October 29, 2019

Mr. Chad Boardman
Eastland Partners, Inc.
217 West Central Street, Suite 3
Natick, MA 01760

RE: Additional Intersection Analyses

Clearview Country Club related Traffic

Dear Mr. Boardman:

In response to your request, I am pleased to forward this memorandum that contains my additional evaluation of the intersections of Park Hill Avenue with Holman Road and Clearview Country Club driveway. This additional evaluation should address the Millbury Planning Board members' concerns relative to additional traffic and its impacts on these two intersections. In support of the application for definitive site plans to the Town of Millbury Planning Board, I am submitting the following analyses.

It should be noted that, based on engineering judgment, these two intersections were assumed not to be significantly impacted by the traffic expected to be generated by the proposed development, thus, they were not analyzed in the original traffic study. However, in response to the concerns expressed by the Millbury Planning Board members, peak hour traffic volumes were collected and analyzed below.

Turning movement traffic counts were collected on an average weekday for two intersections of Park Hill Avenue with Holman Road and the Clearview Country Club driveway on Tuesday, October 8, 2019. These counts have captured traffic to and from the New England Carpenters Training Center, residential properties on Holman Road, and the Clearview Country Club golf course during both AM and PM peak traffic periods. The data were then seasonally adjusted to reflect annual average for existing conditions. They were then projected into future to represent future no-build conditions. Finally, trips expected to be generated by the proposed development were added to the no-build conditions traffic to reflect future build conditions. All of the abovementioned data are shown in the attachments in the form of raw data and graphically.

Intersection of Park Hill Avenue and Holman Road – As stated earlier, the original traffic study did not consider traffic impacts of the proposed development to be significant enough to warrant the analysis of this intersection. However, the Millbury Planning Board members have since expressed concerns relative to the traffic associated with the proposed development and its impact on Park Hill Avenue at this intersection. Therefore, a new set of turning movements traffic counts were collected for this intersection. The data were then adjusted, projected into the future without the proposed development, and added to the traffic expected to be generated by the proposed development. The resultant data were then analyzed. The analysis showed that this intersection is currently operating at Level Of Service (LOS) "A", and will continue to operate at LOS "A" in the future with or without the proposed development in place. The following table 1 shows the trip

generation for the site of the proposed condominium development. The analyses results are shown in the following table 2.

Intersection of Park Hill Avenue and Clearview Country Club Driveway – This intersection was also the source of safety concerns by the Millbury Planning Board members due to the introduction of new traffic associated with the proposed development. The intersection turning movements traffic counts were adjusted, expanded to the future, and finally added to the traffic anticipated from the existing driveway of the proposed development. Similar to the Holman Road intersection, the analyses showed that this intersection is currently operating at LOS "A", and will continue to operate at the same LOS "A" in the future with or without the proposed residential development. The following table 2 also shows the results of these analyses. Finally, all analysis sheets are shown in the attachments.

Table 1

140 Units Condominium Housing - Attached LU Code 252

Daily	%In	%Out	AM Pk	%In	%Out	PM Pk	%In	%Out
7.32	50%	50%	0.46	23%	77%	0.56	63%	37%
1023	512	513	64	15	49	78	49	29

Table 2 Intersection Analysis

	Intersection	of Park Hill A	ve	and Holman	Rd - AM Peak			
	Existing Co	nditions		No Build Co	onditions	Build Cor	nditions	
Controlled	Approach	Level of	٦	Approach	Level of	Approach	Level o	f
Approach	Delay	Service		Delay	Service	Delay	Service	
EB	8.9	A	1	8.9	А	9.1	А	
WB						9.4	А	
NB								
SB						0.3	А	
Intersection	0.4	Λ	П.	0.4	Λ.	1.5	Λ	,

	Intersection of	of Park Hill Ave	and Holman F	d - PM Peak		
EB	9.2	Α	9.3	Α	10.2	В
WB					9.6	Α
NB	0.3	Α	0.3	Α	0.2	Α
SB					1.3	Α
Intersection	0.7	Α	1.5	Α	1.7	Α

·	Intersection of	f Park Hill Ave	9 2	and Clearview	Country Club	- /	AM Peak		
WB	9.4	Α		9.5	Α		9.8	Α	П
SB	0.6	Α		0.5	Α		0.7	Α	П
Intersection	0.4	Α		0.4	Α		3.5	Α	٦

	Intersection o	f Park Hill Ave	and Clearview	Country Club	- PM Peak	
WB	9.3	Α	9.3	Α	9.5	Α
SB	0.5	Α	0.5	Α	1.5	Α
Intersection	0.9	A	0.8	A	2.2	Α

Mr. Chad Boardman Eastland Partners, Inc.

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In conclusion, the results of these analyses confirm the assumption made in the original traffic study, that is, these two intersections were not expected to be impacted by the new trips associated with the proposed condominium development. It further validates the fact that the Park Hill Avenue and Holman Road traffic volumes are not significant enough to warrant any concerns due to the additional traffic from the condominium site.

I trust the above responses will suffice. Please feel free to contact me if you should have any questions.

Sincerely,

Ali R. Khorasani

Ali R. Khorasani

Attachments

Accurate Counts 978-664-2565

N/S Street : Park Hill Avenue E/W Street: Holman Road City/State : Millbury, MA Weather : Clear File Name: 18350001 Site Code: 18350001 Start Date: 10/8/2019 Page No: 2

		Park Hill Ave			Park Hill Ave	100		Holman Rd		
		From North			From South			From West		
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00	AM to 08:45 AM	- Peak 1 of 1								
Peak Hour for Entire Intersection	Begins at 07:00	AM								
07:00 AM	11	0	11	0	24	24	0	0	0	35
07:15 AM	17	0	17	0	23	23	0	2	2	42
07:30 AM	12	0	12	0	20	20	0	0	0	32
07:45 AM	15	1	16	0	16	16	1	0	1	33
Total Volume	55	1	56	0	83	83	1	2	3	142
% App. Total	98.2	1.8		0	100		33.3	66.7		
PHF	.809	.250	.824	.000	.865	.865	.250	.250	.375	.845
Cars	55	1	56	0	81	81	1	2	3	140
% Cars	100	100	100	0	97.6	97.6	100	100	100	98.6
Trucks	0	0	0	0	2	2	0	0	0	2
% Trucks	0	0	0	0	2.4	2.4	0	0	0	1.4

