



POSTO 3

Movimento

R. Bento Gonçalves / R. Manuel Ferreira

B-A

3ª feira - 13/07/2021

Período de Contagem	Ligeiros	Pesados	Total	%Pes
07:00 às 07:15	0	0	0	0%
07:15 às 07:30	1	0	1	0%
07:30 às 07:45	3	0	3	0%
07:45 às 08:00	0	0	0	0%
08:00 às 08:15	0	0	0	0%
08:15 às 08:30	2	0	2	0%
08:30 às 08:45	7	0	7	0%
08:45 às 09:00	3	0	3	0%
09:00 às 09:15	2	0	2	0%
09:15 às 09:30	5	0	5	0%
09:30 às 09:45	2	0	2	0%
09:45 às 10:00	4	0	4	0%
10:00 às 10:15	2	0	2	0%
10:15 às 10:30	3	0	3	0%
10:30 às 10:45	5	0	5	0%
10:45 às 11:00	9	0	9	0%

Períodos de Contagem	Ligeiros	Pesados	Total	%Pes
16:00 às 16:15	3	0	3	0%
16:15 às 16:30	3	0	3	0%
16:30 às 16:45	5	2	7	29%
16:45 às 17:00	1	0	1	0%
17:00 às 17:15	9	0	9	0%
17:15 às 17:30	2	0	2	0%
17:30 às 17:45	3	0	3	0%
17:45 às 18:00	4	0	4	0%
18:00 às 18:15	0	0	0	0%
18:15 às 18:30	6	0	6	0%
18:30 às 18:45	6	0	6	0%
18:45 às 19:00	4	0	4	0%
19:00 às 19:15	3	0	3	0%
19:15 às 19:30	2	0	2	0%
19:30 às 19:45	5	0	5	0%
19:45 às 20:00	1	0	1	0%

07:00 às 11:00	48	0	48	0%
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16:00 às 20:00	57	2	59	3%
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HPM - Hora de Ponta do movimento

10:00 às 11:00	19	0	19	0%
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HPT - Hora de Ponta do movimento

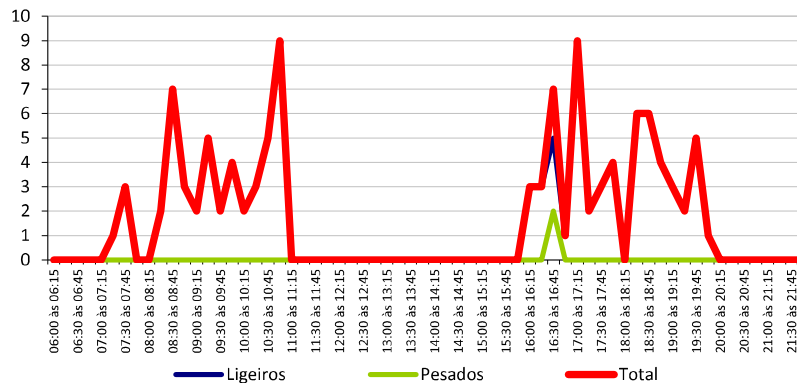
16:15 às 17:15	18	2	20	10%
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HPM - Hora de Ponta do posto

08:30 às 09:30	17	0	17	0%
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HPT - Hora de Ponta do posto

17:00 às 18:00	18	0	18	0%
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POSTO 3

Movimento

R. Bento Gonçalves / R. Manuel Ferreira

B-C

3ª feira - 13/07/2021

Período de Contagem	Ligeiros	Pesados	Total	%Pes
07:00 às 07:15	6	0	6	0%
07:15 às 07:30	3	0	3	0%
07:30 às 07:45	1	0	1	0%
07:45 às 08:00	2	0	2	0%
08:00 às 08:15	4	0	4	0%
08:15 às 08:30	3	0	3	0%
08:30 às 08:45	4	0	4	0%
08:45 às 09:00	9	0	9	0%
09:00 às 09:15	2	0	2	0%
09:15 às 09:30	6	0	6	0%
09:30 às 09:45	2	0	2	0%
09:45 às 10:00	3	0	3	0%
10:00 às 10:15	4	0	4	0%
10:15 às 10:30	5	0	5	0%
10:30 às 10:45	11	0	11	0%
10:45 às 11:00	16	0	16	0%

Períodos de Contagem	Ligeiros	Pesados	Total	%Pes
16:00 às 16:15	0	0	0	0%
16:15 às 16:30	8	0	8	0%
16:30 às 16:45	3	0	3	0%
16:45 às 17:00	3	0	3	0%
17:00 às 17:15	3	0	3	0%
17:15 às 17:30	6	0	6	0%
17:30 às 17:45	3	0	3	0%
17:45 às 18:00	3	0	3	0%
18:00 às 18:15	7	0	7	0%
18:15 às 18:30	4	0	4	0%
18:30 às 18:45	7	0	7	0%
18:45 às 19:00	5	0	5	0%
19:00 às 19:15	5	0	5	0%
19:15 às 19:30	5	0	5	0%
19:30 às 19:45	2	0	2	0%
19:45 às 20:00	4	0	4	0%

07:00 às 11:00	81	0	81	0%
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16:00 às 20:00	68	0	68	0%
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HPM - Hora de Ponta do movimento

10:00 às 11:00	36	0	36	0%
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HPT - Hora de Ponta do movimento

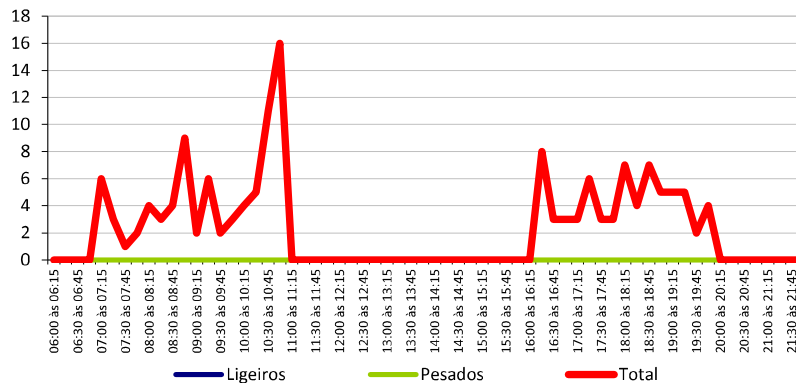
18:00 às 19:00	23	0	23	0%
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HPM - Hora de Ponta do posto

08:30 às 09:30	21	0	21	0%
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HPT - Hora de Ponta do posto

17:00 às 18:00	15	0	15	0%
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POSTO 3

Movimento

R. Bento Gonçalves / R. Manuel Ferreira

C-A

3ª feira - 13/07/2021

Período de Contagem	Ligeiros	Pesados	Total	%Pes
07:00 às 07:15	47	0	47	0%
07:15 às 07:30	58	1	59	2%
07:30 às 07:45	92	1	93	1%
07:45 às 08:00	96	1	97	1%
08:00 às 08:15	124	0	124	0%
08:15 às 08:30	128	3	131	2%
08:30 às 08:45	118	1	119	1%
08:45 às 09:00	125	0	125	0%
09:00 às 09:15	109	1	110	1%
09:15 às 09:30	118	2	120	2%
09:30 às 09:45	101	2	103	2%
09:45 às 10:00	115	1	116	1%
10:00 às 10:15	89	1	90	1%
10:15 às 10:30	103	2	105	2%
10:30 às 10:45	77	0	77	0%
10:45 às 11:00	54	4	58	7%

