

economic insights



DEMAND FORECAST OF INDUSTRIAL LANDS

2012 – 2025



Office of the Chief Economist

John Rose
Chief Economist
Financial Services
780-496-6070

Milap Petigara
Senior Economist
Financial Services
780-442-7086

August, 2012

Table of Contents

1.0	Executive Summary.....	3
2.0	Overview.....	4
3.0	Sector Profiles	4
3.1	Northwest Sector.....	4
3.2	Northeast Sector.....	5
3.3	Southeast Sector	6
3.4	Southwest Sector	6
4.0	Methodology	7
5.0	Employment Forecast.....	10
5.1	Northwest Sector.....	11
5.2	Northeast Sector.....	12
5.3	Southeast Sector	13
5.4	Southwest Sector	13
6.0	Industrial Land Demand Forecast	14
6.1	Northwest Sector.....	14
6.2	Northeast Sector.....	15
6.3	Southeast Sector	16
6.4	Southwest Sector	17
7.0	Appendix	19

1.0 Executive Summary

Demand for industrial lands within the City of Edmonton—lands zoned for industrial, commercial, and institutional uses—has continued to rise as a result of a strong local economy, nested with a strong provincial economy. A forecast of industrial land demand from 2012 to 2025, predicated on employment forecasts per industry sector, was undertaken as a means to better understand where industrial land requirements may arise.

Four geographic sectors of interest are examined in this report: Northwest, Northeast, Southeast, and Southwest. Over the thirteen-year 2012 to 2025 period, a total of 1,312.9 hectares of new industrial land will be required to satisfy forecasted demand. Of this new industrial land requirement, 537.4 hectares will be required in the Northwest sector, 171.3 hectares in the Northeast sector, 432.3 hectares in the Southeast sector, and 171.9 hectares in the Southwest sector (Table ES).

Table ES: Total Industrial Land Area Requirements (HA)

City Sector	2012 to 2017	2017 to 2025	13-Year Total	Per Year
Northwest Sector Total	201.0	336.5	537.5	41.3
Industrial Zoning	87.9	162.9	250.8	19.3
Commercial Zoning	107.9	164.3	272.2	20.9
Institutional/Governmental Zoning	5.2	9.2	14.5	1.1
Northeast Sector Total	64.1	107.2	171.3	13.2
Industrial Zoning	28.0	51.9	79.9	6.1
Commercial Zoning	34.4	52.4	86.7	6.7
Institutional/Governmental Zoning	1.7	2.9	4.6	0.4
Southeast Sector Total	161.8	270.8	432.6	33.3
Industrial Zoning	70.7	131.1	201.9	15.5
Commercial Zoning	86.8	132.2	219.0	16.8
Institutional/Governmental Zoning	4.2	7.4	11.6	0.9
Southwest Sector Total	64.3	107.6	171.9	13.2
Industrial Zoning	28.1	52.1	80.2	6.2
Commercial Zoning	34.5	52.5	87.0	6.7
Institutional/Governmental Zoning	1.7	3.0	4.6	0.4
Total Industrial Land Area	491.2	822.1	1,313.2	101.0

2.0 Overview

The City of Edmonton's (the City) business and employment areas have experienced considerable development pressures over the past few decades. A strong local economy, driven by the province's oil and gas sector, has generated high demand for industrial and business properties throughout the City. At the same time, the City has experienced high population growth rates: between 2006 and 2011, the City's population increased by over 11%, from 730,000 to over 812,000.¹ As a result of this, there has been high demand for residential housing, placing additional strains on business and employment lands throughout the City as developers seek new land for residential projects.

As a means to foster better-informed policy and strategic planning, this report provides a forecast of industrial land demand from 2012 to 2025. Industrial land constitutes areas zoned for industrial, commercial, or institutional/governmental development. For the purposes of this report, the City is divided into five sectors, which are delineated by traffic district boundaries: Northwest, Northeast, Southeast, Southwest, and Central.² Due to the unique nature of the Central sector, with most future growth expected to occur through redevelopment, it is omitted from this study.

Many of the industrial operations occurring within Edmonton are related to the various resource sectors in Alberta. Over the past few decades, these resource sectors have exhibited periods of constant output, moderate growth, and large-scale intensive growth over relatively short time periods. Much of the future demand growth for industrially zoned land in Edmonton hinges on the growth of Alberta's resource sectors, and, as such, will likely occur in an inconsistent, nonlinear, and sporadic fashion.

3.0 Sector Profiles

3.1 Northwest Sector

The City's Northwest sector is comprised of the following traffic districts: North Central (West of highway 28), Calder, Castle Downs/Palisades, Mistatim, Winterburn, Northwest Industrial, Jasper Place, West Jasper Place, and West Edmonton.³ The traffic districts of

¹ Statistics Canada. 2012. *Focus on Geography Series, 2011 Census*. Statistics Canada Catalogue no. 98-310-XWE2011004. Ottawa, Ontario. Analytical products, 2011 Census.

² See Appendix 1.

³ See Appendix 2.

Jasper Place, West Jasper Place, and West Edmonton are comprised primarily of residential neighbourhoods and service commercial centres—namely, West Edmonton Mall. The remaining traffic districts are comprised of business and employment lands, constituting one of the main industrial areas in the City. This sector is a strong employment node, and encompasses the highest proportion of jobs relative to the other three sectors.

The Northwest sector's population is estimated to grow by almost 47,000 between 2012 and 2025 (Table 1). During that same period, employment is estimated to grow by over 33,000. The employment-to-population ratio is forecasted to increase from 63.2 percent to 64.5 percent over this 13-year period.

