

Industrial Zoning Review: Industrial Parking Report

Parking Review and Parking Count Findings in Leduc's Industrial Park

Introduction

Metro Vancouver (2012) suggests periodically reviewing parking requirements to ensure they are still appropriate, as parking needs can change over time. For example, as certain industrial uses have become increasingly automated over time, there may be a decreased need for employee parking.

The City of Edmonton recently reviewed their parking regulations and ultimately chose to eliminate parking regulations entirely, which they call "open option parking". This change was approved by Edmonton City Council in June 2020. Edmonton did extensive parking reviews, research, and public engagement before making the change. One of the key findings of their research that motivated the change was that there was no consistent pattern to how parking was being used across the City, and no discernable correlation between land use and the amount of parking required. They also found that generally, parking is over-supplied in the City of Edmonton.

This parking report was completed to review the City of Leduc's industrial parking requirements and to explore the potential and feasibility of reducing and/or simplifying the City's parking regulations. First, the methodology and findings of a parking count exercise is provided. This exercise involved randomly selected sites throughout Leduc's industrial area that reflect a variety of land use districts, land uses, and building typologies. Then, a brief overview of the parking requirements of several Alberta municipalities is provided. This list includes municipalities comparable to Leduc, mid-size municipalities that are slightly larger than Leduc, the nearby large metropolitan centre, and those municipalities that have particularly innovative or forward-thinking land use bylaws. No jurisdictions outside Alberta were reviewed at this time, as land use regulation frameworks and economic realities can vary greatly in other provinces or countries. Following this, how each municipality's requirements would apply to the selected sites in Leduc is considered, and the original development permits for each site are reviewed. Finally, appendices provide more detail on the sites selected and each municipality's parking requirements.

Goals and Objectives

The intent of this report is to explore the feasibility of reducing or simplifying parking regulations in the City of Leduc's industrial zones by specifically analyzing:

- Does actual parking usage match parking requirements?
- How do Leduc's parking requirements compare to other municipalities?
- Are there parts of Leduc's parking regulations and processes that are redundant or unnecessary and could be simplified?

Parking Count

Site Selection Rationale

Parking counts can be a very time and labour intensive process. To avoid this, the parking count was designed to be as representative of the entire industrial area as possible, without committing a high

amount of resources. Therefore, sites were chosen which, when combined, cover a range of sizes, districts, ages, and geographic spread throughout the industrial area.

Using the data available on active business licenses, and a random number generator, one parcel was chosen in 6 different size ranges. The resulting parcels were not particularly varied in location or age of development, so some substitutions were made to increase variability while maintaining the size range of the parcels. The final selected parcels are listed below, along with some site characteristics.

	District	Land Use	Building Size (m2)	Parcel Size (m2)	Site Coverage (%)
Site 1	GC	Vehicle Sales	1860	13,500	14%
Site 2	IBL	Multiple	4130	10,000	41%
Site 3	IL	Office & Warehouse/Shop	4200	17,400	24%
Site 4	IL	Office & Warehouse/Shop	5200	23,000	23%
Site 5	IL	Retail	2350	43,800	5%
Site 6	IM	Warehouse/Shop	2200	14454	15%
Site 7	IM	Office & Warehouse/Shop	1700	8650	20%

Methodology

The counting methodology was straightforward. The parking stalls and the use thereof on the selected sites were all counted in person on Tuesday, October 19, 2021 between 1:30 and 3:00 pm. All marked spaces were counted on each site. In the absence of marked parking stalls, on site counts were conducted on the basis of empty parking spaces between vehicles, outlets provided to plug in vehicles, and general size of parking area. These estimates were then compared with the number of parking stalls required on site plans that had been previously approved.

All parked vehicles which were on each site were counted. Vehicles belonging to City staff conducting the counts were not included on any of the sites. On one site, it was determined that the vehicles parked on the street also belonged to staff working in the building, so these vehicles were noted. This site has an office component with an entrance not adjacent to the parking lot. One of the manufacturing staff confirmed that the office staff opted to park on the street rather than walk from the lot.

Limitations

While the sites were selected to present a broad view of parking use in the Industrial area, this represents a snapshot of varied sites, and caution should be used in interpretation. The scope of the parking investigation is limited as discussed, however the real-world aspect is also currently influenced by the ongoing COVID-19 pandemic.

While the majority of industrial workers are unlikely to work-from-home, additional shifts with reduced capacity may be in use at certain facilities, and office or support staff may be working remotely where possible. It is difficult to determine how much of an impact these factors may have on the results.

