PARKS DEPARTMENT

Park Development Standards

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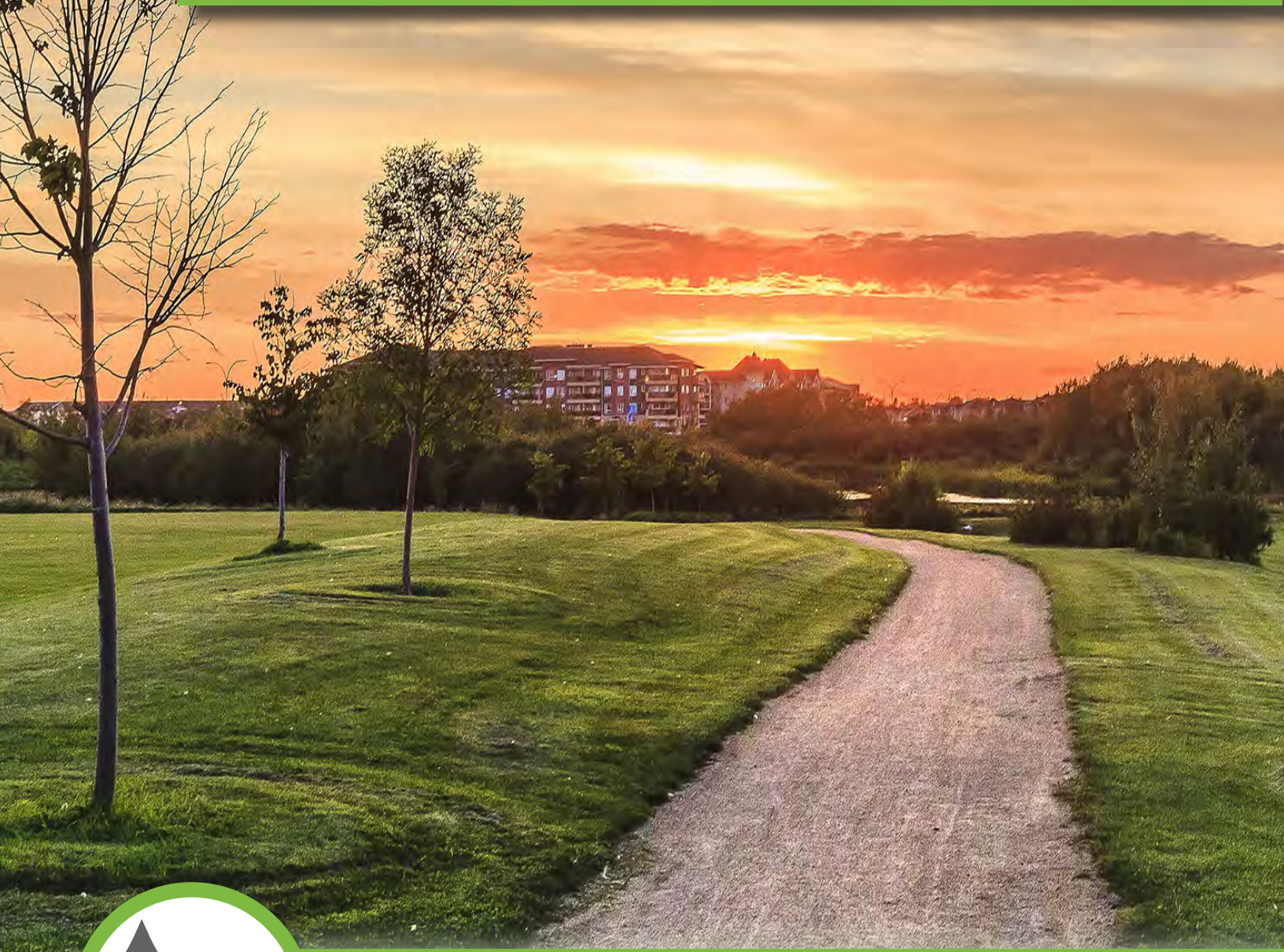
2022-02-28



City of Saskatoon

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PART 1: Overview

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1.0 Introduction

1.1 Importance of Parks

Parks and natural areas are the heart and soul of any great city.

They provide a connection to nature, sports and leisure activities, a place to run, play, fly a kite, walk the dog, ride a bike, and meet neighbors and friends. Parks are places where all are welcome. Some provide opportunities to appreciate and experience the Indigenous, cultural and heritage elements of the city.

Parks are an important part of the Green Network - the natural areas extending throughout Saskatoon. They increase biomass and biodiversity, provide wildlife habitat, improve the quality of air we breathe, and are important components of low impact development (LID) and stormwater management and protecting groundwater. As climate change continues to unfold, parks are increasingly important in strategies to cool air temperatures, increase evaporation and humidity, and reduce GHG emissions.

Parks help define the character and quality of where we live, and improve our sense of well-being. Parks improve our quality of life.

1.2 Scope

The Park Development Standards (PDS) apply to the design and construction of new parks in Saskatoon and for re-construction in existing parks.

The PDS also applies to several park-related green infrastructure elements, as follows:

Stormwater Management and Low Impact Development (LID) landscapes

- for standards related to siting within and adjacent to parks, refer to Pt-2 Section 4.8
- all design and construction standards for planting and landscape features in Part 3 must also be complied with for conceptual and detailed construction drawings
- additional design and construction standards can be found in the Low Impact Development Guidelines, the Wetland Policy and the Wetland Design Guidelines
- refer to the chart in Pt-1 Section 1.4 for a list of other documents that may apply

Buffer Strips

- for standards related to the size, location, and landscape elements within buffer strips, refer to Pt-2 Section 5.0
- all design and construction standards for planting and landscape features in Part 3 must also be complied with for conceptual and detailed construction drawings

Naturalization

- for standards related to selection of naturalized areas and siting within parks or adjacent stormwater management areas, refer to Pt-2 Section 5.2
- for design detail standards for naturalization within parks, refer to Pt-3 Section 2.9.

- all planting and construction standards in Pt-3 may also be used for naturalization areas located outside of parks

Streetscapes

- all design standards and guidelines for streetscapes that were contained in the former Landscape Design and Development Standards will be located in a new streetscape design document.

1.3 How to Use This Document

The following document, the Park Development Standards, 2022 (PDS), replaces both the Park Development Guidelines (2016 update) and the Landscape Design and Development Standards Manual (2016). It is a comprehensive list of standards that apply to park planning and design, from the initial ideas stage to park construction.

Objectives, guidelines, standards and procedures in the PDS all comply with the Official Community Plan (OCP), the Saskatchewan Planning and Development Act and related provincial legislation, and the Saskatoon North Planning for Growth Regional Plan. It is also compatible with other city-wide documents, with a full list provided in Section 1.4

To fully understand the intent, and how and when to apply the standards, we recommend that planners, designers, stakeholders and residents should use the document as follows:

To Understand Objectives and Scope of the PDS

- Review Pt-1 Section 1.4 - Relationship to Other Plans
- Review Pt-1 Section 1.7 - Definitions
- Review Pt-1 Section 2.0 - Sustainability-First for Parks
- To understand how park standards are implemented within the planning and design process, review Pt-1 Section 3.0 - 6 Stages of Park Planning and Design
- For an overview of the PDS report sections that apply to the 6 stages of park planning and design, review the chart in Pt-1 Section 3.0

For Park Standards Applicable to Park Planning

- for standards related to the preparation of Sector Plans, Neighbourhood Concept Plans and Plans of Subdivision, review all sections in Part 2: Park Planning Development Standards

For Park Standards Applicable to Park Design

- for standards related to the preparation of Park Amenity Layout Plans, Park Concept Plans and Detailed Park Design plans, review all sections in Part 3: Detailed Design and Construction Standards

For Submission and Procedure Requirements

- for standards related to the 6 stages of park planning and design, review all sections in Part 4: Submission and Procedural Requirements

List of Acronyms

Documents

ATMP	Active Transportation Master Plan
ATP	Active Transportation Plan
CEG	Contractor Environmental Guidelines
CSDM	Complete Streets Design Manual
DDSM	Detailed Design Standards Manual
FADS	Facility Accessibility Design Standards
GIS	Green Infrastructure Strategy
LECP	Low Emissions Community Plan
LIDG	Low Impact Development Guidelines
PDS	Park Development Standards
SG	Safe Growth and CPTED
SCS(P)	Standard Construction Specifications (Parks)
UFMP	Urban Forestry Management Plan
WCS	Water Conservation Strategy
WDG	Wetland Design Guidelines
WP	Wetlands Policy

Planning

CPTED	Crime Prevention Through Environmental Design
GHG	greenhouse gas
ICH	Indigenous, culture, heritage
LID	Low Impact Development
TBL	Saskatoon's Triple Bottom Line policy

Construction

CCC	Construction Completion certificate
CCO	Contemplated Change Order
CO	Change Order
FAC	Final Acceptance Certificate

1.4 Relationship to Other Plans

The following documents should be reviewed and complied with for all park planning, design and construction projects:

Figure 1: Related Documents

Related Documents by Planning Stages	City-Wide	Sector	Neighbourhood	Subdivision	Park Concept	Detailed Design	Tender Documents
Planning for Growth *Regional siting of parks in the green network*	x						
Strategic Plan *Importance of parks and sustainability*	x						
Official Community Plan *Park planning objectives*	x	x					
Recreation and Parks Master Plan *Existing and projected recreation needs and standards*	x	x	x				
Green Infrastructure Strategy *Relationship to natural areas and open space*	x	x	x				
Urban Forestry Management Plan *Naturalization and tree planting targets*	x	x	x	x	x	x	
Triple Bottom Line *Embedding environmental, social, economic considerations in park planning*	x	x	x	x	x	x	x
Low Emissions Community Plan *Roadmap of actions to reduce GHG emissions by 80% by 2050.*	x	x	x	x	x	x	x
Active Transportation Master Plan *Siting parks along active transportation system*	x	x	x	x	x	x	x
Safe Growth & CPTED *Siting parks for visibility and crime prevention*	x	x	x	x	x	x	x
Wintercity YXE *Create parks for winter conditions*		x	x	x	x	x	x
Low Impact Development Guidelines *Stormwater management and drainage in park design*		x	x	x	x	x	x
Wetland Policy *Restoration policy for natural and constructed wetlands*	x	x	x				
Wetland Design Guidelines *Location, size, layout, construction standards, and details*				x	x	x	x
Buffer Strips Policy *Size, function, features in buffer strips*			x	x	x	x	x
Facility Accessibility Design Standards *Location, setbacks, construction details for park features*				x	x	x	x
Standard Construction Specifications *Details and construction standards for park features*						x	x

Related Natural Area Screenings	City-Wide	Sector	Neighbourhood	Subdivision	Park Concept	Detailed Design	Tender Documents
Natural Area Management Plan		x	x	x	x	x	
Resource Management Plan		x	x	x	x	x	
High Performance Building Policy					x	x	x
Design Standards for Spray Pads					x	x	x
Federal Migratory Bird Regulations on Distributions of Breeding Birds		x	x	x	x		

1.5 Approval Procedure

The park planning and design process consists of six stages, from Sector Plans through to tender drawings. As illustrated in Figure 2, each planning stage requires a specific park plan to be prepared and approved before proceeding to the next stage. Associated requirements and standards for the required plans can be found in the sections of the PDS listed in the last column.

Figure 2: Approval Authority for Required Park Plans

	Planning Stage	Required Park Plan	Approved By	PDS section
1	Sector Plan	Open Space Layout Plan	Planning and Development	**Part 2**
2	Neighbourhood Concept Plan	Open Space Master Plan Park Amenity Layout Plan	Planning and Development	**Part 2 + 3**
3	Plan of Subdivision	No Requirement	N/A	
4	Park Concept	Park Concept Plan	Parks Department	**Part 3**
5	Detailed Design	Detailed Park Design	Parks Department	**Part 3**
6	Procurement	Tender Drawings	Parks Department	**Part 3 + 4**

Reviews

Required park plans will be reviewed by a number of committees to ensure compliance with short and long term planning and design objectives for the City. Figure 3 illustrates the required park plans that will be subject to a committee review.

Figure 3: Committee Review for Required Park Plans

	Planning Stage	Required Park Plan	Committee Review
1	Sector Plans	Open Space Layout Plan	Municipal Heritage Advisory Committee
2	Neighbourhood Concept Plan	Open Space Master Plan Park Amenity Layout Plan	CPTED Review Committee Municipal Heritage Advisory Committee Saskatoon Environmental Advisory Committee
3	Plan of Subdivision		
4	Park Concept	Park Concept Plan	Saskatoon Accessibility Advisory Committee Public Art Advisory Committee
5	Detailed Design	Detailed Park Design	
6	Tender	Tender Drawings	

All Neighbourhood Concept Plans and amendments shall be reviewed by the CPTED Review Committee for conformance with the principles of CPTED through the existing approval process. The required CPTED Review Committee Submission Application is available from Community Services. Responses to the CPTED Review Committee recommendations must be submitted to the General Manager or Senior Management Team per the policy for final approval.