Períodos de Contagem	Ligeiros	Pesados	Total	%Pes
16:00 às 16:15	69	0	69	0%
16:15 às 16:30	81	2	83	2%
16:30 às 16:45	84	1	85	1%
16:45 às 17:00	77	0	77	0%
17:00 às 17:15	88	2	90	2%
17:15 às 17:30	92	1	93	1%
17:30 às 17:45	109	0	109	0%
17:45 às 18:00	119	1	120	1%
18:00 às 18:15	99	0	99	0%
18:15 às 18:30	93	1	94	1%
18:30 às 18:45	107	0	107	0%
18:45 às 19:00	108	3	111	3%
19:00 às 19:15	118	2	120	2%
19:15 às 19:30	89	0	89	0%
19:30 às 19:45	86	0	86	0%
19:45 às 20:00	73	0	73	0%

07:00 às 11:00	1 554	20	1 574	1%
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16:00 às 20:00	1 492	13	1 505	1%
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HPM - Hora de Ponta do movimento

08:00 às 09:00	495	4	499	1%
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HPT - Hora de Ponta do movimento

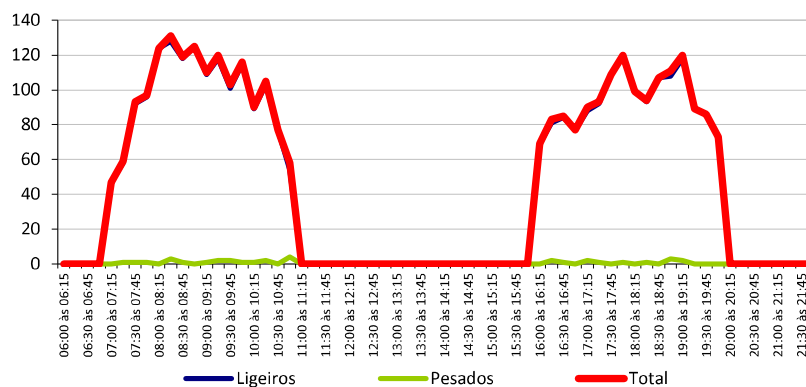
18:15 às 19:15	426	6	432	1%
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HPM - Hora de Ponta do posto

08:30 às 09:30	470	4	474	1%
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HPT - Hora de Ponta do posto

17:00 às 18:00	408	4	412	1%
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POSTO 3

Movimento

R. Bento Gonçalves / R. Manuel Ferreira

C-B

3ª feira - 13/07/2021

Período de Contagem	Ligeiros	Pesados	Total	%Pes
07:00 às 07:15	2	0	2	0%
07:15 às 07:30	0	0	0	0%
07:30 às 07:45	2	0	2	0%
07:45 às 08:00	1	0	1	0%
08:00 às 08:15	1	0	1	0%
08:15 às 08:30	1	0	1	0%
08:30 às 08:45	4	0	4	0%
08:45 às 09:00	5	0	5	0%
09:00 às 09:15	4	1	5	20%
09:15 às 09:30	5	0	5	0%
09:30 às 09:45	1	0	1	0%
09:45 às 10:00	4	0	4	0%
10:00 às 10:15	7	0	7	0%
10:15 às 10:30	5	0	5	0%
10:30 às 10:45	12	0	12	0%
10:45 às 11:00	19	0	19	0%

Períodos de Contagem	Ligeiros	Pesados	Total	%Pes
16:00 às 16:15	3	0	3	0%
16:15 às 16:30	3	2	5	40%
16:30 às 16:45	2	0	2	0%
16:45 às 17:00	4	0	4	0%
17:00 às 17:15	1	0	1	0%
17:15 às 17:30	6	0	6	0%
17:30 às 17:45	5	0	5	0%
17:45 às 18:00	6	0	6	0%
18:00 às 18:15	5	0	5	0%
18:15 às 18:30	1	0	1	0%
18:30 às 18:45	3	0	3	0%
18:45 às 19:00	5	1	6	17%
19:00 às 19:15	4	0	4	0%
19:15 às 19:30	4	0	4	0%
19:30 às 19:45	3	0	3	0%
19:45 às 20:00	2	0	2	0%

07:00 às 11:00	73	1	74	1%
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16:00 às 20:00	57	3	60	5%
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HPM - Hora de Ponta do movimento

10:00 às 11:00	43	0	43	0%
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HPT - Hora de Ponta do movimento

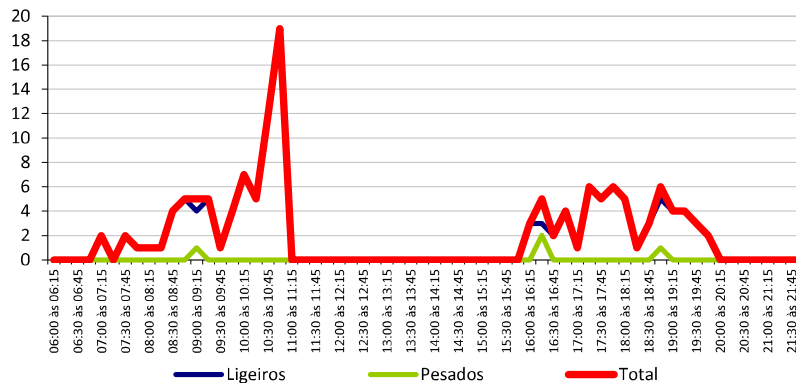
17:15 às 18:15	22	0	22	0%
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HPM - Hora de Ponta do posto

08:30 às 09:30	18	1	19	5%
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HPT - Hora de Ponta do posto

17:00 às 18:00	18	0	18	0%
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POSTO 3

R. Bento Gonçalves / R. Manuel Ferreira

Total Movimentos

3ª feira - 13/07/2021

Período de Contagem	Ligeiros	Pesados	Total	%Pes
07:00 às 07:15	104	0	104	0%
07:15 às 07:30	111	2	113	2%
07:30 às 07:45	182	2	184	1%
07:45 às 08:00	217	4	221	2%
08:00 às 08:15	232	0	232	0%
08:15 às 08:30	243	4	247	2%
08:30 às 08:45	228	3	231	1%
08:45 às 09:00	248	1	249	0%
09:00 às 09:15	224	7	231	3%
09:15 às 09:30	253	4	257	2%
09:30 às 09:45	209	2	211	1%
09:45 às 10:00	249	4	253	2%
10:00 às 10:15	212	3	215	1%
10:15 às 10:30	225	5	230	2%
10:30 às 10:45	197	5	202	2%
10:45 às 11:00	185	10	195	5%

Períodos de Contagem	Ligeiros	Pesados	Total	%Pes
16:00 às 16:15	170	1	171	1%
16:15 às 16:30	202	7	209	3%
16:30 às 16:45	189	4	193	2%
16:45 às 17:00	224	3	227	1%
17:00 às 17:15	268	4	272	1%
17:15 às 17:30	229	3	232	1%
17:30 às 17:45	233	1	234	0%
17:45 às 18:00	281	2	283	1%
18:00 às 18:15	227	1	228	0%
18:15 às 18:30	220	1	221	0%
18:30 às 18:45	269	5	274	2%
18:45 às 19:00	251	6	257	2%
19:00 às 19:15	243	5	248	2%
19:15 às 19:30	215	1	216	0%
19:30 às 19:45	192	2	194	1%
19:45 às 20:00	173	0	173	0%

