

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	R Garland			Intersection	Monterey Blvd/Park Avenue			
Agency/Co.	Hermosa Beach City School Dist			Jurisdiction	City of Hermosa Beach			
Date Performed	5/8/18			Analysis Year	2018 Existing + Project			
Analysis Time Period	AM Peak Half Hour							
Project Description North Elementary School								
East/West Street: Monterey Boulevard				North/South Street: Park Avenue				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	16	25			105	65		
Peak-Hour Factor, PHF	0.50	0.50	1.00	1.00	0.50	0.50		
Hourly Flow Rate, HFR (veh/h)	32	50	0	0	210	130		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LT					TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				54		15		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.50	1.00	0.50		
Hourly Flow Rate, HFR (veh/h)	0	0	0	108	0	30		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration					LR			
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	32						138	
C (m) (veh/h)	1214						613	
v/c	0.03						0.23	
95% queue length	0.08						0.86	
Control Delay (s/veh)	8.0						12.6	
LOS	A						B	
Approach Delay (s/veh)	--	--				12.6		
Approach LOS	--	--				B		

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	R Garland			Intersection	Monterey Blvd/Park Avenue		
Agency/Co.	Hermosa Beach City School Dist			Jurisdiction	City of Hermosa Beach		
Date Performed	5/8/18			Analysis Year	2019 Without Project		
Analysis Time Period	AM Peak Half Hour						
Project Description North Elementary School							
East/West Street: Monterey Boulevard				North/South Street: Park Avenue			
Intersection Orientation: East-West				Study Period (hrs): 0.25			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	5	25			106	20	
Peak-Hour Factor, PHF	0.50	0.50	1.00	1.00	0.50	0.50	
Hourly Flow Rate, HFR (veh/h)	10	50	0	0	212	40	
Percent Heavy Vehicles	0	--	--	0	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	0	1	0	0	1	0	
Configuration	LT					TR	
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)				15		5	
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.50	1.00	0.50	
Hourly Flow Rate, HFR (veh/h)	0	0	0	30	0	10	
Percent Heavy Vehicles	0	0	0	0	0	0	
Percent Grade (%)	0			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	0	0	0	0	0	0	
Configuration					LR		
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11 12
Lane Configuration	LT						LR
v (veh/h)	10						40
C (m) (veh/h)	1307						695
v/c	0.01						0.06
95% queue length	0.02						0.18
Control Delay (s/veh)	7.8						10.5
LOS	A						B
Approach Delay (s/veh)	--	--				10.5	
Approach LOS	--	--				B	

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	R Garland			Intersection	Monterey Blvd/Park Avenue			
Agency/Co.	Hermosa Beach City School Dist			Jurisdiction	City of Hermosa Beach			
Date Performed	5/8/18			Analysis Year	2019 With Project			
Analysis Time Period	AM Peak Half Hour							
Project Description North Elementary School								
East/West Street: Monterey Boulevard				North/South Street: Park Avenue				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	16	25			106	65		
Peak-Hour Factor, PHF	0.50	0.50	1.00	1.00	0.50	0.50		
Hourly Flow Rate, HFR (veh/h)	32	50	0	0	212	130		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LT					TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				54		15		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.50	1.00	0.50		
Hourly Flow Rate, HFR (veh/h)	0	0	0	108	0	30		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration					LR			
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	32						138	
C (m) (veh/h)	1212						612	
v/c	0.03						0.23	
95% queue length	0.08						0.86	
Control Delay (s/veh)	8.1						12.6	
LOS	A						B	
Approach Delay (s/veh)	--	--				12.6		
Approach LOS	--	--				B		

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	R Garland			Intersection	Monterey Blvd/Park Avenue			
Agency/Co.	Hermosa Beach City School Dist			Jurisdiction	City of Hermosa Beach			
Date Performed	5/8/18			Analysis Year	2018 Existing			
Analysis Time Period	PM Peak Half Hour							
Project Description North Elementary School								
East/West Street: Monterey Boulevard				North/South Street: Park Avenue				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	10	20			25	10		
Peak-Hour Factor, PHF	0.50	0.50	1.00	1.00	0.50	0.50		
Hourly Flow Rate, HFR (veh/h)	20	40	0	0	50	20		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LT					TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				10		5		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.50	1.00	0.50		
Hourly Flow Rate, HFR (veh/h)	0	0	0	20	0	10		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration					LR			
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	20						30	
C (m) (veh/h)	1523						869	
v/c	0.01						0.03	
95% queue length	0.04						0.11	
Control Delay (s/veh)	7.4						9.3	
LOS	A						A	
Approach Delay (s/veh)	--	--				9.3		
Approach LOS	--	--				A		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	R Garland
Agency/Co.	Hermosa Beach City School Dist
Date Performed	5/8/18
Analysis Time Period	PM Peak Half Hour

Site Information

Intersection	Monterey Blvd/Park Avenue
Jurisdiction	City of Hermosa Beach
Analysis Year	2018 Existing + Project

Project Description North Elementary School

East/West Street: Monterey Boulevard

North/South Street: Park Avenue

Intersection Orientation: East-West

Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	15	20			25	29
Peak-Hour Factor, PHF	0.50	0.50	1.00	1.00	0.50	0.50
Hourly Flow Rate, HFR (veh/h)	30	40	0	0	50	58
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	
Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				33		11
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.50	1.00	0.50
Hourly Flow Rate, HFR (veh/h)	0	0	0	66	0	22
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	30						88	
C (m) (veh/h)	1475						814	
v/c	0.02						0.11	
95% queue length	0.06						0.36	
Control Delay (s/veh)	7.5						10.0	
LOS	A						A	
Approach Delay (s/veh)	--	--					10.0	
Approach LOS	--	--					A	

TWO-WAY STOP CONTROL SUMMARY									
General Information					Site Information				
Analyst	R Garland				Intersection	Monterey Blvd/Park Avenue			
Agency/Co.	Hermosa Beach City School Dist				Jurisdiction	City of Hermosa Beach			
Date Performed	5/8/18				Analysis Year	2019 Without Project			
Analysis Time Period	PM Peak Half Hour								
Project Description North Elementary School									
East/West Street: Monterey Boulevard					North/South Street: Park Avenue				
Intersection Orientation: East-West					Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments									
Major Street	Eastbound			Westbound					
Movement	1	2	3	4	5	6			
	L	T	R	L	T	R			
Volume (veh/h)	10	20			25	10			
Peak-Hour Factor, PHF	0.50	0.50	1.00	1.00	0.50	0.50			
Hourly Flow Rate, HFR (veh/h)	20	40	0	0	50	20			
Percent Heavy Vehicles	0	--	--	0	--	--			
Median Type	Undivided								
RT Channelized			0			0			
Lanes	0	1	0	0	1	0			
Configuration	LT					TR			
Upstream Signal		0			0				
Minor Street	Northbound			Southbound					
Movement	7	8	9	10	11	12			
	L	T	R	L	T	R			
Volume (veh/h)				10		5			
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.50	1.00	0.50			
Hourly Flow Rate, HFR (veh/h)	0	0	0	20	0	10			
Percent Heavy Vehicles	0	0	0	0	0	0			
Percent Grade (%)	0			0					
Flared Approach		N			N				
Storage		0			0				
RT Channelized			0			0			
Lanes	0	0	0	0	0	0			
Configuration					LR				
Delay, Queue Length, and Level of Service									
Approach	Eastbound	Westbound	Northbound			Southbound			
Movement	1	4	7	8	9	10	11	12	
Lane Configuration	LT						LR		
v (veh/h)	20						30		
C (m) (veh/h)	1523						869		
v/c	0.01						0.03		
95% queue length	0.04						0.11		
Control Delay (s/veh)	7.4						9.3		
LOS	A						A		
Approach Delay (s/veh)	--	--				9.3			
Approach LOS	--	--				A			

