



January 10, 2017

Mr. Rick Frye
Whispering Woods Land, LLC
803 P.C.A. Road
Warrensburg, MO 64093

Re: Whispering Woods – Lee's Summit, MO

Dear Mr. Frye:

In response to your request, Priority Engineers, Inc. has completed a review of the intersection of SW Pryor Road and SW Scherer Road. The purpose of this analysis is to determine if a signal is currently warranted at this location.

This intersection was previously reviewed for the Whispering Woods Traffic Impact Study dated January 3, 2017. For the purposes of the Traffic Impact Study, Priority Engineers, Inc. collected traffic data on October 6, 2016 and performed an analysis of the typical peak hours of 07:00-09:00 and 16:00-18:00. This analysis determined if the Manual of Uniform Traffic Control Devices (MUTCD) conditions for warranting a signal during the peak hour (Warrant 3) were met. The results of the existing conditions Peak Hour are summarized in Table 1.

Table 1: Peak Hour Signal Warrants					
Intersection	Scenario	Major Street Volume	Minor Street Volume	Peak Hour	Peak Hour (70% Factor)
Scherer Rd & Pryor Rd	Existing AM	846	130	NO	YES
	Existing PM	987	194	NO	YES

Many municipalities have limited transportation resources. To maximize their infrastructure investments, Owner-Agencies often require additional MUTCD Warrants to be met before considering signalization of an intersection. To determine if additional MUTCD warrants were met, traffic count data was reviewed for the thirteen-hour period of 06:00-19:00 collected on October 6, 2016. Analysis of this data for the 4 Hour Warrant (Warrant 2) is summarized in Table 2. Based upon this analysis a signal is warranted at this location with existing traffic volumes.

Table 2: Warrant 2 (4 Hour Warrant)					
Intersection	Time	Northbound + Southbound Volume	Eastbound Volume	Westbound Volume	Meets 4 Hour Warrant (70%)
Scherer Rd & Pryor Rd	06:45-07:45	780	114	95	YES
	07:45-8:45	719	109	61	YES
	16:00-17:00	786	115	146	YES
	17:00-18:00	985	109	202	YES

During the January 3rd, 2017 meeting with the developer and City of Lee's Summit Staff, timelines for both the potential improvements at the SW Pryor and SW Scherer intersection and the phases of the development were discussed. The City estimated that if it was determined that existing conditions warranted the programming of an intersection upgrade that these upgrades would most likely occur around the anticipated construction of the 1st phase of the development and potentially could still be under construction during portions of the 2nd Phase. Trip Generation for Phase 1 and Phase 2 of the development were estimated using the Institute of Transportation Engineers' Trip Generation, 9th Edition. Land Use 210, Single Family Detached Residences, was used. The estimated AM and PM peak hour traffic volumes associated with these uses are shown in Table 3.

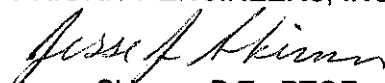
Table 3: Trip Generation								
Land Use	Intensity	Daily	AM Peak			PM Peak		
			Total	In	Out	Total	In	Out
Total (All Phases)	164 Units	1655	124	31	93	164	103	61
Phase 1	33 Units	333	25	6	19	33	21	12
Phase 2	35 Units	353	26	7	19	35	22	13