Table 1: Northwest Sector Employment and Population Forecasts

	2012	2017	2025	2012 to 2025
Employment	146,750	157,935	180,089	33,339
Population	232,236	249,085	279,132	46,896
Employment/Population	63.19%	63.41%	64.52%	- - -

3.2 Northeast Sector

The City's Northeast sector is comprised of the Londonderry, Lake District/Pilot Sound, Beverly, Clareview, Clover Bar, Landbank, and Northeast Edmonton traffic districts, as well as the eastern portion of the North Central traffic district.⁴ This sector's population is estimated to grow by over 30,000 between 2012 and 2025 (Table 2). At the same time, employment is forecasted to grow by over 10,600. The employment-to-population ratio in the Northeast sector is significantly lower than the Northwest sector. Between 2012 and 2025, this ratio is estimated to increase from 31.4 percent to 32.1 percent.

This sector contains the Edmonton Energy and Technology Park (EETP), a 4,860 hectare parcel of industrial land located in Alberta's Industrial Heartland (AIH).⁵ The EETP strives to establish a new eco-industrial area for the City of Edmonton. The intended land uses within the EETP include an integrated cluster of secondary and tertiary industries related to value-added energy industries, logistics, and associated research and technology sectors.

⁴ See Appendix 2.

⁵ EETP is reflected in Appendix 2 as Traffic District 29: Landbank.

Table 2: Northeast Sector Employment and Population Forecasts

	2012	2017	2025	2012 to 2025
Employment	46,769	50,333	57,394	10,625
Population	148,826	159,624	178,880	30,053
Employment/Population	31.42%	31.53%	32.09%	- - -

3.3 Southeast Sector

The City's Southeast sector is comprised of the Capilano, Bonnie Doon, Southeast Industrial, South Industrial, Mill Woods, Meadows, and Ellerslie traffic districts.⁶ This sector is the second largest employment sector in the City, after the Northwest, with employment growth forecasted at almost 27,000 over the 13-year period from 2012 to 2025. During this same period, population in this sector is estimated to increase by over 36,000. The employment-to-population ratio is also estimated to increase from 65.4 percent in 2012 to 66.8 percent in 2025. The Southeast sector has a substantial concentration of existing and available industrial land, and has traditionally played a role as a major employment area.

Table 3: Southeast Sector Employment and Population Forecasts

	2012	2017	2025	2012 to 2025
Employment	118,103	127,105	144,934	26,831
Population	180,648	193,754	217,127	36,479
Employment/Population	65.38%	65.60%	66.75%	- - -

3.4 Southwest Sector

The City's Southwest sector is comprised of the Riverbend/Terwillegar, Kaskitayo, Heritage Valley East, Heritage Valley West, and Southgate traffic districts.⁷ The Southwest sector is estimated to experience a large population increase between 2012 and 2025, of almost 34,000 people. At the same time, employment growth is estimated to be almost 11,000. The employment-to-population ratios remain someone constant in this sector, changing only from 28.2 percent to 28.8 percent over the 13-year period.

⁶ See Appendix 2.

⁷ See Appendix 2.

Table 4: Southwest Sector Employment and Population Forecasts

	2012	2017	2025	2012 to 2025
Employment	46,933	50,510	57,595	10,662
Population	166,427	178,502	200,035	33,607
Employment/Population	28.20%	28.30%	28.79%	- - -

4.0 Methodology

The methodology employed in this report first extracts City of Edmonton employment forecasts per industry sector from the *Office of the Chief Economist's* forecasting model—a fixed-price general equilibrium forecasting model. Within the model, quantity adjustments rather than price adjustments clear markets in both the short and medium terms. Quantity adjustments include changes in capital and labour utilization rates, as well as changes in the movement of labour. This format is chosen because, at the smaller urban scale, firms are price takers, and quantity adjustments rather than price adjustments clear markets. The City's employment projections are calculated according to industry sector. There are a total of thirteen industry sectors, shown in Table 5.

Table 5: List of Industry Sectors

No.	Industry Sector
1	Primary Industries
2	Manufacturing
3	Construction
4	Utilities
5	Transportation & Warehousing
6	Retail & Wholesale Trade
7	Finance, Insurance, & Real Estate
8	Professional, Technical, Scientific, & Management Services
9	Accommodation & Food Services
10	Educational Services
11	Health & Welfare Services
12	Commercial Services
13	Government Services

Next, the City's total employment projections by industry sector are disaggregated into the four sectors of interest—Northwest, Northeast, Southeast, and Southwest—using each

sector's proportion of employment.⁸ Third, once employment projections by industry sector are attained, projections of floor area demand from 2012 to 2025 are then calculated for each industry sector using estimated floor area per employee figures, shown in Table 6.

The most comprehensive survey of employment floor area in the Edmonton region was undertaken by the City of Edmonton in 1986, and published as the *Business and Floorspace Inventory*. In 2007, floor-space-per-employee ratios were revised and updated by Harris Consulting using industry trends observed both nationally and within the Edmonton region. Since 1986, significant reductions were experienced in the amount of business floor space per employee in the finance, insurance, and real estate sector, and the government services sector. Concurrently, increases in average floor space per employee were experienced in the retail and wholesale trade sector, the manufacturing sector, and the transportation and warehousing sector.

Table 6: Floor Area Per Employee by Industry Sector (in Square Metres)⁹

No.	Industry Sector	Floor Area Per Employee
1	Primary Industries	30.5
2	Manufacturing	38.2
3	Construction	21.7
4	Utilities	32.2
5	Transportation & Warehousing	48.6
6	Retail & Wholesale Trade	54.9
7	Finance, Insurance, & Real Estate	8.0
8	Professional, Technical, Scientific, & Management Services	8.0
9	Accommodation & Food Services	18.2
10	Educational Services	18.2
11	Health & Welfare Services	18.2
12	Commercial Services	18.2
13	Government Services	19.4

The projected demand figures for new floor space are then translated into land area requirements by using site coverage ratios typical for each industry sector (Table 7). Site coverage constitutes the percentage of a site that is covered by the built environment.

