|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SIMPANG APILL PENENTUAN WAKTU ISYARAT KAPASITAS** | | | | Tanggal : 14 Januari 2019 | | | | Ditangani oleh : Shefvina | | |
| Simpang : Jalan Puri Lingkar Luar | | | | | | |
| Perihal : Simpang Empat | | | | | | |
| Periode : Jam puncak sore hari kerja | | | | | | |
| Sketsa Fase APILL | | | | | | | | | | |
|  | |  | |  | |  | | Waktu siklus | | |
| c = 166 detik | | |
|
| Waktu Hilang total | | |
| HH =  AH = 12 detik | | |
|
| H = 99 | | H = 58 | | H = 61 | |  | | H = Waktu Hijau  AH = Waktu antar hijau | | |
| AH = 4 | | AH = 4 | | AH = 4 | |  | |
|  | | | | | | | | | | |
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|
|
|
| Kode Pendekat | Tipe Linkungan Jalan | Hambatan Samping Tinggi/Rendah | Median Ya/Tidak | Kelandaian pendekat +(nanjak) /-(turun) % | BKiJT Y(Ada) /T (Tidak) | Jarak ke kendaraan parkir pertama (m) | Lebar Pendekat (m) | | | |
| Pada lajur awal L (m) | Pada garis hentin Lm (m) | Pada lajur belok kiri Jalan Terus LBKiJT (m) | Pada lajur keluar Lk (m) |
|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| U | KOM | R | YA | 0 | Y | 0 | 12,5 | 12,5 | 6,10 | 12,5 |
| S | KOM | R | TIDAK | 0 | T | 0 | 6,7 | 6,7 | 0 | 6,7 |
| B | KOM | R | YA | 0 | Y | 0 | 17,3 | 17,3 | 7,45 | 17,3 |
| T | KOM | R | YA | 0 | Y | 0 | 7,8 | 7,8 | 4,2 | 7,8 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SIMPANG APILL** | | | | | | Tanggal : 14 Januari 2019 | | | | | | | Ditangani oleh : Shefvina | | | | |
| Kota : Jakarta Barat | | | | | | | | | | | |
| **ARUS LALU LINTAS** | | | | | | Simpang : Jalan Puri Lingkar Luar | | | | | | | | | | | |
| Perihal : Simpang Empat | | | | | | | | | | | |
| Periode : Jam puncak sore hari kerja | | | | | | | | | | | |
| Kode Pendekat | Arah | KENDARAAN BERMOTOR | | | | | | | | | | | | | | KEND. TAK BERMOTOR | |
| QKR | | | QKB | | | QSM | | | QKBM | | | RBKi | RBKa | QKTB | QKTB |
| ekr terlindung = | | 1, 00 | ekr terlindung = | | 1, 30 | ekr terlindung = | | 0, 20 | Total arus kendaraan bermotor | | | Rasio belok ke kiri | Rasio belok ke kanan | Arus kend. tak bermotor | Rasio |
| ekr terlawan = | | 1, 00 | ekr terlawan = | | 1, 30 | ekr terlawan = | | 0, 20 |
| Kend/ jam | Terlindung | Terlawan | Kend/ jam | Terlindung | Terlawan | Kend/ jam | Terlindung | Terlawan | Kend/ jam | Terlindung | Terlawan |
| skr/ jam | skr/ jam | skr/ jam | skr/ jam | skr/ jam | skr/ jam | skr/ jam | skr/ jam | Kend/ jam |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| U | Bkijt | 67 | 67 |  | 10 | 13 |  | 200 | 30 |  | 277 | 110 |  | 0,0514 |  | 3 |  |
| Lrs | 907 | 907 |  | 19 | 24,7 |  | 2001 | 300,15 |  | 2927 | 1231,85 |  |  | 2 |
| Bka | 681 | 681 |  | 11 | 14,3 |  | 681 | 102,15 |  | 1154 | 797,45 |  | 0,3728 | 0 |