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	R Garland			Intersection	Monterey Blvd/Park Avenue			
Agency/Co.	Hermosa Beach City School Dist			Jurisdiction	City of Hermosa Beach			
Date Performed	5/8/18			Analysis Year	2019 With Project			
Analysis Time Period	PM Peak Half Hour							
Project Description North Elementary School								
East/West Street: Monterey Boulevard				North/South Street: Park Avenue				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	15	20			25	29		
Peak-Hour Factor, PHF	0.50	0.50	1.00	1.00	0.50	0.50		
Hourly Flow Rate, HFR (veh/h)	30	40	0	0	50	58		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LT					TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				33		11		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.50	1.00	0.50		
Hourly Flow Rate, HFR (veh/h)	0	0	0	66	0	22		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration					LR			
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	30						88	
C (m) (veh/h)	1475						814	
v/c	0.02						0.11	
95% queue length	0.06						0.36	
Control Delay (s/veh)	7.5						10.0	
LOS	A						A	
Approach Delay (s/veh)	--	--				10.0		
Approach LOS	--	--				A		

ALL-WAY STOP CONTROL ANALYSIS								
General Information					Site Information			
Analyst	R Garland				Intersection	Valley Drive/Gould Avenue		
Agency/Co.	Hermosa Beach City School Dist				Jurisdiction	City of Hermosa Beach		
Date Performed	12/13/2015				Analysis Year	2018 Existing		
Analysis Time Period								
Project ID North Elementary School								
East/West Street: Gould Avenue					North/South Street: Valley Drive			
Volume Adjustments and Site Characteristics								
Approach	Eastbound				Westbound			
Movement	L	T	R		L	T	R	
Volume (veh/h)	15	115	40		115	120	45	
%Thrus Left Lane								
Approach	Northbound				Southbound			
Movement	L	T	R		L	T	R	
Volume (veh/h)	5	35	70		40	85	5	
%Thrus Left Lane								
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	R	L	TR	LT	R	LTR	
PHF	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
Flow Rate (veh/h)	260	80	230	330	80	140	260	
% Heavy Vehicles	0	0	0	0	0	0	0	
No. Lanes	2		2		2		1	
Geometry Group	5		5		5		4b	
Duration, T	0.25							
Saturation Headway Adjustment Worksheet								
Prop. Left-Turns	0.1	0.0	1.0	0.0	0.1	0.0	0.3	
Prop. Right-Turns	0.0	1.0	0.0	0.3	0.0	1.0	0.0	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
hLT-adj	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.2
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.1	-0.7	0.5	-0.2	0.1	-0.7	0.0	
Departure Headway and Service Time								
hd, initial value (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	
x, initial	0.23	0.07	0.20	0.29	0.07	0.12	0.23	
hd, final value (s)	7.32	6.55	7.43	6.72	7.81	7.04	7.41	
x, final value	0.53	0.15	0.47	0.62	0.17	0.27	0.54	
Move-up time, m (s)	2.3		2.3		2.3		2.3	
Service Time, t _s (s)	5.0	4.2	5.1	4.4	5.5	4.7	5.1	
Capacity and Level of Service								
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	472	330	473	523	330	390	463	
Delay (s/veh)	17.94	10.36	16.66	19.63	12.15	12.37	18.34	
LOS	C	B	C	C	B	B	C	
Approach: Delay (s/veh)	16.16		18.41		12.29		18.34	
LOS	C		C		B		C	
Intersection Delay (s/veh)	16.86							
Intersection LOS	C							

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	R Garland
Agency/Co.	Hermosa Beach City School Dist
Date Performed	12/13/2015
Analysis Time Period	PM Peak Half Hour

Site Information

Intersection	Valley Drive/25th Street
Jurisdiction	City of Hermosa Beach
Analysis Year	2019 With Project

Project Description North Elementary School

East/West Street: 25th Street

North/South Street: Valley Drive

Intersection Orientation: North-South

Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	16	51			192	42
Peak-Hour Factor, PHF	0.50	0.50	1.00	1.00	0.50	0.50
Hourly Flow Rate, HFR (veh/h)	32	102	0	0	384	84
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	
Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	7		12			
Peak-Hour Factor, PHF	0.50	1.00	0.50	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	14	0	24	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	32						38	
C (m) (veh/h)	1096						549	
v/c	0.03						0.07	
95% queue length	0.09						0.22	
Control Delay (s/veh)	8.4						12.0	
LOS	A						B	
Approach Delay (s/veh)	--	--					12.0	
Approach LOS	--	--					B	

ALL-WAY STOP CONTROL ANALYSIS									
General Information					Site Information				
Analyst		R Garland			Intersection		Valley Drive/24th Place		
Agency/Co.		Hermosa Beach City School Dist			Jurisdiction		City of Hermosa Beach		
Date Performed		5/7/18			Analysis Year		2018 Existing		
Analysis Time Period		AM Peak Half Hour							
Project ID North Elementary School									
East/West Street: 24th Place					North/South Street: Valley Drive				
Volume Adjustments and Site Characteristics									
Approach		Eastbound			Westbound				
Movement		L	T	R	L	T	R		
Volume (veh/h)		10	0	10	0	0	0		
%Thrus Left Lane									
Approach		Northbound			Southbound				
Movement		L	T	R	L	T	R		
Volume (veh/h)		10	95	0	0	230	5		
%Thrus Left Lane									
		Eastbound		Westbound		Northbound		Southbound	
		L1	L2	L1	L2	L1	L2	L1	L2
Configuration		LR				LT		TR	
PHF		0.50				0.50		0.50	
Flow Rate (veh/h)		40				210		470	
% Heavy Vehicles		0				0		0	
No. Lanes		1		0		1		1	
Geometry Group		1				1		1	
Duration, T		0.25							
Saturation Headway Adjustment Worksheet									
Prop. Left-Turns	0.5				0.1		0.0		
Prop. Right-Turns	0.5				0.0		0.0		
Prop. Heavy Vehicle	0.0				0.0		0.0		
hLT-adj	0.2	0.2			0.2	0.2	0.2	0.2	
hRT-adj	-0.6	-0.6			-0.6	-0.6	-0.6	-0.6	
hHV-adj	1.7	1.7			1.7	1.7	1.7	1.7	
hadj, computed	-0.2				0.0		-0.0		
Departure Headway and Service Time									
hd, initial value (s)	3.20				3.20		3.20		
x, initial	0.04				0.19		0.42		
hd, final value (s)	5.17				4.50		4.22		
x, final value	0.06				0.26		0.55		
Move-up time, m (s)	2.0				2.0		2.0		
Service Time, t _s (s)	3.2				2.5		2.2		
Capacity and Level of Service									
		Eastbound		Westbound		Northbound		Southbound	
		L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)		290				460		720	
Delay (s/veh)		8.49				9.09		12.28	
LOS		A				A		B	
Approach: Delay (s/veh)		8.49				9.09		12.28	
LOS		A				A		B	
Intersection Delay (s/veh)		11.14							
Intersection LOS		B							

