i:\..\Seelshield Way - A41 East - Gravenhill Road North - A41 West - B4100 London Road P.

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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RG40 3GA, UK

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

Run with file:-
"i:\18578-01-X_Gavray Drive, Bicester\3. Project\3.2 Analysis\Junction Capacity Tests\Old TA Reproduced TA\PCU\
Copy of Seelshield Way\
Seelshield Way - A41 East - Gravenhill Road North - A41 West - B4100 London Road PM Peak specific.vai"
(drive-on-the-left) at 15:21:56 on Thursday, 2 September 2010

FILE PROPERTIES

RUN TITLE: Seelshield Way/A41 East/Gravenhill Road North/A41 West/B4100 London Road PM Peak
LOCATION: Bicester
DATE: 13/07/10
CLIENT: JJ Gallagher Ltd
ENUMERATOR: Alexanders [CS5DG3J]
JOB NUMBER: 18578-01-1
STATUS: TIA
DESCRIPTION:

INPUT DATA

ARM A - Seelshield Way
ARM B - A41 East
ARM C - Gravenhill Road North
ARM D - A41 West
ARM E - B4100 London Road

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	7.00	I	7.00	I	0.00	I	20.00	I	70.00	I	31.0	I	0.570	I	35.227	I
I ARM B	I	5.25	I	8.50	I	20.00	I	20.00	I	70.00	I	31.0	I	0.588	I	37.181	I
I ARM C	I	3.50	I	7.00	I	5.00	I	20.00	I	70.00	I	20.0	I	0.472	I	23.933	I
I ARM D	I	5.00	I	9.00	I	20.00	I	20.00	I	70.00	I	42.0	I	0.568	I	36.003	I
I ARM E	I	7.00	I	7.00	I	0.00	I	20.00	I	70.00	I	39.0	I	0.554	I	34.246	I

V = approach half-width
E = entry width

L = effective flare length
R = entry radius

D = inscribed circle diameter
PHI = entry angle

TRAFFIC DEMAND DATA

(Or 'v' sets included in the current run are shown)

TRL TRL VIEWER 3.1 AD i:\... \Seelshield Way - A41 East - Gravenhill Road North - A41 West - B4100 London d I

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
I	E	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 TURNING COUNT DATA

DEMAND SET TITLE: 2016 PM Peak+CD

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	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00	I	7.66 I 11.49 I 7.66	I
I	ARM B	I	15.00 I 45.00 I 75.00	I	19.17 I 28.76 I 19.17	I
I	ARM C	I	15.00 I 45.00 I 75.00	I	1.05 I 1.57 I 1.05	I
I	ARM D	I	15.00 I 45.00 I 75.00	I	17.40 I 26.10 I 17.40	I
I	ARM E	I	15.00 I 45.00 I 75.00	I	8.84 I 13.26 I 8.84	I

DEMAND SET TITLE: 2016 PM Peak+CD

I	TIME	I	TURNING PROPORTIONS	I
I	I	I	TURNING COUNTS (VEH/HR)	I
I	I	I	(PERCENTAGE OF H.V.S)	I
I	I	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I ARM E I	I
I	16.45 - 18.15	I	ARM A I 0.000 I 0.308 I 0.003 I 0.560 I 0.129 I	I
I		I	I 0.0 I 189.0 I 2.0 I 343.0 I 79.0 I	I
I		I	I (0.0) I (0.0) I (0.0) I (0.0) I (0.0) I	I
I		I	ARM B I 0.257 I 0.000 I 0.006 I 0.512 I 0.225 I	I
I		I	I 394.0 I 0.0 I 9.0 I 786.0 I 345.0 I	I
I		I	I (0.0) I (0.0) I (0.0) I (0.0) I (0.0) I	I
I		I	ARM C I 0.155 I 0.286 I 0.000 I 0.321 I 0.238 I	I
I		I	I 13.0 I 24.0 I 0.0 I 27.0 I 20.0 I	I
I		I	I (0.0) I (0.0) I (0.0) I (0.0) I (0.0) I	I
I		I	ARM D I 0.392 I 0.500 I 0.006 I 0.000 I 0.101 I	I
I		I	I 546.0 I 696.0 I 9.0 I 0.0 I 141.0 I	I
I		I	I (0.0) I (0.0) I (0.0) I (0.0) I (0.0) I	I
I		I	ARM E I 0.212 I 0.470 I 0.000 I 0.318 I 0.000 I	I
I		I	I 150.0 I 332.0 I 0.0 I 225.0 I 0.0 I	I
I		I	I (0.0) I (0.0) I (0.0) I (0.0) I (0.0) I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

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									
ARM A	7.66	26.11	0.293		0.0	0.4	6.1		
ARM B	19.17	32.36	0.593		0.0	1.4	20.7		
ARM C	1.05	11.17	0.094		0.0	0.1	1.5		
ARM D	17.40	29.82	0.583		0.0	1.4	19.9		
ARM E	8.84	22.66	0.390		0.0	0.6	9.2		

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)
17.00-17.15									
ARM A	9.15	24.33	0.376		0.4	0.6	8.8		
ARM B	22.90	31.41	0.729		1.4	2.6	37.1		
ARM C	1.25	8.67	0.145		0.1	0.2	2.4		
ARM D	20.78	28.61	0.726		1.4	2.6	36.4		
ARM E	10.55	20.39	0.517		0.6	1.1	15.3		

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									
ARM A	11.21	22.04	0.508		0.6	1.0	14.8		
ARM B	28.04	30.14	0.930		2.6	10.0	119.7		
ARM C	1.54	5.43	0.283		0.2	0.4	5.5		
ARM D	25.45	27.06	0.940		2.6	10.7	125.2		
ARM E	12.92	17.56	0.736		1.1	2.7	36.4		

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									
ARM A	11.21	21.88	0.512		1.0	1.0	15.5		
ARM B	28.04	30.11	0.931		10.0	11.3	161.3		
ARM C	1.54	5.22	0.294		0.4	0.4	6.0		
ARM D	25.45	26.94	0.945		10.7	12.8	179.1		
ARM E	12.92	17.30	0.747		2.7	2.8	41.7		

ME	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									
ARM A	9.15	24.04	0.381		1.0	0.6	9.5		
ARM B	22.90	31.37	0.730		11.3	2.8	49.9		
ARM C	1.25	8.33	0.151		0.4	0.2	2.8		
ARM D	20.78	28.42	0.731		12.8	2.8	53.3		
ARM E	10.55	19.92	0.530		2.8	1.1	18.1		

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									
ARM A	7.66	26.03	0.294		0.6	0.4	6.4		
ARM B	19.17	32.33	0.593		2.8	1.5	23.0		
ARM C	1.05	11.06	0.095		0.2	0.1	1.6		
ARM D	17.40	29.76	0.585		2.8	1.4	22.2		
ARM E	8.84	22.54	0.392		1.1	0.7	10.0		

TRL

TRL VIEWER

3.1 AD i:\..\Seelshield Way - A41 East - Gravenhill Road North - A41 West - B4100 London F d P

 QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.6 *
17.30	1.0 *
17.45	1.0 *
18.00	0.6 *
18.15	0.4

 QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	1.4 *
17.15	2.6 ***
17.30	10.0 *****
17.45	11.3 *****
18.00	2.8 ***
18.15	1.5 *

 QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.4
17.45	0.4
18.00	0.2
18.15	0.1

 QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	1.4 *
17.15	2.6 ***
17.30	10.7 *****
17.45	12.8 *****
18.00	2.8 ***
18.15	1.4 *

 QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.6 *
17.15	1.1 *
17.30	2.7 ***
17.45	2.8 ***
18.00	1.1 *
18.15	0.7 *

TRL VIEWER 3.1 AD i:\..\Seelshield Way - A41 East - Gravenhill Road North - A41 West - B4100 London Road E

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING *	* INCLUSIVE QUEUEING *
		* DELAY *	* DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
A	840.6	61.1	0.07
B	2103.4	411.7	0.20
C	115.2	19.9	0.17
D	1908.7	436.1	0.23
E	969.4	130.8	0.13
ALL	5937.3	1059.5	0.18

* 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

***** ARCADY 6 run completed.

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

[Printed at 15:23:30 on 02/09/2010]

Appendix D

TRICS Outputs

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 EMPLOYMENT
Category : A OFFICE

Selected Regions and Areas:

02	SOUTH EAST	
	BD BEDFORDSHIRE	2 days
	BF BRACKNELL FOREST	6 days
	ES EAST SUSSEX	1 days
	EX ESSEX	2 days
	HF HERTFORDSHIRE	2 days
	IW ISLE OF WIGHT	1 days
	RE READING	5 days
	SC SURREY	5 days
	WS WEST SUSSEX	7 days
03	SOUTH WEST	
	BR BRISTOL CITY	1 days
	DC DORSET	7 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
05	EAST MIDLANDS	
	LE LEICESTERSHIRE	2 days

Main Parameter Selection:

Parameter: Gross Floor Area
Range: 1075 to 135750 (units: sqm)

Date Range: 06/03/90 to 05/09/02

Selected Survey Days:

Monday	2 days
Tuesday	10 days
Wednesday	10 days
Thursday	17 days
Friday	3 days

Selected Survey Types:

Manual Count	28 days
One Way ATC Count	14 days

TRIP RATE for Land Use EMPLOYMENT/OFFICE

Calculation Factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30	14	20077	0.00	14	20077	0.00	14	20077	0.00
00:30 - 01:00	14	20077	0.00	14	20077	0.00	14	20077	0.00
01:00 - 01:30	14	20077	0.00	14	20077	0.00	14	20077	0.00
01:30 - 02:00	14	20077	0.00	14	20077	0.00	14	20077	0.00
02:00 - 02:30	14	20077	0.00	14	20077	0.00	14	20077	0.00
02:30 - 03:00	14	20077	0.00	14	20077	0.00	14	20077	0.00
03:00 - 03:30	14	20077	0.00	14	20077	0.00	14	20077	0.00
03:30 - 04:00	14	20077	0.00	14	20077	0.00	14	20077	0.00
04:00 - 04:30	14	20077	0.00	14	20077	0.00	14	20077	0.00
04:30 - 05:00	14	20077	0.00	14	20077	0.00	14	20077	0.00
05:00 - 05:30	14	20077	0.01	14	20077	0.01	14	20077	0.02
05:30 - 06:00	14	20077	0.00	14	20077	0.01	14	20077	0.01
06:00 - 06:30	16	18128	0.03	16	18128	0.01	16	18128	0.04
06:30 - 07:00	16	18128	0.03	16	18128	0.01	16	18128	0.04
07:00 - 07:30	41	14109	0.26	41	14109	0.05	41	14109	0.30
07:30 - 08:00	41	14109	0.31	41	14109	0.05	41	14109	0.36
08:00 - 08:30	42	13852	0.81	42	13852	0.08	42	13852	0.89
08:30 - 09:00	42	13852	0.86	42	13852	0.08	42	13852	0.94
09:00 - 09:30	42	13852	0.48	42	13852	0.10	42	13852	0.58
09:30 - 10:00	42	13852	0.43	42	13852	0.10	42	13852	0.53
10:00 - 10:30	42	13852	0.12	42	13852	0.10	42	13852	0.22
10:30 - 11:00	42	13852	0.11	42	13852	0.11	42	13852	0.21
11:00 - 11:30	42	13852	0.10	42	13852	0.11	42	13852	0.21
11:30 - 12:00	42	13852	0.10	42	13852	0.12	42	13852	0.22
12:00 - 12:30	42	13852	0.14	42	13852	0.27	42	13852	0.41
12:30 - 13:00	42	13852	0.15	42	13852	0.26	42	13852	0.41
13:00 - 13:30	42	13852	0.24	42	13852	0.21	42	13852	0.45
13:30 - 14:00	42	13852	0.25	42	13852	0.19	42	13852	0.44
14:00 - 14:30	42	13852	0.15	42	13852	0.13	42	13852	0.28
14:30 - 15:00	42	13852	0.13	42	13852	0.13	42	13852	0.26
15:00 - 15:30	42	13852	0.09	42	13852	0.16	42	13852	0.25
15:30 - 16:00	42	13852	0.09	42	13852	0.16	42	13852	0.25
16:00 - 16:30	42	13852	0.09	42	13852	0.42	42	13852	0.50
16:30 - 17:00	42	13852	0.09	42	13852	0.42	42	13852	0.51
17:00 - 17:30	42	13852	0.08	42	13852	0.65	42	13852	0.73
17:30 - 18:00	42	13852	0.08	42	13852	0.61	42	13852	0.69
18:00 - 18:30	40	13674	0.03	40	13674	0.25	40	13674	0.29
18:30 - 19:00	40	13674	0.03	40	13674	0.22	40	13674	0.25
19:00 - 19:30	15	19111	0.04	15	19111	0.10	15	19111	0.14
19:30 - 20:00	15	19111	0.04	15	19111	0.10	15	19111	0.14
20:00 - 20:30	15	19111	0.01	15	19111	0.03	15	19111	0.04
20:30 - 21:00	15	19111	0.01	15	19111	0.03	15	19111	0.04
21:00 - 21:30	15	19111	0.01	15	19111	0.04	15	19111	0.05
21:30 - 22:00	15	19111	0.01	15	19111	0.04	15	19111	0.05
22:00 - 22:30	14	20077	0.01	14	20077	0.01	14	20077	0.02
22:30 - 23:00	14	20077	0.00	14	20077	0.01	14	20077	0.02
23:00 - 23:30	14	20077	0.00	14	20077	0.01	14	20077	0.01
23:30 - 24:00	14	20077	0.00	14	20077	0.00	14	20077	0.01
Daily Trip Rates:			5.43			5.41			10.85