Findings

Address & LUB District		Land Use	Building Size (m2)	Parcel Size (m2)	Site Coverage (%)	Required Stalls	Provided Stalls	Vehicles Parked	Parking Usage %
Site 1	GC	Vehicle Sales	1860	13,500	14%	13	14	5	36%
Site 2	IBL	Multiple	4130	10,000	41%	69	unmarked	31	45%
Site 3	IL	Office & Warehouse/ Shop	4200	17,400	24%	103	102	11	11%
Site 4	IL	Office & Warehouse/ Shop	5200	23,000	23%	64	unmarked	16*	25%
Site 5	IL	Retail	2350	43,800	5%	32	14	8	57%
Site 6	IM	Warehouse/ Shop	2200	14454	15%	105	85	67	79%
Site 7	IM	Office & Warehouse/ Shop	1700	8650	20%	25	20	5	25%

*11 cars were parked on the street

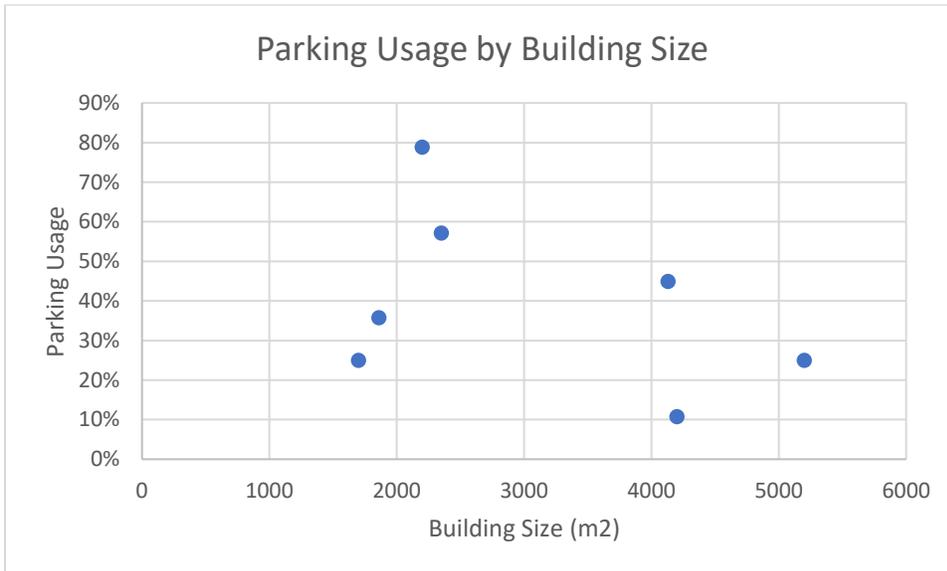
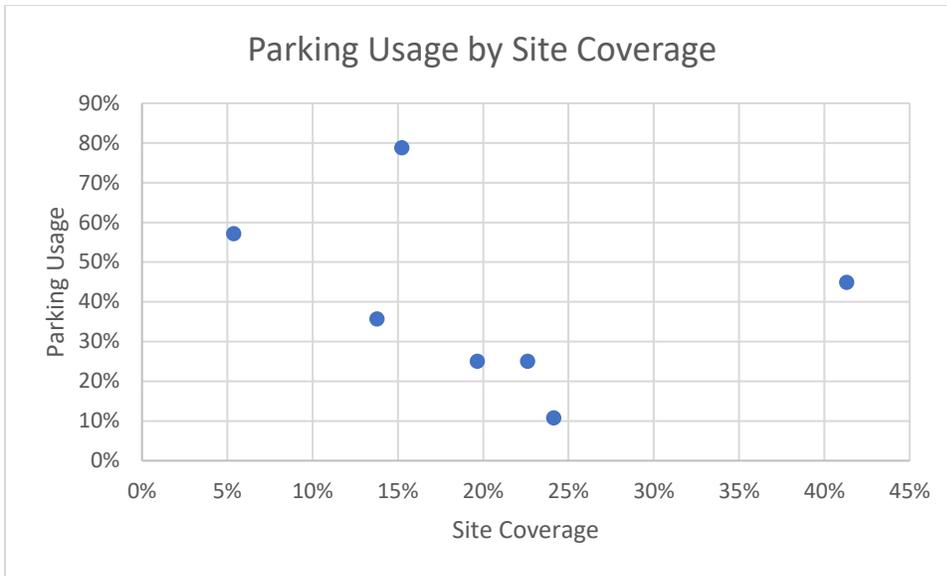
General Findings

The findings table above summarizes the parking usage found at the surveyed sites. There was no discernable correlation between parking usage and LUB District or Land Use found.

