

Bylaw 15038

A Bylaw to amend Bylaw 12800, as amended,  
The Edmonton Zoning Bylaw  
Amendment No. 1011

WHEREAS Council considers it desirable to amend the text of the Edmonton Zoning Bylaw;

WHEREAS Council considers it desirable to amend the Zoning Bylaw to implement proposed Section 860 – The Quarter Overlay; and

NOW THEREFORE after due compliance with the relevant provisions of the Municipal Government Act RSA 2000, ch. M-26, as amended, the Municipal Council of the City of Edmonton duly assembled enacts as follows:

1. Bylaw 12800, as amended, The Edmonton Zoning Bylaw is hereby amended by:
  - a. by adding the following as Section 6.1(75):

75. **Stepback** means the horizontal distance a building façade is stepped back, on a horizontal plane, from the building façade immediately below it.
  - b. by renumbering Section 6.1 accordingly.
  - c. by adding the following as Section 7.3(6):

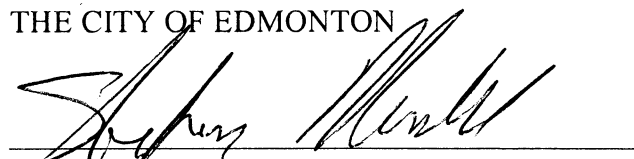
Live Work Unit means a business operated from a Dwelling by the principal resident of the Dwelling, where:

    - a. the business does not exceed 50 per cent of the gross floor area of the Dwelling;
    - b. the business is limited to:
      - i. Personal Service Shops
      - ii. Professional, Financial and Office Support Services
      - iii. Custom Manufacturing Establishments
      - iv. Health Services
      - v. Private Education Services; and
    - c. the associated Dwelling does not contain a Minor Home Based Business or a Major Home Based Business.
  - d. by renumbering Section 7.3 accordingly.
  - e. by adding the following as Section 92:

- f. Live Work Units shall comply with the following regulations:
- i. each unit shall have individual access at grade;
  - ii. there shall be no exterior display or advertisement other than an identification plaque or Sign a maximum of 20 cm x 30.5 cm in size located on the Dwelling;
  - iii. the number of non-resident employees or business partners working on-site shall not exceed two per unit at any one time;
  - iv. there shall be no outdoor business activity, or outdoor storage of material or equipment associated with the Business. Indoor storage related to the business activity shall be allowed in either the Dwelling or Accessory buildings;
  - v. there shall be no nuisance created by the business by way of electronic interference, dust, noise, odor, smoke, bright light or anything of an offensive or objectionable nature which is detectable to normal sensory perception outside the Live Work unit; and
  - vi. each application for a Development Permit for the Use Class Live Work Unit shall include a description of the business to be undertaken at the premises, an indication of the number of business visits per week, provision for vehicular and bicycle parking for visitors and employees, and where any materials or equipment associated with the business use are to be stored.
- g. adding new Section "Section 860 – The Quarters Overlay" attached hereto as Schedule "A" and forming part of this bylaw.

READ a first time this	24 <sup>th</sup>	day of	November	, A. D. 2008;
READ a second time this	9 <sup>th</sup>	day of	March	, A. D. 2009;
READ a third time this	15 <sup>th</sup>	day of	April	, A. D. 2009
SIGNED and PASSED this	15 <sup>th</sup>	day of	April	, A. D. 2009.

THE CITY OF EDMONTON

  
MAYOR

  
CITY CLERK

**860 The Quarters Downtown Overlay****860.1. General Purpose**

The purpose of this Overlay is to apply common regulations to a number of underlying Direct Control Provisions in order to achieve the objectives of The Quarters Area Redevelopment Plan and The Quarters Urban Design Plan.

**860.2. Area of Application**

Notwithstanding Section 800 of the Zoning Bylaw respecting the area of application of Overlays, this Overlay applies to the lands shown in Appendix I to this Overlay, except for those sites as noted.

**860.3. Variance and Interpretation**

1. The Development Officer may vary requirements such as building setbacks and building stepbacks, tower separation, built form and podium design, parking, glazing, and application of The Quarters Downtown Sustainable Development Standard Checklist as contained in Appendix IV provided consideration is given to the character of the built form, and its visual, shadow and other microclimatic impacts on adjacent development, and to the objectives of The Quarters Downtown Urban Design Plan and principles of Crime Prevention Through Environmental Design (CPTED).
2. The Development Officer may vary the minimum distance between individual high-rise developments in consideration of the following:
  - a. The visual, sun/shadowing, and other microclimatic impacts on adjacent residential development; and
  - b. The recommendations and mitigative measures specified in any required technical studies.
3. The Development Officer may approve a residential or any non-commercial use for a maximum period of five years for any active commercial frontage as specified in Appendix II.
4. The Development Officer, in consultation with the Transportation Department, may relax:
  - a. parking requirements in response to initiatives which reduce parking demand, including, but are not limited to, dedicated car share/car pool program stalls, universal bus pass programmes, or shared parking between Commercial, Commercial Related, Residential, and Residential Related Uses;
  - b. parking and loading requirements in the case of restoration or rehabilitation of existing buildings on the Register of Heritage Buildings of Edmonton;
5. Development exceeding 23.0 m. or 6 Storeys is considered a Tower to which the Urban Design Regulations for Towers shall apply.
6. The Development Officer shall not vary maximum Floor Area Ratios, nor maximum Building Heights specified in the underlying Direct Development Control Provisions or this Overlay.
7. Bicycle storage areas shall be exempted from Floor Area calculations.
8. The number of storeys noted in association with minimum and maximum Building Heights in this Overlay and the underlying Direct Control Provisions are provided for descriptive purposes only.