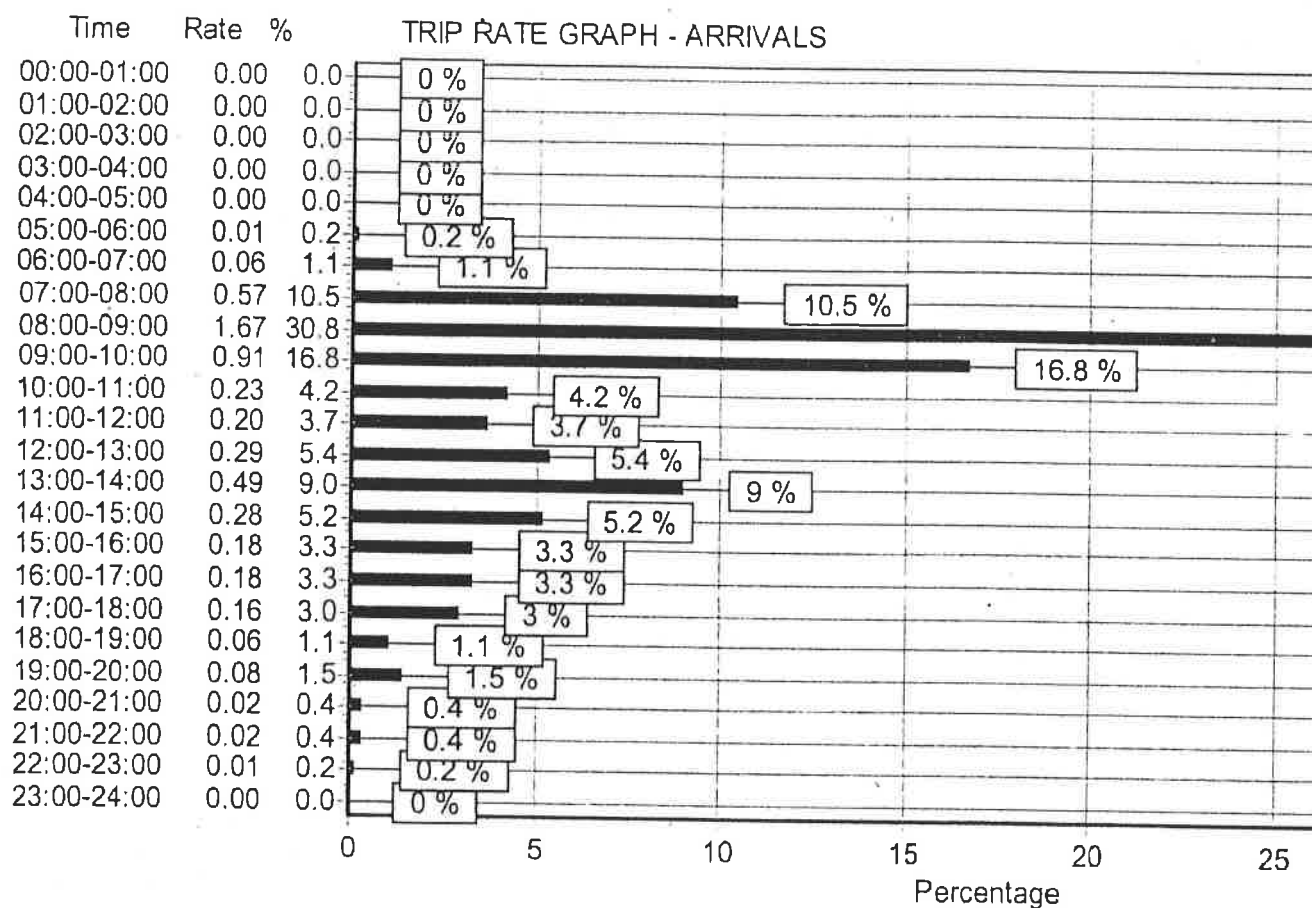
B1a without london

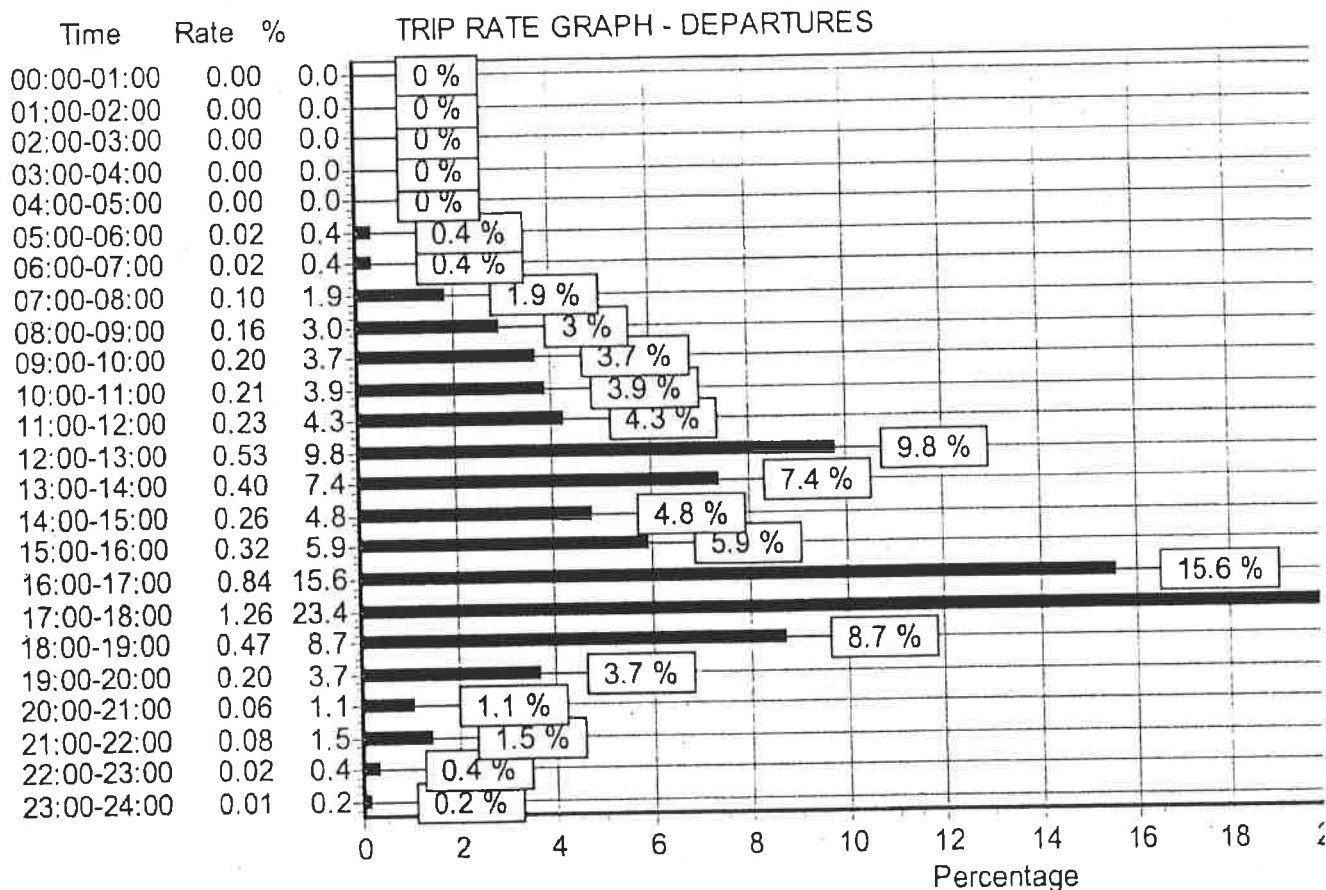
Colin Buchanan and Partners 45 Notting Hill Gate London

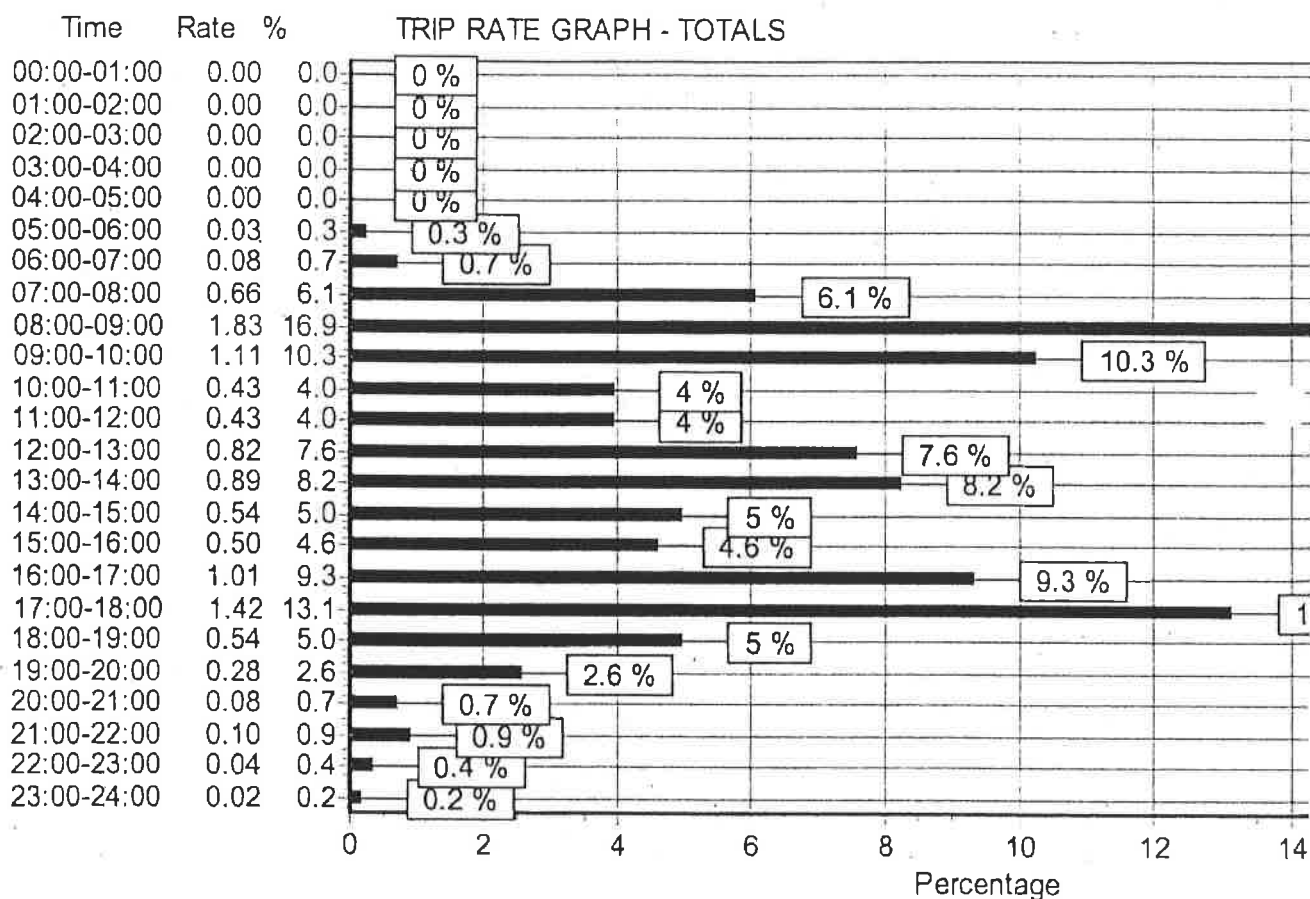
Licence No: 202601

Parameter Summary

Trip Rate Parameter Range Selected:	1075 - 135750 (units: sqm)
Survey Date Date Range:	06/03/90 - 05/09/02
Number of Weekdays (Monday-Friday):	42
Number of Saturdays:	0
Number of Sundays:	0
Optional Parameters Used in Selection:	NO
Surveys Manually Removed from Selection:	0







TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 EMPLOYMENT
 Category : D INDUSTRIAL ESTATE

Selected Regions and Areas:

01	GREATER LONDON	
	GL GREATER LONDON	5 days
02	SOUTH EAST	
	ES EAST SUSSEX	1 days
	KC KENT	1 days
	RE READING	10 days
	WS WEST SUSSEX	11 days
03	SOUTH WEST	
	BR BRISTOL CITY	1 days
	DC DORSET	7 days
	DV DEVON	4 days
04	EAST ANGLIA	
	NF NORFOLK	2 days
06	WEST MIDLANDS	
	ST STAFFORDSHIRE	10 days
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	KH KINGSTON UPON HULL	1 days
	NO NORTH LINCOLNSHIRE	2 days
	RI EAST RIDING OF YORKSHIRE	1 days
08	NORTH WEST	
	GM GREATER MANCHESTER	11 days
	LC LANCASHIRE	10 days
11	SCOTLAND	
	DG DUMFRIES & GALLOWAY	5 days
	EB CITY OF EDINBURGH	1 days
	ER EAST RENFREWSHIRE	2 days
	FA FALKIRK	1 days
	HI HIGHLAND	8 days

Main Parameter Selection:

Parameter: Gross Floor Area
 Range: 708 to 234115 (units: sqm)

Date Range: 31/01/90 to 18/10/01

Selected Survey Days:

Monday	13 days
Tuesday	22 days
Wednesday	23 days
Thursday	22 days
Friday	15 days

Selected Survey Types:

Manual Count	39 days
One Way ATC Count	56 days

TRIP RATE for Land Use EMPLOYMENT/INDUSTRIAL ESTATE

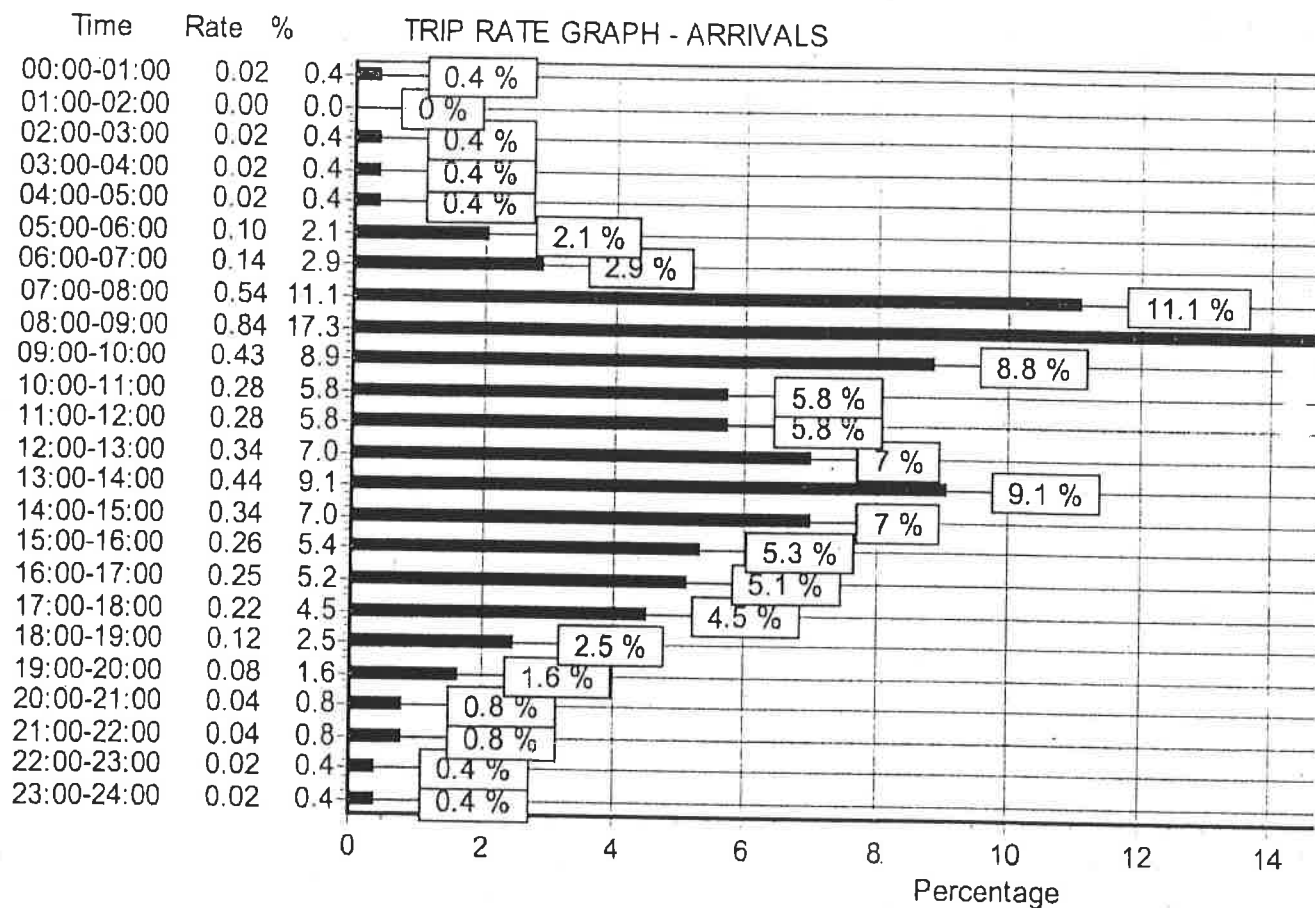
Calculation Factor: 100 sqm

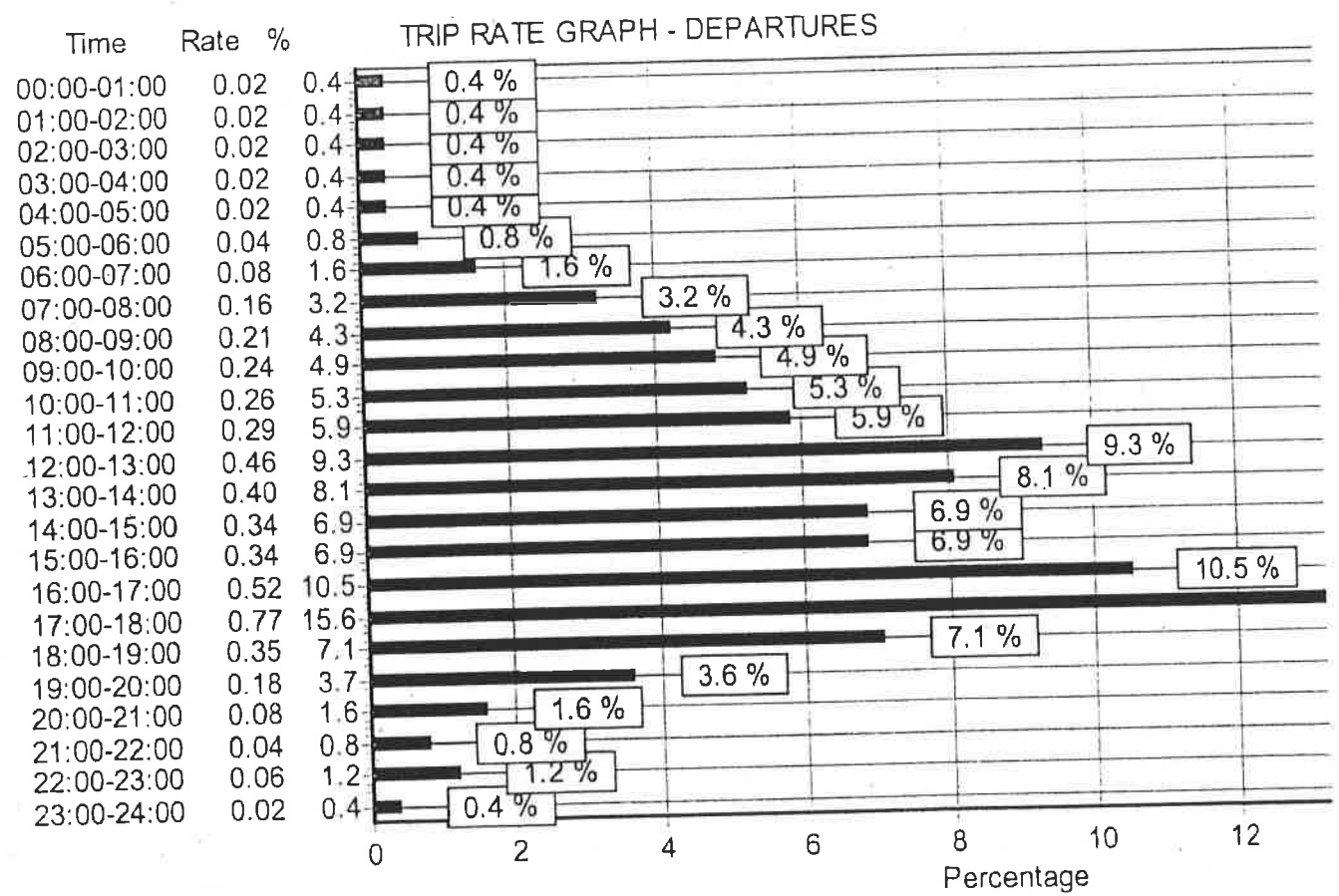
BOLD print indicates peak (busiest) period