| Total | 1655 | **1655** | 0 | 40 | **52** | 0 | 2882 | **432,3** | 0 | 4075 | **2139,3** | 0 |  | 5 | 0,0012 |
| S | Bkijt | 111 | 111 |  | 67 | 87,1 |  | 0 | 0 |  | 178 | 198,1 |  | 0,2906 |  | 0 |  |
| Lrs | 321 | 321 |  | 114 | 148,2 |  | 0 | 0 |  | 435 | 469,2 |  |  | 0 |
| Bka | 8 | 8 |  | 5 | 6,5 |  | 0 | 0 |  | 13 | 15 |  | 0,0213 | 0 |
| Total | 440 | 440 | 0 | 186 | 241,8 | 0 | 0 | 0 | 0 | 668 | **681,8** | 0 |  | 0 | 0 |
| B | Bkijt | 96 | 96 |  | 11 | 14,3 |  | 193 | 28,95 |  | 300 | 139,25 |  | 0,0766 |  | 0 |  |
| Lrs | 921 | 921 |  | 9 | 11,7 |  | 921 | 138,15 |  | 1851 | 1070,85 |  |  | 3 |
| Bka | 322 | 322 |  | 183 | 237,9 |  | 322 | 48,3 |  | 827 | 608,2 |  | 0,3345 | 1 |
| Total | 1339 | **1339** | 0 | 203 | **263,9** | 0 | 1436 | **215,4** | 0 | 2174 | **1818,3** | 0 |  | 4 | 0,0018 |
| T | Bkijt | 47 | 47 |  | 8 | 10,4 |  | 54 | 8,1 |  | 109 | 65,5 |  | 0,5217 |  | 3 |  |
| Lrs | 19 | 19 |  | 10 | 13 |  | 33 | 4,95 |  | 62 | 36,95 |  |  | 1 |
| Bka | 15 | 15 |  | 3 | 3,9 |  | 28 | 4,2 |  | 46 | 23,1 |  | 0,184 | 2 |
| Total | 81 | 81 | 0 | 21 | 27,3 | 0 | 115 | 17,25 | 0 | 217 | **125,55** | 0 |  | 6 | 0,0271 |

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| **SIMPANG APILL PENENTUAN WAKTU ISYARAT KAPASITAS** | | | | | | Tanggal : 14 Januari 2019 | | | | | | | | | | | | Ditangani oleh : Shefvina | | | |  |
| Kota : Jakarta Barat | | | | | | | | | | | | | | | |
| Simpang : Jalan Puri Lingkar Luar | | | | | | | | | | | | | | | |
| Perihal : Simpang Empat | | | | | | | | | | | | | | | |
| Periode : Jam puncak sore hari kerja | | | | | | | | | | | | | | | |
| Distribusi arus lalu lintas: | | | | | | | | | | | | | | | | | | | | | |
|  | | | |  | | | |  | | | |  | | | |  | | |  | | | |
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|
| Distribusi Arus Lalu Lintas, skr/jam | | | | Fase 1 | | | | Fase 2 | | | | Fase 3 | | | |  | | |  | | | |
| Kode Pendekat | Hijau dalam fase ke | Tipe pendekat | Rasio kendaraan belok | | | Arus Belok kanan | | Lebar efektif (m) | Arus jenuh, S | | | | | | |  |  |  |  |  |  |  |
| RBKiJT | RBKi | RBKa | Dari arah ditinjau skr/ jam | Dari arah berlawanan skr/ jam | Arus jenuh dasar So skr/ jam | Faktor-faktor penyesuaian | | | | | | Arus jenuh disesuaikan (**S )**  ekr/ jam | Arus lalu lintas (**Q )** skr/ jam | Rasio arus **Rq/s** | Rasio Fase **RF** | Waktu hijau (**Hj)** | Kapasitas (**C)** | Derajat Kejenuhan **Dj** |
| Semua tipe pendekat | | | | Hanya Tipe P | |
| **FUK** | **FKHS** | **FG** | **FP** | **FBKa** | **FBKi** |
|  | **So** = 600 x Le  **S**  = So x FHS x FUK x FG x Fp x FBKi x FBKa | | | | | | | |  | | | | |  |
|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) |
| U | 1 | P | 0,0514 |  | 0,3728 |  |  | 12,5 | 7500 | 1 | 0,95 | 1,00 | 1,00 | 1,00 | 1,00 | 7125 | 4081 | 0,573 | 0,581 | 99 | 4249,247 | 0,96041 |