Accurate Counts 978-664-2565

N/S Street : Park Hill Avenue E/W Street: Holman Road City/State : Millbury, MA Weather : Clear File Name : 18350001 Site Code : 18350001 Start Date : 10/8/2019 Page No : 2

		Park Hill Ave		F	Park Hill Ave			Holman Rd		
		From North			From South			From West		
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Tota
Peak Hour Analysis From 04:00 PM	1 to 05:45 PM - Pe	ak 1 of 1								
Peak Hour for Entire Intersection Be	egins at 04:15 PM									
04:15 PM	14	0	14	1	19	20	1	0	1	35
04:30 PM	21	0	21	0	17	17	0	0	0	38
04:45 PM	13	1	14	1	10	11	0	0	0	25
05:00 PM	22	0	22	0	13	13	2	0	2	37
Total Volume	70	1	71	2	59	61	3	0	3	135
% App. Total	98.6	1.4		3.3	96.7		100	0		
PHF	.795	.250	.807	.500	.776	.763	.375	.000	.375	.888
Cars	70	1	71	2	58	60	3	0	3	134
% Cars	100	100	100	100	98.3	98.4	100	0	100	99.3
Trucks	0	0	0	0	1	1	0	0	0	1
% Trucks	0	0	0	0	1.7	1.6	0	0	0	0.7

Accurate Counts 978-664-2565

N/S Street : Park Hill Avenue E/W Street: Clearview Country Club City/State : Millbury, MA Weather : Clear File Name: 18350002 Site Code: 18350002 Start Date: 10/8/2019 Page No: 2

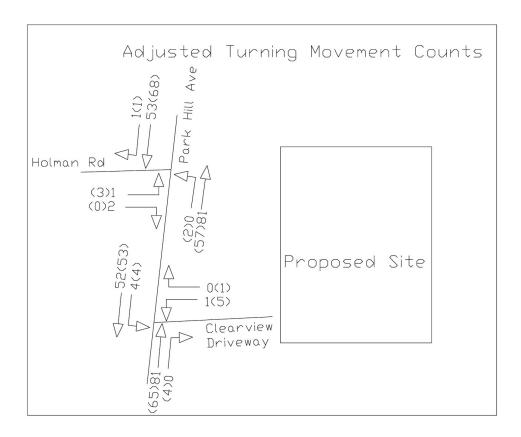
		Park Hill Ave		Co	untry Club Dwy		F	Park Hill Ave	· ·	
		From North			From East			From South		
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM	I to 08:45 AM - Pe	eak 1 of 1		-						
Peak Hour for Entire Intersection Be	egins at 07:00 AM	1								
07:00 AM	0	11	11	0	0	0	24	0	24	35
07:15 AM	0	19	19	0	0	0	25	0	25	44
07:30 AM	2	10	12	1	0	4	17	0	17	30
07:45 AM	2	14	16	0	0	o	18	0	18	34
Total Volume	4	54	58	1	0	1	84	0	84	143
% App. Total	6.9	93.1		100	0		100	0		
PHF	.500	.711	.763	.250	.000	.250	.840	.000	.840	.813
Cars	4	54	58	1	0	1	82	0	82	141
% Cars	100	100	100	100	0	100	97.6	0	97.6	98.6
Trucks	0	0	0	0	0	0	2	0	2	2
% Trucks	0	0	0	0	0	0	2.4	0	2.4	1.4

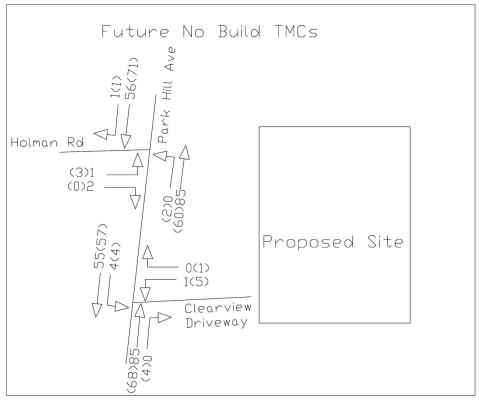
Accurate Counts 978-664-2565

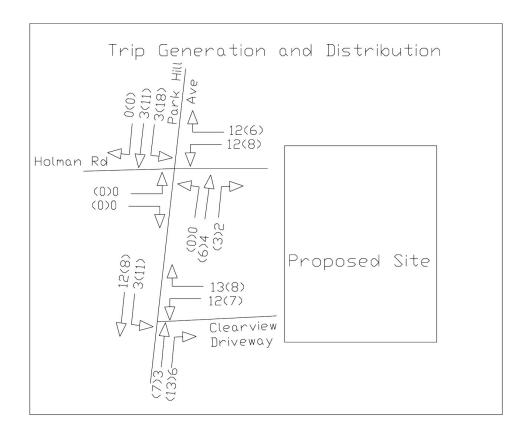
N/S Street : Park Hill Avenue E/W Street: Clearview Country Club City/State : Millbury, MA Weather : Clear

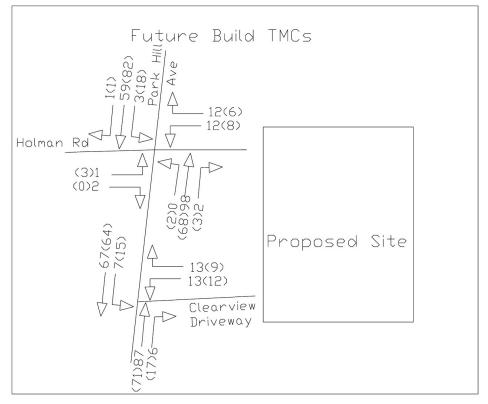
File Name: 18350002 Site Code: 18350002 Start Date: 10/8/2019 Page No: 2