ALL-WAY STOP CONTROL ANALYSIS

General Information				Site Information				
Analyst	R Garland			Intersection	Valley Drive/24th Place			
Agency/Co.	Hermosa Beach City School Dist			Jurisdiction	City of Hermosa Beach			
Date Performed	5/7/18			Analysis Year	2018 Existing + Project			
Analysis Time Period	AM Peak Half Hour							
Project ID North Elementary School								
East/West Street: 24th Place				North/South Street: Valley Drive				
Volume Adjustments and Site Characteristics								
Approach	Eastbound				Westbound			
Movement	L	T	R	L	T	R		
Volume (veh/h)	13	0	12	0	0	0		
%Thrus Left Lane								
Approach	Northbound				Southbound			
Movement	L	T	R	L	T	R		
Volume (veh/h)	35	125	0	0	232	5		
%Thrus Left Lane								
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LR				LT		TR	
PHF	0.50				0.50		0.50	
Flow Rate (veh/h)	50				320		474	
% Heavy Vehicles	0				0		0	
No. Lanes	1		0		1		1	
Geometry Group	1				1		1	
Duration, T	0.25							
Saturation Headway Adjustment Worksheet								
Prop. Left-Turns	0.5				0.2		0.0	
Prop. Right-Turns	0.5				0.0		0.0	
Prop. Heavy Vehicle	0.0				0.0		0.0	
hLT-adj	0.2	0.2			0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6			-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7			1.7	1.7	1.7	1.7
hadj, computed	-0.2				0.0		-0.0	
Departure Headway and Service Time								
hd, initial value (s)	3.20				3.20		3.20	
x, initial	0.04				0.28		0.42	
hd, final value (s)	5.46				4.59		4.39	
x, final value	0.08				0.41		0.58	
Move-up time, m (s)	2.0				2.0		2.0	
Service Time, t _s (s)	3.5				2.6		2.4	
Capacity and Level of Service								
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	300				570		724	
Delay (s/veh)	8.91				10.71		13.20	
LOS	A				B		B	
Approach: Delay (s/veh)	8.91				10.71		13.20	
LOS	A				B		B	
Intersection Delay (s/veh)	12.00							
Intersection LOS	B							

ALL-WAY STOP CONTROL ANALYSIS									
General Information					Site Information				
Analyst	R Garland				Intersection	Valley Drive/24th Place			
Agency/Co.	Hermosa Beach City School Dist				Jurisdiction	City of Hermosa Beach			
Date Performed	5/7/18				Analysis Year	2019 Without Project			
Analysis Time Period	AM Peak Half Hour								
Project ID North Elementary School									
East/West Street: 24th Place					North/South Street: Valley Drive				
Volume Adjustments and Site Characteristics									
Approach	Eastbound				Westbound				
Movement	L	T	R		L	T	R		
Volume (veh/h)	10	0	10		0	0	0		
%Thrus Left Lane									
Approach	Northbound				Southbound				
Movement	L	T	R		L	T	R		
Volume (veh/h)	10	96	0		0	232	5		
%Thrus Left Lane									
	Eastbound		Westbound		Northbound		Southbound		
	L1	L2	L1	L2	L1	L2	L1	L2	
Configuration	LR				LT		TR		
PHF	0.50				0.50		0.50		
Flow Rate (veh/h)	40				212		474		
% Heavy Vehicles	0				0		0		
No. Lanes	1		0		1		1		
Geometry Group	1				1		1		
Duration, T	0.25								
Saturation Headway Adjustment Worksheet									
Prop. Left-Turns	0.5				0.1		0.0		
Prop. Right-Turns	0.5				0.0		0.0		
Prop. Heavy Vehicle	0.0				0.0		0.0		
hLT-adj	0.2	0.2			0.2	0.2	0.2	0.2	
hRT-adj	-0.6	-0.6			-0.6	-0.6	-0.6	-0.6	
hHV-adj	1.7	1.7			1.7	1.7	1.7	1.7	
hadj, computed	-0.2				0.0		-0.0		
Departure Headway and Service Time									
hd, initial value (s)	3.20				3.20		3.20		
x, initial	0.04				0.19		0.42		
hd, final value (s)	5.18				4.50		4.23		
x, final value	0.06				0.27		0.56		
Move-up time, m (s)	2.0				2.0		2.0		
Service Time, t _s (s)	3.2				2.5		2.2		
Capacity and Level of Service									
	Eastbound		Westbound		Northbound		Southbound		
	L1	L2	L1	L2	L1	L2	L1	L2	
Capacity (veh/h)	290				462		724		
Delay (s/veh)	8.50				9.12		12.39		
LOS	A				A		B		
Approach: Delay (s/veh)	8.50				9.12		12.39		
LOS	A				A		B		
Intersection Delay (s/veh)	11.22								
Intersection LOS	B								

ALL-WAY STOP CONTROL ANALYSIS

General Information		Site Information	
Analyst	R Garland	Intersection	Valley Drive/24th Place
Agency/Co.	Hermosa Beach City School Dist	Jurisdiction	City of Hermosa Beach
Date Performed	5/7/18	Analysis Year	2019 With Project
Analysis Time Period	AM Peak Half Hour		

Project ID North Elementary School

East/West Street: 24th Place

North/South Street: Valley Drive

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
	L	T	R	L	T	R
Movement						
Volume (veh/h)	13	0	12	0	0	0
%Thrus Left Lane						
Approach	Northbound			Southbound		
	L	T	R	L	T	R
Movement						
Volume (veh/h)	35	126	0	0	234	5
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LR				LT		TR	
PHF	0.50				0.50		0.50	
Flow Rate (veh/h)	50				322		478	
% Heavy Vehicles	0				0		0	
No. Lanes	1		0		1		1	
Geometry Group	1				1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.5				0.2		0.0	
Prop. Right-Turns	0.5				0.0		0.0	
Prop. Heavy Vehicle	0.0				0.0		0.0	
hLT-adj	0.2	0.2			0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6			-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7			1.7	1.7	1.7	1.7
hadj, computed	-0.2				0.0		-0.0	