| S | 2 | P | 0,2906 | 0,0213 |  |  | 6,7 | 4020 | 1 | 0,95 | 1,00 | 1,00 | 1,00 | 1,00 | 3819 | 448 | 0,117 | 0,119 | 58 | 1334,349 | 0,33574 |
| B | 3 | P | 0,0766 | 0,3345 |  |  | 17,3 | 10380 | 1 | 0,95 | 1,00 | 1,00 | 1,00 | 1,00 | 9861 | 2678 | 0,272 | 0,275 | 61 | 3623,62 | 0,73904 |
| T | 4 | P | 0,5217 | 0,184 |  |  | 7,8 | 4680 | 1 | 0,95 | 1,00 | 1,00 | 1,00 | 1,00 | 4446 | 108 | 0,024 | 0,025 |  | 2731,88 | 0,03953 |
| Waktu hilang total, HH, total, detik = 12 | | | | Waktu siklus pra penyesuaian (detik) | | | | | | | 166 |  | | | RAS = | | | 0,986 |  | | | |
| Waktu siklus disesuaikan  (detik) c = | | | | | | | 166 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SIMPANG APILL**  **PANJANG ANTRIAN JUMLAH KENDARAAN**  **TERHENTI TUNDAAN** | | | | | | Tanggal : 14 Januari 2019 | | | | | | | Ditangani oleh : Shefvina | | |
| Kota : Jakarta Barat | | | | | | | | | |
| Simpang : Jalan Puri Lingkar Luar | | | | | | | | | |
| Perihal : Simpang Empat | | | | | | | | | |
| Periode : Jam puncak sore hari kerja | | | | | | | | | |
| **Kode Pendekat** | **Arus lalu lintas**  **Q**  skr/jam | **Kapasitas**  **C**  skr/jam | **Derajat kejenuhan Dj** | **Rasio hijau**  **RH** | Jumlah kendaraan antri | | | | **Panjang Antrian**  **PA**  m | **Rasio kendaraan terhenti**  **RKH** | **Jumlah kendaraan terhenti**  **NKH**  skr | **Tundaan** | | | |
| **NQ1**  skr | **NQ2**  skr | **NQ**  = (NQ1 + NQ2)  skr | **NQmax**  Grafik   skr | **Tundaan lalu lintas rata-rata**  **TL**  det/skr | **Tundaan geometri rata-rata**  **TG**  det/skr | **Tundaan rata-rata**  **T=TT + TG**  Det/skr | **Tundaan total**  **TxQ**  det/skr |
|
|
|
|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
| U | 4081 | 4249,25 | 0,960405 | 0,5964 | 10,354 | 177,78 | 188,13 | 69 | 110,400 | 0,85026 | 3469,893 | 277,61166 | 2,72046 | 280,332 | 1144035 |
| S | 448 | 1334,35 | 0,335744 | 0,3494 | 0,2474 | 15,226 | 14,979 | 26 | 77,612 | 0,66336 | 297,1852 | 26,568144 | 1,44055 | 28,0087 | 11257,16 |
| B | 2678 | 3623,62 | 0,73904 | 0,3675 | 0,9142 | 107,23 | 108,14 | 69 | 79,769 | 0,78151 | 2092,904 | 41,406932 | 1,90836 | 43,3153 | 115998,3 |
| T | 108 | 2731,88 | 0,039533 | 0,6145 | 0,4796 | 1,9678 | 1,4882 | 6 | 15,385 | 0,35563 | 38,40768 | 7,9912994 | 3,16918 | 11,1605 | 520,7886 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| BKiJT | 512,85 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | |  |  |  |  |  |  |  | Total, skr | | 5898,389 |  | Total, skr | | 1271812 |
| QTotal = 7827,85 | | NQ1  = 0, 25 x c x  NQ2 = c x | | | | PA= NQmax x  RKH = 0, 9 x x 3600  NKH = Q x RKH | |  |  |  |  | Tundaan simpang rata-rata, det/skr | | | 162,473 |
|  | |  | | | | TG = (1 – RKH) x PB x 6 + (RH x 4) | | | |
|  | |  | | | |
| TL = c x X | | | |  | | | |
|
|