

## **SECTION 7: LANDSCAPING REQUIREMENTS**

### **7.1 REFERENCE STANDARDS**

Design details or procedures not specified in this section shall be determined in accordance with the following Reference Standards or as otherwise found applicable and approved by the City of Medicine Hat.

Current editions of:

- City of Medicine Hat Open Space Plan
- City of Medicine Hat Open Space Guidelines
- Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads (Chapter 3.3 Streetscapes and Chapter 3.4 Bikeways)
- Industry Best Practices (e.g. Irrigation Association)
- Canadian Nursery Landscape Association “Canadian Standards for Nursery Stock”
- Alberta Agriculture, Food and Rural Development “Alberta Yards and Gardens”
- City of Medicine Hat General Landscape Specifications

In general, the provisions of this section shall govern over the Reference Standards, where there are conflicts. The City may, at its discretion and in special cases only; issue requirements specific to such special cases derived from other accredited technical resources and published best practices.

### **7.2 DEVELOPMENT STANDARDS**

#### **7.2.1 DEFINITION OF PARK TYPES:**

##### **7.2.1.1 AMENITY/TOT LOT PARKS**

- Small-scale open space for residents close to the periphery of a neighborhood, which focuses on passive recreation and aesthetic appeal.
- Minimum size 0.4 ha
- Not less than 400 meters from Neighborhood Park, and not more than 400 meters from neighborhood periphery.

##### **7.2.1.2 NEIGHBOURHOOD PARKS**

- Larger than Amenity Parks, intended to satisfy active and passive recreational needs of the neighborhood (approximately 5000 residents).
- Within 600 meters of 95% of the residences in the neighborhood.
- Centrally located in neighborhood,
- Elementary Schools may be located adjacent to Neighborhood Parks.

##### **7.2.1.3 COMMUNITY PARKS**

- Intended to serve four neighborhoods, and accommodates both active and passive recreation
- Located close to center of area served, but Community and Neighborhood Park sites should be separated from each other.
- May be located on arterial or collector streets with City transit service.

##### **7.2.1.4 CITY PARKS**

- Intended to serve entire community, and accommodates both active and passive recreation. Emphasis on structured sports.
- Sports fields should be suitable for national levels of competition.
- Paved parking may be required on-site
- May be located on arterial or collector streets with City transit service.

### **7.2.1.5 OTHER**

#### **7.2.1.5.1 Environmental Reserves**

- Environmental Reserve areas are an important component in the overall open space system.
- Activities in natural areas may include nature oriented outdoor recreation such as viewing and studying nature, bird and animal watching, hiking and other trail uses.
- Size varies depending on natural features being protected or other specific requirements.
- Pedestrian access may be restricted to trails, in areas of environmental sensitivity.

#### **7.2.1.5.2 Linear Park**

- For planning purposes, included as part of the Park type category.
- Intended to provide a safe and aesthetically pleasing connection between parks and other destinations through non-motorized means of transportation.
- Development of linear parks to be limited.

#### **7.2.1.5.3 Boulevards and Buffers:**

- Boulevards provide visual relief between the roadways and other land uses.
- Buffers adjacent to residential areas also provide visual screening and noise attenuation from conflicting land uses.
- Any boulevards and buffers provided by the developer along roadways shall be part of the public road right-of-way and not constitute a part of the municipal reserve dedication.
- Landscaping islands in p-loops or medians are permitted only if treated in a low or no maintenance manner as approved by the Parks and Outdoor Recreation Department.
- Islands and boulevards are not to be credited as municipal reserve dedication.

#### **7.2.1.5.4 School Reserves**

- Location and planning of municipal and school reserves in residential expansion areas should be addressed at the preliminary stages of Area Structure Plan preparation to ensure that the requirements for municipal and school reserves are in balance with total land dedication requirements.
- In liaison with local school boards, the Planning and Building Department shall carry out cooperative planning with developers of new subdivisions to ensure the provision of sports fields, playgrounds and open space to meet school curricular and recreational program requirements.
- The school reserve shall be developed to a manicured, irrigated turf standard at the time of the initial subdivision development.