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### **860.4. Development Regulations**

1. General Provisions
  - a. The Development Officer shall have regard for The Quarters Downtown Urban Design Plan in applying the regulations of this Overlay.
  - b. Prior to the submission of a Development Permit application the owner shall provide proof the affected lands have been remediated such that they are suited to their intended use to the satisfaction of the Development Officer in consultation with Alberta Environment, the Capital Health Authority, and the Transportation Department.
  - c. Documentation showing proof of consultation with the Planning and Development Department regarding City acquisition of the mid-block, north-south pedestrian street at least 90 days prior to the submission of a Development Permit Application shall be submitted concurrent with a Development Permit Application for sites mid-block between 96 and 97 Streets in accordance with The Quarters Downtown Area Redevelopment Plan and the Quarters Downtown Urban Design Plan.
  - d. Ground Floor uses shall be developed in accordance with Appendix II to this Overlay
  - e. The maximum ground Floor Area of any individual business premise for a retail use shall not exceed 1,850 m<sup>2</sup>.
  - f. The maximum number of individual business premises for retail use with a Floor Area between 1,200 m<sup>2</sup> and 1,850 m<sup>2</sup> shall not exceed one per block face.
  - g. Building facades shall incorporate architectural designs or features that characterize the particular precinct theme envisioned in The Quarters Downtown Urban Design Plan.
  - h. Vehicular access and egress to sites shall be provided from laneways. Where no abutting laneway exists access may be taken from an abutting public roadway, to the satisfaction of the Development Officer in consultation with the Transportation Department.
  - i. Driveway ramps for underground parkades must be at Grade at the property line and must not exceed a slope of 6% for a distance of 4.5 m inside the property line, or to the satisfaction of the Transportation Department.
  - j. Laneway infrastructure shall be improved to provide access to on-site parking facilities to the satisfaction of the Development Officer in consultation with the Transportation Department.
2. Parking, Loading and Bicycle Storage shall be provided as specified in Appendix III
3. Signs shall comply with Schedule 59B, excluding Freestanding signs as specified in Section 59B.1.2. For Commercial uses on the ground floor, signs shall comply with the overall intent of Section 59.3 of the Zoning Bylaw.
4. A minimum of 5 m<sup>2</sup> shall be required for each residential unit as amenity space. This space may be provided for each dwelling, or aggregated to a common area in a development, and may be located interior or exterior to the development.
5. Historic Resources
  - a. Municipally, provincially or federally designated historic resources on the Register of Historic Resources in Edmonton shall be retained and incorporated into any redevelopment, so that their heritage values and those character defining elements of merit become an integral part of the development, to the satisfaction of the Development Officer in consultation with the Heritage Officer.

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- b. The preservation of designated historic resources and buildings on the Register of Historic Resources in Edmonton and the design of new development on the site shall conform to the following regulations:
  - i. The “Standards and Guidelines for the Conservation of Historic Places in Canada” published by Parks Canada and the Minister of Alberta Culture and Community Spirit;
  - ii. The Statements of Significance for the buildings; and
  - iii. All modification and/or alteration shall be reviewed and approved by the Development Officer in consultation with the Heritage Officer and Alberta Culture and Community Spirit, if required.

#### **860.5. Urban Design Regulations**

- 1. Site Planning shall be addressed in accordance with The Quarters Downtown Urban Design Plan
- 2. Landscaping
  - a. In addition to the requirements specified in Section 55.3, Landscaping shall be provided in consideration of The Quarters Downtown Urban Design Plan.
  - b. Landscaping along public roadways, including lanes shall be coordinated by the City of Edmonton and shall be provided in consideration of The Quarters Downtown Urban Design Plan.
- 3. Parking and Loading
  - a. Surface parking, loading, and storage areas shall be located to the rear of any building and be screened from public roadways through the orientation of on-site built form and/or enhanced landscaping measures.
  - b. The location and provision of garbage storage, compaction, recycling and collection facilities shall be to the satisfaction of the Development Officer having regard for minimizing the nuisance impacts of these facilities.
  - c. Parking, loading and passenger drop-off areas shall be designed to minimize pedestrian-vehicle conflicts.
  - d. Visitor parking for residential uses shall not be provided as tandem parking.
  - e. Blank walls (with or without windows) of vehicular Parking Garages shall not be developed adjacent to, or be visible from, any public roadway.
  - f. No portion of an above Grade Parking Garage on the ground (first) floor shall be allowed for a minimum depth of 10.0 m from any building façade facing a public roadway, other than a lane.
  - g. No portion of an above Grade Parking Garage above the ground (first) floor up to 5 storeys shall be allowed for a minimum depth of 6.0 m from any building façade facing a public roadway, other than a lane.
  - h. No portion of an above Grade Parking Garage will be located on or above the top floor of any building or, in the case of a tower, podium structure.
- 4. Entrances
  - a. Where a Dwelling unit is developed at ground level abutting a public roadway, other than a lane, the principal entrance to the unit shall have direct external access to the

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abutting public sidewalk and feature doorways, terraces and / or patios and windows at ground level.