⁸ Sector employment proportions were derived from *City of Edmonton Municipal Development Plan Background Report: Business and Employment Land Allocation Study*. Prepared for the City of Edmonton by Harris Consulting. 2007.

⁹ Floor area per employee figures were referenced from *City of Edmonton Municipal Development Plan Background Report: Business and Employment Land Allocation Study*. Prepared for the City of Edmonton by Harris Consulting. 2007.

Typical site coverage ratios for industrial, commercial, and institutional development on industrial lands in Edmonton range from 10 percent for construction land uses, to 30 percent for government offices (Table 7).

The industrial land demand forecasts do not take into consideration the complex phenomenon of increased efficiencies in space utilization of industrial, commercial, and institutional activities. They also do not take into consideration existing land owners adding more employment space to existing premises. If employment space becomes utilized more efficiently, or employment lands utilized more intensely, the estimates of industrial land demand provided in this report may be higher than the actual amount of land used over the period 2012 to 2025.

On the other side of the coin, land used for Park and Ride facilities, transit centres, public parks, recreation facilities, oil and gas pipelines, snow disposal sites, and sanitation sites, among others, do not support significant levels of employment. However, they do take up a considerable amount of land. If a large amount of future land demand emerges for these types of uses, the estimates of industrial land demand provided in this report may be lower than the actual amount of land used over the 2012 to 2025 period.

Table 7: Land Area Requirements by Industry Sector¹⁰

No.	Industry Sector	Average Floor Space Ratio
1	Primary Industries	0.20
2	Manufacturing	0.20
3	Construction	0.10
4	Utilities	0.15
5	Transportation & Warehousing	0.15
6	Retail & Wholesale Trade	0.28
7	Finance, Insurance, & Real Estate	0.25
8	Professional, Technical, Scientific, & Management Services	0.25
9	Accommodation & Food Services	0.20
10	Educational Services	0.20
11	Health & Welfare Services	0.20
12	Commercial Services	0.20
13	Government Services	0.30

¹⁰ Average floor space ratios were referenced from *City of Edmonton Municipal Development Plan Background Report: Business and Employment Land Allocation Study*. Prepared for the City of Edmonton by Harris Consulting. 2007.

5.0 Employment Forecast

Table 8 provides the 13-year, 2012 to 2025 per-industry-sector employment forecast for the City of Edmonton. Strong employment growth is forecasted for the City, with over 107,000 new jobs anticipated between 2012 and 2025 (Table 8). The largest gains are forecasted in the retail and wholesale trade, accommodation and food services, and commercial services sectors (Table 8).

Over this time period, employment is forecasted to decline in both the educational services and health and welfare services sectors. As a caveat, it should be noted that the educational services and health and welfare services sectors are both largely contingent on public financing. As such, these forecasts are subject to revision if the Government of Alberta alters its financing platform to either of these sectors in subsequent budgetary cycles.

Table 8: City of Edmonton Employment Forecast by Industry Sector

No.	Industry Sector	2012	2017	2025	2012 to 2025	Per Year
1	Primary Industries	11,400	11,400	12,600	1,200	92
2	Manufacturing	38,900	42,900	50,300	11,400	877
3	Construction	46,500	49,500	58,500	12,000	923
4	Utilities	4,300	4,700	5,500	1,200	92
5	Transportation & Warehousing	26,100	30,200	34,900	8,800	677
6	Retail & Wholesale Trade	69,600	79,600	92,900	23,300	1,792
7	Finance, Insurance, & Real Estate	26,100	30,000	34,900	8,800	677
8	Professional, Technical, Scientific, & Management Services	45,000	49,400	56,800	11,800	908
9	Accommodation & Food Services	35,200	40,100	50,200	15,000	1,154
10	Educational Services	33,800	32,000	31,200	-2,600	-200
11	Health & Welfare Services	48,700	40,800	35,000	-13,700	-1,054
12	Commercial Services	53,900	62,300	76,800	22,900	1,762
13	Government Services	32,800	35,400	40,000	7,200	554
Total Employment		472,300	508,300	579,600	107,300	8,254

The percentage of total employment comprised by educational services is forecasted to decline from 7.2% in 2012, to 5.4% in 2025 (Table 9). Likewise, the percentage of total employment comprised by health and welfare services is forecasted to decline from 10.3% in 2012, to 6.0% in 2025 (Table 9). The commercial service sector is forecasted to undergo the largest percentage gain in total employment share, increasing from 11.4% in 2012, to 13.3% in 2025 (Table 9).

Table 9: City of Edmonton Employment Forecast by Industry Sector, as Percent of Total

No.	Industry Sector	2012	% of 2012	2017	% of 2017	2025	% of 2025
1	Primary Industries	11,400	2.4%	11,400	2.2%	12,600	2.2%
2	Manufacturing	38,900	8.2%	42,900	8.4%	50,300	8.7%
3	Construction	46,500	9.8%	49,500	9.7%	58,500	10.1%
4	Utilities	4,300	0.9%	4,700	0.9%	5,500	0.9%
5	Transportation & Warehousing	26,100	5.5%	30,200	5.9%	34,900	6.0%
6	Retail & Wholesale Trade	69,600	14.7%	79,600	15.7%	92,900	16.0%
7	Finance, Insurance, & Real Estate	26,100	5.5%	30,000	5.9%	34,900	6.0%
8	Professional, Technical, Scientific, & Management Services	45,000	9.5%	49,400	9.7%	56,800	9.8%
9	Accommodation & Food Services	35,200	7.5%	40,100	7.9%	50,200	8.7%
10	Educational Services	33,800	7.2%	32,000	6.3%	31,200	5.4%
11	Health & Welfare Services	48,700	10.3%	40,800	8.0%	35,000	6.0%
12	Commercial Services	53,900	11.4%	62,300	12.3%	76,800	13.3%
13	Government Services	32,800	6.9%	35,400	7.0%	40,000	6.9%
Total Employment		472,300	100.0%	508,300	100.0%	579,600	100.0%

5.1 Northwest Sector

Over the 13-year period, from 2012 to 2025, employment in the Northwest sector is anticipated to increase by over 33,000, with an average annual employment gain estimated at 2,565 (Table 10).