1.6 Compliance

All objectives, policies and guidelines in this document must be complied with by Developers, stakeholders and City staff through all stages of park planning, design and construction, according to the following criteria:

.1 If a sentence or phrase contains the words "will", "must", or "shall", the development standards must be complied with.

.2 If a sentence or phase contains the words "should", "may", or "might", the associated development standard describes an end result that would satisfy the objectives and intent of the PDS. Proposed park concept plans and detailed designs can include design measures that achieve the standards described, or an alternative solution that would also achieve the standards.

If, in the opinion of City staff, park planning and development plans are not in compliance with the PDS, the Parks Department will do one, some, or all of the following:

- for Sector Plans, Neighbourhood Concept Plans, and Plans of Subdivision - submit a notification letter to the Planning and Development Department requesting that the development application not be approved until the development plan complies with the PDS and/or a satisfactory Planning Justification Report demonstrating how the proposed development complies with the intent of the policies of the PDS is prepared by the developer and approved by the Parks Department.
- for Park Concept Plans, Detailed Park Design, and Tender Drawings, refuse to grant approval until drawings are revised to comply with the PDS or a satisfactory Planning Justification Report is prepared by the developer and approved by the Parks Department. If the Parks Department refuses to grant approval to any of the above-noted plans, park development is not permitted to proceed. In that case, the applicant may choose to undergo an appeal as described below:

Appeals

Developers may appeal the decision of the Parks Department to refuse to grant approval to Park Amenity Layout Plans, Park Concept Plans and Detailed Park Design Plans to the Development Appeal Board as per regulations within the Saskatchewan Planning and Development Act.

1.7 Definitions

Accessible Route
A route of travel that addresses the full range of persons and vehicles that may use it.

Active Transportation
Any form of human-powered transportation, such as walking, jogging, cycling, skateboarding, cross-country skiing, and using mobility aids.

Biodiversity
The variety of life in the Saskatoon region, particularly species, habitats and ecosystems typical to the Canadian prairie.

Bluff
A clump or grove of trees on a prairie or other generally treeless area.

Buffer Strip
A parcel of land required to act as a buffer between adjacent land use.

Climate Adaptation
Involves activities that increase the ability to prepare for, withstand, and recover from the impacts of changing climate conditions. These activities increase community resilience
to climate change by adapting current services, practices, and infrastructure to withstand current and future climate-related risks.

Climate Mitigation
Actions taken to address the root cause of climate change by decreasing the rate that heat trapping greenhouse gases are emitted into the atmosphere. Mitigating emissions is expected to slow the effects of climate change, which can decrease the need to adaptive actions.

Concept Plan - See *Development Plans*

Connectivity
The degree that movement between open spaces is facilitated or impeded, measured by the physical continuity of open space and by how well species are distributed throughout an area.

Conservation
The sustainable use, protection, and management of natural areas and assets to prevent decline or loss.

Constructed Wetlands - See *Wetlands*

Contractor - *See Developer*

CPTED (Crime Prevention Through Environmental Design)
Crime Prevention Through Environmental Design (CPTED) means a collaborative, multi-faceted approach to reducing opportunities for crime, improving community perceptions of safety, and strengthening community bonds.

Culture
The customs, history, values and languages that make up the heritage of a person or people and contribute to that person's or peoples' identity.

Dedication

Environmental Reserve
Land dedicated at the time of subdivision that contains wildlife habitat or areas that are environmentally sensitive or contain significant historical or natural features; ravines, coulees, swamps, natural drainage courses; land subject to flooding or that is unstable; land that abuts a body of water and is required to prevent pollution, preserve the bank, or protect against flooding.

Municipal Reserve
Dedicated lands that may be used for open space, park, recreation facilities, public buildings, natural areas, and more.

Developer
A private developer or municipal agency that seek to construct a development on a vacant or occupied property.

Development Plans

Concept Plan
A comprehensive plan showing land use patterns, street layouts, open spaces, and other relevant design details for a defined area.

Neighbourhood Concept Plan
A Concept Plan for a specific neighbourhood.

Sector Plan
A comprehensive plan that provides a broad framework for urban development and includes the location and size of future neighborhoods and/or employment areas, arterial road alignments, parks, and significant natural areas and open spaces.

District Park - See *Park Types*

Drought Resistant Dryland - vegetated area consisting of grasses and herbs that is mowed less frequently than a lawn, thereby reducing the carbon footprint.

Energy efficiency - park locations that are sited close to public transit and active transportation routes, and park designs that reduce the need for fossil fuels to maintain and operate the park

Enhanced Natural Wetlands - See *Wetlands*

Environmental Sustainability
Maintaining qualities that are valued in the natural environment by living within the Earth's limits through:

- Energy efficiency and reliance on renewable energy sources;
- Preventing waste;
- Transportation and land-use patterns that protect the environment;
- Maintaining the capacity of the environment to sustain living conditions for people and other species.

Environmental Reserve - See *Dedication*

Erosion Control Blanket
A blanket of synthetic or natural fibers that protects soil from the erosive impact of precipitation and overland flow, retains moisture, and assists in establishment of vegetation.

Greenhouse Gas Emissions (GHG)
Air emissions that contribute to the greenhouse effect (global warming by absorbing infrared radiation and trapping it in the atmosphere, including water vapor, carbon dioxide, methane, nitrous oxide, and ozone.

Green Infrastructure
A system of natural, enhanced, and engineered assets that provide municipal and ecosystem services by protecting, restoring, or emulating nature.

Green Network
When green infrastructure is designed holistically, it becomes an interconnected Green Network that enhances the urban environment and improves quality of life.

Heritage Facility
A facility or portion thereof designated under the Saskatchewan Heritage Property Act, or identified in the Heritage Registry for the City of Saskatoon.

Heritage Resource
Heritage resource means any resource, or group of resources, natural or cultural, tangible or intangible, that a community recognizes for its Heritage Value as a witness to history or memory.

Linear Park - See *Park Types*

Low Impact Development
A land planning and engineering design approach that manages storm water runoff by emphasizing on-site features and systems that lower runoff quantity, lower peak runoff volumes and flow rates, and improves runoff water quality. LID improves and maintains natural hydrological processes on site such as absorption, infiltration, evaporation, evapotranspiration, filtration through soils, pollutant uptake by select vegetation, and bio-degradation of pollutants by soil microbes. Examples of LID features include rain gardens, bioswales, green roofs, permeable pavements, and stormwater harvesting.

Maintained Turf - All areas within a park that are seeded with grass, regularly mowed, and irrigated

Municipal Reserve - See *Dedication*

Natural Area
An area containing natural assets that work together to provide ecosystem services (e.g. habitats, nutrient cycling, water purification, climate regulation, carbon sequestration) and social benefits (e.g. recreational, aesthetic, cultural).

Naturalization
The process of creating a Naturalized Area.

Naturalized Area
An area in a park that will be prepared, planted and maintained to achieve a predetermined ecological state

Natural Wetland - See Wetlands

Naturalized Wetland - See Wetlands

Neighbourhood
A residential area designed as a comprehensively planned unit containing a variety of housing and community services necessary to meet the needs of a neighbourhood population.

Neighbourhood Concept Plan - See Development Plans

Multi-District Park - See Park Types

Neighbourhood Core Park - See Park Types

Neighbourhood Park - See Park Types

Neighbourhood Pocket Park - See Park Types

Open Space
Large-scale tracts of land without visible evidence of residential, commercial or industrial development. Open space may be privately or publicly owned and are generally left in a natural state and not programmed for active recreation.

Park Features
All built-form items in a park, such as a bench, park building, sign, parking lot, etc., all planting beds and individual trees.

Park Types

District Park
A park which serves the recreational requirements of four to five neighborhoods, and may accommodate city-wide and high school activities.

Industrial Park
A park located in an industrial, commercial or employment area that serves the recreational needs of the surrounding businesses.

Linear Park
A park which serves recreational requirements and acts as a linkage by providing a connection between parks and other destinations through non-motorized means of travel.

Multi-District Park
A park which serves recreational requirements of the suburban development area, city-wide programs, and meets the requirements of national/international competition.

Naturalized Park
A park which is dedicated to preserving and enhancing components of a natural system and associated passive recreational uses.

Neighbourhood Core Park
A park which serves the recreational requirements of elementary schools, neighbourhood residents, as well as some intra-neighborhood league play.

Neighbourhood Pocket Park
A small scale park that provides passive recreational opportunities for neighbourhood residents,.

Village Square
A park owned, operated or controlled by the City or another civic agency and intended for public gatherings, displays or events in an urban neighbourhood , including City Hall Square, River Landing, Market Square, and the like.

Special Use Park
A park that serves the unique needs of that particular open space, including parks located adjacent to the South Saskatchewan River.

Passive Recreation
Activities in a park that are not overseen by sport organizations.

Place Making
A design approach to improving public spaces by increasing the connections between people and the places they share.

Public Realm
Public space that is available and accessible to everyone, and includes sidewalks, streets, open space, squares, riverfront, and other public spaces.

Recreation Facility
Any building owned by The City of Saskatoon that is used for recreation purposes

Rehabilitation
Rehabilitation means the sensitive adaptation of a Heritage Resource for a continuing or compatible contemporary use, while protecting its Heritage Value.

Resilience
Resilience is the capacity of individuals, communities, institutions, businesses and systems to survive, adapt and thrive, no matter what kinds of chronic stresses and acute shocks they experience.

Restoration (heritage)
Restoration means accurately revealing, recovering or representing the state of a Heritage Resource as it appeared at a particular period in its history, while protecting its Heritage Value.

Sector Plan - See *Development Plans*

Shared use
Adjacent land uses in different ownership that have unrestricted access allowing shared use of pathways, parking, and other outdoor facilities.

Special Use Park - See *Park Types*

Stepping Stone Habitat
Patches of habitat, such as naturalized features, in the urban landscape that provide shelter, food or rest to wildlife.

Stormwater Management Ponds
Stormwater management ponds are designed to briefly contain and attenuate rain water and provide some limited treatment, reduce flooding potential and protect receiving waters from sediment loads.

Stormwater Retention Ponds - *see Constructed Wetlands*

Sustainability
Development that is responsive to operational requirements and environmental needs, while balancing long-term financial, environmental, cultural, and social factors. Sustainability within the City of Saskatoon is viewed through a Triple Bottom Line lens, which considers environmental health and integrity, social equity and cultural wellbeing, economic prosperity, and fiscal responsibility.

Triple Bottom Line
An approach to sustainability whereby environmental health and integrity, social equity and cultural well-being, and economic prosperity and fiscal responsibility are integrated into decision making in a way that produces equitable solutions and mitigates undesirable trade-offs.

Urban Forest
An urban forest encompasses the trees and shrubs in an urban area, including trees in yards, along streets and utility corridors, in protected areas, and in watersheds. This includes individual trees, street trees, green spaces with trees, and even the associated vegetation and the soil beneath the trees.

Utility Easement
An interest in land granted by the owner which allows a public or private utility (i.e. SaskPower, SaskTel, Utility Services Department – Saskatoon Light and Power, Shaw Cable, etc.) to use the land for the purpose set out in the easement.

Water Conservation Strategy (WCS)

Stormwater
It includes stormwater and snowmelt that flows overland; it either enters the City's storm drain system, flows directly into a natural water body (e.g., the river, wetland), or is directed into a green infrastructure system (e.g., cisterns, storm ponds, bioswales, silva cells).

Grey-water
Grey water, also called recycled or reused water, is relatively clean wastewater from sources such as pools, spray pads, washing machines, and showers. It has potential for reuse in some cases, such as for irrigation.

Wastewater
Includes water from toilets, showers, and appliances that is sent down the drain into the sanitary sewer and carried to the Wastewater Treatment Plant where it is cleaned and discharged back into the river.

Groundwater
Includes water beneath the surface of the ground such as in an aquifer.

Wetlands

Constructed Wetlands
A constructed and/or modified water body that fluctuates with water drainage but holds water at all times, designed to mimic the functions of naturally occurring wetlands, including filtering pollutants from storm water runoff and providing habitat with associated buffers/riparian areas.

Enhanced or Naturalized Wetlands
Natural wetlands that are modified to increase their functional performance in stormwater storage, flood attenuation, and water quality improvement, while maintaining or improving all other wetland functions,that may include installation of water inlet, outlet, or level control structures, as well as re-vegetation, weed removal, wildlife habitat improvement measures, or recreation/education facilities.

