

# MACKENZIE COUNTY

<b>TITLE</b>	<b>Urban Development Standards</b>	<b>POLICY NO.</b>	<b>DEV001</b>
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<b>LEGISLATION REFERENCE</b>	<b>Municipal Government Act, Part 17, Division 6/7</b>
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## **PURPOSE**

To establish minimum urban development standards that ensure all urban development is consistent with municipal plans, policies, and bylaws, and to provide clarity to developers respecting the County expectations for urban development. Urban development within the hamlets of Mackenzie County shall be fair, while guaranteeing all future municipal infrastructure meets the engineering and design requirements of the County.

## **POLICY STATEMENT**

Mackenzie County and developers have a shared responsibility for defining and addressing the existing and future needs of each hamlet by creating development policies consistent with Mackenzie County plans, policies, and bylaws. Mackenzie County will provide guidance and vision for development objectives. These policies will be applied equitably and fairly to all within each hamlet.

All beneficiaries of new development should participate in the cost of providing and installing infrastructure in their respective hamlet on an equitable basis that relates to the degree of benefit, through the use of off-site levies, local improvement bylaws, and Endeavour to Assist clauses.

## **GUIDELINES**

1. Mackenzie County will:
  - a) adopt development standard requirements for individual urban zonings as indicated in this policy and detailed within the General Municipal Improvement Standard (GMIS),
  - b) determine who is responsible for installation of the infrastructure as indicated in this policy,
  - c) determine who is responsible for the cost of installing the infrastructure as indicated in this policy, and
  - d) establish the mechanism of any cost sharing, Endeavour to Assist, or other financial considerations.
2. The developer will be responsible for all costs except where otherwise indicated in this policy.

## **DEFINITIONS**

**Development Agreement:** A contract entered into between the municipality and the developer respecting the installation of municipal improvements and adherence to all conditions of approval.

**Development Approval:** The subdivision/development approval where the application process has been followed and an approval subsequently issued by the County's subdivision/development authority.

**Endeavour to Assist:** The developer can request that the designated portion of the costs of various municipal improvements paid for by the developer which benefit lands other than the developer's lands be reimbursed or shared. The County does not guarantee reimbursement of these costs.

**GMIS:** The General Municipal Improvement Standards (engineering guidelines) for the County.

**Off-site Levy:** The charges payable to the County by the developer for the use and benefits received from the existing or proposed municipal improvements as stated in the Alberta Municipal Government Act.

**Local Improvement Bylaw:** Local improvements are capital construction (municipal improvement) projects that Council considers to be of greater benefit to a particular neighbourhood of the municipality than to the whole municipality, and that are to be paid for in whole or in part by a tax imposed as a local improvement.

**Rural Standard:** Asphalt road surfacing, ditches/swales, shallow utilities, street lighting. Gravel roads may be considered in lieu of asphalt as outlined elsewhere in this policy.

**The County:** Refers to Mackenzie County.

**Urban Standard:** Curb and gutter, sidewalk, shallow utilities, metal light standards with underground servicing, asphalt road surfacing, and storm sewer.

**Zoning:** Land use district designations as per the Land Use Bylaw.

## **FUNDING**

Funding for municipal infrastructure improvements required to support an approved development will be provided by the developer. The County, through Endeavour to Assist provisions in the Development Agreement, may provide assistance to the

developer when oversizing is required to collect funds from benefitting lands when the benefitting lands are developed.

When the County constructs municipal improvements in advance of development, the County will, through an Off-site Levy bylaw(s), collect apportioned costs as assigned to benefitting lands.

Where a development requires an arterial road to be constructed, the County shall only consider covering the costs of upgrading the road from a collector to an arterial standard, and shall, whenever possible, utilize the mechanisms provided for by Off-site Levy or Local Improvement Bylaw(s) to recover those costs.

All oversizing requirements shall be clearly identified by the developer on the tentative subdivision plan along with a written request for cost sharing, prior to final approval by the subdivision authority.