- b. Residential and Residential Related Uses developed above ground level Commercial Uses shall have separate access at Grade.
  - c. Where a Commercial Use is developed at ground level abutting a public roadway other than a lane, the principal entrance to the unit shall have direct external access to the abutting public sidewalk.
  - d. Main building entrances for Apartment Housing and Commercial Uses shall be designed for universal accessibility.
    - i. Level changes from the sidewalk to entrances of buildings shall be minimized.
    - ii. Sidewalk furniture and other streetscape elements shall be located such that they do not obstruct a travel path and building entrances.
  - e. Entrances for all ground level uses shall be placed not more than 15.0 m apart.
5. Weather protection in the form of a canopy, colonnade, galleria or any other method suitable to the architectural style of the sub-area, building or street theme shall be provided to support year-round use.
6. Architectural Control
- a. All exposed building facades shall be architecturally treated to create a unified building exterior.
  - b. All building façades shall use high quality, compatible and harmonious exterior finishing materials.
  - c. Architectural diversity and visual interest shall be created through:
    - i. the use of distinctive treatments at the corner of the development and at its main entrance; and
    - ii. the articulation and incorporation of other design elements in its facades and rooflines.
  - d. A minimum of 70% of the ground floor level portion of the commercial façade abutting a public roadway, other than a lane, shall be comprised of clear, non-reflective glazing to promote pedestrian interaction and safety.
  - e. All mechanical equipment, including roof mechanical units, shall be integrated into the total building design.
  - f. Perceived massing shall be minimized through design elements such as building setback variations, building orientation, window placement, awnings, articulation around entrance ways, roof treatment, and the choice of exterior materials and colours.
  - g. All mid and high rise buildings should display a distinct base, middle and top.
  - h. The upper floors of high rise buildings shall provide distinctive shaping or sculpting of the roof line to contribute to a unique and interesting skyline.
  - i. Dwellings and other elements of the development should be sited and oriented to minimize their impact on other dwellings, considering such things as daylight, sunlight, ventilation, quiet, visual privacy, shadowing and views.
  - j. Overhangs will be permitted within the space of the setback and within public road right-of-ways at the discretion of the Development Officer in accordance with the guidelines provided in The Quarters Downtown Urban Design Plan.

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- k. Towers shall form one comprehensive architectural whole, both in form, building mass, and articulation. Podiums for towers shall include design elements that create a pedestrian oriented/scale built form where adjacent to circulation routes on public or private property. This can be created in various ways through setbacks and stepbacks in the Building mass, Building articulation, and through the architectural treatment of the façades.
  - i. The tower base Building shall integrate Residential and Commercial Uses to provide a pedestrian-scaled Building edge and complement adjacent Buildings or open space. The base Building should define street and open space edges.
  - ii. The tower shall be designed and oriented to the site in a way that complements the base Building, minimizes shadows and maximizes views for existing development.
  - iii. The average floor plate for the tower zone shall not exceed 750 m<sup>2</sup>.
  - iv. The minimum separation space between any two Towers shall be 15.0m.
  - v. Development on the site shall provide gardens or patios on the top of the base Building to improve rooftop aesthetics and provide additional amenity space, where physically and economically feasible.
  - vi. Where property configuration permits, the longest axis of a tower shall be in the north/south direction in order to preserve view corridors and allow sunlight to reach street level.
  - vi. No side of a tower shall be more than 35.0 m long.
- 7. Public Art shall be incorporated into publicly accessible open spaces and provide a signature feature to the development. Public art may also be incorporated in the architecture, architectural facades and the facades of a building and landscaped areas.
- 8. Technical Study Requirements
  - a. Technical studies not required to accompany Development Permit applications for base level and Incentive Levels 1 or 2, as per Appendix IV include the following;
    - i. Sun Shadow Impact Study;
    - ii. Traffic Impact Assessment;
    - iii. Park Impact Assessment;
    - iv. Parking Impact Assessment;
    - v. Conceptual Site Servicing Report.
    - vi. Loading / Unloading and Waste Management

The above noted technical studies may be required to accompany Development Permit applications for Incentive Level 3 as per Appendix IV to the satisfaction of the Development Officer.
  - b. Additional technical studies that may be required to accompany Development Permit Applications to the satisfaction of the Development Officer include, but are not limited to:
    - i. Wind Impact Statement or Study
    - ii. Slope and Soil Information;
    - iii. Environmental Site Assessment;

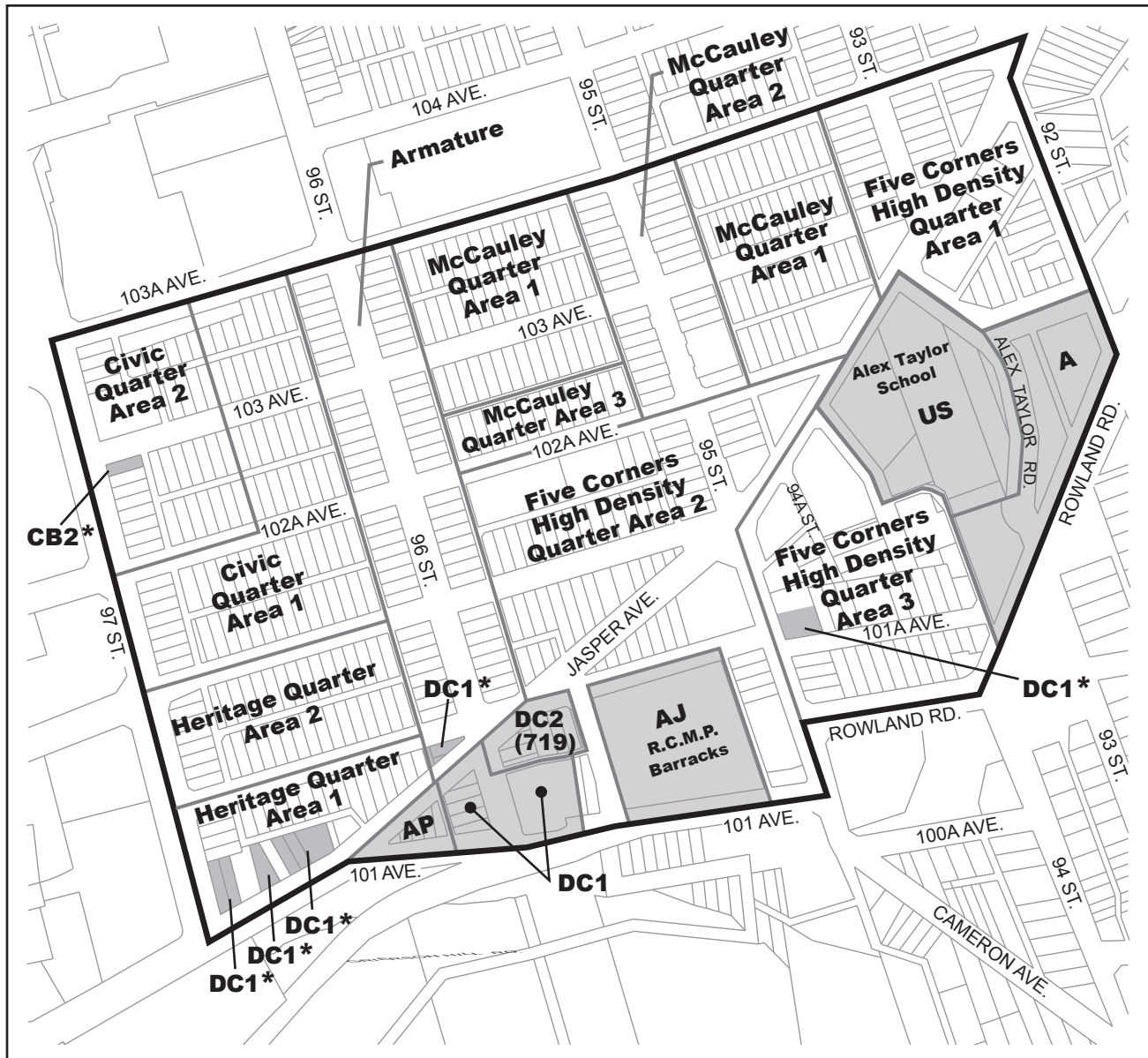
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