Table 10: Northwest Sector Employment Forecast by Industry Sector

No.	Industry Sector	2012	2017	2025	2012 to 2025	Per Year
1	Primary Industries	3,542	3,542	3,915	373	29
2	Manufacturing	12,087	13,330	15,629	3,542	272
3	Construction	14,448	15,380	18,177	3,729	287
4	Utilities	1,336	1,460	1,709	373	29
5	Transportation & Warehousing	8,110	9,384	10,844	2,734	210
6	Retail & Wholesale Trade	21,626	24,733	28,865	7,240	557
7	Finance, Insurance, & Real Estate	8,110	9,321	10,844	2,734	210
8	Professional, Technical, Scientific, & Management Services	13,982	15,349	17,648	3,666	282
9	Accommodation & Food Services	10,937	12,460	15,598	4,661	359
10	Educational Services	10,502	9,943	9,694	-808	-62
11	Health & Welfare Services	15,132	12,677	10,875	-4,257	-327
12	Commercial Services	16,747	19,357	23,863	7,115	547
13	Government Services	10,191	10,999	12,429	2,237	172
Total Employment		146,750	157,935	180,089	33,339	2,565

This sector's employment forecast follows the trend of the City of Edmonton, with the largest employment gains anticipated to occur in retail and wholesale trade, accommodation and food services, and commercial services. Also like the City of Edmonton, total employment in educational services and health and welfare services is anticipated to decline over the 13-year period.

5.2 Northeast Sector

Over the 13-year period, from 2012 to 2025, employment in the Northeast sector is anticipated to increase by over 10,500, with an average annual employment gain of 817 (Table 11). This sector's employment forecast follows the trend of the City of Edmonton, with the largest employment gains anticipated to occur in retail and wholesale trade, accommodation and food services, and commercial services. Also like the City of Edmonton, total employment in educational services and health and welfare services is anticipated to decline over the 13-year period.

Table 11: Northeast Sector Employment Forecast by Industry Sector

No.	Industry Sector	2012	2017	2025	2012 to 2025	Per Year
1	Primary Industries	1,129	1,129	1,248	119	9
2	Manufacturing	3,852	4,248	4,981	1,129	87
3	Construction	4,605	4,902	5,793	1,188	91
4	Utilities	426	465	545	119	9
5	Transportation & Warehousing	2,584	2,990	3,456	871	67
6	Retail & Wholesale Trade	6,892	7,882	9,199	2,307	177
7	Finance, Insurance, & Real Estate	2,584	2,971	3,456	871	67
8	Professional, Technical, Scientific, & Management Services	4,456	4,892	5,625	1,168	90
9	Accommodation & Food Services	3,486	3,971	4,971	1,485	114
10	Educational Services	3,347	3,169	3,090	-257	-20
11	Health & Welfare Services	4,822	4,040	3,466	-1,357	-104
12	Commercial Services	5,337	6,169	7,605	2,268	174
13	Government Services	3,248	3,505	3,961	713	55
	Total Employment	46,769	50,333	57,394	10,625	817

5.3 Southeast Sector

From 2012 to 2025, employment in the Southeast sector is anticipated to increase by over 26,000, with an average annual employment gain of 2,064 (Table 12). This sector's employment forecast trends with the City: the largest gains are anticipated to occur in retail and wholesale trade, accommodation and food services, and commercial services; employment declines are forecasted for educational services and health and welfare services.

Table 12: Southeast Sector Employment Forecast by Industry Sector

No.	Industry Sector	2012	2017	2025	2012 to 2025	Per Year
1	Primary Industries	2,851	2,851	3,151	300	23
2	Manufacturing	9,727	10,728	12,578	2,851	219
3	Construction	11,628	12,378	14,628	3,001	231
4	Utilities	1,075	1,175	1,375	300	23
5	Transportation & Warehousing	6,527	7,552	8,727	2,201	169
6	Retail & Wholesale Trade	17,404	19,905	23,230	5,826	448
7	Finance, Insurance, & Real Estate	6,527	7,502	8,727	2,201	169
8	Professional, Technical, Scientific, & Management Services	11,253	12,353	14,203	2,951	227
9	Accommodation & Food Services	8,802	10,027	12,553	3,751	289
10	Educational Services	8,452	8,002	7,802	-650	-50
11	Health & Welfare Services	12,178	10,202	8,752	-3,426	-264
12	Commercial Services	13,478	15,579	19,205	5,726	440
13	Government Services	8,202	8,852	10,002	1,800	138
Total Employment		118,103	127,105	144,934	26,831	2,064

5.4 Southwest Sector

Over the 13-year period, from 2012 to 2025, employment in the Southwest sector is anticipated to increase by over 10,500, with an average annual employment gain of 820 (Table 13). This sector's employment forecast follows the trend of the City of Edmonton, with the largest employment gains anticipated to occur in retail and wholesale trade, accommodation and food services, and commercial services. Also like the City of Edmonton, total employment in educational services and health and welfare services is anticipated to decline over the 13-year period.