Natural Wetland
Lands having water at, near or above the land surface or land that is saturated with water long enough to promote wetland or aquatic processes as indicated by poorly drained soils, aquatic vegetation and various kinds of biological activity which are adapted to a wet environment.

Xeriscaping
Planting technique that uses drought-resistant species that do not require irrigation for plant establishment or growth.

2.0 Sustainability-First for Parks

A Sustainability-First approach will be taken for the planning and design of all parks in Saskatoon.

What is Sustainability-First for Parks?

Sustainability-First is an approach that places sustainability as the over-arching principle for all planning and design standards in Saskatoon. All standards contained in this document support the notion that sustainability can and must be the most important consideration for planners, designers and stakeholders to use when planning, designing and constructing parks.

Sustainability-First for Parks includes important environmental planning standards for climate resilience, naturalization, and green infrastructure. It is an approach to implement the Triple Bottom Line, Green Infrastructure and Climate Action Strategies into park planning and design.

Why should parks use the Sustainability-First Approach?

The City of Saskatoon's commitment to a sustainable future is reflected in documents such as the Climate Action Plan, Low Emissions Community Plan, Green Infrastructure Strategy, and the Urban Forestry Management Plan. Parks are important components of the Green Network and must be designed with preservation, maintenance and enhancement of natural systems and processes above all else.

How can Sustainability-First for Parks be implemented?

Park Planning

Sustainability-First for park planning will be implemented by selecting appropriate locations, sizes, activities, naturalization and green infrastructure elements for the city-wide, sector and neighbourhood parks in Sector Plans, Neighbourhood Concept Plans, and Plans of Subdivision.

Park Design

Sustainability-First for park design will be implemented by incorporating the park design standards in this document into Park Amenity Layout Plans, Park Concept Plans, and Detailed Park Design Drawings.

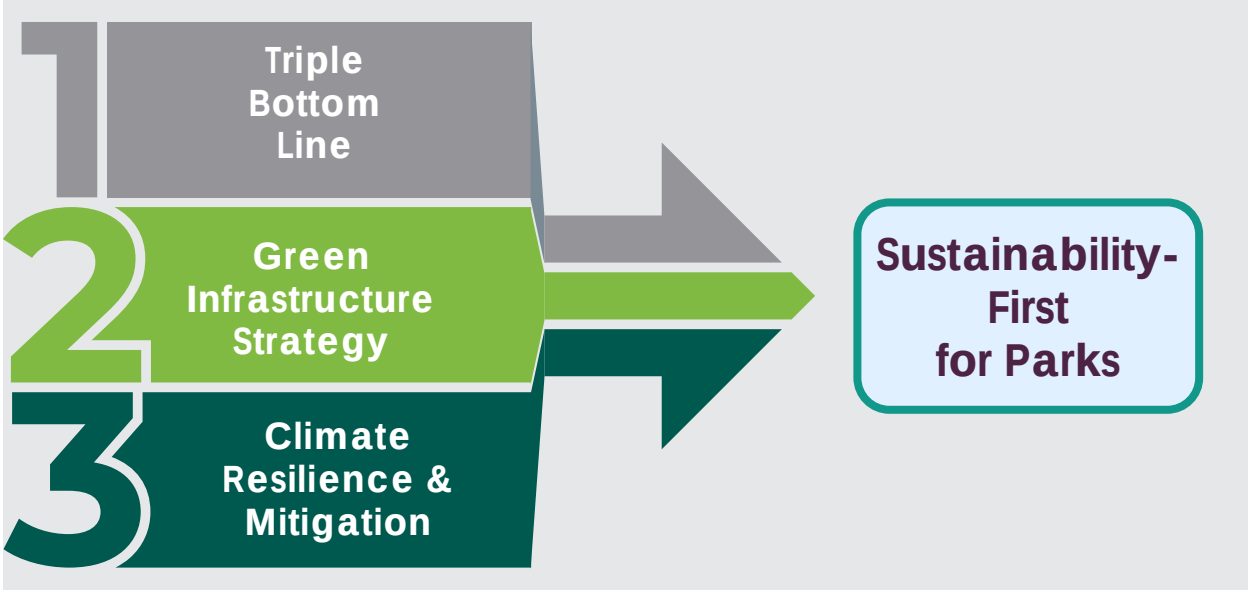
Sustainability-First Checklist for Parks

Sustainability-First in park plans and designs will be confirmed by submission and approval of a Sustainability-First checklist for the six stages of park planning and design. The Checklist provides opportunity for landowners to list sustainable design features and explain how the layout and design meets park sustainability standards in Sector Plans, Neighbourhood Concept Plans, Plans of Subdivision, Park Amenity Layout Plans, Park Concept Plans and Detailed Park Design Drawings.

2.1 Triple Bottom Line

The Triple Bottom Line (TBL) Policy C08-001 is one of three important components in Sustainability-First for parks, see Figure 1.

Figure 4: Components of the Sustainability-First approach



It is a city-wide sustainability initiative that came into effect on January 1st, 2020, that requires all city departments to apply a sustainability lens to initiatives, projects and programs. TBL provides a framework for the entire City to follow and requires that the following sustainability factors be considered:

- good governance
- environmental health and integrity
- economic prosperity and fiscal responsibility
- social equity and cultural well-being

2.2 Green Infrastructure Strategy

The Green Network is the living part of our City that makes our neighbourhoods more sustainable and resilient, consisting of both natural elements (forests, rivers, lakes, wetlands) and engineered structures (constructed wetlands, bioswales, street trees, parks). It connects living systems, increases biodiversity, supports wildlife, increases oxygen levels, cools temperatures, and filters toxins. It also is an important part of stormwater management and climate resilience, and provides opportunities for people to appreciate, learn from, and experience nature.

Saskatoon's city-wide plan to protect and enhance all parts of the Green Network, including parks, is found in the Green Infrastructure Strategy (GIS). The GIS contains mapping of green infrastructure elements across the city, and provides strategies to enhance open space, ecology and biodiversity, stormwater, and an interconnected Green Network.

Sustainability-First for Parks recognizes the Green Infrastructure Strategy as an important resource providing strategies for adjacent natural areas that should be considered when planning and designing parks.

2.3 Climate Mitigation and Resilience

Climate mitigation is a set of strategies to reduce the impacts of climate change, so that Saskatoon can achieve a state of climate resilience. According to the Official Community Plan (OCP), climate

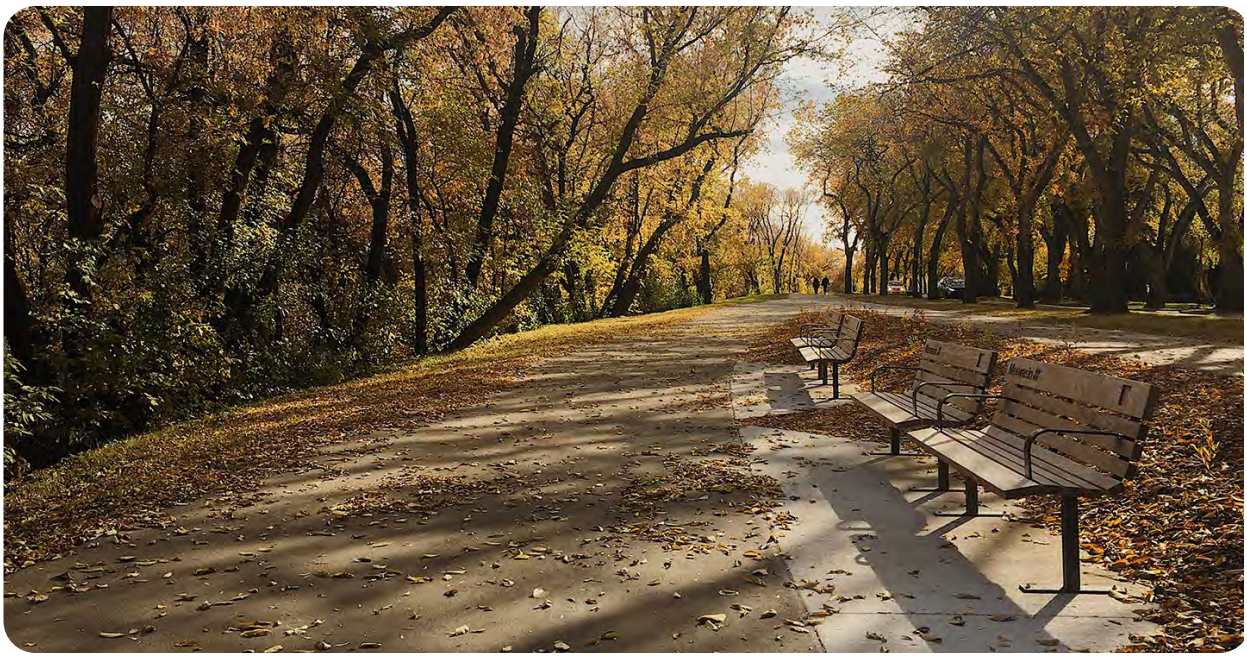
> *Actions taken to address the root cause of climate change by decreasing the rate that heat trapping greenhouse gases are emitted into the atmosphere. Mitigating emissions is expected to slow the effects of climate change, which can decrease the need to adaptive actions.*

To achieve climate goals, all parks must be planned and designed with climate mitigation and adaptation measures, which establish sustainability as the first priority. As part of Sustainability-First for Parks, policies for climate mitigation are included in the Design Principles for park planning (Pt-2 Section 5.0) and are interwoven into most of the detailed design and construction standards in Part 3.

Saskatoon currently has the following strategies to both mitigate and adapt to climate change:

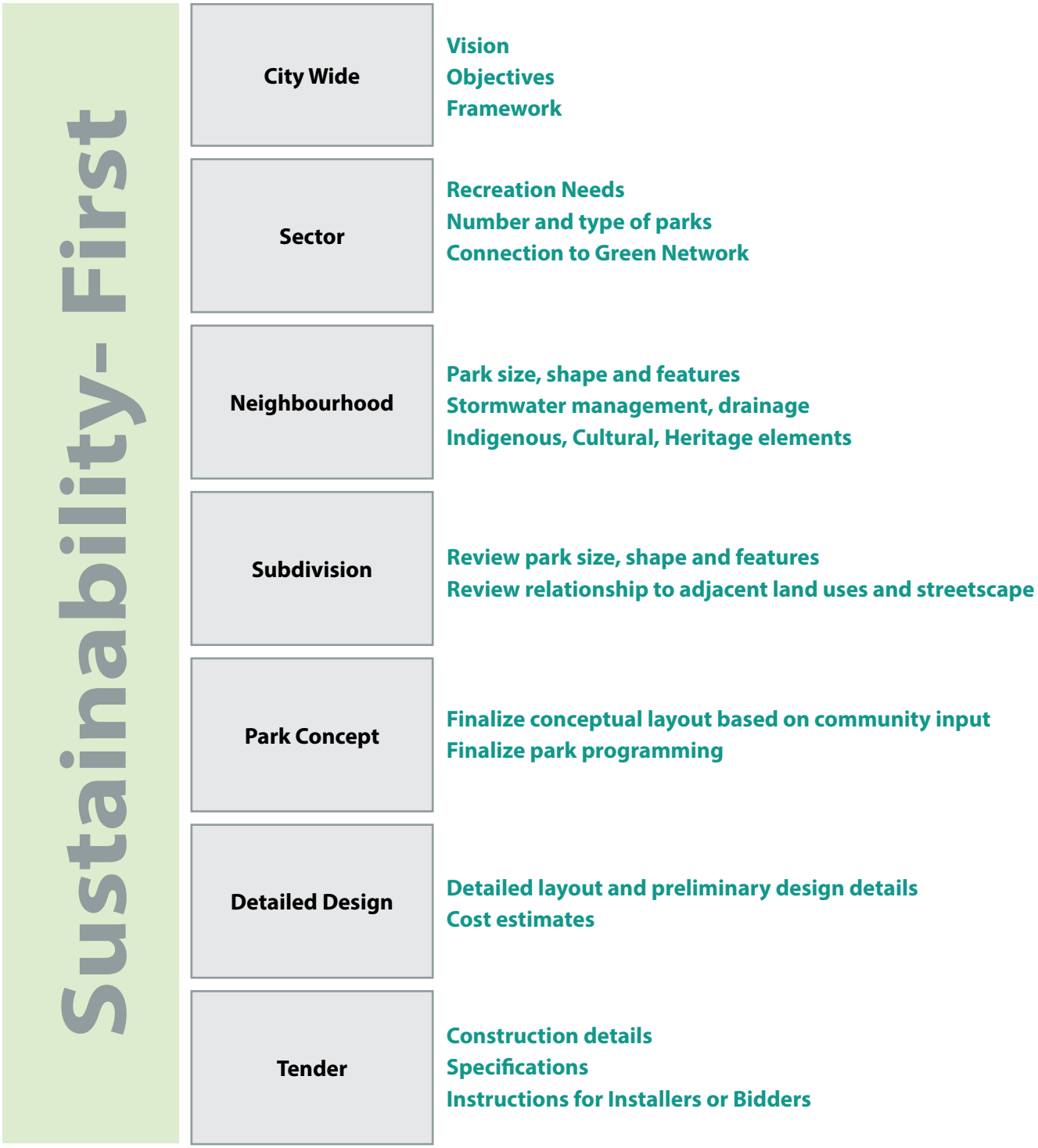
- Low Emissions Community Plan (LECP) contains strategies which make up a long-term roadmap for reducing GHG emissions both in city operations and in the broader community
- Corporate Climate Adaptation Strategy is a yearly report that demonstrates how the objectives and strategies in the LECP have been implemented. It focuses on increasing resilience in city operations to adapt to climate risks.
- Water Conservation Strategy (WCS) aims to mitigate climate change

These documents do not currently apply to parks and open space. However, planning and design of parks should comply with these documents as they evolve to include policies and standards for parks.