The County may consider providing a portion of the funding when oversizing, Off-site Levy, Endeavour to Assist or other mechanism are required, however this will be subject to negotiation and Council approval prior to the commencement of construction.

Any cost sharing or other funding commitment by the County must be included in the Development Agreement and form part of the contractual commitment of each party. The County will not retroactively consider requests from a developer for funding or cost sharing where a Development Agreement has already been entered into for the project.

## **URBAN DEVELOPMENT STANDARDS**

The minimum standards for new development are summarized in Table 1 on the following page.

### **UTILITIES**

#### **Power**

New power installations shall ideally be underground. Industrial areas may be serviced by overhead power, but commercial and residential areas shall have underground servicing. Where infill development occurs, the development shall utilize the existing standard that services the area.

In residential and commercial areas, overhead servicing will only be considered where the developer has provided verification that underground installation is not viable, considering continuity with existing power supply, lot sizes and anticipated use, and other criteria as deemed necessary.

**Table 1: Zoning Standards Chart**

Road Classification	Zoning					
	Residential		Commercial		Industrial	
	HR <sup>1</sup> , MHC, MHS	H-CR	FV-CC, LC-TC, LC-MS	FV-HC, LC-HC	FV-LI, LC-LI	FV-HI, LC-HI
Arterial Hamlet 40 m min ROW width	<ul style="list-style-type: none"> <li>urban or rural standard<sup>2</sup></li> <li>sidewalk</li> <li>u/g power</li> </ul>	<ul style="list-style-type: none"> <li>urban or rural standard<sup>2</sup></li> <li>sidewalk</li> <li>u/g power</li> </ul>	<ul style="list-style-type: none"> <li>urban or rural standard<sup>2</sup></li> <li>sidewalk</li> <li>u/g power</li> </ul>	<ul style="list-style-type: none"> <li>urban or rural standard<sup>2</sup></li> <li>sidewalk</li> <li>u/g power</li> </ul>	<ul style="list-style-type: none"> <li>urban or rural standard<sup>2</sup></li> <li>sidewalk</li> <li>u/g power</li> </ul>	<ul style="list-style-type: none"> <li>urban or rural standard<sup>2</sup></li> <li>sidewalk</li> <li>u/g power</li> </ul>
Collector Hamlet 26 m min ROW width	<ul style="list-style-type: none"> <li>urban or rural standard<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>rural standard</li> <li>sidewalk</li> <li>u/g power</li> </ul>	<ul style="list-style-type: none"> <li>urban standard</li> </ul>	<ul style="list-style-type: none"> <li>urban or rural standard<sup>2</sup></li> <li>sidewalk</li> <li>u/g power</li> </ul>	<ul style="list-style-type: none"> <li>rural standard</li> <li>sidewalk</li> <li>o/h power</li> </ul>	<ul style="list-style-type: none"> <li>rural standard</li> <li>o/h power</li> </ul>
Local Hamlet 20 m min ROW width	<ul style="list-style-type: none"> <li>urban or rural standard<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>rural standard</li> <li>u/g power</li> </ul>	<ul style="list-style-type: none"> <li>urban standard</li> </ul>	<ul style="list-style-type: none"> <li>urban or rural standard<sup>2</sup></li> <li>sidewalk</li> <li>u/g power</li> </ul>	<ul style="list-style-type: none"> <li>rural standard</li> <li>o/h power</li> </ul>	<ul style="list-style-type: none"> <li>rural standard</li> <li>o/h power</li> </ul>
Core Hamlet 22 m min ROW width	<ul style="list-style-type: none"> <li>urban standard</li> </ul>	N/A	<ul style="list-style-type: none"> <li>urban standard</li> </ul>	N/A	N/A	N/A

All overhead power servicing shall utilize the utility rights-of-way and be located behind the lots. Road crossings, especially in industrial areas, shall be designed to permit over size loads to safely traverse.

