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Traffic Impact Analysis

Pine Ridge Commons
Planned Unit Development Amendment (PUDA)
Growth Management Plan Amendment (GMPA)

Collier County, FL
10/24/2016

Prepared for:

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Collier County Transportation Review Fee – Small Scale Study – No Fee

Statement of Certification

I certify that this Traffic Impact Analysis has been prepared by me or under my immediate supervision and that I have experience and training in the field of Traffic and Transportation Engineering.
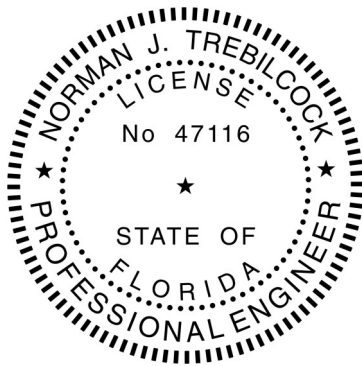
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Table of Contents

Project Description

The Pine Ridge Commons project is an existing approved Planned Unit Development (PUD) pursuant to Collier County Ordinance No. 1999–94, as may be amended. The subject parcel has a total gross area of approximately 31.00 acres.

The project site is located on the northeast quadrant of the intersection of Goodlette-Frank Road (CR 851) and Pine Ridge Road (CR 896), approximately 0.5 miles east of US 41, in Section 10, Township 49 South, Range 25 East, Collier County.

Refer to **Fig. 1 – Project Location Map**, which follows, and **Appendix A: Goodlette/Pine Ridge Commercial Infill Subdistrict**.

Fig. 1 – Project Location Map
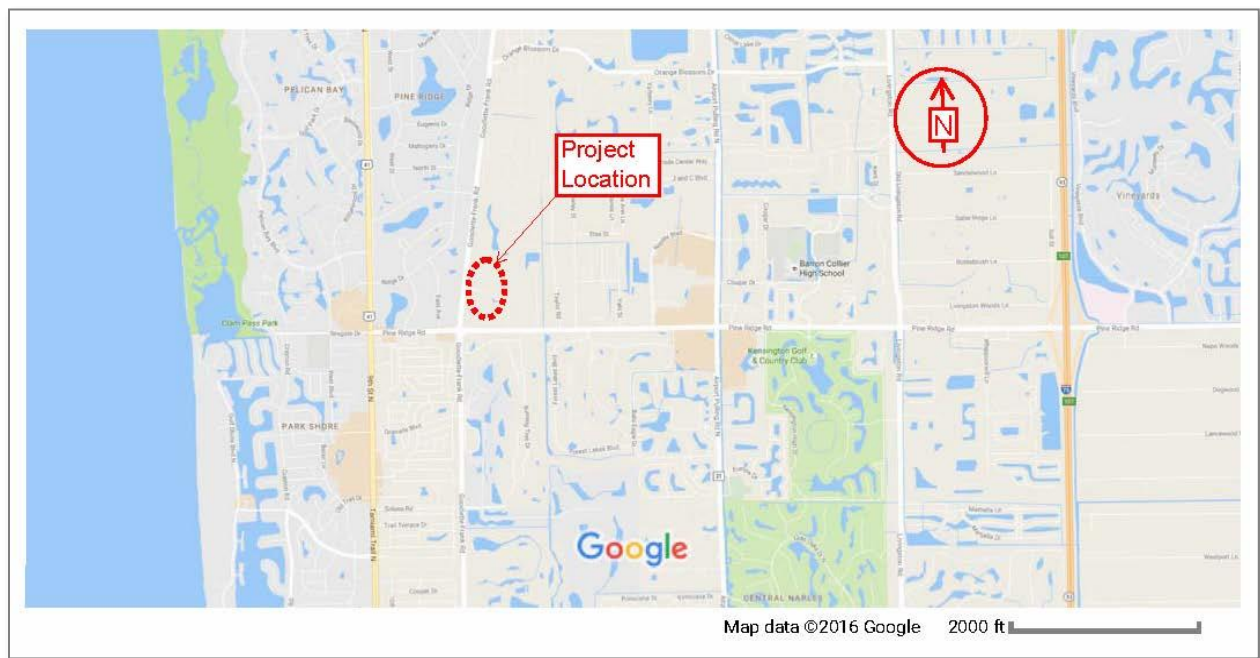
The Collier County approved ordinance currently allows the site to be developed for a maximum of 275,000 square feet of retail and commercial uses. Consistent with the approved Pine Ridge Commons PUD Traffic Impact Statement (TIS) prepared by Wilson Miller, dated August, 1999, the site is approved to be developed for up to a maximum 125,000sf gross leasable area of retail shopping and 150,000sf gross floor area of office financial institution space.