There was also significant disparity between the number of stalls required by the development permit, and the number of marked stalls actually found on the site. While two sites very closely matched their required stall number, three provided significantly less stalls than were required. Two properties, 3920 and 3901, provided roughly 80% of the required parking, while 6509 provided only 44% of the required parking. The two remaining properties had unmarked stalls, making it impossible to compare the exact difference. Nonetheless, all seven properties surveyed were not at a critically high level of parking usage.

Parking Usage vs. Site Characteristics

The two graphs below illustrate the relationships between parking usage and site coverage and parking usage and building size for the sites surveyed. No discernable correlation for either relationship was found.



Municipal Review

Industrial Parking Requirements Across Municipalities

The table below summarizes parking requirements for key industrial land uses in each of the surveyed municipalities. A more detailed breakdown of industrial parking requirements for each municipality is available in Appendix 2.

	General Industrial		Warehouse / Warehouse Sales	
	Ratio	Minimum	Ratio	Minimum
Leduc	1 / 100m2 PFA*	3	1 / 100m2 PFA*	3
Strathcona County	1 / 100m2 GFA**	3	1 / 100m2 GFA**, up to 2000m2 + 0.2 / additional 100m2	NA
Fort Saskatchewan	0.6 / 100m2 GFA**	10	1 / 3 employees at full shift + 0.6 / 100m2 GFA**	NA
Lethbridge	1/55m2 GFA**	NA	Retail component: 1/30m2 GFA**	NA
			Warehouse component: 1/65m2 GFA**	NA
Beaumont	1/100m2 lot coverage	NA	1/100m2 lot coverage	NA
Airdrie	1/staff at full shift + 5 visitor stalls	NA	1.0 stall per staff at full shift, OR 2.0 stalls per 100m ² of gross floor area To be exercised at the discretion of the Development Authority.	NA
Edmonton	-	-	-	-
High River	-	-	-	-
Cochrane (Proposed)	-	-	-	-

*PFA = Public Floor Area

**GFA = Gross Floor Area

Applying Requirements to Selected Sites

The parking requirements summarized in the table above were then used to analyze each of the sites selected for the parking count, in order to see how each municipality's requirements would apply. This is summarized in the table below. Generally, Airdrie tends to have the highest requirements, while Fort Saskatchewan tends to have the lowest. Leduc tends to be in the middle.

The table below also indicates several different numbers for Leduc. A brief description of what each number means is as follows:

- "Leduc - Current LUB": based on the October 13, 2021 version of Bylaw 809-2013.
- "Leduc - DP Condition": the required number of parking stalls provided in the original development permit conditions.
- "Leduc – Site plan calculation": the required number of parking stalls, according to the Land Use Bylaw at the time of development permit review, as calculated on the site plan.
- "Leduc – Provided on site plan": the number of parking stalls provided by the permit applicant, as shown on the site plan.

- “Leduc – Existing on site”: the number of stalls counted on site on October 19, 2021.

Required parking by municipality on selected sites								
	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 6b	Site 7
Leduc - Current LUB	5 or 39	72	72	64	53	3	39	19
Leduc - DP Condition	21	72	not specified	64	not specified	16	63	15
Leduc – Site plan calculation	39	72	81	64	not calculated	21	92	17
Leduc – Provided on site plan	21	69	104	64	32	105	55	25
Leduc – Existing on site	14	unmarked	102	unmarked	14	85	not counted	20
Leduc – Usage percentage	36%	45%	11%	25%	57%	79%	not counted	25%
Strathcona County	19	42	42	27	24	21	73	17
Fort Saskatchewan***	12	25	26	32	15	14	49	10
Lethbridge	38	32	77	95	47-78	17	26	20
Beaumont	19	42	42	52	24	22	73	17
Airdrie***	37	42-164	84	104	47	44	37	34
Edmonton	-	-	-	-	-	-	-	-
High River	-	-	-	-	-	-	-	-
Cochrane (Proposed)	-	-	-	-	-	-	-	-

***Based on floor area calculation. Bylaw gives option between basing on floor area or number of staff per full time shift.

The significant differences between the various Leduc numbers raise some questions. Notably, what were the requirements at the time, and how did we end up with the final result?

Reviewing the original permits for each of these sites indicated that there appears to be a significant amount of negotiation undertaken to arrive at the final required amount of parking, as well as the amount of provided parking. There are examples of:

- the developer providing significantly more parking than the LUB would require,
- the Development Authority requiring additional parking to be added,
- the Development Authority providing a variance to allow approval of less parking than the LUB would require,
- the required parking not being paved or marked, and
- the required parking not being used as parking, despite being paved and marked.