- iv. A Letter prepared by a qualified, registered, Professional Architect or Engineer ensuring that building designs, through their massing and location, would avoid adverse microclimatic effects such as wind tunnelling, snow drifting, and rain sheeting, and would minimize shadowing and loss of sunlight both on and off-site.
- v. A Crime Prevention Through Environmental Design (CPTED) Assessment that shall be reviewed and accepted by the Development Officer prior to the issuance of a Development Permit to ensure that development on the Site provides a safe urban environment in accordance with the guidelines and principles established in the Design Guide for a Safer City (City of Edmonton, 1995), which may be amended from time to time.





## *The Quarters Downtown Overlay*



-  Sites not included in The Quarters Downtown Overlay
-  Area Boundary
-  The Quarters Downtown Overlay Boundary



## *Active Residential and Commercial Frontages*



### Legend

- Active Commercial Frontages
- Active Residential / Commercial Frontages
- The Quarters Downtown ARP Boundary

### Appendix II

**860 The Quarters Downtown Overlay****Appendix III****Parking, Loading and Bicycle Storage Requirements**

Vehicular Parking Requirements			
Use of Building or Site	Gross Floor Area (m <sup>2</sup> )	Minimum Spaces	Maximum Spaces
Residential and Residential Related Use Classes	Less than 40	0.20 spaces	0.35 spaces
	40 to 50	0.30 spaces	0.50 spaces
	50 to 60	0.50 spaces	0.75 spaces
	60 to 70	0.50 spaces	0.75 spaces
	70 to 80	0.70 spaces	1.00 space
	80 to 90	0.75 spaces	1.00 space
	90 to 100	0.80 spaces	1.00 space
	100 to 110	1.00 space	1.25 spaces
	110 to 120	1.00 space	1.25 spaces
	120 to 130	1.00 space	1.50 spaces
	130 to 150	1.00 space	2.0 spaces
Visitor parking for residential uses shall be provided at a minimum of 1 stall per 10 Dwellings			
Commercial Use Classes	Minimum Spaces	Maximum Spaces	
Professional, Financial and Office Support Services	0.3 spaces per 100 m2 of Gross Floor Area	0.7 spaces per 100 m2 of Gross Floor Area	
Speciality Food Services and Restaurants	1 per 4.8 m2 of Public Space		
Health Services	4.5 spaces per 300 m2 of Gross Floor Area		
All other Commercial Use Classes	0.3 spaces per 100 m2 of Gross Floor Area	1 space per 100 m2 of Gross Floor Area	
All non-Residential and non-Commercial Use Classes	As per Section 54 of the Zoning Bylaw		

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<b>Loading Space Requirements</b>		
<b>Use of Building or Site</b>	<b>Gross Floor Area of Building</b>	<b>Minimum Number of Loading Spaces</b>
Any development within the Commercial use Classes	• Less than 200 m <sup>2</sup>	0
	• Between 200 m <sup>2</sup> and 2,500 m <sup>2</sup>	1
	• Each additional 2,500 m <sup>2</sup> or fraction thereof	1 additional
Professional, Financial, and Office Support Services	• Less than 200 m <sup>2</sup> of GFA of the building	0
	• Between 200 m <sup>2</sup> and 5,000 m <sup>2</sup> of GFA of the building	1
	• Between 5,000 m <sup>2</sup> and 10,000 m <sup>2</sup>	2
	• Each additional 10,000 m <sup>2</sup> or portion thereof	1 additional
Any development within Residential Related Use Classes	• Less than 100 dwelling units	0
	• Between 100 and 199 units	1
	• Between 200 and 399 units	2
	• Each additional 100 units or portion thereof	1 additional
Any development within the Basic Services, Community, Educational, Recreational, and Cultural Service Use Classes	• Less than 2,500 m <sup>2</sup> of GFA of the buildings	1
	• Each additional 2,500 m <sup>2</sup> of GFA of the building or portion thereof	1 additional

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<b>Bicycle Storage Requirements</b>	
<b>Use of Building or Site</b>	<b>Minimum Number of Bicycle Spaces</b>
Any development within Commercial Use Classes including Professional, Financial, and Office Support Services	20% of the number of vehicular parking spaces required or a minimum of 5 spaces, whichever is more.
Any development within Residential Use Classes	No requirement for multi family developments of less than 20 units
	A minimum of 0.5 spaces per unit with a minimum requirement of 5 bicycle parking spaces for multi family, whichever is more.
Any development within the Basic Services, Community, Educational, Recreational, and Cultural Service Use Classes	25% of the number of vehicular parking spaces with a minimum of 10 bicycle parking spaces, whichever is more.