Country Club Dwy From South From North From East Int. Total Start Time Thru Right App. Total Left App. Total Left Right App. Total Thru Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 Peak Hour for Entire Intersection Begins at 04:00 PM 04:00 PM 0 12 12 0 2 36 22 18 18 21 18 04:15 PM 13 15 34 0 0 2 04:30 PM 2 16 19 13 40 26 17 13 3 2 04:45 PM 12 13 0 0 Total Volum 55 59 67 71 136 % App. Total 6.8 93.2 83.3 94.4 5.6 .500 .776 .625 .250 .500 .798 .500 .807 .850 55 59 66 70 135 Cars 4 % Cars 100 100 100 100 100 100 98.5 100 98.6 99.3 0 0 0 0 0 0 0 1.4 Trucks 1 % Trucks 0 0 0 0 1.5 0 0.7









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Park Hill at Country Club Driveway Existing Conditions AM Peak 1: Int 10/27/2019

	1		†	-	-	↓	
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	W		₽			4	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Volume (veh/h)	1	0	81	0	4	52	
Peak Hour Factor	0.25	0.25	0.82	0.82	0.76	0.76	
Hourly flow rate (veh/h)	4	0	99	0	5	68	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None						
Median storage veh)							
vC, conflicting volume	178	99			99		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
tC, single (s)	6.4	6.2			4.1		
tC, 2 stage (s)							
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	100			100		
cM capacity (veh/h)	814	963			1507		
Direction, Lane #	WB 1	NB 1	SB 1				
Volume Total	4	99	74				
Volume Left	4	0	5				
Volume Right	0	0	0				
cSH	814	1700	1507				
Volume to Capacity	0.00	0.06	0.00				
Queue Length (ft)	0	0	0				
Control Delay (s)	9.4	0.0	0.6				
Lane LOS	Α		Α				
Approach Delay (s)	9.4	0.0	0.6				
Approach LOS	Α						
Intersection Summary							
Average Delay			0.4				
Intersection Capacity Ut	ilization		15.2%	IC	CU Leve	of Servic	е

Park Hill at Country Club Driveway Existing Conditions PM Peak

1: Int							10/27/2019
	-	*	†	~	1	Ţ	
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	W		1>	.,	001	4	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Volume (veh/h)	5	1	65	4	4	53	
Peak Hour Factor	0.50	0.50	0.81	0.81	0.78	0.78	
Hourly flow rate (veh/h)	10	2	80	5	5	68	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None						
Median storage veh)							
vC, conflicting volume	161	83			85		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
tC, single (s)	6.4	6.2			4.1		
tC, 2 stage (s)							
tF (s)	3.5	3.3			2.2		
p0 queue free %	99	100			100		
cM capacity (veh/h)	832	982			1524		
Direction, Lane #	WB 1	NB 1	SB 1				
Volume Total	12	85	73				
Volume Left	10	0	5				
Volume Right	2	5	0				
cSH	854	1700	1524				
Volume to Capacity	0.01	0.05	0.00				
Queue Length (ft)	1	0	0				
Control Delay (s)	9.3	0.0	0.5				
Lane LOS	Α		Α				
Approach Delay (s)	9.3	0.0	0.5				
Approach LOS	Α						
Intersection Summary							
Average Delay			0.9				
Intersection Capacity Ut	ilization		14.5%	[(CU Leve	l of Servi	ce A