Comparable municipalities use a variety of calculations for parking requirements, gross floor area, number of staff on a full shift, and floor area by use type. The City of Leduc uses Public Floor Area for industrial uses, ostensibly only setting minimum required parking for the public, rather than staff at a site. This differs from both comparable municipalities and from the calculations for parking minimums for other uses in the City of Leduc, such as office space – calculated based on Gross Floor Area.

The significant amount of negotiation to arrive at a final number of required parking stalls indicates a complicated, non-transparent, and unpredictable process. Furthermore, the inconsistencies in how parking minimums are applied within use types in the industrial area, as well as across use types and in other municipalities, serves to further complicate the process for developers looking to locate in Leduc's industrial parks.

Appendix 1: Municipal Industrial Parking Requirements Summary

Leduc	<ul style="list-style-type: none"> • Industrial, General; Vehicle Repair Facility; Vehicle Repair Facility (Limited); Warehouse Sales – 1 stall per 100m² of public floor area (but not less than 3 stalls) • Service Station, Service Station (Limited) – 1 stall per 100m² of PFA
Edmonton	<ul style="list-style-type: none"> • Open Option Parking (no minimum requirements)
Strathcona County	<ul style="list-style-type: none"> • Any industrial use not listed separately: 3 per establishment, or 1.0 per 100 m² GFA or as determined by the Development Officer • Business , general; Industrial, general; Custom indoor manufacturing; Contractor service, general; Contractor service, limited: 3 per establishment, or 1.0 per 100 m² GFA; whichever is greater • Warehousing and storage: 1.0 per 100 m² GFA up to 2,000 m², plus 0.2 per additional 100 m² GFA
Fort Saskatchewan	<ul style="list-style-type: none"> • Cannabis Production and Distribution Facility: 1 for every 3 employees during the maximum working shift plus 0.6 per 100m² of GFA • General Industrial Use: 0.6 per 100m² of GFA, with minimum not less than 10 • Heavy Industrial Use: At the discretion of the Development Authority • Warehouse, Distribution and Storage: 1 for every 3 employees during the maximum working shift, plus 0.6 per 100m² of GFA
Lethbridge	<ul style="list-style-type: none"> • Commercial/Industrial Vehicles and Machinery <ul style="list-style-type: none"> ○ Warehouse, storage, and service: 1/130m² GFA ○ Office: 1/45m² GFA ○ Classroom: 1/18m² GFA • Equipment Sales, Rental, Service: 1/50m² GFA • Greenhouse: 1/65m² of GFA • Manufacturing, General and Intensive: 1 per 55m² of GFA • Warehouse, Retail <ul style="list-style-type: none"> ○ Retail component: 1/30m² GFA ○ Warehouse component: 1/65m² GFA • Warehouse, Wholesale <ul style="list-style-type: none"> ○ Office component: 1/45m² GFA ○ Warehouse component: 1/130m² GFA
High River	No minimum number of parking stalls shall be required for any Development, rather each Development shall consider the appropriate number of parking stalls required to support the proposed Development.
Beaumont	<ul style="list-style-type: none"> • All Industrial uses: 1 stall per 100m² of lot coverage
Airdrie	<ul style="list-style-type: none"> • Industrial, Manufacturing and Operations Industrial Distribution Storage Facilities: 1.0 stall per staff at full shift, PLUS 5.0 visitor parking stalls. • Vehicle Service, Limited Heavy Vehicle Sales and Leasing Vehicle Sales and Leasing RV Sales and Service RV Storage: 2.0 stalls per 100m² of gross floor area ♣ This does not include on-site vehicle storage or queuing spaces required for an associated drive-through. • Heavy Vehicle Storage and Repair Vehicle Service, General or Major Vehicle Service, Bulk Fuel Depot: 4.0 stalls per 100m² of gross floor

	<p>area ♣ This does not include on-site vehicle storage or queuing spaces required for an associated drive-through.</p> <ul style="list-style-type: none">• Other Industrial Uses (Not otherwise listed or multi-bay developments without specified uses): 1.0 stall per staff at full shift, OR 2.0 stalls per 100m² of gross floor area To be exercised at the discretion of the Development Authority.• Other Vehicle-Related Uses (Not otherwise listed or multi-bay developments without specified uses): 4.0 stalls per 100m² of gross floor area
Cochrane (Proposed)	<p>In determining whether the number of Parking Stalls submitted as part of a Development Permit application is sufficient to serve the Development, the Development Authority may have consideration for:</p> <ol style="list-style-type: none">a. The rationale submitted as part of the Development Permit application;b. The scale of the Development;c. The proposed Use(s) of the Site;d. The location of the Development; ande. The parking required by various users on a Site.