### **7.2.2 ALLOCATION AND USE OF OPEN SPACE**

Open Space shall be allocated in a neighborhood according to the following:

- 50% Municipal Reserve and School Reserve Active Use
- 25% Municipal Reserve Tot Lots, Amenities, Local Use
- 12.5% Municipal Reserve Linear Pedestrian
- 12.5% Municipal Reserve Other Use (e.g. adjacent to storm water management facilities)

### **7.3 SUBMISSIONS**

The Developer's Landscape Architect shall prepare Conceptual and Detailed Landscape Plans.

### 7.3.1 LANDSCAPE PLANS

#### 7.3.1.1 CONCEPTUAL LANDSCAPE PLAN INFORMATION

A Conceptual Landscape Plan for all Municipal Reserve and Environmental Reserve parcels is to be submitted as part of the Functional Servicing Report. Information on native flora and fauna inventory to be submitted as part of the functional servicing report. The Soils Report shall also address any limitations on landscape development with respect to:

- Slope Stability
- Erosion potential due irrigation.

A Conceptual Landscape Plan for all Municipal Reserve and Environmental Reserve parcels is to be submitted as part of the subdivision design stage.

- The following information is required on a Conceptual Landscape Plan:
  - Lot numbers, block numbers, street names and drawn to a scale of 1:1000,
  - North arrow,
  - Legend and definitions of any symbols, abbreviations and or table headings used,
  - Limits of development/ construction,
  - Original ground contours and elevations (0.5m intervals),
  - Conceptual details for any earth berms proposed within the development,
  - Grading details – a minimum of 2% gradient is recommended; lesser grades are subject to the approval of the General Manager of Parks & Outdoor Recreation. Such deviations are to be clearly identified on design drawings.
- Drainage patterns
- Extent of landscape development and type
- Conceptual details for location of plant material, asphalt trails and site furnishings and amenities
- Location for electrical service
- Location of water service
- Confirmation of size of water service

#### 7.3.1.2 DETAILED LANDSCAPE PLAN INFORMATION

A Landscape Plan for all Municipal Reserve and Environmental Reserve parcels is to be submitted as part of the detailed design drawings set for every development.

The following information can be provided on separate sheets:

- Site Grading and Drainage Plan
- Layout Plan
- Playground Plan
- Planting Plan
- Irrigation Plan

##### 7.3.1.2.1 The following information is required on all Landscape Plans:

- Lot numbers, block numbers, street names and drawn to a scale of minimum 1:500, prefer 1:250
- North arrow,
- Legend and definitions of any symbols, abbreviations and or table headings used,
- Limits of development/ construction,
- Easements and Utility Rights-of-Way

##### 7.3.1.2.2 The following information is required on the Site Grading and Drainage Plan:

- Major items associated with layout
- Original ground contours and elevations at 0.5 metre contour intervals
- Elevations to be shown at each break
- Details for any earth berms proposed within the development,
- Geotechnical report slope setback lines from steep slopes,

- Finished ground elevations at all lot corners and at proposed changes of surface slope along property boundaries,
- Drainage direction arrows indicating the direction and percent gradient of surface drainage, particularly at common boundaries between adjacent parcels or lots,

7.3.1.2.3 The following information is required on the Layout Plan:

- Existing features to be saved.
- Location of all hard surface landscaping (trails, shale/mulch areas, benches, garbage receptacle, bridges etc), playgrounds and park amenities (basketball hoops, asphalt pads etc). Include symbol in legend.
- Engineering details for grade related features (e.g. trails where slope is greater than 5%).
- Protection, and if necessary, restoration requirements for Environmental Reserve parcels.
- Fence type and alignment, where required.
- Proposed and existing utility alignments

7.3.1.2.4 The following information is required on the Playground Plan:

- Location and details of components of playground
- Location and details of borders, low impact surface material, benches, garbage containers

7.3.1.2.5 The following information is required on the Planting Plan:

- Major items associated with Layout Plan
- Plant material shown with crowns at 2/3 maximum size as noted in “Alberta Yards and Gardens”
- Outline of planting beds, including mulch detail
- Proposed contours at 0.5 metre contour intervals
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- Location of plant material. Symbol, Latin and common name, quantities and size of all plant material in tabular format.