Departure Headway and Service Time

hd, initial value (s)	3.20				3.20		3.20	
x, initial	0.04				0.29		0.42	
hd, final value (s)	5.47				4.59		4.39	
x, final value	0.08				0.41		0.58	
Move-up time, m (s)	2.0				2.0		2.0	
Service Time, t _s (s)	3.5				2.6		2.4	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	300				572		728	
Delay (s/veh)	8.92				10.76		13.33	
LOS	A				B		B	
Approach: Delay (s/veh)	8.92				10.76		13.33	
LOS	A				B		B	
Intersection Delay (s/veh)	12.09							
Intersection LOS	B							

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	R Garland
Agency/Co.	Hermosa Beach City School Dist
Date Performed	5/7/18
Analysis Time Period	PM Peak Half Hour

Site Information

Intersection	Valley Drive/24th Place
Jurisdiction	City of Hermosa Beach
Analysis Year	2018 Existing

Project ID North Elementary School

East/West Street: 24th Place

North/South Street: Valley Drive

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
	L	T	R	L	T	R
Movement						
Volume (veh/h)	10	0	5	0	0	0
%Thrus Left Lane						

Approach	Northbound			Southbound		
	L	T	R	L	T	R
Movement						
Volume (veh/h)	5	40	0	0	190	10
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LR				LT		TR	
PHF	0.50				0.50		0.50	
Flow Rate (veh/h)	30				90		400	
% Heavy Vehicles	0				0		0	
No. Lanes	1		0		1		1	
Geometry Group	1				1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.7				0.1		0.0	
Prop. Right-Turns	0.3				0.0		0.1	
Prop. Heavy Vehicle	0.0				0.0		0.0	
hLT-adj	0.2	0.2			0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6			-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7			1.7	1.7	1.7	1.7
hadj, computed	-0.1				0.0		-0.0	

Departure Headway and Service Time

hd, initial value (s)	3.20				3.20		3.20	
x, initial	0.03				0.08		0.36	
hd, final value (s)	4.87				4.38		4.04	
x, final value	0.04				0.11		0.45	
Move-up time, m (s)	2.0				2.0		2.0	
Service Time, t _s (s)	2.9				2.4		2.0	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	280				340		650	
Delay (s/veh)	8.08				7.92		10.29	
LOS	A				A		B	
Approach: Delay (s/veh)	8.08				7.92		10.29	
LOS	A				A		B	
Intersection Delay (s/veh)	9.76							
Intersection LOS	A							

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	R Garland
Agency/Co.	Hermosa Beach City School Dist
Date Performed	5/7/18
Analysis Time Period	PM Peak Half Hour

Site Information

Intersection	Valley Drive/24th Place
Jurisdiction	City of Hermosa Beach
Analysis Year	2018 Existing + Project

Project ID North Elementary School

East/West Street: 24th Place

North/South Street: Valley Drive

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	12	0	7	0	0	0
%Thrus Left Lane						
Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	16	54	0	0	192	10
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LR				LT		TR	
PHF	0.50				0.50		0.50	
Flow Rate (veh/h)	38				140		404	
% Heavy Vehicles	0				0		0	
No. Lanes	1		0		1		1	
Geometry Group	1				1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.6				0.2		0.0	
Prop. Right-Turns	0.4				0.0		0.0	
Prop. Heavy Vehicle	0.0				0.0		0.0	
hLT-adj	0.2	0.2			0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6			-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7			1.7	1.7	1.7	1.7
hadj, computed	-0.1				0.0		-0.0	

Departure Headway and Service Time

hd, initial value (s)	3.20				3.20		3.20	
x, initial	0.03				0.12		0.36	
hd, final value (s)	4.97				4.44		4.12	
x, final value	0.05				0.17		0.46	
Move-up time, m (s)	2.0				2.0		2.0	
Service Time, t_s (s)	3.0				2.4		2.1	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	288				390		654	
Delay (s/veh)	8.25				8.37		10.61	
LOS	A				A		B	
Approach: Delay (s/veh)	8.25				8.37		10.61	
LOS	A				A		B	
Intersection Delay (s/veh)	9.92							
Intersection LOS	A							

ALL-WAY STOP CONTROL ANALYSIS									
General Information					Site Information				
Analyst: R Garland					Intersection: Valley Drive/24th Place				
Agency/Co.: Hermosa Beach City School Dist					Jurisdiction: City of Hermosa Beach				
Date Performed: 5/7/18					Analysis Year: 2019 Without Project				
Analysis Time Period: PM Peak Half Hour									
Project ID: North Elementary School									
East/West Street: 24th Place					North/South Street: Valley Drive				
Volume Adjustments and Site Characteristics									
Approach		Eastbound			Westbound				
Movement		L	T	R	L	T	R		
Volume (veh/h)		10	0	5	0	0	0		
%Thrus Left Lane									
Approach		Northbound			Southbound				
Movement		L	T	R	L	T	R		
Volume (veh/h)		5	41	0	0	192	10		
%Thrus Left Lane									
		Eastbound		Westbound		Northbound		Southbound	
		L1	L2	L1	L2	L1	L2	L1	L2
Configuration		LR				LT		TR	
PHF		0.50				0.50		0.50	
Flow Rate (veh/h)		30				92		404	
% Heavy Vehicles		0				0		0	
No. Lanes		1		0		1		1	
Geometry Group		1				1		1	
Duration, T		0.25							
Saturation Headway Adjustment Worksheet									
Prop. Left-Turns	0.7				0.1		0.0		
Prop. Right-Turns	0.3				0.0		0.0		
Prop. Heavy Vehicle	0.0				0.0		0.0		
hLT-adj	0.2	0.2			0.2	0.2	0.2	0.2	
hRT-adj	-0.6	-0.6			-0.6	-0.6	-0.6	-0.6	
hHV-adj	1.7	1.7			1.7	1.7	1.7	1.7	
hadj, computed	-0.1				0.0		-0.0		
Departure Headway and Service Time									
hd, initial value (s)	3.20				3.20		3.20		
x, initial	0.03				0.08		0.36		
hd, final value (s)	4.89				4.38		4.04		
x, final value	0.04				0.11		0.45		
Move-up time, m (s)	2.0				2.0			2.0	
Service Time, t _s (s)	2.9				2.4		2.0		
Capacity and Level of Service									
	Eastbound		Westbound		Northbound		Southbound		
	L1	L2	L1	L2	L1	L2	L1	L2	
Capacity (veh/h)	280				342		654		
Delay (s/veh)	8.10				7.94		10.36		
LOS	A				A		B		
Approach: Delay (s/veh)	8.10				7.94			10.36	
LOS	A				A			B	
Intersection Delay (s/veh)	9.81								
Intersection LOS	A								