**860 The Quarters Downtown Overlay****Appendix IV****Floor Area Ratio (FAR) and Height Incentives**

1. The Floor Area Ratio and Height Incentives shall be calculated as additional FAR and height, up to the maximum achievable FAR and height as provided in Table 1, based on points earned according to the sustainable development initiatives added to the development as per Appendix V provided in this provision.
2. To secure the Floor Area Ratio and Height Incentives shall be submitted along with the Development Permit application with the information required as per Appendices IV and V.
3. Floor Area Ratio and Height Incentives
  - i. The maximum achievable FAR and Height as per the incentives for each Area shown in Appendix I shall be as stated in Table 1. Incentive Level 1 can be achieved by accumulating 15 points, Incentive Level 2 can be achieved by accumulating 30 points and Incentive Level 3 can be achieved by accumulating 50 points as per Appendix V provided in this provision. Some points must be accumulated in each of the 8 categories.
  - ii. Development sites may be developed up to the base allowable FAR and height in each Area shown in Appendix I without providing any sustainable development incentives listed on Appendix V. All development shall still conform to all other provisions in the Zone where the development is located in the Zoning Bylaw.
  - iii. In order to develop above the base FAR and height, developments may pursue the FAR Incentive Level 1 or the FAR Incentive Level 2 as defined in Appendix V.

**Table 1: FAR and Height Incentives by Area<sup>1</sup>**

Area	Base Level FAR	Base Level Height (metres / storeys <sup>2</sup> )	Incentive Level 1 FAR	Incentive Level 1 Height (metres / storeys <sup>2</sup> )	Incentive Level 2 FAR	Incentive Level 2 Height (metres / storeys <sup>2</sup> )	Incentive Level 3 FAR	Incentive Level 3 Height <sup>1</sup> (metres / storeys <sup>2</sup> )
Heritage Quarter Area 1	3.0	11m / 3	4.5	23m / 6	-	-	-	-
Heritage Quarter Area 2	3.0	11m / 3	4.5	23m / 6	6.0	50m / 15	-	-
Civic Quarter Area 1	3.0	11m / 3	7.0	47m / 13	8.0	77m / 23	-	-
Civic Quarter Area 2	3.0	11m / 3	7.0	47m / 13	8.0	77m / 23	10.0	113m / 33
The Armature	3.0	11m / 3	4.5	23m / 6	-	-	-	-
McCauley Quarter Area 1	1.5	7m / 2	3.5	23m / 6	-	-	-	-
McCauley Quarter Area 2	2.0	7m / 2	3.5	23m / 6	-	-	-	-
McCauley Quarter Area 3	1.5	7m / 2	4.0	27m / 8	-	-	-	-
Five Corners Area 1	3.0	11m / 3	7.5	50m / 15	8.0	85m / 28	-	-
Five Corners Area 2	3.0	11m / 3	7.5	50m / 15	8.0	85m / 28	-	-
Five Corners Area 3	3.0	11m / 3	7.5	50m / 15	8.0	85m / 28	11.0	150m / 45

**NOTES:**

<sup>1</sup> Maximum Building Height shall not exceed that established by the City Centre Protection Overlay of the Zoning Bylaw or as approved by Nav Canada, Transport Canada, and the Edmonton Airports Authority.

<sup>2</sup> Storeys indicated are approximate and are included for illustrative purposes only.

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#### **4. Sustainable Development Standard Checklist**

##### **a. Incentive Rates:**

1. In order to be granted the FAR and Height Incentive Level 1, as per Table 1, the development shall provide all required sustainable development initiatives and achieve 15 points in Appendix V. If the development achieves less than 15 points, no additional FAR or additional height shall be granted.
2. In order to be granted the FAR and Height Incentive Level 2, as per Table 1, the development shall provide all required sustainable development initiatives and achieve 30 points in Appendix V. If the development achieves 15 or more points, but less than 30 points, and should the applicant choose to proceed, the development shall be granted additional FAR and additional height according to FAR and Height Incentive Level 1 in Table 1.
3. The points assigned to each of the sustainable development initiatives are summarized in Appendix V:
4. The applicant shall provide evidence to the Development Officer, as requested in Appendix V, as to how the sustainable development initiatives will be implemented.

##### **b. Contents**

1. All developments pursuing FAR and Height Incentives consistent with Table 1 shall submit supporting documentation describing the commitment and compliance path.
2. Documentation shall include signature(s) of the responsible parties and shall provide a detailed description of the design strategy and/or plan of action as it relates to the chosen sustainable building feature.
3. Applications to secure FAR and Height Incentives shall be submitted along with the Development Permit application.