Table 13: Southwest Sector Employment Forecast by Industry Sector

No.	Industry Sector	2012	2017	2025	2012 to 2025	Per Year
1	Primary Industries	1,133	1,133	1,252	119	9
2	Manufacturing	3,865	4,263	4,998	1,133	87
3	Construction	4,621	4,919	5,813	1,192	92
4	Utilities	427	467	547	119	9
5	Transportation & Warehousing	2,594	3,001	3,468	874	67
6	Retail & Wholesale Trade	6,916	7,910	9,231	2,315	178
7	Finance, Insurance, & Real Estate	2,594	2,981	3,468	874	67
8	Professional, Technical, Scientific, & Management Services	4,472	4,909	5,644	1,173	90
9	Accommodation & Food Services	3,498	3,985	4,988	1,491	115
10	Educational Services	3,359	3,180	3,100	-258	-20
11	Health & Welfare Services	4,839	4,054	3,478	-1,361	-105
12	Commercial Services	5,356	6,191	7,632	2,276	175
13	Government Services	3,259	3,518	3,975	715	55
Total Employment		46,933	50,510	57,595	10,662	820

6.0 Industrial Land Demand Forecast

Forecasted land area requirements over the 2012 to 2025 period for land zoned industrial, commercial, and institutional/governmental is provided in the following four subsections. Forecasted land area requirements are estimated for each of the thirteen industry sectors of interest (Table 5).

The industry sectors that require industrial zoning are primary industries, manufacturing, construction, utilities, and transportation and warehousing. Commercial zoning is required for: retail and wholesale trade; finance, insurance, and real estate; professional, technical, scientific, and management services; accommodation and food services; and commercial services. Institutional/governmental zoning is required for: educational services; health and welfare services; and government services.

6.1 Northwest Sector

Over the 13-year period, from 2012 to 2025, the Northwest sector is anticipated to require 537.5 hectares of industrial land to satisfy demand. On a per-year basis, this averages 41.3 hectares per year. The industry sectors anticipated to require the largest areas of industrial land are manufacturing (67.7 hectares), construction (80.9 hectares), transportation and warehousing (88.6 hectares), retail and wholesale trade (144.5 hectares), and commercial

services (64.7 hectares) (Table 14). Due to forecasted contractions in employment levels for both educational services and health and welfare services within the City of Edmonton, no new land will be demanded for these uses.

Table 14: Northwest Sector Land Area Requirements Forecast Based on Employment Growth (HA)

No.	Industry Sector	2012 to 2017	2017 to 2025	13-Year Total	Per Year
1	Primary Industries	0.0	5.7	5.7	0.4
2	Manufacturing	23.7	43.9	67.7	5.2
3	Construction	20.2	60.7	80.9	6.2
4	Utilities	2.7	5.3	8.0	0.6
5	Transportation & Warehousing	41.3	47.3	88.6	6.8
6	Retail & Wholesale Trade	62.0	82.5	144.5	11.1
7	Finance, Insurance, & Real Estate	3.9	4.9	8.7	0.7
8	Professional, Technical, Scientific, & Management Services	4.4	7.4	11.7	0.9
9	Accommodation & Food Services	13.9	28.6	42.4	3.3
10	Educational Services	0.0	0.0	0.0	0.0
11	Health & Welfare Services	0.0	0.0	0.0	0.0
12	Commercial Services	23.8	41.0	64.7	5.0
13	Government Services	5.2	9.2	14.5	1.1
Total Land Area		201.0	336.5	537.5	41.3

Of the 537.5 hectares of industrial land required in the Northwest sector over the 2012 to 2025 period, 250.8 hectares will require industrial zoning, 272.2 hectares will require commercial zoning, and 14.5 hectares will require zoning for institutional and governmental uses (Table 15).

Table 15: Northwest Sector Land Area Requirements Forecast by Land Use (HA)

Zoning Type	2012 to 2017	2017 to 2025	13-Year Total	Per Year
Industrial Zoning	87.9	162.9	250.8	19.3
Commercial Zoning	107.9	164.3	272.2	20.9
Institutional/Governmental Zoning	5.2	9.2	14.5	1.1
Total	201.0	336.5	537.5	41.3

6.2 Northeast Sector

Industrial land demand in the Northeast sector over the 13-year period, from 2012 to 2025, is estimated to be 171.3 hectares (Table 16). On a per-year basis, this averages 13.2 hectares per year. The industry sectors anticipated to require the largest areas of industrial land are manufacturing (21.6 hectares), construction (25.8 hectares), transportation and warehousing

(28.2 hectares), retail and wholesale trade (46.1 hectares), and commercial services (20.6) (Table 16). Due to forecasted contractions in employment levels for both educational services and health and welfare services within the City of Edmonton, no new land will be demanded for these uses.

Table 16: Northeast Sector Land Area Requirements Forecast Based on Employment Growth (HA)

No.	Industry Sector	2012 to 2017	2017 to 2025	13-Year Total	Per Year
1	Primary Industries	0.0	1.8	1.8	0.1
2	Manufacturing	7.6	14.0	21.6	1.7
3	Construction	6.4	19.3	25.8	2.0
4	Utilities	0.9	1.7	2.6	0.2
5	Transportation & Warehousing	13.2	15.1	28.2	2.2
6	Retail & Wholesale Trade	19.8	26.3	46.1	3.5
7	Finance, Insurance, & Real Estate	1.2	1.6	2.8	0.2
8	Professional, Technical, Scientific, & Management Services	1.4	2.3	3.7	0.3
9	Accommodation & Food Services	4.4	9.1	13.5	1.0
10	Educational Services	0.0	0.0	0.0	0.0
11	Health & Welfare Services	0.0	0.0	0.0	0.0
12	Commercial Services	7.6	13.1	20.6	1.6
13	Government Services	1.7	2.9	4.6	0.4
Total Land Area		64.1	107.2	171.3	13.2

Of the 171.3 hectares of industrial land required in the Northeast sector over the 2012 to 2025 period, 79.9 hectares will require industrial zoning, 86.7 hectares will require commercial zoning, and 4.6 hectares will require zoning for institutional and governmental uses (Table 17).