ALL-WAY STOP CONTROL ANALYSIS

General Information		Site Information	
Analyst	R Garland	Intersection	Valley Drive/24th Place
Agency/Co.	Hermosa Beach City School Dist	Jurisdiction	City of Hermosa Beach
Date Performed	5/7/18	Analysis Year	2019 With Project
Analysis Time Period	PM Peak Half Hour		

Project ID North Elementary School

East/West Street: 24th Place

North/South Street: Valley Drive

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	12	0	7	0	0	0
%Thrus Left Lane						
Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	16	55	0	0	194	10
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LR				LT		TR	
PHF	0.50				0.50		0.50	
Flow Rate (veh/h)	38				142		408	
% Heavy Vehicles	0				0		0	
No. Lanes	1		0		1		1	
Geometry Group	1				1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.6				0.2		0.0	
Prop. Right-Turns	0.4				0.0		0.0	
Prop. Heavy Vehicle	0.0				0.0		0.0	
hLT-adj	0.2	0.2			0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6			-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7			1.7	1.7	1.7	1.7
hadj, computed	-0.1				0.0		-0.0	

Departure Headway and Service Time

hd, initial value (s)	3.20				3.20		3.20	
x, initial	0.03				0.13		0.36	
hd, final value (s)	4.99				4.44		4.12	
x, final value	0.05				0.18		0.47	
Move-up time, m (s)	2.0				2.0		2.0	
Service Time, t _s (s)	3.0				2.4		2.1	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	288				392		658	
Delay (s/veh)	8.26				8.39		10.68	
LOS	A				A		B	
Approach: Delay (s/veh)	8.26				8.39		10.68	
LOS	A				A		B	
Intersection Delay (s/veh)	9.97							
Intersection LOS	A							

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	R Garland			Intersection	Valley Drive/24th Street			
Agency/Co.	Hermosa Beach City School Dist			Jurisdiction	City of Hermosa Beach			
Date Performed	12/13/2015			Analysis Year	2018 Existing			
Analysis Time Period	AM Peak Half Hour							
Project Description North Elementary School								
East/West Street: 24th Street				North/South Street: Valley Drive				
Intersection Orientation: North-South				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Northbound			Southbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	15	90			235	5		
Peak-Hour Factor, PHF	0.50	0.50	1.00	1.00	0.50	0.50		
Hourly Flow Rate, HFR (veh/h)	30	180	0	0	470	10		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LT					TR		
Upstream Signal		0			0			
Minor Street	Eastbound			Westbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	15		20					
Peak-Hour Factor, PHF	0.50	1.00	0.50	1.00	1.00	1.00		
Hourly Flow Rate, HFR (veh/h)	30	0	40	0	0	0		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration		LR						
Delay, Queue Length, and Level of Service								
Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	30						70	
C (m) (veh/h)	1083						478	
v/c	0.03						0.15	
95% queue length	0.09						0.51	
Control Delay (s/veh)	8.4						13.8	
LOS	A						B	
Approach Delay (s/veh)	--	--				13.8		
Approach LOS	--	--				B		

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	R Garland			Intersection	Valley Drive/24th Street			
Agency/Co.	Hermosa Beach City School Dist			Jurisdiction	City of Hermosa Beach			
Date Performed	12/13/2015			Analysis Year	2019 With Project			
Analysis Time Period	PM Peak Half Hour							
Project Description North Elementary School								
East/West Street: 24th Street				North/South Street: Valley Drive				
Intersection Orientation: North-South				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Northbound			Southbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	16	57			191	10		
Peak-Hour Factor, PHF	0.50	0.50	1.00	1.00	0.50	0.50		
Hourly Flow Rate, HFR (veh/h)	32	114	0	0	382	20		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LT					TR		
Upstream Signal		0			0			
Minor Street	Eastbound			Westbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	13		50					
Peak-Hour Factor, PHF	0.50	1.00	0.50	1.00	1.00	1.00		
Hourly Flow Rate, HFR (veh/h)	26	0	100	0	0	0		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration		LR						
Delay, Queue Length, and Level of Service								
Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	32						126	
C (m) (veh/h)	1158						603	
v/c	0.03						0.21	
95% queue length	0.09						0.78	
Control Delay (s/veh)	8.2						12.5	
LOS	A						B	
Approach Delay (s/veh)	--	--				12.5		
Approach LOS	--	--				B		

ALL-WAY STOP CONTROL ANALYSIS								
General Information					Site Information			
Analyst	R Garland				Intersection	Ardmore Avenue/Gould Avenue		
Agency/Co.	Hermosa Beach City School Dist				Jurisdiction	City of Hermosa Beach		
Date Performed	5/7/18				Analysis Year	2018 Existing		
Analysis Time Period	AM Peak Half Hour							
Project ID North Elementary School								
East/West Street: Gould Avenue					North/South Street: Ardmore Avenue			
Volume Adjustments and Site Characteristics								
Approach	Eastbound			Westbound				
Movement	L	T	R	L	T	R		
Volume (veh/h)	10	190	25	5	230	55		
%Thrus Left Lane				50				
Approach	Northbound			Southbound				
Movement	L	T	R	L	T	R		
Volume (veh/h)	40	125	5	60	90	10		
%Thrus Left Lane								
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LT	T	LT	R	LT	R
PHF	0.50		0.50	0.50	0.50	0.50	0.50	0.50
Flow Rate (veh/h)	450		240	230	330	10	300	20
% Heavy Vehicles	0		0	0	0	0	0	0
No. Lanes	1		2		2		2	
Geometry Group	4b		5		5		5	
Duration, T	0.25							
Saturation Headway Adjustment Worksheet								
Prop. Left-Turns	0.0		0.0	0.0	0.2	0.0	0.4	0.0
Prop. Right-Turns	0.1		0.0	0.0	0.0	1.0	0.0	1.0
Prop. Heavy Vehicle	0.0		0.0	0.0	0.0	0.0	0.0	0.0
hLT-adj	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.1		0.0	0.0	0.1	-0.7	0.2	-0.7
Departure Headway and Service Time								
hd, initial value (s)	3.20		3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.40		0.21	0.20	0.29	0.01	0.27	0.02
hd, final value (s)	8.52		8.99	8.97	9.19	8.33	9.37	8.43
x, final value	1.07		0.60	0.57	0.84	0.02	0.78	0.05
Move-up time, m (s)	2.3		2.3		2.3		2.3	
Service Time, t _g (s)	6.2		6.7	6.7	6.9	6.0	7.1	6.1
Capacity and Level of Service								
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	450		393	394	388	260	379	270
Delay (s/veh)	91.44		24.27	23.04	45.22	11.23	38.46	11.55
LOS	F		C	C	E	B	E	B
Approach: Delay (s/veh)	91.44		23.67		44.22		36.78	
LOS	F		C		E		E	
Intersection Delay (s/veh)	50.05							
Intersection LOS	F							