##### **c. FAR and Height Incentives Submittal Requirements**

Appendix V: The Quarters Downtown Sustainable Development Standard Checklist identifies submittal requirements, to the satisfaction of the Development Officer, for each of the FAR and Height Incentives. The scope of these submittal requirements are as follows:

##### **1. Site Plan and Associated Narrative:**

Provide a site plan detailing the following:

- A. Building footprint
- B. Solar orientation and description of how the building responds to this for passive heating and cooling
- C. Surface parking area as a percentage of total site area
- D. Location of bicycle storage and/or end-of-trip facilities
- E. Context plan
- F. 3-D view of building
- G. How universal accessibility requirements have been met
- H. Landscaping areas
- I. Exterior lighting locations
- J. Green roof area as a percentage of total roof area
- K. Recycling / waste storage and treatment areas

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2. Floor Plans:

Provide floor plans detailing the following:

- A. Natural ventilation, daylight penetration and other passive design systems
- B. Universal accessibility requirements
- C. Wheelchair radius requirements in accessible dwelling
- D. Recycling / waste storage and treatment areas

3. Elevation Drawings:

Provide elevation drawings detailing the following as necessary:

- A. Natural ventilation, daylight penetration and other passive design systems
- B. Universal accessibility requirements

4. Lighting Plan:

Detail the lighting strategy for the site. Demonstrate compliance with the requirements of the Illuminating Engineering Society of North America (IESNA RP-33-99).

5. Parking Plan:

Provide a parking plan detailing the following as necessary:

- A. Universal accessibility requirements
- B. Recycling / waste storage and treatment areas
- C. Location of bicycle storage and/or end-of-trip facilities
- D. Location of unbundled parking spaces
- E. Location and number of car-share vehicles relative to the total number of stalls

6. Simpson's Diversity Index:

Use the following equation to calculate your score:

$$\text{Score} = 1 - \sum (n/N)^2$$

Where n = the total number of dwellings in a single category, and N = the total number of dwellings in all categories

Housing categories in The Quarters Downtown are defined as:

- A. Bachelor large – greater than 46 m<sup>2</sup>
- B. Bachelor small – less than 46 m<sup>2</sup>
- C. One-bedroom large – greater than 65 m<sup>2</sup>)
- D. One-bedroom small – less than 65 m<sup>2</sup>
- E. Two-bedroom large – greater than 84 m<sup>2</sup>
- F. Two-bedroom small – less than 84 m<sup>2</sup>
- G. Three or more bedroom
- H. Live-work

7. Energy Management Plan:

Describe the energy management strategy and active and passive systems being employed to meet the targeted reduction in energy use. Describe the results of energy modelling and the percentage performance improvement over the Model National Energy Code for Buildings. The assessment is to be prepared by a professional engineer or architect.



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**8. Energy Modelling Screening Tool:**

Present the results of the energy modelling screening tool from CBIP or other modelling software. The assessment is to be prepared by a professional engineer.

**9. Letter of Commitment:**

Provide a letter of commitment from the developer and/or owner and/or professional architect and/or engineer declaring that the requirements will be met.

**10. Affordable Housing Agreement:**

The owner will execute an agreement with the City of Edmonton to address the contribution to affordable housing.

**11. Water Management Plan:**

Provide a water management plan (to be prepared by a professional engineer) describing the overall water management strategy and how potable water use will be reduced and water will be reused. Detail the following as necessary:

- A. A system to collect, store and treat (if necessary) rainwater
- B. How collected rainwater will be utilized
- C. Flow rates on water efficient fixtures to be used
- D. Mechanisms to be employed in order to reduce potable water for sewage conveyance by 50% when compared to a typical baseline building.
- E. A system to collect and treat grey water for reuse on site

**12. Landscape Plan:**

Provide a detailed landscape plan (to be prepared by a professional landscape architect) including the overall landscaping strategy and how plant selection will be made. Provide a list of plant materials to be used.

**13. Construction Waste Management Plan:**

Provide a construction waste management plan describing the overall waste management strategy and how waste will be diverted from landfill toward recycling and/or salvage reuse. Provide a list of the materials to be collected for recycling and salvage. The plan is to be prepared by a professional engineer or architect.

**14. Air and Dust Emissions Control Plan:**

Provide an air and dust emissions control plan describing how air quality will be maintained and dust controlled during construction and demolition. Replace all filtration media immediately prior to occupancy, with a Minimum Efficiency Reporting Value of 13. Meet or exceed the recommended Design Approaches of the Sheet Metal and Air Conditioning Contractor's National Association IAQ Guideline for Occupied Buildings Under Construction, 1995, Chapter 3. Protect all absorptive material from moisture damage. Use filtration media with a Minimum Efficiency Reporting Value of 8 at each return air grill if air handlers must be used during construction. The plan is to be prepared by a professional engineer or architect.

**15. Car-Share Plan or contract with car cooperative:**

Describe the terms of use of the project's car-share program. Detail the number of cars to be provided, membership criteria, booking mechanisms, and management plan. A minimum of 1 car for every 50 units shall be provided. If a contract is signed with an existing car cooperative to supply a car on the property provide a copy of the contract.