Table 17: Northeast Sector Land Area Requirements Forecast by Land Use (HA)

Zoning Type	2012 to 2017	2017 to 2025	13-Year Total	Per Year
Industrial Zoning	28.0	51.9	79.9	6.1
Commercial Zoning	34.4	52.4	86.7	6.7
Institutional/Governmental Zoning	1.7	2.9	4.6	0.4
Total	64.1	107.2	171.3	13.2

6.3 Southeast Sector

In the Southeast sector, land area demand is forecasted to be 432.3 hectares over the 13-year period, from 2012 to 2025. On a per-year basis, this averages 33.2 hectares per year. The industry sectors anticipated to require the largest areas of industrial land are manufacturing

(54.4 hectares), construction (65.1 hectares), transportation and warehousing (71.3 hectares), retail and wholesale trade (116.3 hectares), and commercial services (52.1 hectares) (Table 18). Due to forecasted contractions in employment levels for both educational services and health and welfare services within the City of Edmonton, no new land will be demanded for these uses.

Table 18: Southeast Sector Land Area Requirements Forecast Based on Employment Growth (HA)

No.	Industry Sector	2012 to 2017	2017 to 2025	13-Year Total	Per Year
1	Primary Industries	0.0	4.6	4.6	0.4
2	Manufacturing	19.1	35.3	54.4	4.2
3	Construction	16.3	48.8	65.1	5.0
4	Utilities	2.1	4.3	6.4	0.5
5	Transportation & Warehousing	33.2	38.1	71.3	5.5
6	Retail & Wholesale Trade	49.9	66.4	116.3	8.9
7	Finance, Insurance, & Real Estate	3.1	3.9	7.0	0.5
8	Professional, Technical, Scientific, & Management Services	3.5	5.9	9.4	0.7
9	Accommodation & Food Services	11.2	23.0	34.1	2.6
10	Educational Services	0.0	0.0	0.0	0.0
11	Health & Welfare Services	0.0	0.0	0.0	0.0
12	Commercial Services	19.1	33.0	52.1	4.0
13	Government Services	4.2	7.4	11.6	0.9
Total Land Area		161.8	270.8	432.6	33.3

Of the 432.3 hectares of industrial land required in the Southeast sector over the 2012 to 2025 period, 201.9 hectares will require industrial zoning, 219.0 hectares will require commercial zoning, and 11.6 hectares will require zoning for institutional and governmental uses (Table 19).

Table 19: Southeast Sector Land Area Requirements Forecast by Land Use (HA)

Zoning Type	2012 to 2017	2017 to 2025	13-Year Total	Per Year
Industrial Zoning	70.7	131.1	201.9	15.5
Commercial Zoning	86.8	132.2	219.0	16.8
Institutional/Governmental Zoning	4.2	7.4	11.6	0.9
Total	161.8	270.8	432.6	33.3

6.4 Southwest Sector

Industrial land demand in the Southwest sector over the 13-year period, from 2012 to 2025, is estimated to be 171.9 hectares. On a per-year basis, this averages 13.3 hectares per year.

The industry sectors anticipated to require the largest areas of industrial land are manufacturing (21.6 hectares), construction (25.9 hectares), transportation and warehousing (28.3 hectares), retail and wholesale trade (46.2 hectares), and commercial services (20.7 hectares) (Table 20). Due to forecasted contractions in employment levels for both educational services and health and welfare services within the City of Edmonton, no new land will be demanded for these uses.

Table 20: Southwest Sector Land Area Requirements Forecast Based on Employment Growth (HA)

No.	Industry Sector	2012 to 2017	2017 to 2025	13-Year Total	Per Year
1	Primary Industries	0.0	1.8	1.8	0.1
2	Manufacturing	7.6	14.0	21.6	1.7
3	Construction	6.5	19.4	25.9	2.0
4	Utilities	0.9	1.7	2.6	0.2
5	Transportation & Warehousing	13.2	15.1	28.3	2.2
6	Retail & Wholesale Trade	19.8	26.4	46.2	3.6
7	Finance, Insurance, & Real Estate	1.2	1.6	2.8	0.2
8	Professional, Technical, Scientific, & Management Services	1.4	2.4	3.8	0.3
9	Accommodation & Food Services	4.4	9.1	13.6	1.0
10	Educational Services	0.0	0.0	0.0	0.0
11	Health & Welfare Services	0.0	0.0	0.0	0.0
12	Commercial Services	7.6	13.1	20.7	1.6
13	Government Services	1.7	3.0	4.6	0.4
Total Land Area		64.3	107.6	171.9	13.2