ALL-WAY STOP CONTROL ANALYSIS

General Information				Site Information				
Analyst	R Garland			Intersection	Ardmore Avenue/Gould Avenue			
Agency/Co.	Hermosa Beach City School Dist			Jurisdiction	City of Hermosa Beach			
Date Performed	5/7/18			Analysis Year	2018 Existing + Project			
Analysis Time Period	AM Peak Half Hour							
Project ID North Elementary School								
East/West Street: Gould Avenue				North/South Street: Ardmore Avenue				
Volume Adjustments and Site Characteristics								
Approach	Eastbound				Westbound			
Movement	L	T	R	L	T	R		
Volume (veh/h)	26	222	41	5	268	55		
%Thrus Left Lane				50				
Approach	Northbound				Southbound			
Movement	L	T	R	L	T	R		
Volume (veh/h)	59	125	5	60	90	29		
%Thrus Left Lane								
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LT	T	LT	R	LT	R
PHF	0.50		0.50	0.50	0.50	0.50	0.50	0.50
Flow Rate (veh/h)	578		278	268	368	10	300	58
% Heavy Vehicles	0		0	0	0	0	0	0
No. Lanes	1		2		2		2	
Geometry Group	4b		5		5		5	
Duration, T	0.25							
Saturation Headway Adjustment Worksheet								
Prop. Left-Turns	0.1		0.0	0.0	0.3	0.0	0.4	0.0
Prop. Right-Turns	0.1		0.0	0.0	0.0	1.0	0.0	1.0
Prop. Heavy Vehicle	0.0		0.0	0.0	0.0	0.0	0.0	0.0
hLT-adj	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.1		0.0	0.0	0.2	-0.7	0.2	-0.7
Departure Headway and Service Time								
hd, initial value (s)	3.20		3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.51		0.25	0.24	0.33	0.01	0.27	0.05
hd, final value (s)	9.08		9.40	9.39	9.54	8.64	9.83	8.88
x, final value	1.46		0.73	0.70	0.97	0.02	0.82	0.14
Move-up time, m (s)	2.3		2.3		2.3		2.3	
Service Time, t _s (s)	6.8		7.1	7.1	7.2	6.3	7.5	6.6
Capacity and Level of Service								
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	578		380	381	377	260	364	308
Delay (s/veh)	243.29		33.38	31.17	71.52	11.55	44.49	13.06
LOS	F		D	D	F	B	E	B
Approach: Delay (s/veh)	243.29		32.30		69.94		39.40	
LOS	F		D		F		E	
Intersection Delay (s/veh)	106.88							
Intersection LOS	F							

ALL-WAY STOP CONTROL ANALYSIS									
General Information					Site Information				
Analyst		R Garland			Intersection		Ardmore Avenue/Gould Avenue		
Agency/Co.		Hermosa Beach City School Dist			Jurisdiction		City of Hermosa Beach		
Date Performed		5/7/18			Analysis Year		2019 Without Project		
Analysis Time Period		AM Peak Half Hour							
Project ID North Elementary School									
East/West Street: Gould Avenue					North/South Street: Ardmore Avenue				
Volume Adjustments and Site Characteristics									
Approach		Eastbound			Westbound				
Movement		L	T	R	L	T	R		
Volume (veh/h)		14	206	27	5	249	57		
%Thrus Left Lane					50				
Approach		Northbound			Southbound				
Movement		L	T	R	L	T	R		
Volume (veh/h)		42	130	5	62	93	10		
%Thrus Left Lane									
		Eastbound		Westbound		Northbound		Southbound	
		L1	L2	L1	L2	L1	L2	L1	L2
Configuration		LTR		LT	T	LT	R	LT	R
PHF		0.50		0.50	0.50	0.50	0.50	0.50	0.50
Flow Rate (veh/h)		494		258	250	344	10	310	20
% Heavy Vehicles		0		0	0	0	0	0	0
No. Lanes		1		2		2		2	
Geometry Group		4b		5		5		5	
Duration, T		0.25							
Saturation Headway Adjustment Worksheet									
Prop. Left-Turns	0.1		0.0	0.0	0.2	0.0	0.4	0.0	
Prop. Right-Turns	0.1		0.0	0.0	0.0	1.0	0.0	1.0	
Prop. Heavy Vehicle	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
hLT-adj	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5	
hRT-adj	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	
hadj, computed	-0.1		0.0	0.0	0.1	-0.7	0.2	-0.7	
Departure Headway and Service Time									
hd, initial value (s)	3.20		3.20	3.20	3.20	3.20	3.20	3.20	
x, initial	0.44		0.23	0.22	0.31	0.01	0.28	0.02	
hd, final value (s)	8.82		9.20	9.18	9.37	8.51	9.58	8.64	
x, final value	1.21		0.66	0.64	0.90	0.02	0.83	0.05	
Move-up time, m (s)	2.3		2.3		2.3		2.3		
Service Time, t _s (s)	6.5		6.9	6.9	7.1	6.2	7.3	6.3	
Capacity and Level of Service									
	Eastbound		Westbound		Northbound		Southbound		
	L1	L2	L1	L2	L1	L2	L1	L2	
Capacity (veh/h)	494		386	387	382	260	372	270	
Delay (s/veh)	142.52		28.05	26.71	54.38	11.42	44.39	11.77	
LOS	F		D	D	F	B	E	B	
Approach: Delay (s/veh)	142.52		27.39		53.17		42.41		
LOS	F		D		F		E		
Intersection Delay (s/veh)	69.48								
Intersection LOS	F								