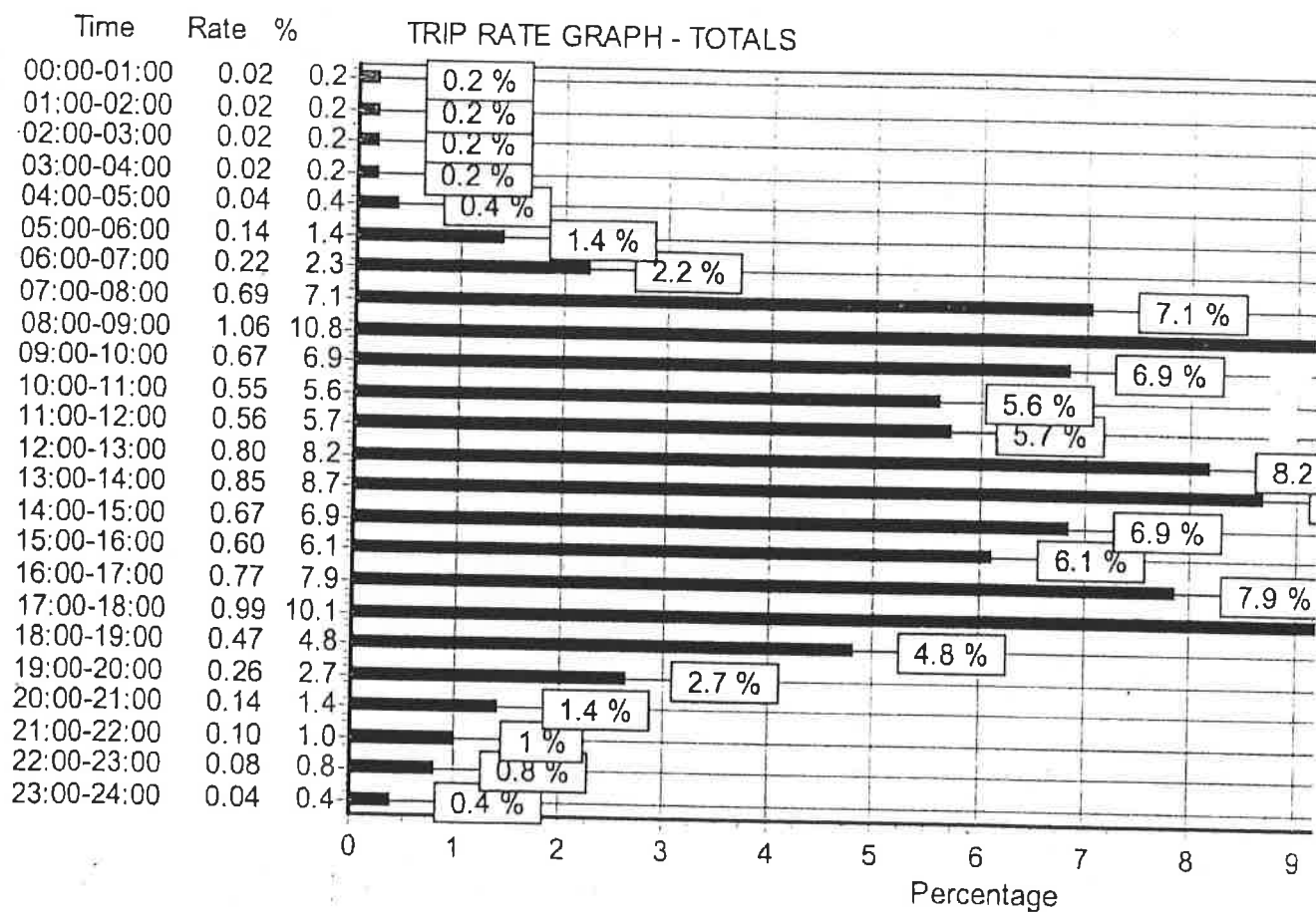
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30	46	30428	0.01	46	30428	0.01	46	30428	0.01
00:30 - 01:00	46	30428	0.01	46	30428	0.01	46	30428	0.01
01:00 - 01:30	46	30428	0.00	46	30428	0.01	46	30428	0.01
01:30 - 02:00	46	30428	0.00	46	30428	0.01	46	30428	0.01
02:00 - 02:30	46	30428	0.01	46	30428	0.01	46	30428	0.01
02:30 - 03:00	46	30428	0.01	46	30428	0.01	46	30428	0.01
03:00 - 03:30	46	30428	0.01	46	30428	0.01	46	30428	0.01
03:30 - 04:00	46	30428	0.01	46	30428	0.01	46	30428	0.01
04:00 - 04:30	46	30428	0.01	46	30428	0.01	46	30428	0.02
04:30 - 05:00	46	30428	0.01	46	30428	0.01	46	30428	0.02
05:00 - 05:30	46	30428	0.05	46	30428	0.02	46	30428	0.07
05:30 - 06:00	46	30428	0.05	46	30428	0.02	46	30428	0.07
06:00 - 06:30	58	32167	0.07	58	32167	0.04	58	32167	0.11
06:30 - 07:00	58	32167	0.07	58	32167	0.04	58	32167	0.11
07:00 - 07:30	92	31494	0.26	92	31494	0.08	92	31494	0.33
07:30 - 08:00	92	31494	0.28	92	31494	0.08	92	31494	0.36
08:00 - 08:30	95	30654	0.42	95	30654	0.10	95	30654	0.53
08:30 - 09:00	95	30654	0.42	95	30654	0.11	95	30654	0.53
09:00 - 09:30	95	30654	0.22	95	30654	0.12	95	30654	0.34
09:30 - 10:00	95	30654	0.21	95	30654	0.12	95	30654	0.33
10:00 - 10:30	95	30654	0.14	95	30654	0.13	95	30654	0.27
10:30 - 11:00	95	30654	0.14	95	30654	0.13	95	30654	0.28
11:00 - 11:30	95	30654	0.14	95	30654	0.15	95	30654	0.28
11:30 - 12:00	95	30654	0.14	95	30654	0.14	95	30654	0.28
12:00 - 12:30	95	30654	0.17	95	30654	0.23	95	30654	0.40
12:30 - 13:00	95	30654	0.17	95	30654	0.23	95	30654	0.40
13:00 - 13:30	95	30654	0.22	95	30654	0.20	95	30654	0.43
13:30 - 14:00	95	30654	0.22	95	30654	0.20	95	30654	0.42
14:00 - 14:30	95	30654	0.17	95	30654	0.17	95	30654	0.34
14:30 - 15:00	95	30654	0.17	95	30654	0.17	95	30654	0.33
15:00 - 15:30	95	30654	0.13	95	30654	0.17	95	30654	0.30
15:30 - 16:00	95	30654	0.13	95	30654	0.17	95	30654	0.30
16:00 - 16:30	95	30654	0.13	95	30654	0.25	95	30654	0.38
16:30 - 17:00	95	30654	0.12	95	30654	0.27	95	30654	0.39
17:00 - 17:30	95	30654	0.11	95	30654	0.39	95	30654	0.50
17:30 - 18:00	95	30654	0.11	95	30654	0.38	95	30654	0.49
18:00 - 18:30	90	31098	0.06	90	31098	0.18	90	31098	0.24
18:30 - 19:00	90	31098	0.06	90	31098	0.17	90	31098	0.23
19:00 - 19:30	58	32313	0.04	58	32313	0.09	58	32313	0.13
19:30 - 20:00	58	32313	0.04	58	32313	0.09	58	32313	0.13
20:00 - 20:30	57	32657	0.02	57	32657	0.04	57	32657	0.07
20:30 - 21:00	57	32657	0.02	57	32657	0.04	57	32657	0.07
21:00 - 21:30	57	32657	0.02	57	32657	0.02	57	32657	0.05
21:30 - 22:00	57	32657	0.02	57	32657	0.02	57	32657	0.05
22:00 - 22:30	46	30428	0.01	46	30428	0.03	46	30428	0.04
22:30 - 23:00	46	30428	0.01	46	30428	0.03	46	30428	0.04
23:00 - 23:30	46	30428	0.01	46	30428	0.01	46	30428	0.02
23:30 - 24:00	46	30428	0.01	46	30428	0.01	46	30428	0.02
Daily Trip Rates:			4.88			4.89			9.76

Parameter Summary

Trip Rate Parameter Range Selected:	708 - 234115 (units: sqm)
Survey Date Date Range:	31/01/90 - 18/10/01
Number of Weekdays (Monday-Friday):	95
Number of Saturdays:	0
Number of Sundays:	0
Optional Parameters Used in Selection:	NO
Surveys Manually Removed from Selection:	0









Appendix E

Residential Trip Distribution



2001 Census Data (Living in Bicester)

County of Work		%	
Buckinghamshire		12.77%	
Derbyshire		0.15%	
Essex		0.15%	
Gloucestershire		0.30%	
Hampshire		0.30%	
Hertfordshire		1.52%	
Leicestershire		0.15%	
London Borough		12.47%	
Northamptonshire		3.65%	
Oxfordshire	Cherwell	Ambrosden and Chesterton	1.12%
		Banbury Calthorpe	0.30%
		Banbury Easington	0.30%
		Banbury Grimsbury and Castle	1.22%
		Banbury Neithrop	0.30%
		Bicester North	0.15%
		Bicester East	5.12%
		Bicester Town	6.84%
		Bicester West	0.46%
		Caversfield	1.06%
		Cropredy	0.15%
		Deddington	0.15%
		Fringford	0.30%
		Hook Norton	0.15%
		Kidlington North	2.69%
		Kidlington South	0.15%
		Kirtlington	1.06%
		Launton	3.09%
		Otmoor	0.46%
		The Astons and Heyfords	0.61%
		Wroxton	0.15%
		Yarnton, Gosford and Water Eaton	2.08%
	Oxford		22.30%
	South Oxfordshire		6.13%
	Vale of White Horse		5.63%
	West Oxfordshire		4.41%
Surrey		0.91%	
Warwickshire		0.46%	
West Sussex		0.30%	
Wiltshire		0.30%	
Worcestershire		0.15%	



Appendix F

Employment Trip Distribution



2001 Census Data (Working in Bicester)

County of Work		%	
London		3.33%	
Bedfordshire		0.35%	
Buckinghamshire		11.12%	
Devon		0.04%	
Dorset		0.13%	
Durham		0.04%	
East Sussex		0.09%	
Gloucestershire		0.22%	
Hampshire		0.04%	
Hertfordshire		0.43%	
Lancashire		0.04%	
Leicestershire		0.13%	
Lincolnshire		0.04%	
Norfolk		0.09%	
Northamptonshire		6.51%	
Nottinghamshire		0.09%	
Oxfordshire	Cherwell	Adderbury	0.35%
		Ambrosden and Chesterton	2.77%
		Banbury Calthorpe	0.39%
		Banbury Easington	0.69%
		Banbury Grimsbury and Castle	0.71%
		Banbury Hardwick	0.69%
		Banbury Neithrop	0.26%
		Banbury Ruscote	0.53%
		Bicester East	9.61%
		Bicester North	7.58%
		Bicester South	5.09%
		Bicester Town	5.43%
		Bicester West	13.13%
		Bloxham and Bodicote	0.79%
		Caversfield	3.20%
		Cropledy	0.35%
		Deddington	0.52%
		Fringford	1.90%
		Hook Norton	0.17%
		Kidlington North	0.52%
		Kidlington South	0.86%
		Kirtlington	0.56%
		Launton	2.61%
		Otmoor	0.88%
		Sibford	0.13%
		The Astons and Heyfords	2.97%
		Wroxton	0.43%
		"Yarnon, Gosford and Water Eaton"	0.52%
	Oxford		3.50%
	South Oxfordshire		2.51%
	Vale of White Horse		2.90%
	West Oxfordshire		3.30%
Shropshire		0.13%	
Somerset		0.09%	
Staffordshire		0.13%	
Surrey		0.17%	
Warwickshire		0.61%	
Wiltshire		0.09%	
Worcestershire		0.26%	



Appendix G

Junction Capacity Tests – 2016 Baseline + Development Scenario

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)

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PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk

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

Run with file:-
"I:\18578-01-X_Gavray Drive, Bicester\3. Project\3.2 Analysis\Junction Capacity Tests\Old TA Reproduced TA\PCU\
Copy of Gavray - Mallards\Gavray Mallards.vpi"
(drive-on-the-left) at 13:01:29 on Thursday, 2 September 2010

RUN INFORMATION

RUN TITLE: Gavray Drive - Mallards
LOCATION: Bicester
DATE: 13/07/10
CLIENT: JJ Gallagher
ENUMERATOR: Alexanders [CS5DG3J]
JOB NUMBER: 18578-01-1
STATUS: TIA
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 Gavray Drive East
ARM B IS Mallards Lane
ARM C IS Gavray Drive 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) 9.10 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) 130.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 90.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 85.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I
I	- WIDTH AT 0 M FROM JUNC.	I	10.00 M.	I
I	- WIDTH AT 5 M FROM JUNC.	I	5.50 M.	I
I	- WIDTH AT 10 M FROM JUNC.	I	5.00 M.	I
I	- WIDTH AT 15 M FROM JUNC.	I	4.00 M.	I
I	- WIDTH AT 20 M FROM JUNC.	I	4.00 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	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	623.19 0.21	0.08	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	505.60 0.20	0.08	0.13	0.29	I

I	Intercept For Slope For Opposing	Slope For Opposing	I
I	Stream C-B Stream A-C	Stream A-B	I
I	649.25 0.22	0.22	I

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND 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)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	0.04	9.71	0.005		0.00	0.00	0.1		
B-A	1.06	10.45	0.102		0.09	0.11	1.7		
C-A	0.15								
C-B	0.07	10.67	0.007		0.01	0.01	0.1		
A-B	0.58								
A-C	0.12								