	Park Hill at Holman Existing Conditions Alvi Peak
: Int	10/27/2019

Sign Control Stop Free Free Grade 0% 0% 0% Volume (veh/h) 1 2 0 81 53 1 Peak Hour Factor 0.38 0.38 0.87 0.87 0.82 0.82 Hourly flow rate (veh/h) 3 5 0 93 65 1 Pedestrians Lane Width (ft) Walking Speed (ft/s) Percent Blockage Right turn flare (veh) None Median storage veh) VC, conflicting volume 158 65 66 66 vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 100 99 100 cM cM capacity (veh/h) 837 1004 1536		۶	*	1	†	Ţ	4	
Sign Control Stop Free Free Grade 0% 0% 0% Volume (veh/h) 1 2 0 81 53 1 Peak Hour Factor 0.38 0.38 0.87 0.82 0.82 Hourly flow rate (veh/h) 0	Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Grade 0% 0% 0% 0% Volume (veh/h) 1 2 0 81 53 1 Peak Hour Factor 0.38 0.38 0.87 0.87 0.82 0.82 Hourly flow rate (veh/h) 3 5 0 93 65 1 Pedestrians Lane Width (ft) Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median type None Median storage veh) vC, conflicting volume 158 65 66 vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) 6.4 6.2 4.1 tC, 2 stage 2 conf vol tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 100 99 100 cM capacity (veh/h) 837 1004 1536 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 8 93 66 Volume Left 3 0 0 Volume Right 5 0 1 cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary	Lane Configurations	W			र्स	1>		
Volume (veh/h) 1 2 0 81 53 1 Peak Hour Factor 0.38 0.38 0.87 0.87 0.82 0.82 Hourly flow rate (veh/h) 3 5 0 93 65 1 Pedestrians Lane Width (ft) Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Wedian storage veh) vC, conflicting volume 158 65 66 vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) 6.4 6.2 4.1 tC, stage 2 conf vol tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 100 99 100 cM capacity (veh/h) 837 1004 1536 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 8 93 66 Volume Right 5 0 1 cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04	Sign Control	Stop			Free	1000000		
Peak Hour Factor 0.38 0.38 0.87 0.82 0.82 Hourly flow rate (veh/h) 3 5 0 93 65 1 Pedestrians Lane Width (ft) Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median type None Median storage veh) None Median storage veh) vC, conflicting volume 158 65 66 vC1, stage 1 conf vol 6.4 6.2 4.1 tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) 100 99 100 cM capacity (veh/h) 837 1004 1536 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 8 93 66 Volume Right 5 0 1 cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 <td>Grade</td> <td>0%</td> <td></td> <td></td> <td>0%</td> <td>0%</td> <td></td> <td></td>	Grade	0%			0%	0%		
Hourly flow rate (veh/h) 3 5 0 93 65 1 Pedestrians Lane Width (ft) Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median type None Median storage veh) vC, conflicting volume 158 65 66 vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 100 99 100 cM capacity (veh/h) 837 1004 1536 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 8 93 66 Volume Left 3 0 0 Volume Right 5 0 1 cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary	Volume (veh/h)	1	2	0	81	53	1	
Pedestrians Lane Width (ft) Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median type None Median storage veh) vC, conflicting volume vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) tF (s) 3.5 3.3 2.2 p0 queue free % 100 99 100 cM capacity (veh/h) 837 1004 1536 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 8 93 66 Volume Left 3 0 0 Volume Right cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 Control Delay (s) A Approach Delay (s) A Intersection Summary	Peak Hour Factor	0.38	0.38	0.87	0.87	0.82	0.82	
Lane Width (ft) Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median type Median storage veh) vC, conflicting volume vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) tF (s) Direction, Lane # EB 1 NB 1 SB 1 Volume Total Volume Left Volume Right cSH 942 1536 1700 Volume to Capacity Volume to Capacity Queue Length (ft) Control Delay (s) Approach LOS A Intersection Summary	Hourly flow rate (veh/h)	3	5	0	93	65	1	
Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median type None Median storage veh) 158 65 66 vC1, stage 1 conf vol vC2, stage 2 conf vol 0 0 0 0 tC, single (s) 6.4 6.2 4.1 0	Pedestrians							
Percent Blockage Right turn flare (veh) Median type None Median storage veh) VC, conflicting volume 158 65 66 vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 100 99 100 cM capacity (veh/h) 837 1004 1536 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 8 93 66 Volume Left 3 0 0 Volume Right 5 0 1 cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 0.0 Lane LOS A Approach LOS A Intersection Summary	Lane Width (ft)							
Right turn flare (veh) Median type Median storage veh) vC, conflicting volume vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 100 99 100 cM capacity (veh/h) 837 1004 1536 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 8 93 66 Volume Left 3 0 0 Volume Right 5 0 1 cSH 942 1536 1700 Volume to Capacity Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) Approach Delay (s) Approach LOS A Intersection Summary	Walking Speed (ft/s)							
Median type None Median storage veh) vC, conflicting volume 158 65 66 vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) 6.4 6.2 4.1 tC, single (s) 6.4 6.2 4.1 <	Percent Blockage							
Median storage veh) vC, conflicting volume 158 65 66 vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 100 99 100 cM capacity (veh/h) 837 1004 1536 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 8 93 66 Volume Left 3 0 0 Volume Right 5 0 1 cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 0.0 Lane LOS A Approach Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary	Right turn flare (veh)							
vC, conflicting volume 158 65 66 vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 100 99 100 cM capacity (veh/h) 837 1004 1536 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 8 93 66 Volume Left 3 0 0 Volume Right 5 0 1 cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 0.0 Lane LOS A Approach Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary	Median type	None						
vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 100 99 100 cM capacity (veh/h) 837 1004 1536 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 8 93 66 Volume Left 3 0 0 Volume Right 5 0 1 cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 0.0 Approach Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary								
vC2, stage 2 conf vol tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 100 99 100 cM capacity (veh/h) 837 1004 1536 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 8 93 66 Volume Left 3 0 0 Volume Right 5 0 1 cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 0.0 Lane LOS A Approach Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary	vC, conflicting volume	158	65	66				
tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 100 99 100 cM capacity (veh/h) 837 1004 1536 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 8 93 66 Volume Left 3 0 0 Volume Right 5 0 1 cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 0.0 Approach Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary	vC1, stage 1 conf vol							
tC, 2 stage (s) tF (s)								
tF (s) 3.5 3.3 2.2 p0 queue free % 100 99 100 cM capacity (veh/h) 837 1004 1536 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 8 93 66 Volume Left 3 0 0 Volume Right 5 0 1 cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 0.0 Approach Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary	tC, single (s)	6.4	6.2	4.1				
p0 queue free % 100 99 100 cM capacity (veh/h) 837 1004 1536 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 8 93 66 Volume Left 3 0 0 Volume Right 5 0 1 cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 0.0 Lane LOS A Approach Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary	tC, 2 stage (s)							
Direction, Lane # EB 1 NB 1 SB 1 Volume Total 8 93 66 Volume Left 3 0 0 Volume Right 5 0 1 cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary	tF (s)							
Direction, Lane # EB 1 NB 1 SB 1 Volume Total 8 93 66 Volume Left 3 0 0 Volume Right 5 0 1 cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 0.0 Lane LOS A Approach Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary	•			1.7070				
Volume Total 8 93 66 Volume Left 3 0 0 Volume Right 5 0 1 cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 0.0 Lane LOS A Approach Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary	cM capacity (veh/h)	837	1004	1536				
Volume Total 8 93 66 Volume Left 3 0 0 Volume Right 5 0 1 cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 0.0 Lane LOS A Approach Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary								
Volume Left 3 0 0 Volume Right 5 0 1 cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 0.0 Lane LOS A Approach Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary	Direction, Lane #	EB 1	NB 1	SB 1				
Volume Right 5 0 1 cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 0.0 Lane LOS A Approach Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary	Volume Total	8	93	66				
cSH 942 1536 1700 Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 0.0 Lane LOS A Approach Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary	Volume Left	3	0	0				
Volume to Capacity 0.01 0.00 0.04 Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 0.0 Lane LOS A Approach Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary	Volume Right	5	0	1				
Queue Length (ft) 1 0 0 Control Delay (s) 8.9 0.0 0.0 Lane LOS A Approach Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary	cSH	942	1536	1700				
Control Delay (s) 8.9 0.0 0.0 Lane LOS A Approach Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary	Volume to Capacity	0.01	0.00	0.04				
Lane LOS A Approach Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary	Queue Length (ft)	1	0	0				
Approach Delay (s) 8.9 0.0 0.0 Approach LOS A Intersection Summary	Control Delay (s)	8.9	0.0	0.0				
Approach LOS A Intersection Summary	Lane LOS	Α						
Intersection Summary	Approach Delay (s)	8.9	0.0	0.0				
	Approach LOS	Α						
Average Delay 0.4	Intersection Summary							
	Average Delay			0.4				
Intersection Capacity Utilization 14.9% ICU Level of Service	Intersection Capacity Ut	tilization		14.9%	10	CU Leve	el of Service	