ALL-WAY STOP CONTROL ANALYSIS									
General Information					Site Information				
Analyst	R Garland				Intersection	Ardmore Avenue/Gould Avenue			
Agency/Co.	Hermosa Beach City School Dist				Jurisdiction	City of Hermosa Beach			
Date Performed	5/7/18				Analysis Year	2019 With Project			
Analysis Time Period	AM Peak Half Hour								
Project ID North Elementary School									
East/West Street: Gould Avenue					North/South Street: Ardmore Avenue				
Volume Adjustments and Site Characteristics									
Approach	Eastbound				Westbound				
Movement	L	T	R		L	T	R		
Volume (veh/h)	30	238	43		5	287	57		
%Thrus Left Lane					50				
Approach	Northbound				Southbound				
Movement	L	T	R		L	T	R		
Volume (veh/h)	61	130	5		62	93	29		
%Thrus Left Lane									
	Eastbound		Westbound		Northbound		Southbound		
	L1	L2	L1	L2	L1	L2	L1	L2	
Configuration	LTR		LT	T	LT	R	LT	R	
PHF	0.50		0.50	0.50	0.50	0.50	0.50	0.50	
Flow Rate (veh/h)	622		296	288	382	10	310	58	
% Heavy Vehicles	0		0	0	0	0	0	0	
No. Lanes	1		2		2		2		
Geometry Group	4b		5		5		5		
Duration, T	0.25								
Saturation Headway Adjustment Worksheet									
Prop. Left-Turns	0.1		0.0	0.0	0.3	0.0	0.4	0.0	
Prop. Right-Turns	0.1		0.0	0.0	0.0	1.0	0.0	1.0	
Prop. Heavy Vehicle	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
hLT-adj	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5	
hRT-adj	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	
hadj, computed	-0.1		0.0	0.0	0.2	-0.7	0.2	-0.7	
Departure Headway and Service Time									
hd, initial value (s)	3.20		3.20	3.20	3.20	3.20	3.20	3.20	
x, initial	0.55		0.26	0.26	0.34	0.01	0.28	0.05	
hd, final value (s)	9.27		9.53	9.51	9.67	8.77	9.95	9.00	
x, final value	1.60		0.78	0.76	1.03	0.02	0.86	0.15	
Move-up time, m (s)	2.3		2.3		2.3		2.3		
Service Time, t _s (s)	7.0		7.2	7.2	7.4	6.5	7.6	6.7	
Capacity and Level of Service									
	Eastbound		Westbound		Northbound		Southbound		
	L1	L2	L1	L2	L1	L2	L1	L2	
Capacity (veh/h)	622		377	378	382	260	362	308	
Delay (s/veh)	305.45		39.25	36.86	85.42	11.69	50.23	13.22	
LOS	F		E	E	F	B	F	B	
Approach: Delay (s/veh)	305.45		38.07		83.54		44.40		
LOS	F		E		F		E		
Intersection Delay (s/veh)	132.91								
Intersection LOS	F								

ALL-WAY STOP CONTROL ANALYSIS								
General Information					Site Information			
Analyst: <u>R Garland</u>					Intersection: <u>Ardmore Avenue/Gould Avenue</u>			
Agency/Co.: <u>Hermosa Beach City School Dist</u>					Jurisdiction: <u>City of Hermosa Beach</u>			
Date Performed: <u>5/7/18</u>					Analysis Year: <u>2018 Existing</u>			
Analysis Time Period: <u>PM Peak Half Hour</u>								
Project ID: <u>North Elementary School</u>								
East/West Street: <u>Gould Avenue</u>					North/South Street: <u>Ardmore Avenue</u>			
Volume Adjustments and Site Characteristics								
Approach	Eastbound			Westbound				
Movement	L	T	R	L	T	R		
Volume (veh/h)	<u>5</u>	<u>185</u>	<u>10</u>	<u>5</u>	<u>200</u>	<u>45</u>		
%Thrus Left Lane				<u>50</u>				
Approach	Northbound			Southbound				
Movement	L	T	R	L	T	R		
Volume (veh/h)	<u>20</u>	<u>95</u>	<u>15</u>	<u>20</u>	<u>45</u>	<u>10</u>		
%Thrus Left Lane								
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	<u>LTR</u>		<u>LT</u>	<u>T</u>	<u>LT</u>	<u>R</u>	<u>LT</u>	<u>R</u>
PHF	<u>0.50</u>		<u>0.50</u>	<u>0.50</u>	<u>0.50</u>	<u>0.50</u>	<u>0.50</u>	<u>0.50</u>
Flow Rate (veh/h)	<u>400</u>		<u>210</u>	<u>200</u>	<u>230</u>	<u>30</u>	<u>130</u>	<u>20</u>
% Heavy Vehicles	<u>0</u>		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
No. Lanes	<u>1</u>		<u>2</u>		<u>2</u>		<u>2</u>	
Geometry Group	<u>4b</u>		<u>5</u>		<u>5</u>		<u>5</u>	
Duration, T	<u>0.25</u>							
Saturation Headway Adjustment Worksheet								
Prop. Left-Turns	<u>0.0</u>		<u>0.0</u>	<u>0.0</u>	<u>0.2</u>	<u>0.0</u>	<u>0.3</u>	<u>0.0</u>
Prop. Right-Turns	<u>0.1</u>		<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>1.0</u>	<u>0.0</u>	<u>1.0</u>
Prop. Heavy Vehicle	<u>0.0</u>		<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
hLT-adj	<u>0.2</u>	<u>0.2</u>	<u>0.5</u>	<u>0.5</u>	<u>0.5</u>	<u>0.5</u>	<u>0.5</u>	<u>0.5</u>
hRT-adj	<u>-0.6</u>	<u>-0.6</u>	<u>-0.7</u>	<u>-0.7</u>	<u>-0.7</u>	<u>-0.7</u>	<u>-0.7</u>	<u>-0.7</u>
hHV-adj	<u>1.7</u>	<u>1.7</u>	<u>1.7</u>	<u>1.7</u>	<u>1.7</u>	<u>1.7</u>	<u>1.7</u>	<u>1.7</u>
hadj, computed	<u>-0.0</u>		<u>0.0</u>	<u>0.0</u>	<u>0.1</u>	<u>-0.7</u>	<u>0.2</u>	<u>-0.7</u>
Departure Headway and Service Time								
hd, initial value (s)	<u>3.20</u>		<u>3.20</u>	<u>3.20</u>	<u>3.20</u>	<u>3.20</u>	<u>3.20</u>	<u>3.20</u>
x, initial	<u>0.36</u>		<u>0.19</u>	<u>0.18</u>	<u>0.20</u>	<u>0.03</u>	<u>0.12</u>	<u>0.02</u>
hd, final value (s)	<u>6.58</u>		<u>6.76</u>	<u>6.73</u>	<u>7.39</u>	<u>6.59</u>	<u>7.76</u>	<u>6.89</u>
x, final value	<u>0.73</u>		<u>0.39</u>	<u>0.37</u>	<u>0.47</u>	<u>0.05</u>	<u>0.28</u>	<u>0.04</u>
Move-up time, m (s)	<u>2.3</u>		<u>2.3</u>		<u>2.3</u>		<u>2.3</u>	
Service Time, t _s (s)	<u>4.3</u>		<u>4.5</u>	<u>4.4</u>	<u>5.1</u>	<u>4.3</u>	<u>5.5</u>	<u>4.6</u>
Capacity and Level of Service								
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	<u>535</u>		<u>460</u>	<u>450</u>	<u>458</u>	<u>280</u>	<u>380</u>	<u>270</u>
Delay (s/veh)	<u>25.14</u>		<u>13.79</u>	<u>13.40</u>	<u>16.53</u>	<u>9.67</u>	<u>13.46</u>	<u>9.86</u>
LOS	<u>D</u>		<u>B</u>	<u>B</u>	<u>C</u>	<u>A</u>	<u>B</u>	<u>A</u>
Approach: Delay (s/veh)	<u>25.14</u>		<u>13.60</u>		<u>15.74</u>		<u>12.98</u>	
LOS	<u>D</u>		<u>B</u>		<u>C</u>		<u>B</u>	
Intersection Delay (s/veh)	<u>17.76</u>							
Intersection LOS	<u>C</u>							