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)
08.15-08.30									
B-C	0.06	9.63	0.006		0.00	0.01	0.1		
B-A	1.30	10.42	0.125		0.11	0.14	2.1		
A	0.18								
B	0.09	10.63	0.009		0.01	0.01	0.1		
-B	0.72								
A-C	0.15								

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)
08.30-08.45									
B-C	0.06	9.63	0.006		0.01	0.01	0.1		
B-A	1.30	10.42	0.125		0.14	0.14	2.1		
C-A	0.18								
C-B	0.09	10.63	0.009		0.01	0.01	0.1		
A-B	0.72								
A-C	0.15								

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)
15-09.00									
-C	0.04	9.71	0.005		0.01	0.00	0.1		
-A	1.06	10.45	0.102		0.14	0.11	1.7		
C-A	0.15								
C-B	0.07	10.67	0.007		0.01	0.01	0.1		
A-B	0.58								
A-C	0.12								

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)
09.00-09.15									
B-C	0.04	9.77	0.004		0.00	0.00	0.1		
B-A	0.89	10.47	0.085		0.11	0.09	1.4		
C-A	0.13								
C-B	0.06	10.69	0.006		0.01	0.01	0.1		
A-B	0.49								
A-C	0.10								

QUEUE FOR STREAM B-C

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 B-A

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-B

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	STREAM	I	TOTAL	I	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	(VEH)	I	(VEH/H)	I	(MIN)	I	(MIN)	I
I	I	I		I		I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-C	I	4.1	I	2.8	I	0.4	I	0.10	I
I	B-A	I	97.7	I	65.2	I	10.4	I	0.11	I
I	C-A	I	13.8	I	9.2	I		I		I
I	C-B	I	6.9	I	4.6	I	0.6	I	0.09	I
I	A-B	I	53.7	I	35.8	I		I		I
I	A-C	I	11.0	I	7.3	I		I		I
I	ALL	I	187.2	I	124.8	I	11.5	I	0.06	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.
* T' E WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

.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	623.19		0.21		0.08	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	Stream B-A	Stream	A-C	Stream	A-B	Stream	C-A	I
I	505.60		0.20		0.08		0.13	I

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	Stream C-B	Stream	A-C	Stream	A-B	I
I	649.25		0.22		0.22	I

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND 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)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15					0.01	0.01	0.2		
B-C	0.10	10.02	0.010		0.05	0.07	1.0		
B-A	0.63	10.18	0.062						
C-A	0.19				0.00	0.01	0.1		
C-B	0.06	10.44	0.006						
A-B	1.50								
A-C	0.24								

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					0.01	0.01	0.2		
B-C	0.13	9.94	0.013		0.07	0.08	1.2		
B-A	0.77	10.13	0.076						
A	0.24				0.01	0.01	0.1		
B	0.07	10.36	0.007						
-B	1.84								
A-C	0.29								

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					0.01	0.01	0.2		
B-C	0.13	9.94	0.013		0.08	0.08	1.2		
B-A	0.77	10.13	0.076						
C-A	0.24				0.01	0.01	0.1		
C-B	0.07	10.36	0.007						
A-B	1.84								
A-C	0.29								

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)
15-18.00					0.01	0.01	0.2		
B-C	0.10	10.01	0.010		0.08	0.07	1.0		
B-A	0.63	10.18	0.062						
C-A	0.19				0.01	0.01	0.1		
C-B	0.06	10.44	0.006						
A-B	1.50								
A-C	0.24								

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)
18.00-18.15					0.01	0.01	0.1		
B-C	0.09	10.07	0.009		0.07	0.05	0.8		
B-A	0.53	10.23	0.052						
C-A	0.16				0.01	0.00	0.1		
C-B	0.05	10.50	0.005						
A-B	1.25								
A-C	0.20								

TRL

TRL VIEWER

3.1 AD I:\..\Copy of Gavray - Mallards\Gavray Mallards.vpo - Page 9

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	0.1
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1

QUEUE FOR STREAM C-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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	I	(MIN)	I	(MIN)	I
I		I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	B-C	I	9.6	I	6.4	I	1.0	I
I	B-A	I	57.8	I	38.5	I	0.10	I
I	C-A	I	17.9	I	11.9	I	6.0	I
I	C-B	I	5.5	I	3.7	I	0.10	I
I	A-B	I	137.6	I	91.8	I	0.5	I
I	A-C	I	22.0	I	14.7	I	0.10	I
I	ALL	I	250.5	I	167.0	I	7.5	I
							0.03	
							7.5	
							0.03	

* 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

***** PICADY 5 run completed.

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

[Printed at 13:02:04 on 02/09/2010]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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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:-
"i:\18578-01-X Gavray Drive, Bicester\3. Project\3.2 Analysis\Junction Capacity Tests\Old TA Reproduced TA\PCU\
Copy of Wretchwick - Gavray Drive - Charbridge\Wretchwick - Gavray Drive - Charbridge AM Peak REV.vai"
(drive-on-the-left) at 13:52:03 on Thursday, 2 September 2010

FILE PROPERTIES

RUN TITLE: Wretchwick - Gavray Drive - Charbridge AM Peak
LOCATION: Bicester
DATE: 13/07/10
CLIENT: JJ Gallagher
ENUMERATOR: Alexanders [CS5DG3J]
JOB NUMBER: 18578-01-1
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Wretchwick
ARM B - Gavray Drive
ARM C - Charbridge

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	6.00	I	8.00	I	15.00	I	20.00	I	45.00	I	49.0	I	0.685	I	34.915	I
I ARM B	I	3.50	I	7.00	I	10.00	I	20.00	I	45.00	I	44.0	I	0.571	I	24.749	I
I ARM C	I	5.75	I	7.00	I	10.00	I	35.00	I	45.00	I	34.0	I	0.694	I	33.784	I

V = approach half-width
E = entry width

L = effective flare length
R = entry radius

D = inscribed circle diameter
PHI = entry angle

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

TRL

TRL VIEWER

3.1 AD i:\... \Wretchwick - Gavray Drive - Charbridge AM Peak REV.vao - Page 2

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 TURNING COUNT DATA

DEMAND SET TITLE: 2016+CD+DEV Wretchwick - Gavray Drive - Charbridge AM Peak

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED IF 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	8.61	I	12.92
I	ARM B	I	15.00	I	45.00	I	75.00	I	4.32	I	6.49
I	ARM C	I	15.00	I	45.00	I	75.00	I	9.84	I	14.76

DEMAND SET TITLE: 2016+CD+DEV Wretchwick - Gavray Drive - Charbridge AM Peak

		TURNING PROPORTIONS					
		TURNING COUNTS (VEH/HR)					
		(PERCENTAGE OF H.V.S)					
TIME	FROM/TO	ARM A	ARM B	ARM C			
07.45 - 09.15	ARM A	0.000	0.139	0.861			
		0.0	96.0	593.0			
		(0.0)	(0.0)	(0.0)			
	ARM B	0.786	0.000	0.214			
		272.0	0.0	74.0			
		(0.0)	(0.0)	(0.0)			
	ARM C	0.962	0.038	0.000			
		757.0	30.0	0.0			
		(0.0)	(0.0)	(0.0)			

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

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	07.45-08.00										I
I	ARM A	8.61	34.66	0.248		0.0	0.3	4.9			I
I	ARM B	4.32	20.52	0.211		0.0	0.3	3.9			I
I	ARM C	9.84	31.43	0.313		0.0	0.5	6.7			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	ARM A	10.28	34.61	0.297		0.3	0.4	6.2			I
I	ARM B	5.16	19.69	0.262		0.3	0.4	5.2			I
I	ARM C	11.75	30.97	0.379		0.5	0.6	9.0			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	ARM A	12.60	34.54	0.365		0.4	0.6	8.4			I
I	ARM B	6.33	18.56	0.341		0.4	0.5	7.5			I
I	ARM C	14.39	30.34	0.474		0.6	0.9	13.1			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	ARM A	12.60	34.54	0.365		0.6	0.6	8.6			I
I	ARM B	6.33	18.55	0.341		0.5	0.5	7.7			I
I	ARM C	14.39	30.33	0.474		0.9	0.9	13.5			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	ARM A	10.28	34.61	0.297		0.6	0.4	6.5			I
I	ARM B	5.16	19.69	0.262		0.5	0.4	5.5			I
I	ARM C	11.75	30.96	0.379		0.9	0.6	9.4			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	8.61	34.66	0.249		0.4	0.3	5.0			I
I	ARM B	4.32	20.51	0.211		0.4	0.3	4.1			I
I	ARM C	9.84	31.42	0.313		0.6	0.5	7.0			I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.3
08.15	0.4
08.30	0.6 *
08.45	0.6 *
09.00	0.4
09.15	0.3

QUEUE AT ARM B

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 C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5
08.15	0.6 *
08.30	0.9 *
08.45	0.9 *
09.00	0.6 *
09.15	0.5

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

	ARM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I
		I			I	* DELAY *		I	* DELAY *		I
		I			I			I			I
		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	A	I	944.8	I	629.8	I	39.6	I	0.04	I	
I	B	I	474.4	I	316.3	I	33.9	I	0.07	I	
I	C	I	1079.1	I	719.4	I	58.6	I	0.05	I	
I	ALL	I	2498.3	I	1665.6	I	132.1	I	0.05	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

***** ARCADY 6 run completed.

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

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
I WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"i:\18578-01-X Gavray Drive, Bicester\3. Project\3.2 Analysis\Junction Capacity Tests\Old TA Reproduced TA\PCU\
Copy of Wretchwick - Gavray Drive - Charbridge\Wretchwick - Gavray Drive - Charbridge PM Peak.vai"
(drive-on-the-left) at 14:00:10 on Thursday, 2 September 2010

FILE PROPERTIES

RUN TITLE: Wretchwick - Gavray Drive - Charbridge PM Peak
LOCATION: Bicester
DATE: 13/07/10
CLIENT: JJ Gallagher
ENUMERATOR: Alexanders [CS5DG3J]
JOB NUMBER: 18578-01-1
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Wretchwick
ARM B - Gavray Drive
ARM C - Charbridge

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	6.00	I	8.00	I	15.00	I	20.00	I	45.00	I	49.0	I	0.685	I	34.915	I
I	ARM B	I	3.50	I	7.00	I	10.00	I	20.00	I	45.00	I	44.0	I	0.571	I	24.749	I
I	ARM C	I	5.75	I	7.00	I	10.00	I	35.00	I	45.00	I	34.0	I	0.694	I	33.784	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)

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 TURNING COUNT DATA

DEMAND SET TITLE: 2016+CD+DEV Wretchwick - Gavray Drive - Charbridge PM Peak

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	IF FLOW STOPS IF FALLING	I	PEAK	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	12.54	I	18.81	I	12.54	I		I
I	ARM B	I	15.00	I	45.00	I	75.00	I	1.75	I	2.63	I	1.75	I		I
I	ARM C	I	15.00	I	45.00	I	75.00	I	8.89	I	13.33	I	8.89	I		I

DEMAND SET TITLE: 2016+CD+DEV Wretchwick - Gavray Drive - Charbridge PM Peak

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	TURNING PROPORTIONS (PERCENTAGE OF H.V.S)	I
I	16.45 - 18.15	I	ARM A	I	0.000	I	0.283	I	0.717	I		I
I		I		I	0.0	I	284.0	I	719.0	I		I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I		I
I		I	ARM B	I	0.736	I	0.000	I	0.264	I		I
I		I		I	103.0	I	0.0	I	37.0	I		I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I		I
I		I	ARM C	I	0.887	I	0.113	I	0.000	I		I
I		I		I	631.0	I	80.0	I	0.0	I		I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I		I
I		I		I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