07:00 às 11:00	3 319	56	3 375	2%
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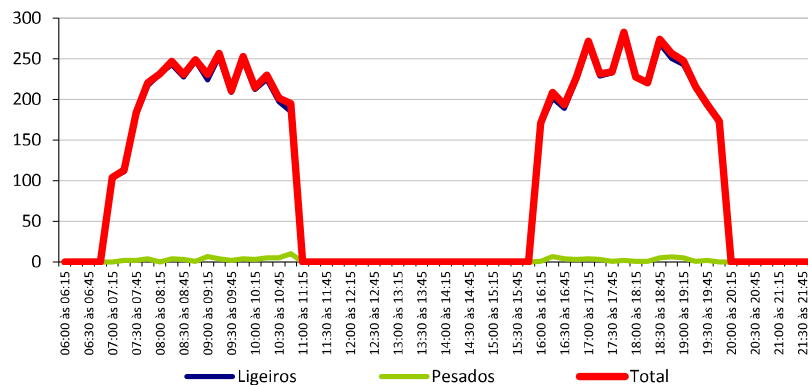
16:00 às 20:00	3 586	46	3 632	1%
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HPM - Hora de Ponta do movimento

08:30 às 09:30	953	15	968	2%
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HPT - Hora de Ponta do movimento

17:00 às 18:00	1 011	10	1 021	1%
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POSTO 1-1 – EN10 – R. INFANTE D. AUGUSTO

POSTO 1-2 – EN10 - ROTUNDA

POSTO 1-3 – EN10 – RUA AZEDO GNECO

POSTO 1-4 – EN10 – R. SANTA MARTA DE CORROIOS

POSTO 1-5 – EN10 - ROTUNDA

POSTO 2 – R. BENTO GONÇALVES / EST. JOÃO BACHEREL

POSTO 3 – R. BENTO GONÇALVES / R. MANUEL FERREIRA

ANEXO II – NÍVEIS DE SERVIÇO E RESERVAS DE CAPACIDADE



POSTO 1-1 – EN10 – R. INFANTE D. AUGUSTO



Posto 1-1 – EN10 – R. Infante D. Augusto
Cenário 0 – 2031 sem empreendimento
Dia Útil – Hora de Ponta da Manhã

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-1							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Infante D. Augusto							
Time Analyzed	Sem empreendimento - HPM							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p style="text-align: center;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	0	0	0	0	2	1	0	0	0		0	0	1	
Configuration							T	R								R
Volume (veh/h)							1166	95								424
Percent Heavy Vehicles (%)																0
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No															
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)																5.9
Critical Headway (sec)																5.90
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.30
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)																424
Capacity, c (veh/h)																542
v/c Ratio																0.78
95% Queue Length, Q ₉₅ (veh)																9.3
Control Delay (s/veh)																34.3
Level of Service (LOS)																D
Approach Delay (s/veh)	34.3															
Approach LOS	D															

Posto 1-1 – EN10 – R. Infante D. Augusto
Cenário 0 – 2031 sem empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	VTM Consultores							Intersection	P1-1								
Agency/Co.								Jurisdiction	CM Seixal								
Date Performed	10/8/2021							East/West Street	EN10								
Analysis Year	2031							North/South Street	R. Infante D. Augusto								
Time Analyzed	Sem empreendimento - HPT							Peak Hour Factor	1.00								
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00								
Project Description	ET Loteamento Seixal																
Lanes																	
<p>Major Street: East-West</p>																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	0	0	0	0	0	2	1		0	0	0		0	0	1	
Configuration							T	R								R	
Volume (veh/h)							1509	152								207	
Percent Heavy Vehicles (%)																0	
Proportion Time Blocked																	
Percent Grade (%)																0	
Right Turn Channelized							No									No	
Median Type Storage	Undivided																
Critical and Follow-up Headways																	
Base Critical Headway (sec)																5.9	
Critical Headway (sec)																5.90	
Base Follow-Up Headway (sec)																3.3	
Follow-Up Headway (sec)																3.30	
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)																207	
Capacity, c (veh/h)																439	
v/c Ratio																0.47	
95% Queue Length, Q ₉₅ (veh)																2.6	
Control Delay (s/veh)																20.5	
Level of Service (LOS)																C	
Approach Delay (s/veh)																20.5	
Approach LOS																C	

Posto 1-1 – EN10 – R. Infante D. Augusto
Cenário 1 – 2031 com empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-1							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Infante D. Augusto							
Time Analyzed	Com empreendimento - HPM							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	0	0	0	0	2	1		0	0	0		0	0	1
Configuration							T	R								R
Volume (veh/h)							1499	95								424
Percent Heavy Vehicles (%)																0
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													No			
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)																5.9
Critical Headway (sec)																5.90
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.30
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)																424
Capacity, c (veh/h)																442
v/c Ratio																0.96
95% Queue Length, Q ₉₅ (veh)																21.2
Control Delay (s/veh)																101.3
Level of Service (LOS)																F
Approach Delay (s/veh)													101.3			
Approach LOS													F			

Posto 1-1 – EN10 – R. Infante D. Augusto
Cenário 1 – 2031 com empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-1							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Infante D. Augusto							
Time Analyzed	Com empreendimento - HPT							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p>Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	0	0	0	0	2	1		0	0	0		0	0	1
Configuration							T	R								R
Volume (veh/h)							2169	152								207
Percent Heavy Vehicles (%)																0
Proportion Time Blocked																
Percent Grade (%)																0
Right Turn Channelized							No									No
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)																5.9
Critical Headway (sec)																5.90
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.30
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)																207
Capacity, c (veh/h)																291
v/c Ratio																0.71
95% Queue Length, Q ₉₅ (veh)																6.4
Control Delay (s/veh)																46.2
Level of Service (LOS)																E
Approach Delay (s/veh)																46.2
Approach LOS																E



Posto 1-1 – EN10 – R. Infante D. Augusto
Cenário 2 – 2031 com empreendimento e nova rede viária
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	VTM Consultores							Intersection	P1-1								
Agency/Co.								Jurisdiction	CM Seixal								
Date Performed	10/8/2021							East/West Street	EN10								
Analysis Year	2031							North/South Street	R. Infante D. Augusto								
Time Analyzed	Com empreendimento - HPM							Peak Hour Factor	1.00								
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00								
Project Description	ET Loteamento Seixal																
Lanes																	
<p style="text-align: center;">Major Street: East-West</p>																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	0	0	0	0	0	2	1		0	0	0		0	0	1	
Configuration							T	R								R	
Volume (veh/h)							1233	95								424	
Percent Heavy Vehicles (%)																0	
Proportion Time Blocked																	
Percent Grade (%)	0																
Right Turn Channelized	No																
Median Type Storage	Undivided																
Critical and Follow-up Headways																	
Base Critical Headway (sec)																	5.9
Critical Headway (sec)																	5.90
Base Follow-Up Headway (sec)																	3.3
Follow-Up Headway (sec)																	3.30
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)																	424
Capacity, c (veh/h)																	520
v/c Ratio																	0.82
95% Queue Length, Q ₉₅ (veh)																	10.8
Control Delay (s/veh)																	40.1
Level of Service (LOS)																	E
Approach Delay (s/veh)	40.1																
Approach LOS	E																