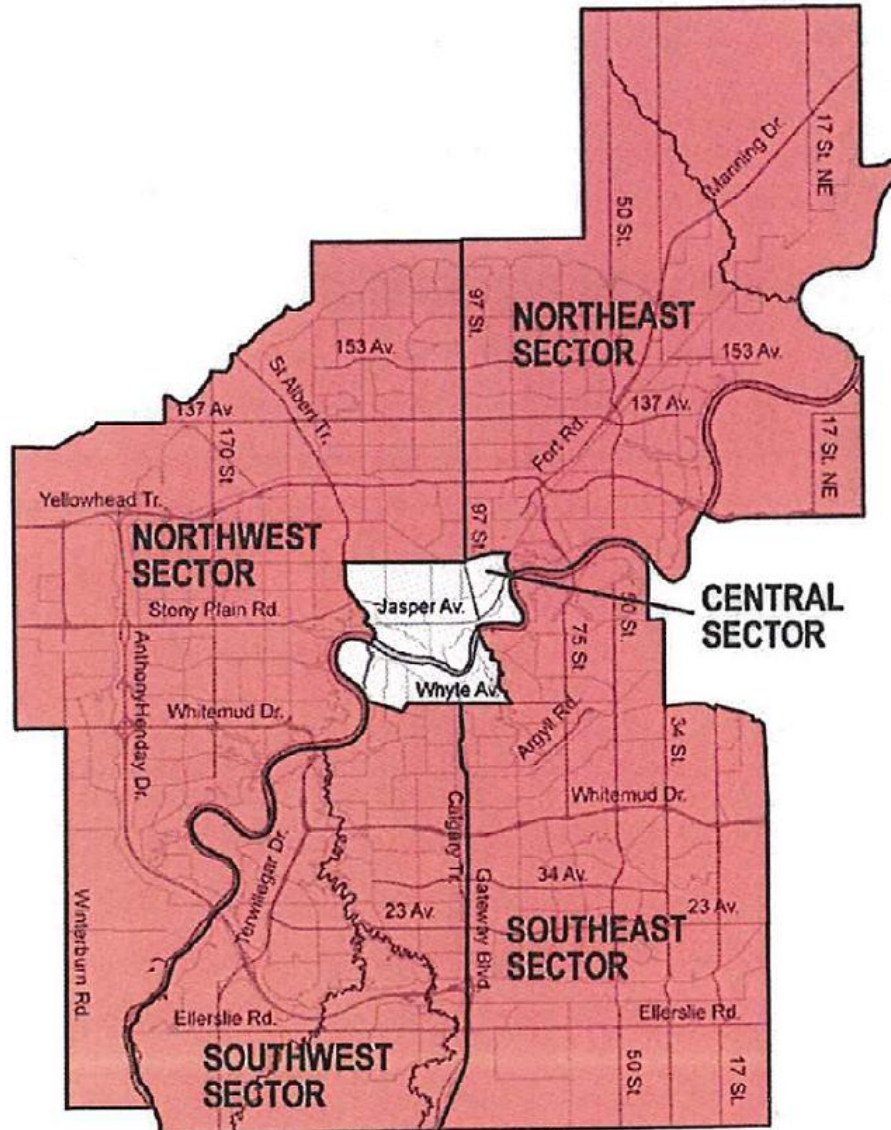
Of the 171.9 hectares of industrial land required in the Southwest sector over the 2012 to 2025 period, 80.2 hectares will require industrial zoning, 87.0 hectares will require commercial zoning, and 4.6 hectares will require zoning for institutional and governmental uses (Table 21).

Table 21: Southwest Sector Land Area Requirements Forecast by Land Use (HA)

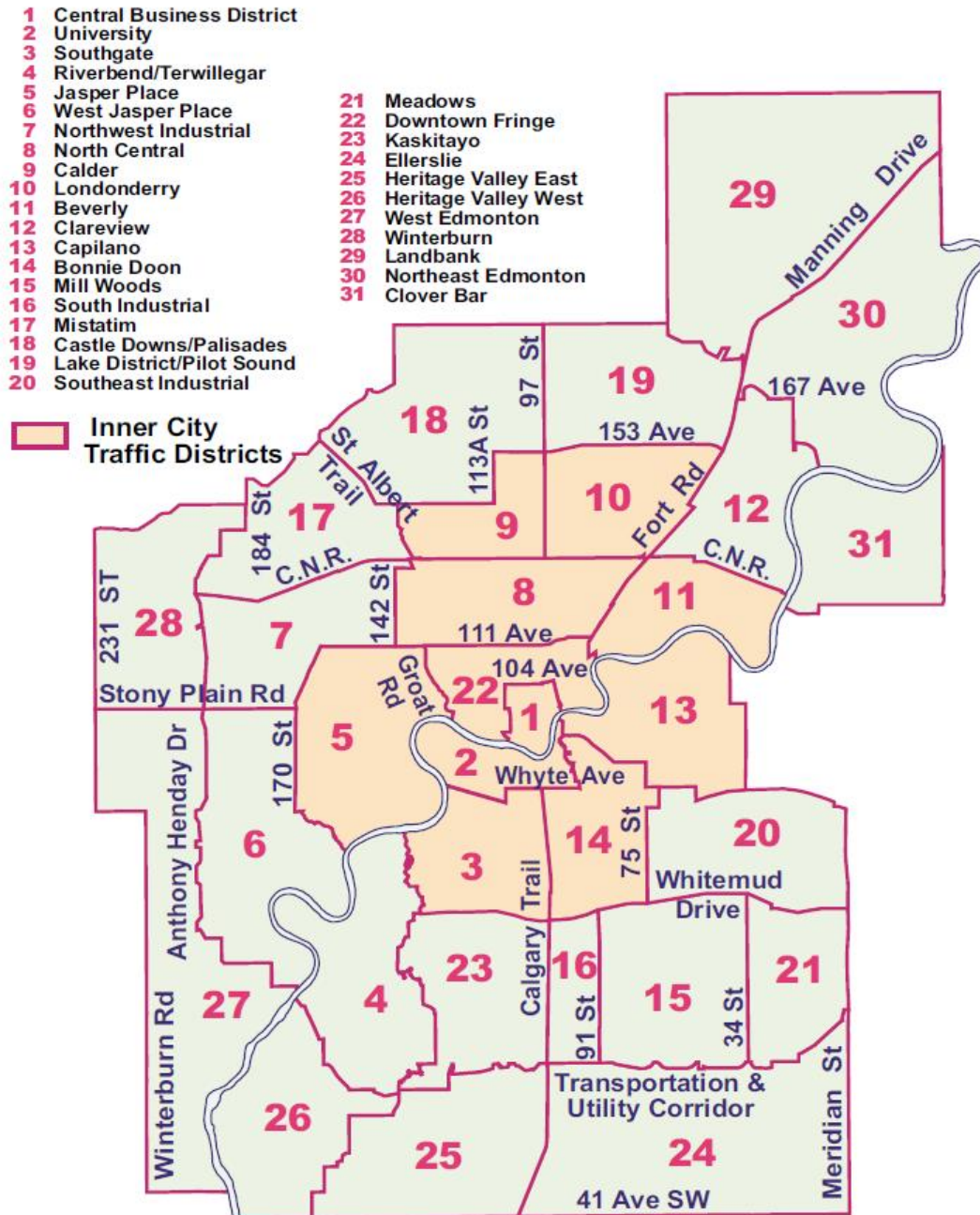
Zoning Type	2012 to 2017	2017 to 2025	13-Year Total	Per Year
Industrial Zoning	28.1	52.1	80.2	6.2
Commercial Zoning	34.5	52.5	87.0	6.7
Institutional/Governmental Zoning	1.7	3.0	4.6	0.4
Total	64.3	107.6	171.9	13.2

