

Proiectant general: **S.C. ARHICITY OFFICE S.R.L.**
Proiectant Specialite: **SC VIA PROIECT SRL**

Beneficiar: ENEA PAVEL
Proiectant General: S.C. ARHICITY OFFICE S.R.L.
Proiectant Specialitate: Via Proiect SRL

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STUDIU TRAFIC

❖ Generalități

Denumire :

**CONSTRUIRE IMOBIL CU FUNCTIUNE MIXTA (SERVICII, COMERT SI SPATII
REZIDENTIALE), IMPREJMUIRE TEREN, ACCESE.**

Amplasament:

**Jud. Prahova, mun. Ploiesti, , b-dul. Republicii, Nr. 34-36-38, nr. cad. 140397, C.F.
nr. 140397**

Proprietar teren / investitor:

ENEA PAVEL

Proiectant general:

S.C. ARHICITY OFFICE S.R.L.

Proiectant specialitate drumuri:

VIA PROIECT S.R.L.

Faza de proiectare:

PUZ

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❖ **Situatia existentă**

Obiectul prezentului studiu, este acela de a determina care ste impactul realizării investiției propuse de beneficiar asupra condițiilor de desfășurare a traficului în zona adiacentă acesteia.

Terenul pe care se va realiza investiția analizată, proprietatea beneficiarului, este situat în Jud. Prahova, mun. Ploiesti, b-dul Republicii nr. 34-36-38, nr. cad. 140397.

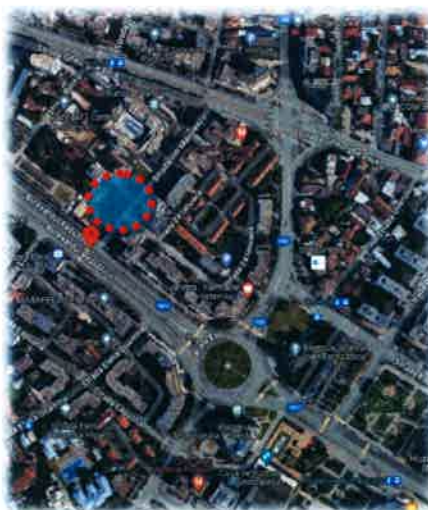
Terenul are o suprafață de 926mp având categoria de folosință curți-construcții, și se învecinează cu proprietăți private ale persoanelor fizice sau juridice:

nord	Proprietăți private Nr. Cad. 123531, 9967
sud	Bulevardul Republicii
est	Strada Ion Măiorescu
vest	Proprietate privată, Nr. Cad. 141773

➤ **Situatia rețelei de strazi**

Amplasamentul are acces, ce face obiectul studiului are deschidere la str. Ion Măiorescu, str. de categoria a III cu un :carosabil de 7.00 m lățime, spații de parcare cu locurile dispuse perpendicular pe partea dreaptă și trotuare de 2 – 3 m. Circulația se desfășoară în sens unic.

Această stradă face legătura între b-dul Republicii și str. Ghe Doja, două artere ce fac parte din trama majoră de circulație a orașului.



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➤ **Transport public**

Din punct de vedere al transportului public zona investitiei este o zonă cu deservita de mai multe linii de transport public :

- ✓ Pe str. Ghe Doja
 - o linie de tramvai - 101
 - trei linii de autobuz – 26, 302, 306
- ✓ Pe str. Emil Zola si Valeni :
 - liniile de autobuz si troleibuz – 4, 4B, 5, 7, 8, 22

Toate aceste linii de transport public au statii situate la o distanta de max 350-400 m distanță față de amplasamentul viitoareii investitii.

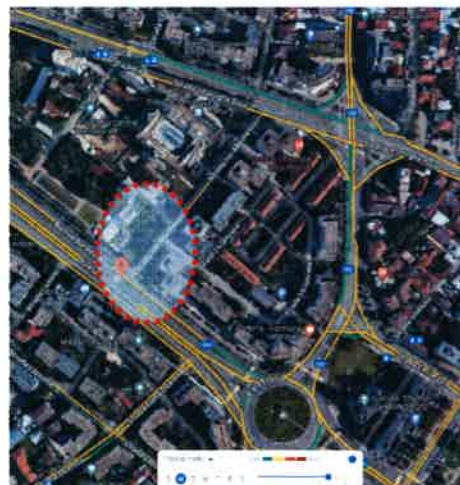
➤ **Trafic**

Zona în care se va realize investitia este o zonă cu trafic mediu ca intensitate, in orele de vârf:

Trafic dimineata



Trafic seara



❖ **Date referitoare la traficul generat de investitie si impactul asupra traficului curent**

Prezenta documentatie este elaborata pentru amplasamentul situat pe b-dul Republicii nr. 34-36-38.

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Conform P.U.G. municipiul Ploiesti, terenul studiat are destinatia functionala C/Cr zona centrala / centru civic cu restrictie de construire pana la elaborare PUZ/PUD.

Prin RLU aferent PUG, sunt stabiliti urmatoorii indicatori urbanistici pentru aceasta zona functionala: P.O.T. 70%, C.U.T. 6.00

C/Cr - zona centrala / centru civic cu restrictie	4644 mp	33,00
Ccr - cai de comunicatii rutiere	9428 mp	67,00
ZONA DE STUDIU	14072 mp	100,00

Conform solicitării Beneficiarului pe terenul ce face obiectul prezentului studiu va fi realizată un imobil cu functiune mixta (locuinte collective si comert). Parametrii urbanistici propusi pentru investitie sunt:

P.O.T.– procentul de ocupare a terenului maximum 70%

C.U.T.– coeficientul de utilizarea a terenului maximum 6.00

REGIMUL DE ÎNĂLȚIME max. 6S+P+11E

ALINIAMENT PROPUȘ:

- 26.56 din ax b-dul. Republicii, conform profil 4-4
- 10.68m din ax strada Ion Maiorescu, conform profil 1-1

BILANT TERITORIAL ZONIFICARE FUNCTIONALA	EXISTENT		PROPUȘ	
	SUPRAFATA	%	SUPRAFATA	%
C/Cr -zona centrala / centru civic cu restrictie	4644 mp	33,00	4644 mp	33,00
Ccr - cai de comunicatii rutiere	9428 mp	67,00	9428,00 mp	67,00
ZONA DE STUDIU	14072 mp	100,00	14072,00 mp	100,00

Imobilul va avea 40 apartamente si suprafată comerciala de 660 mp.

Accese auto, parcaje:

Accesul auto se va realiza din str. Ion Marinescu, iar imobilul va beneficia de un număr de 60 locuri de parcare amplasate in subsolurile imobilului

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Pornind de la caracteristicile investitiei, stabilite prin proiectul de arhitectură, traficul etimat a fi generat de investitie a fost estimat pentru orele de vârf de dimineată si de seară, utilizând « TRIP GENERATION ».

Cu ajutorul acestui soft a fost determinat, pentru fiecare tip de functiune (locuinte, comert, alimentatie publică), un număr de călătorii ce vorfi generate de ansamblu.

Utilizând aceste valori si luând în considerare faptul că numărul mediu de persoane ce călătoresc cu acelasi vehicul este de 1.2 – 1.3 persoane / autoturism, a fost determinat traficul generat de ansamblu pe sensuri (intrare/iesire) pentru orele de vârf.

Trip Generation Summary - Alternative 1										
Weekday Peak Hour of Generator										
Project: Imobil funct.mixta Republicii 38 Ploiesti					Open Date: 3/18/2024					
Alternative: Alternative 1					Analysis Date: 3/18/2024					
ITE	Land Use	Average Daily Trips			AM Peak Hour of Generator			PM Peak Hour of Generator		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
223	MRAPT 1				4	10	14	11	7	18
	40 Dwelling Units									
814	STOREVARIETY 1	150	150	300	9	9	18	17	16	33
	4.66 Gross Floor Area 1000 SF									
Unadjusted Volume		150	150	300	13	19	32	28	23	51
Internal Capture Trips		0	0	0	0	0	0	0	0	0
Pass-By Trips		0	0	0	0	0	0	0	0	0
Volume Added to Adjacent Streets		150	150	300	13	19	32	28	23	51
Total AM Peak Hour Internal Capture = 0 Percent										
Total PM Peak Hour Internal Capture = 0 Percent										

Pentru această fază vom analiza efectele realizării investitiei raportându-ne la un traficul din orele de vârf de dimineată si de seară.