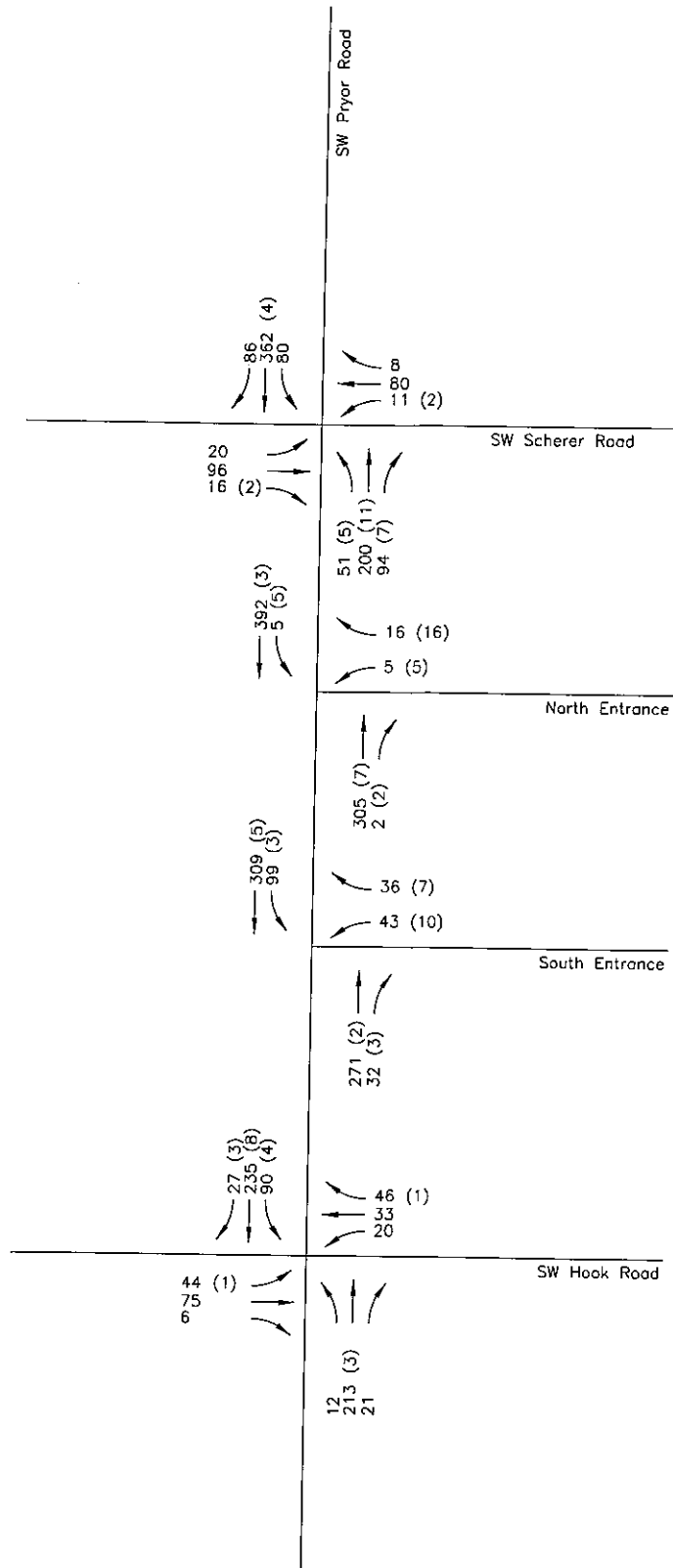
The combination of additional trips generated by Phase 1 and Phase 2 of the development equate to 2.8% of the total traffic entering the intersection during the AM Peak hour and 3.1 % of the traffic during the PM Peak Hour. Based upon these nominal increases in traffic, it is my recommendation that these Phases of the development be allowed to be constructed without regard to the status of the intersection upgrade to signalization.

We appreciate the opportunity to work with you on this project. Please contact us with any questions or if you require additional information.

Sincerely,

PRIORITY ENGINEERS, INC.


Jesse Skinner, P.E., PTOE
Senior Transportation Engineer



LEGEND



Total Volume [Approved]

