

TECHNICAL MEMORANDUM

TO: Evan French, Sr Development Manager, Wesgroup Properties
FROM: Gary Vlieg, P.Eng., Creative Transportation Solutions Ltd. (CTS)
DATE: 1 February 2022
RE: Coronation Park Development TIA – Supplemental Letter for OCP
FILE NO: 7224-01

CTS was retained by Wesgroup to provide traffic engineering advice regarding a proposed mixed-use development in the Coronation Park neighbourhood of the City of Port Moody. CTS conducted an analysis of transportation considerations and issued a technical report in November 2021 to the City of Port Moody.

This supplemental memo addresses a proposed increase in job-providing density on the site and the impacts of the increased density on the previous analyses conducted.

1.0 BACKGROUND

Wesgroup are proposing a revised massing for the proposed development that aligns with previous OCP bylaw amendment restrictions. The key changes to site statistics since the last transportation analysis conducted by CTS are as follows:

- A total commercial area of 76,428.7 square feet; and
- A total office area of 54,000 square feet.

In addition to this increased density, the development proposal has shifted the residential development to the eastern edge of the site such that the shorter buildings are located along loco Road and the taller buildings on Balmoral Drive. This shift will not affect transit ridership as the typical walking distance used for rail rapid transit is 800 metres and the furthest corner of the site is less than 450 metres from the Inlet Centre Station.

While the residential development is shifting on the site, at the present time the access points to the underground parking remain unchanged. Through the rezoning process, if the access points are relocated, the rezoning transportation impact assessment will ascertain if the vehicular traffic assignment also changes. There may be an opportunity to re-distribute the site generated traffic to reduce the impact to the adjacent street network.

2.0 IMPACT OF REVISED SITE STATISTICS ON VEHICLE TRIPS

CTS conducted a transportation study in November 2021 using a lower estimate and upper estimate for residential trips generated by the proposed mixed-use, transit-oriented development in Coronation Park. It is noted that these estimates were made using existing site statistics available at the time, which were subject to change as this stage was prior to rezoning.

Summaries for the lower and upper trip generation estimates as shown in **TABLE 1** and **TABLE 2** respectively.

**TABLE 1
TRIP GENERATION TABLE
(LOWER ESTIMATE)**

Land Use	Peak Hour	Trip Generation Variable	Scope of Development	Vehicle Trip Generation Rate	Trip Rate Source	Directional Split		Gross Peak Hour Volumes (vph)			Reduction Internal Capture	Net Peak Hour Volumes (vph)		
						% in	% out	in	out	total	%	in	out	total
Mid Rise Multifamily Housing (Total)	Weekday Morning	Dwelling Units	445	0.20	ITE Code 221 (10th Edition) Dense	12%	88%	11	78	89	0%	11	78	89
	Weekday Afternoon			0.18		72%	28%	58	23	81	0%	58	23	81
High Rise Multifamily Housing (Total)	Weekday Morning	Dwelling Units	2220	0.21	ITE Code 222 (10th Edition) Dense	12%	88%	56	411	467	0%	56	411	467
	Weekday Afternoon			0.19		70%	30%	295	127	422	0%	295	127	422
Drug Store (Parcel 1)	Weekday Morning	1000 sq. ft.	18.24	2.94	ITE 10th Edition - Code 880	65%	35%	35	19	54	20%	28	15	43
	Weekday Afternoon			8.51		49%	51%	76	80	156	20%	61	64	125
CRU - Clinic (Parcel 1)	Weekday Morning	1000 sq. ft.	7.34	3.69	ITE 10th Edition - Code 630	78%	22%	22	6	28	20%	17	5	22
	Weekday Afternoon			3.28		29%	71%	7	18	25	20%	6	14	20
Grocery (Parcel 2)	Weekday Morning	1000 sq. ft.	34.79	3.82	ITE 10th Edition - Code 850	60%	40%	80	53	133	20%	63	43	106
	Weekday Afternoon			9.24		51%	49%	164	158	322	20%	132	126	258
Office (Parcel 2)	Weekday Morning	1000 sq. ft.	29.25	1.16	ITE 10th Edition - Code 710	86%	14%	29	5	34	20%	23	4	27
	Weekday Afternoon			1.15		16%	84%	5	29	34	20%	4	23	27
Restaurant (Parcel 2)	Weekday Morning	1000 sq. ft.	9.46	9.94	ITE 10th Edition - Code 932	55%	45%	52	43	95	20%	42	34	76
	Weekday Afternoon			9.77		62%	38%	58	35	93	20%	46	28	74
Total	Weekday Morning Peak Hour											241	590	831
	Weekday Afternoon Peak Hour											602	405	1007

TABLE 2
TRIP GENERATION TABLE
(UPPER ESTIMATE)

Land Use	Peak Hour	Trip Generation Variable	Scope of Development	Vehicle Trip Generation Rate	Trip Rate Source	Directional Split		Gross Peak Hour Volumes (vph)			Reduction Internal Capture	Net Peak Hour Volumes (vph)		
						% in	% out	in	out	total	%	in	out	total
Mid Rise Multifamily Housing (Total)	Weekday Morning	Dwelling Units	445	0.34	Local Trip Rate	19%	81%	29	123	152	0%	29	123	152
	Weekday Afternoon			0.37		74%	26%	122	43	165	0%	122	43	165
High Rise Multifamily Housing (Total)	Weekday Morning	Dwelling Units	2220	0.34	Local Trip Rate	19%	81%	143	612	755	0%	143	612	755
	Weekday Afternoon			0.37		74%	26%	608	214	822	0%	608	214	822
Drug Store (Parcel 1)	Weekday Morning	1000 sq. ft.	18.24	2.94	ITE 10th Edition - Code 880	65%	35%	35	19	54	20%	28	15	43
	Weekday Afternoon			8.51		49%	51%	76	80	156	20%	61	64	125
CRU - Clinic (Parcel 1)	Weekday Morning	1000 sq. ft.	7.34	3.69	ITE 10th Edition - Code 630	78%	22%	22	6	28	20%	17	5	22
	Weekday Afternoon			3.28		29%	71%	7	18	25	20%	6	14	20
Grocery (Parcel 2)	Weekday Morning	1000 sq. ft.	34.79	3.82	ITE 10th Edition - Code 850	60%	40%	80	53	133	20%	63	43	106
	Weekday Afternoon			9.24		51%	49%	164	158	322	20%	132	126	258
Office (Parcel 2)	Weekday Morning	1000 sq. ft.	29.25	1.16	ITE 10th Edition - Code 710	86%	14%	29	5	34	20%	23	4	27
	Weekday Afternoon			1.15		16%	84%	5	29	34	20%	4	23	27
Restaurant (Parcel 2)	Weekday Morning	1000 sq. ft.	9.46	9.94	ITE 10th Edition - Code 932	55%	45%	52	43	95	20%	42	34	76
	Weekday Afternoon			9.77		62%	38%	58	35	93	20%	46	28	74
Total	Weekday Morning Peak Hour											346	836	1182
	Weekday Afternoon Peak Hour											979	512	1491

A revised scheme by Wesgroup Properties was provided to CTS showing updated site statistics to align with the existing OCP bylaw amendment restrictions.

CTS updated the lower and upper trip generation estimates using the revised site plan. A summary of the revised trip generation estimates are shown in **TABLE 3** and **TABLE 4** respectively.

TABLE 3
REVISED TRIP GENERATION TABLE
(LOWER ESTIMATE)

Land Use	Peak Hour	Trip Generation Variable	Scope of Development	Vehicle Trip Generation Rate	Trip Rate Source	Directional Split		Gross Peak Hour Volumes (vph)			Reduction Internal Capture	Net Peak Hour Volumes (vph)		
						% in	% out	in	out	total	%	in	out	total
Mid Rise Multifamily Housing (Total)	Weekday Morning	Dwelling Units	445	0.20	ITE Code 221 (10th Edition) Dense	12%	88%	11	78	89	0%	11	78	89
	Weekday Afternoon			0.18		72%	28%	58	23	81	0%	58	23	81
High Rise Multifamily Housing (Total)	Weekday Morning	Dwelling Units	2220	0.21	ITE Code 222 (10th Edition) Dense	12%	88%	56	411	467	0%	56	411	467
	Weekday Afternoon			0.19		70%	30%	295	127	422	0%	295	127	422
Drug Store (Parcel 1)	Weekday Morning	1000 sq. ft.	19.97	2.94	ITE 10th Edition - Code 880	65%	35%	38	21	59	20%	30	17	47
	Weekday Afternoon			8.51		49%	51%	83	87	170	20%	67	69	136
CRU - Clinic (Parcel 1)	Weekday Morning	1000 sq. ft.	8.03	3.69	ITE 10th Edition - Code 630	78%	22%	23	7	30	20%	19	5	24
	Weekday Afternoon			3.28		29%	71%	8	19	27	20%	7	15	22
Grocery (Parcel 2)	Weekday Morning	1000 sq. ft.	38.08	3.82	ITE 10th Edition - Code 850	60%	40%	88	58	146	20%	70	47	117
	Weekday Afternoon			9.24		51%	49%	180	172	352	20%	144	138	282
Office (Parcel 2)	Weekday Morning	1000 sq. ft.	54.00	1.16	ITE 10th Edition - Code 710	86%	14%	54	9	63	20%	43	7	50
	Weekday Afternoon			1.15		16%	84%	10	53	63	20%	8	42	50
Restaurant (Parcel 2)	Weekday Morning	1000 sq. ft.	10.35	9.94	ITE 10th Edition - Code 932	55%	45%	57	46	103	20%	45	37	82
	Weekday Afternoon			9.77		62%	38%	63	39	102	20%	51	31	82
Total	Weekday Morning Peak Hour											275	602	877
	Weekday Afternoon Peak Hour											629	445	1074

TABLE 4
REVISED TRIP GENERATION TABLE
(UPPER ESTIMATE)

Land Use	Peak Hour	Trip Generation Variable	Scope of Development	Vehicle Trip Generation Rate	Trip Rate Source	Directional Split		Gross Peak Hour Volumes (vph)			Reduction Internal Capture	Net Peak Hour Volumes (vph)		
						% in	% out	in	out	total	%	in	out	total
Mid Rise Multifamily Housing (Total)	Weekday Morning	Dwelling Units	445	0.34	Local Trip Rate	19%	81%	29	123	152	0%	29	123	152
	Weekday Afternoon			0.37		74%	26%	122	43	165	0%	122	43	165
High Rise Multifamily Housing (Total)	Weekday Morning	Dwelling Units	2220	0.34	Local Trip Rate	19%	81%	143	612	755	0%	143	612	755
	Weekday Afternoon			0.37		74%	26%	608	214	822	0%	608	214	822
Drug Store (Parcel 1)	Weekday Morning	1000 sq. ft.	19.96	2.94	ITE 10th Edition - Code 880	65%	35%	38	21	59	20%	30	17	47
	Weekday Afternoon			8.51		49%	51%	83	87	170	20%	67	69	136
CRU - Clinic (Parcel 1)	Weekday Morning	1000 sq. ft.	8.03	3.69	ITE 10th Edition - Code 630	78%	22%	23	7	30	20%	19	5	24
	Weekday Afternoon			3.28		29%	71%	8	19	27	20%	7	15	22
Grocery (Parcel 2)	Weekday Morning	1000 sq. ft.	38.07	3.82	ITE 10th Edition - Code 850	60%	40%	88	58	146	20%	70	47	117
	Weekday Afternoon			9.24		51%	49%	180	172	352	20%	144	138	282
Office (Parcel 2)	Weekday Morning	1000 sq. ft.	54.00	1.16	ITE 10th Edition - Code 710	86%	14%	54	9	63	20%	43	7	50
	Weekday Afternoon			1.15		16%	84%	10	53	63	20%	8	42	50
Restaurant (Parcel 2)	Weekday Morning	1000 sq. ft.	10.35	9.94	ITE 10th Edition - Code 932	55%	45%	57	46	103	20%	45	37	82
	Weekday Afternoon			9.77		62%	38%	63	39	102	20%	51	31	82
Total	Weekday Morning Peak Hour											380	848	1228
	Weekday Afternoon Peak Hour											1006	552	1558

Comparing the revised trip generation estimates in **TABLE 3** and **4** to the initial trip generation estimates in **TABLE 1** and **2**, the difference in total vehicle trips can be summarized as follows:

- An increase of 46 trips (5.5%) in the AM peak period for the lower trip estimate.
- An increase of 67 trips (6.6%) in the PM peak period for the lower trip estimate.
- An increase of 46 trips (3.9%) in the AM peak period for the upper trip estimate.
- An increase of 67 trips (4.5%) in the PM peak period for the upper trip estimate.

Based on the above comparison, the total increase in trips resulting from updated site statistics is between 3.9% to 6.6% of the total vehicle trips using both the lower and upper estimates for residential trip generation. When this increase in trips generated is assigned to the road network, the increase in volume to individual movements is negligible.

Due to the provision of increased job-producing density, there has been the ability to reduce the overall trip generation due to internal capture. As illustrated in **Tables 3 and 4**, CTS has reduced the quantity of trips added to the network by 20% to reflect “internal trip”, i.e., trips that occur wholly within the development as there is a mix of residential and employment land uses. This internal trip capture will be further refined at the rezoning stage.

One characteristic of increasing the non-residential density is that the directionality of vehicular trip making activity is opposite to that of the residential trip making activity. For residential trips the outbound direction is peaked during the AM (80%) and inbound during the PM (75%) as compared to office trips where during the AM there is 14% outbound (86% inbound) and during the PM 16% inbound (84% outbound). The net effect of increasing the non-residential land uses is that traffic volumes are more balanced on the road network.

This small increase in vehicle trips in consideration of the site context as a transit-oriented development and the high-level site statistics available for adjacent developments, CTS finds that the proposed increase in job-producing density will not have a significant impact to the transportation network analysis conducted in November 2021.

Once this project moves forward to rezoning with more detailed site development statistics, a comprehensive transportation impact assessment will be undertaken. It is expected that the net trip generation will be less than what is contained in this memo. The TIA will address specific concerns identified in the earlier, high-level study.

Please call the undersigned should you have any questions or comments.

Yours truly,

CREATIVE TRANSPORTATION SOLUTIONS LTD.

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