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Posto 1-1 – EN10 – R. Infante D. Augusto
Cenário 2 – 2031 com empreendimento e nova rede viária
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	VTM Consultores							Intersection	P1-1								
Agency/Co.								Jurisdiction	CM Seixal								
Date Performed	10/8/2021							East/West Street	EN10								
Analysis Year	2031							North/South Street	R. Infante D. Augusto								
Time Analyzed	Com emp e reaf - HPT							Peak Hour Factor	1.00								
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00								
Project Description	ET Loteamento Seixal																
Lanes																	
<p>Major Street: East-West</p>																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	0	0	0	0	0	2	1		0	0	0		0	0	1	
Configuration							T	R								R	
Volume (veh/h)							1641	152								207	
Percent Heavy Vehicles (%)																0	
Proportion Time Blocked																	
Percent Grade (%)	0																
Right Turn Channelized	No																
Median Type Storage	Undivided																
Critical and Follow-up Headways																	
Base Critical Headway (sec)	5.9																
Critical Headway (sec)	5.90																
Base Follow-Up Headway (sec)	3.3																
Follow-Up Headway (sec)	3.30																
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)	207																
Capacity, c (veh/h)	405																
v/c Ratio	0.51																
95% Queue Length, Q ₉₅ (veh)	3.1																
Control Delay (s/veh)	23.1																
Level of Service (LOS)	C																
Approach Delay (s/veh)	23.1																
Approach LOS	C																



POSTO 1-2 – EN10 - ROTUNDA

Posto 1-2 – EN10 – Rotunda
 Cenário 0 – 2031 sem empreendimento
 Dia Útil – Hora de Ponta da Manhã

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-2							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Infante D. Augusto/Rot							
Time Analyzed	Sem empreendimento - HPM							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p style="text-align: center;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	0	0	0	0	1	0		0	1	0		0	0	0
Configuration								TR			T					
Volume (veh/h)							877	6			89					
Percent Heavy Vehicles (%)											0					
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)											5.5					
Critical Headway (sec)											5.50					
Base Follow-Up Headway (sec)											4.0					
Follow-Up Headway (sec)											4.00					
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)											89					
Capacity, c (veh/h)											367					
v/c Ratio											0.24					
95% Queue Length, Q ₉₅ (veh)											1.0					
Control Delay (s/veh)											18.0					
Level of Service (LOS)											C					
Approach Delay (s/veh)											18.0					
Approach LOS											C					



Posto 1-2 – EN10 – Rotunda
Cenário 0 – 2031 sem empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-2							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Infante D. Augusto/Rot							
Time Analyzed	Sem empreendimento - HPT							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p style="text-align: center;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	0	0	0	0	1	0		0	1	0		0	0	0
Configuration								TR			T					
Volume (veh/h)								1325	22			130				
Percent Heavy Vehicles (%)												2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)									5.5							
Critical Headway (sec)									5.50							
Base Follow-Up Headway (sec)									4.0							
Follow-Up Headway (sec)									4.00							
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)									130							
Capacity, c (veh/h)									222							
v/c Ratio									0.59							
95% Queue Length, Q ₉₅ (veh)									3.9							
Control Delay (s/veh)									43.6							
Level of Service (LOS)									E							
Approach Delay (s/veh)									43.6							
Approach LOS									E							



Posto 1-2 – EN10 – Rotunda
Cenário 1 – 2031 com empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																		
General Information								Site Information										
Analyst	VTM Consultores							Intersection	P1-2									
Agency/Co.								Jurisdiction	CM Seixal									
Date Performed	10/8/2021							East/West Street	EN10									
Analysis Year	2031							North/South Street	R. Infante D. Augusto/Rot									
Time Analyzed	Com empreendimento - HPM							Peak Hour Factor	1.00									
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00									
Project Description	ET Loteamento Seixal																	
Lanes																		
<p>Major Street: East-West</p>																		
Vehicle Volumes and Adjustments																		
Approach	Eastbound				Westbound				Northbound				Southbound					
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority	1U	1	2	3	4U	4	5	6			7	8	9			10	11	12
Number of Lanes	0	0	0	0	0	0	1	0			0	1	0			0	0	0
Configuration								TR				T						
Volume (veh/h)								1110	6				89					
Percent Heavy Vehicles (%)													0					
Proportion Time Blocked																		
Percent Grade (%)													0					
Right Turn Channelized																		
Median Type Storage					Undivided													
Critical and Follow-up Headways																		
Base Critical Headway (sec)												5.5						
Critical Headway (sec)												5.50						
Base Follow-Up Headway (sec)												4.0						
Follow-Up Headway (sec)												4.00						
Delay, Queue Length, and Level of Service																		
Flow Rate, v (veh/h)												89						
Capacity, c (veh/h)												285						
v/c Ratio												0.31						
95% Queue Length, Q ₉₅ (veh)												1.3						
Control Delay (s/veh)												23.3						
Level of Service (LOS)												C						
Approach Delay (s/veh)												23.3						
Approach LOS												C						

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Posto 1-2 – EN10 – Rotunda
Cenário 1 – 2031 com empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-2							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Infante D. Augusto/Rot							
Time Analyzed	Com empreendimento - HPT							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p style="text-align: center;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	0	0	0	0	1	0		0	1	0		0	0	0
Configuration								TR			T					
Volume (veh/h)								1531	22			130				
Percent Heavy Vehicles (%)												2				
Proportion Time Blocked																
Percent Grade (%)											0					
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)												5.5				
Critical Headway (sec)												5.52				
Base Follow-Up Headway (sec)												4.0				
Follow-Up Headway (sec)												4.02				
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)												130				
Capacity, c (veh/h)												174				
v/c Ratio												0.75				
95% Queue Length, Q ₉₅ (veh)												6.7				
Control Delay (s/veh)												79.8				
Level of Service (LOS)												F				
Approach Delay (s/veh)												79.8				
Approach LOS												F				



Posto 1-2 – EN10 – Rotunda
Cenário 2 – 2031 com empreendimento e nova rede viária
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-2							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Infante D. Augusto/Rot							
Time Analyzed	Com emp e reaf - HPM							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	0	0	0	0	1	0		0	1	0		0	0	0
Configuration								TR			T					
Volume (veh/h)							924	6			89					
Percent Heavy Vehicles (%)											0					
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)											5.5					
Critical Headway (sec)											5.50					
Base Follow-Up Headway (sec)											4.0					
Follow-Up Headway (sec)											4.00					
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)											89					
Capacity, c (veh/h)											349					
v/c Ratio											0.26					
95% Queue Length, Q ₉₅ (veh)											1.0					
Control Delay (s/veh)											18.9					
Level of Service (LOS)											C					
Approach Delay (s/veh)											18.9					
Approach LOS											C					

Posto 1-2 – EN10 – Rotunda
Cenário 2 – 2031 com empreendimento e nova rede viária
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-2							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Infante D. Augusto/Rot							
Time Analyzed	Com emp e reaf - HPT							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	0	0	0	0	1	0		0	1	0		0	0	0
Configuration								TR			T					
Volume (veh/h)								1366	22			130				
Percent Heavy Vehicles (%)												2				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)												5.5				
Critical Headway (sec)												5.52				
Base Follow-Up Headway (sec)												4.0				
Follow-Up Headway (sec)												4.02				
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)												130				
Capacity, c (veh/h)												210				
v/c Ratio												0.62				
95% Queue Length, Q ₉₅ (veh)												4.4				
Control Delay (s/veh)												49.1				
Level of Service (LOS)												E				
Approach Delay (s/veh)												49.1				
Approach LOS												E				