Existing Phases 1 & 2
AM Peak Hour Traffic Volumes

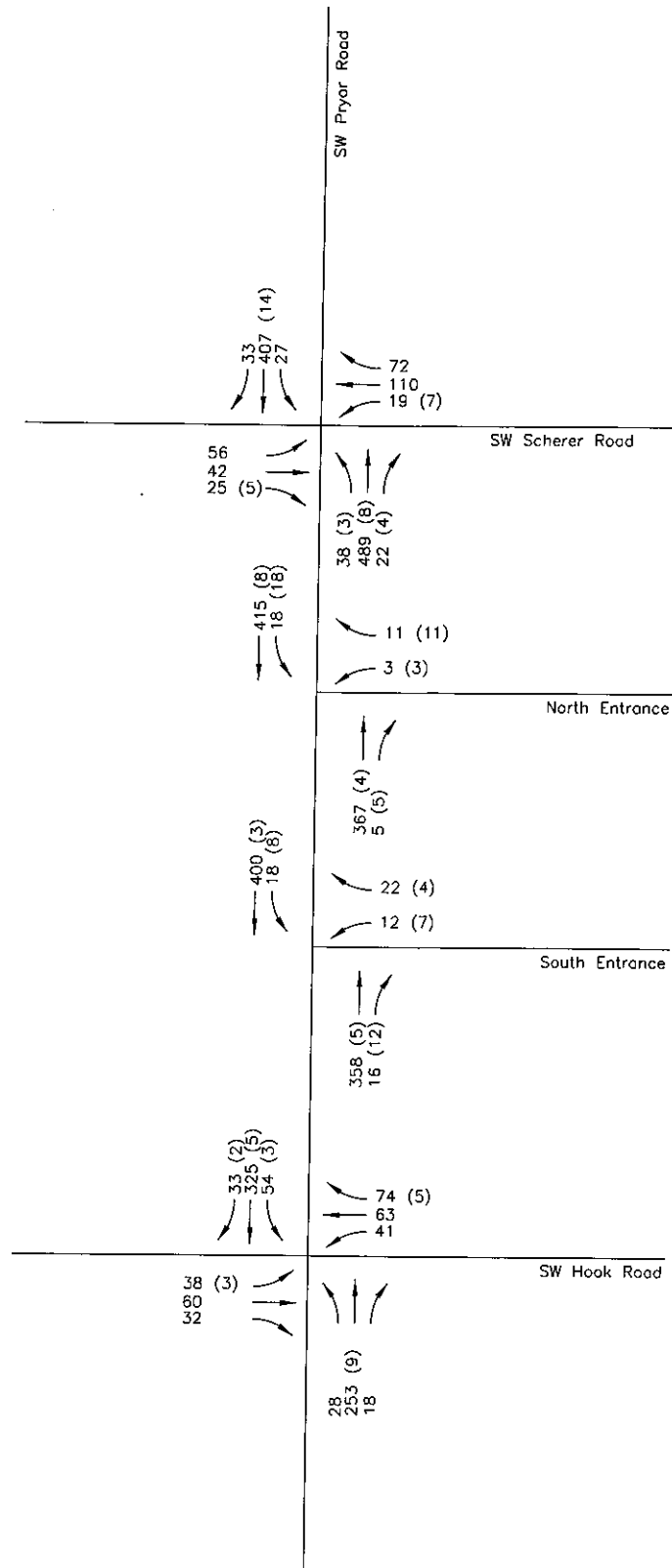
Whispering
Woods
Lee's Summit, MO

No Scale

Exhibit A



Priority
ENGINEERS



LEGEND



Total Volume [Approved]