Park Hill at Holman Existing Conditions PM Peak 10/29/2019

1	Int
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Sign Control		۶	*	4	†	Ţ	4	
Sign Control Stop Free Free Grade 0% 0% 0% Volume (veh/h) 3 1 2 57 68 1 Peak Hour Factor 0.38 0.38 0.76 0.76 0.81 0.81 Hourly flow rate (veh/h) 8 3 3 75 84 1 Pedestrians Lane Width (ft) Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median storage veh) V.C. conflicting volume 165 85 85 vC1, stage 1 conf vol v.C., stage 2 conf vol 10, single (s) 6.4 6.2 4.1 tC, 2 stage (s) 1F (s) 3.5 3.3 2.2 p0 queue free % 99 100 100 cM capacity (veh/h) 829 980 1511 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 11 78 85 Volume Right 3 0 1 cSH 862<	Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Sign Control Stop Free Free Grade 0% 0% 0% Volume (veh/h) 3 1 2 57 68 1 Peak Hour Factor 0.38 0.38 0.76 0.76 0.81 0.81 Hourly flow rate (veh/h) 8 3 3 75 84 1 Pedestrians Lane Width (ft) Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median storage veh) V.C. conflicting volume 165 85 85 vC1, stage 1 conf vol v.C., stage 2 conf vol 10, single (s) 6.4 6.2 4.1 tC, 2 stage (s) 1F (s) 3.5 3.3 2.2 p0 queue free % 99 100 100 cM capacity (veh/h) 829 980 1511 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 11 78 85 Volume Right 3 0 1 cSH 862<	Lane Configurations	W			र्स	1→		
Volume (veh/h) 3 1 2 57 68 1 Peak Hour Factor 0.38 0.38 0.76 0.76 0.81 0.81 Hourly flow rate (veh/h) 8 3 3 75 84 1 Pedestrians Lane Width (ft) Walking Speed (ft/s) Percent Blockage Percent Blockage Right turn flare (veh) Median storage veh) None Median storage veh) vC, conflicting volume 165 85 85 vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) 6.4 6.2 4.1 tC, single (s) 6.4 6.2 4.1 1 <td>Sign Control</td> <td>Stop</td> <td></td> <td></td> <td>Free</td> <td></td> <td></td> <td></td>	Sign Control	Stop			Free			
Peak Hour Factor 0.38 0.38 0.76 0.76 0.81 0.81 Hourly flow rate (veh/h) 8 3 3 75 84 1 Pedestrians Lane Width (ft) Walking Speed (ft/s) Percent Blockage Percent Blockage Right turn flare (veh) Median storage veh) None Median storage veh) VC, conflicting volume 165 85 85 vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) 6.4 6.2 4.1 tC, single (s) tC, single (s) 100	Grade	0%			0%	0%		
Hourly flow rate (veh/h) 8 3 3 75 84 1 Pedestrians Lane Width (ft) Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median type	Volume (veh/h)	3		2	57	68	1	
Pedestrians Lane Width (ft) Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median type None Median storage veh) vC, conflicting volume vC, conflicting volume vC2, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 99 100 100 cM capacity (veh/h) 829 980 1511 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 11 78 85 Volume Left 8 3 0 Volume Right 3 0 1 cSH 862 1511 1700 Volume to Capacity 0.01 0.00 0.05 Queue Length (ft) 1 0 0 Control Delay (s) Lane LOS A Approach Delay (s) Approach LOS A Intersection Summary Average Delay None Median Veh/s 85 85 85 85 85 85 85 85 85 85 85 85 85	Peak Hour Factor	0.38	0.38	0.76	0.76	0.81	0.81	
Lane Width (ft) Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median type None Median storage veh) vC, conflicting volume vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) tC, single (s) tF (s) 3.5 3.3 2.2 p0 queue free % 99 100 100 cM capacity (veh/h) 829 980 1511 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 11 78 85 Volume Left 8 3 0 Volume Right 3 0 1 cSH 862 1511 1700 Volume to Capacity Queue Length (ft) 1 0 Control Delay (s) Approach Delay (s) Approach LOS A Intersection Summary Average Delay None No	Hourly flow rate (veh/h)	8	3	3	75	84	1	
Walking Speed (ft/s) Percent Blockage Right turn flare (veh) Median type None Median storage veh) VC, conflicting volume vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 99 100 100 cM capacity (veh/h) 829 980 1511 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 11 78 85 Volume Left 8 3 0 Volume Right 3 0 1 cSH 862 1511 1700 Volume to Capacity 0.01 0.00 0.05 Queue Length (ft) 1 0 0 Control Delay (s) 9.2 0.3 0.0 Lane LOS A A Approach Delay (s) 9.2 0.3 0.0 Approach LOS A A Intersection Summary <td>Pedestrians</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Pedestrians							
Percent Blockage Right turn flare (veh) Median type None Median storage veh) VC, conflicting volume vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) 6.4 6.2 4.1 tC, single (s) 3.5 3.3 2.2 p0 queue free % 99 100 100 cM capacity (veh/h) 829 980 1511 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 11 78 85 Volume Left 8 3 0 Volume Right 3 0 1 cSH 862 1511 1700 Volume to Capacity 0.01 0.00 0.05 Queue Length (ft) 1 0 0 Control Delay (s) 9.2 0.3 0.0 Lane LOS A A Approach LOS A A Intersection Summary	Lane Width (ft)							
Right turn flare (veh) Median type Median storage veh) vC, conflicting volume vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) tC, 2 stage (s) tF (s) Direction, Lane # EB 1 NB 1 SB 1 Volume Total Volume Left Volume Right cSH Volume to Capacity Volume to Capacity Volume to Capacity Control Delay (s) Lane LOS A Approach LOS A Median type None None Median type None Mone Median type None None Median type None Median type None Median type None None Median type None None Median type None None None Median type None Non	Walking Speed (ft/s)							
Median type None Median storage veh) vC, conflicting volume 165 85 85 vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 99 100 100 cM capacity (veh/h) 829 980 1511 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 11 78 85 Volume Right 3 0 1 cSH 862 1511 1700 Volume to Capacity 0.01 0.00 0.05 Queue Length (ft) 1 0 0 Control Delay (s) 9.2 0.3 0.0 Lane LOS A A Approach LOS A A Intersection Summary Average Delay 0.7	Percent Blockage							