### Lighting

Street lighting shall be installed in all new developments as per *Illuminating Engineering Society* and *Transportation Association of Canada (TAC)* criteria. Street lighting shall ideally utilize steel light standards but in areas developed to a rural standard, wood standards may be allowed.

Overall continuity, esthetic, maintenance costs, and likelihood of redevelopment requiring relocation of light standards shall all be considered when determining if wood or steel standards are required.

### Natural Gas

Gas servicing shall be provided to new developments. Installation shall be in keeping with the utility provider's current standard practice.

Depending on the location within the County, the developer may be required to install gas servicing as part of the improvements, in other areas the utility provider will independently install gas servicing as building development occurs.

### Telephone/Broadband/TELUS Fibre Optic Lines

<sup>1</sup> Applies to the H-R1, H-R1A, H-R1B, and H-R2 Districts.

<sup>2</sup> The standard will be determined by the County through the evaluation of anticipated traffic volumes, design speed, continuity with existing infrastructure and future proposed upgrades, and other criteria as deemed relevant.

Telephone and/or data infrastructure shall be provided for all developments, to the specifications of the local telecommunications provider.

Installation of TELUS Fibre Optic Services is required by the developer in order to offer telecommunications providers better options for providing digital data to the community.

### **Storm Sewer**

Design criteria shall be in accordance with the County's GMIS.

Storm drainage shall be provided for all developments. The general level of service required by the County respecting storm water management shall be in keeping with the dual drainage concept utilizing major and minor collection systems.

All urban standard development shall include an integrated surface and underground (major and minor) storm sewer system. All rural standard developments are anticipated to primarily use a surface drainage (major) system to manage storm water, however integration with an underground (minor) system may be required by the County.

Storm water retention ponds shall be constructed in accordance with design criteria established in the GMIS to reduce the downstream effects of the development. Ponds shall be constructed to service large areas, and be thoughtfully integrated with the subdivision design. All new developments shall create zero net change to the existing storm sewer peak flows. The County retains the ability to alter storm pond placement.

### **Sanitary Sewer**

Design criteria shall be in accordance with the County's GMIS.

Sanitary sewer shall be provided for all developments.

In areas that are to be developed as row housing or condominiums, each proposed unit shall receive a separate service from the main line.

In areas that are zoned for either low or medium density development but at time of land development the future build out is undetermined, sewer servicing shall be upsized to ensure adequate capacity.

Sanitary sewer installations shall be gravity based. If, for economic or construction rationale, a gravity system is determined to not be feasible in an area, a detailed engineering report shall be provided to the County explaining the challenges, and how a low pressure system will help to alleviate the challenges. The report shall include details regarding site density, soil types, water tables, existing development, terrain, economics and any other factors that are perceived as a hindrance to installing a gravity system.

### **Water**

Design criteria shall be in accordance with the County's GMIS.

All new developments shall include the installation of a municipal water system that provides adequate fire flow volumes.

In areas that are to be developed as row housing or condominiums, each proposed unit shall receive a separate service from the main line.

In areas that are zoned for either low or medium density residential development, but at time of land development the future build out is undetermined, water servicing shall be upsized to ensure adequate capacity.

### **Service Connections on Private Land**

For all high density or large lot development with multiple buildings serviced from an internal network, an isolation valve shall be provided at the property line. All internal underground servicing shall be engineered to meet *Alberta Environment and Parks Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems*, and a copy of the engineered drawings shall be provided to the County for review prior to installation.

All private hydrants and valves shall be properly maintained to the standards set forth in the GMIS. Preventative maintenance shall be performed annually, with records provided to the County utilities department. Alternately, the utilities department may be contracted to perform the preventative maintenance.

## **ROADS AND ROAD EDGE**

Design criteria shall be in accordance with the County's GMIS.

All new roads constructed within hamlets shall be asphalt surfaced unless otherwise noted in this Section. Paving may be delayed until such time as there are additional paving projects in the area in order to save on cost and increase the project viability. In such cases of pavement delay, the road base may require additional work prior to pavement application.