7.3.1.2.6 The following information shall be required on the Irrigation Plan:

- Major items of Planting Plan, Layout Plan and Grading Plans screened in lighter color
- Proposed contours at 0.5 metre contour intervals, screened in a lighter colour.
- Location for electrical service
- Location and size of water service
- Schedule of irrigation materials (electric zone valves, isolation valves, irrigation main line and laterals, sprinkler heads, controllers, irrigation vaults, conduit etc.) describing sizes, materials, manufacturer and model number
- Indicate static water pressure at the service or at the nearest fire hydrant on the same main as the Parks service as well as the date and time of the test and the testers name
- Design velocity and design pressure of irrigation system, including pressure loss calculations
- Design pressure, pressure range and electrical rating of the booster pump (if applicable)
- Provide nozzle sizes for each head.
- Irrigation Design and Operational Data in tabular format including station, type of head, nozzle size, psi, station flow (in US gpm), precipitation rate, slope, aspect, soil conditions, cycle days, number of cycles and run time per zone and soak time.

- The Watering Window shall not exceed 6 hours per watering day, and shall operate between the hours of 12 a.m. and 6 a.m.

## **7.4 OPEN SPACE DEVELOPMENT REQUIREMENTS**

### **7.4.1 PLANNING PRINCIPLES**

- Park and recreation planning and provision of public open space shall be carried out in accordance with the Municipal Government Act, Subdivision Regulations, and the City of Medicine Hat Land Use Bylaws.
- Incorporate all appropriate lands such as School Reserves, tot lots, active open space, trails and Environmental Reserves into an approved, well designed open space plan.
- Give highest priority to sensitive integration of proposed built development and the natural environment. The visual quality of a development will depend on the successful integration of the man-made elements with the natural landscape features that exist on the site. This careful integration will ensure preservation and retention of the natural features and thus the beauty of the area.
- The grades of private property and roads abutting land slated for school/open space development should be designed to ensure efficient drainage of public open space.

### **7.4.2 SUBGRADE AND DRAINAGE**

- Provide a minimum 2% gradient across all reserve parcels .
- Grass swales shall be minimized. Where required grass swales are to drain at a minimum 2% gradient.
- City reserves the right to limit the amount of off site drainage onto a reserve parcel.
- The aforementioned grades are recommended minimums. Deviations and/or alternatives are subject to the approval of the General Manager of Parks & Outdoor Recreation.
- Slopes in areas to be mowed shall not be steeper than 4:1.

### **7.4.3 MUNICIPAL RESERVE**

- Developed to a turf grass standard including grading, topsoil supply and spread, irrigation installation and tree planting.
- Provide a suitably sized water service. The following guidelines are subject to the calculations for the pressure loss and watering window:

Park Water Service	Maximum Size of Site
50 mm	0.83 ha
100 mm	3.02 ha
150 mm	6.79 ha
200 mm	11.17 ha

- Provide an electrical service with 25 meters of coil.
- Provide a centrally controlled automated irrigation system controller for all turf areas compatible with the City of Medicine Hat Motorola system.

### **7.4.4 TREE PLANTING**

- Provide a minimum of sixty-two trees (62) per hectare (twenty-five {25} trees per acre) of Municipal Reserve provided.
- Tree species are to be 30% coniferous and 70% deciduous
- In principle, coniferous tree sizes at time of planting shall be as follows:
  - 25% - 1.5 meter height
  - 50% - 2.0 meter height
  - 25% - 2.5 meter height

- In principle, deciduous tree sizes at time of planting shall be as follows:
  - 50% - 50 mm caliper
  - 50% - 85 mm caliper
- Shrub planting may be up to 1% of the total park area. Planting to be approved on a site-by-site basis.
- Shrub species are to be 40% coniferous and 60% deciduous
- Coniferous shrub sizes at time of planting shall be as follows:
  - 50% - 2 gallon potted.
  - 50% - 5 gallon potted.
- Deciduous shrub sizes at time of planting shall be as follows:
  - 50% - 2 gallon potted.
  - 50% - 5 gallon potted.
- Tree and shrub species shall be as per the current City of Medicine Hat Recommended Tree Species List.
- Tree planting plans for public road rights-of-way are to be approved in conjunction with Municipal Works, the Planning and Building, Municipal Engineering, and the Parks and Outdoor Recreation Department to ensure proper sight clearances from roads, intersections and clearance from utilities. Co-ordination will take place via the Parks & Outdoor Recreation Department.
- The following table shows the setback and spacing guidelines for all tree plantings:

Description	Deciduous Trees	Coniferous Trees
Setback – Hard Surfaces	2 m	½ maximum spread
Setback – Vertical Elements	2 m	½ maximum spread
Setback – Utilities (UROW)	As stipulated by Utility Companies	As stipulated by Utility Companies
Tree Spacing	½ maximum spread	½ maximum spread

- Do not plant within an utility right of way
- Deciduous trees planted in medians must be a minimum of 750 mm from back of concrete curbs and 4.5 m from bullnose.
- Tree planting should be strategically spaced to avoid blocking street light illumination levels, sight lines in the vicinity of intersections, pedestrian crossings, and traffic signs.