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### Appendix V

This appendix is to be used in conjunction with Appendix IV

THE QUARTERS DOWNTOWN SUSTAINABLE DEVELOPMENT STANDARD CHECKLIST		
Design Category	Points	Submission Requirements
1 <input type="checkbox"/> Building orientation and design that responds to solar patterns in order to create opportunities for passive solar heating and shading for cooling.	1	<ul style="list-style-type: none"> <li>Floor, plan and elevation drawings.</li> </ul>
2 <input type="checkbox"/> Passive design principles have been applied that improve efficiency of mechanical systems by maximizing natural ventilation and day lighting and enhancing envelope efficiency.	1	<ul style="list-style-type: none"> <li>Floor Plans</li> <li>Elevation Drawings</li> </ul>
3 <input type="checkbox"/> The design provides for reduced light pollution by minimizing light trespass from the building site and using targeted lighting to improve visibility of the night sky. This can be achieved if the design meets or exceeds the requirements of the Illuminating Engineering Society of North America (IESNA RP-33-99).	1	<ul style="list-style-type: none"> <li>Site Plan</li> <li>Lighting Plan</li> </ul>
4 <input type="checkbox"/> The design of the main building entrance and the first level parkade lobby entrance to the building addresses universal accessibility and universal design as follows: <ul style="list-style-type: none"> <li>Main entranced doors should meet universal design standards;</li> <li>Level changes from the sidewalk to the main entrance of apartment buildings should be minimized; and</li> <li>Landscaping elements should be located out of the travel path to ensure they are not obstacles to apartment building access.</li> </ul>	1	<ul style="list-style-type: none"> <li>Site Plan</li> <li>Floor Plans</li> <li>Underground Parking Plan</li> <li>Elevation Drawings</li> <li>Landscaping Plan</li> </ul>
5 <input type="checkbox"/> A minimum of 3% of residential suites to be fully wheelchair accessible.	3	<ul style="list-style-type: none"> <li>Floor plans</li> </ul>
6 <input type="checkbox"/> Ensure that the design of the building provides a diversity of dwelling types as follows: <ul style="list-style-type: none"> <li>Bachelor</li> <li>One-bedroom</li> <li>Two-bedroom</li> <li>Three or more bedrooms</li> <li>Co-housing</li> <li>Live-Work</li> </ul>	3	<ul style="list-style-type: none"> <li>Floor Plans</li> <li>Simpson's Diversity Index calculations. Must have a score of at least .75 (Refer to section 7.6 for details)</li> </ul>
Energy Category	Points	Submission Requirements
7 <input type="checkbox"/> The building design achieves a 29% efficiency improvement over the Model National Energy Code (MNECB) and 10% improvement for retrofit.	Required for buildings over three storeys	<ul style="list-style-type: none"> <li>Energy Management Plan</li> <li>Energy modelling screening tool (CBIP or other)</li> </ul>
8 <input type="checkbox"/> Specify Heating, Ventilating and Air-Conditioning (HVAC) and refrigeration equipment that do not contain Hydro chlorofluorocarbons (HCFCs).	Required	<ul style="list-style-type: none"> <li>Letter of commitment from professional engineer or architect</li> </ul>
9 <input type="checkbox"/> Meet the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 90.1 2001 standards for lighting, including metering, smart controls and occupancy sensors in public spaces.	Required	<ul style="list-style-type: none"> <li>Letter of commitment from professional engineer/ developer/owner</li> </ul>
10 <input type="checkbox"/> Develop co-managed energy/utility servicing for more than one project.	5	<ul style="list-style-type: none"> <li>Letter of commitment from professional engineer/ developer/owner</li> </ul>
11 <input type="checkbox"/> Ensure that 70% of fixtures and appliances supplied are Energy Star compliant.	1	<ul style="list-style-type: none"> <li>Letter of commitment from developer/owner</li> </ul>
12 <input type="checkbox"/> The design of the building provides for the necessary infrastructure to allow in-suite metering of electricity, hot water use and cost.	1	<ul style="list-style-type: none"> <li>Design plans and letter of commitment from professional engineer</li> </ul>

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13 <input type="checkbox"/> Design the building to achieve a 33% efficiency improvement over the Model National Energy Code (MNECB) and 15% improvement for retrofit.	3	<ul style="list-style-type: none"> <li>• Energy Management Plan</li> <li>• Energy modelling screening tool (CBIP or other)</li> </ul>
14 <input type="checkbox"/> Purchase 50% of energy needs through grid-source renewable energy.	3	<ul style="list-style-type: none"> <li>• Contract or written agreement with green energy supplier</li> </ul>
15 <input type="checkbox"/> Provide on-site renewable energy to self-supply 5% of the project's need.	4	<ul style="list-style-type: none"> <li>• Letter of commitment from professional engineer and developer</li> </ul>
16 <input type="checkbox"/> Provide for green roofs for at least 50% of roof surfaces. Where feasible, developments should provide gardens or patios on the top of podium level and building rooftops to improve rooftop aesthetics and provide additional amenity space.	4	<ul style="list-style-type: none"> <li>• Roof plan and landscape plan</li> </ul>
<b>Water Category</b>	<b>Points</b>	<b>Submission Requirements</b>
17 <input type="checkbox"/> Design an onlot storm water control system having a controlled discharged rate of 20-35Litre/second/ha for 1:100 storm events.	Required	<ul style="list-style-type: none"> <li>• Letter of commitment from professional engineer</li> <li>• Water Management Plan</li> </ul>
18 <input type="checkbox"/> Specify water efficient fixtures such as low-flow toilets, urinals and faucets to ensure reduction of potable water consumption by 30%. The City of Edmonton Bylaw 14571 Water Efficient Fixtures specifies low-flow toilets and urinals.	Required	<ul style="list-style-type: none"> <li>• Water Management Plan</li> </ul>
19 <input type="checkbox"/> Design a system to collect, store, treat (if necessary), and use rainwater for use on-site (toilet flushing; irrigation).	2	<ul style="list-style-type: none"> <li>• Letter of commitment from professional engineer</li> <li>• Water Management Plan</li> </ul>
20 <input type="checkbox"/> Specify drought resistant and/or native indigenous planting species.	1	<ul style="list-style-type: none"> <li>• Landscape Plan</li> </ul>
21 <input type="checkbox"/> Design a system to reduce the use of municipal potable water for building sewage by 50%.	2	<ul style="list-style-type: none"> <li>• Water Management Plan</li> </ul>
22 <input type="checkbox"/> Design an integrated system for collecting and treating laundry and bathing grey water for use in flushing, irrigation and cooling.	2	<ul style="list-style-type: none"> <li>• Water Management Plan</li> </ul>
<b>Matter Category</b>	<b>Points</b>	<b>Submission Requirements</b>
23 <input type="checkbox"/> Provide a construction waste management plan to recycle and/or salvage a minimum 50% of non-hazardous construction and demolition debris.	Required for buildings over three storeys	<ul style="list-style-type: none"> <li>• Construction Waste Management Plan</li> </ul>
24 <input type="checkbox"/> The design of the building provides for user-friendly and accessible handling and storage facilities for recyclable materials.	Required	<ul style="list-style-type: none"> <li>• Site Plan</li> <li>• Floor Plans or Underground Parking Plan</li> </ul>
25 <input type="checkbox"/> At least 7.5% of the specified project's materials, based on value, are comprised of recycled content as defined by CAN/CSA-ISO 14021-00 Environmental Labelling and Advertising Guidelines.	1	<ul style="list-style-type: none"> <li>• Letter of commitment from professional architect</li> </ul>
26 <input type="checkbox"/> At least 15% of the specified project's materials, based on value, are comprised of recycled content as defined by CAN/CSA-ISO 14021-00 Environmental Labelling and Advertising Guidelines.	1 additional	<ul style="list-style-type: none"> <li>• Letter of commitment from professional architect</li> </ul>
27 <input type="checkbox"/> At least 10% of the project's specified materials, based on value, are comprised of regionally extracted and manufactured materials. Regionally extracted refers to at least 80% of their mass extracted, processed and manufactured within 800 KM by truck and/or 2,400 KM by rail or water.	1	<ul style="list-style-type: none"> <li>• Letter of commitment from professional architect</li> </ul>
28 <input type="checkbox"/> At least 20% of the project's specified materials, based on value, are comprised of regionally extracted and manufactured materials. Definition for 'regionally extracted' remains the same. See above.	1 additional	<ul style="list-style-type: none"> <li>• Letter of commitment from professional architect</li> </ul>