### **Arterial**

Arterial roads shall be located as required to facilitate the efficient movement of vehicles and goods into and around a community. They shall typically be placed a minimum of 800 m apart.

Arterial roads shall be asphalt surfaced in all cases.

Where existing private properties already access directly onto an arterial road, sufficient traffic lanes must be provided to ensure a consistent traffic flow. Where possible, shared driveways and/or service roads shall be utilized in order to concentrate the turning movements of traffic.

Approach locations shall be well defined in order to help delineate where to expect traffic turning. Developments along arterial roads shall have parking areas of sufficient size so as to eliminate the need for traffic backing onto the roadway when leaving a property.

Driveways onto private properties shall be minimized, as moving traffic and goods are the primary priorities. Turning lanes shall be utilized to help maintain the flow of traffic with minimal disturbances.

It is anticipated that traffic signalization will be required where arterial roads intersect, and potentially where collector roads intersect with arterial. Traffic warrant studies shall be conducted for all such intersections, as deemed necessary by the County.

Conventional grass swales (ditches) may be utilized along arterial roads, but ditch slopes shall consider maintenance and aesthetics.

Arterial roads should not allow for any on street parking.

Trees shall be planted between the curb and sidewalk, to provide shade, provide protection, and help define the pedestrian space. It is strongly encouraged to plant additional trees behind the sidewalk, on private property, in order to avoid conflicts with underground utilities. Acceptable tree options are provided for in the GMIS.

### **Collector**

Collector roads shall typically be spaced about 300 m to 400 m apart, with intersections onto arterial roads at the same intervals in order to facilitate efficient traffic movement. When deciding on collector road location, adjacent land uses and existing and proposed arterial and collector road locations shall be considered.

Collector roads shall be asphalt surfaced in all cases.

Conventional grass swales (ditches) may be utilized along collector roads, but ditch design shall consider available right-of-way width, maintenance and aesthetics.

When possible, locate buildings which are likely to draw high amounts of traffic to property that has direct access to an arterial road.

Trees shall be planted between the curb and sidewalk (if not monolithic), to provide shade, provide protection, and help define the pedestrian space. It is strongly encouraged to plant additional trees behind the sidewalk, on private property. Trees shall be located as to avoid conflicts with underground utilities. Acceptable tree options are provided for in the GMIS.

Use curb bump-outs to help delineate parking lanes, and to prevent them from being used for through traffic.

Roundabouts are encouraged at intersections that are anticipated to see high traffic volumes but where signalization is not warranted. These are also effective at calming traffic and limiting speed while maintaining a consistent traffic flow. Consideration shall be given to ensure that sight lines are not negatively impacted at other intersections or onto private driveways.

### **Local**

Local roads shall constitute the majority of roads within the communities. Their objective is to provide access to each individual property, and the primary purpose is to facilitate slow moving traffic frequently interrupted by vehicle turning movements and pedestrians.

Local roads shall be asphalt surfaced in all residential and commercial Land Use Districts. The requirement for asphalt may be waived at the discretion of Council in industrial areas if the following criteria are met:

- Asphalt aprons shall be constructed to prevent the spread of gravel onto collector roads;
- Dust control;
- Other?

On street parking is a staple feature of local roads in residential and commercial areas. Local roads constructed to a rural standard shall utilize swales or ditches for storm water management.

Trees shall be planted to provide shade and help define the pedestrian space. Trees shall be located as to avoid conflicts with underground utilities. Acceptable tree options are provided for in the GMIS.

### **Core Hamlet**

Roadways shall be designed to allow adequate movement of vehicular traffic with access to both on street parking and private parking. Pedestrian movement is a key consideration when considering streets within the Core district.

Crosswalks shall be clearly marked, and may be located mid-block to help facilitate safe and efficient pedestrian movement.

Sidewalks shall be located on both sides of all streets in the Core area to help facilitate higher pedestrian volumes and encourage pedestrian traffic.