POSTO 1-3 – EN10 – RUA AZEDO GNECO



Posto 1-3 – EN10 – Rua Azedo Gneco
Cenário 0 – 2031 sem empreendimento
Dia Útil – Hora de Ponta da Manhã

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-3							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Azedo Gneco							
Time Analyzed	Sem empreendimento - HPM							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	0	0		0	0	1		0	0	0
Configuration			T	TR								R				
Volume (veh/h)			1397	176												119
Percent Heavy Vehicles (%)																5
Proportion Time Blocked																
Percent Grade (%)											0					
Right Turn Channelized											No					
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)																5.9
Critical Headway (sec)																6.00
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.35
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)																119
Capacity, c (veh/h)																409
v/c Ratio																0.29
95% Queue Length, Q ₉₅ (veh)																1.2
Control Delay (s/veh)																17.4
Level of Service (LOS)																C
Approach Delay (s/veh)																17.4
Approach LOS																C

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Posto 1-3 – EN10 – Rua Azedo Gneco
Cenário 0 – 2031 sem empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-3							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Azedo Gneco							
Time Analyzed	Sem empreendimento - HPT							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p style="text-align: center;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	0	0		0	0	1		0	0	0
Configuration			T	TR								R				
Volume (veh/h)			1596	143												241
Percent Heavy Vehicles (%)																1
Proportion Time Blocked																
Percent Grade (%)											0					
Right Turn Channelized											No					
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)																5.9
Critical Headway (sec)																5.92
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.31
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)																241
Capacity, c (veh/h)																378
v/c Ratio																0.64
95% Queue Length, Q ₉₅ (veh)																4.9
Control Delay (s/veh)																30.9
Level of Service (LOS)																D
Approach Delay (s/veh)																30.9
Approach LOS																D



Posto 1-3 – EN10 – Rua Azedo Gneco
Cenário 1 – 2031 com empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-3							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Azedo Gneco							
Time Analyzed	Com empreendimento - HPM							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	0	0		0	0	1		0	0	0
Configuration			T	TR								R				
Volume (veh/h)			1572	176								119				
Percent Heavy Vehicles (%)												5				
Proportion Time Blocked																
Percent Grade (%)											0					
Right Turn Channelized											No					
Median Type Storage							Undivided									
Critical and Follow-up Headways																
Base Critical Headway (sec)																5.9
Critical Headway (sec)																6.00
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.35
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)																119
Capacity, c (veh/h)																366
v/c Ratio																0.33
95% Queue Length, Q ₉₅ (veh)																1.4
Control Delay (s/veh)																19.6
Level of Service (LOS)																C
Approach Delay (s/veh)																19.6
Approach LOS																C

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Posto 1-3 – EN10 – Rua Azedo Gneco
Cenário 1 – 2031 com empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-3							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Azedo Gneco							
Time Analyzed	Com empreendimento - HPT							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p style="text-align: center;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	0	0		0	0	1		0	0	0
Configuration			T	TR								R				
Volume (veh/h)			2391	143								241				
Percent Heavy Vehicles (%)												1				
Proportion Time Blocked																
Percent Grade (%)											0					
Right Turn Channelized											No					
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)												5.9				
Critical Headway (sec)												5.92				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.31				
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)												241				
Capacity, c (veh/h)												229				
v/c Ratio												1.05				
95% Queue Length, Q ₉₅ (veh)												22.2				
Control Delay (s/veh)												245.3				
Level of Service (LOS)												F				
Approach Delay (s/veh)											245.3					
Approach LOS											F					

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Posto 1-3 – EN10 – Rua Azedo Gneco
Cenário 2 – 2031 com empreendimento e nova rede viária
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-3							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Azedo Gneco							
Time Analyzed	Com emp e reaf - HPM							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p style="text-align: center;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	0	0		0	0	1		0	0	0
Configuration			T	TR								R				
Volume (veh/h)			1432	176												119
Percent Heavy Vehicles (%)																5
Proportion Time Blocked																
Percent Grade (%)											0					
Right Turn Channelized											No					
Median Type Storage																Undivided
Critical and Follow-up Headways																
Base Critical Headway (sec)																5.9
Critical Headway (sec)																6.00
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.35
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)																119
Capacity, c (veh/h)																400
v/c Ratio																0.30
95% Queue Length, Q ₉₅ (veh)																1.3
Control Delay (s/veh)																17.8
Level of Service (LOS)																C
Approach Delay (s/veh)																17.8
Approach LOS																C

Posto 1-3 – EN10 – Rua Azedo Gneco
Cenário 2 – 2031 com empreendimento e nova rede viária
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-3							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Azedo Gneco							
Time Analyzed	Com emp e reaf - HPT							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	2	0	0	0	0	0		0	0	1		0	0	0
Configuration			T	TR								R				
Volume (veh/h)			1755	143								241				
Percent Heavy Vehicles (%)												1				
Proportion Time Blocked																
Percent Grade (%)											0					
Right Turn Channelized											No					
Median Type Storage							Undivided									
Critical and Follow-up Headways																
Base Critical Headway (sec)												5.9				
Critical Headway (sec)												5.92				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.31				
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)												241				
Capacity, c (veh/h)												342				
v/c Ratio												0.70				
95% Queue Length, Q ₉₅ (veh)												6.3				
Control Delay (s/veh)												39.4				
Level of Service (LOS)												E				
Approach Delay (s/veh)												39.4				
Approach LOS												E				



POSTO 1-4 – EN10 – R. SANTA MARTA DE CORROIOS



Posto 1-4 – EN10 – Rua Santa Marta de Corroios
Cenário 0 – 2031 sem empreendimento
Dia Útil – Hora de Ponta da Manhã

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-4							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Santa Marta Corroios							
Time Analyzed	Sem empreendimento - HPM							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p style="text-align: center;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	2	0	0	0	0	0	0	0	1		0	0	0	
Configuration			T								R					
Volume (veh/h)			1146								426					
Percent Heavy Vehicles (%)											2					
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized									No							
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)													5.9			
Critical Headway (sec)													5.94			
Base Follow-Up Headway (sec)													3.3			
Follow-Up Headway (sec)													3.32			
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)													426			
Capacity, c (veh/h)													542			
v/c Ratio													0.79			
95% Queue Length, Q ₉₅ (veh)													9.5			
Control Delay (s/veh)													34.6			
Level of Service (LOS)													D			
Approach Delay (s/veh)									34.6							
Approach LOS									D							

Posto 1-4 – EN10 – Rua Santa Marta de Corroios
Cenário 0 – 2031 sem empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-4							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Santa Marta Corroios							
Time Analyzed	Sem empreendimento - HPT							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p style="text-align: center;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	0	0		0	0	1		0	0	0
Configuration			T									R				
Volume (veh/h)			1281									458				
Percent Heavy Vehicles (%)												2				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized										No						
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)												5.9				
Critical Headway (sec)												5.94				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.32				
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)												458				
Capacity, c (veh/h)												499				
v/c Ratio												0.92				
95% Queue Length, Q ₉₅ (veh)												17.9				
Control Delay (s/veh)												70.1				
Level of Service (LOS)												F				
Approach Delay (s/veh)												70.1				
Approach LOS												F				