Welcoming, healthy and inspiring parks are created by having a clear vision, comprehensive objectives and definitive park standards that allow room for creativity throughout the park planning and design process.

Figure 5: Sustainability-First in the park planning and design process



3.0 Relevant Report Sections

	Objectives	Report Sections
City Wide	1. Provide a vision for park planning and design throughout Saskatoon 2. Create a framework for park performance standards 3. Describe relationships between parks and other public spaces 4. Establish sustainability as a top priority	Part 1 2.0 Sustainability-First Part 2 1.0 Parkland Dedication 2.0 Parkland Classification 3.1 Recreation Needs
Sector	1. Site parks equitably throughout the sector to meet community recreational needs 2. Demonstrate parks as an important component of the Green Network 3. Identify park types and potential sizes 4. Locate parks to maximize sustainability and GHG emission reduction	Part 1 2.0 Sustainability-First Part 2 all Part 4 1.0 Overview 2.0 Sector Plan Submission
Neighbourhood	1. Site parks to maximize connectivity to the green network, active transportation, community sites 2. Demonstrate proper size and shape of parks to support recreational needs, LID, natural features 3. Neighbourhood and park grading to maximize water capacity, storage and drainage 4. Identify Indigenous, cultural and heritage potential	Part 1 2.0 Sustainability-First Part 2 all Part 4 1.0 Overview 3.0 Neighbourhood Concept Plan Submission
Plan of Subdivision	1. Demonstrate proper size and shape to support recreational needs, road pattern, green network 2. Identify and illustrate sustainable design features to be used in the park	Part 1 2.0 Sustainability-First Part 2 all Part 4 1.0 Overview 4.0 Plan of Subdivision Submission

	Objectives	Report Sections
Park Concept	1. Layout park features to maximize safety, connectivity to the green network, community node 2. Demonstrate proper size and placement of all park features, access points and connections 3. Spot elevations and grading to maximize water capacity, storage and drainage 4. Conceptual layout of sustainable design, Indigenous, cultural and heritage features	Part 1 2.0 Sustainability-First Part 3 all Part 4 1.0 Overview 5.0 Park Concept Plan Submission
Detailed Design Plan	1. Detailed layout of park features including setbacks and dimensions 2. Park grading details for all park features, drainage and stormwater management 3. Design details for all sustainable design features	
Tender and Construction	1. Details and specifications to ensure quality installation and safety during construction 2. Inspections and warranty details	Part 1 2.0 Sustainability-First Part 3 all Part 4 1.0 Overview 7.0 Submissions During Construction

PART 2: Park Planning Development Standards

2

PART 2: PARK PLANNING DEVELOPMENT STANDARDS

LIST OF FIGURES

Park Planning Development Standards

Park planning development standards are used to guide development at the early planning stages, (sector plans, neighbourhood concept plans, and plans of subdivision). They help planners, developers and municipal staff derive creative, sustainable and healthy solutions for the following questions:

- What types of parks should be built?
- Where should park types be located in the city, sector and neighbourhood?
- What size should parks be?
- What recreation and leisure activities should be located in the development?
- How can we include indigenous, cultural, heritage features and spaces?
- How do parks relate to the Green Network and active transportation system?
- How can parks contribute to sustainability, climate mitigation and low impact development?
- How can we ensure parks are safe and accessible for all?
- How do parks contribute to stormwater management?

Scope

Standards in Part 2 apply to park plans prepared for Sector, Neighbourhood Concept and Plans of Subdivision as shown in Figure 1.

Figure 1: Park Plans Required By Park Planning Stage

Planning Stage	Required Park Plan
Sector Plans	**Open Space Layout Plan**
Neighbourhood Concept Plan	**Open Space Master Plan** **Park Amenity Layout Plans**
Plan of Subdivision	**No Requirement**

Compliance

All objectives, policies and guidelines in this section must be complied with when preparing and amending required park plans created for Sector Plans, Neighbourhood Concept Plans and Plans of Subdivision, according to compliance provisions in Pt-1 Section 1.6.

See the chart in Pt-1 Section 1.4 for a complete list of related documents that must also be complied with when preparing required park plans.

Land Dedication Types

The City of Saskatoon has four land dedication types that are relevant to park features and activities:

- Municipal Reserves (parks and recreation only)
- Environmental Reserves (green infrastructure)
- Utility Parcels (above and below ground utilities and green space)
- Buffer Strips (green space used to separate land uses)

The size and location of the four land dedication types is determined at the Sector Plan stage when undeveloped land is divided into neighborhoods separated by arterial roads and the Green Network (natural areas to be preserved, LID and stormwater management, parks, utilities). The amount of land required for parks is calculated per neighbourhood and land dedication types (municipal reserve, environmental reserve and buffer strip) are assigned.

Park Features Permitted in Land Dedication Types

The range of park features and activities permitted in each of the four land dedication types is outlined in Figure 2. Distribution of park features and activities in Figure 2 must be complied with when selecting size, location and distribution of park features and activities in a sector or neighbourhood.

Deviations from the permissions shown in Figure 2 will require a Planning Justification Report to be prepared by the Developer that outlines how the proposed distribution of park types, size, location and function will achieve the objectives of the PDG and related documents.

Figure 2: Park features permitted in Municipal and Environmental Reserves, Utility Parcels and Buffer Strips

Park features and activities per land dedication type	Municipal Reserve	Environmental Reserve	Utility Parcel	Buffer Strip
Active Recreation *Regulated sport fields, programmed activities*	x			
Passive Recreation *Trails, seating, playgrounds, interpretive features, planting*	x	x	x	x
Naturalization *Natural features, naturalization areas*	x	x	x	
Stormwater Management and LID *Constructed wetlands, channels, stormwater retention*	x	x	x	x
Utilities *Power lines, underground servicing*			x	x

1.0 Parkland Dedication

1.1 Acquisition

Land dedication is governed by City of Saskatoon Policy C09-005 which requires municipal reserves to only be used for parks and recreation purposes, and environmental reserves are to contain natural areas such as river corridors, significant woodlots, wetlands, regeneration areas and large-scale stormwater management features such as ponds.

Section 186(3) of the Saskatchewan Planning and Development Act (SPDA) provides the rate for parkland dedication as:

(a) 10% of the land area proposed for residential subdivision; and

(b) 5% of the land area proposed for non-residential subdivision (industrial park)

The OCP (Section D 5(2)(a)) further defines the rate of parkland dedication as:

> *A ratio of four hectares of public open space to every 1,000 persons will be considered adequate. Public open spaces may include Municipal Reserves and other publicly owned areas dedicated to public enjoyment and recreation.*

Final calculations for parkland dedication will be determined for each sector in consultation with landowners, developers and stakeholders according to the above policies, and in compliance with any subsequent parkland dedication policies approved by Council.

Cash-in-lieu

Any portion of the required parkland dedication may be taken as money in lieu, at the discretion of the Parks Department, and used to enhance other Municipal Reserves as per the Dedicated Lands Reserve Policy No. C09-005, or the land could be combined with the dedication for multi-district or special use parks.

Over-dedication of Parkland

Over-dedication of land, defined as the dedication of more land than is legally required under the Saskatchewan Planning and Development Act, may be acceptable under the following conditions:

.1 The developer agrees to pay the entire cost of developing those lands, which are deemed to be 'over-dedicated' lands into park space; and

.2 The developer agrees to pay into a reserve fund for the annual maintenance costs of the over-dedicated amount.

The reserve fund must be sufficient and available for use by the City for a period of not less than 15 years from the date upon which the over-dedicated land is turned over to the City.

1.2 Allocation

For Sector Plans, Neighbourhood Concept Plans and Plans of Subdivision, parkland shall be allocated according to the following ratio:

Neighbourhood Parks - 61% of total parkland dedication

District Parks - 36% of total parkland dedication

Other - 3% of total parkland dedication

Peter H. Currie Park

1.3 Shared Use

Shared use of parks, schools, community (public) facilities and the Green Network is supported by the OCP and the GIS. Potential shared use will be identified in Sector Plans and confirmed at the Neighbourhood Concept Plan stage in a collaborative process involving Developers, city departments and other stakeholders.

Policies that apply to planning and conceptual layout of shared uses with parks include:

.1 Shared use of parks will promote sustainable design principles of connectivity, energy and GHG emissions reduction, enhancing ecological functioning, stormwater management and climate mitigation.

.2 Shared use of parks is permitted according to an agreement facilitating shared use, and must to be identified in Sector Plans and reconfirmed in Neighbourhood Concept Plans. Permitted shared uses and activities include:

- schools
- recreational lakes, natural and constructed wetlands
- stormwater management and LID facilities
- community centres and public indoor sport complexes
- indigenous, cultural and heritage features, sites, and uses
- green infrastructure
- community gardens and community activities
- other public site or land use

.3 Agreements facilitating shared use must contain provisions for funding for construction and maintenance of the storm water management facilities, and others as needed.

.4 Development plans for shared use of parks with a permitted land use will contain the following (see Part 4 for full list of requirements):

- **Sector Plan** - Open Space Layout Plan must demonstrate all shared uses
- **Neighborhood Concept Plan**
  - Open Space Master Plan must illustrate shared facilities, linkages, barriers
  - Park Amenity Layout Plans must show conceptual landscape plan for shared facilities, stormwater management, green infrastructure and park facilities demonstrating visual, functional and sustainable integration of shared facilities, for each park with shared uses
- **Detailed Park Design Plans** - design details of all shared use facilities

.5 Shared Use of parks for periodic stormwater retention must demonstrate that:

(a) no sports fields or trails within parks will be allowed to be flooded for any longer than a 24-hour period and will not be below the 1-in-5 year storm event waterline.

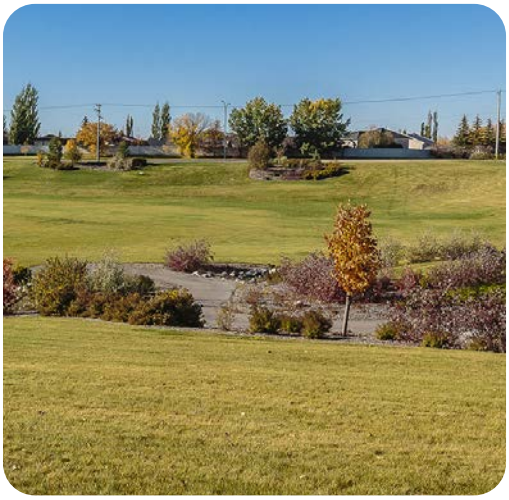
(b) any other park area must be designed to retain stormwater for a maximum 48-hour period except for playgrounds, seating, ICH features, and the like.

(c) stormwater conveyed or retained in the park will not damage or compromise the use of park features, nor damage or compromise the health or function of trees and green infrastructure. This provision applies to all development stages, from Sector Plans through to detailed park design plans.

(d) SWM ponds or other LID feature with standing water shall not be located near elementary schools or playgrounds.

(e) stormwater facilities and LID, when located in or adjacent to parks, must complement park layout, sustainability and character.

