DAVID EVANS AND ASSOCIATES INC.

MEMORANDUM

DATE: December 9, 2019

TO: Paul MacCready, Principal Planner/Project Manager, Snohomish County
Departments of Planning & Development Services and Public Works
Snohomish County
3000 Rockefeller Ave, Everett, WA 98201

FROM: Kirk Harris, PE, PMP

SUBJECT: Traffic Memo – Updated Information for the 2016 Expanded Traffic Impact Analysis

PROJECT: PARA0000-0010
Point Wells Urban Center

CC: Jacque St. Romain, Gary Huff, Doug Luetjen with KTC; Dan Seng with Perkins + Will

The purpose of this memorandum is to supplement the 2016 Expanded Traffic Impact Analysis (2016 ETIA) for the Point Wells Mixed-Used Development Project (Project) with information based on the 2019 site plan.

The 2019 site plan proposes 235 less residential units than were proposed in 2016 and evaluated for the 2016 ETIA. The 2019 site plan proposes 6,293 SF less commercial office space but also adds an almost equal amount of retail space (6,269 SF). The following table illustrates the differences between the 2016 and 2019 site plans upon full buildout of the site.

Table 1: Urban Center - Site Development

Land Use Types	Land Use Code (LUC)	Units	2016 Totals	2019 Totals	Difference
Residential		**DU**	**3,081**	**2,846**	**(235)**
High-Rise Apartment	222	DU	307	190	(117)
High-Rise Residential Condominium/Townhouse	232	DU	1,560	1,563	3
Residential Condominium/Townhouse	230	DU	114	109	(5)
Senior Adult Housing – Attached (Condo)	252	DU	1,100	984	(116)
Commercial Office		**SF**	**35,862**	**29,569**	**(6,293)**
General Office	710	SF	24,762	19,142	(5,620)
General Office (Police/Fire)	710	SF	3,600	2,927	(673)
Medical-Dental Office Building	720	SF	7,500	7,500	0
Retail		**SF**	**82,935**	**89,204**	**6,269**
Specialty Retail Center	826	SF	38,635	52,324	13,689
Supermarket	850	SF	26,300	18,100	(8,200)
Quality Restaurant(s)	931	SF	18,000	18,780	780

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Land Use Types	Land Use Code (LUC)	Units	2016 Totals	2019 Totals	Difference
Public Uses		**Acre**	**19.3**	**19.3**	**0.0**
Beach Park/Public Pier	415	Acre	19.3	19.3	0.0
Private Uses		**SF**	**20,000**	**20,722**	**722**
Health/Fitness Club*	492	SF	20,000	20,722	722

*Health/Fitness Club will provide services to residents only; therefore, no trip generation is expected.

The Land Use Codes (LUC) derived from the Institute of Transportation Engineers (ITE) and identified in **Table 1** are consistent with the LUC used in the 2016 ETIA.

The 2019 site plan was evaluated with respect to traffic trips generated and internal trip capture rates that result from the blend of mixed-use development following the same methodologies used in the 2016 ETIA. Trip generation calculations and internal capture rate calculations are included with this memorandum as an attachment. A summary of the cumulative trip generation and phase trip generation by project phase is also included with this memorandum as an attachment.

As a result of the decreased number of residential units proposed in the 2019 site plan and the revised blend of commercial office and retail land uses, the Project as outlined in the 2019 site plan is forecasted to generate less traffic than was forecasted in the 2016 ETIA.

The following tables summarize the forecasted trips generated by the site upon its full buildout and provides comparisons between the 2016 and 2019 plans on a daily basis, at the AM and PM Peak Hours.

Table 2: Urban Center Alt Cumulative Trip Generation_Daily

Description	2016 Phases 1-4			2019 Phases 1-4			Differences		
	Total	In	Out	Total	In	Out	Total	In	Out
Gross Trips	**14,692**	7,346	7,346	**13,655**	6,828	6,828	**(1,037)**	(519)	(519)
Net Trips Reduction (with Transit and Internal Capture)	**3,986**	1,993	1,993	**3,765**	1,883	1,883	**(221)**	(110)	(110)
Total Net Trips	**10,706**	5,353	5,353	**9,890**	4,945	4,945	**(817)**	(408)	(408)
Net Trip Reduction	**27.1%**			**27.6%**					

Table 3: Urban Center Alt Cumulative Trip Generation_AM Peak Hour

Description	2016 Phases 1-4			2019 Phases 1-4			Differences		
	Total	In	Out	Total	In	Out	Total	In	Out
Gross Trips	**1,253**	462	791	**1,209**	446	763	**(44)**	(16)	(28)
Net Trips Reduction (with Transit and Internal Capture)	**282**	117	165	**276**	115	161	**(6)**	(2)	(4)
Total Net Trips	**971**	345	626	**933**	331	602	**(38)**	(14)	(24)
Net Trip Reduction	**22.5%**			**22.8%**					

Table 4: Urban Center Alt Cumulative Trip Generation_PM Peak Hour

Description	2016 Phases 1-4			2019 Phases 1-4			Differences		
	Total	In	Out	Total	In	Out	Total	In	Out
Gross Trips	**1,572**	880	692	**1,461**	819	642	**(111)**	(61)	(50)
Net Trips Reduction (with Transit and Internal Capture)	**499**	263	236	**472**	248	224	**(27)**	(15)	(12)
Total Net Trips	**1,073**	617	456	**989**	571	418	**(84)**	(46)	(38)
Net Trip Reduction	**31.7%**			**32.3%**					

This memo acknowledges that certain elements of the traffic impact analysis report such as incorporating an updated development timeline of the proposed project, incorporating a potentially revised background growth rate of existing traffic, and using updated counts of existing traffic volumes will need to be addressed at some point during the project development process. Snohomish County staff indicated following their review of the 2016 ETIA, that since the approach to developing the 2016 ETIA was consistent with established industry standards and guidelines, the aforementioned updates may be completed as part of the environmental impact analysis process.

DATE:	December 9, 2019	**FROM:**	Kirk Harris, PE, PMP
TO:	Paul MacCready, Principal Planner/Project Manager, Snohomish County	**SUBJECT:**	Traffic Memo – Updated Information for the 2016 Expanded Traffic Impact Analysis

Considering that the 2019 site plan proposes less development than was evaluated for the 2016 ETIA and that calculations included with this memo indicate that the 2019 site plan will generate less traffic to and from the site on a daily basis and during the AM and PM Peak Hours, we request that the 2016 ETIA remain in effect and applicable for this Project. This memo supplements the 2016 ETIA and thus we propose that both documents be included as part of the 2019 submittal package for this Project.

Attachments/Enclosures: 2016-2019 Land Use Site Plan Comparison; Trip Generation Calculations by Project Phase; Internal Capture Calculations by Project Phase; Summary of Cumulative Trip Generation and Phase Trip Generation by Project Phase.

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2016 August 30 - Expanded Traffic Impact Analysis (ETIA)

Land Use Types	Land Use Code (LUC)	Units	Subtotal in Phase				Cumulative Total by Phase			
			I (SV)	II (UP)	III (CV)	IV (NV)	I	I-II	I-III	I-IV
Residential		**DU**	**653**	**254**	**1,271**	**903**	**653**	**907**	**2,178**	**3,081**
High-Rise Apartment	222	DU	53	254			53	307	307	307
High-Rise Residential Condominium/Townhouse	232	DU	433		763	364	433	433	1,196	1,560
Residential Condominium/Townhouse	230	DU	114				114	114	114	114
Senior Adult Housing – Attached (Condo)	252	DU	53		508	539	53	53	561	1,100
Commercial Office		**KSF**	**3.600**	**32.262**			**3.600**	**35.862**	**35.862**	**35.862**
General Office	710	KSF		24.762				24.762	24.762	24.762
General Office (Police/Fire)	710	KSF	3.600				3.600	3.600	3.600	3.600
Medical-Dental Office Building	720	KSF		7.500				7.500	7.500	7.500
Retail		**KSF**	**32.635**	**26.300**	**24.000**		**32.635**	**58.935**	**82.935**	**82.935**
Specialty Retail Center	826	KSF	24.635		14.000		24.635	24.635	38.635	38.635
Supermarket	850	KSF		26.300				26.300	26.300	26.300
Quality Restaurant(s)	931	KSF	8.000		10.000		8.000	8.000	18.000	18.000
Public Uses		**Acre**	**19.3**				**19.3**	**19.3**	**19.3**	**19.3**
Beach Park/Public Pier	415	Acre	19.3				19.3	19.3	19.3	19.3
Private Uses		**KSF**		**20.0**				**20.0**	**20.0**	**20.0**
Health/Fitness Club*	492	KSF		20.0				20.0	20.0	20.0

*Health/Fitness Club will provide services to residents only; therefore, no trip generation is expected.

2019 December 12 - Submittal

Land Use Types	Land Use Code (LUC)	Units	Subtotal in Phase				Cumulative Total by Phase			
			I (SV)	II (UP)	III (CV)	IV (NV)	I	I-II	I-III	I-IV
Residential		**DU**	**605**	**140**	**1204**	**897**	**605**	**745**	**1,949**	**2,846**
High-Rise Apartment	222	DU	120	70			120	190	190	190
High-Rise Residential Condominium/Townhouse	232	DU	134		891	538	134	134	1,025	1,563
Residential Condominium/Townhouse	230	DU	109				109	109	109	109
Senior Adult Housing – Attached (Condo)	252	DU	242	70	313	359	242	312	625	984
Commercial Office		**KSF**	**2.927**	**26.642**	**0.000**	**0.000**	**2.927**	**29.569**	**29.569**	**29.569**
General Office	710	KSF		19.142			0.000	19.142	19.142	19.142
General Office (Police/Fire)	710	KSF	2.927				2.927	2.927	2.927	2.927
Medical-Dental Office Building	720	KSF		7.500			0.000	7.500	7.500	7.500
Retail		**KSF**	**31.259**	**28.670**	**29.275**	**0.000**	**31.259**	**59.929**	**89.204**	**89.204**
Specialty Retail Center	826	KSF	23.954	10.570	17.800		23.954	34.524	52.324	52.324
Supermarket	850	KSF		18.100			0.000	18.100	18.100	18.100
Quality Restaurant(s)	931	KSF	7.305		11.475		7.305	7.305	18.780	18.780
Public Uses		**Acre**	**19.3**				**19.3**	**19.3**	**19.3**	**19.3**
Beach Park/Public Pier	415	Acre	19.3				19.3	19.3	19.3	19.3
Private Uses		**KSF**			**20.722**		**0.000**	**0.000**	**20.722**	**20.722**
Health/Fitness Club*	492	KSF			20.722		0.000	0.000	20.722	20.722

*Health/Fitness Club will provide services to residents only; therefore, no trip generation is expected.

Subtotal in Phase (Change from 2016 ETIA)				Cumulative Total by Phase (Change)					
I (SV)	II (UP)	III (CV)	IV (NV)	I	I-II	I-III	I-IV		
(48)	**(114)**	**(67)**	**(6)**	**(48)**	**(162)**	**(229)**	**(235)**	**-7.6%**	
67	(184)	0	0	67	(117)	(117)	(117)		
(299)	0	128	174	(299)	(299)	(171)	3		
(5)	0	0	0	(5)	(5)	(5)	(5)		
189	70	(195)	(180)	189	259	64	(116)		
(0.673)	**(5.620)**	**0.000**	**0.000**	**(0.673)**	**(6.293)**	**(6.293)**	**(6.293)**		(6.293)
0.000	(5.620)	0.000	0.000	0.000	(5.620)	(5.620)	(5.620)		
(0.673)	0.000	0.000	0.000	(0.673)	(0.673)	(0.673)	(0.673)		
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
(1.376)	**2.370**	**5.275**	**0.000**	**(1.376)**	**0.994**	**6.269**	**6.269**		6.269
(0.681)	10.570	3.800	0.000	(0.681)	9.889	13.689	13.689		(0.024)
0.000	(8.200)	0.000	0.000	0.000	(8.200)	(8.200)	(8.200)		
(0.695)	0.000	1.475	0.000	(0.695)	(0.695)	0.780	0.780		
0.0	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**		
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
0.000	**(20.000)**	**20.722**	**0.000**	**0.000**	**(20.000)**	**0.722**	**0.722**		
0.000	(20.000)	20.722	0.000	0.000	(20.000)	0.722	0.722		

Table 1: Land Use by Project Phase_Urban Center Alternative

Land Use Types	Land Use Code (LUC)	Units	Phase				Phase Cumulative Total			
			1	2	3	4	1	1-2	1-3	1-4
Residential		**DU**	**605**	**140**	**1,204**	**897**	**605**	**745**	**1,949**	**2,846**
High-Rise Apartment	222	DU	120	70			120	190	190	190
High-Rise Residential Condominium/Townhouse	232	DU	134		891	538	134	134	1,025	1,563
Residential Condo/Townhouse	230	DU	109				109	109	109	109
Senior Adult Housing – Attached (Condo)	252	DU	242	70	313	359	242	312	625	984
Commercial Office		**KSF**	**2.927**	**26.642**			**2.927**	**29.569**	**29.569**	**29.569**
General Office	710	KSF		19.142				19.142	19.142	19.142
General Office (Police/Fire)	710	KSF	2.927				2.927	2.927	2.927	2.927
Medical-Dental Office Building	720	KSF		7.500				7.500	7.500	7.500
Retail		**KSF**	**31.259**	**28.670**	**29.275**		**31.259**	**59.929**	**89.204**	**89.204**
Specialty Retail Center	826	KSF	23.954	10.570	17.800		23.954	34.524	52.324	52.324
Supermarket	850	KSF		18.100				18.100	18.100	18.100
Quality Restaurant(s)	931	KSF	7.305		11.475		7.305	7.305	18.780	18.780
Public Uses		**Acre**	**19.3**				**19.3**	**19.3**	**19.3**	**19.3**
Beach Park/Public Pier	415	Acre	19.3				19.3	19.3	19.3	19.3
Private Uses		**KSF**		**20.7**				**20.7**	**20.7**	**20.7**
Health/Fitness Club*	492	KSF		20.7				20.7	20.7	20.7

*Health/Fitness Club will provide services to residents only; therefore, no trip generation is expected.

DAVID EVANS AND ASSOCIATES INC.

Project: Point Wells Development
Project #: PARA0000-0010
Phase: Urban Center Alt Phase 1
Period: Daily

Description	ITE Land Use Code (LUC)	Units	Planned Units	ITE Trip Rates or Equations	ITE Trip Directional Split		Total Generated Trips		
				Weekday	Dail In	Daily Out	Daily Total	Daily In	Daily Out
Residential			**605**				**2,608**	**1,304**	**1,304**
High-Rise Apartment	222	DU	120	4.20	50%	50%	504	252	252
High-Rise Residential Condominium/Townhouse	232	DU	134	T=3.77*(X)+223.66	50%	50%	729	364	364
Residential Condo/Townhouse	230	DU	109	5.81	50%	50%	633	317	317
Senior Adult Housing - Attached (Condo)	252	DU	242	T=2.98*(X)+21.05	50%	50%	742	371	371
Commercial Office			**2.927**				**32**	**16**	**16**
General Office	710	KSF^2	0.000	11.03	50%	50%	0	0	0
General Office (Police/Fire)	710	KSF^2	2.927	11.03	50%	50%	32	16	16
Medical-Dental Office Building	720	KSF^2	0.000	36.13	50%	50%	0	0	0
Retail			**31.259**				**1,718**	**859**	**859**
Specialty Retail Center	826	KSF^2	23.954	44.32	50%	50%	1,062	531	531
Supermarket	850	KSF^2	0.000	102.24	50%	50%	0	0	0
Quality Restaurant	931	KSF^2	7.305	89.95	50%	50%	657	329	329
Public Uses		**Acre**	**19.3**				**575**	**288**	**288**
Beach Park/Public Pier	415	Acre	19.3	29.81	50%	50%	575	288	288
Private Uses		**KSF**	**0.0**						
Health/Fitness Club*	492	KSF	0.0						
							4,933	**2,467**	**2,467**
							Daily Total	**Daily In**	**Daily Out**

*Health/Fitness Club facilities provide complimentary services to residents only; therefore, no trip generation is expected.

DAVID EVANS AND ASSOCIATES INC.

Project: Point Wells Development
Project #: PARA0000-0010
Phase: Urban Center Alt Phases 1-2
Period: Daily

Description	ITE Land Use Code (LUC)	Units	Planned Units	ITE Trip Rates or Equations	ITE Trip Directional Split		Total Generated Trips		
				Weekday	Dail In	Daily Out	Daily Total	Daily In	Daily Out
Residential			**745**				**3,110**	**1,555**	**1,555**
High-Rise Apartment	222	DU	190	4.20	50%	50%	798	399	399
High-Rise Residential Condominium/Townhouse	232	DU	134	T=3.77*(X)+223.66	50%	50%	729	364	364
Residential Condo/Townhouse	230	DU	109	5.81	50%	50%	633	317	317
Senior Adult Housing - Attached (Condo)	252	DU	312	T=2.98*(X)+21.05	50%	50%	951	475	475
Commercial Office			**29.569**				**514**	**257**	**257**
General Office	710	KSF^2	19.142	11.03	50%	50%	211	106	106
General Office (Police/Fire)	710	KSF^2	2.927	11.03	50%	50%	32	16	16
Medical-Dental Office Building	720	KSF^2	7.500	36.13	50%	50%	271	135	135
Retail			**59.929**				**4,038**	**2,019**	**2,019**
Specialty Retail Center	826	KSF^2	34.524	44.32	50%	50%	1,530	765	765
Supermarket	850	KSF^2	18.100	102.24	50%	50%	1,851	925	925
Quality Restaurant	931	KSF^2	7.305	89.95	50%	50%	657	329	329
Public Uses		**Acre**	**19.3**				**575**	**288**	**288**
Beach Park/Public Pier	415	Acre	19.3	29.81	50%	50%	575	288	288
Private Uses		**KSF**	**20.7**						
Health/Fitness Club*	492	KSF	20.7						
							8,237	**4,119**	**4,119**
							Daily Total	**Daily In**	**Daily Out**

*Health/Fitness Club facilities provide complimentary services to residents only; therefore, no trip generation is expected.

DAVID EVANS AND ASSOCIATES INC.

Project: Point Wells Development
Project #: PARA0000-0010
Phase: Urban Center Alt Phases 1-3
Period: Daily

Description	ITE Land Use Code (LUC)	Units	Planned Units	ITE Trip Rates or Equations	ITE Trip Directional Split		Total Generated Trips		
				Weekday	Dail In	Daily Out	Daily Total	Daily In	Daily Out
Residential			**1949**				**7,402**	**3,701**	**3,701**
High-Rise Apartment	222	DU	190	4.20	50%	50%	798	399	399
High-Rise Residential Condominium/Townhouse	232	DU	1025	T=3.77*(X)+223.66	50%	50%	4,088	2,044	2,044
Residential Condo/Townhouse	230	DU	109	5.81	50%	50%	633	317	317
Senior Adult Housing - Attached (Condo)	252	DU	625	T=2.98*(X)+21.05	50%	50%	1,884	942	942
Commercial Office			**29.569**				**514**	**257**	**257**
General Office	710	KSF^2	19.142	11.03	50%	50%	211	106	106
General Office (Police/Fire)	710	KSF^2	2.927	11.03	50%	50%	32	16	16
Medical-Dental Office Building	720	KSF^2	7.500	36.13	50%	50%	271	135	135
Retail			**89.204**				**5,858**	**2,929**	**2,929**
Specialty Retail Center	826	KSF^2	52.324	44.32	50%	50%	2,319	1,159	1,159
Supermarket	850	KSF^2	18.100	102.24	50%	50%	1,851	925	925
Quality Restaurant	931	KSF^2	18.780	89.95	50%	50%	1,689	845	845
Public Uses		**Acre**	**19.3**				**575**	**288**	**288**
Beach Park/Public Pier	415	Acre	19.3	29.81	50%	50%	575	288	288
Private Uses		**KSF**	**20.7**						
Health/Fitness Club*	492	KSF	20.7						
							14,349	**7,175**	**7,175**
							Daily Total	**Daily In**	**Daily Out**

*Health/Fitness Club facilities provide complimentary services to residents only; therefore, no trip generation is expected.

DAVID EVANS AND ASSOCIATES INC.

Project: Point Wells Development
Project #: PARA0000-0010
Phase: Urban Center Alt Phases1-4
Period: Daily

Description	ITE Land Use Code (LUC)	Units	Planned Units	ITE Trip Rates or Equations	ITE Trip Directional Split		Total Generated Trips		
				Weekday	Dail In	Daily Out	Daily Total	Daily In	Daily Out
Residential			**2846**				**10,500**	**5,250**	**5,250**
High-Rise Apartment	222	DU	190	4.20	50%	50%	798	399	399
High-Rise Residential Condominium/Townhouse	232	DU	1563	T=3.77*(X)+223.66	50%	50%	6,116	3,058	3,058
Residential Condo/Townhouse	230	DU	109	5.81	50%	50%	633	317	317
Senior Adult Housing - Attached (Condo)	252	DU	984	T=2.98*(X)+21.05	50%	50%	2,953	1,477	1,477
Commercial Office			**29.569**				**514**	**257**	**257**
General Office	710	KSF^2	19.142	11.03	50%	50%	211	106	106
General Office (Police/Fire)	710	KSF^2	2.927	11.03	50%	50%	32	16	16
Medical-Dental Office Building	720	KSF^2	7.500	36.13	50%	50%	271	135	135
Retail			**89.204**				**5,858**	**2,929**	**2,929**
Specialty Retail Center	826	KSF^2	52.324	44.32	50%	50%	2,319	1,159	1,159
Supermarket	850	KSF^2	18.100	102.24	50%	50%	1,851	925	925
Quality Restaurant	931	KSF^2	18.780	89.95	50%	50%	1,689	845	845
Public Uses		**Acre**	**19.3**				**575**	**288**	**288**
Beach Park/Public Pier	415	Acre	19.3	29.81	50%	50%	575	288	288
Private Uses		**KSF**	**20.7**						
Health/Fitness Club*	492	KSF	20.7						
							17,447	**8,724**	**8,724**
							Daily Total	**Daily In**	**Daily Out**

*Health/Fitness Club facilities provide complimentary services to residents only; therefore, no trip generation is expected.

DAVID EVANS AND ASSOCIATES INC.

Project: Point Wells Development
Project #: PARA0000-0010
Phase: Urban Center Alt Phase 1
Period: AM Peak Hour

Description	ITE Land Use Code (LUC)	Units	Planned Units	ITE Trip Rates or Equations	ITE Trip Directional Split		Total Generated Trips		
				AM Peak	AM In	AM Out	AM Total	AM In	AM Out
Residential			**605**				**208**	**48**	**160**
High-Rise Apartment	222	DU	120	Ln(T)=0.99* Ln(X)-1.14	25%	75%	37	9	27
High-Rise Residential Condominium/Townhouse	232	DU	134	T=0.29*(X)+28.86	19%	81%	68	13	55
Residential Condo/Townhouse	230	DU	109	Ln(T)=0.80* Ln(X)+0.26	17%	83%	55	9	46
Senior Adult Housing - Attached (Condo)	252	DU	242	T=0.20*(X)-0.13	34%	66%	48	16	32
Commercial Office			**2.927**				**5**	**4**	**1**
General Office	710	KSF^2	0.000	1.56	88%	12%	0	0	0
General Office (Police/Fire)	710	KSF^2	2.927	1.56	88%	12%	5	4	1
Medical-Dental Office Building	720	KSF^2	0.000	2.39	79%	21%	0	0	0
Retail			**31.259**				**122**	**70**	**52**
Specialty Retail Center	826	KSF^2	23.954	3.69	48%	52%	88	42	46
Supermarket	850	KSF^2	0.000	3.40	62%	38%	0	0	0
Quality Restaurant	931	KSF^2	7.305	4.63	82%	18%	34	28	6
Public Uses		**Acre**	**19.3**				**25**	**18**	**7**
Beach Park/Public Pier	415	Acre	19.3	1.30	71%	29%	25	18	7
Private Uses		**KSF**	**0.0**						
Health/Fitness Club*	492	KSF	0.0						
							360	**140**	**220**
							AM Total	**AM In**	**AM Out**

*Health/Fitness Club facilities provide complimentary services to residents only; therefore, no trip generation is expected.

DAVID EVANS AND ASSOCIATES INC.

Project: Point Wells Development
Project #: PARA0000-0010
Phase: Urban Center Alt Phases 1-2
Period: AM Peak Hour

Description	ITE Land Use Code (LUC)	Units	Planned Units	ITE Trip Rates or Equations	ITE Trip Directional Split		Total Generated Trips		
				AM Peak	AM In	AM Out	AM Total	AM In	AM Out
Residential			**745**				**243**	**58**	**185**
High-Rise Apartment	222	DU	190	Ln(T)=0.99* Ln(X)-1.14	25%	75%	58	14	43
High-Rise Residential Condominium/Townhouse	232	DU	134	T=0.29*(X)+28.86	19%	81%	68	13	55
Residential Condo/Townhouse	230	DU	109	Ln(T)=0.80* Ln(X)+0.26	17%	83%	55	9	46
Senior Adult Housing - Attached (Condo)	252	DU	312	T=0.20*(X)-0.13	34%	66%	62	21	41
Commercial Office			**29.569**				**52**	**44**	**8**
General Office	710	KSF^2	19.142	1.56	88%	12%	30	26	4
General Office (Police/Fire)	710	KSF^2	2.927	1.56	88%	12%	5	4	1
Medical-Dental Office Building	720	KSF^2	7.500	2.39	79%	21%	18	14	4
Retail			**59.929**				**223**	**127**	**96**
Specialty Retail Center	826	KSF^2	34.524	3.69	48%	52%	127	61	66
Supermarket	850	KSF^2	18.100	3.40	62%	38%	62	38	23
Quality Restaurant	931	KSF^2	7.305	4.63	82%	18%	34	28	6
Public Uses		**Acre**	**19.3**				**25**	**18**	**7**
Beach Park/Public Pier	415	Acre	19.3	1.30	71%	29%	25	18	7
Private Uses		**KSF**	**20.7**						
Health/Fitness Club*	492	KSF	20.7						
							543	**247**	**296**
							AM Total	**AM In**	**AM Out**

*Health/Fitness Club facilities provide complimentary services to residents only; therefore, no trip generation is expected.

DAVID EVANS AND ASSOCIATES INC.

Project: Point Wells Development
Project #: PARA0000-0010
Phase: Urban Center Alt Phases 1-3
Period: AM Peak Hour

Description	ITE Land Use Code (LUC)	Units	Planned Units	ITE Trip Rates or Equations	ITE Trip Directional Split		Total Generated Trips		
				AM Peak	AM In	AM Out	AM Total	AM In	AM Out
Residential			**1949**				**564**	**128**	**436**
High-Rise Apartment	222	DU	190	Ln(T)=0.99* Ln(X)-1.14	25%	75%	58	14	43
High-Rise Residential Condominium/Townhouse	232	DU	1025	T=0.29*(X)+28.86	19%	81%	326	62	264
Residential Condo/Townhouse	230	DU	109	Ln(T)=0.80* Ln(X)+0.26	17%	83%	55	9	46
Senior Adult Housing - Attached (Condo)	252	DU	625	T=0.20*(X)-0.13	34%	66%	125	42	82
Commercial Office			**29.569**				**52**	**44**	**8**
General Office	710	KSF^2	19.142	1.56	88%	12%	30	26	4
General Office (Police/Fire)	710	KSF^2	2.927	1.56	88%	12%	5	4	1
Medical-Dental Office Building	720	KSF^2	7.500	2.39	79%	21%	18	14	4
Retail			**89.204**				**341**	**202**	**139**
Specialty Retail Center	826	KSF^2	52.324	3.69	48%	52%	193	93	100
Supermarket	850	KSF^2	18.100	3.40	62%	38%	62	38	23
Quality Restaurant	931	KSF^2	18.780	4.63	82%	18%	87	71	16
Public Uses		**Acre**	**19.3**				**25**	**18**	**7**
Beach Park/Public Pier	415	Acre	19.3	1.30	71%	29%	25	18	7
Private Uses		**KSF**	**20.7**						
Health/Fitness Club*	492	KSF	20.7						
							982	**392**	**590**
							AM Total	**AM In**	**AM Out**

*Health/Fitness Club facilities provide complimentary services to residents only; therefore, no trip generation is expected.

DAVID EVANS AND ASSOCIATES INC.

Project: Point Wells Development
Project #: PARA0000-0010
Phase: Urban Center Alt Phases1-4
Period: AM Peak Hour

Description	ITE Land Use Code (LUC)	Units	Planned Units	ITE Trip Rates or Equations	ITE Trip Directional Split		Total Generated Trips		
				AM Peak	AM In	AM Out	AM Total	AM In	AM Out
Residential			**2846**				**791**	**182**	**609**
High-Rise Apartment	222	DU	190	Ln(T)=0.99* Ln(X)-1.14	25%	75%	58	14	43
High-Rise Residential Condominium/Townhouse	232	DU	1563	T=0.29*(X)+28.86	19%	81%	482	92	391
Residential Condo/Townhouse	230	DU	109	Ln(T)=0.80* Ln(X)+0.26	17%	83%	55	9	46
Senior Adult Housing - Attached (Condo)	252	DU	984	T=0.20*(X)-0.13	34%	66%	197	67	130
Commercial Office			**29.569**				**52**	**44**	**8**
General Office	710	KSF^2	19.142	1.56	88%	12%	30	26	4
General Office (Police/Fire)	710	KSF^2	2.927	1.56	88%	12%	5	4	1
Medical-Dental Office Building	720	KSF^2	7.500	2.39	79%	21%	18	14	4
Retail			**89.204**				**341**	**202**	**139**
Specialty Retail Center	826	KSF^2	52.324	3.69	48%	52%	193	93	100
Supermarket	850	KSF^2	18.100	3.40	62%	38%	62	38	23
Quality Restaurant	931	KSF^2	18.780	4.63	82%	18%	87	71	16
Public Uses		**Acre**	**19.3**				**25**	**18**	**7**
Beach Park/Public Pier	415	Acre	19.3	1.30	71%	29%	25	18	7
Private Uses		**KSF**	**20.7**						
Health/Fitness Club*	492	KSF	20.7						
							1,209	**446**	**763**
							AM Total	**AM In**	**AM Out**

*Health/Fitness Club facilities provide complimentary services to residents only; therefore, no trip generation is expected.

DAVID EVANS AND ASSOCIATES INC.

Project: Point Wells Development
Project #: PARA0000-0010
Phase: Urban Center Alt Phase 1
Period: PM Peak Hour

Description	ITE Land Use Code (LUC)	Units	Planned Units	ITE Trip Rates or Equations	ITE Trip Directional Split		Total Generated Trips		
				PM Peak	PM In	PM Out	PM Total	PM In	PM Out
Residential			**605**				**236**	**144**	**92**
High-Rise Apartment	222	DU	120	T=0.32*(X)+12.3	61%	39%	51	31	20
High-Rise Residential Condominium/Townhouse	232	DU	134	T=0.34*(X)+15.47	62%	38%	61	38	23
Residential Condo/Townhouse	230	DU	109	Ln(T)=0.82* Ln(X)+0.32	67%	33%	65	43	21
Senior Adult Housing - Attached (Condo)	252	DU	242	T=0.24*(X)+1.64	54%	46%	60	32	27
Commercial Office			**2.927**				**5**	**1**	**4**
General Office	710	KSF^2	0.000	1.49	17%	83%	0	0	0
General Office (Police/Fire)	710	KSF^2	2.927	1.49	17%	83%	4	1	4
Medical-Dental Office Building	720	KSF^2	0.000	3.57	28%	72%	0	0	0
Retail			**31.259**				**119**	**65**	**54**
Specialty Retail Center	826	KSF^2	23.954	2.71	44%	56%	65	29	36
Supermarket	850	KSF^2	0.000	9.48	51%	49%	0	0	0
Quality Restaurant	931	KSF^2	7.305	7.49	67%	33%	55	37	18
Public Uses		**Acre**	**19.3**				**25**	**7**	**18**
Beach Park/Public Pier	415	Acre	19.3	1.30	29%	71%	25	7	18
Private Uses		**KSF**	**0.0**						
Health/Fitness Club*	492	KSF	0.0						
							385	**217**	**168**
							PM Total	**PM In**	**PM Out**

*Health/Fitness Club facilities provide complimentary services to residents only; therefore, no trip generation is expected.

DAVID EVANS AND ASSOCIATES INC.

Project: Point Wells Development
Project #: PARA0000-0010
Phase: Urban Center Alt Phases 1-2
Period: PM Peak Hour

Description	ITE Land Use Code (LUC)	Units	Planned Units	ITE Trip Rates or Equations	ITE Trip Directional Split		Total Generated Trips		
				PM Peak	PM In	PM Out	PM Total	PM In	PM Out
Residential			**745**				**275**	**167**	**108**
High-Rise Apartment	222	DU	190	T=0.32*(X)+12.3	61%	39%	73	45	29
High-Rise Residential Condominium/Townhouse	232	DU	134	T=0.34*(X)+15.47	62%	38%	61	38	23
Residential Condo/Townhouse	230	DU	109	Ln(T)=0.82* Ln(X)+0.32	67%	33%	65	43	21
Senior Adult Housing - Attached (Condo)	252	DU	312	T=0.24*(X)+1.64	54%	46%	77	41	35
Commercial Office			**29.569**				**60**	**13**	**47**
General Office	710	KSF^2	19.142	1.49	17%	83%	29	5	24
General Office (Police/Fire)	710	KSF^2	2.927	1.49	17%	83%	4	1	4
Medical-Dental Office Building	720	KSF^2	7.500	3.57	28%	72%	27	7	19
Retail			**59.929**				**320**	**165**	**155**
Specialty Retail Center	826	KSF^2	34.524	2.71	44%	56%	94	41	52
Supermarket	850	KSF^2	18.100	9.48	51%	49%	172	88	84
Quality Restaurant	931	KSF^2	7.305	7.49	67%	33%	55	37	18
Public Uses		**Acre**	**19.3**				**25**	**7**	**18**
Beach Park/Public Pier	415	Acre	19.3	1.30	29%	71%	25	7	18
Private Uses		**KSF**	**20.7**						
Health/Fitness Club*	492	KSF	20.7						
							680	**352**	**328**
							PM Total	**PM In**	**PM Out**

*Health/Fitness Club facilities provide complimentary services to residents only; therefore, no trip generation is expected.

DAVID EVANS AND ASSOCIATES INC.

Project: Point Wells Development
Project #: PARA0000-0010
Phase: Urban Center Alt Phases 1-3
Period: PM Peak Hour

Description	ITE Land Use Code (LUC)	Units	Planned Units	ITE Trip Rates or Equations	ITE Trip Directional Split		Total Generated Trips		
				PM Peak	PM In	PM Out	PM Total	PM In	PM Out
Residential			**1949**				**653**	**395**	**258**
High-Rise Apartment	222	DU	190	T=0.32*(X)+12.3	61%	39%	73	45	29
High-Rise Residential Condominium/Townhouse	232	DU	1025	T=0.34*(X)+15.47	62%	38%	364	226	138
Residential Condo/Townhouse	230	DU	109	Ln(T)=0.82* Ln(X)+0.32	67%	33%	65	43	21
Senior Adult Housing - Attached (Condo)	252	DU	625	T=0.24*(X)+1.64	54%	46%	152	82	70
Commercial Office			**29.569**				**60**	**13**	**47**
General Office	710	KSF^2	19.142	1.49	17%	83%	29	5	24
General Office (Police/Fire)	710	KSF^2	2.927	1.49	17%	83%	4	1	4
Medical-Dental Office Building	720	KSF^2	7.500	3.57	28%	72%	27	7	19
Retail			**89.204**				**454**	**244**	**210**
Specialty Retail Center	826	KSF^2	52.324	2.71	44%	56%	142	62	79
Supermarket	850	KSF^2	18.100	9.48	51%	49%	172	88	84
Quality Restaurant	931	KSF^2	18.780	7.49	67%	33%	141	94	46
Public Uses		**Acre**	**19.3**				**25**	**7**	**18**
Beach Park/Public Pier	415	Acre	19.3	1.30	29%	71%	25	7	18
Private Uses		**KSF**	**20.7**						
Health/Fitness Club*	492	KSF	20.7						
							1,192	**659**	**533**
							PM Total	**PM In**	**PM Out**

*Health/Fitness Club facilities provide complimentary services to residents only; therefore, no trip generation is expected.

DAVID EVANS AND ASSOCIATES INC.

Project: Point Wells Development
Project #: PARA0000-0010
Phase: Urban Center Alt Phases1-4
Period: PM Peak Hour

Description	ITE Land Use Code (LUC)	Units	Planned Units	ITE Trip Rates or Equations	ITE Trip Directional Split		Total Generated Trips		
				PM Peak	PM In	PM Out	PM Total	PM In	PM Out
Residential			**2846**				**922**	**555**	**367**
High-Rise Apartment	222	DU	190	T=0.32*(X)+12.3	61%	39%	73	45	29
High-Rise Residential Condominium/Townhouse	232	DU	1563	T=0.34*(X)+15.47	62%	38%	547	339	208
Residential Condo/Townhouse	230	DU	109	Ln(T)=0.82* Ln(X)+0.32	67%	33%	65	43	21
Senior Adult Housing - Attached (Condo)	252	DU	984	T=0.24*(X)+1.64	54%	46%	238	128	109
Commercial Office			**29.569**				**60**	**13**	**47**
General Office	710	KSF^2	19.142	1.49	17%	83%	29	5	24
General Office (Police/Fire)	710	KSF^2	2.927	1.49	17%	83%	4	1	4
Medical-Dental Office Building	720	KSF^2	7.500	3.57	28%	72%	27	7	19
Retail			**89.204**				**454**	**244**	**210**
Specialty Retail Center	826	KSF^2	52.324	2.71	44%	56%	142	62	79
Supermarket	850	KSF^2	18.100	9.48	51%	49%	172	88	84
Quality Restaurant	931	KSF^2	18.780	7.49	67%	33%	141	94	46
Public Uses		**Acre**	**19.3**				**25**	**7**	**18**
Beach Park/Public Pier	415	Acre	19.3	1.30	29%	71%	25	7	18
Private Uses		**KSF**	**20.7**						
Health/Fitness Club*	492	KSF	20.7						
							1,461	**819**	**642**
							PM Total	**PM In**	**PM Out**

*Health/Fitness Club facilities provide complimentary services to residents only; therefore, no trip generation is expected.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Point Wells Development	**Organization:**	David Evans and Associates, Inc.
Project Location:	20555 RBD NW, Seattle, WA 98177	**Performed By:**	KAHA
Scenario Description:	Urban Center Phase I	**Date:**	9-Dec-19
Analysis Year:	2020	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	3,600	-	5	4	1
Retail	826/850	24,600	0	88	42	46
Restaurant	931	8,000	0	34	28	6
Cinema/Entertainment	-	-	-			
Residential	22/232/230/25	-	653	208	48	160
Hotel	-	-	-			
All Other Land Uses[2]	415	19	-	25	18	7
				360	140	220

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.06	5%	0%	1.06	5%	0%
Retail	1.17	5%	0%	1.16	5%	0%
Restaurant		5%	0%		5%	0%
Cinema/Entertainment						
Residential	1.13	5%	0%	1.09	5%	0%
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		7	0	1	0
Restaurant	1	1		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	2	6	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	394	153	241
Internal Capture Percentage	9%	12%	7%
External Vehicle-Trips[5]	311	117	194
External Transit-Trips[6]	16	6	10
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	25%	0%
Retail	6%	15%
Restaurant	46%	33%
Cinema/Entertainment	N/A	N/A
Residential	2%	5%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Point Wells Development	**Organization:**	David Evans and Associates, Inc.
Project Location:	20555 RBD NW, Seattle, WA 98177	**Performed By:**	KAHA
Scenario Description:	Urban Center Phase I	**Date:**	9-Dec-19
Analysis Year:	2020	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	3,600	-	5	1	4
Retail	826/850	24,600	0	64	28	36
Restaurant	931	8,000	0	55	37	18
Cinema/Entertainment	-	-	-			
Residential	22/232/230/25	-	653	236	144	92
Hotel	-	-	-			
All Other Land Uses[2]	415	19	-	25	7	18
				385	217	168

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.11	5%	0%	1.07	5%	0%
Retail	1.21	5%	0%	1.18	5%	0%
Restaurant	1.62	5%	0%	1.52	5%	0%
Cinema/Entertainment						
Residential	1.15	5%	0%	1.21	5%	0%
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		780	1410		1030	
Retail					250	
Restaurant					380	
Cinema/Entertainment						
Residential		250	380			
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	0	0	0	0
Retail	0		12	0	11	0
Restaurant	0	11		0	5	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	3	8	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	470	268	202
Internal Capture Percentage	22%	19%	25%
External Vehicle-Trips[5]	291	169	122
External Transit-Trips[6]	18	11	7
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	0%	25%
Retail	44%	55%
Restaurant	33%	59%
Cinema/Entertainment	N/A	N/A
Residential	10%	10%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Point Wells Development	**Organization:**	David Evans and Associates, Inc.
Project Location:	20555 RBD NW, Seattle, WA 98177	**Performed By:**	KAHA
Scenario Description:	Urban Center Phase II	**Date:**	9-Dec-19
Analysis Year:	2025	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710/720	35,862	0	52	44	8
Retail	826/850	50,935	0	189	99	90
Restaurant	931	8,000	0	34	28	6
Cinema/Entertainment	-	-	-			
Residential	22/232/230/25	-	907	243	58	185
Hotel	-	-	-			
All Other Land Uses[2]	415	19	0	25	18	7
				543	247	296

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.06	5%	0%	1.06	5%	0%
Retail	1.17	5%	0%	1.16	5%	0%
Restaurant		5%	0%		5%	0%
Cinema/Entertainment						
Residential	1.13	5%	0%	1.09	5%	0%
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		2	5	0	0	0
Retail	2		14	0	1	0
Restaurant	2	1		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	2	6	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	602	275	327
Internal Capture Percentage	12%	13%	11%
External Vehicle-Trips[5]	455	204	251
External Transit-Trips[6]	25	11	14
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	11%	88%
Retail	4%	16%
Restaurant	89%	50%
Cinema/Entertainment	N/A	N/A
Residential	2%	4%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

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NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Point Wells Development	**Organization:**	David Evans and Associates, Inc.
Project Location:	20555 RBD NW, Seattle, WA 98177	**Performed By:**	KAHA
Scenario Description:	Urban Center Phase II	**Date:**	9-Dec-19
Analysis Year:	2025	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710/720	35,862	0	60	13	47
Retail	826/850	50,935	0	265	128	137
Restaurant	931	8,000	0	55	37	18
Cinema/Entertainment	-	-	-			
Residential	22/232/230/25	-	907	275	167	108
Hotel	-	-	-			
All Other Land Uses[2]	415	19	0	25	7	18
				680	352	328

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.11	5%	0%	1.07	5%	0%
Retail	1.21	5%	0%	1.18	5%	0%
Restaurant	1.62	5%	0%	1.52	5%	0%
Cinema/Entertainment						
Residential	1.15	5%	0%	1.21	5%	0%
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		230	1010		460	
Retail					230	
Restaurant					550	
Cinema/Entertainment						
Residential		230	550			
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		10	1	0	1	0
Retail	3		17	0	42	0
Restaurant	1	11		0	5	0
Cinema/Entertainment	0	0	0		0	0
Residential	5	15	8	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	816	428	388
Internal Capture Percentage	29%	28%	31%
External Vehicle-Trips[5]	464	244	220
External Transit-Trips[6]	28	15	13
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	64%	24%
Retail	23%	38%
Restaurant	43%	63%
Cinema/Entertainment	N/A	N/A
Residential	25%	21%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

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NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Point Wells Development	**Organization:**	David Evans and Associates, Inc.
Project Location:	20555 RBD NW, Seattle, WA 98177	**Performed By:**	KAHA
Scenario Description:	Urban Center Phase III	**Date:**	9-Dec-19
Analysis Year:	2030	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710/720	35,862	0	52	44	8
Retail	826/850	64,900	0	254	131	123
Restaurant	931	18,000	0	87	71	16
Cinema/Entertainment	-	-	-			
Residential	22/232/230/25	-	2,178	564	128	436
Hotel	-	-	-			
All Other Land Uses[2]	415	19	0	25	18	7
				982	392	590

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.06	10%	0%	1.06	10%	0%
Retail	1.17	10%	0%	1.16	10%	0%
Restaurant		10%	0%		10%	0%
Cinema/Entertainment						
Residential	1.13	10%	0%	1.09	10%	0%
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		2	5	0	0	0
Retail	2		19	0	3	0
Restaurant	5	2		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	5	14	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,083	434	649
Internal Capture Percentage	11%	14%	9%
External Vehicle-Trips[5]	786	304	482
External Transit-Trips[6]	94	35	59
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	17%	88%
Retail	6%	17%
Restaurant	54%	50%
Cinema/Entertainment	N/A	N/A
Residential	3%	4%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

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NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Point Wells Development	**Organization:**	David Evans and Associates, Inc.
Project Location:	20555 RBD NW, Seattle, WA 98177	**Performed By:**	KAHA
Scenario Description:	Urban Center Phase III	**Date:**	9-Dec-19
Analysis Year:	2030	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710/720	35,862	0	60	13	47
Retail	826/850	64,900	0	314	150	164
Restaurant	931	18,000	0	140	94	46
Cinema/Entertainment	-	-	-			
Residential	22/232/230/25	-	2,178	653	395	258
Hotel	-	-	-			
All Other Land Uses[2]	415	19	0	25	7	18
				1,192	659	533

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.11	10%	0%	1.07	10%	0%
Retail	1.21	10%	0%	1.18	10%	0%
Restaurant	1.62	10%	0%	1.52	10%	0%
Cinema/Entertainment						
Residential	1.15	10%	0%	1.21	10%	0%
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		610	1050		850	
Retail					240	
Restaurant					1020	
Cinema/Entertainment						
Residential		240	1020			
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		9	1	0	1	0
Retail	4		44	0	50	0
Restaurant	2	29		0	12	0
Cinema/Entertainment	0	0	0		0	0
Residential	7	18	16	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,453	809	644
Internal Capture Percentage	27%	24%	30%
External Vehicle-Trips[5]	800	458	342
External Transit-Trips[6]	105	61	44
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	93%	22%
Retail	31%	51%
Restaurant	40%	61%
Cinema/Entertainment	N/A	N/A
Residential	14%	13%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

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NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Point Wells Development	**Organization:**	David Evans and Associates, Inc.
Project Location:	20555 RBD NW, Seattle, WA 98177	**Performed By:**	KAHA
Scenario Description:	Urban Center Phase IV	**Date:**	9-Dec-19
Analysis Year:	2035	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710/720	35,862	0	52	44	8
Retail	826/850	64,900	0	254	131	123
Restaurant	931	18,000	0	87	71	16
Cinema/Entertainment	-	-	-			
Residential	22/232/230/25	-	3,081	791	182	609
Hotel	-	-	-			
All Other Land Uses[2]	415	19	0	25	18	7
				1,209	446	763

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.06	15%	0%	1.06	15%	0%
Retail	1.17	15%	0%	1.16	15%	0%
Restaurant		15%	0%		15%	0%
Cinema/Entertainment						
Residential	1.13	15%	0%	1.09	15%	0%
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		2	5	0	0	0
Retail	2		19	0	4	0
Restaurant	5	2		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	7	14	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,333	495	838
Internal Capture Percentage	9%	13%	7%
External Vehicle-Trips[5]	933	331	602
External Transit-Trips[6]	177	62	115
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	17%	88%
Retail	7%	17%
Restaurant	54%	50%
Cinema/Entertainment	N/A	N/A
Residential	2%	3%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

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NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Point Wells Development	**Organization:**	David Evans and Associates, Inc.
Project Location:	20555 RBD NW, Seattle, WA 98177	**Performed By:**	KAHA
Scenario Description:	Urban Center Phase IV	**Date:**	9-Dec-19
Analysis Year:	2035	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710/720	35,862	0	60	13	47
Retail	826/850	64,900	0	314	150	164
Restaurant	931	18,000	0	140	94	46
Cinema/Entertainment	-	-	-			
Residential	22/232/230/25	-	3,081	922	555	367
Hotel	-	-	-			
All Other Land Uses[2]	415	19	0	25	7	18
				1,461	819	642

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.11	15%	0%	1.07	15%	0%
Retail	1.21	15%	0%	1.18	15%	0%
Restaurant	1.62	15%	0%	1.52	15%	0%
Cinema/Entertainment						
Residential	1.15	15%	0%	1.21	15%	0%
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		610	1050		1050	
Retail					440	
Restaurant					1220	
Cinema/Entertainment						
Residential		440	1220			
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		9	1	0	1	0
Retail	4		44	0	50	0
Restaurant	2	29		0	11	0
Cinema/Entertainment	0	0	0		0	0
Residential	7	17	15	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,769	993	776
Internal Capture Percentage	21%	19%	24%
External Vehicle-Trips[5]	989	571	418
External Transit-Trips[6]	204	119	85
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	93%	22%
Retail	30%	51%
Restaurant	39%	60%
Cinema/Entertainment	N/A	N/A
Residential	10%	9%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

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Table 1: Urban Center Alt Cumulative Trip Generation by Project Phase_Daily (5%, 5%, 10%, 15% Transit)

Description	Phase 1			Phases 1-2			Phases 1-3			Phases 1-4		
	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
Gross Trips	**3,599**	1,799	1,799	**6,356**	3,178	3,178	**11,141**	5,571	5,571	**13,655**	6,828	6,828
Net Trips Reduction (with Transit and Internal Capture)	**685**	342	342	**1,525**	763	763	**2,944**	1,472	1,472	**3,765**	1,883	1,883
Total Net Trips	**2,914**	1,457	1,457	**4,831**	2,415	2,415	**8,197**	4,098	4,098	**9,890**	4,945	4,945
Net Trip Reduction	**19.0%**			**24.0%**			**26.4%**			**27.6%**		

Table 2: Urban Center Alt Cumulative Trip Generation by Project Phase_AM Peak Hour (5%, 5%, 10%, 15% Transit)

Description	Phase 1			Phases 1-2			Phases 1-3			Phases 1-4		
	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
Gross Trips	**360**	140	220	**543**	247	296	**982**	392	590	**1,209**	446	763
Net Trips Reduction (with Transit and Internal Capture)	**49**	23	26	**88**	43	45	**196**	88	108	**276**	115	161
Total Net Trips	**311**	117	194	**455**	204	251	**786**	304	482	**933**	331	602
Net Trip Reduction	**13.6%**			**16.2%**			**20.0%**			**22.8%**		

Table 3: Urban Center Alt Cumulative Trip Generation by Project Phase_PM Peak Hour (5%, 5%, 10%, 15% Transit)

Description	Phase 1			Phases 1-2			Phases 1-3			Phases 1-4		
	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
Gross Trips	**385**	217	168	**680**	352	328	**1,192**	659	533	**1,461**	819	642
Net Trips Reduction (with Transit and Internal Capture)	**94**	48	46	**216**	108	108	**392**	201	191	**472**	248	224
Total Net Trips	**291**	169	122	**464**	244	220	**800**	458	342	**989**	571	418
Net Trip Reduction	**24.4%**			**31.8%**			**32.9%**			**32.3%**		

Table 4: Urban Center Alt Trip Generation by Project Phase_Daily (5%, 5%, 10%, 15% Transit)

Description	Phase 1			Phase 2			Phase 3			Phase 4		
	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
Gross Trips	4,933	2,467	2,467	2,757	1,379	1,379	4,785	2,393	2,393	2,514	1,257	1,257
Net Trips Reduction (with Transit and Internal Capture)	685	342	342	840	420	420	1,419	710	710	821	410	410
Total Net Trips	**4,248**	**2,124**	**2,124**	**1,917**	**958**	**958**	**3,366**	**1,683**	**1,683**	**1,693**	**847**	**847**

Table 5: Urban Center Alt Trip Generation by Project Phase_AM Peak Hour (5%, 5%, 10%, 15% Transit)

Description	Phase 1			Phase 2			Phase 3			Phase 4		
	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
Gross Trips	360	140	220	183	107	76	439	145	294	227	54	173
Net Trips Reduction (with Transit and Internal Capture)	49	23	26	39	20	19	108	45	63	80	27	53
Total Net Trips	**311**	**117**	**194**	**144**	**87**	**57**	**331**	**100**	**231**	**147**	**27**	**120**

Table 6: Urban Center Alt Trip Generation by Project Phase_PM Peak Hour (5%, 5%, 10%, 15% Transit)

Description	Phase 1			Phase 2			Phase 3			Phase 4		
	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
Gross Trips	385	217	168	295	135	160	512	307	205	269	160	109
Net Trips Reduction (with Transit and Internal Capture)	94	48	46	122	60	62	176	93	83	80	47	33
Total Net Trips	**291**	**169**	**122**	**173**	**75**	**98**	**336**	**214**	**122**	**189**	**113**	**76**