Pe baza datelor mentionate mai sus a fost efectuată o analiza computerizată a rețelei de străzi adiacentă investitiei. Scopul acestei analize este acela de a determina care este impactul produs de realizarea acestei investitii asupra traficului curent din zona adiacenta. Analiza computerizată a fost realizată cu ajutorul soft-urilor specializate SYNCHRO si SIM TRAFFIC, produse de Trafficware din Statele Unite ale Americii.

Cu ajutorul acestor două soft-uri s-au efectuat simulări pe două ipoteze. A fost analizată situatia existentă si situatia după realizarea investitiei.

Pe baza acestor simulări au fost obtinuti o serie de indicatori ce dau o imagine asupra modului în care se desfășoară circulatia pe rețeaua de străzi adiacentă viitoarei investitii.

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Parametrii care au fost luati în calcul la analiză si care dau o imagine asupra calității desfășurării traficului sunt :

➤ **Indicele de Utilizare a Capacitatii**

Capacitatea de circulație a intersecției este estimată prin intermediul indicelui de utilizare a capacității de circulație a intersecției (I.C.U.). Acesta se calculează pe baza raportului dintre suma timpului total necesar pentru a se asigura relațiile de mișcare în intersecție a tuturor participanților la trafic, raportat la lungimea ciclului de semaforizare calculat.

$$I.C.U. = \frac{\sum [\max(t_{\min}, Q / Q_{\max})C + t_{Li}]}{C}$$

$t_{\min}$ = durata minimă a fazei de verde

Q = debitul de vehicule

$Q_{\max}$ = debitul maxim (volum de saturatie)

t_{Li} = durata timp pierdut pentru relația critică din cadrul ciclului de semaforizare

C = durata ciclului de semaforizare

Coeficientul I.C.U. poate indica rezerva de capacitate disponibilă a intersecției sau cu cât s-a depășit această rezerva. Coeficientul nu poate estima întârzierile, dar poate fi folosit pentru a indica când o intersecție va fi congestionată. Coeficientul I.C.U. poate fi de asemenea folosit pentru o intersecție nesemnalizată pentru a evalua condițiile de circulație și capacitatea de circulație.

➤ **Nivelul de serviciu al intersecției.**

Nivelul de serviciu pentru intersecții se exprimă ca o măsură a disconfortului, frustrării șoferului, consumului de carburant și timpului crescut de călătorie. Întârzierea unui conducător auto este compusă dintr-un număr de factori legați de semaforizarea intersecțiilor, traficul de vehicule, obstacole sau incidente. Întârzierea totală este dată de diferența dintre timpul total de călătorie și timpul de referință al călătoriei. Aceasta rezultă în condiții ideale de circulație: absența semaforului electric în intersecție, absența altor vehicule în intersecție.

Nivelul de servicii reprezintă măsuri / limite rezonabile în aprecierea calității călătoriei în intersecții (întârzierea controlată):

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Nivelul A (LOS A) descrie un nivel scazut al intarzierilor calculate, (maxim 10s/veh). Acest nivel de servicii este adoptat in caracterizarea circulatiei intr-o intersectie atunci cand deplasarea vehiculelor se face fara intarzieri si majoritatea vehiculelor care sosesc pot traversa intersectia. Majoritatea vehicule nu opresc deloc. Lungimi scurte ale ciclului de semaforizare pot contribui la valori scazute ale intarzierilor.

Nivelul B (LOS B) exprima faptul ca intersectia functioneaza cu intarzieri minore. Deplasarea vehiculelor in intersectie se face fara intarzieri apreciabile. Valoarea estimata a intarzierilor se plaseaza intre 10 s/veh si 20 s/veh.

Nivelul C (LOS C) descrie deplasari ale vehiculelor in intersectie cu intarziere limitate, cuprinse in marja de 20 s/veh pana la 35 s/veh. Aceste intarzieri pot rezulta din deplasarea vehiculelor cu o viteza moderata. In aceste conditii poate sa apara fenomenul de supraincarcare a benzilor de circulatie. Numarul vehiculelor ce opresc la intersectie in cadrul unei functionari de nivel "C" sa fie insemnat, desi multe vehicule pot trece fara sa opreasca.

Nivelul D (LOS D) descrie deplasari ale vehiculelor in intersectie cu intarziere controlata mai mare de 35 s/veh pana la limita a 55 s/veh. In cadrul acestui nivel de servicii, influenta congestiei in trafic devine usor de remarcat. Intarzierile mai lungi pot rezulta din deplasari ingreunate ale vehiculelor si valori ale indicatorului volum/capacitate (v/c) ridicate.

Nivelul E (LOS E) descrie conditii de circulatie ale vehiculelor in intersectie cu o intarziere controlata cuprinsa in marja 55s/veh - 80s/veh. Valorile ridicate ale intarzierilor indica viteza de deplasare redusa in intersectie si rate ridicate ale indicatorului volum/capacitate (v/c). Numarul ciclurilor de semaforizare care nu pot asigura trecerea tuturor vehiculelor (acumulate in sirul de asteptare) pe faza de verde, este ridicat.

Nivelul F (LOS F) indica un nivel al intarzierilor mai mari de 80 s/veh. Acest nivel, considerat inacceptabil de catre majoritatea soferilor, apare adesea in

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situatia blocajilor in trafic. Din punct de vedere al debitelor care determina acest nivel ridicat al intarzierilor se poate remarca faptul ca aceasta situatie are loc atunci cand rata fluxului de sosire depaseste capacitatea grupurilor de benzi de circulatie. In cadrul acestui nivel de servicii viteza de deplasare a vehiculelor este redusa si adesea se observa opriri in flux.

Nivelul G (LOS G), $1.00 < ICU = 1.09$: Intersectia este cu 10% - 20% peste capacitatea sa si este probabil sa se inregistreze congestionari de 60 to 120 min pe zi. Cozile de asteptare sunt lungi si pot apare blocaje frecvente.

Nivelul H (LOS H), $1.09 < ICU$: Intersectia este cu 20% peste capacitatea de circulatie si pot apare congestii de peste 120 min pe zi. Cozile de asteptare sunt lungi si pot apare blocaje frecvente.

➤ Intarzieri

Acest parametru definit prin formula lui Webster (H.C.M.2010) indica nivelul intarzierilor cumulant in calcul urmatoarele nivele de intarzieri inregistrate in intersectii: intarzierea uniforma (D1), intarzierea incrementală (D2), Intarzierea reziduala (D3).

$$D = D1 + D2 + D3$$

Pentru a analiza impactul pe care-l genereaza investitia asupra traficului curent în cadrul studiului au fost luate in calcul un numar de 6 intersectii adiacente investitiei, dintre care trei intersectii situate pe rețeaua majoră a orasului (str. Ghe doja, str. Valeni, str. Emil zola si b-dul Republicii)

Au fost analizate două scenarii :

- ✓ Situatia existentă – înainte de realizarea investitiei
- ✓ Situatia propusă – după realizarea investitiei în care toate accesele functioneaza numai cu relatie dreapta

In urma analizei efectuate solutia pentru asigurarea accesului la investitie în momentul de față este următoarea :

Au fost luate în calcul 4 scenarii :

- ✓ Situatia existentă :
 - pentru ora de vârf de dimineată

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- pentru ora de vârf de seară
- ✓ Situatia propusă – după realizarea investitiei:
 - pentru ora de vâr de dimineată
 - pentru ora de vârf de seară

De asemenea a fost analizată si situatia în care pe str. Ion Maiorescu între str. 24 Ianuarie si b-dul republicii se modifica organizarea circulatie urmând a se circula în ambele sensuri. Pentru aceasta din urma varianta nu a fost analizată decât situatia pentru ora de vârf de dimineată datorită faptului că o parte din fluxul de trafic generat de viitoarea investitie are ca destinatie zona de Nord a orasului, iar prin aceasta reorganmizare acestui flux is se va creea posibilitate de a iesire directa in b-dul Republicii, descărcând implicit celelalte intersectii majore adiacente.

In urma anlizei efectuate au rezultat o serie de indicatori ce dau o imagine asupra calitatii desfășurării traficului în zona analizată. Acestia sunt prezentati în tabelul de mai jos.