ALL-WAY STOP CONTROL ANALYSIS

General Information		Site Information	
Analyst	R Garland	Intersection	Ardmore Avenue/Gould Avenue
Agency/Co.	Hermosa Beach City School Dist	Jurisdiction	City of Hermosa Beach
Date Performed	5/7/18	Analysis Year	2018 Existing + Project
Analysis Time Period	PM Peak Half Hour		

Project ID: North Elementary School

East/West Street: Gould Avenue

North/South Street: Ardmore Avenue

Volume Adjustments and Site Characteristics

Approach		Eastbound			Westbound		
Movement		L	T	R	L	T	R
Volume (veh/h)		15	205	20	5	216	45
%Thrus Left Lane					50		

Approach		Northbound			Southbound		
Movement		L	T	R	L	T	R
Volume (veh/h)		28	95	15	20	45	18
%Thrus Left Lane							

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LT	T	LT	R	LT	R
PHF	0.50		0.50	0.50	0.50	0.50	0.50	0.50
Flow Rate (veh/h)	480		226	216	246	30	130	36
% Heavy Vehicles	0		0	0	0	0	0	0
No. Lanes	1		2		2		2	
Geometry Group	4b		5		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.1		0.0	0.0	0.2	0.0	0.3	0.0
Prop. Right-Turns	0.1		0.0	0.0	0.0	1.0	0.0	1.0
Prop. Heavy Vehicle	0.0		0.0	0.0	0.0	0.0	0.0	0.0
hLT-adj	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.0		0.0	0.0	0.1	-0.7	0.2	-0.7

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.43		0.20	0.19	0.22	0.03	0.12	0.03
hd, final value (s)	6.88		7.24	7.22	7.94	7.10	8.36	7.48
x, final value	0.92		0.45	0.43	0.54	0.06	0.30	0.07
Move-up time, m (s)	2.3		2.3		2.3		2.3	
Service Time, t _s (s)	4.6		4.9	4.9	5.6	4.8	6.1	5.2

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	520		476	466	434	280	380	286
Delay (s/veh)	47.49		15.83	15.31	19.64	10.25	14.64	10.79
LOS	E		C	C	C	B	B	B
Approach: Delay (s/veh)	47.49		15.57		18.62		13.81	
LOS	E		C		C		B	
Intersection Delay (s/veh)	27.21							
Intersection LOS	D							

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	R Garland
Agency/Co.	Hermosa Beach City School Dist
Date Performed	5/7/18
Analysis Time Period	PM Peak Half Hour

Site Information

Intersection	Ardmore Avenue/Gould Avenue
Jurisdiction	City of Hermosa Beach
Analysis Year	2019 Without Project

Project ID North Elementary School

East/West Street: Gould Avenue

North/South Street: Ardmore Avenue

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	6	206	13	6	222	48
%Thrus Left Lane				50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	23	98	15	21	49	10
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LT	T	LT	R	LT	R
PHF	0.50		0.50	0.50	0.50	0.50	0.50	0.50
Flow Rate (veh/h)	450		234	222	242	30	140	20
% Heavy Vehicles	0		0	0	0	0	0	0
No. Lanes	1		2		2		2	
Geometry Group	4b		5		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.0		0.1	0.0	0.2	0.0	0.3	0.0
Prop. Right-Turns	0.1		0.0	0.0	0.0	1.0	0.0	1.0
Prop. Heavy Vehicle	0.0		0.0	0.0	0.0	0.0	0.0	0.0
hLT-adj	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.0		0.0	0.0	0.1	-0.7	0.2	-0.7

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.40		0.21	0.20	0.22	0.03	0.12	0.02
hd, final value (s)	6.85		7.11	7.08	7.81	7.00	8.23	7.35
x, final value	0.86		0.46	0.44	0.53	0.06	0.32	0.04
Move-up time, m (s)	2.3		2.3		2.3		2.3	
Service Time, t_s (s)	4.6		4.8	4.8	5.5	4.7	5.9	5.1

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	519		484	472	434	280	390	270
Delay (s/veh)	37.93		15.77	15.17	18.83	10.13	14.75	10.36
LOS	E		C	C	C	B	B	B
Approach: Delay (s/veh)	37.93		15.48		17.87		14.20	
LOS	E		C		C		B	
Intersection Delay (s/veh)	23.36							
Intersection LOS	C							

ALL-WAY STOP CONTROL ANALYSIS

General Information				Site Information	
Analyst	R Garland			Intersection	Ardmore Avenue/Gould Avenue
Agency/Co.	Hermosa Beach City School Dist			Jurisdiction	City of Hermosa Beach
Date Performed	5/7/18			Analysis Year	2019 With Project
Analysis Time Period	PM Peak Half Hour				

Project ID North Elementary School

East/West Street: Gould Avenue

North/South Street: Ardmore Avenue

Volume Adjustments and Site Characteristics

Approach		Eastbound			Westbound				
Movement		L	T	R	L	T	R		
Volume (veh/h)		16	226	23	6	238	48		
%Thrus Left Lane					50				
Approach		Northbound			Southbound				
Movement		L	T	R	L	T	R		
Volume (veh/h)		31	98	15	21	49	18		
%Thrus Left Lane									
		Eastbound		Westbound		Northbound		Southbound	
		L1	L2	L1	L2	L1	L2	L1	L2
Configuration		LTR		LT	T	LT	R	LT	R
PHF		0.50		0.50	0.50	0.50	0.50	0.50	0.50
Flow Rate (veh/h)		530		250	238	258	30	140	36
% Heavy Vehicles		0		0	0	0	0	0	0
No. Lanes		1		2		2		2	
Geometry Group		4b		5		5		5	
Duration, T		0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.1		0.0	0.0	0.2	0.0	0.3	0.0
Prop. Right-Turns	0.1		0.0	0.0	0.0	1.0	0.0	1.0
Prop. Heavy Vehicle	0.0		0.0	0.0	0.0	0.0	0.0	0.0
hLT-adj	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.0		0.0	0.0	0.1	-0.7	0.2	-0.7

Departure Headway and Service Time

hd, initial value (s)	3.20		3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.47		0.22	0.21	0.23	0.03	0.12	0.03
hd, final value (s)	7.14		7.55	7.52	8.27	7.43	8.74	7.86
x, final value	1.05		0.52	0.50	0.59	0.06	0.34	0.08
Move-up time, m (s)	2.3		2.3		2.3		2.3	
Service Time, t _s (s)	4.8		5.2	5.2	6.0	5.1	6.4	5.6

Capacity and Level of Service

		Eastbound		Westbound		Northbound		Southbound	
		L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)		530		469	471	426	280	390	286
Delay (s/veh)		80.79		18.27	17.44	22.31	10.62	15.88	11.23
LOS		F		C	C	C	B	C	B
Approach Delay (s/veh)		80.79		17.86		21.09		14.92	
LOS		F		C		C		B	
Intersection Delay (s/veh)		40.65							
Intersection LOS		E							