**7.4.5 PROVISION OF TREES FOR RESIDENTIAL LOTS**

- Two (2) trees are to be provided to each residential lot owner. The trees are to be 1.75 meters to 2.5 meters in height, or 50 mm caliper.
- Description of system to verify that homeowners were offered two trees per lots.

**7.4.6 ASPHALT TRAILS**

- Trails and trail linkages are to be provided. Ensure trail alignments correspond to Area Structure Plans, and avoid isolated and disjointed trails.
- Trail layout should be designed to connect the residential areas with the park areas and other centers such as City-wide and Regional Parks, schools, Recreation Centers, natural features including escarpments, natural areas and associated open space, commercial districts and prime scenic attractions.
- Trails developed in Environmental Reserve areas should be designed and sited to minimize physical and visible disturbance to landform or vegetation. Minimize damage to Environmental Reserve parcels by careful trail route selection, by sensitive use of retaining structures, and by grading side slopes to minimize disturbances.

- All trails should be barrier free wherever possible.
- Maximum distance between access points should be 500 metres.
- All trails are to be constructed of asphalt to accommodate both pedestrians and cyclists.
- Trail design details should conform to the TAC Manual.
- Trail width 3.0 metres minimum.
- Trails located within road right of way will be 2.4 meters in width.
- Setback trails should be located a minimum of 10.0 meters from residential property lines.
- Safety railing shall be installed when a trail is within 2.0 meters of the top of a 2:1 slope or steeper, and the slope is greater than 1.0 meter in height.
- Minimum railing height and design to meet current building code standards.
- Link trail to pedestrian facilities within roadways.
- Terminate or link trails to wheelchair ramps at street intersections.
- Provide a removable steel bollard where the entrance to a trail is to Environmental Reserve, Natural Area or intersects with road or lane.
- Line up entrances for visual continuity where trail route crosses street.
- Ensure no catch basins located at trail entrance.
- Where possible, ensure no obstructions to visibility within 5.0 meters of junction with other trails and streets (trees, shrubs, utility boxes, fences, etc.)
- Slope Grades:
  - Under 3%: Required if to be wheelchair accessible (compare with Roadway standard for wheelchair sidewalk)
  - Less than 5%: Desirable
  - 5% to 10%: Acceptable
  - Over 10%: Provide switchbacks

#### **7.4.7 WALKWAYS**

- To be provided to provide pedestrian access.
- 3.0 metre width, constructed of asphalt, constructed within a 3.0 m right of way.
- Walkways proposed for utility line access, that do not benefit pedestrian access, shall be registered as a utility right of way of Public Utility Lot. The General Manager of Parks and Outdoor Recreation will make the determination as to the suitability of a pedestrian walkway.

#### **7.4.8 PLAYGROUNDS**

- Provide a creative playground structure to be located within 600 metres walking distance of 95% of the residences in the subdivision.
- All playground installation must conform to CAN/CSA - Z614 - M90; A Guideline On Children's Play Spaces and Equipment.
- Two benches per creative playground structure shall be provided.
- One Hid-a-Bag Haul All garbage container per playground shall be provided.
- Identify requirements for playground zone signage on appropriate plan.

#### **7.4.9 ACCESS CONTROL**

- All Municipal Reserves abutting a roadway or lane must be provided with a standard curb along the roadway or lane to prevent vehicular access.
- All Environmental Reserves abutting a roadway or lane must be provided with a standard curb and bollard and chain along the roadway or lane to prevent vehicular access.
- All Environmental Reserves abutting a residential property must be provided with bollard and chain installed on the City side of the property line no more than 150 mm from the property line.

- Removable bollards must be provided at entrances to walkways. Supplementary fixed bollards may also be required where walkways are greater than 3 meters. .
- All uniform fences must be constructed on the property line .