Posto 1-4 – EN10 – Rua Santa Marta de Corroios
Cenário 1 – 2031 com empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-4							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Santa Marta Corroios							
Time Analyzed	Com empreendimento - HPM							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	0	0		0	0	1		0	0	0
Configuration			T									R				
Volume (veh/h)			1146									601				
Percent Heavy Vehicles (%)												1				
Proportion Time Blocked																
Percent Grade (%)											0					
Right Turn Channelized											No					
Median Type Storage							Undivided									
Critical and Follow-up Headways																
Base Critical Headway (sec)																5.9
Critical Headway (sec)																5.92
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.31
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)																601
Capacity, c (veh/h)																545
v/c Ratio																1.10
95% Queue Length, Q ₉₅ (veh)																47.0
Control Delay (s/veh)																250.3
Level of Service (LOS)																F
Approach Delay (s/veh)																250.3
Approach LOS																F



Posto 1-4 – EN10 – Rua Santa Marta de Corroios
Cenário 1 – 2031 com empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-4							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Santa Marta Corroios							
Time Analyzed	Com empreendimento - HPT							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p style="text-align: center;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	0	0		0	0	1		0	0	0
Configuration			T									R				
Volume (veh/h)			1281									1253				
Percent Heavy Vehicles (%)												1				
Proportion Time Blocked																
Percent Grade (%)											0					
Right Turn Channelized											No					
Median Type Storage																
							Undivided									
Critical and Follow-up Headways																
Base Critical Headway (sec)																5.9
Critical Headway (sec)																5.92
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.31
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)																1253
Capacity, c (veh/h)																502
v/c Ratio																2.50
95% Queue Length, Q ₉₅ (veh)																380.5
Control Delay (s/veh)																2717.3
Level of Service (LOS)																F
Approach Delay (s/veh)																2717.3
Approach LOS																F



Posto 1-4 – EN10 – Rua Santa Marta de Corroios
Cenário 2 – 2031 com empreendimento e nova rede viária
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-4							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Santa Marta Corroios							
Time Analyzed	Com emp e reaf - HPM							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p style="text-align: center;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	0	0		0	0	1		0	0	0
Configuration			T									R				
Volume (veh/h)			1146									461				
Percent Heavy Vehicles (%)												2				
Proportion Time Blocked																
Percent Grade (%)											0					
Right Turn Channelized											No					
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)																5.9
Critical Headway (sec)																5.94
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.32
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)																461
Capacity, c (veh/h)																542
v/c Ratio																0.85
95% Queue Length, Q ₉₅ (veh)																12.9
Control Delay (s/veh)																45.1
Level of Service (LOS)																E
Approach Delay (s/veh)																45.1
Approach LOS																E

Posto 1-4 – EN10 – Rua Santa Marta de Corroios
Cenário 2 – 2031 com empreendimento e nova rede viária
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-4							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Santa Marta Corroios							
Time Analyzed	Com emp e reaf - HPT							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p style="text-align: center;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	0	0	0		0	0	1		0	0	0
Configuration			T									R				
Volume (veh/h)			1281									617				
Percent Heavy Vehicles (%)												1				
Proportion Time Blocked																
Percent Grade (%)											0					
Right Turn Channelized											No					
Median Type Storage							Undivided									
Critical and Follow-up Headways																
Base Critical Headway (sec)												5.9				
Critical Headway (sec)												5.92				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.31				
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)												617				
Capacity, c (veh/h)												502				
v/c Ratio												1.23				
95% Queue Length, Q ₉₅ (veh)												70.6				
Control Delay (s/veh)												460.1				
Level of Service (LOS)												F				
Approach Delay (s/veh)												460.1				
Approach LOS												F				



POSTO 1-5 – EN10 - ROTUNDA



Posto 1-5 – EN10 – Rotunda
Cenário 0 – 2031 sem empreendimento
Dia Útil – Hora de Ponta da Manhã

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-5							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Santa Marta Corroios/R							
Time Analyzed	Sem empreendimento - HPM							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p style="text-align: center;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	0	0		0	0	0		0	1	0
Configuration			T												T	
Volume (veh/h)			1070													256
Percent Heavy Vehicles (%)																3
Proportion Time Blocked																
Percent Grade (%)																0
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)																5.5
Critical Headway (sec)																5.53
Base Follow-Up Headway (sec)																4.0
Follow-Up Headway (sec)																4.03
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)																256
Capacity, c (veh/h)																296
v/c Ratio																0.86
95% Queue Length, Q ₉₅ (veh)																12.0
Control Delay (s/veh)																78.8
Level of Service (LOS)																F
Approach Delay (s/veh)																78.8
Approach LOS																F



Posto 1-5 – EN10 – Rotunda
 Cenário 0 – 2031 sem empreendimento
 Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-5							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Santa Marta Corroios/R							
Time Analyzed	Sem empreendimento - HPT							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p style="text-align: center;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	0	0		0	0	0		0	1	0
Configuration			T												T	
Volume (veh/h)			1147													313
Percent Heavy Vehicles (%)																3
Proportion Time Blocked																
Percent Grade (%)																0
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)																5.5
Critical Headway (sec)																5.53
Base Follow-Up Headway (sec)																4.0
Follow-Up Headway (sec)																4.03
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)																313
Capacity, c (veh/h)																272
v/c Ratio																1.15
95% Queue Length, Q ₉₅ (veh)																34.0
Control Delay (s/veh)																364.7
Level of Service (LOS)																F
Approach Delay (s/veh)																364.7
Approach LOS																F

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Posto 1-5 – EN10 – Rotunda
Cenário 1 – 2031 com empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-5							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Santa Marta Corroios/R							
Time Analyzed	Com empreendimento - HPM							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p style="text-align: center;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	0	0		0	0	0		0	1	0
Configuration			T												T	
Volume (veh/h)			1070												489	
Percent Heavy Vehicles (%)															1	
Proportion Time Blocked																
Percent Grade (%)															0	
Right Turn Channelized																
Median Type Storage																Undivided
Critical and Follow-up Headways																
Base Critical Headway (sec)																5.5
Critical Headway (sec)																5.51
Base Follow-Up Headway (sec)																4.0
Follow-Up Headway (sec)																4.01
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)																489
Capacity, c (veh/h)																299
v/c Ratio																1.64
95% Queue Length, Q ₉₅ (veh)																102.3
Control Delay (s/veh)																1193.1
Level of Service (LOS)																F
Approach Delay (s/veh)																1193.1
Approach LOS																F

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Posto 1-5 – EN10 – Rotunda
Cenário 1 – 2031 com empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	VTM Consultores							Intersection	P1-5								
Agency/Co.								Jurisdiction	CM Seixal								
Date Performed	10/8/2021							East/West Street	EN10								
Analysis Year	2031							North/South Street	R. Santa Marta Corroios/R								
Time Analyzed	Com empreendimento - HPT							Peak Hour Factor	1.00								
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00								
Project Description	ET Loteamento Seixal																
Lanes																	
<p>Major Street: East-West</p>																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	0	0		0	0	0		0	1	0	
Configuration			T												T		
Volume (veh/h)			1147												519		
Percent Heavy Vehicles (%)															2		
Proportion Time Blocked																	
Percent Grade (%)															0		
Right Turn Channelized																	
Median Type Storage	Undivided																
Critical and Follow-up Headways																	
Base Critical Headway (sec)															5.5		
Critical Headway (sec)															5.52		
Base Follow-Up Headway (sec)															4.0		
Follow-Up Headway (sec)															4.02		
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)															519		
Capacity, c (veh/h)															274		
v/c Ratio															1.90		
95% Queue Length, Q ₉₅ (veh)															128.7		
Control Delay (s/veh)															1659.3		
Level of Service (LOS)															F		
Approach Delay (s/veh)															1659.3		
Approach LOS															F		