Nr. crt.	Număr nod conf schemei din cadrul anexei	ICU (gradul de utilizare a intersecției)		LOS (nivelul de serviciu)	
		Dimineta	Seara	Dimineta	Seara
Situatia Existentă					
1	Nod 1 – Giratoriu b-dul Republicii / str. Văleni	67.9 %	91.3%	C	F
2	Nod 2 – B-dul Republicii / str. Ion Marinescu	19.5 %	26.8%	A	A
3	Nod 3 – str. Ion Maiorescu/str 24 Ianuarie	16.8 %	15.4 %	A	A
4	Nod 4 – str. Ion Maiorescu/str. Ghe Doja	33.1%	34.6%	A	A
5	Nod 5 – str. Ghe Doja –str. Văleni	57.2%	59.1%	B	B
Situatia propusă		Configuratie actuala			
1	Nod 1 – Giratoriu b-dul Republicii / str. Văleni	68.2%	93.1%	C	F
2	Nod 2 – B-dul Republicii / str. Ion Marinescu	20.1%	27.5%	A	A
3	Nod 3 – str. Ion Maiorescu/str 24 Ianuarie	23.9%	23.6%	A	A
4	Nod 4 – str. Ion Maiorescu/str. Ghe Doja	33.5%	36.1%	A	A
5	Nod 5 – str. Ghe Doja –str. Văleni	57.2%	59.5%	B	B
Situatia propusă		Dublu sens Ion Maiorescu pana la str 24 Ianuarie			
1	Nod 1 – Giratoriu b-dul Republicii / str. Văleni	68.2%		C	
2	Nod 2 – B-dul Republicii / str. Ion Marinescu	26.8%		A	
3	Nod 3 – str. Ion Maiorescu/str 24 Ianuarie	19.7%		A	
4	Nod 4 – str. Ion Maiorescu/str. Ghe Doja	30.8%		A	
5	Nod 5 – str. Ghe Doja –str. Văleni	57.2%		B	

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Asa cum se poate observa din tabelul de mai sus în condițiile în care a fost efectuată analiza, calitatea desfășurării traficului în zonă nu se modifica semnificativ.

❖ Concluzii

În urma analizei efectuate a rezultat că impactul realizării investiției, ce face obiectul prezentului studiu, asupra traficului curent din zona adiacentă este minor.

Cu toate acestea, pe baza analizei efectuate, recomandăm o modificare a organizării circulației în zona care ar conduce la descărcarea câtorva intersecții adiacente. Această modificare presupune ca pe sectorul str. Ion Maiorescu cuprins între B-dul Republicii și str. 24 Ianuarie, tronson cu o lungime de aprox 50m, să se circule în dublu sens. Această modificare nu are un impact major asupra intersecției dintre str. Ion Maiorescu și B-dul Republicii, deoarece circulația se va desfășura doar cu relație de dreapta atât la intrarea pe str. Ion Maiorescu cât și la ieșirea de pe această stradă în b-dul Republicii.

Această modificare ar scurta traseul parcurs de vehiculele ce se deplasează spre zona de N a orașului și va descărca cu câteva procente intersecțiile Ion Maiorescu/ Ghe Doja și Ghe. Doja/Văleni.

Intosmit

 Ing. Silviu Brateanu



												
Lane Group	WBL	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR	SEL2	SEL	SER
Lane Configurations												
Volume (vph)	0	613	78	96	131	36	102	226	109	50	714	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0		30.0	0.0		30.0		0.0	0.0
Storage Lanes	1	2		0		1	1		1		2	1
Taper Length (m)	15.0			15.0			15.0				15.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.850			0.850			0.850			0.850
Flt Protected					0.979		0.950			0.950	0.950	
Satd. Flow (prot)	1842	1566	1566	0	3426	1566	1750	1842	1566	1750	1750	1566
Flt Permitted					0.979		0.950			0.950	0.950	
Satd. Flow (perm)	1842	1566	1566	0	3426	1566	1750	1842	1566	1750	1750	1566
Link Speed (k/h)	48				48			48			48	
Link Distance (m)	305.6				186.0			112.9			214.5	
Travel Time (s)	22.9				14.0			8.5			16.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	666	85	104	142	39	111	246	118	54	776	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	666	85	0	246	39	111	246	118	54	776	61
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)	3.5				3.5			3.5			11.0	
Link Offset(m)	0.0				0.0			0.0			0.0	
Crosswalk Width(m)	1.6				1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14	24		14	24		14	24	24	14
Sign Control	Yield				Yield			Yield			Yield	

Intersection Summary

Area Type: Other

Control Type: Roundabout

Intersection Capacity Utilization 67.9%

ICU Level of Service C

Analysis Period (min) 15

						
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↑↑↑	↑↑↑			
Volume (vph)	0	820	695	123	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	1.00
Frt			0.977			
Flt Protected						
Satd. Flow (prot)	0	5029	4913	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	5029	4913	0	0	0
Link Speed (k/h)		48	48		48	
Link Distance (m)		166.8	214.5		71.5	
Travel Time (s)		12.5	16.1		5.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	891	755	134	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	891	889	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.0	7.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	19.5%			ICU Level of Service A		
Analysis Period (min)	15					

						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	49	89	34	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.963			
Flt Protected						
Satd. Flow (prot)	0	1593	1774	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1593	1774	0	0	0
Link Speed (k/h)	48		48			48
Link Distance (m)	61.0		71.5			184.0
Travel Time (s)	4.6		5.4			13.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	53	97	37	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	53	134	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		14	24	
Sign Control	Yield		Free			Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	16.8%			ICU Level of Service A		
Analysis Period (min)	15					

						
Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑↑			↑↑		↑
Volume (vph)	631	0	0	378	0	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	3500	0	0	3500	0	1593
Flt Permitted						
Satd. Flow (perm)	3500	0	0	3500	0	1593
Link Speed (k/h)	48			48	48	
Link Distance (m)	221.2			87.4	184.0	
Travel Time (s)	16.6			6.6	13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	686	0	0	411	0	158
Shared Lane Traffic (%)						
Lane Group Flow (vph)	686	0	0	411	0	158
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.0			7.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	33.1%			ICU Level of Service A		
Analysis Period (min)	15					

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	457	221	72	288	56	69	267	33	43	143	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		80.0	0.0		50.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	15.0			15.0			15.0			15.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt		0.951			0.976				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1750	3328	0	1750	1798	0	1750	1842	1566	1750	3500	1566
Flt Permitted	0.462			0.311			0.654			0.560		
Satd. Flow (perm)	851	3328	0	573	1798	0	1205	1842	1566	1032	3500	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		216			26				36			36
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		87.4			217.1			200.5			150.5	
Travel Time (s)		6.6			16.3			15.0			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	107	497	240	78	313	61	75	290	36	47	155	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	737	0	78	374	0	75	290	36	47	155	23
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		10.0			10.0			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	18.0	18.0		18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.40	0.40		0.40	0.40		0.40	0.40	0.40	0.40	0.40	0.40
v/c Ratio	0.31	0.50		0.34	0.51		0.16	0.39	0.06	0.11	0.11	0.04
Control Delay	12.5	8.4		14.6	12.4		9.7	11.6	4.0	9.4	8.8	3.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.5	8.4		14.6	12.4		9.7	11.6	4.0	9.4	8.8	3.0
LOS	B	A		B	B		A	B	A	A	A	A
Approach Delay		8.9			12.8			10.6			8.3	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			B			B			A		
Stops (vph)	67	331		54	229		45	177	10	28	81	5
Fuel Used(l)	3	17		3	15		3	11	1	2	5	0
CO Emissions (g/hr)	59	316		64	284		52	209	18	28	88	9
NOx Emissions (g/hr)	11	61		12	55		10	40	3	5	17	2
VOC Emissions (g/hr)	14	73		15	65		12	48	4	7	20	2
Dilemma Vehicles (#)	0	0		0	0		0	0	0	0	0	0
Queue Length 50th (m)	5.4	14.4		4.0	19.1		3.6	15.3	0.0	2.2	3.7	0.0
Queue Length 95th (m)	14.3	25.1		12.3	37.2		9.5	29.5	3.6	6.8	7.7	2.2
Internal Link Dist (m)	63.4			193.1			176.5			126.5		
Turn Bay Length (m)							80.0			50.0		
Base Capacity (vph)	340	1460		229	734		482	736	648	412	1400	648
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.50		0.34	0.51		0.16	0.39	0.06	0.11	0.11	0.04