As this development has been under construction for a number of years, the built uses are as follows: Retail – 75,243sf, and General Office – 129,099sf (Office – 36,140sf, Valley National

Bank – Out Parcel – 3,600sf, Naples Trust – Out Parcel – 6,000sf, Quarles & Brady office building – 43,993sf, and Premier Executive office building – 39,366sf).

The Pine Ridge Commons PUDA – GMPA proposes to retain the option to develop as currently allowed by zoning and add a potential development option consisting of existing developed commercial uses and 400 residential multi-family dwelling units.

The development program is illustrated in **Table 1.**

Table 1
Development Program

Potential Development	ITE Land Use	ITE Land Use Code	Total Size
Approved PUD[1]	Shopping Center	820	125,000sf
	General Office Building	710	150,000sf
Proposed PUDA Scenario[2]	Shopping Center	820	75,243sf
	General Office Building	710	129,099sf
	Residential Condominium/Townhouse	230	400 dwelling units

Note(s):   [1] per approved Pine Ridge Commons PUD TIS, dated August, 1999. [2] existing built to date conditions and 400 Multi-Family residential dwelling units.

Access to the site is approved from both Goodlette-Frank Road and Pine Ridge Road. For the purposes of this rezone application, no changes to the previously approved accesses are requested.

Trip Generation

The project provides the highest and best use scenario with respect to the project's proposed trip generation. The project's site trip generation is based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition, and the software program OTISS (Online Traffic Impact Study Software, most current version). The ITE rates and equations are used for the trip generation calculations, as applicable. The ITE – OTISS trip generation calculation worksheets are provided in **Appendix B: Trip Generation Calculations ITE 9th Edition**.

The residential associated common recreation amenities are considered passive incidental to residential use, and are not included in the trip generation analysis.

The **internal capture** accounts for a reduction in external traffic because of the interaction between the multiple land uses in a site. Per Collier County TIS Guidelines and Procedures, the internal capture trips should be reasonable and should not exceed 20% of the total project trips.

For this project, the software program OTISS is used to generate associated internal capture trips. The OTISS process follows the trip balancing approach as recommended in the ITE Trip Generation Manual, 9th Edition (Volume 1): User's Guide and Handbook, Chapter 7 – procedure for estimating multi-use trip generation internal capture, aka "triangle method".

The resulting internal capture rates are below the county limits.

The **pass-by trips** account for traffic that is already on the external roadway network and stops at the project on the way to a primary trip destination.

It should be noted that the driveway volumes are not reduced as a result of the pass-by reduction, only the traffic added to the surrounding streets and intersections. As such, pass-by trips are not deducted for operational-access analysis (all external traffic is accounted for).

Consistent with Collier County TIS Guidelines and Procedures, shopping center pass-by rates should not exceed 25% for the peak hour and the daily capture rates are assumed 10% lower than the peak hour capture rate. This analysis calculates Shopping Center LUC 820 pass-by daily rates at 15% and AM and PM peak hour rates at 25%.

The new PUDA – GMPA development scenario trip generation is illustrated in **Table 2A**. The trip generation analysis based on approved conditions is shown in **Table 2B**. The net new proposed trip generation (**Table 2C**) shows total proposed conditions versus existing allowed (the difference between **Table 2A** and **Table 2B**).

Table 2A
Trip Generation (Proposed PUDA Conditions) – Average Weekday

Development	24 Hour Two-Way Volume	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Proposed PUDA[1]	9,388	315	208	**523**	401	504	**905**
Total Internal	1,556	18	18	**36**	68	68	**136**
Total External	7,832	297	190	**487**	333	436	**769**
Total Pass-By	732	18	11	**29**	53	55	**108**
Total Non-Pass-By	**7,100**	279	179	**458**	280	381	**661**

Note(s):   [1] Existing built to date and 400 Multi-Family residential dwelling units.

Table 2B
Trip Generation (Approved PUD Allowed) – Average Weekday

Development	24 Hour Two-Way Volume	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Approved PUD	9,638	344	100	**444**	376	566	**942**
Total Internal	550	4	4	**8**	18	18	**36**
Total External	9,088	340	96	**436**	358	548	**906**
Total Pass-By	1,136	27	17	**44**	82	88	**170**
Total Non-Pass-By	7,952	313	79	**392**	276	460	**736**

In agreement with the Collier County TIS guidelines, significantly impacted roadways are identified based on the proposed project highest peak hour trip generation and consistent with the peak hour of the adjacent street traffic. Based on the information contained in Collier County 2015 Annual Update and Inventory Report (AUIR), the peak hour for adjacent roadway network is PM.

For the purpose of this TIS, the potential project's traffic impact is analyzed based on projected PM peak hour non-pass-by trips generated as a result of the proposed PUDA-GMPA (as shown in **Table 2C**).

Table 2C
Trip Generation (Proposed Net New Traffic) – Average Weekday

Development	24 Hour Two-Way Volume	PM Peak Hour		
		Enter	Exit	Total
Proposed PUDA (Total Non-Pass-By)	7,100	280	381	**661**
Approved PUD (Total Non-Pass-By)	7,952	276	460	**736**
Proposed Net New Total Non-Pass-By Net Increase /(Net Decrease)	(852)	4	(79)	(75)

Conclusions

As illustrated in **Table 2C**, from a traffic stand point, the proposed rezone development scenario is less intensive when compared to the maximum allowed under current zoning conditions.

A detailed evaluation of applicable access points will be performed at the time of site development permitting/platting to determine turn lane requirements, as applicable.

Mitigation of Impact

The developer proposes to pay the appropriate Collier County Road Impact Fee as building permits are issued for the project.

Appendix A: Goodlette/Pine Ridge Commercial Infill Subdistrict

(1 Sheet)

GOODLETTE/PINE RIDGE COMMERCIAL INFILL SUBDISTRICT
COLLIER COUNTY, FLORIDA

AMENDED — OCTOBER 14, 2008
(Ord. No. 2008-59)

LEGEND

GOODLETTE/PINE RIDGE
COMMERCIAL INFILL
SUBDISTRICT

SCALE
0   200 FT.   400 FT.
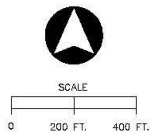
PREPARED BY: GRAPHICS AND TECHNICAL SUPPORT SECTION
COMMUNITY DEVELOPMENT AND ENVIRONMENTAL SERVICES DIVISION
DATE: 10/2008   FILE: CPSP-2006-13A-1.DWG

Appendix B: Trip Generation Calculations
ITE 9th Edition
(9 Sheets)

Project Name:	Pine Ridge Commons - Zoning Allowed		No:		
Date:	10/21/2016		City:		
State/Province:			Zip/Postal Code:		
Country:			Client Name:		
Analyst's Name:			Edition:	ITE-TGM 9th Edition	

LAND USE	SIZE	WEEKDAY		AM PEAK HOUR		PM PEAK HOUR	
		Entry	Exit	Entry	Exit	Entry	Exit
820 - Shopping Center	125 (1)	3926	3925	111	68	334	362
Reduction		0	0	0	0	0	0
Internal		157	118	2	2	7	11
Pass-by		565	571	27	17	82	88
Non-pass-by		3204	3236	82	49	245	263
710 - General Office Building	150 (2)	894	893	233	32	42	204
Reduction		0	0	0	0	0	0
Internal		118	157	2	2	11	7
Pass-by		0	0	0	0	0	0
Non-pass-by		776	736	231	30	31	197
Total		4820	4818	344	100	376	566
Total Reduction		0	0	0	0	0	0
Total Internal		275	275	4	4	18	18
Total Pass-by		565	571	27	17	82	88
Total Non-pass-by		3980	3972	313	79	276	460

(1) 1000 Sq. Feet Gross Leasable Area
(2) 1000 Sq. Feet Gross Floor Area

PERIOD SETTING ☑ DATA PROVIDED BY ITE

Specify the Independent Variable, Time Period, and Calculation Method to be used in the calculation of the number of Trips generated in the analysis. To record any notes, click ✎ Add Notes above.

PROJECT NAME: PINE RIDGE COMMONS - ZONING ALLOWED

ANALYSIS NAME: Weekday

LAND USE	INDEPENDENT VARIABLE	SIZE	TIME PERIOD	METHOD	ENTRY	EXIT	TOTAL
🔍 820 - Shopping Center	1000 Sq. Feet Gross ▾	125	Weekday ▾	Best Fit (LOG) ▾ $Ln(T) = 0.65Ln(X) + 5.83$	3926	3925	7851
🔍 710 - General Office Building	1000 Sq. Feet Gross ▾	150	Weekday ▾	Best Fit (LOG) ▾ $Ln(T) = 0.76Ln(X) + 3.68$	894	893	1787

TRAFFIC REDUCTIONS

INTERNAL TRIPS

Specify the percentage of trips that occur between the Land Use on the left and the Land Use on the right. The table below displays the total number of trips that have been reduced from a particular Land Use. The total number of Internal Trips for each Land Use will be deducted from the adjusted Entry Trips and Exit Trips from the previous section. To record any notes, click the ✎ icon above. For recommended values see the ITE Handbook or NCHRP 684.

820 - Shopping Center   710 - General Office Building

| Exit | 3925 | Demand Exit: | 3 | % (118) | Balanced: 118 | Demand Entry: | 15 | % (134) | Entry | 894 |
| Entry | 3926 | Demand Entry: | 4 | % (157) | Balanced: 157 | Demand Exit: | 22 | % (196) | Exit | 893 |

820 - Shopping Center

	TOTAL TRIPS	INTERNAL TRIPS		EXTERNAL TRIPS
		710 - General Office Building	Total	
Entry	3926 (100%)	157 (4%)	157 (4%)	3769 (96%)
Exit	3925 (100%)	118 (3%)	118 (3%)	3807 (97%)
Total	7851 (100%)	275 (4%)	275 (4%)	7576 (96%)

710 - General Office Building

	TOTAL TRIPS	INTERNAL TRIPS		EXTERNAL TRIPS
		820 - Shopping Center	Total	
Entry	894 (100%)	118 (13%)	118 (13%)	776 (87%)
Exit	893 (100%)	157 (18%)	157 (18%)	736 (82%)
Total	1787 (100%)	275 (15%)	275 (15%)	1512 (85%)

EXTERNAL TRIPS

Specify the percentage of Pass-by Trips for each Land Use. The percentage will be reduced from the total number of External Trips from the previous section. To record any notes, click ✎ Add Notes above.

The ♥ icon preceding the Pass-by% value indicates data provided by ITE. Clicking the icon changes a custom Pass-by% value to data provided by ITE.

LAND USE	EXTERNAL TRIPS	PASS-BY%	PASS-BY TRIPS	NON-PASS-BY TRIPS
820 - Shopping Center	7576	15 %	1136	6440
710 - General Office Building	1512	0 %	0	1512

PERIOD SETTING   ✓ DATA PROVIDED BY ITE

Specify the Independent Variable, Time Period, and Calculation Method to be used in the calculation of the number of Trips generated in the analysis. To record any notes, click ✍ Add Notes above.

PROJECT NAME: PINE RIDGE COMMONS - ZONING ALLOWED
ANALYSIS NAME: [AM Peak Hour]

LAND USE	INDEPENDENT VARIABLE	SIZE	TIME PERIOD	METHOD	ENTRY	EXIT	TOTAL
🔍 820 - Shopping Center	1000 Sq. Feet Gross ▾	125	Weekday, Peak Hou ▾	Best Fit (LOG) ▾ ✓ Ln(T) = 0.61Ln(X) + 2.24	111	68	179
🔍 710 - General Office Building	1000 Sq. Feet Gross ▾	150	Weekday, A.M. Pea ▾	Best Fit (LOG) ▾ ✓ Ln(T) = 0.8Ln(X) + 1.57	233	32	265

🛑 The time periods do not match.

TRAFFIC REDUCTIONS

INTERNAL TRIPS

Specify the percentage of trips that occur between the Land Use on the left and the Land Use on the right. The table below displays the total number of trips that have been reduced from a particular Land Use. The total number of Internal Trips for each Land Use will be deducted from the adjusted Entry Trips and Exit Trips from the previous section. To record any notes, click the ✍ icon above. For recommended values see the ITE Handbook or NCHRP 684.

820 - Shopping Center   710 - General Office Building

Exit	68	Demand Exit: [3] % (2)	Balanced: 2	Demand Entry: [31] % (72)	Entry 233
Entry	111	Demand Entry: [2] % (2)	Balanced: 2	Demand Exit: [23] % (7)	Exit 32

820 - Shopping Center

	TOTAL TRIPS	INTERNAL TRIPS 710 - General Office Building	Total	EXTERNAL TRIPS
Entry	111 (100%)	2 (2%)	2 (2%)	109 (98%)
Exit	68 (100%)	2 (3%)	2 (3%)	66 (97%)
Total	179 (100%)	4 (2%)	4 (2%)	175 (98%)

710 - General Office Building

	TOTAL TRIPS	INTERNAL TRIPS 820 - Shopping Center	Total	EXTERNAL TRIPS
Entry	233 (100%)	2 (1%)	2 (1%)	231 (99%)
Exit	32 (100%)	2 (6%)	2 (6%)	30 (94%)
Total	265 (100%)	4 (2%)	4 (2%)	261 (98%)

EXTERNAL TRIPS

Specify the percentage of Pass-by Trips for each Land Use. The percentage will be reduced from the total number of External Trips from the previous section. To record any notes, click ✍ Add Notes above.

The ✓ icon preceding the Pass-by% value indicates data provided by ITE. Clicking the icon changes a custom Pass-by% value to data provided by ITE.

LAND USE	EXTERNAL TRIPS	PASS-BY%	PASS-BY TRIPS	NON-PASS-BY TRIPS
820 - Shopping Center	175	[25] %	44	131
710 - General Office Building	261	[0] %	0	261

PERIOD SETTING   ✔ DATA PROVIDED BY ITE

Specify the Independent Variable, Time Period, and Calculation Method to be used in the calculation of the number of Trips generated in the analysis. To record any notes, click ✎ Add Notes above.

PROJECT NAME: PINE RIDGE COMMONS - ZONING ALLOWED

ANALYSIS NAME: PM Peak Hour

LAND USE	INDEPENDENT VARIABLE	SIZE	TIME PERIOD	METHOD	ENTRY	EXIT	TOTAL
🔍 820 - Shopping Center	1000 Sq. Feet Gross	125	Weekday, Peak Hour	Best Fit (LOG) ✔ Ln(T) = 0.67Ln(X) + 3.31	334	362	696
🔍 710 - General Office Building	1000 Sq. Feet Gross	150	Weekday, P.M. Peak	Best Fit (LIN) ✔ T = 1.12(X) + 78.45	42	204	246

⚠ The time periods do not match.

TRAFFIC REDUCTIONS

INTERNAL TRIPS

Specify the percentage of trips that occur between the Land Use on the left and the Land Use on the right. The table below displays the total number of trips that have been reduced from a particular Land Use. The total number of Internal Trips for each Land Use will be deducted from the adjusted Entry Trips and Exit Trips from the previous section. To record any notes, click the ✎ icon above. For recommended values see the ITE Handbook or NCHRP 684.

820 - Shopping Center   **710 - General Office Building**

820 - Shopping Center				710 - General Office Building	
Exit	362	Demand Exit: 3 % (11)	Balanced: 11	Demand Entry: 31 % (13)	Entry 42
Entry	334	Demand Entry: 2 % (7)	Balanced: 7	Demand Exit: 23 % (47)	Exit 204

820 - Shopping Center

	TOTAL TRIPS	INTERNAL TRIPS 710 - General Office Building	Total	EXTERNAL TRIPS
Entry	334 (100%)	7 (2%)	7 (2%)	327 (98%)
Exit	362 (100%)	11 (3%)	11 (3%)	351 (97%)
Total	696 (100%)	18 (3%)	18 (3%)	678 (97%)

710 - General Office Building

	TOTAL TRIPS	INTERNAL TRIPS 820 - Shopping Center	Total	EXTERNAL TRIPS
Entry	42 (100%)	11 (26%)	11 (26%)	31 (74%)
Exit	204 (100%)	7 (3%)	7 (3%)	197 (97%)
Total	246 (100%)	18 (7%)	18 (7%)	228 (93%)

EXTERNAL TRIPS

Specify the percentage of Pass-by Trips for each Land Use. The percentage will be reduced from the total number of External Trips from the previous section. To record any notes, click ✎ Add Notes above.

The 🛡 icon preceding the Pass-by% value indicates data provided by ITE. Clicking the icon changes a custom Pass-by% value to data provided by ITE.

LAND USE	EXTERNAL TRIPS	PASS-BY%	PASS-BY TRIPS	NON-PASS-BY TRIPS
820 - Shopping Center	678	🛡 25 %	170	508
710 - General Office Building	228	0 %	0	228

Project Name:	Pine Ridge Commons - Existing plus Residential	No:	
Date:	10/21/2016	City:	
State/Province:		Zip/Postal Code:	
Country:		Client Name:	
Analyst's Name:		Edition:	ITE-TGM 9th Edition

LAND USE	SIZE	WEEKDAY		AM PEAK HOUR		PM PEAK HOUR	
		Entry	Exit	Entry	Exit	Entry	Exit
820 - Shopping Center	75.243 (1)	2823	2822	81	50	238	257
Reduction		0	0	0	0	0	0
Internal		367	395	9	8	26	39
Pass-by		368	364	18	11	53	55
Non-pass-by		2088	2063	54	31	159	163
710 - General Office Building	129.1 (2)	797	797	207	28	38	185
Reduction		0	0	0	0	0	0
Internal		85	129	2	3	8	8
Pass-by		0	0	0	0	0	0
Non-pass-by		712	668	205	25	30	177
230 - Residential Condominium/Townhouse	400 (3)	1075	1074	27	130	125	62
Reduction		0	0	0	0	0	0
Internal		326	254	7	7	34	21
Pass-by		0	0	0	0	0	0
Non-pass-by		749	820	20	123	91	41
Total		4695	4693	315	208	401	504
Total Reduction		0	0	0	0	0	0
Total Internal		778	778	18	18	68	68
Total Pass-by		368	364	18	11	53	55
Total Non-pass-by		3549	3551	279	179	280	381

(1) 1000 Sq. Feet Gross Leasable Area
(2) 1000 Sq. Feet Gross Floor Area
(3) Dwelling Units

Analysis: Weekday   Page 1 of 2

PERIOD SETTING   ☑ DATA PROVIDED BY ITE

Specify the Independent Variable, Time Period, and Calculation Method to be used in the calculation of the number of Trips generated in the analysis. To record any notes, click ✍ Add Notes above.

PROJECT NAME: PINE RIDGE COMMONS - EXISTING PLUS RESIDENTIAL

ANALYSIS NAME Weekday

LAND USE	INDEPENDENT VARIABLE	SIZE	TIME PERIOD	METHOD	ENTRY	EXIT	TOTAL
🔍 820 - Shopping Center	1000 Sq. Feet Gros:	75.243	Weekday	Best Fit (LOG) Ln(T) = 0.65Ln(X) + 5.83	2823	2822	5645
🔍 710 - General Office Building	1000 Sq. Feet Gros:	129.1	Weekday	Best Fit (LOG) Ln(T) = 0.76Ln(X) + 3.68	797	797	1594
🔍 230 - Residential Condominium/Townhouse	Dwelling Units	400	Weekday	Best Fit (LOG) Ln(T) = 0.87Ln(X) + 2.46	1075	1074	2149

TRAFFIC REDUCTIONS

INTERNAL TRIPS

Specify the percentage of trips that occur between the Land Use on the left and the Land Use on the right. The table below displays the total number of trips that have been reduced from a particular Land Use. The total number of Internal Trips for each Land Use will be deducted from the adjusted Entry Trips and Exit Trips from the previous section. To record any notes, click the ✍ icon above. For recommended values see the ITE Handbook or NCHRP 684.

820 - Shopping Center   **710 - General Office Building**
Exit   2822   Demand Exit: 3 % (85)   Balanced: 85   Demand Entry: 15 % (120)   **Entry** 797
Entry   2823   Demand Entry: 4 % (113)   Balanced: 113   Demand Exit: 22 % (175)   **Exit** 797

820 - Shopping Center   **230 - Residential Condominium/Townhouse**
Exit   2822   Demand Exit: 11 % (310)   Balanced: 310   Demand Entry: 33 % (355)   **Entry** 1075
Entry   2823   Demand Entry: 9 % (254)   Balanced: 254   Demand Exit: 38 % (408)   **Exit** 1074

710 - General Office Building   **230 - Residential Condominium/Townhouse**
Exit   797   Demand Exit: 2 % (16)   Balanced: 16   Demand Entry: 3   % (32)   **Entry** 1075
Entry   797   Demand Entry: 0 % (0)   Balanced: 0   Demand Exit: 0   % (0)   **Exit** 1074

820 - Shopping Center

	TOTAL TRIPS	INTERNAL TRIPS			EXTERNAL TRIPS
		710 - General Office Building	230 - Residential Condominium/Townhouse	Total	
Entry	2823 (100%)	113 (4%)	254 (9%)	367 (13%)	2456 (87%)
Exit	2822 (100%)	85 (3%)	310 (11%)	395 (14%)	2427 (86%)
Total	5645 (100%)	198 (4%)	564 (10%)	762 (13%)	4883 (87%)

710 - General Office Building

	TOTAL TRIPS	INTERNAL TRIPS			EXTERNAL TRIPS
		820 - Shopping Center	230 - Residential Condominium/Townhouse	Total	
Entry	797 (100%)	85 (11%)	0 (0%)	85 (11%)	712 (89%)
Exit	797 (100%)	113 (14%)	16 (2%)	129 (16%)	668 (84%)
Total	1594 (100%)	198 (12%)	16 (1%)	214 (13%)	1380 (87%)

https://otisstraffic.com/projectstudy?projectid=14852&study=44692   10/21/2016

230 - Residential Condominium/Townhouse

	TOTAL TRIPS	INTERNAL TRIPS			EXTERNAL TRIPS
		820 - Shopping Center	710 - General Office Building	Total	
Entry	1075 (100%)	310 (29%)	16 (1%)	326 (30%)	749 (70%)
Exit	1074 (100%)	254 (24%)	0 (0%)	254 (24%)	820 (76%)
Total	2149 (100%)	564 (26%)	16 (1%)	580 (27%)	1569 (73%)

EXTERNAL TRIPS

Specify the percentage of Pass-by Trips for each Land Use. The percentage will be reduced from the total number of External Trips from the previous section. To record any notes, click ✐ Add Notes above.

The ✔ icon preceding the Pass-by% value indicates data provided by ITE. Clicking the icon changes a custom Pass-by% value to data provided by ITE.

LAND USE	EXTERNAL TRIPS	PASS-BY%	PASS-BY TRIPS	NON-PASS-BY TRIPS
820 - Shopping Center	4883	15 %	732	4151
710 - General Office Building	1380	0 %	0	1380
230 - Residential Condominium/Townhouse	1569	0 %	0	1569

(Print Preview)   (Save Analysis)

https://otisstraffic.com/projectstudy?projectid=14852&study=44692   10/21/2016

Analysis: AM Peak Hour   Page 1 of 2

PERIOD SETTING   ✓ DATA PROVIDED BY ITE

Specify the Independent Variable, Time Period, and Calculation Method to be used in the calculation of the number of Trips generated in the analysis. To record any notes, click ✎ Add Notes above.

PROJECT NAME: PINE RIDGE COMMONS - EXISTING PLUS RESIDENTIAL
ANALYSIS NAME: AM Peak Hour

LAND USE	INDEPENDENT VARIABLE	SIZE	TIME PERIOD	METHOD	ENTRY	EXIT	TOTAL
🔍 820 - Shopping Center	1000 Sq. Feet Gros▼	75.243	Weekday, Peak Hou▼	Best Fit (LOG)▼ ✓ Ln(T) = 0.61Ln(X) + 2.24	81	50	131
🔍 710 - General Office Building	1000 Sq. Feet Gros▼	129.1	Weekday, A.M. Pea▼	Best Fit (LOG)▼ ✓ Ln(T) = 0.8Ln(X) + 1.57	207	28	235
🔍 230 - Residential Condominium/Townhouse	Dwelling Units ▼	400	Weekday, Peak Hou▼	Best Fit (LOG)▼ ✓ Ln(T) = 0.8Ln(X) + 0.26	27	130	157

🛑 The time periods do not match.

TRAFFIC REDUCTIONS

INTERNAL TRIPS

Specify the percentage of trips that occur between the Land Use on the left and the Land Use on the right. The table below displays the total number of trips that have been reduced from a particular Land Use. The total number of Internal Trips for each Land Use will be deducted from the adjusted Entry Trips and Exit Trips from the previous section. To record any notes, click the ✎ icon above. For recommended values see the ITE Handbook or NCHRP 684.

820 - Shopping Center   **710 - General Office Building**

| Exit | 50 | Demand Exit: | 3 | % | (2) | Balanced: 2 | Demand Entry: | 31 | % | (64) | Entry | 207 |
| Entry | 81 | Demand Entry: | 2 | % | (2) | Balanced: 2 | Demand Exit: | 23 | % | (6) | Exit | 28 |

820 - Shopping Center   **230 - Residential Condominium/Townhouse**

| Exit | 50 | Demand Exit: | 12 | % | (6) | Balanced: 6 | Demand Entry: | 31 | % | (8) | Entry | 27 |
| Entry | 81 | Demand Entry: | 9 | % | (7) | Balanced: 7 | Demand Exit: | 53 | % | (69) | Exit | 130 |

710 - General Office Building   **230 - Residential Condominium/Townhouse**

| Exit | 28 | Demand Exit: | 2 | % | (1) | Balanced: 1 | Demand Entry: | 2 | % | (1) | Entry | 27 |
| Entry | 207 | Demand Entry: | 0 | % | (0) | Balanced: 0 | Demand Exit: | 0 | % | (0) | Exit | 130 |

820 - Shopping Center

	TOTAL TRIPS	710 - General Office Building	230 - Residential Condominium/Townhouse	Total	EXTERNAL TRIPS
		INTERNAL TRIPS			
Entry	81 (100%)	2 (2%)	7 (9%)	9 (11%)	72 (89%)
Exit	50 (100%)	2 (4%)	6 (12%)	8 (16%)	42 (84%)
Total	131 (100%)	4 (3%)	13 (10%)	17 (13%)	114 (87%)

710 - General Office Building

	TOTAL TRIPS	820 - Shopping Center	230 - Residential Condominium/Townhouse	Total	EXTERNAL TRIPS
		INTERNAL TRIPS			
Entry	207 (100%)	2 (1%)	0 (0%)	2 (1%)	205 (99%)
Exit	28 (100%)	2 (7%)	1 (4%)	3 (11%)	25 (89%)
Total	235 (100%)	4 (2%)	1 (0%)	5 (2%)	230 (98%)

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230 - Residential Condominium/Townhouse

	TOTAL TRIPS	INTERNAL TRIPS			EXTERNAL TRIPS
		820 - Shopping Center	710 - General Office Building	Total	
Entry	27 (100%)	6 (22%)	1 (4%)	7 (26%)	20 (74%)
Exit	130 (100%)	7 (5%)	0 (0%)	7 (5%)	123 (95%)
Total	157 (100%)	13 (8%)	1 (1%)	14 (9%)	143 (91%)

EXTERNAL TRIPS

Specify the percentage of Pass-by Trips for each Land Use. The percentage will be reduced from the total number of External Trips from the previous section. To record any notes, click ✍ Add Notes above.

The ✔ icon preceding the Pass-by% value indicates data provided by ITE. Clicking the icon changes a custom Pass-by% value to data provided by ITE.

LAND USE	EXTERNAL TRIPS	PASS-BY%	PASS-BY TRIPS	NON-PASS-BY TRIPS
820 - Shopping Center	114	25 %	29	85
710 - General Office Building	230	0 %	0	230
230 - Residential Condominium/Townhouse	143	0 %	0	143

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https://otisstraffic.com/projectstudy?projectid=14852&study=44693   10/21/2016

Analysis: PM Peak Hour   Page 1 of 2

PERIOD SETTING   ✓ DATA PROVIDED BY ITE

Specify the Independent Variable, Time Period, and Calculation Method to be used in the calculation of the number of Trips generated in the analysis. To record any notes, click ✍ Add Notes above.

PROJECT NAME: PINE RIDGE COMMONS - EXISTING PLUS RESIDENTIAL

ANALYSIS NAME: PM Peak Hour

LAND USE	INDEPENDENT VARIABLE	SIZE	TIME PERIOD	METHOD	ENTRY	EXIT	TOTAL
🔍 820 - Shopping Center	1000 Sq. Feet Gros:	75.243	Weekday, Peak Hou	Best Fit (LOG) $Ln(T) = 0.67Ln(X) + 3.31$	238	257	495
🔍 710 - General Office Building	1000 Sq. Feet Gros:	129.1	Weekday, P.M. Pea	Best Fit (LIN) $T = 1.12(X) + 78.45$	38	185	223
🔍 230 - Residential Condominium/Townhouse	Dwelling Units	400	Weekday, Peak Hou	Best Fit (LOG) $Ln(T) = 0.82Ln(X) + 0.32$	125	62	187

🛡 The time periods do not match.

TRAFFIC REDUCTIONS

INTERNAL TRIPS

Specify the percentage of trips that occur between the Land Use on the left and the Land Use on the right. The table below displays the total number of trips that have been reduced from a particular Land Use. The total number of Internal Trips for each Land Use will be deducted from the adjusted Entry Trips and Exit Trips from the previous section. To record any notes, click the ✍ icon above. For recommended values see the ITE Handbook or NCHRP 684.

820 - Shopping Center   **710 - General Office Building**

| Exit | 257 | Demand Exit: | 3 | % | (8) | Balanced: 8 | Demand Entry: | 31 | % | (12) | Entry | 38 |
| Entry | 238 | Demand Entry: | 2 | % | (5) | Balanced: 5 | Demand Exit: | 23 | % | (43) | Exit | 185 |

820 - Shopping Center   **230 - Residential Condominium/Townhouse**

| Exit | 257 | Demand Exit: | 12 | % | (31) | Balanced: 31 | Demand Entry: | 31 | % | (39) | Entry | 125 |
| Entry | 238 | Demand Entry: | 9 | % | (21) | Balanced: 21 | Demand Exit: | 53 | % | (33) | Exit | 62 |

710 - General Office Building   **230 - Residential Condominium/Townhouse**

| Exit | 185 | Demand Exit: | 2 | % | (4) | Balanced: 3 | Demand Entry: | 2 | % | (3) | Entry | 125 |
| Entry | 38 | Demand Entry: | 0 | % | (0) | Balanced: 0 | Demand Exit: | 0 | % | (0) | Exit | 62 |

820 - Shopping Center

| | TOTAL TRIPS | INTERNAL TRIPS | | | EXTERNAL TRIPS |
		710 - General Office Building	230 - Residential Condominium/Townhouse	Total	
Entry	238 (100%)	5 (2%)	21 (9%)	26 (11%)	212 (89%)
Exit	257 (100%)	8 (3%)	31 (12%)	39 (15%)	218 (85%)
Total	495 (100%)	13 (3%)	52 (11%)	65 (13%)	430 (87%)

710 - General Office Building

| | TOTAL TRIPS | INTERNAL TRIPS | | | EXTERNAL TRIPS |
		820 - Shopping Center	230 - Residential Condominium/Townhouse	Total	
Entry	38 (100%)	8 (21%)	0 (0%)	8 (21%)	30 (79%)
Exit	185 (100%)	5 (3%)	3 (2%)	8 (4%)	177 (96%)
Total	223 (100%)	13 (6%)	3 (1%)	16 (7%)	207 (93%)

https://otisstraffic.com/projectstudy?projectid=14852&study=44694   10/21/2016

Analysis: PM Peak Hour   Page 2 of 2

230 - Residential Condominium/Townhouse

	TOTAL TRIPS	INTERNAL TRIPS			EXTERNAL TRIPS
		820 - Shopping Center	710 - General Office Building	Total	
Entry	125 (100%)	31 (25%)	3 (2%)	34 (27%)	91 (73%)
Exit	62 (100%)	21 (34%)	0 (0%)	21 (34%)	41 (66%)
Total	187 (100%)	52 (28%)	3 (2%)	55 (29%)	132 (71%)

EXTERNAL TRIPS

Specify the percentage of Pass-by Trips for each Land Use. The percentage will be reduced from the total number of External Trips from the previous section. To record any notes, click ✑ Add Notes above.

The ✔ icon preceding the Pass-by% value indicates data provided by ITE. Clicking the icon changes a custom Pass-by% value to data provided by ITE.

LAND USE	EXTERNAL TRIPS	PASS-BY%	PASS-BY TRIPS	NON-PASS-BY TRIPS
820 - Shopping Center	430	25 %	108	322
710 - General Office Building	207	0 %	0	207
230 - Residential Condominium/Townhouse	132	0 %	0	132

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