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Posto 1-5 – EN10 – Rotunda
Cenário 2 – 2031 com empreendimento e nova rede viária
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-5							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Santa Marta Corroios/R							
Time Analyzed	Com emp e reaf - HPM							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p style="text-align: center;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	0	0		0	0	0		0	1	0
Configuration			T												T	
Volume (veh/h)			1070													303
Percent Heavy Vehicles (%)																2
Proportion Time Blocked																
Percent Grade (%)																0
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)																5.5
Critical Headway (sec)																5.52
Base Follow-Up Headway (sec)																4.0
Follow-Up Headway (sec)																4.02
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)																303
Capacity, c (veh/h)																298
v/c Ratio																1.02
95% Queue Length, Q ₉₅ (veh)																22.7
Control Delay (s/veh)																183.4
Level of Service (LOS)																F
Approach Delay (s/veh)																183.4
Approach LOS																F

Posto 1-5 – EN10 – Rotunda
Cenário 2 – 2031 com empreendimento e nova rede viária
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P1-5							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	EN10							
Analysis Year	2031							North/South Street	R. Santa Marta Corroios/R							
Time Analyzed	Com emp e reaf - HPT							Peak Hour Factor	1.00							
Intersection Orientation	East-West							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p style="text-align: center;">Major Street: East-West</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	0	0		0	0	0		0	1	0
Configuration			T												T	
Volume (veh/h)			1147												354	
Percent Heavy Vehicles (%)															3	
Proportion Time Blocked																
Percent Grade (%)															0	
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)															5.5	
Critical Headway (sec)															5.53	
Base Follow-Up Headway (sec)															4.0	
Follow-Up Headway (sec)															4.03	
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)															354	
Capacity, c (veh/h)															272	
v/c Ratio															1.30	
95% Queue Length, Q ₉₅ (veh)															51.1	
Control Delay (s/veh)															609.0	
Level of Service (LOS)															F	
Approach Delay (s/veh)															609.0	
Approach LOS															F	



POSTO 2 – R. BENTO GONÇALVES / EST. JOÃO BACHEREL



Posto 2 - R. Bento Gonçalves / Est. João Bacherel
Cenário 0 – 2031 sem empreendimento
Dia Útil – Hora de Ponta da Manhã

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P2							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	R. Bento Gonçalves							
Analysis Year	2031							North/South Street	Est. Joao Bacherel							
Time Analyzed	Sem empreendimento - HPM							Peak Hour Factor	1.00							
Intersection Orientation	North South							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p style="text-align: center;">Major Street North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						219		188			363	208		65	268	
Percent Heavy Vehicles (%)						1		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type Storage						Undivided										
Critical and Follow-up Headways																
Base Critical Headway (sec)						6.1		5.2						4.1		
Critical Headway (sec)						5.41		5.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.51		3.30						2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)								407						65		
Capacity, c (veh/h)								711						1012		
v/c Ratio								0.57						0.06		
95% Queue Length, Q ₉₅ (veh)								3.9						0.2		
Control Delay (s/veh)								16.8						8.8		
Level of Service (LOS)								C						A		
Approach Delay (s/veh)								16.8						2.3		
Approach LOS								C						A		

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Posto 2 - R. Bento Gonçalves / Est. João Bacherel
Cenário 0 – 2031 sem empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P2							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	R. Bento Gonçalves							
Analysis Year	2031							North/South Street	Est. Joao Bacherel							
Time Analyzed	Sem empreendimento - HPT							Peak Hour Factor	1.00							
Intersection Orientation	North South							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						187		76			265	226		108	391	
Percent Heavy Vehicles (%)						1		4						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type Storage						Undivided										
Critical and Follow-up Headways																
Base Critical Headway (sec)						6.1		5.2						4.1		
Critical Headway (sec)						5.41		5.24						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.51		3.34						2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)								263						108		
Capacity, c (veh/h)								446						1083		
v/c Ratio								0.59						0.10		
95% Queue Length, Q ₉₅ (veh)								4.1						0.3		
Control Delay (s/veh)								24.5						8.7		
Level of Service (LOS)								C						A		
Approach Delay (s/veh)								24.5						2.7		
Approach LOS								C						A		



Posto 2 - R. Bento Gonçalves / Est. João Bacherel
Cenário 1 – 2031 com empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P2							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	R. Bento Gonçalves							
Analysis Year	2031							North/South Street	Est. Joao Bacherel							
Time Analyzed	Com empreendimento - HPM							Peak Hour Factor	1.00							
Intersection Orientation	North-South							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p>Major Street North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						336		188			538	246		65	812	
Percent Heavy Vehicles (%)						1		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type Storage						Undivided										
Critical and Follow-up Headways																
Base Critical Headway (sec)						6.1		5.2						4.1		
Critical Headway (sec)						5.41		5.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.51		3.30						2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)								524						65		
Capacity, c (veh/h)								212						843		
v/c Ratio								2.47						0.08		
95% Queue Length, Q ₉₅ (veh)								161.0						0.3		
Control Delay (s/veh)								2702.8						9.6		
Level of Service (LOS)								F						A		
Approach Delay (s/veh)								2702.8						2.0		
Approach LOS								F								

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Posto 2 - R. Bento Gonçalves / Est. João Bacherel
Cenário 1 – 2031 com empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P2							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	R. Bento Gonçalves							
Analysis Year	2031							North/South Street	Est. Joao Bacherel							
Time Analyzed	Com empreendimento - HPT							Peak Hour Factor	1.00							
Intersection Orientation	North-South							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						290		76			1060	396		108	871	
Percent Heavy Vehicles (%)						1		4						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type Storage						Undivided										
Critical and Follow-up Headways																
Base Critical Headway (sec)						6.1		5.2						4.1		
Critical Headway (sec)						5.41		5.24						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.51		3.34						2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)								366						108		
Capacity, c (veh/h)								52						471		
v/c Ratio								7.04						0.23		
95% Queue Length, Q ₉₅ (veh)								160.4						0.9		
Control Delay (s/veh)								11032.5						14.9		
Level of Service (LOS)								F						B		
Approach Delay (s/veh)								11032.5						7.5		
Approach LOS								F								



Posto 2 - R. Bento Gonçalves / Est. João Bacherel
Cenário 2 – 2031 com empreendimento e nova rede viária
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P2							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	R. Bento Gonçalves							
Analysis Year	2031							North/South Street	Est. Joao Bacherel							
Time Analyzed	Com emp e reaf - HPM							Peak Hour Factor	1.00							
Intersection Orientation	North South							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						242		188			398	216		65	377	
Percent Heavy Vehicles (%)						1		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type Storage						Undivided										
Critical and Follow-up Headways																
Base Critical Headway (sec)						6.1		5.2							4.1	
Critical Headway (sec)						5.41		5.20							4.10	
Base Follow-Up Headway (sec)						3.5		3.3							2.2	
Follow-Up Headway (sec)						3.51		3.30							2.20	
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)								430							65	
Capacity, c (veh/h)								534							975	
v/c Ratio								0.81							0.07	
95% Queue Length, Q ₉₅ (veh)								10.4							0.2	
Control Delay (s/veh)								37.8							9.0	
Level of Service (LOS)								E							A	
Approach Delay (s/veh)								37.8							2.0	
Approach LOS								E							A	