Intersection Summary

Area Type: Other

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 45

Control Type: Pretimed

Maximum v/c Ratio: 0.51

Intersection Signal Delay: 10.1

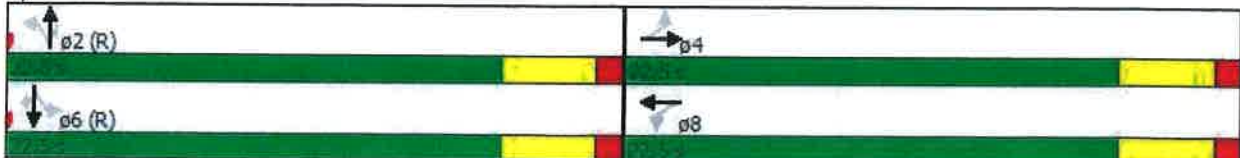
Intersection LOS: B

Intersection Capacity Utilization 57.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5:



						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	63	178	191	68	62	374
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		30.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	15.0				15.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt		0.850	0.961			
Flt Protected	0.950					0.993
Satd. Flow (prot)	1750	1566	3363	0	0	3475
Flt Permitted	0.950					0.993
Satd. Flow (perm)	1750	1566	3363	0	0	3475
Link Speed (k/h)	48		48			48
Link Distance (m)	202.6		112.9			200.5
Travel Time (s)	15.2		8.5			15.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	193	208	74	67	407
Shared Lane Traffic (%)						
Lane Group Flow (vph)	68	193	282	0	0	474
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.5		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 33.1%

ICU Level of Service A

Analysis Period (min) 15

												
Lane Group	WBL	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR	SEL2	SEL	SER
Lane Configurations												
Volume (vph)	36	1005	96	94	149	48	115	232	103	54	816	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0		30.0	0.0		30.0		0.0	0.0
Storage Lanes	1	2		0		1	1		1		2	1
Taper Length (m)	15.0			15.0			15.0				15.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frst		0.850	0.850			0.850			0.850			0.850
Flt Protected	0.950				0.981		0.950			0.950	0.950	
Satd. Flow (prot)	1750	1566	1566	0	3433	1566	1750	1842	1566	1750	1750	1566
Flt Permitted	0.950				0.981		0.950			0.950	0.950	
Satd. Flow (perm)	1750	1566	1566	0	3433	1566	1750	1842	1566	1750	1750	1566
Link Speed (k/h)	48				48			48			48	
Link Distance (m)	305.6				186.0			112.9			214.5	
Travel Time (s)	22.9				14.0			8.5			16.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	1092	104	102	162	52	125	252	112	59	887	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	1092	104	0	264	52	125	252	112	59	887	83
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)	3.5				3.5			3.5			11.0	
Link Offset(m)	0.0				0.0			0.0			0.0	
Crosswalk Width(m)	1.6				1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14	24		14	24		14	24	24	14
Sign Control	Yield				Yield			Yield			Yield	

Intersection Summary

Area Type: Other

Control Type: Roundabout

Intersection Capacity Utilization 91.3%

ICU Level of Service F

Analysis Period (min) 15

						
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↑↑↑	↑↑↑			
Volume (vph)	0	946	1104	98	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	1.00
Frt			0.988			
Flt Protected						
Satd. Flow (prot)	0	5029	4968	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	5029	4968	0	0	0
Link Speed (k/h)		48	48		48	
Link Distance (m)		166.8	214.5		71.5	
Travel Time (s)		12.5	16.1		5.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1028	1200	107	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1028	1307	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.0	7.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	26.8%			ICU Level of Service A		
Analysis Period (min)	15					

						
Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	46	71	27	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.865	0.963			
Flt Protected						
Satd. Flow (prot)	0	1593	1774	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1593	1774	0	0	0
Link Speed (k/h)	48		48			48
Link Distance (m)	61.0		71.5			184.0
Travel Time (s)	4.6		5.4			13.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	50	77	29	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	50	106	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		14	24	
Sign Control	Yield		Free			Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization 15.4%	ICU Level of Service A					
Analysis Period (min) 15						

						
Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑↑			↑↑		↑
Volume (vph)	631	0	0	444	0	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	3500	0	0	3500	0	1593
Flt Permitted						
Satd. Flow (perm)	3500	0	0	3500	0	1593
Link Speed (k/h)	48			48	48	
Link Distance (m)	221.2			87.4	184.0	
Travel Time (s)	16.6			6.6	13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	686	0	0	483	0	185
Shared Lane Traffic (%)						
Lane Group Flow (vph)	686	0	0	483	0	185
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.0			7.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	34.6%			ICU Level of Service A		
Analysis Period (min)	15					

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	492	214	66	318	48	88	286	43	56	165	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		80.0	0.0		50.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	15.0			15.0			15.0			15.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt		0.954			0.980				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1750	3339	0	1750	1805	0	1750	1842	1566	1750	3500	1566
Flt Permitted	0.435			0.294			0.639			0.535		
Satd. Flow (perm)	801	3339	0	542	1805	0	1177	1842	1566	985	3500	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		182			20				47			41
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		87.4			217.1			200.5			150.5	
Travel Time (s)		6.6			16.3			15.0			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	535	233	72	346	52	96	311	47	61	179	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	103	768	0	72	398	0	96	311	47	61	179	41
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		10.0			10.0			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	18.0	18.0		18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.40	0.40		0.40	0.40		0.40	0.40	0.40	0.40	0.40	0.40
v/c Ratio	0.32	0.53		0.33	0.54		0.20	0.42	0.07	0.15	0.13	0.06
Control Delay	12.8	9.3		14.7	13.2		10.3	12.0	3.7	9.9	8.9	3.8
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.8	9.3		14.7	13.2		10.3	12.0	3.7	9.9	8.9	3.8
LOS	B	A		B	B		B	B	A	A	A	A
Approach Delay		9.7			13.4			10.8			8.4	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			B			B			A		
Stops (vph)	65	379		50	252		56	194	12	38	95	10
Fuel Used(l)	3	19		3	17		4	12	1	2	5	1
CO Emissions (g/hr)	57	351		59	309		66	227	22	38	102	16
NOx Emissions (g/hr)	11	68		11	60		13	44	4	7	20	3
VOC Emissions (g/hr)	13	81		14	71		15	52	5	9	24	4
Dilemma Vehicles (#)	0	0		0	0		0	0	0	0	0	0
Queue Length 50th (m)	5.2	16.5		3.7	21.2		4.6	16.6	0.0	2.9	4.4	0.0
Queue Length 95th (m)	14.1	28.2		11.7	40.5		11.8	31.6	4.0	8.4	8.7	3.8
Internal Link Dist (m)	63.4			193.1			176.5			126.5		
Turn Bay Length (m)							80.0			50.0		
Base Capacity (vph)	320	1444		216	734		470	736	654	394	1400	651
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.53		0.33	0.54		0.20	0.42	0.07	0.15	0.13	0.06

Intersection Summary

Area Type: Other

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 45

Control Type: Pretimed

Maximum v/c Ratio: 0.54

Intersection Signal Delay: 10.6

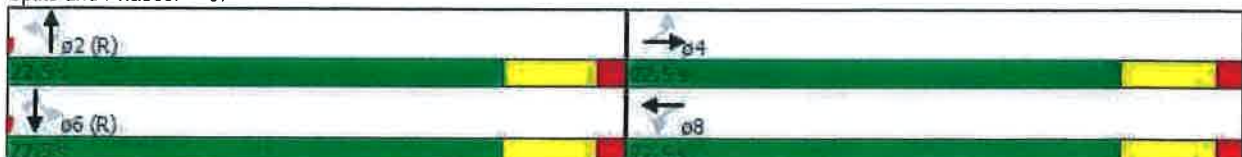
Intersection LOS: B

Intersection Capacity Utilization 59.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5:



						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	63	182	235	64	58	387
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		30.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	15.0				15.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt		0.850	0.968			
Flt Protected	0.950					0.994
Satd. Flow (prot)	1750	1566	3388	0	0	3479
Flt Permitted	0.950					0.994
Satd. Flow (perm)	1750	1566	3388	0	0	3479
Link Speed (k/h)	48		48			48
Link Distance (m)	202.6		112.9			200.5
Travel Time (s)	15.2		8.5			15.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	198	255	70	63	421
Shared Lane Traffic (%)						
Lane Group Flow (vph)	68	198	325	0	0	484
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.5		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary

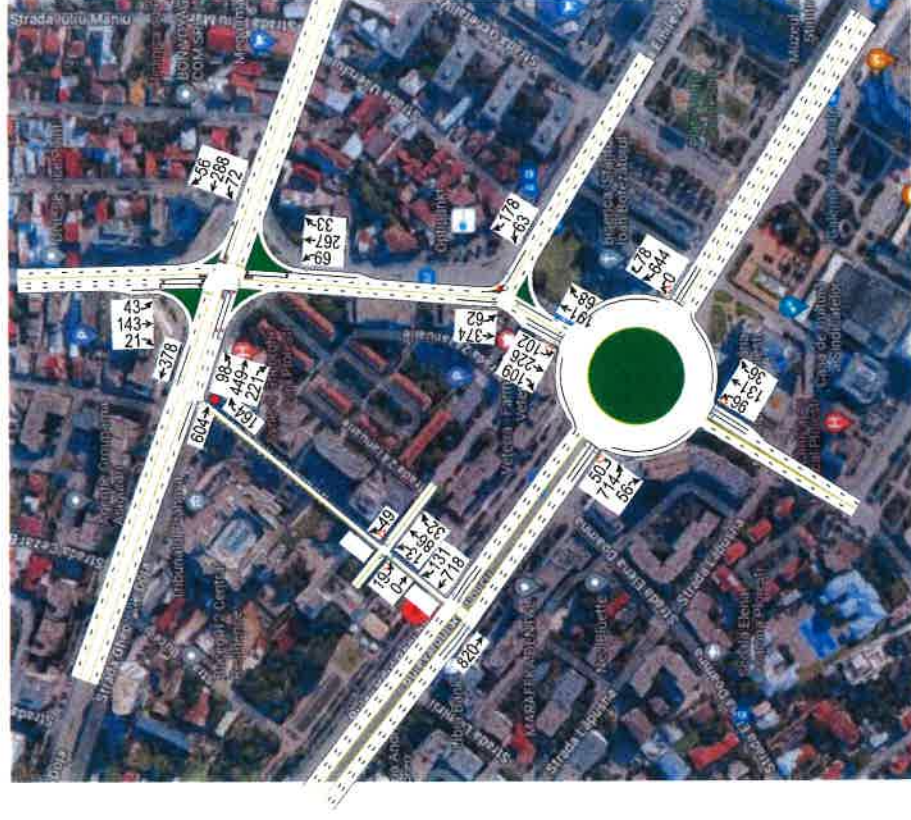
Area Type: Other

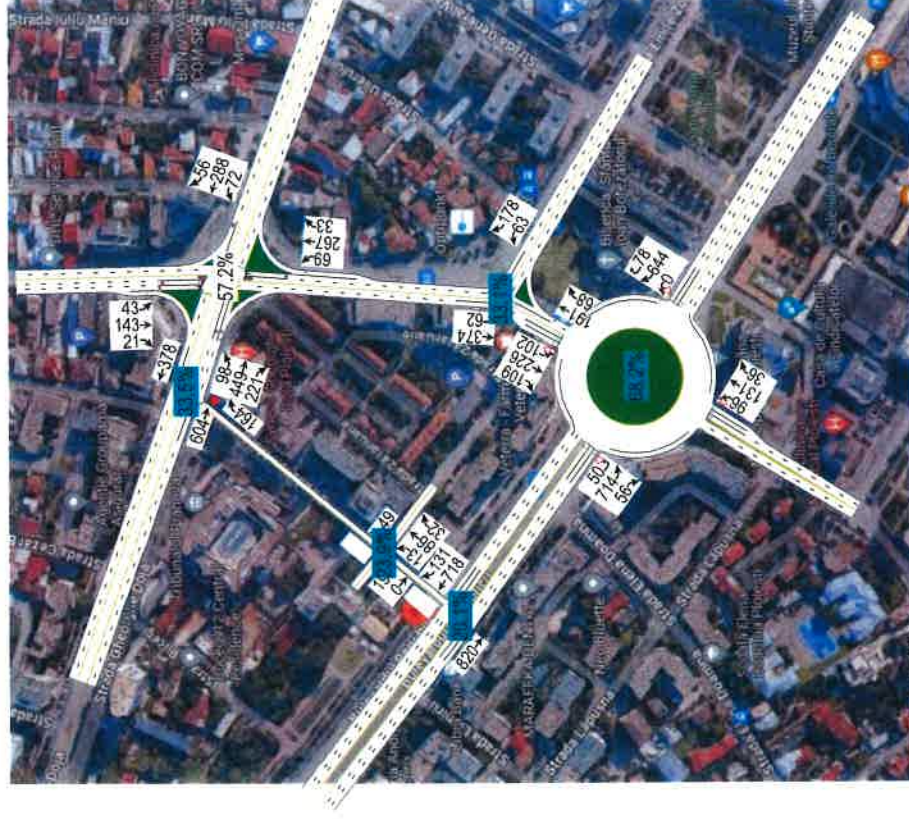
Control Type: Unsignalized

Intersection Capacity Utilization 34.4%

ICU Level of Service A

Analysis Period (min) 15





												
Lane Group	WBL	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR	SEL2	SEL	SER
Lane Configurations												
Volume (vph)	0	644	78	96	131	36	102	226	109	50	714	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0		30.0	0.0		30.0		0.0	0.0
Storage Lanes	1	2		0		1	1		1		2	1
Taper Length (m)	15.0			15.0			15.0				15.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.850			0.850			0.850			0.850
Flt Protected					0.979		0.950			0.950	0.950	
Satd. Flow (prot)	1842	1566	1566	0	3426	1566	1750	1842	1566	1750	1750	1566
Flt Permitted					0.979		0.950			0.950	0.950	
Satd. Flow (perm)	1842	1566	1566	0	3426	1566	1750	1842	1566	1750	1750	1566
Link Speed (k/h)	48				48			48			48	
Link Distance (m)	305.6				186.0			112.9			214.5	
Travel Time (s)	22.9				14.0			8.5			16.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	700	85	104	142	39	111	246	118	54	776	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	700	85	0	246	39	111	246	118	54	776	61
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)	3.5				3.5			3.5			11.0	
Link Offset(m)	0.0				0.0			0.0			0.0	
Crosswalk Width(m)	1.6				1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14	24		14	24		14	24	24	14
Sign Control	Yield				Yield			Yield			Yield	

Intersection Summary

Area Type: Other

Control Type: Roundabout

Intersection Capacity Utilization 68.2%

ICU Level of Service C

Analysis Period (min) 15

						
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↑↑↑	↑↑↑			
Volume (vph)	0	820	718	131	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	1.00
Frt			0.977			
Flt Protected						
Satd. Flow (prot)	0	5029	4913	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	5029	4913	0	0	0
Link Speed (k/h)		48	48		48	
Link Distance (m)		166.8	214.5		71.5	
Travel Time (s)		12.5	16.1		5.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	891	780	142	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	891	922	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.0	7.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	20.1%			ICU Level of Service A		
Analysis Period (min)	15					

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	19	0	0	0	0	49	13	86	32	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865		0.967				
Flt Protected		0.950						0.995				
Satd. Flow (prot)	0	1750	0	0	0	1593	0	1772	0	0	0	0
Flt Permitted		0.950						0.995				
Satd. Flow (perm)	0	1750	0	0	0	1593	0	1772	0	0	0	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		32.1			61.0			71.5			184.0	
Travel Time (s)		2.4			4.6			5.4			13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	0	0	0	0	53	14	93	35	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	0	0	0	53	0	142	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Yield			Yield			Free			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 23.9%

ICU Level of Service A

Analysis Period (min) 15

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑↑			↑↑		↗
Volume (vph)	604	0	0	378	0	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	3500	0	0	3500	0	1593
Flt Permitted						
Satd. Flow (perm)	3500	0	0	3500	0	1593
Link Speed (k/h)	48			48	48	
Link Distance (m)	221.2			87.4	184.0	
Travel Time (s)	16.6			6.6	13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	657	0	0	411	0	178
Shared Lane Traffic (%)						
Lane Group Flow (vph)	657	0	0	411	0	178
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.0			7.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	33.5%			ICU Level of Service A		
Analysis Period (min)	15					