Median storage veh) vC, conflicting volume 165 85 85 vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) 6.4 6.2 4.1 tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 99 100 100 cM capacity (veh/h) 829 980 1511 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 11 78 85 Volume Left 8 3 0 Volume Right 3 0 1 cSH 862 1511 1700 Volume to Capacity 0.01 0.00 0.05 Queue Length (ft) 1 0 0 Control Delay (s) 9.2 0.3 0.0 Lane LOS A A Approach LOS A Intersection Summary Average Delay 0.7 <td>Right turn flare (veh)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Right turn flare (veh)							
vC, conflicting volume 165 85 85 vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 99 100 100 cM capacity (veh/h) 829 980 1511 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 11 78 85 Volume Left 8 3 0 Volume Right 3 0 1 cSH 862 1511 1700 Volume to Capacity 0.01 0.00 0.05 Queue Length (ft) 1 0 0 Control Delay (s) 9.2 0.3 0.0 Lane LOS A A Approach Delay (s) 9.2 0.3 0.0 Approach LOS A A Intersection Summary		None						
vC1, stage 1 conf vol vC2, stage 2 conf vol tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 99 100 100 cM capacity (veh/h) 829 980 1511 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 11 78 85 Volume Left 8 3 0 Volume Right 3 0 1 cSH 862 1511 1700 Volume to Capacity 0.01 0.00 0.05 Queue Length (ft) 1 0 0 Control Delay (s) 9.2 0.3 0.0 Lane LOS A Approach Delay (s) 9.2 0.3 0.0 Approach LOS A Intersection Summary Average Delay 0.7	Median storage veh)							
vC2, stage 2 conf vol tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 99 100 100 cM capacity (veh/h) 829 980 1511 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 11 78 85 Volume Left 8 3 0 Volume Right 3 0 1 cSH 862 1511 1700 Volume to Capacity 0.01 0.00 0.05 Queue Length (ft) 1 0 0 Control Delay (s) 9.2 0.3 0.0 Lane LOS A Approach Delay (s) 9.2 0.3 0.0 Approach LOS A Intersection Summary Average Delay 0.7	vC, conflicting volume	165	85	85				
tC, single (s) 6.4 6.2 4.1 tC, 2 stage (s) tF (s) 3.5 3.3 2.2 p0 queue free % 99 100 100 cM capacity (veh/h) 829 980 1511 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 11 78 85 Volume Left 8 3 0 Volume Right 3 0 1 cSH 862 1511 1700 Volume to Capacity 0.01 0.00 0.05 Queue Length (ft) 1 0 0 Control Delay (s) 9.2 0.3 0.0 Lane LOS A A Approach Delay (s) 9.2 0.3 0.0 Approach LOS A Intersection Summary Average Delay 0.7								
tC, 2 stage (s) tF (s)								
tF (s) 3.5 3.3 2.2 p0 queue free % 99 100 100 cM capacity (veh/h) 829 980 1511 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 11 78 85 Volume Left 8 3 0 Volume Right 3 0 1 cSH 862 1511 1700 Volume to Capacity 0.01 0.00 0.05 Queue Length (ft) 1 0 0 Control Delay (s) 9.2 0.3 0.0 Lane LOS A A Approach Delay (s) 9.2 0.3 0.0 Approach LOS A Intersection Summary Average Delay 0.7		6.4	6.2	4.1				
p0 queue free % 99 100 100 cM capacity (veh/h) 829 980 1511 Direction, Lane # EB 1 NB 1 SB 1 Volume Total 11 78 85 Volume Left 8 3 0 Volume Right 3 0 1 cSH 862 1511 1700 Volume to Capacity 0.01 0.00 0.05 Queue Length (ft) 1 0 0 Control Delay (s) 9.2 0.3 0.0 Lane LOS A A Approach Delay (s) 9.2 0.3 0.0 Approach LOS A Intersection Summary Average Delay 0.7								
Direction, Lane # EB 1 NB 1 SB 1								
Direction, Lane # EB 1 NB 1 SB 1 Volume Total 11 78 85 Volume Left 8 3 0 Volume Right 3 0 1 cSH 862 1511 1700 Volume to Capacity 0.01 0.00 0.05 Queue Length (ft) 1 0 0 Control Delay (s) 9.2 0.3 0.0 Lane LOS A A Approach Delay (s) 9.2 0.3 0.0 Approach LOS A Intersection Summary 0.7	•							
Volume Total 11 78 85 Volume Left 8 3 0 Volume Right 3 0 1 cSH 862 1511 1700 Volume to Capacity 0.01 0.00 0.05 Queue Length (ft) 1 0 0 Control Delay (s) 9.2 0.3 0.0 Lane LOS A A Approach Delay (s) 9.2 0.3 0.0 Approach LOS A Intersection Summary Average Delay 0.7	cM capacity (veh/h)	829	980	1511				
Volume Total 11 78 85 Volume Left 8 3 0 Volume Right 3 0 1 cSH 862 1511 1700 Volume to Capacity 0.01 0.00 0.05 Queue Length (ft) 1 0 0 Control Delay (s) 9.2 0.3 0.0 Lane LOS A A Approach Delay (s) 9.2 0.3 0.0 Approach LOS A Intersection Summary Average Delay 0.7								
Volume Left 8 3 0 Volume Right 3 0 1 cSH 862 1511 1700 Volume to Capacity 0.01 0.00 0.05 Queue Length (ft) 1 0 0 Control Delay (s) 9.2 0.3 0.0 Lane LOS A A Approach Delay (s) 9.2 0.3 0.0 Approach LOS A Intersection Summary Average Delay 0.7	Direction, Lane #	EB 1	NB 1	SB 1				
Volume Right 3 0 1 cSH 862 1511 1700 Volume to Capacity 0.01 0.00 0.05 Queue Length (ft) 1 0 0 Control Delay (s) 9.2 0.3 0.0 Lane LOS A A Approach Delay (s) 9.2 0.3 0.0 Approach LOS A Intersection Summary Average Delay 0.7	Volume Total	11	78	85				
cSH 862 1511 1700 Volume to Capacity 0.01 0.00 0.05 Queue Length (ft) 1 0 0 Control Delay (s) 9.2 0.3 0.0 Lane LOS A A Approach Delay (s) 9.2 0.3 0.0 Approach LOS A Intersection Summary Average Delay 0.7	Volume Left		3	0				
Volume to Capacity 0.01 0.00 0.05 Queue Length (ft) 1 0 0 Control Delay (s) 9.2 0.3 0.0 Lane LOS A A Approach Delay (s) 9.2 0.3 0.0 Approach LOS A Intersection Summary Average Delay 0.7	Volume Right	3	0	1				
Queue Length (ft) 1 0 0 Control Delay (s) 9.2 0.3 0.0 Lane LOS A A Approach Delay (s) 9.2 0.3 0.0 Approach LOS A Intersection Summary Average Delay 0.7	cSH	862	1511					
Control Delay (s) 9.2 0.3 0.0 Lane LOS A A Approach Delay (s) 9.2 0.3 0.0 Approach LOS A Intersection Summary Average Delay 0.7	Volume to Capacity	0.01	0.00	0.05				
Lane LOS A A Approach Delay (s) 9.2 0.3 0.0 Approach LOS A Intersection Summary Average Delay 0.7	Queue Length (ft)	1	0	0				
Approach Delay (s) 9.2 0.3 0.0 Approach LOS A Intersection Summary Average Delay 0.7	Control Delay (s)	9.2	0.3	0.0				
Approach LOS A Intersection Summary Average Delay 0.7	Lane LOS	Α	Α					
Intersection Summary Average Delay 0.7	Approach Delay (s)	9.2	0.3	0.0				
Average Delay 0.7	Approach LOS	Α						
0 ,	Intersection Summary							
Intersection Conscity Utilization 14 59/ ICLU aval of Service	Average Delay			0.7				
intersection Capacity Offization 14.5% ICO Level of Service	Intersection Capacity U	Itilization		14.5%	IC	CU Leve	el of Service	