Bioswale at Reverence Forester Park



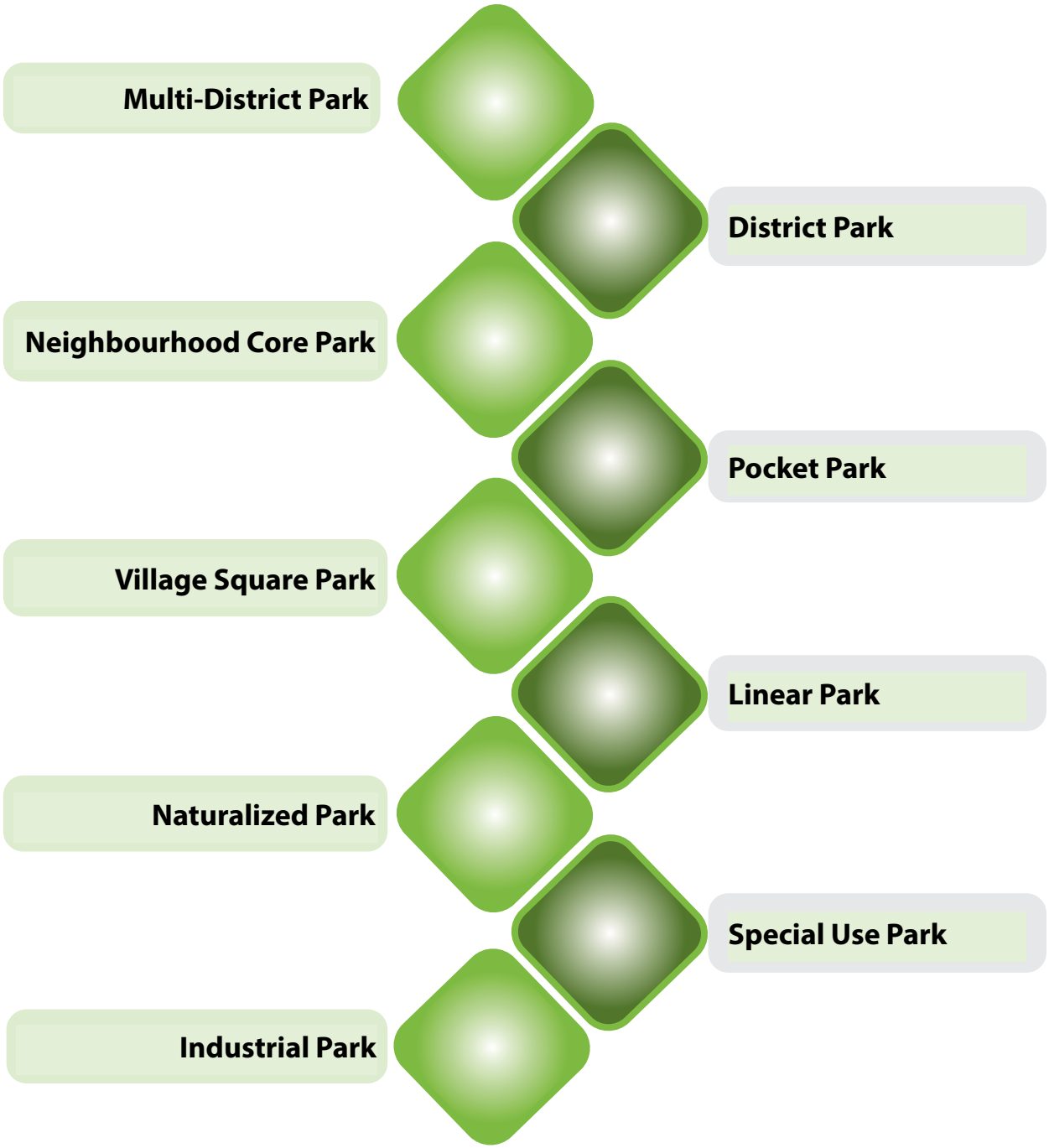
.6 Wherever possible, green infrastructure shall form part of the park, including the retention of natural corridors and natural ponding areas, and be subject to the naturalization policies in Part 3.

.7 Where it is appropriate, utility parcels may be used for recreation purposes. The design of recreational uses within utility corridors shall conform to standards in Pt-3 Detailed Design and Construction Standards.

2.0 Park Classification

Parks in Saskatoon fall into one of 9 categories based on size, function, and park features.

Figure 3: Park Types in Saskatoon



Provisions specific to each park type (purpose, function, dedication, size, location, access, visibility and frontage) are provided in the remainder of this section.

2.1 Multi-District Park

Purpose & Function

Multi-District Parks are intended to accommodate city-wide use for both active and passive recreation. There is an emphasis on structured sports and active recreation, and allocation for passive recreation uses will be determined once active recreation needs have been met. Dimensions of sports fields shall be suitable for international level of competition (e.g. floodlighting sports fields). They serve the complementary activities associated with suburban leisure centres, and serve leisure requirements not otherwise served by Neighbourhood and District Parks.

Multi-District Parks function to provide a variety of active and passive recreation activities at all seasons of the year, as well as siting for suburban leisure centres and official competition sized sports fields and facilities adequate for national/international athletic events. They accommodate sports spectators and allow programming for uses not found in Neighbourhood or District Parks (e.g. cultural facilities, multi-purpose leisure center). Multi-District Parks accommodate Parks Maintenance Buildings, which contain equipment, and material storage requirements associated with new park and open space development.

Dedication

- Part of the 3% Multi-District and Special Use allocation

Size

(a) Minimum 16 ha (39.5 acres).

(b) Minimum one per sector, may be dispersed over more than one neighbourhood.

Location

(c) Preferred location is in close proximity to the commercial portion of a suburban center, or in an industrial area, or in a parcel surrounded by arterial roads, or in a non residential area, or a combination of the above. Siting will minimize traffic disruptions in residential neighborhoods, create the opportunity for joint-use of parking facilities, and allow for elements not suitable for residential areas (e.g. floodlighting sports fields).

(d) Located on arterial or collector streets with City transit service, and with connections to the active transportation system

Access, Visibility, Frontage

(e) 100% visibility of site interior from park/street boundaries, but not necessarily from any one point on the boundary.

(f) Site boundaries to have 50% street exposure.

(g) Parking to be provided, quantities according to programming, with access from a collector street.

(h) Must have an accessible route, accessible seating, accessible parking, at least 1 accessible play activity or structure

2.2 District Park

Purpose & Function

District Parks are intended to serve active and passive recreational needs of residents of multiple neighborhoods. Structured city-wide sports activities intended for District Parks will typically result in a high proportion of space required for active rather than passive recreation. Emerging sports and non-traditional sports should be accommodated within district parks, particularly if partnership opportunities are presented (e.g. disc golf, outdoor lacrosse, etc.).

District Parks function to accommodate city-wide sports leagues for youth and adults based on Community Services Department's sports facility inventory requirements and public consultation with user groups and general public (e.g. soccer, ball, football, ultimate Frisbee, and lacrosse). They will accommodate community wide events (e.g. outdoor concerts), informal active recreational activities, passive recreational activities, and structures for active recreational activities not found in the neighbourhood core park (e.g. tennis courts, disc golf, satellite skateboard site, and dog park). They will accommodate Parks Maintenance Buildings, which contain equipment, and material storage requirements associated with new park and open space development.

Dedication

- Part of the 3% Multi-District and Special Use allocation

Size

(a) Minimum 10 ha (24.3 acres)

(b) Typically, two District Parks per sector serving 20,000 to 30,000 people

Location

(c) Located close to center of catchment area served.

(d) District and Neighbourhood Core Park sites to be separate from each other.

(e) Located on arterial or collector streets with City transit service, and with connections to the active transportation system

Access, Visibility, Frontage

(f) 100% visibility of site interior from park/street boundaries, but not necessarily from any one point on the boundary.

(g) Site boundaries not abutting school property to have 50% street exposure.

(h) Parking to be provided, quantities according to programming, with access from a collector street.

(i) Must have an accessible route, accessible seating, accessible parking, at least 1 accessible play activity or structure

2.3 Neighbourhood Core Park

Purpose & Function

A Neighbourhood Core Park is intended to provide active and passive recreation opportunities for neighbourhood residents and community associations. It will accommodate organized sports primarily for children 13 years of age or younger, and a central gathering place for event programming and socializing. Neighbourhood Core Parks will have expanded play areas and potentially contain amenities such as a spray pad or toboggan hill. Programming should respond to Community Services Department's public consultation and should provide a flexible site design that is adaptable to changes in the community demographics over time.

More than one Neighbourhood Core Park may be provided per neighbourhood as long as recreational needs (number and types of sport fields and leisure activities) are achieved.

Dedication

- Part of the 61% Neighbourhood allocation

Size

(a) Must accommodate anticipated recreational needs for the city and neighbourhood, and recreational needs expressed by the community

Location

(b) Centrally located in neighbourhood, not combined with District Park.

(c) Located on local or collector streets, not arterial.

(d) Ideally situated within 700 m walking distance of all one-unit dwellings and other housing forms designed for households with children as per the Official Community Plan.

(e) Potentially combined with one or more elementary schools, community center, natural or constructed wetland, natural or naturalized area.

Access, Visibility, Frontage

(f) Min. 25% to max. 40% continuous street frontage (on primary collector street), not including school frontage. If excess frontage is accepted above 40%, the City may impose off site levy charges based upon the excess frontage and incorporate such charges within a servicing agreement with the developer.

(g) Preference is to have a minimum 20 m run of street frontage in addition to the 25% noted above.

(h) 100% visibility of site interior from park/street boundaries, but not necessarily from any one point on the boundary.

(i) Easily accessible by walking/cycling/wheeling uninterrupted by arterial roads or other physical barriers. Linked by pathways and/or sidewalks.

(j) Must have an accessible route, accessible seating, and accessible parking.

(k) Accessible play activity or structure provided based on community consultation

2.4 Neighbourhood Pocket Park

Purpose & Function

Neighbourhood Pocket Parks will provide green space for residents located greater than a 5-minute walking distance (400 m) from a Neighbourhood Core Park. The Pocket Park character is small-scale, focusing on passive recreation and aesthetic appeal. The primary function is to provide passive recreation for all age groups, creative play, and structures to accommodate leisure activities for all age groups.

Dedication

- Part of the 61% Neighbourhood allocation

Size

(a) Minimum 0.25 ha (0.6 acres), maximum 0.8 ha (1.25 acres)

Location

(b) Placed so that residents have a 5-minute walking distance (400 m) to the nearest available park space.

(c) Evenly distributed throughout the neighbourhood is preferred. Pocket parks located in a series must be connected by the active transportation system in the neighbourhood

(d) Local or collector streets, not arterial.

(e) Distribute in different parts of the neighbourhood

(f) Where feasible, locate close to multi-unit housing complexes.

Access, Visibility, Frontage

(g) 100% visibility of site interior from street.

(h) Site boundaries to have minimum 25% street frontage.

(i) Easily accessible by walking, cycling, wheeling, and uninterrupted by arterial roads or other physical barriers. Linked by pathways and/or sidewalks

(j) Must have an accessible route and accessible seating

(k) Accessible play activity or structure provided based on community consultation

2.5 Village Square Park

Purpose & Function

Village Square Parks serve as an informal and formal meeting place, and provide a community focal point and destination for passive recreation including socialization and event programming. They also provide a visual focal or termination point in the design of the neighbourhood.

Village Square Parks provide opportunities for meeting, sitting, socializing, walking, cycling, and neighbourhood event programming (e.g. festivals, rallies, community garage sales).

Opportunities for indigenous, cultural and heritage interpretation and experiences should be included as recommended by Community Services Department.

Dedication

- Part of the 61% Neighbourhood allocation

Size

(a) Minimum 0.3 ha to maximum of 0.5 ha (0.75 acres to 1.25 acres). Anything outside these parameters would require approval of the City.

Location

(b) Village Square Park could be located at the center of the neighbourhood or at the entry of the neighbourhood as an entry feature.

(c) Adjacent to neighbourhood commercial property and/or cluster of higher density housing.

Access, Visibility, Frontage

(d) 100% visibility of site interior from surrounding streets.

(e) Minimum 25% percent street frontage.

(f) Must have an accessible route and accessible seating

2.6 Linear Park

Purpose & Function

A Linear Park will act as part of the overall neighbourhood trail network, providing safe active transportation routes to the neighborhood's focal points and to nodal destinations outside the neighbourhood. Unstructured, passive recreation opportunities for socializing, picnics and exercise may be provided along with an accessible route for walking, cycling, skiing and assisted mobility devices. Opportunities to experience and appreciate nature, culture and heritage should be included. Linear Parks are not intended to be used as a Municipal Utility Parcel. They may be designed to include non-regulation sized sports fields or activities for casual use by residents.

Dedication

- Part of the 61% Neighbourhood allocation

Size

(a) Width to vary, minimum 20 m - 30m

(b) Municipal reserve contribution to linear park will be distributed entirely within the neighbourhood unit.

(c) Maximum distance between service vehicle and/or pedestrian access points, not including pedestrian walkways, to be 200 m.

Access, Visibility, Frontage

(d) All access points, except walkways, to have a minimum width of 15m.

(e) Access points to be sited to discourage uncontrolled mid-block crossings of collector or arterial roads.