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	449	221	72	288	56	69	267	33	43	143	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		80.0	0.0		50.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	15.0			15.0			15.0			15.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt		0.951			0.976				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1750	3328	0	1750	1798	0	1750	1842	1566	1750	3500	1566
Flt Permitted	0.462			0.317			0.654			0.560		
Satd. Flow (perm)	851	3328	0	584	1798	0	1205	1842	1566	1032	3500	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		224			26				36			36
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		87.4			217.1			200.5			150.5	
Travel Time (s)		6.6			16.3			15.0			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	107	488	240	78	313	61	75	290	36	47	155	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	728	0	78	374	0	75	290	36	47	155	23
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		10.0			10.0			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	18.0	18.0		18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.40	0.40		0.40	0.40		0.40	0.40	0.40	0.40	0.40	0.40
v/c Ratio	0.31	0.50		0.33	0.51		0.16	0.39	0.06	0.11	0.11	0.04
Control Delay	12.5	8.2		14.4	12.4		9.7	11.6	4.0	9.4	8.8	3.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.5	8.2		14.4	12.4		9.7	11.6	4.0	9.4	8.8	3.0
LOS	B	A		B	B		A	B	A	A	A	A
Approach Delay		8.7			12.8			10.6			8.3	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		A				B				B		
Stops (vph)	67	318		54	229		45	177	10	28	81	5
Fuel Used(l)	3	16		3	15		3	11	1	2	5	0
CO Emissions (g/hr)	59	306		64	284		52	209	18	28	88	9
NOx Emissions (g/hr)	11	59		12	55		10	40	3	5	17	2
VOC Emissions (g/hr)	14	71		15	65		12	48	4	7	20	2
Dilemma Vehicles (#)	0	0		0	0		0	0	0	0	0	0
Queue Length 50th (m)	5.4	13.8		4.0	19.1		3.6	15.3	0.0	2.2	3.7	0.0
Queue Length 95th (m)	14.3	24.4		12.2	37.2		9.5	29.5	3.6	6.8	7.7	2.2
Internal Link Dist (m)		63.4			193.1			176.5			126.5	
Turn Bay Length (m)									80.0			50.0
Base Capacity (vph)	340	1465		233	734		482	736	648	412	1400	648
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.50		0.33	0.51		0.16	0.39	0.06	0.11	0.11	0.04

Intersection Summary

Area Type: Other

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 45

Control Type: Pretimed

Maximum v/c Ratio: 0.51

Intersection Signal Delay: 10.0

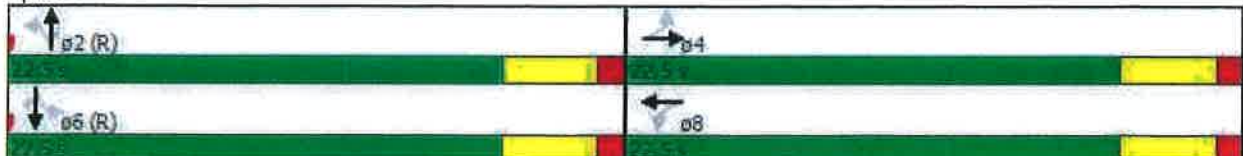
Intersection LOS: B

Intersection Capacity Utilization 57.2%

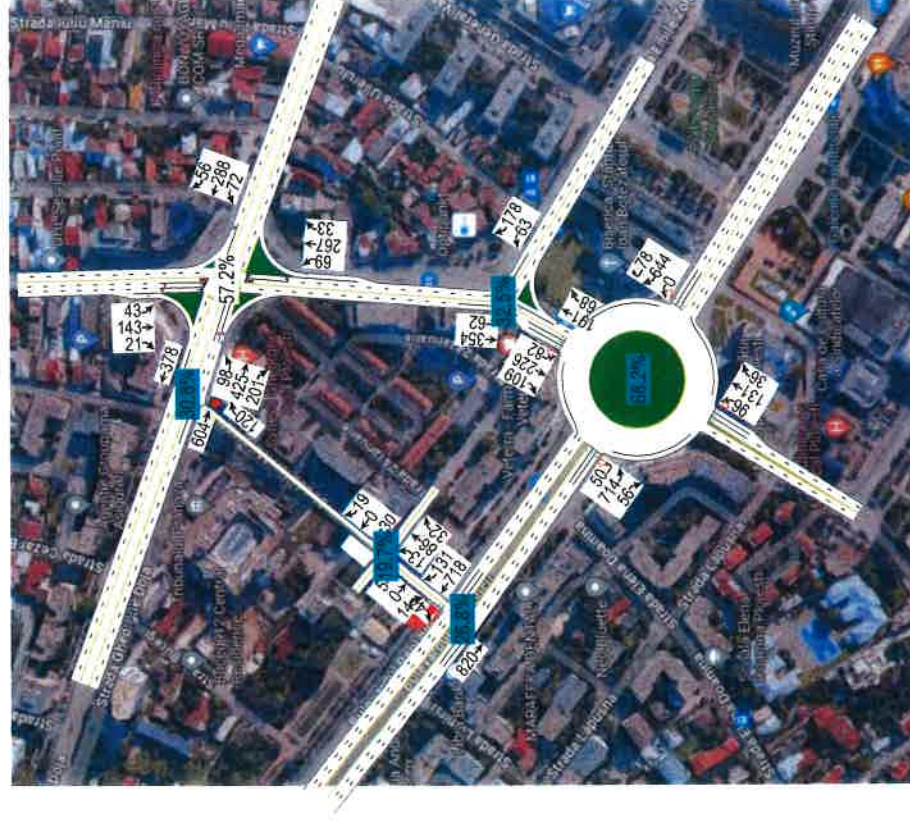
ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5:



						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	63	178	191	68	62	374
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		30.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	15.0				15.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt		0.850	0.961			
Flt Protected	0.950					0.993
Satd. Flow (prot)	1750	1566	3363	0	0	3475
Flt Permitted	0.950					0.993
Satd. Flow (perm)	1750	1566	3363	0	0	3475
Link Speed (k/h)	48		48			48
Link Distance (m)	202.6		112.9			200.5
Travel Time (s)	15.2		8.5			15.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	193	208	74	67	407
Shared Lane Traffic (%)						
Lane Group Flow (vph)	68	193	282	0	0	474
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.5		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization 33.1%	ICU Level of Service A					
Analysis Period (min) 15						



												
Lane Group	WBL	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR	SEL2	SEL	SER
Lane Configurations												
Volume (vph)	0	644	78	96	131	36	82	226	109	50	714	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0		30.0	0.0		30.0		0.0	0.0
Storage Lanes	1	2		0		1	1		1		2	1
Taper Length (m)	15.0			15.0			15.0				15.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.850			0.850			0.850			0.850
Flt Protected					0.979		0.950			0.950	0.950	
Satd. Flow (prot)	1842	1566	1566	0	3426	1566	1750	1842	1566	1750	1750	1566
Flt Permitted					0.979		0.950			0.950	0.950	
Satd. Flow (perm)	1842	1566	1566	0	3426	1566	1750	1842	1566	1750	1750	1566
Link Speed (k/h)	48				48			48			48	
Link Distance (m)	305.6				186.0			112.9			214.5	
Travel Time (s)	22.9				14.0			8.5			16.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	700	85	104	142	39	89	246	118	54	776	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	700	85	0	246	39	89	246	118	54	776	61
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)	3.5				3.5			3.5			11.0	
Link Offset(m)	0.0				0.0			0.0			0.0	
Crosswalk Width(m)	1.6				1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14	24		14	24		14	24	24	14
Sign Control	Yield				Yield			Yield			Yield	