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Posto 2 - R. Bento Gonçalves / Est. João Bacherel
Cenário 2 – 2031 com empreendimento e nova rede viária
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P2							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	R. Bento Gonçalves							
Analysis Year	2031							North/South Street	Est. Joao Bacherel							
Time Analyzed	Com emp e reaf - HPT							Peak Hour Factor	1.00							
Intersection Orientation	North-South							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						208		76			424	260		108	487	
Percent Heavy Vehicles (%)						1		4						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type Storage					Undivided											
Critical and Follow-up Headways																
Base Critical Headway (sec)						6.1		5.2						4.1		
Critical Headway (sec)						5.41		5.24						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.51		3.34						2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)								284						108		
Capacity, c (veh/h)								285						919		
v/c Ratio								0.99						0.12		
95% Queue Length, Q ₉₅ (veh)								203						0.4		
Control Delay (s/veh)								163.2						9.4		
Level of Service (LOS)								F						A		
Approach Delay (s/veh)						163.2						3.0				
Approach LOS						F						A				



POSTO 3 – R. BENTO GONÇALVES / R. MANUEL FERREIRA



Posto 3 - R. Bento Gonçalves / R. Manuel Ferreira
Cenário 0 – 2031 sem empreendimento
Dia Útil – Hora de Ponta da Manhã

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P3							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	R. Manuel Ferreira							
Analysis Year	2031							North/South Street	R. Bento/RSt. Marta							
Time Analyzed	Sem empreendimento - HPM							Peak Hour Factor	1.00							
Intersection Orientation	North South							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						21		16			555	17		9	478	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type Storage						Undivided										
Critical and Follow-up Headways																
Base Critical Headway (sec)						6.1		5.2						4.1		
Critical Headway (sec)						5.40		5.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.30						2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)								37						9		
Capacity, c (veh/h)								415						1011		
v/c Ratio								0.09						0.01		
95% Queue Length, Q ₉₅ (veh)								0.3						0.0		
Control Delay (s/veh)								14.5						8.6		
Level of Service (LOS)								B						A		
Approach Delay (s/veh)								14.5						0.3		
Approach LOS								B						A		

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Posto 3 - R. Bento Gonçalves / R. Manuel Ferreira
Cenário 0 – 2031 sem empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P3							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	R. Manuel Ferreira							
Analysis Year	2031							North/South Street	R. Bento/RSt. Marta							
Time Analyzed	Sem empreendimento - HPT							Peak Hour Factor	1.00							
Intersection Orientation	North South							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						22		10			481	25		18	561	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type Storage						Undivided										
Critical and Follow-up Headways																
Base Critical Headway (sec)						6.1		5.2						4.1		
Critical Headway (sec)						5.40		5.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.30						2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)								32						18		
Capacity, c (veh/h)								379						1069		
v/c Ratio								0.08						0.02		
95% Queue Length, Q ₉₅ (veh)								0.3						0.1		
Control Delay (s/veh)								15.4						8.4		
Level of Service (LOS)								C						A		
Approach Delay (s/veh)								15.4						0.5		
Approach LOS								C						A		



Posto 3 - R. Bento Gonçalves / R. Manuel Ferreira
Cenário 1 – 2031 com empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P3							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	R. Manuel Ferreira							
Analysis Year	2031							North/South Street	R. Bento/RSt. Marta							
Time Analyzed	Com empreendimento - HPM							Peak Hour Factor	1.00							
Intersection Orientation	North-South							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)							59					555	134		670	478
Percent Heavy Vehicles (%)							0								0	
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized																
Median Type Storage							Undivided									
Critical and Follow-up Headways																
Base Critical Headway (sec)							6.1								4.1	
Critical Headway (sec)							5.40								4.10	
Base Follow-Up Headway (sec)							3.5								2.2	
Follow-Up Headway (sec)							3.50								2.20	
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)															670	
Capacity, c (veh/h)															915	
v/c Ratio															0.73	
95% Queue Length, Q ₉₅ (veh)															7.7	
Control Delay (s/veh)															19.5	
Level of Service (LOS)															C	
Approach Delay (s/veh)															19.5	
Approach LOS															F	



Posto 3 - R. Bento Gonçalves / R. Manuel Ferreira
Cenário 1 – 2031 com empreendimento
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P3							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	R. Manuel Ferreira							
Analysis Year	2031							North/South Street	R. Bento/RSt. Marta							
Time Analyzed	Com empreendimento - HPT							Peak Hour Factor	1.00							
Intersection Orientation	North-South							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						193		975			481	127		601	561	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type Storage						Undivided										
Critical and Follow-up Headways																
Base Critical Headway (sec)						6.1		5.2						4.1		
Critical Headway (sec)						5.40		5.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.30						2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)								1168						601		
Capacity, c (veh/h)								50						980		
v/c Ratio								23.34						0.61		
95% Queue Length, Q ₉₅ (veh)								562.1						4.6		
Control Delay (s/veh)								40359.2						14.4		
Level of Service (LOS)								F						B		
Approach Delay (s/veh)								40359.2						13.7		
Approach LOS								F								



Posto 3 - R. Bento Gonçalves / R. Manuel Ferreira
Cenário 2 – 2031 com empreendimento e nova rede viária
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P3							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	R. Manuel Ferreira							
Analysis Year	2031							North/South Street	R. Bento/RSt. Marta							
Time Analyzed	Com emp e reaf- HPM							Peak Hour Factor	1.00							
Intersection Orientation	North South							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						28		59			555	41		141	478	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type Storage						Undivided										
Critical and Follow-up Headways																
Base Critical Headway (sec)						6.1		5.2							4.1	
Critical Headway (sec)						5.40		5.20							4.10	
Base Follow-Up Headway (sec)						3.5		3.3							2.2	
Follow-Up Headway (sec)						3.50		3.30							2.20	
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)								87							141	
Capacity, c (veh/h)								368							990	
v/c Ratio								0.24							0.14	
95% Queue Length, Q ₉₅ (veh)								0.9							0.5	
Control Delay (s/veh)								17.8							9.2	
Level of Service (LOS)								C							A	
Approach Delay (s/veh)								17.8							3.5	
Approach LOS								C							A	

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Posto 3 - R. Bento Gonçalves / R. Manuel Ferreira
Cenário 2 – 2031 com empreendimento e nova rede viária
Dia Útil – Hora de Ponta da Tarde

HCS7 Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	VTM Consultores							Intersection	P3							
Agency/Co.								Jurisdiction	CM Seixal							
Date Performed	10/8/2021							East/West Street	R. Manuel Ferreira							
Analysis Year	2031							North/South Street	R. Bento/RSt. Marta							
Time Analyzed	Com emp e reaf - HPT							Peak Hour Factor	1.00							
Intersection Orientation	North-South							Analysis Time Period (hrs)	1.00							
Project Description	ET Loteamento Seixal															
Lanes																
<p style="text-align: center;">Major Street North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						56		203			481	45		135	561	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type Storage						Undivided										
Critical and Follow-up Headways																
Base Critical Headway (sec)						6.1		5.2						4.1		
Critical Headway (sec)						5.40		5.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.30						2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)								259						135		
Capacity, c (veh/h)								442						1051		
v/c Ratio								0.59						0.13		
95% Queue Length, Q ₉₅ (veh)								4.1						0.4		
Control Delay (s/veh)								24.5						8.9		
Level of Service (LOS)								C						A		
Approach Delay (s/veh)								24.5						3.1		
Approach LOS								C								

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