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
I	16.45-17.00	I		I		I		I		I		I		I		I		I		I
I	ARM A	I	12.54	I	34.23	I	0.366	I		I	0.0	I	0.6	I	8.5	I		I		I
I	ARM B	I	1.75	I	19.63	I	0.089	I		I	0.0	I	0.1	I	1.4	I		I		I
I	ARM C	I	8.89	I	32.89	I	0.270	I		I	0.0	I	0.4	I	5.4	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	17.00-17.15					0.6	0.8	11.5			I
I	ARM A	14.97	34.10	0.439		0.1	0.1	1.9			I
I	ARM B	2.09	18.62	0.112		0.4	0.5	7.1			I
I	ARM C	10.61	32.72	0.324							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					0.8	1.2	17.1			I
I	ARM A	18.34	33.91	0.541		0.1	0.2	2.6			I
I	ARM B	2.56	17.25	0.148		0.5	0.7	9.8			I
I	ARM C	13.00	32.48	0.400							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					1.2	1.2	17.5			I
I	ARM A	18.34	33.91	0.541		0.2	0.2	2.6			I
I	ARM B	2.56	17.24	0.148		0.7	0.7	10.0			I
I	ARM C	13.00	32.48	0.400							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					1.2	0.8	12.1			I
I	ARM A	14.97	34.10	0.439		0.2	0.1	1.9			I
I	ARM B	2.09	18.61	0.112		0.7	0.5	7.3			I
I	ARM C	10.61	32.72	0.324							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					0.8	0.6	8.9			I
I	ARM A	12.54	34.23	0.366		0.1	0.1	1.5			I
I	ARM B	1.75	19.61	0.089		0.5	0.4	5.6			I
I	ARM C	8.89	32.89	0.270							I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.6 *
17.15	0.8 *
17.30	1.2 *
17.45	1.2 *
18.00	0.8 *
18.15	0.6 *

QUEUE AT ARM B

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

QUEUE AT ARM C

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

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
I		I		I		I	(MIN/VEH)	I
I	A	I	1375.3	I	916.9	I	75.4	I
I	B	I	192.0	I	128.0	I	11.9	I
I	C	I	974.9	I	650.0	I	45.3	I
I	ALL	I	2542.2	I	1694.8	I	132.6	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

***** ARCADY 6 run completed. .

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

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)

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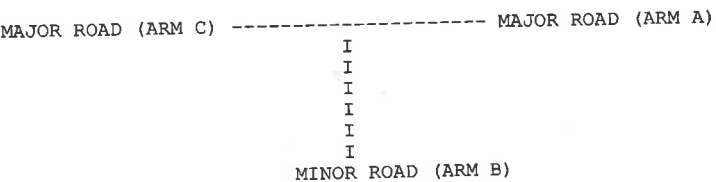
Ru th file:-
"I:\18578-01-X Gavray Drive, Bicester\3. Project\3.2 Analysis\Junction Capacity Tests\Old TA Reproduced TA\PCU\
Copy of Wretchwick - Peregrine Priority\Wretchwick Pergrine Priority.vpi"
(drive-on-the-left) at 13:09:48 on Thursday, 2 September 2010

RUN INFORMATION

RUN TITLE: Wretchwick Way - Peregrine Way
LOCATION: Bicester
DATE: 13/07/10
CLIENT: JJ Gallagher
ENUMERATOR: Alexanders [CS5DG3J]
JOB NUMBER: 18578-01-1
STATUS: TIA
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Wretchwick Way SW
ARM B IS Peregrine Way
ARM C IS Wretchwick Way NE

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) 12.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 3.20 M.	I
I	- VISIBILITY	I	(VC-B) 120.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 65.0 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 JUNC.	I	10.00 M.	I
I	- WIDTH AT 5 M FROM JUNC.	I	9.00 M.	I
I	- WIDTH AT 10 M FROM JUNC.	I	6.50 M.	I
I	- WIDTH AT 15 M FROM JUNC.	I	6.00 M.	I
I	- WIDTH AT 20 M FROM JUNC.	I	6.00 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	I
I	643.46	0.18	0.07	I

I	Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I	513.92	0.17	0.07	0.11	0.25	I

I	Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	I
I	713.49	0.20	0.20	I

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

ARM	FLOW SCALE (%)
A	100
B	100
C	100

Demand set: 2016+CD+DEV Wretchwick Way - Peregrine Way

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 TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN)		
				BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
A	15.00	45.00	75.00	7.15	10.73	7.15
B	15.00	45.00	75.00	3.04	4.56	3.04
C	15.00	45.00	75.00	12.84	19.26	12.84

TIME	TURNING PROPORTIONS			
	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.052	0.948
		0.0	30.0	542.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.354	0.000	0.646
		86.0	0.0	157.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.909	0.091	0.000
		934.0	93.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)
07.45-08.00									
B-C	1.97	11.13	0.177		0.00	0.21	3.1		
B-A	1.08	6.34	0.170		0.00	0.20	2.9		
C-A	11.72				0.00	0.13	1.8		
C-B	1.17	10.43	0.112						
A-B	0.38								
A-C	6.80								

QUEUE FOR STREAM B-C

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

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.3
08.30	0.5
08.45	0.5
09.00	0.3
09.15	0.2

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
B-C	216.1	144.1	26.8
B-A	118.4	78.9	29.1
C-A	1285.6	857.1	0.12
C-B	128.0	85.3	0.25
A-B	41.3	27.5	14.8
A-C	746.0	497.3	0.12
ALL	2535.4	1690.3	70.7

* 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

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
643.46	0.18	0.07

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
513.92	0.17	0.07	0.11	0.25

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
713.49	0.20	0.20

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

TRL

TRL VIEWER

3.1 AD I:\... \Copy of Wretchwick - Peregrine Priority\Wretchwick Pergrine Priority.vpo - P: 8

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	2.31	10.32	0.224		0.21	0.29	4.2		
B-A	0.52	4.76	0.110		0.09	0.12	1.8		
C-A	8.75								
C-B	2.25	8.80	0.255		0.25	0.34	4.9		
A-B	2.19								
A-C	12.93								

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	2.83	9.41	0.300		0.29	0.42	6.1		
B-A	0.64	3.80	0.169		0.12	0.20	2.8		
C-A	10.72								
C-B	2.75	8.11	0.339		0.34	0.50	7.3		
A-B	2.68								
A-C	15.84								

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	2.83	9.40	0.301		0.42	0.43	6.4		
B-A	0.64	3.80	0.169		0.20	0.20	3.0		
C-A	10.72								
C-B	2.75	8.11	0.339		0.50	0.51	7.6		
A-B	2.68								
A-C	15.84								

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	2.31	10.31	0.224		0.43	0.29	4.5		
B-A	0.52	4.75	0.110		0.20	0.13	2.0		
C-A	8.75								
C-B	2.25	8.80	0.255		0.51	0.35	5.4		
A-B	2.19								
A-C	12.93								

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	1.93	10.93	0.177		0.29	0.22	3.3		
B-A	0.44	5.44	0.081		0.13	0.09	1.4		
C-A	7.33								
C-B	1.88	9.31	0.202		0.35	0.26	4.0		
A-B	1.83								
A-C	10.83								

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

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

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.3
17.30	0.5
17.45	0.5
18.00	0.3
18.15	0.3

1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805 2806 2807 2808 2809 2810

1000 900 800 700 600 500 400 300 200 100 0

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-

"i:\18578-01-X Gavray Drive, Bicester\3. Project\3.2 Analysis\Junction Capacity Tests\Old TA Reproduced TA\PCU\
Copy of Peregrine Way - Wretchwick Way\Peregrine Way - Wretchwick Way AM Peak.vai"
(drive-on-the-left) at 14:15:25 on Thursday, 2 September 2010

FILE PROPERTIES

RUN TITLE: Peregrine Way/Wretchwick Way AM Peak
LOCATION: Bicester
DATE: 13/07/10
CLIENT: JJ Gallagher
ENUMERATOR: Alexanders [CS5DG3J]
JOB NUMBER: 18578-01-1
STATUS: TIA
DESCRIPTION:

INPUT DATA

ARM A - Neunkirchen Way
ARM B - Peregrine Way
ARM C - Wretchwick Way North

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	7.00	I	10.00	I	10.00	I	45.00	I	49.00	I	31.0	I	0.800	I	44.100	I
I	ARM B	I	3.00	I	7.00	I	8.00	I	60.00	I	50.00	I	17.0	I	0.590	I	24.700	I
I	ARM C	I	5.50	I	8.00	I	10.00	I	35.00	I	50.00	I	38.0	I	0.677	I	34.552	I

V = approach half-width
E = entry width

L = effective flare length
R = entry radius

D = inscribed circle diameter
PHI = entry angle

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

TRL VIEWER

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.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

53. GRT TITLE: 2016+CD+DEV Peregrine Way/Wretchwick Way AM Peak

DEP		SEA PEAK				RATE OF FLOW (VEH/MIN)		
I	I	I	NUMBER OF MINUTES FROM START WHEN	I	I	BEFORE	AT TOP	AFTER
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I
I	I	I	TO RISE	I	IS REACHED	I	IF FALLING	I
I	ARM A	I	15.00	I	45.00	I	75.00	I
I	ARM B	I	15.00	I	45.00	I	75.00	I
I	ARM C	I	15.00	I	45.00	I	75.00	I
				</				

DEMAND SET TITLE: 2016+CD+DEV Peregrine Way/Wretchwick Way AM Peak

TIME	TURNING PROPORTIONS TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S)			
	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.167	0.833
		0.0	99.0	493.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.827	0.000	0.173
		367.0	0.0	77.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.973	0.027	0.000
		993.0	28.0	0.0
		(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

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)
07.45-08.00									
ARM A	7.40	43.82	0.169		0.0	0.2	3.0		
ARM B	5.55	21.07	0.263		0.0	0.4	5.2		
ARM C	12.76	31.46	0.406		0.0	0.7	9.9		

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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)
08.00-08.15									
ARM A	8.84	43.77	0.202		0.2	0.3	3.8		
ARM B	6.63	20.36	0.325		0.4	0.5	7.0		
ARM C	15.24	30.85	0.494		0.7	1.0	14.2		

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)
08.15-08.30									
ARM A	10.82	43.69	0.248		0.3	0.3	4.9		
ARM B	8.12	19.39	0.419		0.5	0.7	10.4		
ARM C	18.66	30.02	0.622		1.0	1.6	23.4		

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)
08.30-08.45									
ARM A	10.82	43.69	0.248		0.3	0.3	4.9		
ARM B	8.12	19.39	0.419		0.7	0.7	10.7		
ARM C	18.66	30.01	0.622		1.6	1.6	24.4		

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)
08.45-09.00									
ARM A	8.84	43.77	0.202		0.3	0.3	3.8		
ARM B	6.63	20.36	0.326		0.7	0.5	7.5		
ARM C	15.24	30.83	0.494		1.6	1.0	15.2		

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)
09.00-09.15									
ARM A	7.40	43.82	0.169		0.3	0.2	3.1		
ARM B	5.55	21.07	0.263		0.5	0.4	5.5		
ARM C	12.76	31.44	0.406		1.0	0.7	10.5		

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.3
08.30	0.3
08.45	0.3
09.00	0.3
09.15	0.2

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QUEUE AT ARM B

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 C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.7 *
08.15	1.0 *
08.30	1.6 **
08.45	1.6 **
09.00	1.0 *
09.15	0.7 *

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)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	A	I	811.8	I	541.2	I	23.5	I	0.03
I	B	I	608.8	I	405.9	I	46.3	I	0.08
I	C	I	1400.0	I	933.3	I	97.7	I	0.07
I	ALL	I	2820.6	I	1880.4	I	167.5	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 JOB

***** ARCADY 6 run completed.

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

[Printed at 14:16:24 on 02/09/2010]

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ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"i:\18578-01-X_Gavray Drive, Bicester\3. Project\3.2 Analysis\Junction Capacity Tests\Old TA Reproduced TA\PCU\
Copy of Peregrine Way - Wretchwick Way\Peregrine Way - Wretchwick Way PM Peak GEOM CHANGE.vai"
(drive-on-the-left) at 14:37:27 on Thursday, 2 September 2010

FILE PROPERTIES

RUN TITLE: Peregrine Way/Wretchwick Way AM Peak
LOCATION: Bicester
DATE: 13/07/10
CLIENT: JJ Gallagher
ENUMERATOR: Alexanders [CS5DG3J]
JOB NUMBER: 18578-01-1
STATUS: TIA
DESCRIPTION:

INPUT DATA

ARM A - Neunkirchen Way
ARM B - Peregrine Way
ARM C - Wretchwick Way North

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	7.00	I	10.00	I	10.00	I	45.00	I	50.00	I	31.0	I	0.794	I	44.100	I
I	ARM B	I	3.00	I	7.00	I	8.00	I	60.00	I	50.00	I	17.0	I	0.590	I	24.700	I
I	ARM C	I	5.50	I	8.00	I	10.00	I	35.00	I	50.00	I	38.0	I	0.677	I	34.552	I

V = approach half-width
E = entry width

L = effective flare length
R = entry radius

D = inscribed circle diameter
PHI = entry angle

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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 TURNING COUNT DATA

DEMAND SET TITLE: 2016+CD+DEV Peregrine Way/Wretchwick Way PM Peak

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	IF FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	16.55	I	24.82	I	16.55	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	2.56	I	3.84	I	2.56	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	7.90	I	11.85	I	7.90	I

DEMAND SET TITLE: 2016+CD+DEV Peregrine Way/Wretchwick Way PM Peak

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I
I	16.45 - 18.15	I	ARM A	I	0.000	I	0.267	I	0.733	I
I		I		I	0.0	I	354.0	I	970.0	I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I	ARM B	I	0.829	I	0.000	I	0.171	I
I		I		I	170.0	I	0.0	I	35.0	I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I	ARM C	I	0.892	I	0.108	I	0.000	I
I		I		I	564.0	I	68.0	I	0.0	I
I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

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
I	16.45-17.00	I		I		I		I		I		I		I		I		I		I
I	ARM A	I	16.55	I	43.43	I	0.381	I		I	0.0	I	0.6	I	9.0	I		I		I
I	ARM B	I	2.56	I	17.57	I	0.146	I		I	0.0	I	0.2	I	2.5	I		I		I
I	ARM C	I	7.90	I	33.12	I	0.239	I		I	0.0	I	0.3	I	4.6	I		I		I

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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									
ARM A	19.76	43.29	0.456		0.6	0.8	12.3		
ARM B	3.06	16.17	0.189		0.2	0.2	3.4		
ARM C	9.43	32.84	0.287		0.3	0.4	5.9		

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									
ARM A	24.20	43.11	0.561		0.8	1.3	18.6		
ARM B	3.75	14.26	0.263		0.2	0.4	5.2		
ARM C	11.55	32.45	0.356		0.4	0.6	8.1		

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									
ARM A	24.20	43.11	0.561		1.3	1.3	19.1		
ARM B	3.75	14.25	0.263		0.4	0.4	5.3		
ARM C	11.55	32.45	0.356		0.6	0.6	8.3		

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									
ARM A	19.76	43.29	0.456		1.3	0.8	12.9		
ARM B	3.06	16.15	0.189		0.4	0.2	3.6		
ARM C	9.43	32.83	0.287		0.6	0.4	6.2		

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)
18.00-18.15									
ARM A	16.55	43.42	0.381		0.8	0.6	9.4		
ARM B	2.56	17.55	0.146		0.2	0.2	2.6		
ARM C	7.90	33.11	0.239		0.4	0.3	4.8		

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.6 *
17.15	0.8 *
17.30	1.3 *
17.45	1.3 *
18.00	0.8 *
18.15	0.6 *

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QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.4
17.45	0.4
18.00	0.2
18.15	0.2

QUEUE AT ARM C

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	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	A	I	1815.5	I	1210.3	I	81.4	I
I	B	I	281.1	I	187.4	I	22.6	I
I	C	I	866.6	I	577.7	I	37.9	I
I	ALL	I	2963.2	I	1975.5	I	141.9	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.

EN ? JOB

***** ARCADY 6 run completed.

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

[Printed at 14:38:48 on 02/09/2010]

TRL TRL VIEWER 3.1 AD i:\.. \Seelshield Way - A41 East - Gravenhill Road North - A41 West - B4100 London i F

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"i:\18578-01-X Gavray Drive, Bicester\3. Project\3.2 Analysis\Junction Capacity Tests\Old TA Reproduced TA\PCU\
Copy of Seelshield Way\
Seelshield Way - A41 East - Gravenhill Road North - A41 West - B4100 London Road PM Peak specific.vai"
(drive-on-the-left) at 15:25:06 on Thursday, 2 September 2010

FILE PROPERTIES

RUN TITLE: Seelshield Way/A41 East/Gravenhill Road North/A41 West/B4100 London Road PM Peak
LOCATION: Bicester
DATE: 13/07/10
CLIENT: JJ Gallagher Ltd
ENUMERATOR: Alexanders [CS5DG3J]
JOB NUMBER: 18578-01-1
STATUS: TIA
DESCRIPTION:

INPUT DATA

ARM A - Seelshield Way
ARM B - A41 East
ARM C - Gravenhill Road North
ARM D - A41 West
ARM E - B4100 London Road

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	7.00	I	7.00	I	0.00	I	20.00	I	70.00	I	31.0	I	0.570	I	35.227	I
I	ARM B	I	5.25	I	8.50	I	20.00	I	20.00	I	70.00	I	31.0	I	0.588	I	37.181	I
I	ARM C	I	3.50	I	7.00	I	5.00	I	20.00	I	70.00	I	20.0	I	0.472	I	23.933	I
I	ARM D	I	5.00	I	9.00	I	20.00	I	20.00	I	70.00	I	42.0	I	0.568	I	36.003	I
I	ARM E	I	7.00	I	7.00	I	0.00	I	20.00	I	70.00	I	39.0	I	0.554	I	34.246	I

V = approach half-width
E = entry width

L = effective flare length
R = entry radius

D = inscribed circle diameter
PHI = entry angle

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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
I	E	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 TURNING COUNT DATA

DEMAND SET TITLE: 2016 PM Peak+CD+DEV

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	PEAK I OF PEAK I PEAK I	I
I	I	I TO RISE I IS REACHED IFALLING I	I	I	I
I	ARM A	I 15.00 I 45.00 I 75.00 I	I	8.61 I 12.92 I 8.61 I	I
I	ARM B	I 15.00 I 45.00 I 75.00 I	I	19.35 I 29.03 I 19.35 I	I
I	ARM C	I 15.00 I 45.00 I 75.00 I	I	1.05 I 1.57 I 1.05 I	I
I	ARM D	I 15.00 I 45.00 I 75.00 I	I	19.69 I 29.53 I 19.69 I	I
I	ARM E	I 15.00 I 45.00 I 75.00 I	I	9.07 I 13.61 I 9.07 I	I

DEMAND SET TITLE: 2016 PM Peak+CD+DEV

		TURNING PROPORTIONS										
		TURNING COUNTS (VEH/HR)										
		(PERCENTAGE OF H.V.S)										
TIME		FROM/TO	ARM A	ARM B	ARM C	ARM D	ARM E					
16.45 - 18.15	ARM A	0.000	0.282	0.003	0.591	0.125						
		0.0	194.0	2.0	407.0	86.0						
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)						
	ARM B	0.264	0.000	0.006	0.508	0.223						
		408.0	0.0	9.0	786.0	345.0						
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)						
	ARM C	0.155	0.286	0.000	0.321	0.238						
		13.0	24.0	0.0	27.0	20.0						
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)						
	ARM D	0.442	0.463	0.006	0.000	0.090						
		696.0	729.0	9.0	0.0	141.0						
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)						
	ARM E	0.233	0.457	0.000	0.310	0.000						
		169.0	332.0	0.0	225.0	0.0						
		(0.0)	(0.0)	(0.0)	(0.0)	(0.0)						

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

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	ARM A	8.61	25.89	0.333		0.0	0.5	7.3			I
I	ARM B	19.35	31.84	0.608		0.0	1.5	22.0			I
I	ARM C	1.05	10.67	0.098		0.0	0.1	1.6			I
I	ARM D	19.69	29.67	0.663		0.0	1.9	27.4			I
I	ARM E	9.07	21.32	0.426		0.0	0.7	10.6			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	ARM A	10.28	24.07	0.427		0.5	0.7	10.8			I
I	ARM B	23.11	30.80	0.750		1.5	2.9	40.9			I
I	ARM C	1.25	8.08	0.155		0.1	0.2	2.6			I
I	ARM D	23.51	28.44	0.827		1.9	4.5	60.2			I
I	ARM E	10.84	18.81	0.576		0.7	1.3	19.1			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	ARM A	12.60	22.19	0.568		0.7	1.3	18.6			I
I	ARM B	28.30	29.39	0.963		2.9	13.8	153.9			I
I	ARM C	1.54	4.82	0.318		0.2	0.5	6.4			I
I	ARM D	28.79	26.91	1.070		4.5	39.8	354.0			I
I	ARM E	13.27	16.52	0.803		1.3	3.7	49.3			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	ARM A	12.60	22.06	0.571		1.3	1.3	19.6			I
I	ARM B	28.30	29.35	0.964		13.8	17.0	234.0			I
I	ARM C	1.54	4.55	0.337		0.5	0.5	7.3			I
I	ARM D	28.79	26.76	1.076		39.8	71.6	836.9			I
I	ARM E	13.27	16.32	0.813		3.7	4.1	59.2			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	ARM A	10.28	22.81	0.451		1.3	0.8	12.8			I
I	ARM B	23.11	30.73	0.752		17.0	3.1	65.9			I
I	ARM C	1.25	7.55	0.166		0.5	0.2	3.2			I
I	ARM D	23.51	28.14	0.835		71.6	8.0	595.9			I
I	ARM E	10.84	16.43	0.659		4.1	2.0	32.3			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	8.61	25.69	0.335		0.8	0.5	7.8			I
I	ARM B	19.35	31.80	0.609		3.1	1.6	24.6			I
I	ARM C	1.05	10.54	0.100		0.2	0.1	1.7			I
I	ARM D	19.69	29.61	0.665		8.0	2.0	34.3			I
I	ARM E	9.07	21.02	0.432		2.0	0.8	12.0			I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5
17.15	0.7 *
17.30	1.3 *
17.45	1.3 *
18.00	0.8 *
18.15	0.5 *

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	1.5 **
17.15	2.9 ***
17.30	13.8 *****
17.45	17.0 *****
18.00	3.1 ***
18.15	1.6 **

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.5
17.45	0.5
18.00	0.2
18.15	0.1

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	1.9 **
17.15	4.5 ****
17.30	39.8 *****
17.45	71.6 *****
18.00	8.0 *****
18.15	2.0 **

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.7 *
17.15	1.3 *
17.30	3.7 ****
17.45	4.1 ****
18.00	2.0 **
18.15	0.8 *

TRL VIEWER 3.1 AD i:\... \Seelshield Way - A41 East - Gravenhill Road North - A41 West - B4100 London ' i P.