(f) Must have an accessible route and accessible seating

(g) Visibility according to CPTED principles in SG and in Pt.3 Section 1.6

2.7 Naturalized Park

Purpose & Function

Naturalized Parks are important components of the Green Network that conserve and enhance biodiversity by providing uninterrupted natural areas that are as high in ecological function as possible. They also accommodate passive recreation uses for all age groups and opportunities for appreciation and interpretation of nature. Infrastructure would be limited to trail systems, interpretive signage, waste receptacles, seating areas, and fencing (as may be required for conservation purposes). To minimize disturbance to resident wildlife, no active recreational activities should be permitted.

Dedication

- Mostly dedicated as utility parcel or environmental reserve; may also be included within the Municipal Reserve dedication

Size

(a) Minimum size of one hectare when connectivity is provided via adjacent green spaces or corridors.

Location

(b) Location selected to preserve significant natural areas / features that exist prior to development, and/or for a site selected to undergo naturalization to restore or create habitat or enhance ecological functioning.

Access, Visibility, Frontage

(c) Visibility of Naturalized Parks along a street frontage is preferred from a community amenity standpoint; however, protection of wildlife and habitats will prevail. The number of access points should be minimized as much as possible. Pathway locations and routing must protect sensitive habitats and natural features.

(d) A portion of entrances and pathways must be accessible.

2.8 Special Use Park

A Special Use Park is a city-wide resource. Each one responds to unique site circumstances and/or provides unique programming opportunities. Examples include: The Forestry Farm Park, the Gordon Howe Complex, and Diefenbaker Park.

All parks within the jurisdiction of the Meewasin Valley Conservation Area within the City of Saskatoon are Special Use Parks and subject to the Meewasin Valley Authority Act, the Meewasin Valley Development Plan, and Meewasin Park By-laws.

Dedication

- Part of the 61% Neighbourhood allocation

Size

(a) Minimum of 0.25 ha

(b) Maximum depends on use

Location

(c) According to site characteristics, indigenous, cultural or heritage significance

(d) Preferably along an arterial or collector road

Access, Visibility, Frontage

(e) Accessible by walking, cycling, other modes of active transportation

(f) Visibility according to CPTED principles

(g) Must have an accessible route and accessible seating

2.9 Industrial Park

Purpose & Function

An Industrial Park is intended to be a city-wide resource. The location in industrial areas allows elements which are not suitable for residential neighborhoods (i.e. illumination of sports fields).

The primary function of Industrial Parks is to accommodate illuminated sports fields and provide passive recreation for employees (e.g. seating, trails, interpretive features). They may also be used for stormwater management, and indigenous, cultural or heritage interpretation.

Dedication

- Part of the 5% gross developable non-residential area
- The 5% dedication could also be taken as money in lieu and used to enhance other Municipal Reserve, as per the Dedicated Lands Reserve Policy No. C09-005, or the land could be combined with the dedication for Multi-District or Special Use Parks.

Size

(a) Minimum size is 0.25 ha.

(b) Two or more Industrial Parks may be strategically located

Location

(c) Located in non-residential areas

(d) May be located on the edge of the non-residential area or as a central feature

Access, Visibility, Frontage

(e) 100% visibility of site interior from park/street boundaries, but not necessarily from any one point on the boundary.

(f) Site boundaries to have 50% street exposure.

(g) Parking to be provided, quantities according to programming, with access from a collector street.

(h) Must have an accessible route, accessible seating, and accessible parking.

3.0 Location in the Neighbourhood

3.1 Sustainability

Saskatoon's Triple Bottom Line (TBL) for sustainability must be implemented in park planning. Selecting appropriate locations for parks must protect and enhance biodiversity, respect the physical capacity of land to accommodate development, and preserve and promote the urban forest.

Standards for sustainability for locating parks in new communities are as follows:

.1 Required park plans must demonstrate strategy for energy efficiency, water conservation, waste minimization, energy generation that reduces greenhouse gas emissions, and pollution prevention, in relation to the selection of park locations, size and function. (See Pt5 - Sustainability-First Checklists).

.2 Required park plans must demonstrate a commitment to climate resilience opportunities, such as alternative energy buildings and signs, green roofs, permeable paving, low carbon building materials, micro-climatic considerations, etc., that will be constructed at the detailed design stages according to details in Pt-2 and Pt-3. (See Pat-5- Sustainability-First Checklists).

.3 Habitat protection and enhancement, biodiversity, and linkages will be primary determining factors when selecting locations for new parks. Where possible, habitats in adjacent natural areas should extend into park space according to naturalization standards in Pt-3.

.4 Place parks and buffer strips so that vegetation can offset rising temperatures in surrounding areas by locating parks and buffer strips adjacent to existing and proposed land uses that generate heat such as:

(a) sites with a high proportion of paving to green space, and/or

(b) higher density sites, and/or

(c) land uses that generate heat such as industrial uses

.5 Parks may be placed as components of the neighbourhood stormwater management strategy, with such placement reflecting expected increases in precipitation due to climate change.

3.2 Spatial Distribution

The OCP envisions parks as important components of an interconnected green infrastructure, park, and open space system, including natural corridors and ponding areas. Park locations in Sector, Neighbourhood Concept, and Plans of Subdivision should promote healthy, active lifestyles, sustain ecological systems, create a sense of community, and advance climate resilience.

Related documents with objectives, policies and guidelines for access to and within parks include:

- Official Community Plan (OCP) - contains planning and design objectives for an integrated system of parks, green infrastructure and active transportation.
- Active Transportation Plan (ATP) - contains planning and design standards for non-motorized routes in the city, including access to and within parks
- Green Infrastructure Strategy (GIS) - contains standards for a connected and ecologically sustainable Green Network

Policies to guide spatial distribution of parks in new communities are as follows:

.1 Parks should be distributed throughout a sector or neighbourhood according to Sustainability-First design principles contained in Pt-2 Sections 3.1 and 3.4, and in compliance with the ATP, GIS and OCP.

.2 All park concept plans should strive for an overall environment which is accessible and provides a fulfilling recreation experience for all people.

.3 Parks in Sector and Neighbourhood Concept Plans must be located to optimizes distribution of park space in the sector and neighbourhood, maximize access for all residents, and have a connection to other green infrastructure elements through the active transportation system.

.4 Parks should be located to demonstrate they are part of the city-wide and neighbourhood active transportation systems and are sited to:

(a) protect, nurture, and connect natural and built areas

(b) be located away from incompatible land uses or activities

(c) promote safety and visibility by allowing opportunity for surveillance

(d) reduce local air pollution and protect air quality

(e) create direct and short trips between neighbourhood amenity spaces

(f) provide direct connections from parks to transit routes

.5 Municipal reserve contribution to linear park will be distributed entirely within the neighbourhood unit.

.6 All parks should be located so that residents are within 400 m of a park and the active transportation system. Refer to Pt-2 Section 2 (Park Classification) for additional spatial distribution standards by park type.

3.3 ICH Analysis

ICH features and spaces (indigenous, cultural, heritage) are important considerations when selecting the location of parks in a sector, neighbourhood concept plan, and plan of subdivision to take advantage and reinforce Saskatoon's heritage and create a sense of belonging for all.

The Heritage Impact Assessment prepared for the sector and neighbourhood concept plan will identify significant features and landscapes that should be retained in their original location, and others that should be commemorated at any location through reconstruction, artwork, and signage. Parks should be located to promote indigenous, cultural and heritage features where possible.

Standards for cultural preservation when locating parks in new communities are as follows:

.1 Park location and design concept should consider the recommendations of the Heritage Impact Assessment prepared for the sector, neighbourhood or subdivision according to the provision of Policy C10-020, and other relevant ICH policies and guidelines.

.2 To the extent possible, parks should be located to include cultural sites and/or landscapes identified by the City as significant and worthy of preservation.

.3 Identify parks in Sector and Neighbourhood Concept plans that will be designed to include:

(a) preservation of an artifact, landscape or experience

(b) re-creation of a feature

(c) interpretation of a feature

(d) commemoration through park naming, signage, other informative means

Wanuskewin Heritage Park

3.4 Green Network

Parks are important components of the Green Network. Policies for the Green Network relevant to the location and conceptual layout of parks are contained in:

- Official Community Plan (OCP) - city-wide policies for green infrastructure
- Green Infrastructure Strategy (GIS) - city-wide policies for protection and management of the Green Network, maps of green infrastructure
- Urban Forestry Management Plan (UFMP) - city-wide policies for protection and management of trees
- Wetland Policy (WP) - city-wide policies for wetlands
- Natural Area Screening - a natural area assessment prepared for each Sector

Standards to ensure parks are located and designed as important components of the Green Network include:

.1 Park location in a sector or neighbourhood must be consistent with the objectives and policies and mapping in the GIS, UFMP and the OCP.

.2 Parks in a sector or neighbourhood must either be:

(a) located adjacent to a green infrastructure elements such as a natural or constructed wetland or river corridor so that it becomes an extension of the Green Network, and/or

(b) located so that the park becomes a stepping stone to the Green Network, and/or

(c) connected to the Green Network through the active transportation system

Hyde Park

.3 Parks location in a sector and neighbourhood should create a network of public spaces that are high quality, safe, dynamic, accessible, sustainable and support ecological functioning.

.4 Where possible, parks should be located to support the retention of ecological systems in their pre-development state in terms of elevations, hydrology and biomass by protecting existing trees, wetlands, natural assets and habitat.

.5 Ensure parks are located to achieve a 5-minute walking distance (400 m) between homes and parks/ green infrastructure. This principle takes precedence over creating large contiguous Green Network spaces unless habitat or environmental conditions are otherwise.

3.5 Active Recreation Needs

Parks must be properly sized, shaped and located to accommodate intended recreational use identified by the City, sports and leisure organizations, and residents.

For Sector, Neighbourhood Concept, and Plans of Subdivision, planners and designers should apply recreation needs projections contained in the Recreation and Parks Master Plan (e.g.. 1 junior soccer field per 2,500 population) to the site. City of Saskatoon will confirm the proposed number of sport fields and leisure activities needed based on recreation projections and community input. Park size, shape and location should then be fine-tuned to demonstrate that the number of sport facilities and leisure activities can be accommodated while achieving other design standards in this document.

Other recreation standards that must be achieved when selecting the appropriate location, size and function of parks include:

.1 City-wide recreation facilities such as arenas and national-level competitive sport facilities should be located in Multi-District or District Parks.

.2 Regulation sized sport fields will only be located in Multi-District, District and Neighbourhood Core Parks.

.3 Recreation and leisure activities with a Regional interest should be located in Multi-District and District Parks.

.4 Spray pads may be located in Multi-District, District, Neighbourhood Core and Pocket Parks.

3.6 Partnerships

As public spaces, parks often provide facilities and amenities to accommodate a wide ranges of uses for fitness, leisure, recreation, socializing, nature appreciation, stormwater management, sustainability, and indigenous, culture and heritage interpretation. Since a number of organizations have an interest in using parks for specific activities, park planning, design, construction, operations and maintenance must be flexible enough to accommodate partnerships with stakeholders.

For park size, shape and location in Sector and Neighbourhood Concept Plans, and Plans of Subdivision, the following guidelines should be followed to promote partnerships with stakeholders:

.1 Size, location and shape of parks should reflect existing and new partnerships between the City and recreational organizations, other governments, the Meewasin Valley Authority, and other interest groups.

.2 Potential spatial requirements needed by sport and recreational organizations and other stakeholders should be identified and applied to the size, shape and location of parks in a sector and neighbourhood.

4.0 Conceptual Layout

The following standards apply to the conceptual layout for all park types, and should be used to determine park size, location, function, features and sustainability in Open Space Layout Plans, Open Space Master Plans and Park Amenity Layout Plans.

4.1 Climate Resilience

Conceptual park layouts must demonstrate a commitment to using climate mitigation actions to reduce GHG emissions, reduce water usage, and promote energy efficiency and renewable energy for every park in the sector or neighbourhood.

Climate resilience standards applying to the conceptual design of parks for sector, neighbourhood concept and plans of subdivision include:

.1 Park layout must demonstrate connection to the active transportation system and transit, and commitment to providing bike racks and support for energy-efficient non-motorized travel.

.2 Park building design concepts must demonstrate a commitment to energy efficient design by

(a) energy efficient design to reduce heating, cooling and energy demands

(b) airtight design with efficient ventilation

(c) water reduction techniques

(d) use of materials with lower GHG emissions

.3 Park concept must demonstrate water reduction strategies such as use of stormwater, greywater or raw water for irrigation, circulation of water for spray pads, and water efficient irrigation systems.

.4 Park layout must demonstrate stormwater management and LID such as retention ponds, bioswales, rain gardens, permeable paving, and the like, to achieve stormwater reduction targets set by the City of Saskatoon.

.5 Park concept must identify a commitment to use of lower-rated GHG emissions materials for all constructed park features by the use of products with:

(a) longer life span

(b) reduced maintenance

(c) locally manufactured / supplied

(d) comparatively reduced GHG emission rating

.6 Park concept must demonstrate the commitment to providing weather protection such as shading of seating areas, playgrounds and other features, wind breaks, snow drift avoidance, and firebreaks.

4.2 Landscape Conservation

All parks will be designed to incorporate, conserve and enhance existing landscapes as much as possible to protect and enhance biodiversity, respect the physical capacity of land to accommodate development, and to preserve and promote natural landscapes. The degree to which pre-development landscapes are preserved in parks will depend on achieving park programming needs as a first priority, followed by a combination of grading and stormwater management and landscape conservation objectives.

Landscape conservation standards applying to the conceptual design of parks for sector, neighbourhood concept and plans of subdivision include:

.1 All naturally significant areas in the park and on adjacent lands will be identified along with conservation recommendations relevant to the overall conceptual park design.

.2 Landscape conservation strategies for parks must include one, some or all of the following:

(a) retention of existing landscapes and water features within the park,

(b) extending an adjacent landscape or water feature into the park,

(c) creating/enhancing quality habitats for targeted species through vegetation cover, constructed wetlands, bluffs, prairie, and hedgerows

(d) achieving canopy targets detailed in the GIS

.3 A minimum 20% of all parks in a neighbourhood must contains one, some or all of the following:

(a) landscape conservation area listed above (Pt-2 Section 4.2.2), and/or

(b) Drought Resilient Dryland (see Pt-3 Section 2.7)

(c) xeriscaping

.4 All constructed parts of a park, including areas designed for stormwater management and LID, must not have a negative impact on the topography and hydrology of landscape conservation areas. Pre-existing hydrology and elevations of landscape conservation areas must be maintained during and after park and neighbourhood construction.

.5 Where the minimum landscape conservation area is difficult to achieve in any one park, the amount may be transferred to a different park so that a 20% target is achieved for the entire neighbourhood.

.6 Naturally occurring wetlands and streams may be incorporated into parks and/or storm water management systems. In all cases, a 30m buffer that preserves or enhances the natural biodiversity and function must be provided. Permitted park uses within the buffer will be restricted to pathways, signage and seating.

4.3 Water Conservation

Park shape and layout should conserve existing water resources and infrastructure, and contribute to energy efficiency by reducing water consumption. All parks will be irrigated (except Naturalized Parks and potentially Special Use Parks depending on design details) according to the standards below, with the majority of water supply coming from stormwater or other natural means. Water conservation standards applying to the conceptual design of parks include:

.1 Park concept plans will demonstrate commitment to achieving zero serviced-water supply by using any, some, or all of the following park design strategies:

(a) stormwater harvesting from rooftops on park buildings

(b) site grading to store stormwater for re-use for irrigation

(c) irrigation system that uses non-potable water

(d) planting beds designed as rain gardens

(e) underground stormwater storage facility

(f) water from the South Saskatchewan River or other natural sources

.2 Concept plans for Neighbourhood Pocket Parks, due to their smaller size, may demonstrate irrigation with municipally-supplied water (if needed) after all other stormwater or other natural supply and storage has been used.

.3 All parks or open space designed without an irrigation systems must include a plan for plant establishment watering including method, source of water, safe access of site and must be approved by the Parks Department.

Trounce Pond in Hyde Park

Briarwood Lake Park

4.4 Recreation Layout

Park Amenity Layout Plans must demonstrate that parks are sufficiently sized, shaped and located to accommodate recreational needs. Recreation standards applying to the conceptual design of parks include:

.1 Parks that contain regulation-sized sports fields should be sized and shaped to contain the number of sports fields anticipated for the neighbourhood.

.2 Park concept plans must demonstrate that appropriate safety setbacks from sports fields and leisure activities to nearby park features and adjacent land uses can be achieved in the park layout.

.3 Player and spectator seating must be sited and placed to maximize safety.

.4 Park size and shape must be sufficient to provide parking for regulation sports fields and leisure activities within the park and/or on adjacent roads designed for on-street parking.

4.5 Safety

The City of Saskatoon Safe Growth and CPTED (SG) policy outlines requirements to ensure all development proposals follow city-wide safety standards and principles of Crime Prevention Through Environmental Design (CPTED). Park layout, size and location in the community must comply with this policy to ensure parks are safe places that encourage community interaction.

Safety standards applying to park concept plans include:

.1 Park layout, shape and size should achieve the visibility standards contained in Pt-2 Section 2.0 (Park Classification) for each park type.

.2 Layout and design of all park features must not contain hidden spaces that could potentially become areas of criminal activity.

.3 Park Amenity Layout Plans should maximize sightlines wherever possible, including around entrances, pathways and to parking areas.

.4 Park Amenity Layout Plans must indicate all areas of illumination and intended time periods.

.5 Park Amenity Layout Plans must include all access restriction features such as fences, walls, gates, and the like, and indicate the safety objectives of each.

.6 Park Amenity Layout Plans must demonstrate appropriate safety setbacks between adjacent park activities and adjacent land uses.

.7 If there is an entrapment area or isolated area within 50 meters of the end of a movement predictor, it should be modified or eliminated.

4.6 Accessibility

The City of Saskatoon Facility Accessibility Design Standards (FADS) contains objectives, standards and requirements for all development in Saskatoon to accommodate people of all abilities. Conceptual park planning will likewise ensure that all parks permitting access are fully accessible.

Accessibility standards applying to the conceptual design of parks include:

.1 Park location and conceptual layout must comply with universal design and barrier free design standards in the FADS.

.2 All park concept plans should demonstrate an accessible connection from parks to the city-wide or neighbourhood active transportation system, including transit.

.3 Ensure parks are sufficiently sized to contain an accessible route and recreational experience according to park type accessibility requirements (see Pt-2 Section 2 - Park Classification).

.4 Park size, shape and layout must demonstrate that an appropriate amount of accessible parking will be constructed in the park, and/or in close proximity on roads designed for on-street parking.

.5 All accessible parking must have an accessible path connection from the parking space to an accessible route in the park.

4.7 Active Transportation

The Active Transportation Master Plan (ATMP) contains city-wide objectives, standards and policies to promote non-motorized, active movement in the city. All park layouts will be shaped and sized to promote ATP objectives and standards.

Related documents with objectives, policies and standards applying to parks include:

- Facility Accessibility Design Standards (FADS) - contains planning and design provisions for universal and barrier-free design that applies to all development in the city
- Active Transportation Plan (ATP) - contains planning and design standards for non-motorized routes in the city, including access to and within parks
- Design Development Standards Manual (DDSM) - contains standards for on-street parking and sidewalk connections applicable to parks
- Complete Streets Design Manual (CSDM) - contains standards for on-street parking and sidewalk connections applicable to parks

Active transportation standards applying to the conceptual design of parks include:

.1 Open Space Master Plans and Park Amenity Layout Plans must identify all active transportation facilities, including accessible routes, pathways, snow and water based routes, nearby transit, on-street parking and sidewalks, and non-motorized vehicle facilities such as EV charging, bicycle parking, skateboard, in-line skating and scooter routes.

.2 All park concept plans will demonstrate an accessible connection from parks to the city-wide or neighbourhood active transportation system, including transit.

.3 All streets used for on-street parking must have a sidewalk connection to the accessible route within the park

.4 All non-motorized vehicle energy stations, parking, and the like should be identified in Park Amenity Layout Plans.

Parks must connect to active transportation routes in the city

.5 Layout of Active Transportation routes within parks shall not negatively impact natural features, natural areas and naturalization areas.

4.8 Stormwater Management and LID

Stormwater facilities, when located in or adjacent to parks, must complement the park features and activities. Related documents with objectives, policies and standards applying to parks include:

- The Low impact Development Guidelines (LIDG)
- Wetland Policy (WP) and
- Wetlands Design Guidelines (WDG)

Stormwater management and LID standards applying to the conceptual design of parks include:

.1 Park Amenity Concept Plans must demonstrate that parks are sufficiently sized, located and shaped to accommodate necessary stormwater management features without adversely affecting park features, activities and maintenance.

.2 All protected areas (riparian habitat, stream buffers, wetlands, etc), easements, setbacks, existing drainage, topographic features, and natural drainage features should be identified in park concept plans along with LID features to demonstrate an integrated, functional system.

.3 Storage of stormwater within parks should allow for water retention for no longer than a 24-hour period after a storm event. Portions of a park that are used for passive recreation, which is other than sports fields, primary trails, and play structure areas, may serve as a water storage area to hold water for up to a 48-hour period.

.4 Stormwater management shall not be located in or immediately adjacent to playground areas.

.5 All parks are important components of the neighbourhood stormwater management system and should be designed to assist in the remediation of 100+ year storms and increasing weather extremes resulting from climate change.

.6 Storm water facilities that are located bordering parks must be designed to complement the adjacent park development, and have appropriate safety measures such as setbacks, fencing, etc.

.7 Park Amenity Layout Plan should illustrate a sufficient setback for stormwater management features and LID from sidewalks, pathways and crosswalks to avoid spring melt.

.8 Soil characteristics, including pollution and high concentrations of sediments, should be used to select appropriate areas for LID and constructed wetlands.

.9 Pocket parks and linear parks shall be located at elevations above the 1-in-5 year storm event waterline. If those areas are required to hold water for a period of time greater than 48 hours, the plans must be acceptable to the reviewing departments.

.10 Locate snow storage areas so snow melts without damaging pollution sensitive plants or causes ponding by directing snow melt to a bioswales or other settling area.

.11 Stormwater management and LID features will be naturalized according to design details in Pt-3 Section 1.3 and Section 2.0 Planting.

4.9 Park Features

Conceptual park plans must demonstrate that all park features intended for the neighbourhood be accommodated in a manner that is satisfactory to the Director of Parks.

Standards for conceptual design and layout of park features include the following:

.1 Parks must contain the following park features:

- (a) active recreation (Multi-District, District and Neighbourhood Core Parks only)
- (b) accessible route
- (c) naturalization
- (d) tree planting
- (e) seating
- (f) trash receptacles
- (g) lighting (Multi-District, District and Neighbourhood Core Parks only)
- (h) ICH features (if known)

.2 Conceptual park plans may contain other park features such as spray pads, outdoor skating rinks, etc., if deemed to be appropriate and the operating impact is acceptable to the Director of Parks.

.3 All park buildings must be shown on conceptual park plans.

.4 Community garden space and gathering space must be shown on conceptual park plans if identified as a community need.

.5 See Pt-4 Section 2.0 for a complete list of submission and procedural requirements.

5.0 Buffer Strips

Buffer strips provide a transition area between land uses and must be of sufficient width to accommodate all anticipated functions. Detailed design of buffer strips is the key defining factor in determining the appropriate width.

Standards to assist in determining the appropriate width for buffer strips include the following:

.1 Buffer strips must be of sufficient width to accommodate all intended uses. Sector Plans, Neighbourhood Concept Plans and Plans of Subdivision must contain a scaled cross-section drawing demonstrating that all intended functions can be accommodated within the proposed width of the buffer strip.

.2 All buffer strips must be of sufficient width to contain at least the following design elements:

(a) noise attenuation berm (if deemed necessary according to acoustical studies)

(b) LID features (bioswales, constructed wetlands, rain gardens, etc.) that contain all stormwater with no runoff permitted. LID features may be larger if designed to contain stormwater from adjacent lands

(c) tree planting extending the length of the buffer strip

(d) above or below ground utilities (as needed)

.3 Noise attenuation or other berms must have a maximum slope of 28% (3.5:1) if planted with turf that will be maintained. If the berm will be naturalized and there will be no grass cutting, the berm slopes must have:

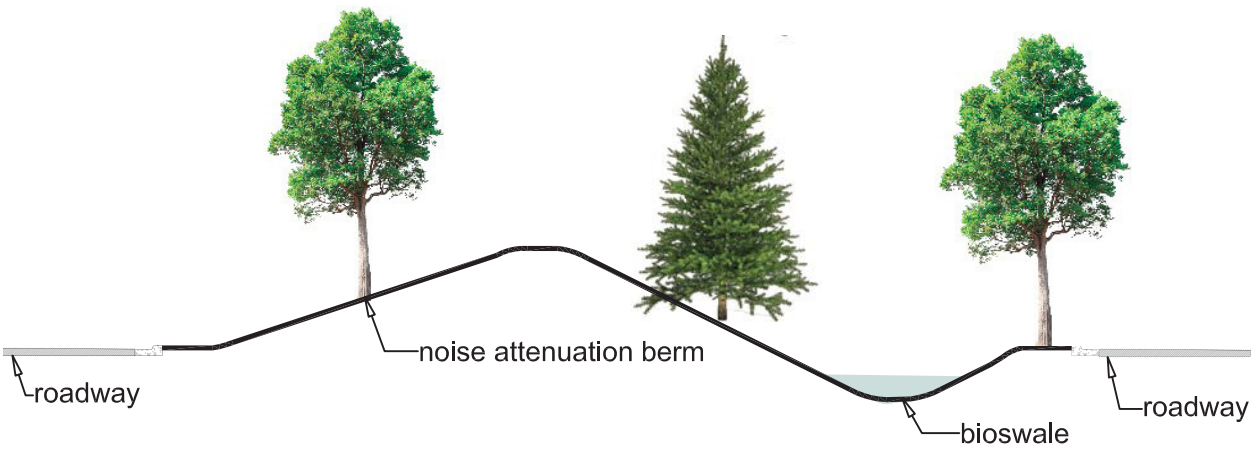
(a) maximum slope of 33% with no slope stabilization measures

(b) maximum slope of 100% (1:1) if slope stabilization measures are used (e.g.. erosion control blankets)

.4 Noise attenuation walls may be constructed if deemed necessary.