#### **7.4.10 SITE FURNISHINGS**

- All site furnishings are to be vandal resistant where possible.
- Site furnishings shall complement and enhance the natural setting. Details which are consistent with local materials, color and style should be utilized.
- Signage for residential development or parks, shall be complementary to the current signage, and in scale with the pedestrian environment. Blend signage into the landscape and site development rather than allowing it to dominate with larger signs and taller posts.
- Provide a minimum of one (1) bench per kilometer of lineal pathway.
- Provide one (1) Hid-a-Bag Haul All trash receptacle to be located at each pathway entrance / exit, and one (1) additional unit per additional kilometer of lineal pathway.

#### **7.4.11 SPORTSFIELDS**

- Developer shall provide sufficient space for future development of sports fields. The space requirements for sports fields shall be determined at the Conceptual Plan stage.
- Grade play surface and perimeter buffer strip for positive drainage. Optimum grade 1.5%. Maximum grade 2% in all directions including the 3 metre buffer strip.
- Grading plans for soccer fields shall illustrate drainage patterns in two directions.

#### **7.4.12 BOULEVARDS**

- Landscaping of boulevards shall be consistent with the landscaping on the adjacent parcel. (e.g. Boulevards adjacent to Municipal Reserve shall be developed to the Municipal Reserve standard and boulevards adjacent to Environmental Reserve shall be seeded to coarse grass)
- Boulevard design must not conflict with the City of Medicine Hat's Boulevard Development and Maintenance Policy.

#### **7.4.13 ENVIRONMENTAL RESERVE AREAS**

- Ensure no construction of permanent structures, other than trails or interpretive elements, in natural areas or environmental reserves.
- All development proposals should detail the intended methods of protecting the natural systems during construction. The design of the development should consider the protection of natural features during regular use of the development after construction.
- Any natural areas designated for preservation that are damaged during construction must be rehabilitated and re-vegetated to the satisfaction of the City of Medicine Hat.
- Replanting should be done with indigenous tree, shrub and grass species in natural areas where existing vegetation has been disturbed or destroyed. Rehabilitation should be undertaken in a manner that promotes natural succession.
- Ensure that any recreational development proposed will not damage the natural environment. Protection and management of the natural or cultural environment is the primary concern, and recreational use is only a secondary objective.
- Ensure preservation of existing tree cover, vegetation and site features through responsible site planning and design.

**7.5 DEVELOPMENT ACTIVITIES**

The following table identifies the development activities for various park types and summarizes the responsibility for these activities.

<b>Development Activity</b>	<b>Amenity Park</b>	<b>Neighborhood Park</b>	<b>Community Park</b>	<b>City Park</b>
Grading	Developer	Developer	Developer	Developer
Topsoil	Developer	Developer	Developer	Developer
Turf Grass with Centrally Controlled Irrigation	Developer	Developer	Developer	Developer
Tree Planting	Developer	Developer	Developer	Developer
Shrub Planting	Developer	Developer	Developer	Developer
Flowerbeds	Not Appropriate	City	City	City
Two Trees per Residential Lot	Developer	Developer	Developer	Developer
Asphalt Trail	Developer	Developer	Developer	Developer
Benches	Developer	Developer	Developer	Developer
Garbage Containers	Developer	Developer	Developer	Developer
Playgrounds \$30,000+CCI*	May Be Required Developer	Developer	Developer	Developer
Uniform Fencing	Developer	Developer	Developer	Developer
Picnic Tables	Not Appropriate	Developer	Developer	Developer
ER Protection and Restoration	Developer	Developer	Developer	Developer
Asphalt Pad and Hoops for Half-Court Basketball	Not Appropriate	City	City	City
Ball Diamond Infield, Backstop and Fencing	Not Appropriate	City	City	City
Soccer Field Goal Posts	Not Appropriate	City	City	City
Outdoor Ice Rink Service and Boards	Not Appropriate	City	City	City
Tennis Court and Fencing	Not Appropriate	City	City	City
Bleachers	Not Appropriate	City	City	City
Washroom	Not Appropriate	City	City	City
Paved Parking Lot	Not Appropriate	City	City	City
Football/Rugby Field	Not Appropriate	City	City	City
Outdoor Track	Not Appropriate	City	City	City
Sports field Lighting	Not Appropriate	City	City	City
Park Lighting	Not Required	Not Required	City	City

\* per location