Park Hill at Country Club Driveway Future No Build AM Peak

1: Int						.,	10/27/2019
	•	*	†	~	-	Ţ	
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	W		1→			ર્ન	
Sign Control	Stop		Free			Free	
Grade	0%		0%			0%	
Volume (veh/h)	1	0	85	0	4	55	
Peak Hour Factor	0.25	0.25	0.82	0.82	0.76	0.76	
Hourly flow rate (veh/h)	4	0	104	0	5	72	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None						
Median storage veh)							
vC, conflicting volume	187	104			104		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
tC, single (s)	6.4	6.2			4.1		
tC, 2 stage (s)							
tF (s)	3.5	3.3			2.2		
p0 queue free %	100	100			100		
cM capacity (veh/h)	804	957			1501		
Direction, Lane #	WB 1	NB 1	SB 1				
Volume Total	4	104	78				
Volume Left	4	0	5				
Volume Right	0	0	0				
cSH	804	1700	1501				
Volume to Capacity	0.00	0.06	0.00				
Queue Length (ft)	0	0	0				
Control Delay (s)	9.5	0.0	0.5				
Lane LOS	Α		Α				
Approach Delay (s)	9.5	0.0	0.5				
Approach LOS	Α						
Intersection Summary							

ICU Level of Service

0.4 15.5%

Average Delay Intersection Capacity Utilization Park Hill at Country Club Driveway Future No Build PM Peak 10/27/2019

1: Int			I aik	i iiii at	Count	ry Club Dii	vewayıu	idle NO L	10/27/2019
	•	*	†	~	/	↓			
Movement	WBL	WBR	NBT	NBR	SBL	SBT			T.
Lane Configurations	N/		₽			ની			
Sign Control	Stop		Free			Free			Ť
Grade	0%		0%			0%			
Volume (veh/h)	5	1	68	4	4	57			
Peak Hour Factor	0.50	0.50	0.81	0.81	0.78	0.78			70
Hourly flow rate (veh/h)	10	2	84	5	5	73			
Pedestrians									
Lane Width (ft)									
Walking Speed (ft/s)									
Percent Blockage									
Right turn flare (veh)									
Median type	None								
Median storage veh)									
vC, conflicting volume	170	86			89				
vC1, stage 1 conf vol									
vC2, stage 2 conf vol									
tC, single (s)	6.4	6.2			4.1				
tC, 2 stage (s)									
tF (s)	3.5	3.3			2.2				
p0 queue free %	99	100			100				
cM capacity (veh/h)	822	978			1519				
Direction, Lane #	WB 1	NB 1	SB 1						
Volume Total	12	89	78						The state of the s
Volume Left	10	0	5						
Volume Right	2	5	0						
cSH	845	1700	1519						
Volume to Capacity	0.01	0.05	0.00						1
Queue Length (ft)	1	0	0						
Control Delay (s)	9.3	0.0	0.5						
Lane LOS	Α		Α						
Approach Delay (s)	9.3	0.0	0.5						
Approach LOS	Α								
Intersection Summary									, il
Average Delay			0.8						
Intersection Capacity Ut	ilization		14.7%	IC	CU Leve	el of Service		Α	

Park Hill at Holman Future No Build AM Peak 10/27/2019

1: Int

	۶	•	4	†	Ţ	4
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4	₽	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	1	2	0	85	56	1
Peak Hour Factor	0.38	0.38	0.87	0.87	0.82	0.82
Hourly flow rate (veh/h)	3	5	0	98	68	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
vC, conflicting volume	167	69	70			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	100			
cM capacity (veh/h)	829	1000	1531			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	8	98	70			
Volume Left	3	0	0			
Volume Right	5	0	1			
cSH	935	1531	1700			
Volume to Capacity	0.01	0.00	0.04			
Queue Length (ft)	1	0	0			
Control Delay (s)	8.9	0.0	0.0			
Lane LOS	Α					
Approach Delay (s)	8.9	0.0	0.0			
Approach LOS	Α					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Ut	tilization		15.1%	10	CU Leve	el of Servi

Eastland Partners, Inc.