Trees shall be planted within or behind the sidewalks to provide shade, provide safety and to help delineate the pedestrian space. Property owners shall be strongly encouraged to plant trees on their properties to help create the sense of place and to ensure the Core is visually appealing and attracts pedestrian traffic.

Whenever possible, buildings, streets and sidewalks shall be oriented in a manner that capitalizes on sun exposure and slows winds from prevailing directions.



### **Sidewalks**

Sidewalk grades shall be minimally impacted by driveways. The sidewalk surfacing material shall be continuous across the crossing.

In locations of high pedestrian traffic, create visually distinct markings (eg. colored pavement, zebra stripes) on the driving surface to delineate the pedestrian crossing locations.

Utilize curb bump-outs to reduce the length of crosswalks, prevent parking near intersections, and increase safety by eliminating the parking lanes as through traffic lanes.

Sidewalks shall be located in all areas where even moderate levels of pedestrian traffic are anticipated.

Sidewalks shall be located along both sides of arterial roads, both sides of collector roads where high traffic volumes are anticipated, and on one side along low volume collectors and local roads. Refer to Table 1: Zoning Standards Chart for additional information regarding the requirements for sidewalks.

Greenlink corridors identified in the La Crete ASP shall have a sidewalk and an asphalt path, on opposite sides of the road ROW. This same standard shall be applied to arterial and high volume collector roads.

### **Private Roads**

Private roads shall be designed and constructed in accordance with accepted engineering standards and a copy of the engineered drawings shall be provided to the County for review prior to construction. Although right-of-way widths may be reduced due to lot constraints, road design, materials testing and other related activities shall be undertaken as if it were a public road. This applies to developments such as Manufactured Home Parks and commercial developments with multiple tenants on a common property.

## **HAMLET REDEVELOPMENT**

Design criteria shall be in keeping with the County's GMIS.

### **Redevelopment Standards**

For all areas being redeveloped, the goal is to improve the infrastructure to match the criteria for new development of the same zoning. This will not always be possible because of the existing right-of-way widths and adjoining development.

Whenever a redevelopment is proposed and there are existing restrictions (eg. ROW widths), a brief engineering report shall be prepared outlining the long term benefits of

working around the obstacles, or removing the obstacles and meeting the criteria of a new build.

This report shall include but shall not be limited to:

- short and long term cost analysis
- future traffic (vehicular and pedestrian) flow implications
- potential safety compromises (lane widths and sight distances)
- esthetic impact
- all other relevant information.

Consideration shall always be provided to account for continuity and additional future plans. If the esthetic of a neighborhood is to be maintained, careful consideration shall be given when upgrading a street to maintain the current esthetic. Careful transitioning from curb and gutter roads to roads with a detached sidewalk and bioswales may be necessary to match the esthetic of a neighborhood without negatively impacting the overall esthetic along the roadway, or the pedestrian and vehicular traffic capabilities along the street.

### **Funding**

When road upgrades in heavy commercial/industrial areas are warranted, the costs of asphalt and street lighting shall be split evenly between the County and property owners adjacent to the improvement area. The County will create Local Improvement Bylaws to recover the landowners' share of the costs.

### **LEAP FROG DEVELOPMENT**

When a developer chooses to develop in an area that is not easily serviced by existing municipal infrastructure and where significant amounts of the newly installed infrastructure will remain underutilized at full build out of the proposed development, the developer shall upfront all costs of the installation of municipal infrastructure, including oversizing to provide future servicing of adjacent undeveloped lands.

The County will Endeavour to Assist in the recovery of these costs from other benefitting lands at the time of the future developments primarily by way of issuing and collecting offsite levies but may also utilize different available tools.

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<b>Approved</b>	18-Jun-02	02-460
<b>Amended</b>	13-Jan-04	04-009
<b>Amended</b>	23-Jun-04	04-510
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<b>Amended</b>	13-Dec-05	05-674
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<b>Amended</b>	13-Oct-10	10-10-855
<b>Amended</b>	23-Feb-11	11-02-199
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