Intersection Summary

Area Type: Other

Control Type: Roundabout

Intersection Capacity Utilization 68.2%

ICU Level of Service C

Analysis Period (min) 15

												
Lane Group	WBL	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR	SEL2	SEL	SER
Lane Configurations												
Volume (vph)	0	644	78	96	131	36	82	226	109	50	714	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0		30.0	0.0		30.0		0.0	0.0
Storage Lanes	1	2		0		1	1		1		2	1
Taper Length (m)	15.0			15.0			15.0				15.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.850			0.850			0.850			0.850
Flt Protected					0.979		0.950			0.950	0.950	
Satd. Flow (prot)	1842	1566	1566	0	3426	1566	1750	1842	1566	1750	1750	1566
Flt Permitted					0.979		0.950			0.950	0.950	
Satd. Flow (perm)	1842	1566	1566	0	3426	1566	1750	1842	1566	1750	1750	1566
Link Speed (k/h)	48				48			48			48	
Link Distance (m)	305.6				186.0			112.9			214.5	
Travel Time (s)	22.9				14.0			8.5			16.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	700	85	104	142	39	89	246	118	54	776	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	700	85	0	246	39	89	246	118	54	776	61
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)	3.5				3.5			3.5			11.0	
Link Offset(m)	0.0				0.0			0.0			0.0	
Crosswalk Width(m)	1.6				1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14	24		14	24		14	24	24	14
Sign Control	Yield				Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											
Intersection Capacity Utilization	68.2%						ICU Level of Service C					
Analysis Period (min)	15											

						
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		  	  			
Volume (vph)	0	820	718	131	0	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	1.00
Frt			0.977			0.865
Flt Protected						
Satd. Flow (prot)	0	5029	4913	0	0	1593
Flt Permitted						
Satd. Flow (perm)	0	5029	4913	0	0	1593
Link Speed (k/h)		48	48		48	
Link Distance (m)		166.8	214.5		71.5	
Travel Time (s)		12.5	16.1		5.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	891	780	142	0	48
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	891	922	0	0	48
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.0	7.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	26.8%			ICU Level of Service A		
Analysis Period (min)	15					

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	5	0	14	30	0	19	13	86	32	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.899			0.947			0.967				
Flt Protected		0.988			0.970			0.995				
Satd. Flow (prot)	0	1636	0	0	1692	0	0	1772	0	0	0	0
Flt Permitted		0.988			0.970			0.995				
Satd. Flow (perm)	0	1636	0	0	1692	0	0	1772	0	0	0	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		32.1			61.0			71.5			184.0	
Travel Time (s)		2.4			4.6			5.4			13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	0	15	33	0	21	14	93	35	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	54	0	0	142	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Yield			Yield			Free			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 19.7%

ICU Level of Service A

Analysis Period (min) 15

						
Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑↑			↑↑		↑
Volume (vph)	604	0	0	378	0	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	3500	0	0	3500	0	1593
Flt Permitted						
Satd. Flow (perm)	3500	0	0	3500	0	1593
Link Speed (k/h)	48			48	48	
Link Distance (m)	221.2			87.4	184.0	
Travel Time (s)	16.6			6.6	13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	657	0	0	411	0	130
Shared Lane Traffic (%)						
Lane Group Flow (vph)	657	0	0	411	0	130
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.0			7.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	30.8%			ICU Level of Service A		
Analysis Period (min)	15					

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	425	201	72	288	56	69	267	33	43	143	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		80.0	0.0		50.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	15.0			15.0			15.0			15.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt		0.952			0.976				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1750	3332	0	1750	1798	0	1750	1842	1566	1750	3500	1566
Flt Permitted	0.462			0.345			0.654			0.560		
Satd. Flow (perm)	851	3332	0	636	1798	0	1205	1842	1566	1032	3500	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		208			26				36			36
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		87.4			217.1			200.5			150.5	
Travel Time (s)		6.6			16.3			15.0			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	107	462	218	78	313	61	75	290	36	47	155	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	680	0	78	374	0	75	290	36	47	155	23
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		10.0			10.0			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effct Green (s)	18.0	18.0		18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.40	0.40		0.40	0.40		0.40	0.40	0.40	0.40	0.40	0.40
v/c Ratio	0.31	0.47		0.31	0.51		0.16	0.39	0.06	0.11	0.11	0.04
Control Delay	12.5	8.0		13.4	12.4		9.7	11.6	4.0	9.4	8.8	3.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.5	8.0		13.4	12.4		9.7	11.6	4.0	9.4	8.8	3.0
LOS	B	A		B	B		A	B	A	A	A	A
Approach Delay		8.6			12.6			10.6			8.3	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			B			B			A		
Stops (vph)	67	294		52	229		45	177	10	28	81	5
Fuel Used(l)	3	15		3	15		3	11	1	2	5	0
CO Emissions (g/hr)	59	283		62	284		52	209	18	28	88	9
NOx Emissions (g/hr)	11	55		12	55		10	40	3	5	17	2
VOC Emissions (g/hr)	14	65		14	65		12	48	4	7	20	2
Dilemma Vehicles (#)	0	0		0	0		0	0	0	0	0	0
Queue Length 50th (m)	5.4	12.8		4.0	19.1		3.6	15.3	0.0	2.2	3.7	0.0
Queue Length 95th (m)	14.3	22.6		11.7	37.2		9.5	29.5	3.6	6.8	7.7	2.2
Internal Link Dist (m)	63.4			193.1			176.5			126.5		
Turn Bay Length (m)							80.0			50.0		
Base Capacity (vph)	340	1457		254	734		482	736	648	412	1400	648
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.47		0.31	0.51		0.16	0.39	0.06	0.11	0.11	0.04

Intersection Summary

Area Type: Other

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 45

Control Type: Pretimed

Maximum v/c Ratio: 0.51

Intersection Signal Delay: 10.0

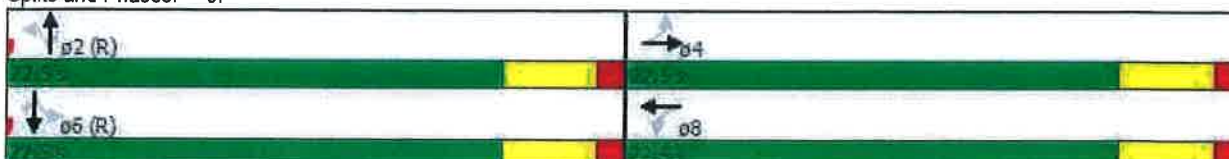
Intersection LOS: A

Intersection Capacity Utilization 57.2%

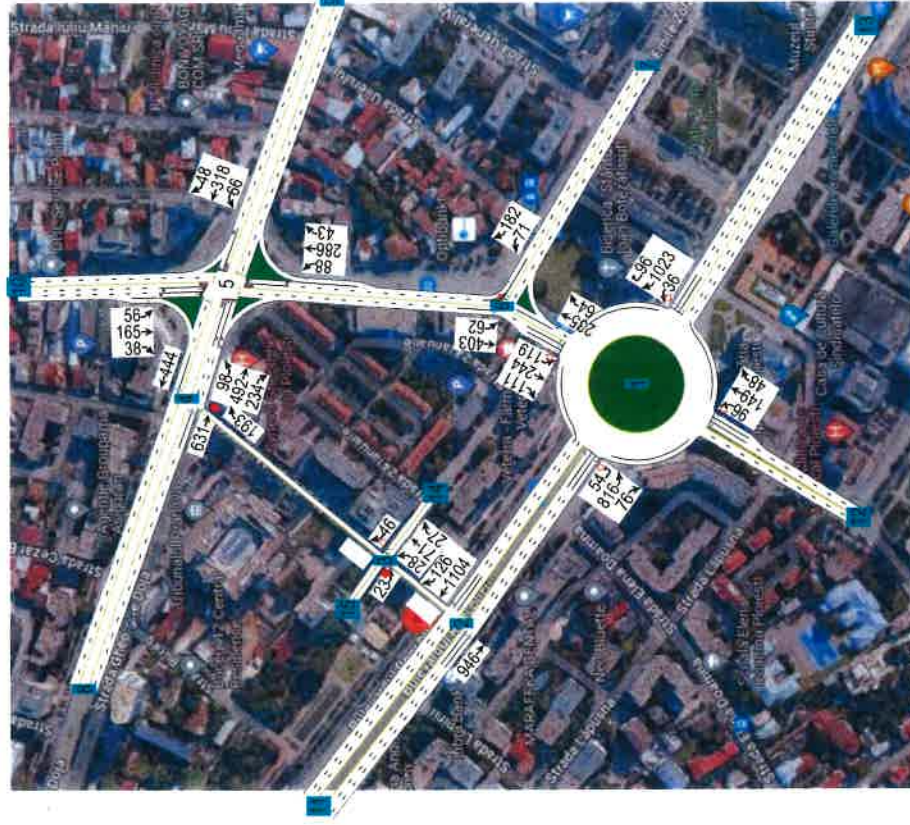
ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5:



						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	63	178	191	68	62	354
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		30.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	15.0				15.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Fr _t		0.850	0.961			
Flt Protected	0.950					0.993
Satd. Flow (prot)	1750	1566	3363	0	0	3475
Flt Permitted	0.950					0.993
Satd. Flow (perm)	1750	1566	3363	0	0	3475
Link Speed (k/h)	48		48			48
Link Distance (m)	202.6		112.9			200.5
Travel Time (s)	15.2		8.5			15.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	193	208	74	67	385
Shared Lane Traffic (%)						
Lane Group Flow (vph)	68	193	282	0	0	452
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.5		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	32.5%			ICU Level of Service A		
Analysis Period (min)	15					



												
Lane Group	WBL	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR	SEL2	SEL	SER
Lane Configurations												
Volume (vph)	36	1023	96	96	149	48	119	244	111	54	816	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		0.0		30.0	0.0		30.0		0.0	0.0
Storage Lanes	1	2		0		1	1		1		2	1
Taper Length (m)	15.0			15.0			15.0				15.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.850			0.850			0.850			0.850
Flt Protected	0.950				0.981		0.950			0.950	0.950	
Satd. Flow (prot)	1750	1566	1566	0	3433	1566	1750	1842	1566	1750	1750	1566
Flt Permitted	0.950				0.981		0.950			0.950	0.950	
Satd. Flow (perm)	1750	1566	1566	0	3433	1566	1750	1842	1566	1750	1750	1566
Link Speed (k/h)	48				48			48			48	
Link Distance (m)	305.6				186.0			112.9			214.5	
Travel Time (s)	22.9				14.0			8.5			16.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	1112	104	104	162	52	129	265	121	59	887	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	1112	104	0	266	52	129	265	121	59	887	83
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)	3.5				3.5			3.5			11.0	
Link Offset(m)	0.0				0.0			0.0			0.0	
Crosswalk Width(m)	1.6				1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14	24		14	24		14	24	24	14
Sign Control	Yield				Yield			Yield			Yield	

Intersection Summary

Area Type: Other

Control Type: Roundabout

Intersection Capacity Utilization 93.1%

ICU Level of Service F

Analysis Period (min) 15

						
Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↑↑↑↑	↑↑↑↑			
Volume (vph)	0	946	1104	126	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	1.00
Frt			0.985			
Flt Protected						
Satd. Flow (prot)	0	5029	4953	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	5029	4953	0	0	0
Link Speed (k/h)		48	48		48	
Link Distance (m)		166.8	214.5		71.5	
Travel Time (s)		12.5	16.1		5.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1028	1200	137	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1028	1337	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.0	7.0		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		1.6	1.6		1.6	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	27.5%			ICU Level of Service A		
Analysis Period (min)	15					

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	23	0	0	0	0	46	28	71	27	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865		0.971				
Flt Protected	0.950							0.989				
Satd. Flow (prot)	1750	0	0	0	0	1593	0	1769	0	0	0	0
Flt Permitted	0.950							0.989				
Satd. Flow (perm)	1750	0	0	0	0	1593	0	1769	0	0	0	0
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		44.1			61.0			71.5			184.0	
Travel Time (s)		3.3			4.6			5.4			13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	0	0	0	0	50	30	77	29	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	25	0	0	0	0	50	0	136	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Sign Control		Stop			Yield			Free			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	23.6%					ICU Level of Service A						
Analysis Period (min)	15											

						
Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑↑			↑↑		↑
Volume (vph)	631	0	0	444	0	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	3500	0	0	3500	0	1593
Flt Permitted						
Satd. Flow (perm)	3500	0	0	3500	0	1593
Link Speed (k/h)	48			48	48	
Link Distance (m)	221.2			87.4	184.0	
Travel Time (s)	16.6			6.6	13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	686	0	0	483	0	210
Shared Lane Traffic (%)						
Lane Group Flow (vph)	686	0	0	483	0	210
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.0			7.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	1.6			1.6	1.6	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	36.1%			ICU Level of Service A		
Analysis Period (min)	15					

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	492	234	66	318	48	88	286	43	56	165	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		80.0	0.0		50.0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (m)	15.0			15.0			15.0			15.0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Friction		0.952			0.980				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1750	3332	0	1750	1805	0	1750	1842	1566	1750	3500	1566
Flt Permitted	0.435			0.283			0.639			0.535		
Satd. Flow (perm)	801	3332	0	521	1805	0	1177	1842	1566	985	3500	1566
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		210			20				47			41
Link Speed (k/h)		48			48			48			48	
Link Distance (m)		87.4			217.1			200.5			150.5	
Travel Time (s)		6.6			16.3			15.0			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	107	535	254	72	346	52	96	311	47	61	179	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	789	0	72	398	0	96	311	47	61	179	41
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		10.0			10.0			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effect Green (s)	18.0	18.0		18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.40	0.40		0.40	0.40		0.40	0.40	0.40	0.40	0.40	0.40
v/c Ratio	0.33	0.54		0.35	0.54		0.20	0.42	0.07	0.15	0.13	0.06
Control Delay	13.1	9.0		15.2	13.2		10.3	12.0	3.7	9.9	8.9	3.8
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.1	9.0		15.2	13.2		10.3	12.0	3.7	9.9	8.9	3.8
LOS	B	A		B	B		B	B	A	A	A	A
Approach Delay		9.5			13.5			10.8			8.4	

	↖	→	↗	↖	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		A			B			B			A	
Stops (vph)	69	376		50	252		56	194	12	38	95	10
Fuel Used(l)	3	19		3	17		4	12	1	2	5	1
CO Emissions (g/hr)	60	353		59	309		66	227	22	38	102	16
NOx Emissions (g/hr)	12	68		11	60		13	44	4	7	20	3
VOC Emissions (g/hr)	14	81		14	71		15	52	5	9	24	4
Dilemma Vehicles (#)	0	0		0	0		0	0	0	0	0	0
Queue Length 50th (m)	5.5	16.3		3.7	21.2		4.6	16.6	0.0	2.9	4.4	0.0
Queue Length 95th (m)	14.6	28.1		11.9	40.5		11.8	31.6	4.0	8.4	8.7	3.8
Internal Link Dist (m)		63.4			193.1			176.5			126.5	
Turn Bay Length (m)									80.0			50.0
Base Capacity (vph)	320	1458		208	734		470	736	654	394	1400	651
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.54		0.35	0.54		0.20	0.42	0.07	0.15	0.13	0.06

Intersection Summary

Area Type: Other

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 45

Control Type: Pretimed

Maximum v/c Ratio: 0.54

Intersection Signal Delay: 10.5

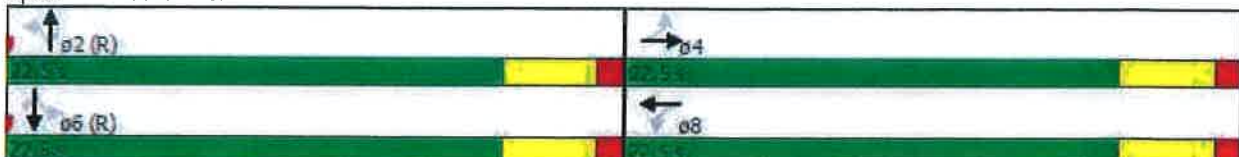
Intersection LOS: B

Intersection Capacity Utilization 59.5%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 5:



						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	71	182	235	64	62	403
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0	0.0		30.0	0.0	
Storage Lanes	1	1		0	0	
Taper Length (m)	15.0				15.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt		0.850	0.968			
Flt Protected	0.950					0.993
Satd. Flow (prot)	1750	1566	3388	0	0	3475
Flt Permitted	0.950					0.993
Satd. Flow (perm)	1750	1566	3388	0	0	3475
Link Speed (k/h)	48		48			48
Link Distance (m)	202.6		112.9			200.5
Travel Time (s)	15.2		8.5			15.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	77	198	255	70	67	438
Shared Lane Traffic (%)						
Lane Group Flow (vph)	77	198	325	0	0	505
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	3.5		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	1.6		1.6			1.6
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	35.4%			ICU Level of Service A		
Analysis Period (min)	15					