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			I			I			I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	A	I	944.8	I 629.8	I	76.9	I 0.08	I	76.9	I 0.08	I
I	B	I	2122.6	I 1415.1	I	541.4	I 0.26	I	541.5	I 0.26	I
I	C	I	115.2	I 76.8	I	22.8	I 0.20	I	22.8	I 0.20	I
I	D	I	2159.7	I 1439.8	I	1908.7	I 0.88	I	1908.8	I 0.88	I
I	E	I	995.5	I 663.7	I	182.7	I 0.18	I	182.7	I 0.18	I
I	ALL	I	6337.7	I 4225.2	I	2732.5	I 0.43	I	2732.6	I 0.43	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

***** ARCADY 6 run completed.

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

[Printed at 15:25:45 on 02/09/2010]

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"i:\18578-01-X Gavray Drive, Bicester\3. Project\3.2 Analysis\Junction Capacity Tests\Old TA Reproduced TA\PCU\
Copy of Seelshield Way\
2010 adj Seelshield Way - A41 East - Gravenhill Road North - A41 West - B4100 London Road AM Peak.vai"
(drive-on-the-left) at 14:54:16 on Thursday, 2 September 2010

FILE PROPERTIES

RUN TITLE: Seelshield Way/A41 East/Gravenhill Road North/A41 West/B4100 London Road AM Peak
LOCATION: Bicester
DATE: 13/07/10
CLIENT: JJ Gallagher Ltd
ENUMERATOR: Alexanders [CS5DG3J]
JOB NUMBER: 18578-01-1
STATUS: TIA
DESCRIPTION:

INPUT DATA

ARM A - Seelshield Way
ARM B - A41 East
AF - Gravenhill Road North
AR - A41 West
ARM E - B4100 London Road

TRL VIEWER 3.1 AD i:\... \2010 adj Seelshield Way - A41 East - Gravenhill Road North - A41 West - B410(and

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	7.00	I	7.00	I	0.00	I	20.00	I	70.00	I	31.0	I	0.570	I	30.227	I
I ARM B	I	5.25	I	8.50	I	20.00	I	20.00	I	70.00	I	31.0	I	0.588	I	37.181	I
I ARM C	I	3.50	I	7.00	I	5.00	I	20.00	I	70.00	I	20.0	I	0.472	I	23.933	I
I ARM D	I	5.00	I	9.00	I	20.00	I	20.00	I	70.00	I	42.0	I	0.568	I	36.003	I
I ARM E	I	7.00	I	7.00	I	0.00	I	20.00	I	70.00	I	39.0	I	0.554	I	34.246	I

V = approach half-width L = effective flare length D = inscribed circle diameter
E = entry width R = entry radius PHI = entry angle

WARNING One or more intercept values (flagged * in the table) have been adjusted according to local values input from a previous run and listed below -

I	I	ADJUSTMENT TO	I
I	I	INTERCEPT (PCU/MIN)	I
I ARM A	I	-5.000	I

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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
I E	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 TURNING COUNT DATA

DEMAND SET TITLE: 2016+CD+DEV AM Peak

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	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I
I ARM A	I	15.00 I 45.00 I 75.00	I	17.20 I 25.80 I 17.20	I
I ARM B	I	15.00 I 45.00 I 75.00	I	15.14 I 22.71 I 15.14	I
I ARM C	I	15.00 I 45.00 I 75.00	I	0.55 I 0.83 I 0.55	I
I ARM D	I	15.00 I 45.00 I 75.00	I	14.93 I 22.39 I 14.93	I
I ARM E	I	15.00 I 45.00 I 75.00	I	8.91 I 13.37 I 8.91	I

DEMAND SET TITLE: 2016+CD+DEV AM Peak

TIME	TURNING PROPORTIONS TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S)					
	FROM/TO	ARM A	ARM B	ARM C	ARM D	ARM E
07.45 - 09.15	ARM A	0.000 0.0 (0.0)	0.328 451.0 (0.0)	0.003 4.0 (0.0)	0.584 803.0 (0.0)	0.086 118.0 (0.0)
	ARM B	0.133 161.0 (0.0)	0.000 0.0 (0.0)	0.013 16.0 (0.0)	0.650 787.0 (0.0)	0.204 247.0 (0.0)
	ARM C	0.182 8.0 (0.0)	0.568 25.0 (0.0)	0.000 0.0 (0.0)	0.250 11.0 (0.0)	0.000 0.0 (0.0)
	ARM D	0.288 344.0 (0.0)	0.553 660.0 (0.0)	0.025 30.0 (0.0)	0.000 0.0 (0.0)	0.134 160.0 (0.0)
	ARM E	0.104 74.0 (0.0)	0.564 402.0 (0.0)	0.014 10.0 (0.0)	0.318 227.0 (0.0)	0.000 0.0 (0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

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)
07.45-08.00									
ARM A	17.20	20.62	0.834		0.0	4.5	58.4		
ARM B	15.14	28.54	0.530		0.0	1.1	16.2		
ARM C	0.55	10.24	0.054		0.0	0.1	0.8		
ARM D	14.93	32.06	0.465		0.0	0.9	12.6		
ARM E	8.91	25.78	0.346		0.0	0.5	7.7		

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)
08.00-08.15									
ARM A	20.54	18.73	1.096		4.5	36.6	324.1		
ARM B	18.08	27.56	0.656		1.1	1.9	26.8		
ARM C	0.66	8.11	0.081		0.1	0.1	1.3		
ARM D	17.82	31.38	0.568		0.9	1.3	19.0		
ARM E	10.64	24.11	0.441		0.5	0.8	11.5		

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)
08.15-08.30									
ARM A	25.15	16.17	1.555		36.6	171.4	1560.5		
ARM B	22.14	27.93	0.793		1.9	3.6	50.2		
ARM C	0.80	6.61	0.122		0.1	0.1	2.0		
ARM D	21.83	30.66	0.712		1.3	2.4	34.3		
ARM E	13.03	21.86	0.596		0.8	1.5	20.8		

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	ARM A	25.15	16.13	1.560		171.4	306.9	3587.1			I
I	ARM B	22.14	27.93	0.793		3.6	3.7	55.3			I
I	ARM C	0.80	6.56	0.123		0.1	0.1	2.1			I
I	ARM D	21.83	30.64	0.712		2.4	2.4	36.5			I
I	ARM E	13.03	21.81	0.598		1.5	1.5	21.9			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	ARM A	20.54	18.66	1.100		306.9	335.0	4814.0			I
I	ARM B	18.08	27.45	0.659		3.7	2.0	31.1			I
I	ARM C	0.66	7.95	0.083		0.1	0.1	1.4			I
I	ARM D	17.82	31.33	0.569		2.4	1.3	20.7			I
I	ARM E	10.64	24.05	0.443		1.5	0.8	12.4			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	17.20	20.56	0.836		335.0	285.5	4653.5			I
I	ARM B	15.14	27.11	0.558		2.0	1.3	19.9			I
I	ARM C	0.55	9.03	0.061		0.1	0.1	1.0			I
I	ARM D	14.93	31.86	0.468		1.3	0.9	13.6			I
I	ARM E	8.91	25.73	0.346		0.8	0.5	8.2			I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	4.5	*****
08.15	36.6	*****
08.30	171.4	*****
08.45	306.9	*****
09.00	335.0	*****
09.15	285.5	*****

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.1	*
08.15	1.9	**
08.30	3.6	****
08.45	3.7	****
09.00	2.0	**
09.15	1.3	*

QUEUE AT ARM C

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 AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.9 *
08.15	1.3 *
08.30	2.4 **
08.45	2.4 **
09.00	1.3 *
09.15	0.9 *

QUEUE AT ARM E

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5 *
08.15	0.8 *
08.30	1.5 *
08.45	1.5 *
09.00	0.8 *
09.15	0.5 *

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	M	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		I
I		I		I	* DELAY *	I	* DELAY *	I		I
I		I		I		I		I		I
I		I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		I
I	A	I	1886.8	I 1257.9	I 14997.7	I 7.95	I 16979.0	I 9.00		I
I	B	I	1660.5	I 1107.0	I 199.5	I 0.12	I 199.5	I 0.12		I
I	C	I	60.3	I 40.2	I 8.6	I 0.14	I 8.6	I 0.14		I
I	D	I	1637.2	I 1091.5	I 136.7	I 0.08	I 136.7	I 0.08		I
I	E	I	977.7	I 651.8	I 82.5	I 0.08	I 82.5	I 0.08		I
I	ALL	I	6222.6	I 4148.4	I 15424.9	I 2.48	I 17406.2	I 2.80		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

***** ARCADY 6 run completed.

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

Appendix H

Junction Capacity Tests – 2016 Baseline + Employment Scenario

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 3.0 (JUNE 2006)

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Run file:-
"I:\18578-01-X Gavray Drive, Bicester\3. Project\3.2 Analysis\Junction Capacity Tests\Old TA Reproduced TA\PCU\
Copy of Gavray - Mallards\Gavray Mallards.vpi"
(drive-on-the-left) at 13:02:35 on Thursday, 2 September 2010

RUN INFORMATION

RUN TITLE: Gavray Drive - Mallards
LOCATION: Bicester
DATE: 13/07/10
CLIENT: JJ Gallagher
ENUMERATOR: Alexanders [CS5DG3J]
JOB NUMBER: 18578-01-1
STATUS: TIA
DESCRIPTION:

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS Gavray Drive East
ARM B IS Mallards Lane
ARM C IS Gavray Drive 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)	9.10 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)	130.0 M.	I
I	- BLOCKS TRAFFIC	I	NO	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I (VB-C)	90.0 M.	I
I	- VISIBILITY TO RIGHT	I (VB-A)	85.0 M.	I
I	- LANE 1 WIDTH	I (WB-C)	-	I
I	- LANE 2 WIDTH	I (WB-A)	-	I
I	- WIDTH AT 0 M FROM JUNC.	I	10.00 M.	I
I	- WIDTH AT 5 M FROM JUNC.	I	5.50 M.	I
I	- WIDTH AT 10 M FROM JUNC.	I	5.00 M.	I
I	- WIDTH AT 15 M FROM JUNC.	I	4.00 M.	I
I	- WIDTH AT 20 M FROM JUNC.	I	4.00 M.	I
I	- LENGTH OF FLARED SECTION	I	1 VEHS	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	I
I	623.19	0.21	0.08	I

I	Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B	I
I	505.60	0.20	0.08	0.13	0.29	I

I	Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	I
I	649.25	0.22	0.22	I

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

ARM	FLOW SCALE (%)
A	100
B	100
C	100

Demand set: 2016 + CD+B1 Gavray Drive - Mallards

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 TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)			I	
			I	I	I	I	I	I		
I		I	FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER	I	
I		I	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK	I	
I	A	I	15.00	I	45.00	I	0.52	I	0.79	I
I	B	I	15.00	I	45.00	I	0.85	I	1.28	I
I	C	I	15.00	I	45.00	I	0.19	I	0.28	I

I I I I I I	I I I I I I	TURNING PROPORTIONS						I		
		TURNING COUNTS (VEH/HR)						I		
		(PERCENTAGE OF H.V.S)						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	ARM A	I	0.000	I	0.810	I	0.190	I
I		I		I	0.0	I	34.0	I	8.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I
I		I	ARM B	I	0.956	I	0.000	I	0.044	I
I		I		I	65.0	I	0.0	I	3.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I
I		I	ARM C	I	0.667	I	0.333	I	0.000	I
I		I		I	10.0	I	5.0	I	0.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I
I		I		I		I		I		I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

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)
07.45-08.00									
B-C	0.04	9.80	0.004		0.00	0.00	0.1		
B-A	0.82	10.48	0.078		0.00	0.08	1.2		
C-A	0.13								
C-B	0.06	10.71	0.006		0.00	0.01	0.1		
A-B	0.43								
A-C	0.10								

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)
08.00-08.15									
B-C	0.04	9.75	0.005		0.00	0.00	0.1		
B-A	0.97	10.45	0.093		0.08	0.10	1.5		
C-A	0.15								
C-B	0.07	10.68	0.007		0.01	0.01	0.1		
A-B	0.51								
A-C	0.12								

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)
08.15-08.30									
B-C	0.06	9.67	0.006		0.00	0.01	0.1		
B-A	1.19	10.43	0.114		0.10	0.13	1.9		
C-A	0.18								
C-B	0.09	10.65	0.009		0.01	0.01	0.1		
A-B	0.62								
A-C	0.15								

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)
08.30-08.45									
B-C	0.06	9.67	0.006		0.01	0.01	0.1		
B-A	1.19	10.43	0.114		0.13	0.13	1.9		
C-A	0.18								
C-B	0.09	10.65	0.009		0.01	0.01	0.1		
A-B	0.62								
A-C	0.15								

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)
08.45-09.00									
B-C	0.04	9.75	0.005		0.01	0.00	0.1		
B-A	0.97	10.45	0.093		0.13	0.10	1.6		
C-A	0.15								
C-B	0.07	10.68	0.007		0.01	0.01	0.1		
A-B	0.51								
A-C	0.12								

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)
09.00-09.15									
B-C	0.04	9.80	0.004		0.00	0.00	0.1		
B-A	0.82	10.48	0.078		0.10	0.09	1.3		
C-A	0.13								
C-B	0.06	10.71	0.006		0.01	0.01	0.1		
A-B	0.43								
A-C	0.10								

QUEUE FOR STREAM B-C

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 B-A

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-B

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

STREAM	TOTAL DEMAND	* QUEUEING *	* INCLUSIVE QUEUEING *
		* DELAY *	* DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
B-C	4.1	0.4	0.10
B-A	89.5	9.4	0.11
C-A	13.8		
C-B	6.9	0.6	0.09
A-B	46.8		
A-C	11.0		
ALL	172.1	10.5	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 JOB

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
623.19	0.21	0.08

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
505.60	0.20	0.08	0.13	0.29

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
649.25	0.22	0.22

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA