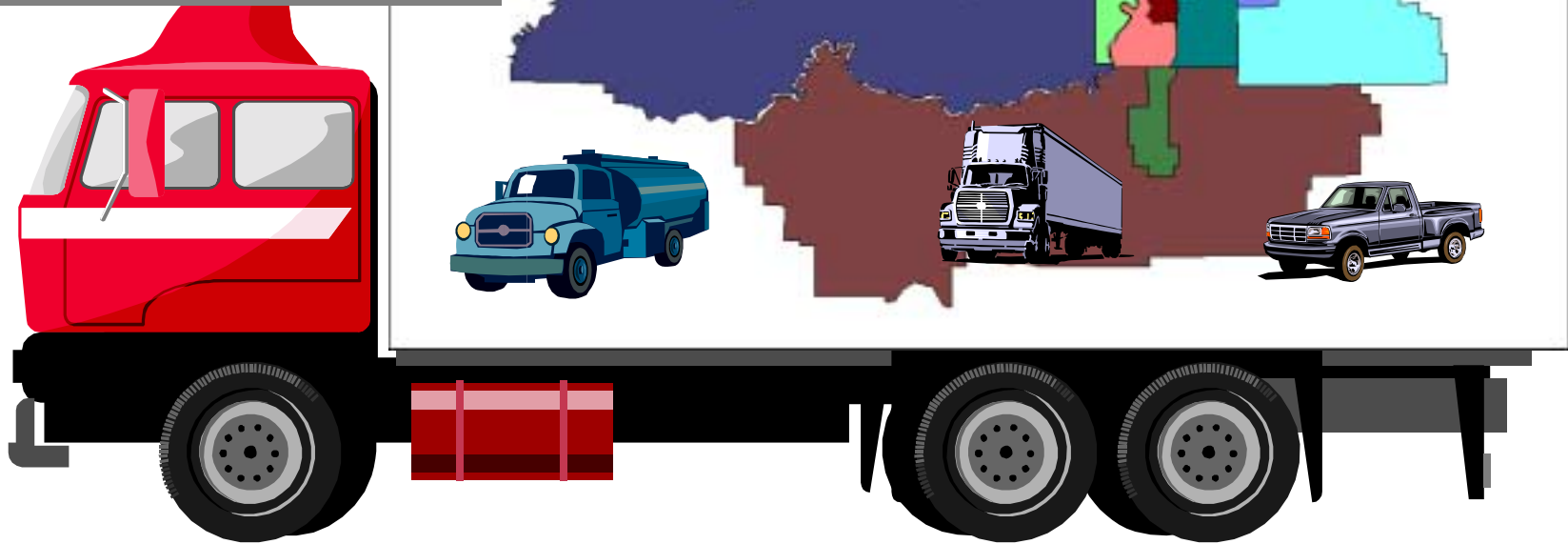


Edmonton Region Commodity Flow Study

A Joint Alberta Transportation,
City of Edmonton and
Economic Development Edmonton
Venture

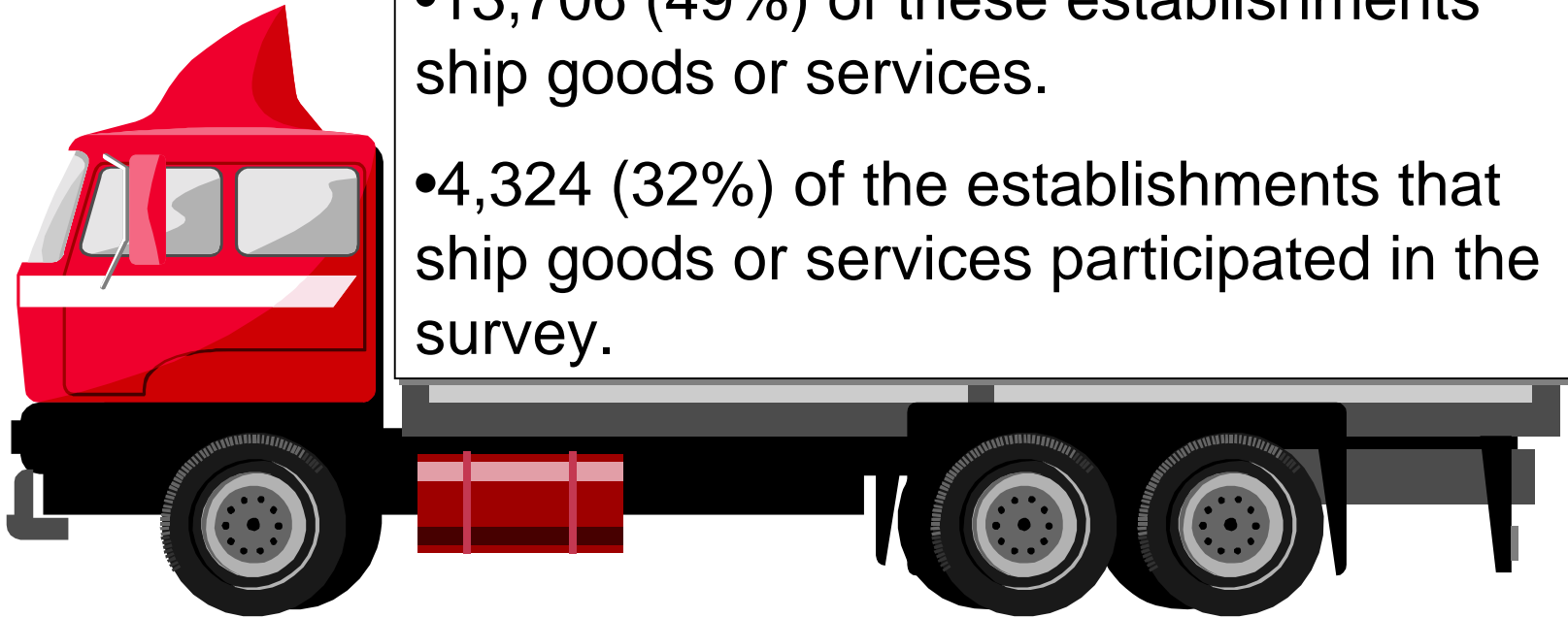
Supported by:

- Alberta Motor Transport Association (AMTA)
- Alberta Capital Region Alliance (ACRA)



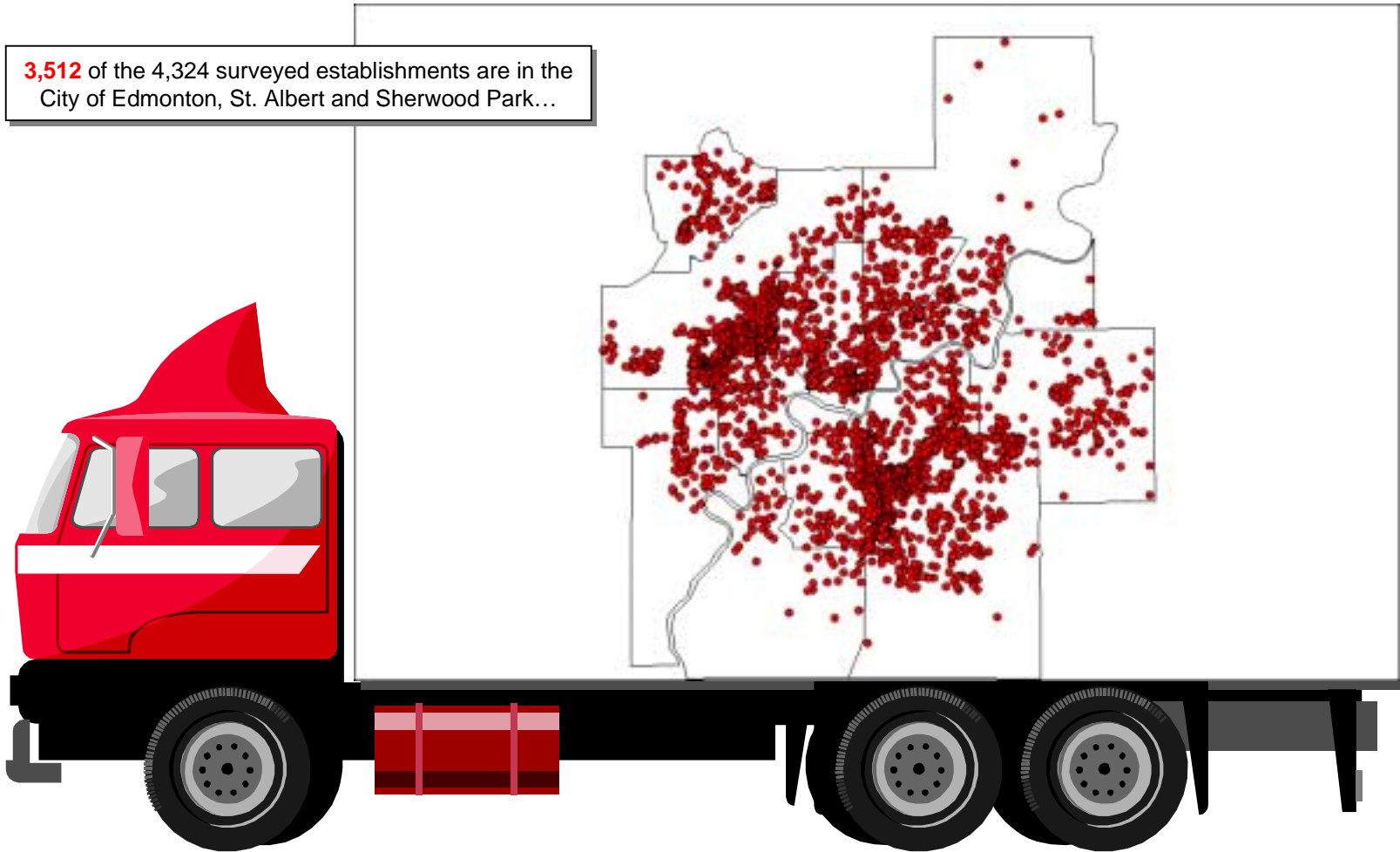
Edmonton Region Commodity Flow Study

- 27,748 business establishments in the Edmonton region were contacted between October 2001 and August 2002.
- 13,706 (49%) of these establishments ship goods or services.
- 4,324 (32%) of the establishments that ship goods or services participated in the survey.



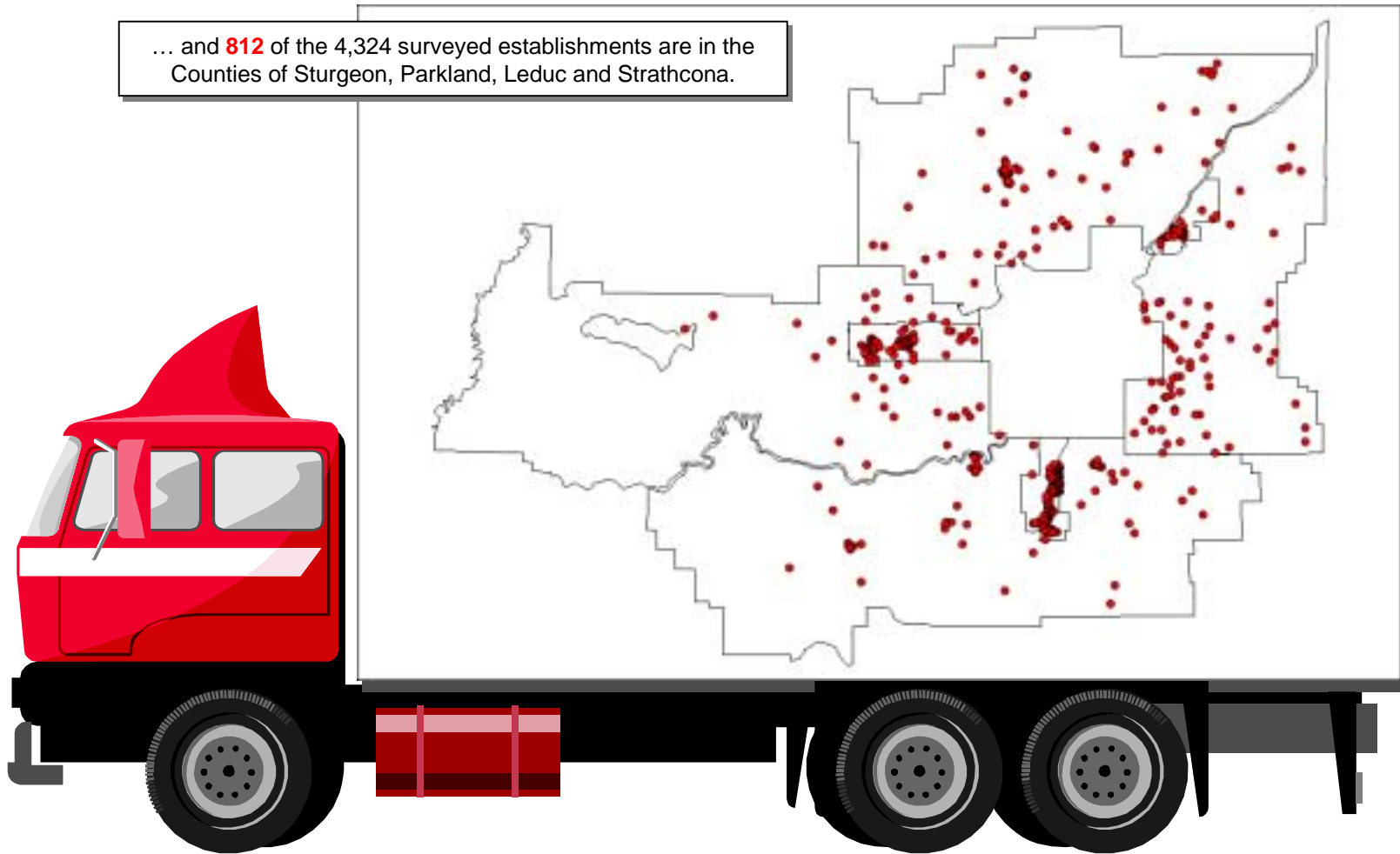
Edmonton Region Commodity Flow Study

3,512 of the 4,324 surveyed establishments are in the City of Edmonton, St. Albert and Sherwood Park...



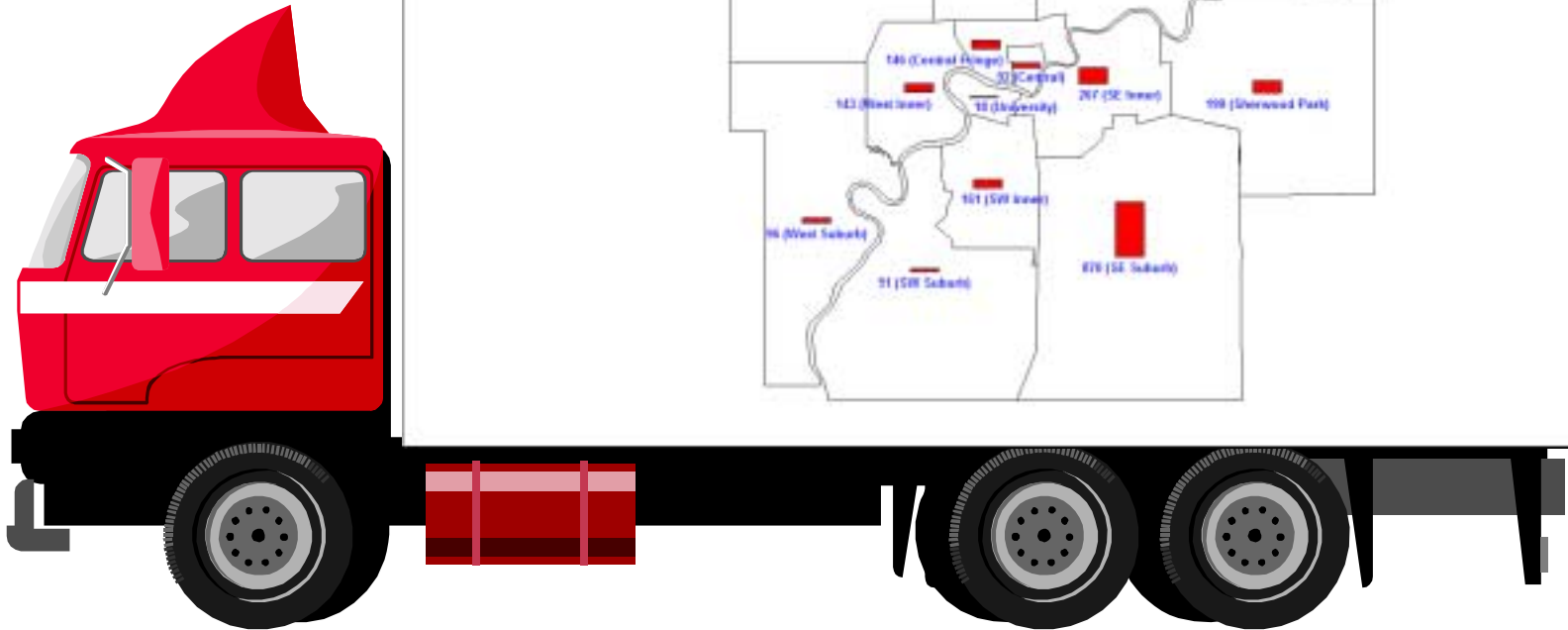
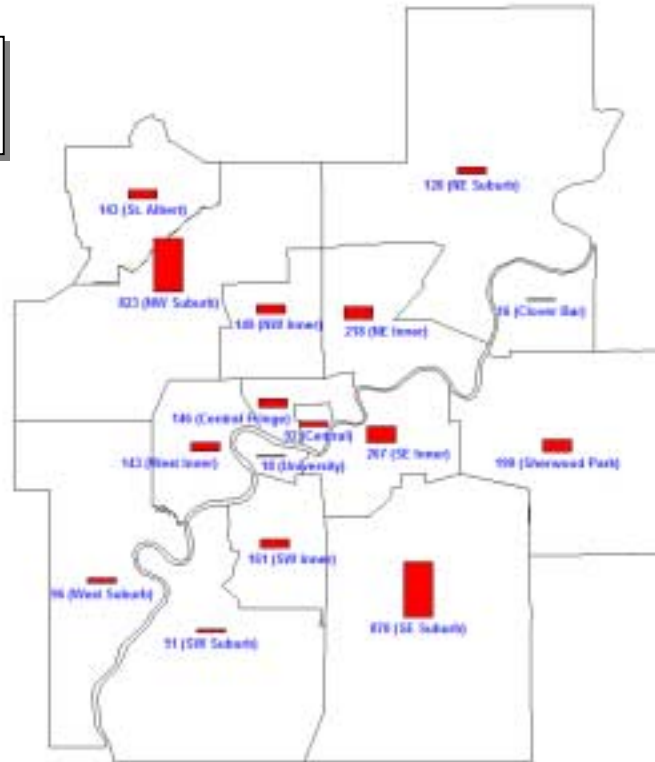
Edmonton Region Commodity Flow Study

... and **812** of the 4,324 surveyed establishments are in the Counties of Sturgeon, Parkland, Leduc and Strathcona.



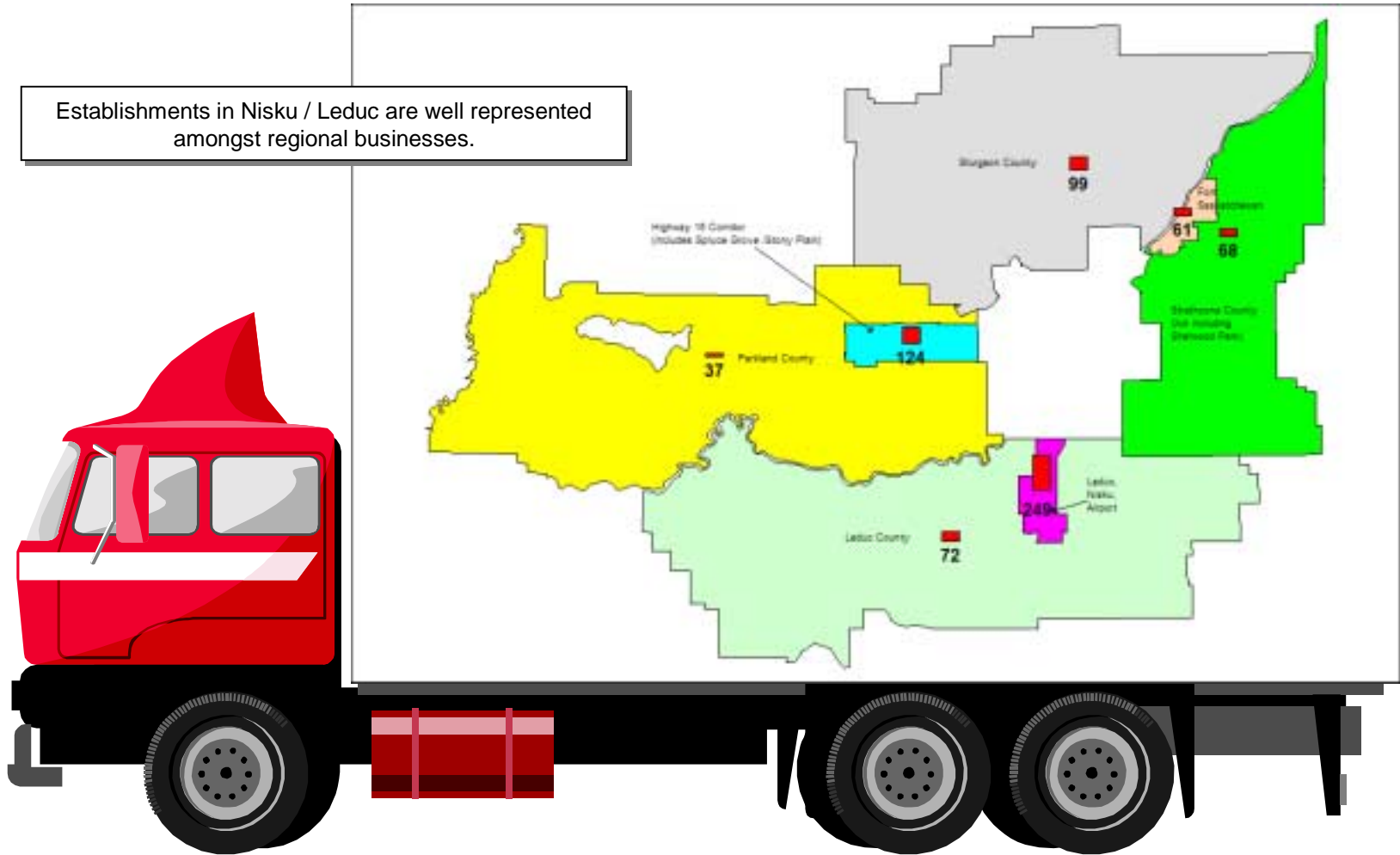
Edmonton Region Commodity Flow Study

About one out of every three establishments surveyed in Edmonton, St. Albert and Sherwood Park are located in the north-west and south-east sectors of Edmonton.



Edmonton Region Commodity Flow Study

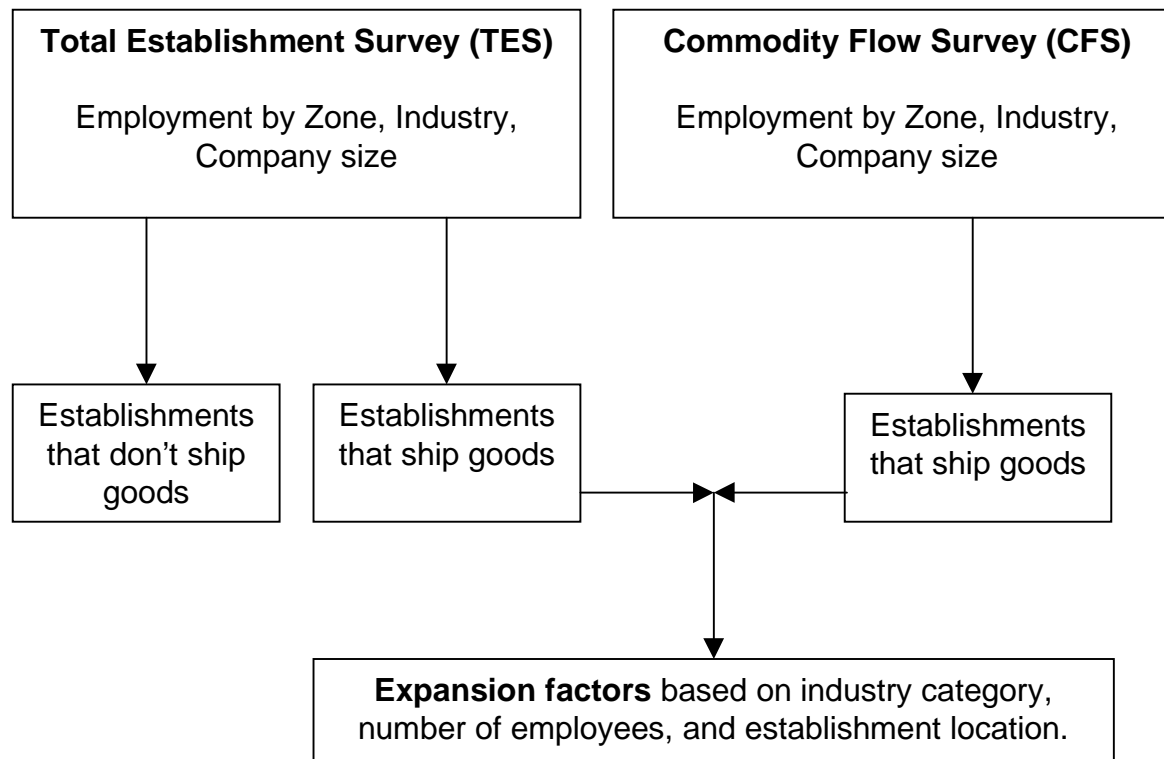
Establishments in Nisku / Leduc are well represented amongst regional businesses.



Edmonton Region Commodity Flow Study

Expansion factors were developed to scale the survey data to the universe of goods and service movements in the Edmonton Region.

This **data expansion** process involved scaling the data from the surveyed establishments to the total number of establishments in the Edmonton CMA across three variables; number of employees, industry, and establishment location.



Edmonton Region Commodity Flow Study

Three vehicles types were used to carry the majority of goods and services throughout the Edmonton Region....

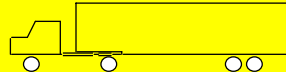
1 Passenger vehicles including pick-up trucks, vans, SUV's and cars.



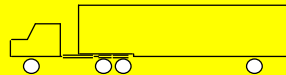
2 Many different types of three or more axle **multi-unit trucks**.



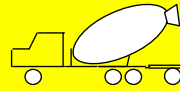
M4 s



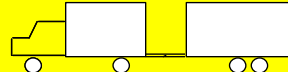
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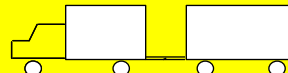
M4 c



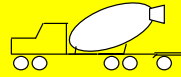
M4 d



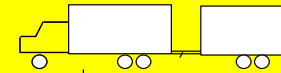
M4 d



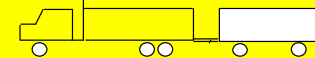
M5 c



M5 d



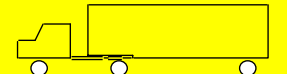
M5 d



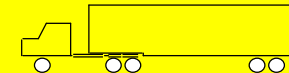
M3 d



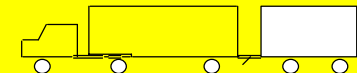
M3 s



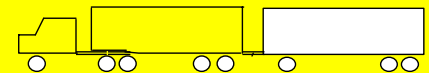
M5 s



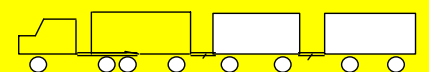
M5 d



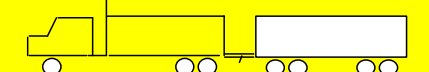
M8 d



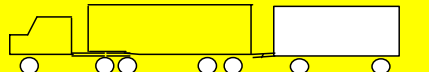
M8 t



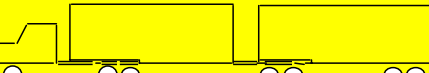
M7 d



M7 d



M7 d



S2 s



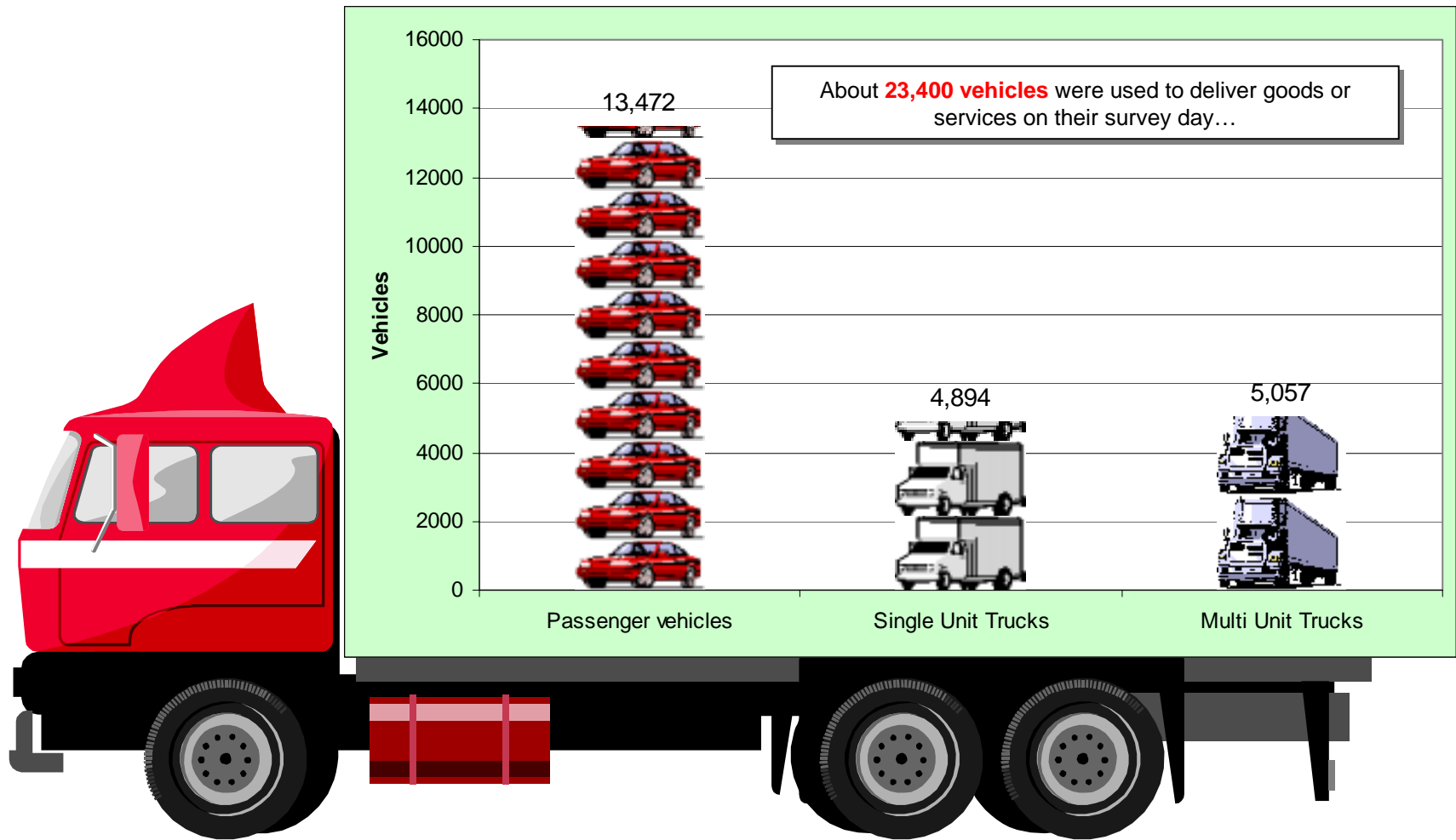
S3 s



3 As well as two or more axle **single-unit trucks**.

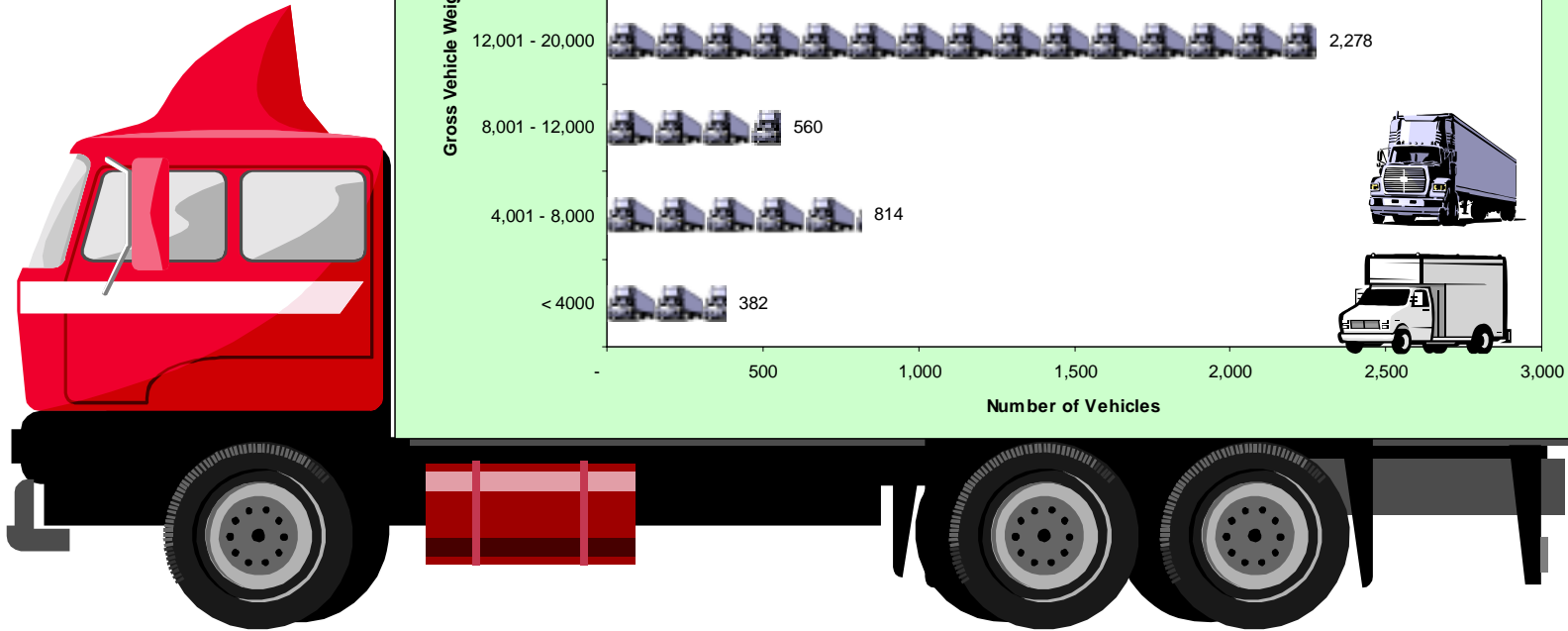
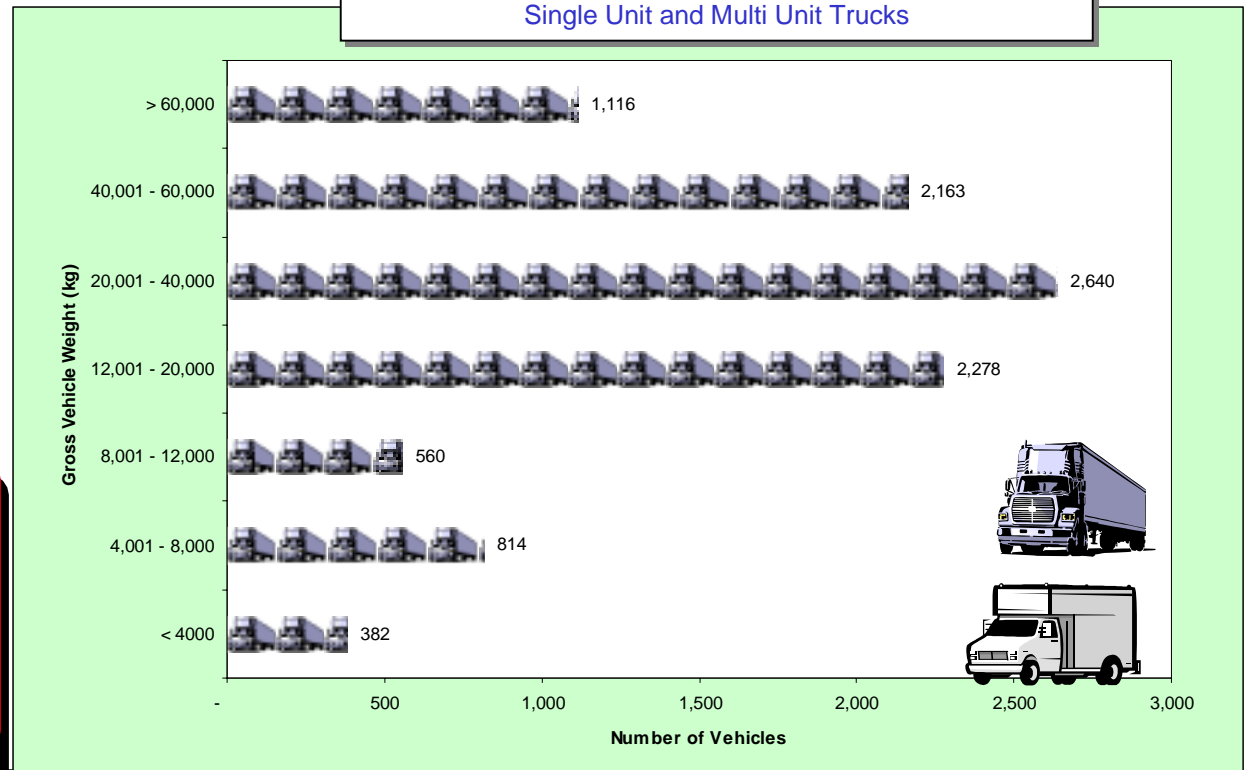


Edmonton Region Commodity Flow Study

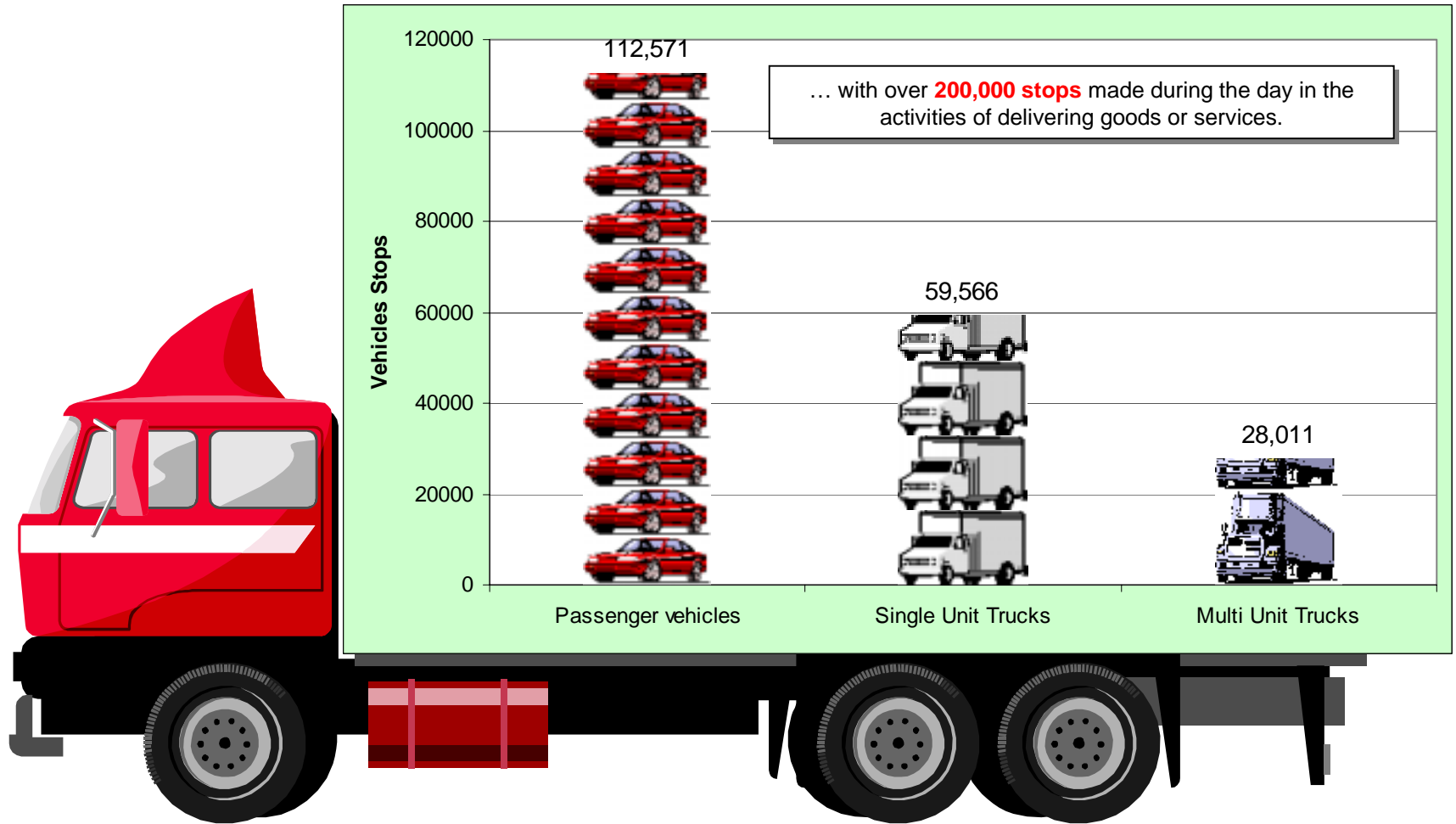


Edmonton Region Commodity Flow Study

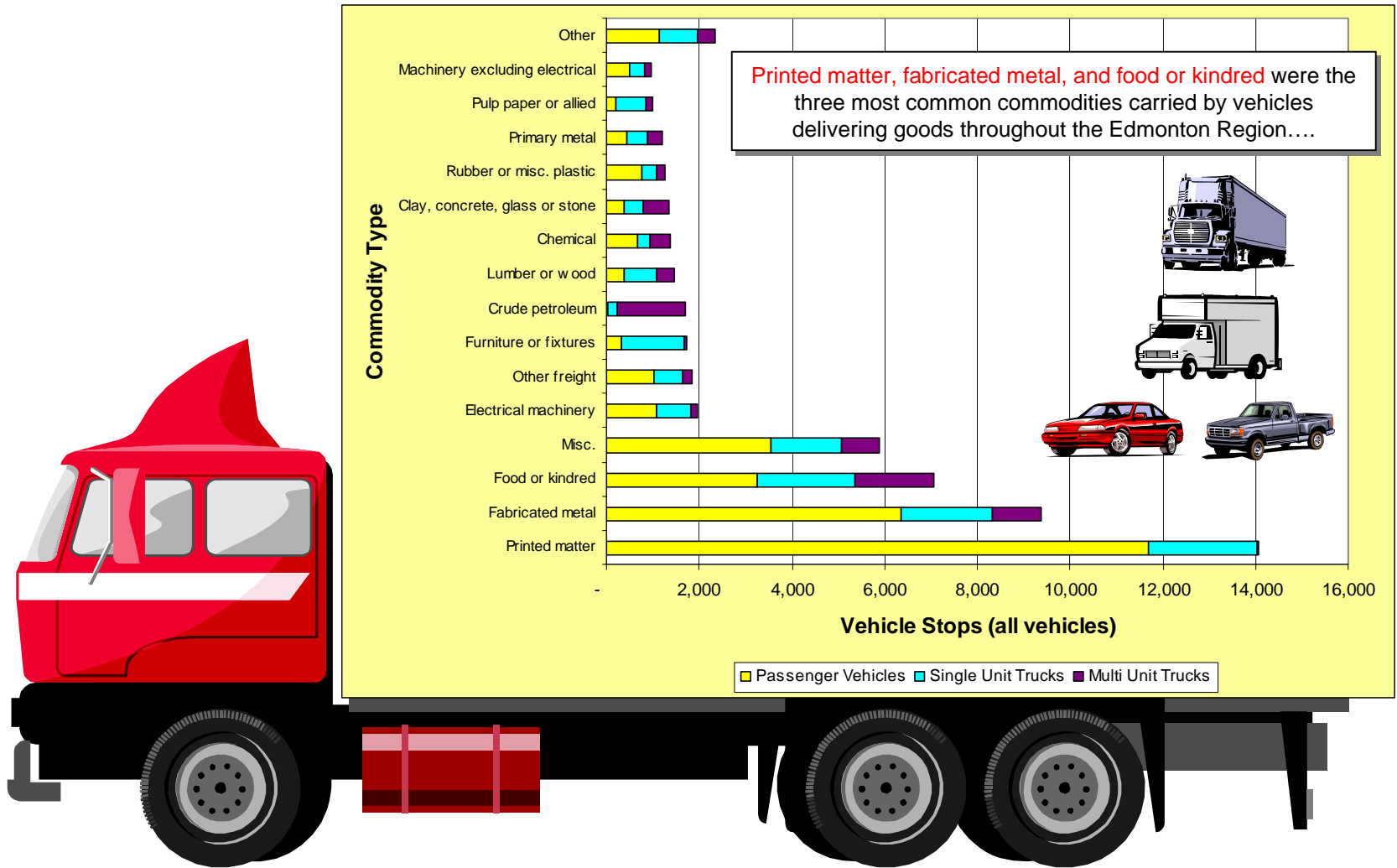
Distribution of Gross Vehicle Weight (kg)
Single Unit and Multi Unit Trucks



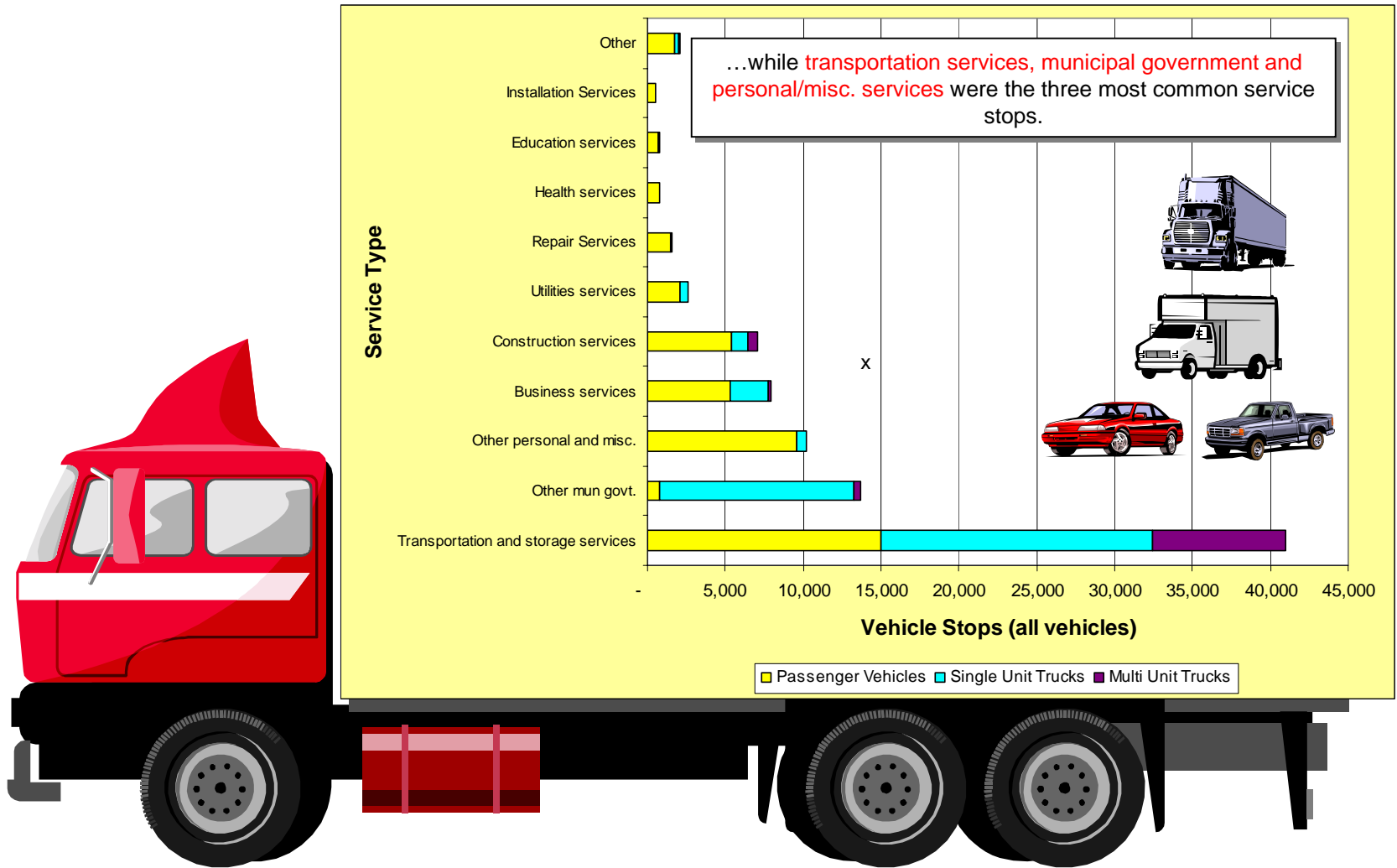
Edmonton Region Commodity Flow Study



Edmonton Region Commodity Flow Study

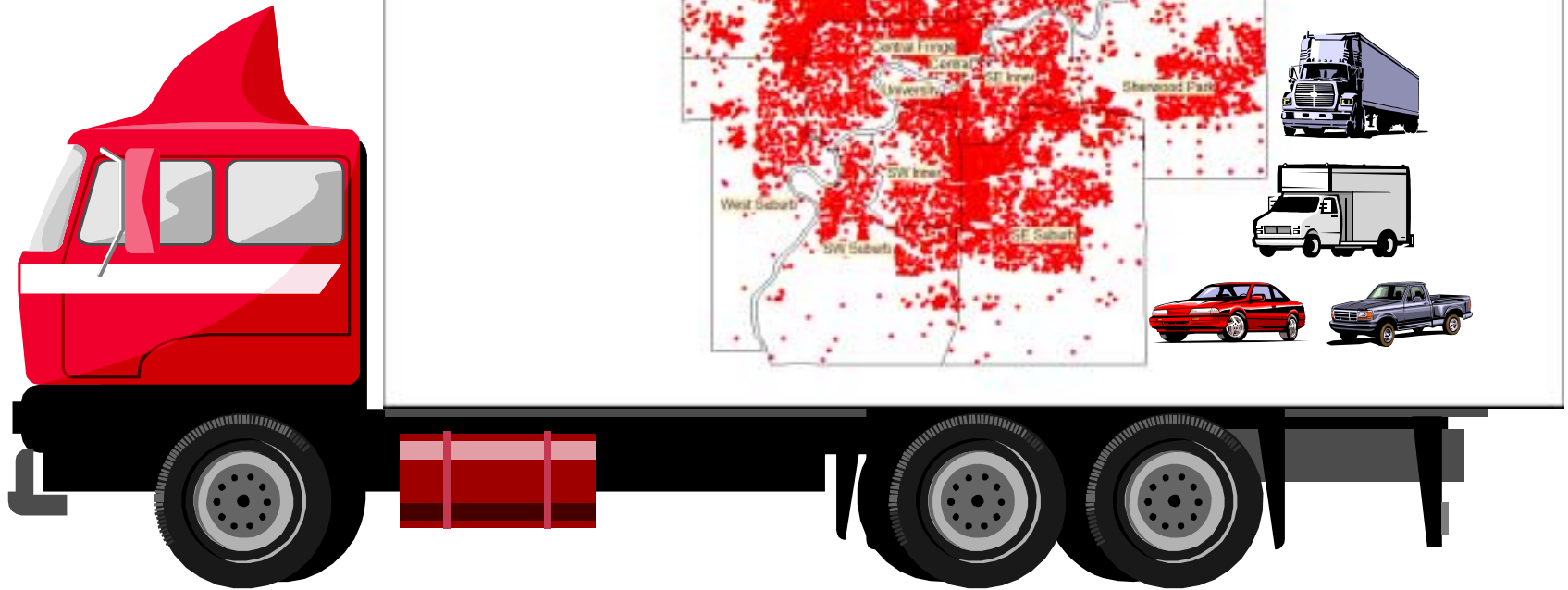


Edmonton Region Commodity Flow Study



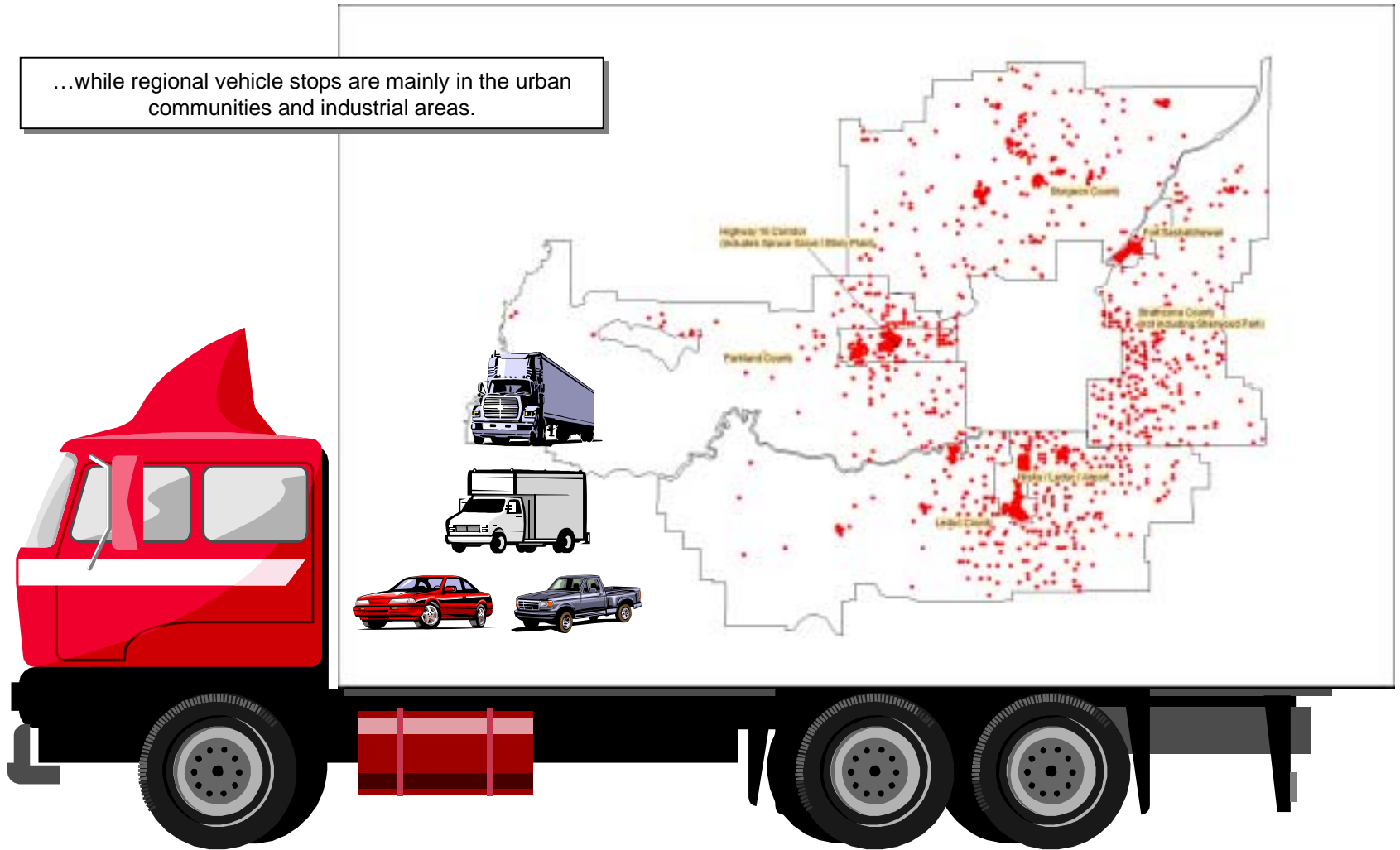
Edmonton Region Commodity Flow Study

The vehicle stops in the Edmonton area are widely distributed throughout all residential and business areas...

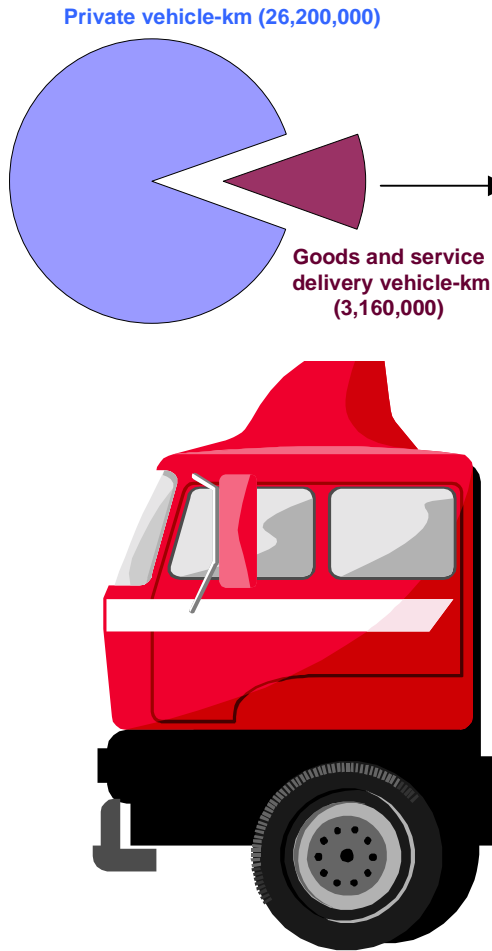


Edmonton Region Commodity Flow Study

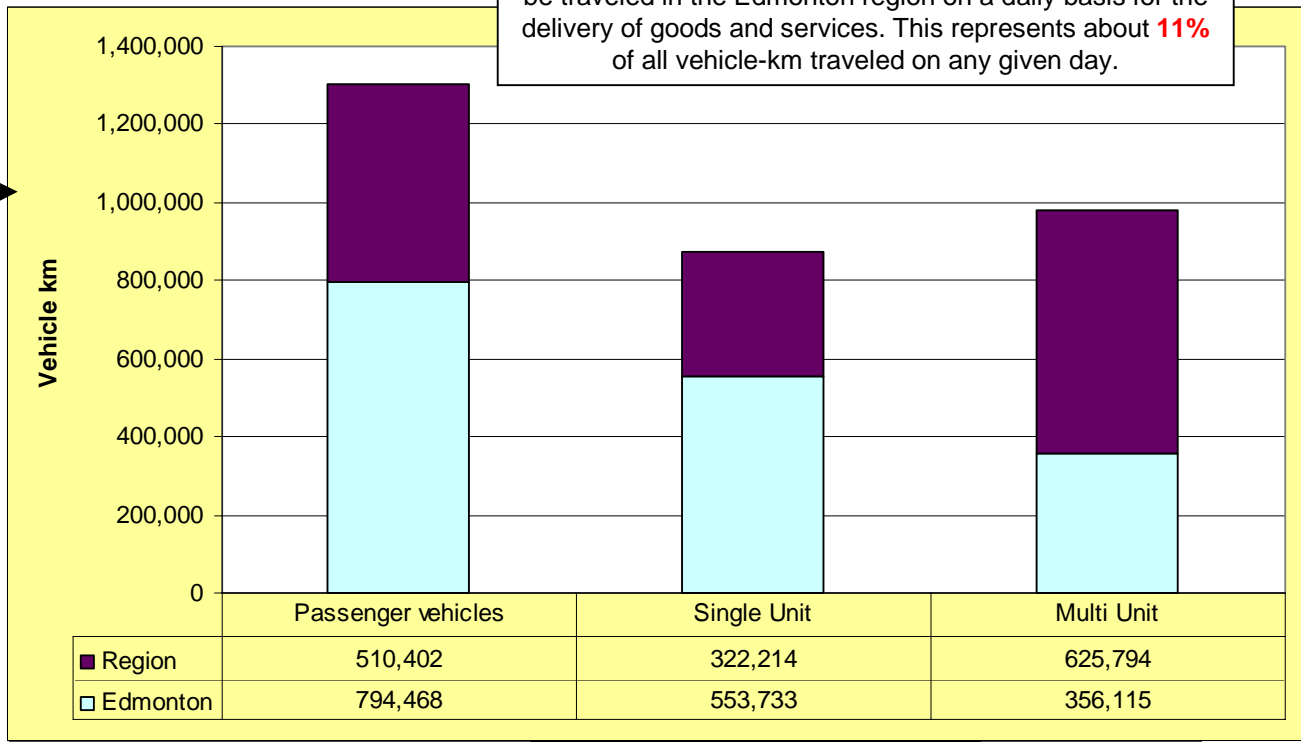
...while regional vehicle stops are mainly in the urban communities and industrial areas.



Edmonton Region Commodity Flow Study



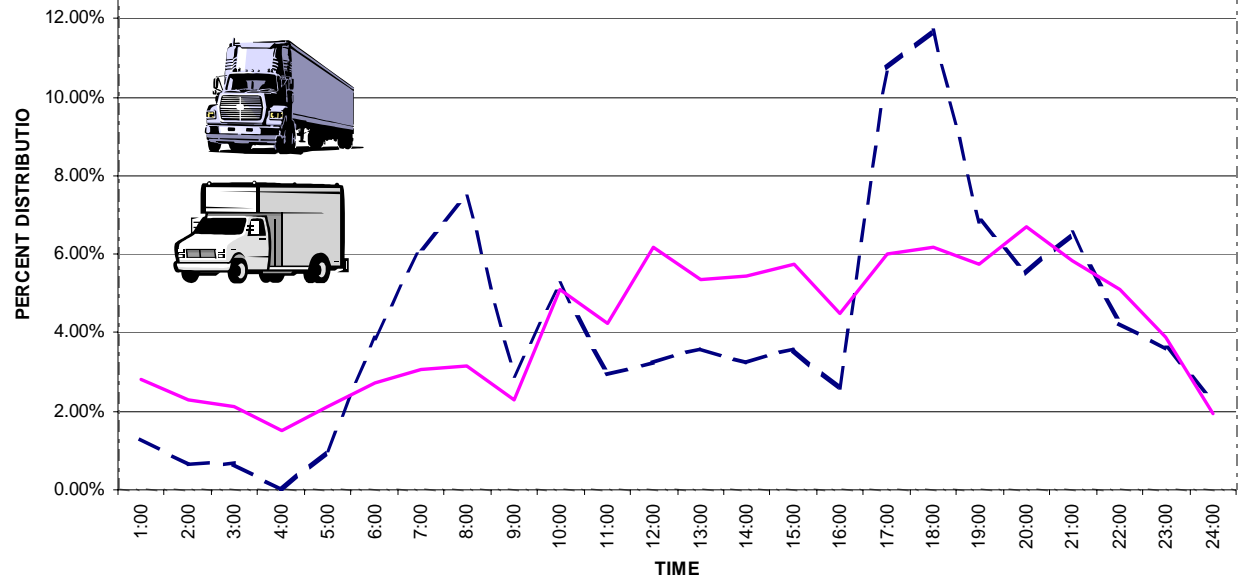
A total of about **3.16 million vehicle-km** are estimated to be traveled in the Edmonton region on a daily basis for the delivery of goods and services. This represents about **11%** of all vehicle-km traveled on any given day.



Edmonton Region Commodity Flow Study

From regional highway traffic counts, a specific AM and PM peak hour is observed for single unit trucks while multi-unit trucks tend to increase in volume as the day progresses....

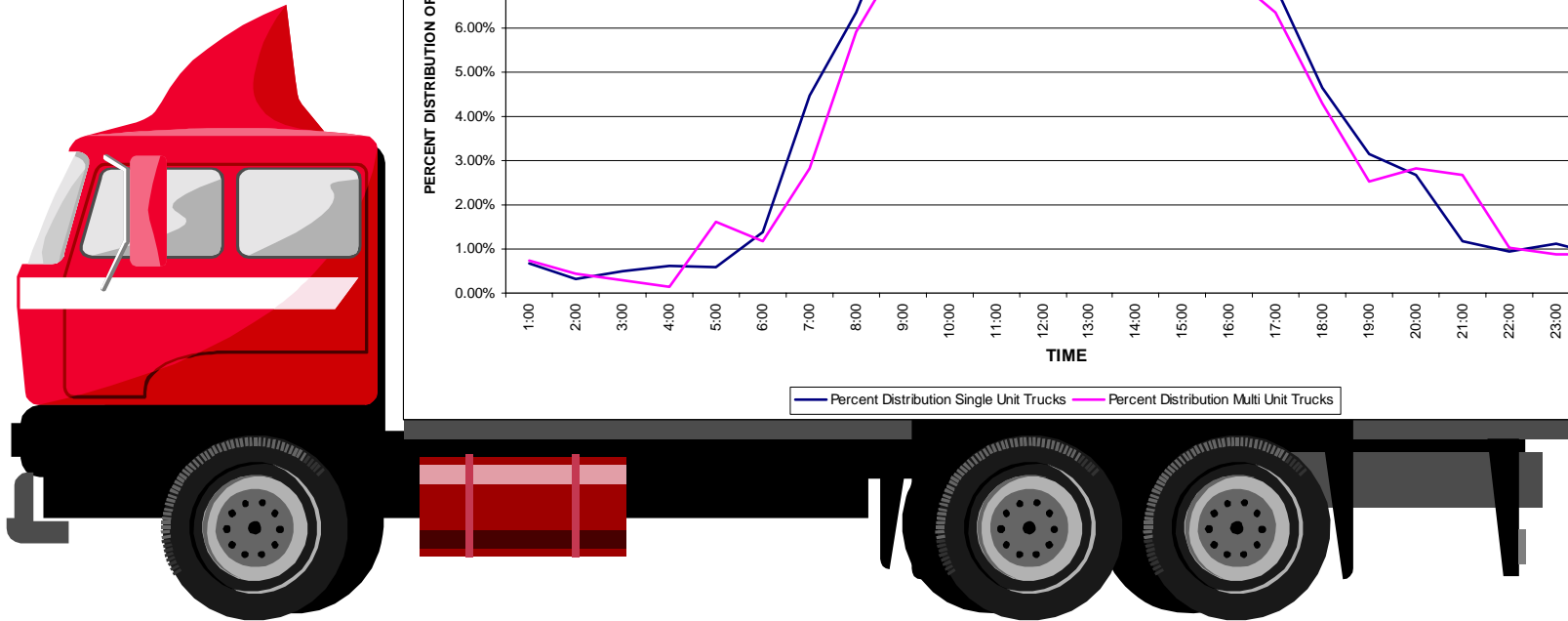
2001 HIGHWAY 16 E of HIGHWAY 21 TRUCK DISTRIBUTION



— Single Unit Percentage — Multi Unit Percentage

Edmonton Region Commodity Flow Study

... while within the City of Edmonton, truck traffic volumes tends to peak between 9AM and 5PM.



Edmonton Region Commodity Flow Study

Daily Vehicle Trips - All Vehicles (not including trips with an origin or destination outside the Edmonton Region)

From	To																							Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
1	1,190	149	865	446	521	431	353	290	910	249	12	721	105	177	286	163	78	40	24	55	3	102	73	7,241
2	115	81	91	32	80	182	254	76	266	31	11	273	125	57	70	27	5	3	16	97	-	15	23	1,932
3	876	142	699	573	829	646	348	450	860	309	41	751	215	274	334	175	60	38	47	98	30	95	57	7,947
4	357	82	577	1,162	1,205	371	261	434	2,066	453	56	790	316	157	277	202	43	43	84	62	13	99	78	9,189
5	605	68	760	1,076	3,227	620	339	224	1,806	1,245	100	906	190	177	532	232	108	81	33	117	57	124	185	12,811
6	354	145	468	368	593	1,519	596	300	1,125	171	117	1,931	322	257	825	70	85	150	73	150	90	117	52	9,877
7	224	247	342	250	320	608	1,412	398	693	95	60	1,424	884	293	282	82	43	33	45	168	-	57	13	7,971
8	249	75	407	369	328	315	401	1,055	1,069	106	18	527	216	831	339	229	36	50	22	25	17	59	18	6,763
9	976	221	947	1,881	1,742	1,122	702	1,073	4,681	1,041	134	2,493	684	1,120	1,056	1,362	207	259	249	425	224	682	389	23,669
10	275	25	289	435	1,233	210	104	91	865	1,244	35	398	66	105	287	159	141	41	10	18	18	62	96	6,207
11	24	6	78	87	82	168	65	18	148	27	44	215	27	13	118	5	18	57	11	43	7	18	28	1,309
12	724	222	719	744	989	1,969	1,265	485	2,255	414	190	5,805	831	622	1,469	363	273	366	261	456	69	339	145	20,977
13	103	134	218	191	244	259	942	228	562	88	38	845	1,291	225	171	89	14	24	18	137	10	26	20	5,878
14	226	42	223	199	249	244	250	770	1,084	162	25	587	309	1,332	138	114	29	25	40	47	30	74	23	6,223
15	310	70	348	285	595	694	378	244	964	305	124	1,571	134	115	3,560	211	328	537	41	203	129	173	181	11,502
16	214	57	170	243	259	94	92	195	1,073	145	14	325	50	156	159	1,769	36	42	60	87	28	312	316	5,898
17	43	24	64	32	105	108	50	70	269	35	20	247	16	12	212	70	476	172	45	87	2	39	171	2,369
18	85	-	50	26	30	158	35	15	208	31	69	251	21	18	498	20	191	762	75	137	8	58	81	2,827
19	32	15	54	43	64	70	40	14	249	9	10	244	38	19	41	193	54	91	634	374	52	108	78	2,527
20	73	31	67	44	144	168	130	46	471	15	44	579	80	34	231	89	60	87	349	553	63	119	140	3,615
21	24	7	35	33	27	34	5	31	204	15	7	51	2	26	112	18	8	29	64	65	239	270	106	1,413
22	92	15	89	52	130	146	49	53	611	93	35	279	71	129	109	107	47	68	149	128	262	707	174	3,597
23	29	3	43	57	145	34	35	2	457	83	39	131	23	25	57	283	151	119	62	94	38	134	1,530	3,572
Total	7,200	1,860	7,604	8,627	13,141	10,171	8,105	6,563	22,897	6,365	1,242	21,343	6,016	6,173	11,166	6,033	2,493	3,116	2,412	3,627	1,391	3,792	3,977	165,313

- 1 – Central
- 2 – University
- 3 - Central Fringe
- 4 - NW Inner
- 5 - NE Inner

- 6 – SE Inner
- 7 – SW Inner
- 8 – West Inner
- 9 – NW Suburb
- 10 – NE Suburb
- 11 – Clover Bar Industrial

- 12 – SE Suburb
- 13 – SW Suburb
- 14 – West Suburb
- 15 – Sherwood Park
- 16 – St. Albert
- 17 – Fort Saskatchewan

- 18 – Strathcona County
- 19 – Leduc County
- 20 – Leduc / Nisku / Airport
- 21 – Parkland County
- 22 – Highway 16 Corridor
- 23 – Sturgeon County

Edmonton Region Commodity Flow Study

Daily Vehicle Trips - Single and Multi Unit Trucks (not including trips with an origin or destination outside the Edmonton Region)

From	To																							Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
1	449	25	347	227	279	160	121	114	337	118	5	311	38	67	113	48	22	7	6	16	-	28	34	2,873
2	37	36	40	16	42	64	102	23	132	3	4	132	78	18	21	9	1	1	7	87	-	8	12	875
3	341	52	265	258	385	209	103	176	314	147	18	323	87	126	172	50	30	6	13	32	22	45	22	3,196
4	181	57	257	524	504	142	107	167	868	215	27	352	167	78	121	72	19	22	20	27	5	34	24	3,989
5	318	13	359	495	1,514	243	164	77	897	639	61	410	85	61	225	65	42	53	12	45	20	51	61	5,909
6	140	62	188	164	200	684	269	138	480	81	50	844	160	89	261	33	37	80	22	66	39	50	14	4,150
7	96	138	137	96	127	255	586	147	289	45	34	708	385	102	105	31	29	18	16	68	-	36	8	3,456
8	82	18	167	108	145	120	171	475	504	41	16	222	80	320	195	56	15	21	7	8	7	31	9	2,817
9	421	101	387	878	793	482	283	517	2,501	453	71	1,181	277	478	491	423	92	98	111	220	102	281	169	10,808
10	140	6	133	210	603	113	36	24	422	503	16	165	22	43	112	60	83	11	7	9	5	25	30	2,779
11	21	6	58	50	41	99	36	13	84	15	15	115	18	8	46	4	11	23	9	22	4	8	7	711
12	330	119	271	352	450	898	539	230	1,172	158	94	2,801	359	345	628	152	111	170	132	216	23	152	54	9,758
13	39	82	77	108	124	111	452	66	237	35	32	391	529	76	59	10	7	10	7	54	7	13	9	2,534
14	103	9	67	83	111	93	101	299	482	63	11	289	175	667	31	33	12	17	12	28	15	26	2	2,729
15	111	33	172	105	269	240	165	81	485	97	69	657	51	54	1,352	64	116	262	18	124	45	102	125	4,796
16	50	24	52	74	74	34	23	46	402	51	13	137	22	39	49	543	22	22	35	24	8	167	99	2,012
17	13	9	21	14	37	36	22	26	113	28	8	127	4	8	89	22	166	65	19	36	2	16	85	967
18	17	-	16	7	12	56	6	7	99	17	45	131	12	12	188	8	61	327	27	57	4	26	41	1,175
19	10	2	18	20	27	28	16	8	107	4	1	88	17	7	5	29	20	41	311	170	23	57	36	1,046
20	28	13	24	21	56	81	47	16	247	5	23	259	28	12	86	22	30	51	162	236	37	64	71	1,619
21	9	-	12	21	11	19	-	13	85	4	4	23	2	12	35	7	4	14	30	34	118	130	46	631
22	35	7	38	29	66	65	22	18	245	52	16	136	20	49	48	33	13	31	53	73	103	322	60	1,536
23	7	-	17	17	38	15	7	1	204	44	14	47	4	10	25	91	49	43	25	49	10	64	737	1,518
Total	2,977	813	3,123	3,876	5,907	4,247	3,377	2,682	10,705	2,818	648	9,851	2,620	2,680	4,458	1,862	993	1,392	1,061	1,703	599	1,735	1,756	71,885

- 1 – Central
- 2 – University
- 3 - Central Fringe
- 4 - NW Inner
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- 9 – NW Suburb
- 10 – NE Suburb
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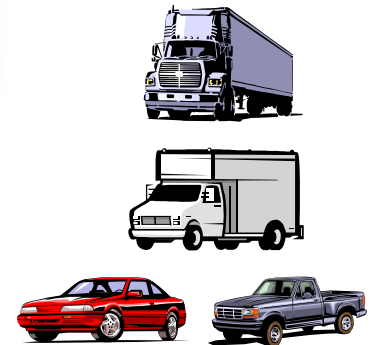
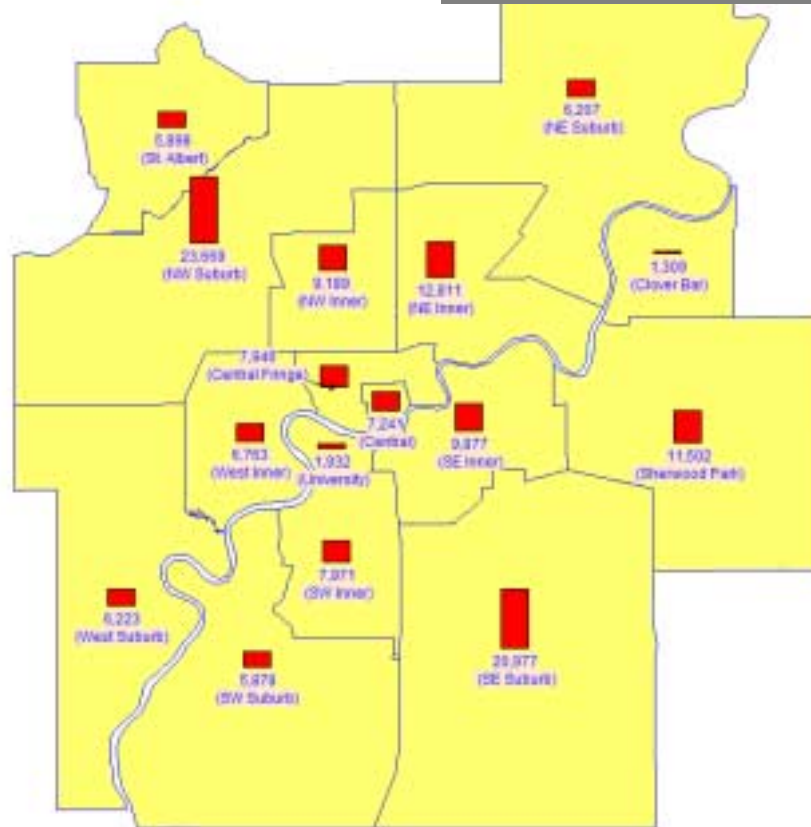
- 12 – SE Suburb
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Edmonton Region Commodity Flow Study

Vehicle Trip Origins by City Sector

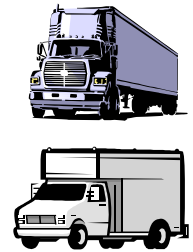
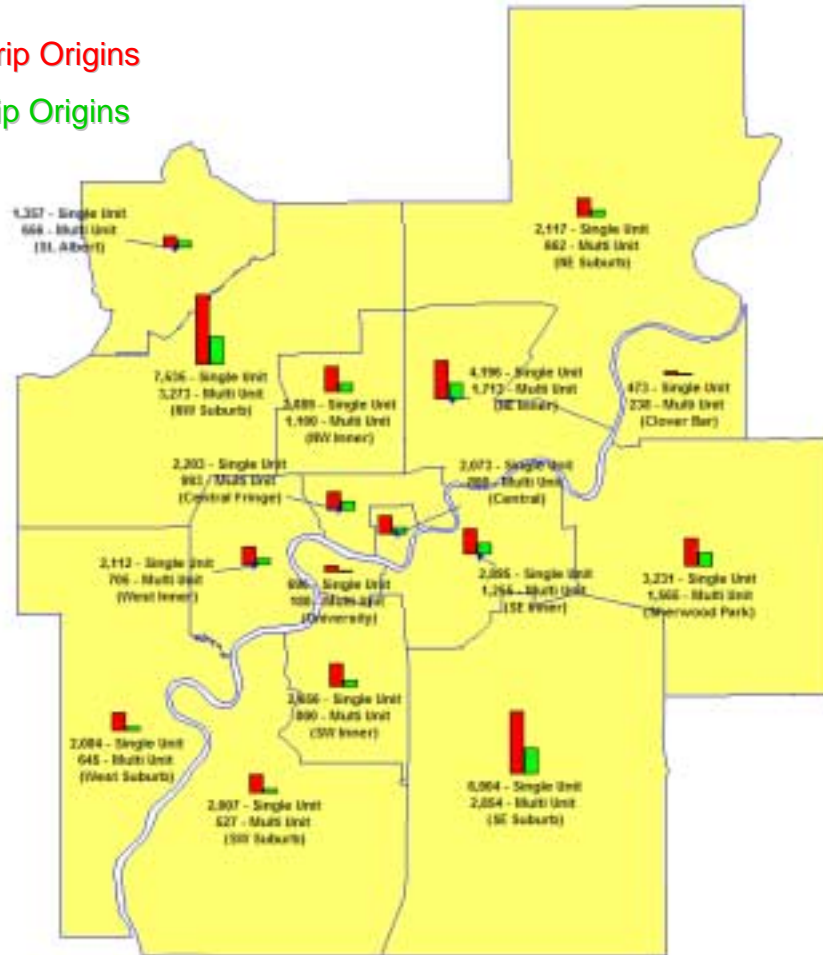
The majority of the daily vehicle trips generated within Edmonton, St. Albert and Sherwood Park originate in the north-west and the south-east suburbs of the city.



Edmonton Region Commodity Flow Study

Single Unit Truck Trip Origins

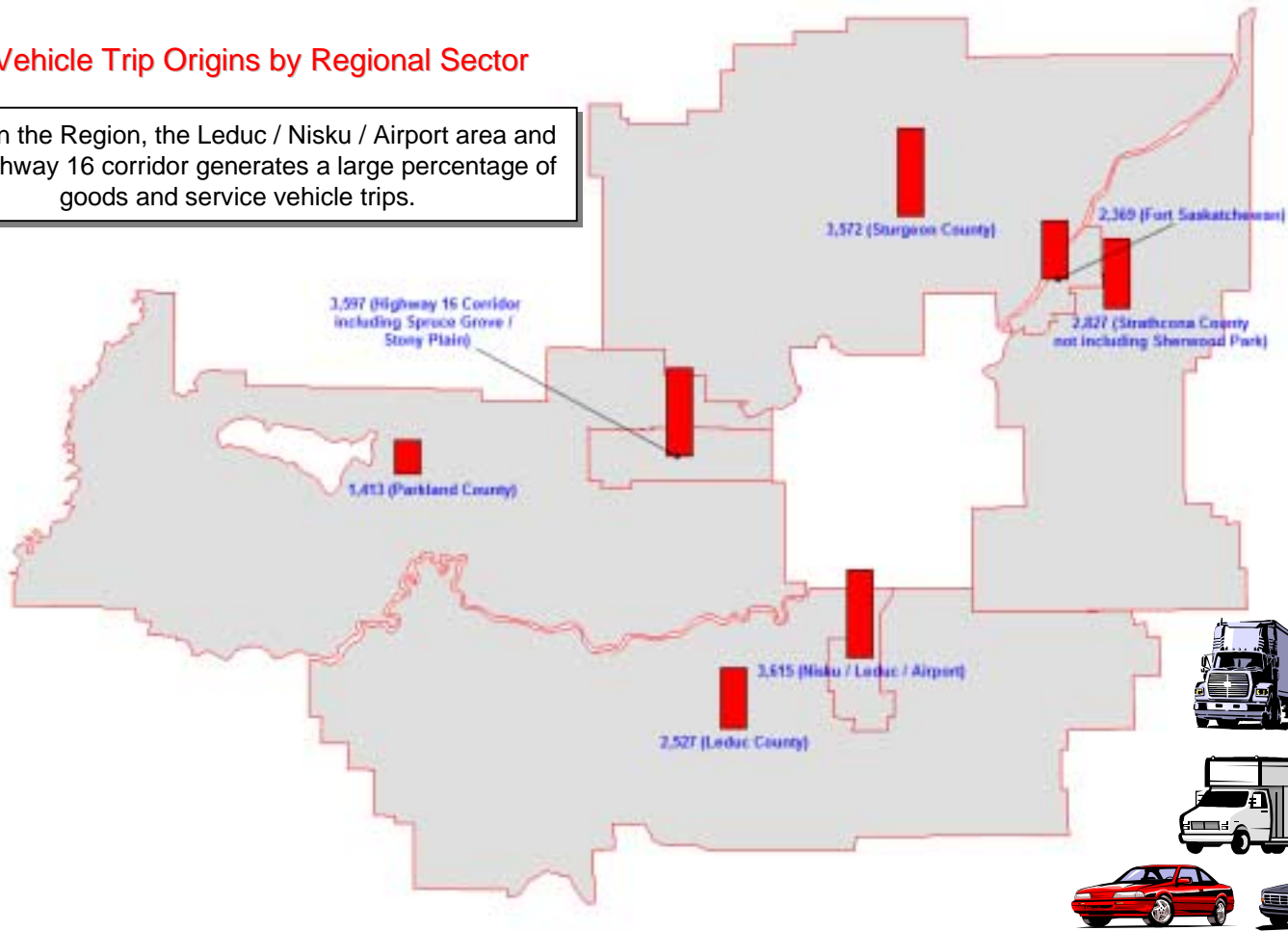
Multi Unit Truck Trip Origins



Edmonton Region Commodity Flow Study

Vehicle Trip Origins by Regional Sector

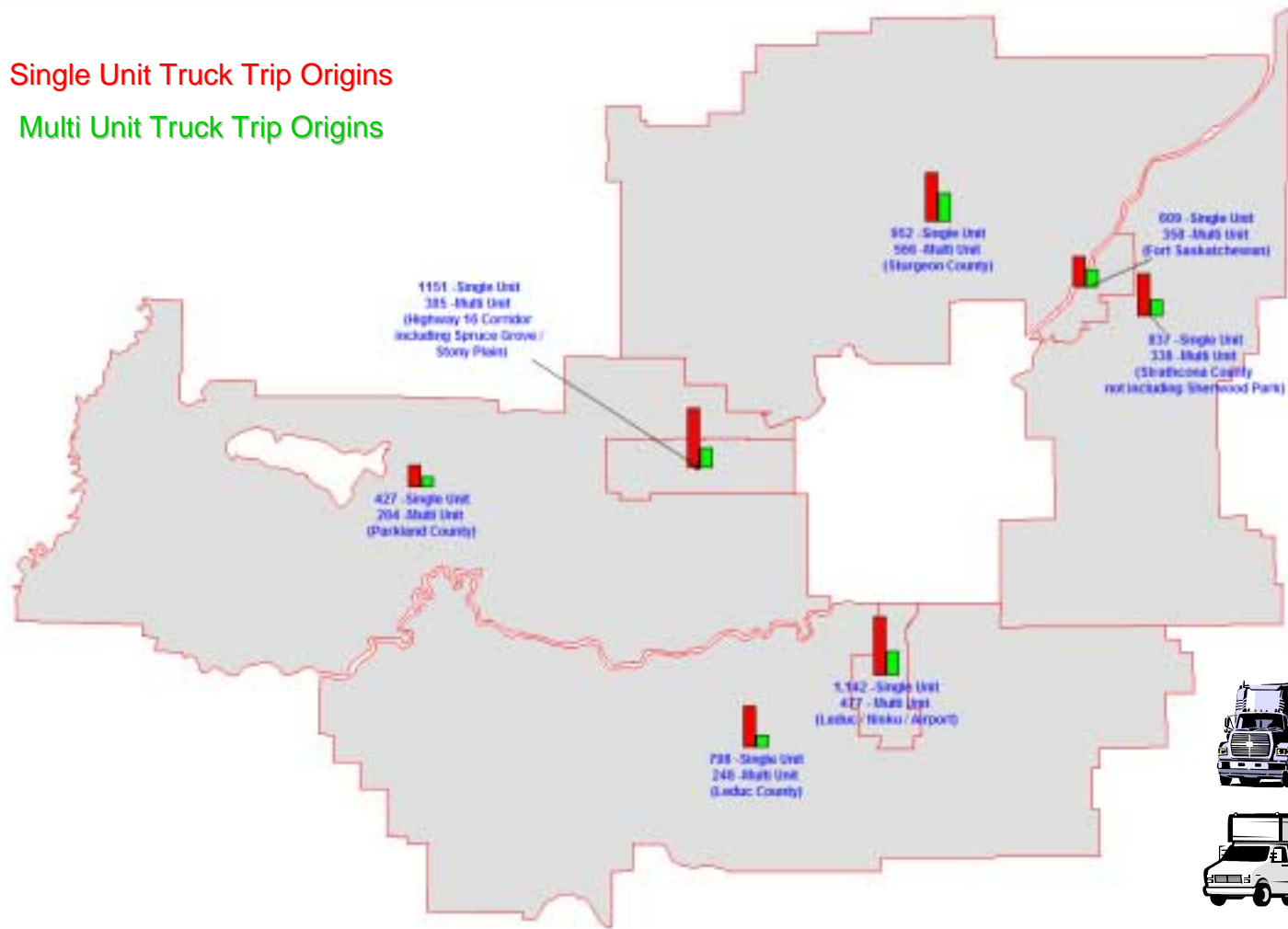
While in the Region, the Leduc / Nisku / Airport area and the Highway 16 corridor generates a large percentage of goods and service vehicle trips.



Edmonton Region Commodity Flow Study

Single Unit Truck Trip Origins

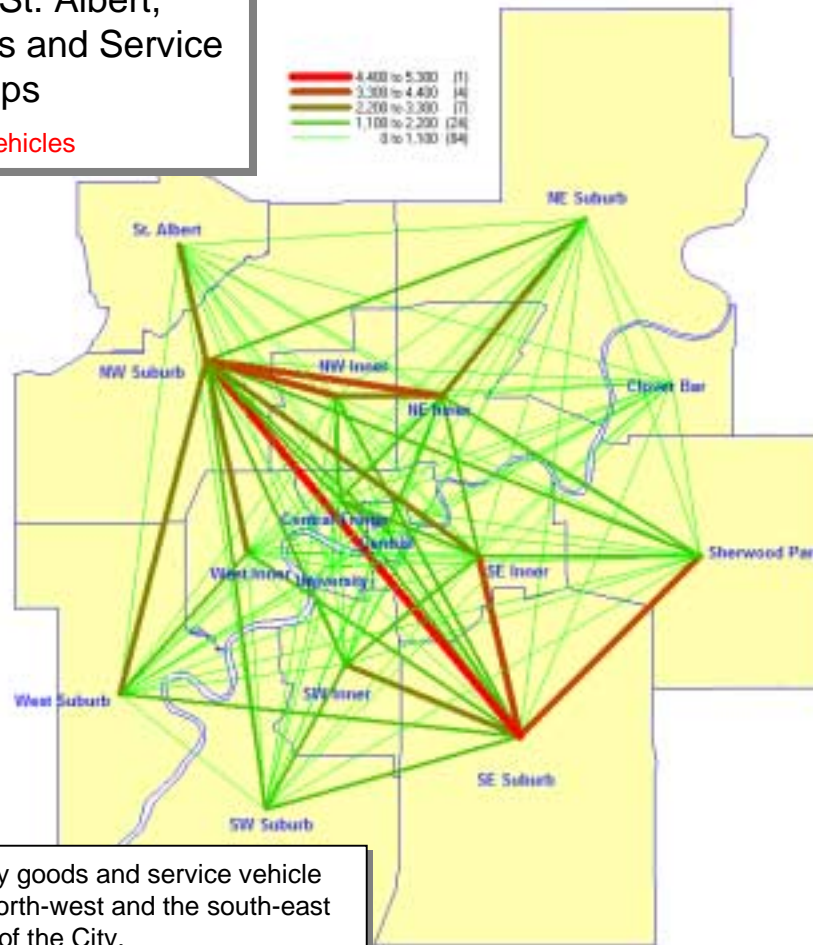
Multi Unit Truck Trip Origins



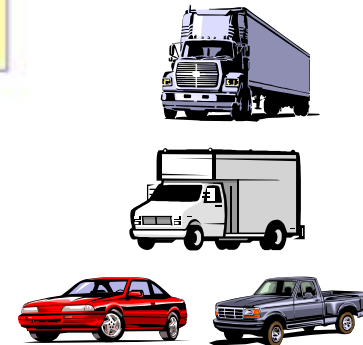
Edmonton Region Commodity Flow Study

Major Edmonton, St. Albert,
Sherwood Park Goods and Service
Vehicle Trips

Daily Trips - All Vehicles



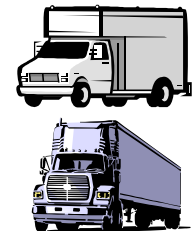
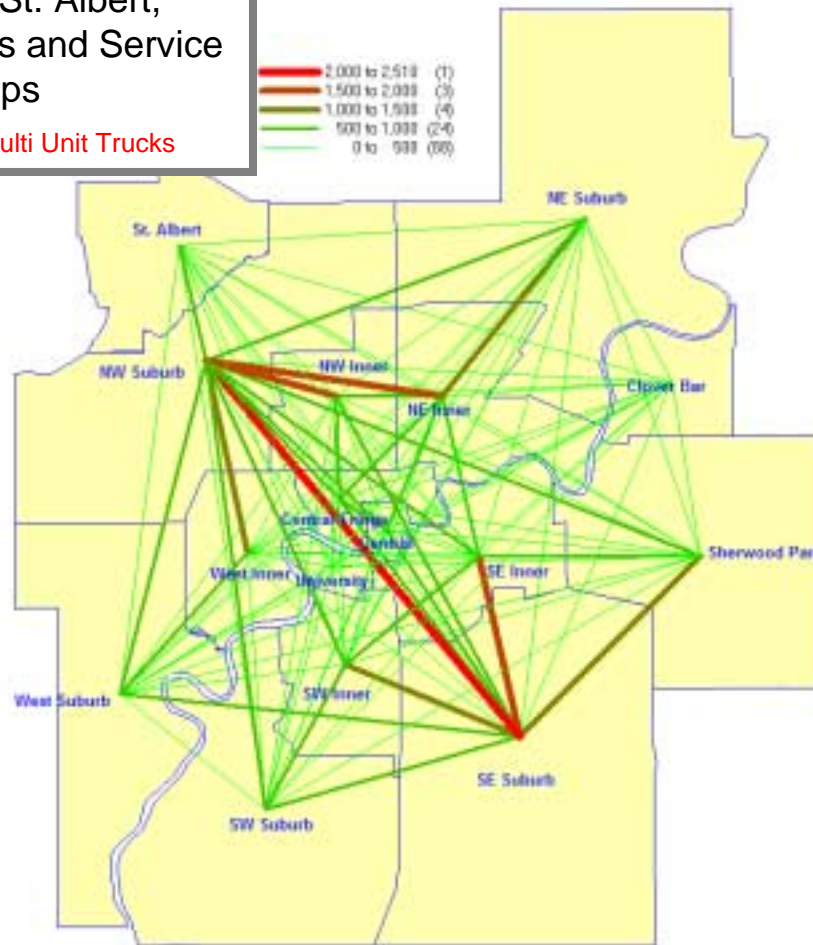
A large proportion of daily goods and service vehicle trips travel between the north-west and the south-east sectors of the City.



Edmonton Region Commodity Flow Study

Major Edmonton, St. Albert, Sherwood Park Goods and Service Vehicle Trips

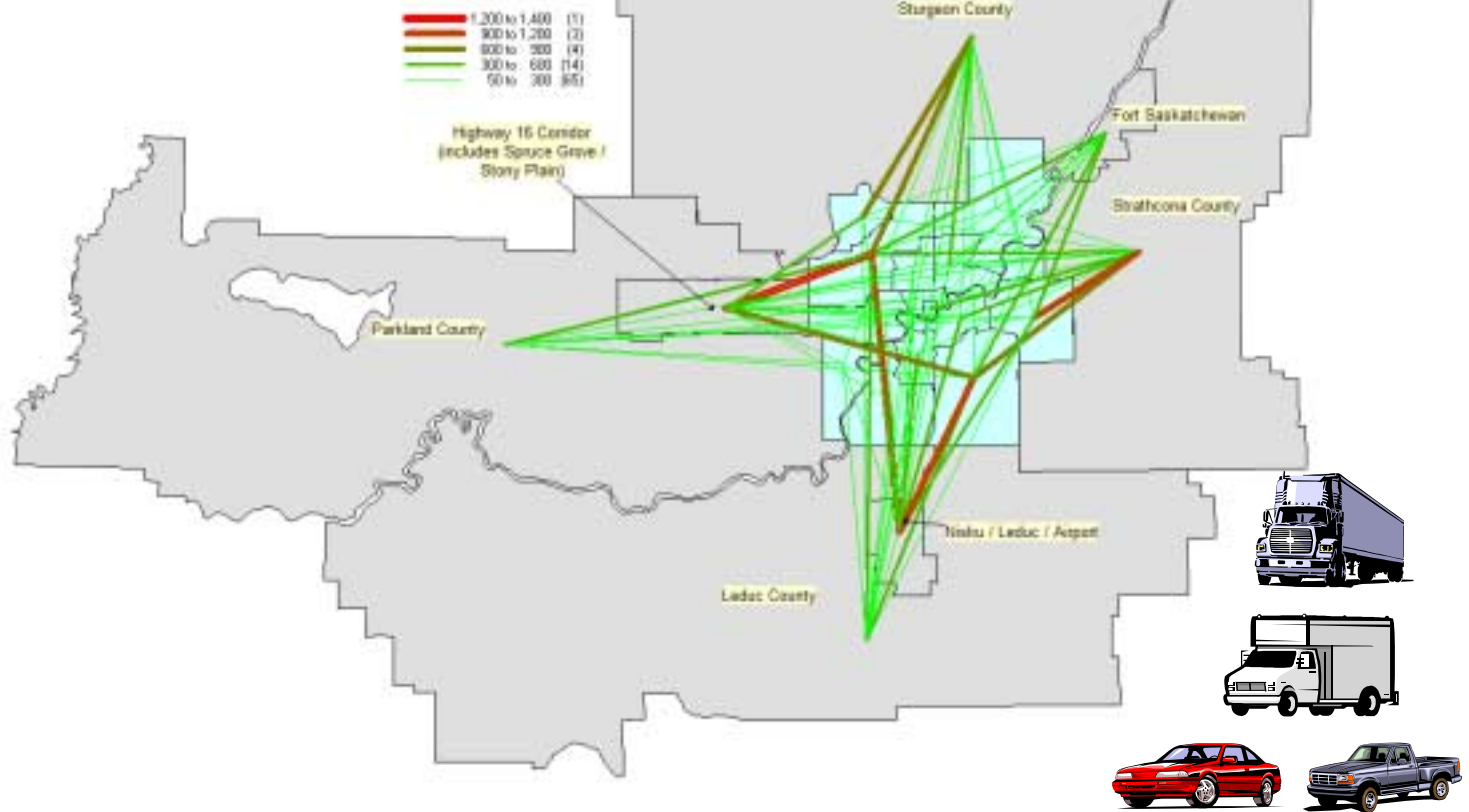
Daily Trips – Single and Multi Unit Trucks



Edmonton Region Commodity Flow Study

Major Goods and Service Vehicle Trips
between Edmonton and the Region

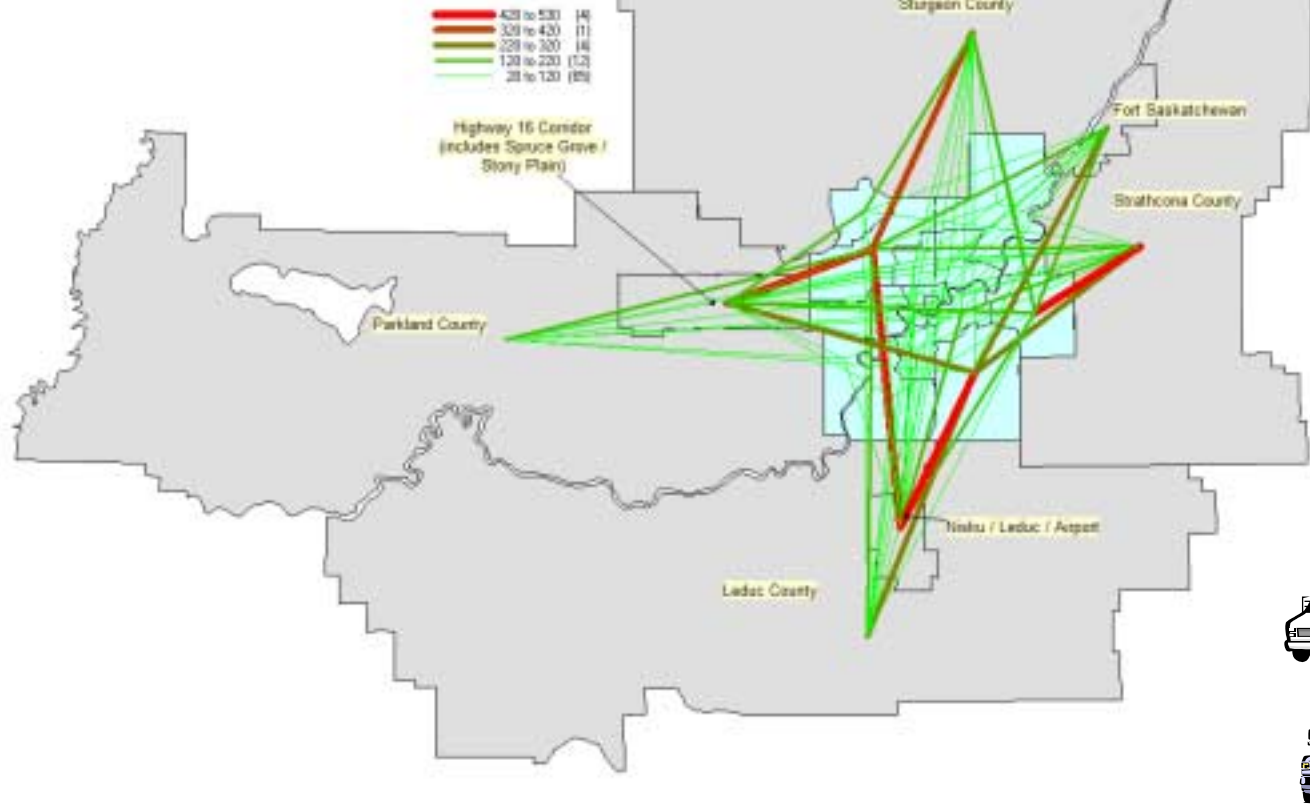
Daily Trips - All Vehicles



Edmonton Region Commodity Flow Study

Major Goods and Service Vehicle Trips between Edmonton and the Region

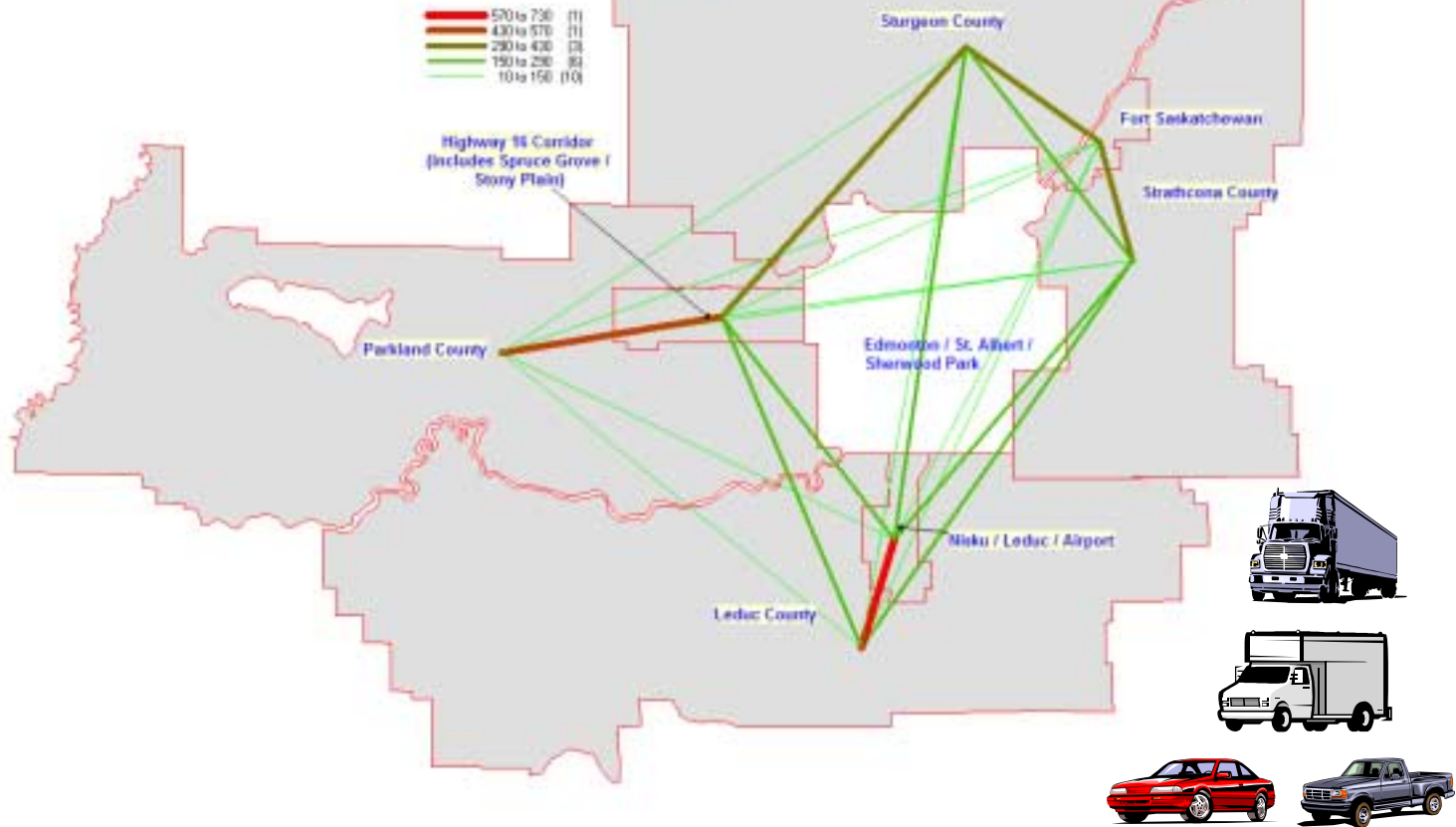
Daily Trips – Single and Multi Unit Trucks



Edmonton Region Commodity Flow Study

Regional Goods and Service Vehicle Trips

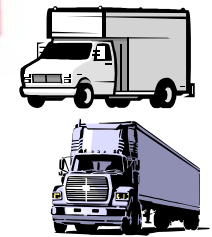
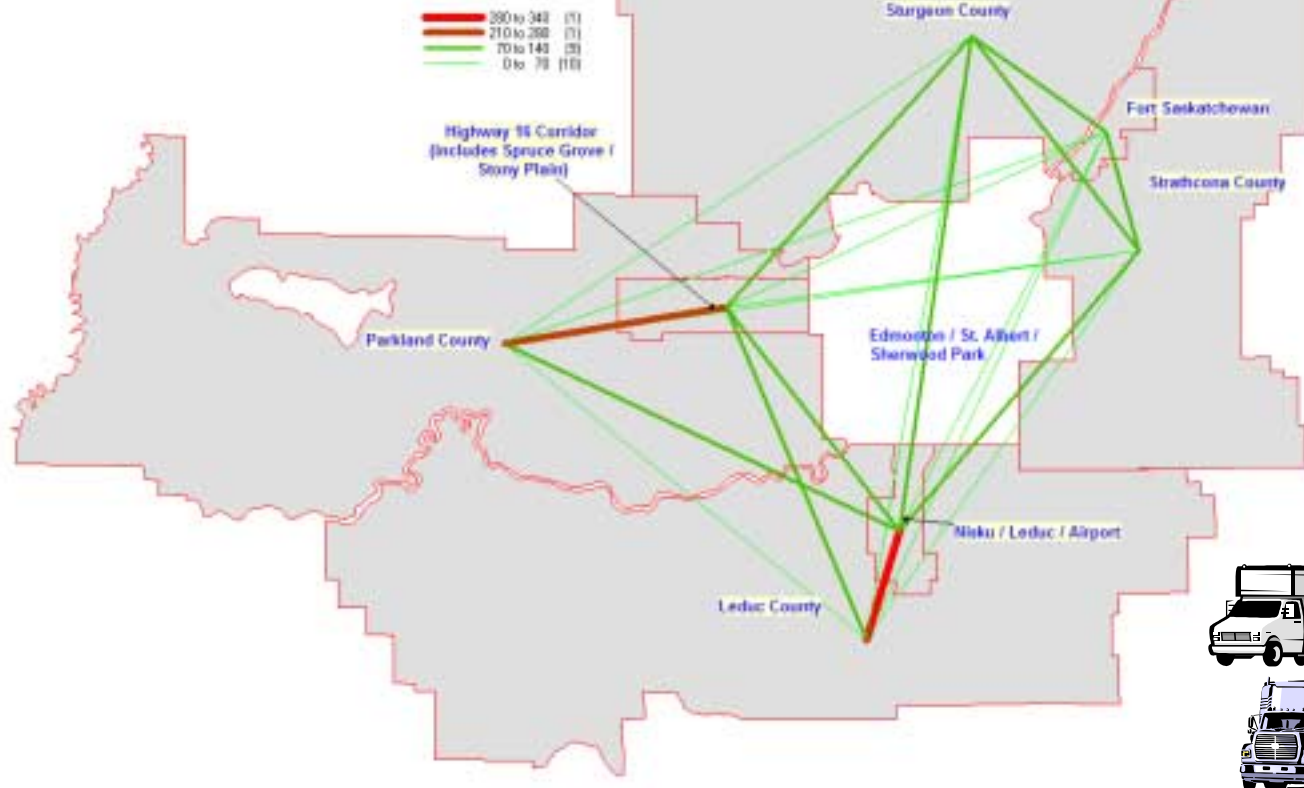
Daily Trips - All Vehicles



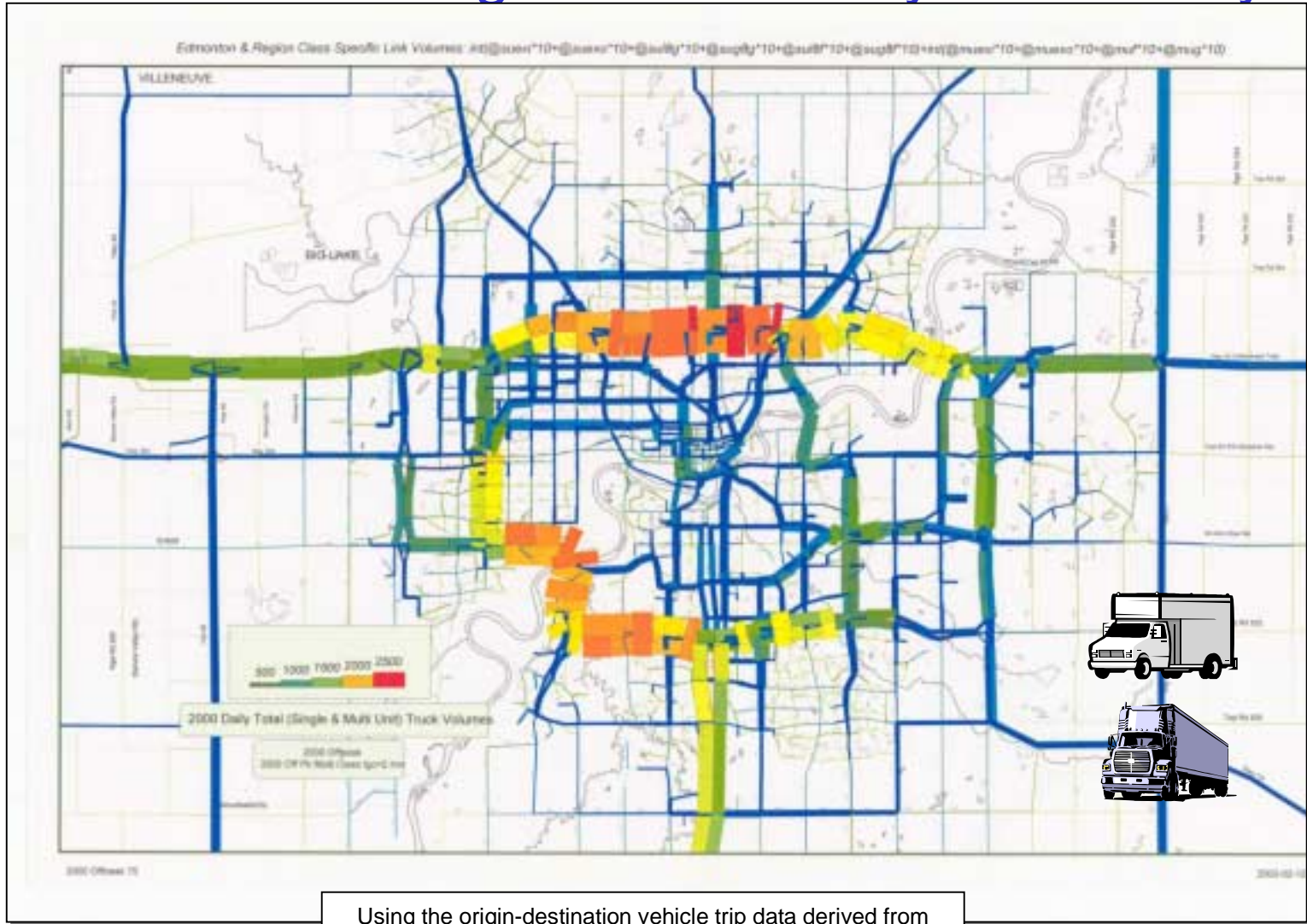
Edmonton Region Commodity Flow Study

Regional Goods and Service Vehicle Trips

Daily Trips – Single and Multi Unit Trucks



Edmonton Region Commodity Flow Study



Using the origin-destination vehicle trip data derived from the survey, the goods and service vehicle trips were assigned to the Edmonton region roadway network.

Edmonton Region Commodity Flow Study