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Air Quality Category	Points	Submission Requirements
29 <input type="checkbox"/> The design of the building complies with the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 62-2004 ventilation standards, for buildings over three storeys.	Required	<ul style="list-style-type: none"> <li>Letter of commitment from professional engineer</li> </ul>
30 <input type="checkbox"/> For construction and demolition, provide for minimizing air and dust emissions.	1	<ul style="list-style-type: none"> <li>Air and Dust Emissions Control Plan</li> </ul>
31 <input type="checkbox"/> A minimum of 50% of the project's specified materials are low-emitting, including adhesives and sealants, paints and coatings, carpet systems, composite wood and agrifiber products. Paints and coatings shall not exceed the VOC (Volatile organic compound) limits set by the Green Seal Standards GS-11 and GS-03. Carpet systems must meet or exceed the requirements of the Carpet and Rug Institute's Green Label Indoor Air Quality Test Program.	2	<ul style="list-style-type: none"> <li>Letter of commitment from professional architect</li> </ul>
Movement Category	Points	Submission Requirements
32 <input type="checkbox"/> The design of the project does not exceed 20% of the site area for surface parking.	Required	<ul style="list-style-type: none"> <li>Site Plan</li> <li>Parking Plan</li> </ul>
33 <input type="checkbox"/> Provide architecturally designed transit shelter(s) which are integrated with new building design	1	<ul style="list-style-type: none"> <li>Site Plan</li> <li>Letter of commitment from professional architect</li> </ul>
34 <input type="checkbox"/> For commercial projects, ensure that end of trip facilities are provided e.g. for bicycle commuters, such as change rooms, lockers and secure storage.	1	<ul style="list-style-type: none"> <li>Site Plan</li> <li>Parking Plan</li> <li>Floor Plan</li> </ul>
35 <input type="checkbox"/> Design the underground parking to provide for "unbundled" parking spaces from residential unit.	2	<ul style="list-style-type: none"> <li>Parking Plan</li> </ul>
36 <input type="checkbox"/> Provide a car-share vehicle with a designated stall for every 50 dwelling units, or provide a stall and have a car-share cooperative supply the vehicles.	2	<ul style="list-style-type: none"> <li>Parking Plan</li> <li>Car-share Plan or contract with car cooperative</li> </ul>
Community Category	Points	Submission Requirements
37 <input type="checkbox"/> Provide a contribution to affordable housing in accordance with Council approved policy which may be amended from time to time.	required	<ul style="list-style-type: none"> <li>Execute an Agreement with the City prior to Development Permit issuance.</li> </ul>
38 <input type="checkbox"/> Provide a voluntary contribution for public art to be located on either private or public lands in accordance with The Quarters Downtown, Platform for Public Art as prepared by the Edmonton Arts Council.	required	<ul style="list-style-type: none"> <li>Site Plan</li> <li>Letter of Commitment from developer</li> </ul>
39 <input type="checkbox"/> Ensure that the design of the project provides at least 150 m <sup>2</sup> of indoor community amenity space such as recreation facilities, daycares, or cultural facilities.	2	<ul style="list-style-type: none"> <li>Clearly marked on Development Permit Plans</li> </ul>
40 <input type="checkbox"/> Provide publicly accessible open space to increase site permeability and to provide a minimum of 225 m <sup>2</sup> for enhanced options for the pedestrian in the form of mews or plaza development.	3	<ul style="list-style-type: none"> <li>Site Plan</li> <li>Letter of Commitment from developer</li> </ul>
New Innovation Category	Points	Submission Requirements
41 <input type="checkbox"/> Provide new exemplary and innovative technology which falls within one of the above categories.	2	<ul style="list-style-type: none"> <li>Provide detailed information outlining/rationalizing the innovation to the satisfaction of the Development Officer.</li> </ul>
	<b>TOTAL: 58 points</b>	