7.0 Appendix

Appendix 1: Map of City Sectors



Appendix 2: Map of Traffic Districts



Appendix 3: Industry Sector Definitions¹¹

No.	Industry Sector	Definition
1	Primary Industries	This sector comprises establishments primarily engaged in growing crops, raising animals, harvesting timber, harvesting fish and other animals from their natural habitats and providing related support activities. This sector also comprises establishments primarily engaged in extracting naturally occurring minerals. These can be solids, such as coal and ores; liquids, such as crude petroleum; and gases, such as natural gas. The term "mining" is used in the broad sense to include quarrying, well operations, milling (for example, crushing, screening, washing, or flotation) and other preparation customarily done at the mine site, or as a part of mining activity. Establishments engaged in exploration for minerals, development of mineral properties and mining operations are included in this sector. Establishments performing similar activities, on a contract or fee basis, are also included.
2	Manufacturing	This sector comprises establishments primarily engaged in the physical or chemical transformation of materials or substances into new products. These products may be finished, in the sense that they are ready to be used or consumed, or semi-finished, in the sense of becoming a raw material for an establishment to use in further manufacturing.
3	Construction	This sector comprises establishments primarily engaged in constructing, repairing and renovating buildings and engineering works, and in subdividing and developing land.
4	Utilities	This sector comprises establishments primarily engaged in operating electric, gas and water utilities. These establishments generate, transmit, control and distribute electric power; distribute natural gas; treat and distribute water; operate sewer systems and sewage treatment facilities; and provide related services, generally through a permanent infrastructure of lines, pipes and treatment and processing facilities.
5	Transportation & Warehousing	This sector comprises establishments primarily engaged in transporting passengers and goods, warehousing and storing goods, and providing services to these establishments. The modes of transportation are road (trucking, transit and ground passenger), rail, water, air and pipeline.
6	Retail & Wholesale Trade	The retail trade sector comprises establishments primarily engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The wholesale trade sector comprises establishments primarily engaged in wholesaling merchandise and providing related logistics, marketing and support services.
7	Finance, Insurance, & Real Estate	The finance and insurance sector comprises establishments primarily engaged in financial transactions (that is, transactions involving the creation, liquidation, or change in ownership of financial assets) or in facilitating financial transactions. The real estate sector comprises establishments primarily engaged in renting, leasing or otherwise allowing the use of tangible or intangible assets.

¹¹ Industry Canada. Canadian Industry Statistics. *Definition: Canadian Economy (NAICS 11–91)*. http://www.ic.gc.ca/eic/site/cis-sic.nsf/eng/h_00006.html

8	Professional, Technical, Scientific, & Management Services	The professional, technical, and scientific services sector comprises establishments primarily engaged in activities in which human capital is the major input. These establishments make available the knowledge and skills of their employees, often on an assignment basis. The individual industries of this sector are defined on the basis of the particular expertise and training of the service provider. This sector comprises establishments primarily engaged in activities in which human capital is the major input. These establishments make available the knowledge and skills of their employees, often on an assignment basis. The individual industries of this sector are defined on the basis of the particular expertise and training of the service provider. The management services sector comprises establishments primarily engaged in managing companies and enterprises and/or holding the securities or financial assets of companies and enterprises, for the purpose of owning a controlling interest in them and/or influencing their management decisions. They may undertake the function of management, or they may entrust the function of financial management to portfolio managers.
9	Accommodation & Food Services	This sector comprises establishments primarily engaged in providing short-term lodging and complementary services to travellers, vacationers and others, in facilities such as hotels, motor hotels, resorts, motels, casino hotels, bed and breakfast accommodation, housekeeping cottages and cabins, recreational vehicle parks and campgrounds, hunting and fishing camps, and various types of recreational and adventure camps. This sector also comprises establishments primarily engaged in preparing meals, snacks and beverages, to customer order, for immediate consumption on and off the premises.
10	Educational Services	This sector comprises establishments primarily engaged in providing instruction and training in a wide variety of subjects. This instruction and training is provided by specialized establishments, such as schools, colleges, universities and training centres. These establishments may be privately owned and operated, either for profit or not, or they may be publicly owned and operated. They may also offer food and accommodation services to their students.
11	Health & Welfare Services	This sector comprises establishments primarily engaged in providing health care by diagnosis and treatment, providing residential care for medical and social reasons, and providing social assistance, such as counselling, welfare, child protection, community housing and food services, vocational rehabilitation and child care, to those requiring such assistance.
12	Commercial Services	This sector comprises establishments, not classified to any other sector, primarily engaged in repairing, or performing general or routine maintenance, on motor vehicles, machinery, equipment and other products to ensure that they work efficiently; providing personal care services, funeral services, laundry services and other services to individuals, such as pet care services and photo finishing services; organizing and promoting religious activities; supporting various causes through grant-making, advocating (promoting) various social and political causes, and promoting and defending the interests of their members. Private households are also included.
13	Government Services	This sector comprises establishments primarily engaged in activities of a governmental nature, that is, the enactment and judicial interpretation of laws and their pursuant regulations, and the administration of programs based on them. Legislative activities, taxation, national defence, public order and safety, immigration services, foreign affairs and international assistance, and the administration of government programs are activities that are purely governmental in nature.