Park Hill at Holman Future No Build PM Peak 10/27/2019

	۶	•	4	†	Ţ	4	
Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Lane Configurations	W			4	1>		
Sign Control	Stop			Free	Free		
Grade	0%			0%	0%		
Volume (veh/h)	3	1	2	60	71	1	
Peak Hour Factor	0.38	0.38	0.76	0.76	0.81	0.81	
Hourly flow rate (veh/h)	8	3	3	79	88	1	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None						
Median storage veh)							
vC, conflicting volume	172	88	89				
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
tC, single (s)	6.4	6.2	4.1				
tC, 2 stage (s)							
tF (s)	3.5	3.3	2.2				
p0 queue free %	99	100	100				
cM capacity (veh/h)	821	975	1507				
Direction, Lane #	EB 1	NB 1	SB 1				
Volume Total	11	82	89				
Volume Left	8	3	0				
Volume Right	3	0	1				
cSH	855	1507	1700				
Volume to Capacity	0.01	0.00	0.05				
Queue Length (ft)	1	0	0				
Control Delay (s)	9.3	0.3	0.0				
Lane LOS	Α	Α					
Approach Delay (s)	9.3	0.3	0.0				
Approach LOS	Α						
Intersection Summary							
Average Delay			0.7				
Intersection Capacity Ut	tilization		14.7%	IC	CU Leve	el of Service	·

1: Int

Park Hill at Holman Future Build AM Peak

1: Int										The Control	10/27	7/2019
	٠	→	*	•	←	•	4	†	~	-	ţ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	0	2	12	0	12	0	98	2	3	59	1
Peak Hour Factor	0.38	0.92	0.38	0.92	0.92	0.92	0.87	0.87	0.92	0.92	0.82	0.82
Hourly flow rate (veh/h)	3	0	5	13	0	13	0	113	2	3	72	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
vC, conflicting volume	206	194	73	198	193	114	73			115		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	98	100	99	100			100		
cM capacity (veh/h)	744	700	995	755	700	939	1527			1474		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	8	26	115	76								
Volume Left	3	13	0	3								
Volume Right	5	13	2	1								
cSH	895	837	1527	1474								
Volume to Capacity	0.01	0.03	0.00	0.00								
Queue Length (ft)	1	2	0	0								
Control Delay (s)	9.1	9.4	0.0	0.3								
Lane LOS	Α	Α		Α								
Approach Delay (s)	9.1	9.4	0.0	0.3								
Approach LOS	Α	Α										
Intersection Summary												
Average Delay			1.5									
Intersection Capacity Uti	ilization		16.1%	10	CU Leve	el of Ser	vice		Α			

Park Hill at Holman Future Build PM Peak

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	3	0	0	8	0	6	2	68	2	18	82	1
Peak Hour Factor	0.38	0.92	0.38	0.92	0.92	0.92	0.76	0.76	0.92	0.92	0.81	0.81
Hourly flow rate (veh/h)	8	0	0	9	0	7	3	89	2	20	101	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
vC, conflicting volume	243	238	102	237	237	91	102			92		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	99	100	99	100			99		
cM capacity (veh/h)	702	653	959	710	654	967	1490			1503		
Direction, Lane #	EB 1	WB1	NB 1	SB 1								
Volume Total	8	15	94	122								
Volume Left	8	9	3	20								
Volume Right	0	7	2	1								
cSH	702	801	1490	1503								
Volume to Capacity	0.01	0.02	0.00	0.01								
Queue Length (ft)	1	1	0	1								
Control Delay (s)	10.2	9.6	0.2	1.3								
Lane LOS	В	Α	Α	Α								
Approach Delay (s)	10.2	9.6	0.2	1.3								
Approach LOS	В	Α										
Intersection Summary												
Average Delay			1.7									
Intersection Capacity Uti	ilization		18.0%	[0	CU Leve	el of Ser	vice		А			

Park Hill at Country Club Driveway Future Build AM Peak
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Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	W		₽			4		
Sign Control	Stop		Free			Free		
Grade	0%		0%			0%		
Volume (veh/h)	13	13	87	6	7	67		
Peak Hour Factor	0.25	0.25	0.82	0.82	0.76	0.76		
Hourly flow rate (veh/h)	52	52	106	7	9	88		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type	None							
Median storage veh)								
vC, conflicting volume	216	110			113			
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
tC, single (s)	6.4	6.2			4.1			
tC, 2 stage (s)								
tF (s)	3.5	3.3			2.2			
p0 queue free %	93	95			99			
cM capacity (veh/h)	772	949			1488			
Direction, Lane #	WB 1	NB 1	SB 1					
Volume Total	104	113	97					
Volume Left	52	0	9					
Volume Right	52	7	0					
cSH	851	1700	1488					
Volume to Capacity	0.12	0.07	0.01					
Queue Length (ft)	10	0	0					
Control Delay (s)	9.8	0.0	0.7					
Lane LOS	Α		Α					
Approach Delay (s)	9.8	0.0	0.7					
Approach LOS	Α							
Intersection Summary								
Average Delay			3.5					
Intersection Capacity Ut	tilization		18.8%	IC	CU Leve	el of Service	C	е

Park Hill at Country Club Driveway Future Build PM Peak __10/27/2019 1: Int

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Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	**		1>			4		
Sign Control	Stop		Free			Free		
Grade	0%		0%			0%		
Volume (veh/h)	12	9	71	17	15	64		
Peak Hour Factor	0.50	0.50	0.81	0.81	0.78	0.78		
Hourly flow rate (veh/h)	24	18	88	21	19	82		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type	None							
Median storage veh)								
vC, conflicting volume	219	98			109			
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
tC, single (s)	6.4	6.2			4.1			
tC, 2 stage (s)								
tF (s)	3.5	3.3			2.2			
p0 queue free %	97	98			99			
cM capacity (veh/h)	764	963			1494			
Direction, Lane #	WB 1	NB 1	SB 1					
Volume Total	42	109	101					
Volume Left	24	0	19					
Volume Right	18	21	0					
cSH	838	1700	1494					
Volume to Capacity	0.05	0.06	0.01					
Queue Length (ft)	4	0	1					
Control Delay (s)	9.5	0.0	1.5					
Lane LOS	Α		Α					
Approach Delay (s)	9.5	0.0	1.5					
Approach LOS	Α							
Intersection Summary								
Average Delay			2.2					
Intersection Capacity Ut	tilization		16.4%	10	CU Leve	of Service	е	