Existing Phases 1 & 2
PM Peak Hour Traffic Volumes

Whispering
Woods
Lee's Summit, MO

No Scale

Exhibit B



Priority
ENGINEERS

Time	SB	Right	SB Thru	SB Left	WB Right	WB Thru	WB Left	NB Right	NB Thru	NB Left	EB Right	EB Thru	EB Left			
06:00	1	12	1	0	4	2	3	35	6	4	1	1		70		
06:15	3	21	10	0	7	2	8	44	6	2	10	0		113		
06:30	3	20	9	3	21	2	11	62	10	2	9	3		155		
06:45	5	31	34	3	11	3	23	60	13	4	14	1		202	Hour	6:45-7:45
07:00	31	66	18	4	31	2	7	43	57	2	22	0		283	NB +SB	780
07:15	31	67	18	1	24	1	10	36	27	10	26	0		251	EB	114
07:30	7	105	21	0	10	5	16	54	0	7	20	8		253	WB	95
Hourly Total	74	269	91	8	76	11	56	193	97	23	82	9				
07:45	17	120	23	3	15	1	13	56	3	1	28	6		286	Hour	7:45-8:45
08:00	16	90	13	1	7	2	7	53	13	13	8	2		225	NB +SB	719
08:15	5	77	11	7	7	3	12	44	6	15	11	4		202	EB	109
08:30	8	59	6	1	12	2	7	53	7	13	7	1		176	WB	61
Hourly Total	46	346	53	12	41	8	39	206	29	42	54	13				
08:45	6	70	6	2	2	2	7	52	12	14	8	2		183		
09:00	4	40	6	0	5	3	2	60	8	1	8	1		138		
09:15	3	30	1	2	2	1	0	59	3	1	7	6		115		
09:30	2	25	1	2	1	1	3	48	4	3	3	2		95		
09:45	2	18	3	2	3	2	3	39	1	3	4	2		82		
10:00	3	23	2	0	3	2	2	34	1	2	6	3		81		
10:15	2	20	1	1	7	3	6	32	5	0	3	6		86		
10:30	2	26	2	2	0	2	6	52	2	3	9	2		108		
10:45	1	32	3	1	4	3	3	41	4	5	7	1		105		
11:00	2	31	3	0	5	5	4	46	5	2	4	2		109		
11:15	1	38	0	2	3	5	3	33	4	2	2	9		102		
11:30	3	42	1	2	7	5	6	41	6	2	6	0		121		
11:45	4	41	2	0	3	4	1	49	2	4	5	2		117		
12:00	1	44	2	5	2	1	5	51	0	2	4	2		119		
12:15	0	50	4	6	5	5	6	49	5	4	2	1		137		
12:30	6	37	3	1	2	4	3	50	4	4	2	2		118		
12:45	3	36	0	5	7	0	3	46	4	6	6	1		117		
13:00	4	60	3	1	2	7	3	42	6	3	6	1		138		
13:15	2	44	4	1	5	5	4	38	3	2	5	1		114		
13:30	1	47	4	4	6	6	7	23	0	4	4	2		108		
13:45	7	45	7	2	10	2	1	37	3	3	6	1		124		
14:00	5	48	8	2	8	3	6	31	6	3	11	4		135	Hour	14:00-15:00
14:15	4	52	5	16	11	5	6	39	2	2	8	1		151	NB +SB	522
14:30	5	67	11	35	30	13	8	65	8	3	6	5		256	EB	72
14:45	3	75	5	6	8	9	7	55	1	8	15	6		198	WB	146
Hourly Total	17	242	29	59	57	30	27	190	17	16	40	16				
15:00	2	73	1	3	12	7	7	57	2	8	13	3		188	Hour	15:00-16:00
15:15	4	98	3	4	8	8	8	50	5	4	13	1		206	NB +SB	636
15:30	7	84	5	15	5	9	10	75	1	9	11	9		240	EB	99
15:45	2	63	11	11	8	17	9	54	5	8	16	4		208	WB	107
Hourly Total	15	318	20	33	33	41	34	236	13	29	53	17				
16:00	14	65	9	5	10	5	6	78	9	7	12	12		232	Hour	16:00-17:00
16:15	6	74	3	9	19	7	4	79	9	11	8	11		240	NB +SB	786
16:30	5	80	3	22	20	9	9	110	4	1	7	16		286	EB	115
16:45	3	86	1	16	23	1	4	117	8	4	12	14		289	WB	146
Hourly Total	28	305	16	52	72	22	23	384	30	23	39	53				
17:00	9	81	5	19	32	3	4	108	9	4	11	23		308	Hour	17:00-18:00
17:15	7	115	14	18	33	4	1	139	6	5	9	12		363	NB +SB	985
17:30	14	111	7	19	22	4	9	117	12	7	10	7		339	EB	109
17:45	7	100	4	17	28	3	2	91	13	5	8	8		286	WB	202
Hourly Total	37	407	30	73	115	14	16	455	40	21	38	50				
18:00	10	86	20	5	7	6	10	77	2	13	14	4		254	Hour	18:00-1900
18:15	4	85	11	10	11	12	7	53	3	12	12	4		224	NB +SB	632
18:30	0	81	2	1	9	12	4	42	2	5	6	5		169	EB	91
18:45	1	75	6	4	7	10	4	45	2	6	7	3		170	WB	94
Hourly Total	15	327	39	20	34	40	25	217	9	36	39	16				