.5 Detailed design of buffer strips must comply with Part 3 and Part 4 of this document.

Figure 4: Landscape Buffer Strips



PART 3: Detailed Design and Construction Standards

3

PART 3: PARK DESIGN DEVELOPMENT STANDARDS

LIST OF FIGURES

Park Design Development Standards

Park design development standards are used to guide development at the later planning stages, after park size, shape and location in the sector and neighbourhood have been determined and the conceptual layout of park features is approved. They provide objectives, standards, details and guidelines to ensure that parks are designed and constructed to achieve minimum standards for safety, quality and sustainability.

Scope

Standards in Part 3 apply to the preparation of Park Concept Plans, Detailed Park Design Plans and Tender Drawings as shown in Figure 1.

Figure 1: Park Plans Required by Park Planning Stage

Planning Stage	Required Park Plan
Conceptual Design	Park Concept Plan
Detailed Design	Park Detailed Design Drawings
Tender	Park Tender Drawings

Part 3 also applies to procedures and documentation during construction and the post-construction warranty period.

Standard Construction Specifications

The Standard Construction Specifications (SPC) issued by the Parks Department contains construction details for site grading, drainage, planting, and sports fields, and should be referenced and complied with, along with the standards in this document.

All drawings listed in Figure 1 must be prepared according to standards in the PDS and SPC.

Compliance

All objectives, policies and guidelines in this section must be complied with when creating and amending the required park plans - Park Concept Plan, Park Detailed Design Drawings, and Park Tender Drawings - according to compliance provisions in Pt-1 Section 1.6.

See the chart in Pt-1 Section 1.4 for a complete list of related that must also be complied with.

Related Documents

Other documents that should be referenced and complied with are listed in Pt-1 Section 1.6. Of note is the Contractor Environmental Guidelines which contains standards and procedures to be followed during construction to manage impacts of construction on the natural environment.

1.0 Landscape and Environment

1.1 Climate Mitigation

All parks must be designed to demonstrate a commitment to using climate mitigation strategies to reduce GHG emissions, reduce water usage, promote energy efficiency, and provide for weather protection.

Standards for climate mitigation include the following:

Examples of solar powered park furniture, phone charging stations and digital signage

.1 Design of park features and amenities must demonstrate a commitment to using lower-rated GHG emissions materials for all constructed park features by the use of materials and products with:

- (a) longer life span
- (b) reduced maintenance
- (c) locally manufactured / supplied
- (d) comparatively less GHG emissions

.2 Park designs must provide for weather protection through one, some, or all of the following measures:

- (a) shading of play areas, seating, interpretive signs, interpretive features
- (b) shade structures and/or tree planting for primary pathways
- (c) shading integrated into park seating

.3 Park designs must provide for wind protection through one, some or all of the following measures:

- (a) site grading to protect primary pathways from dominant wind flows
- (b) windbreaks (see Pt-3 Section 2.0) of trees and shrubs in appropriate locations
- (c) low, permeable fencing

.4 Electric vehicle charging stations or other appropriate alternative energy supply structure may be provided in every new or updated park.

.5 Parks with parking area should provide space for electric scooters, bicycles, and other non-motorized transportation, proportional to the size and number of users in the park.

1.2 Water Capture and Re-Use

Parks must be designed so that as much water as possible intended for irrigation and park use is sourced naturally and does not use municipally supplied water.

Standards for water capture and re-use include the following:

.1 Parks must be designed so that as much water as possible intended for irrigation and park use is not drinking water.

.2 All parks should be graded to:

(a) ensure active recreation areas are not unduly impacted by stormwater and at the same time maximize potential for storage of stormwater for irrigation and re-use.

(b) direct runoff to rain gardens, planting beds, trees and turf.

(c) without unduly impacting active recreational uses

.3 All parks must include appropriately-sized stormwater storage areas to supply water for irrigation and park use, such as:

(a) above-ground storage tank

(b) bioswales

(c) underground storage tank

(d) other LID measures

Recirculating spray pad in Stillwater community, Edmonton

.4 Parks with spray pads and/or paddling pools should be designed to capture and treat water for re-circulation or to irrigate the surrounding park and sports fields.

.5 All planting beds must contain a mulch layer that reduces potential for evapotranspiration and promotes water retention and storage.

.6 In appropriate areas, planting beds should be designed as rain gardens that trap and store water for later use, see Pt-3 Section 2.9 LID features for design standards.

.7 Soil in planting beds, turf areas, drought resistant dryland, naturalization areas and LID features must have high water absorption capabilities as detailed in the SCS(P).

1.3 Naturalization

Naturalization within parks is an important strategy to ensure that parks are sustainable, resilient and support Indigenous flora and fauna.

Standards for naturalization in parks include the following:

.1 Naturalization means to design and install a landscaped area and maintained to achieve one of the following ecotones:

(a) bluff

(b) prairie

(c) wetland

(d) stream

(e) combination of any of the above

Stage 1 naturalization

.2 Design of park areas to be naturalized should ensure:

(a) appropriate soil and drainage patterns are achieved

(b) existing soil undergoes weed removal according to standards in SCS(P)

(c) topsoil added is weed-free

(d) planting density and species are appropriate for the ecotone and wildlife enhancement

(e) weeds are removed on an annual basis during the plant warranty period

.3 Parks designed to retain all or a portion of a natural or constructed wetland or river channel should:

(a) ensure drainage patterns in surrounding landscape are maintained and/or created so t the naturalization area will maintain its pre-development characteristics

(b) ensure existing wildlife habitats are maintained or enhanced

(c) create a 30m naturalized buffer from the water's edge where space permits

(d) plant trees in the natural buffer where appropriate for cooling, shading and habitat (see Pt-3 Section 2.7.3)

(e) enhance biodiversity within the naturalized buffer

.4 Planting in all naturalization areas must comply with Pt-3 Part 2 Planting.

1.4 Grading

All parks must be graded to maximize park user safety, enhance ecological systems, create an enjoyable experience for park users, and achieve cost effective maintenance objectives.

Standards for grading in park design include the following:

.1 Landscaped areas shall be sloped as required to maintain positive drainage, enhance ecological systems and reduce the potential for erosion.

.2 Other than sport fields and leisure activities, slopes shall be between 2% - 33.3% (3:1 ratio) to permit turf maintenance, but may be reduced to a lesser amount based on site conditions. Slopes greater than 33.3% may be considered for Naturalization areas (non-maintained) if they are reinforced with bio-engineering slope retention measures such as erosion control blankets. Plant selection for non-maintained slope areas shall use naturalization planting techniques for slopes in Pt3-Section 2.

.3 If engineered solutions (retaining walls, gabion baskets, etc.) are required, they should be designed to:

(a) incorporate native plant species, if appropriate

(b) maximize park user safety by restricting access and/or achieving a maximum height of 600mm between levels

(c) use materials, color, layout and expression that enhances the visual quality of the park and park user experience.

.4 Parking lots and paved pathways must be graded to prevent ponding of water at all times.

.5 Grading of LID features within parks shall conform with requirements in the Low Impact Development Guidelines (LIDG).

.6 All parks shall be graded to achieve stormwater management objectives without compromising park features and amenities.

1.5 Fire Resilience

With climate change, Saskatoon will likely encounter increased drought and susceptibility to wildfire in the near future. All parks must be constructed to reduce the potential for wildfire.

Standards for fire resilience include the following:

.1 Layout / install park features and planting according to Canada's FireSmart Guide to Landscaping.

.2 Locate park buildings so that there is a minimum setback of 25m from the nearest natural area or naturalization area. Ensure planting beds and tree planting are setback by at least 10m in wildfire-prone areas.

.3 Encourage water retention in landscapes using LID (rain gardens, swales with standing water, wetlands, lakes, etc.)

.4 Breaks in continuous hedgerows along walkways or in extended planting beds should be provided in appropriate locations to prevent the potential for fire spread.

.5 Select wildfire resistant plant species from Canada's FireSmart Guide to Landscaping (see Appendix A) for all parks located in wildfire-prone areas.

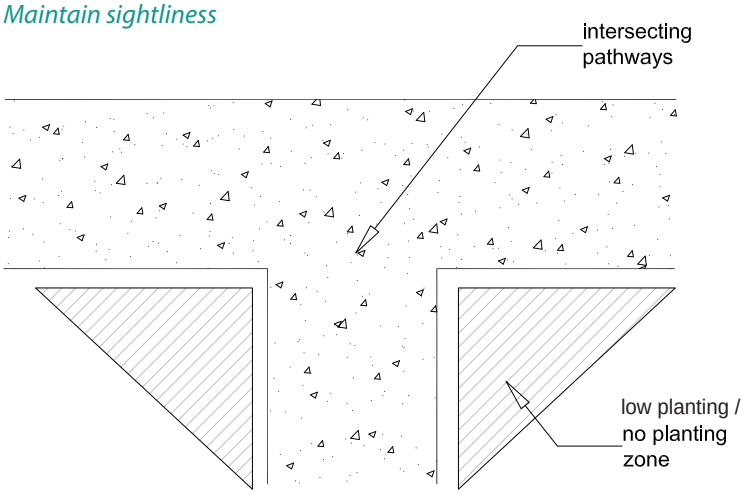
1.6 Visibility and CPTED

.1 All park conceptual and detailed design plans must comply with CPTED policies in the SG regarding visual access, illumination, and layout of park features, as well as the following standards.

.2 Visual access to play areas must be achieved through placement of park features that ensure visibility is maintained and "eyes on the street" is maximized.

.3 Tree selection and placement must ensure that branching and foliage permit visibility of play areas and other park features.

Figure 2: Restricted planting zones at pathway intersections to Maintain sightliness



1.7 Accessibility

All park features and amenities, except for naturalization features, must be accessible and provide a fulfilling recreational experience for all people. All FADS standards must be complied with.

Standards for accessibility in parks include:

.1 All parks must have an accessible site entrance from a sidewalk in an adjacent street.

.2 An accessible route from the park entrance to park amenities must be provided. It must have a maximum 5% slope, and be constructed of a hard-surface material like concrete or asphalt that accommodate assisted movement.

.3 All gates must be accessible by including:

(a) an accessible route to and from the gate

(b) latch or push bar no more than 900mm height above the ground

(c) double inward swing motion

.4 At least one seating option in a park must be accessible. In larger parks with multiple groupings of seating, at least one accessible seating option must be provided per group.

.5 All park benches shall have a 1.0m hard surface area on at least one side to accommodate wheelchairs as per Park SCS(P) details.

.6 All parks with play equipment must have at least 1 accessible feature or activity. Consultation with the community will identify parks that are constructed to have a greater number of play features or are fully accessible.

.7 Accessible fitness equipment should be provided in parks based on consultation with the community.

.8 All park information, direction and warning signs must have an accessible height (no greater than 1.8m from the top of the sign to the ground), with highly visible lettering that is appropriately sized by viewing distance.

.9 Where a park building is constructed with washrooms, the appropriate number of accessible stalls must be provided based on building type /occupancy standards.

2.0 Planting

2.1 Weed and Seed

All parks in a developing neighbourhood must undergo either a Weed Management or a Weed and Seed treatment as an interim park development treatment that remains in place and is maintained until the full build-out of the park. Either of these options must be installed in locations where land has been disturbed for construction of the neighbourhood and the park is not immediately built.

To ensure new neighborhoods have parks with an acceptable quality during the construction phase, the following guidelines apply:

.1 Developers must provide sufficient evidence that land intended to be parkland that has been disturbed for construction of a subdivision or a neighbourhood will be developed as a park or it is subject to:

(a) submission of a Weed Management Plan according to Park Department standards, followed by installation and regular maintenance until the park is built, or

(b) installation of the Weed and Seed interim park development treatment, which shall remain in place and maintained until the park is built.

.2 Parks that are identified to undergo the Weed and Seed treatment must be constructed within the time period identified by the Director of Parks.

.3 Weed and Seed interim park development will consist of the following:

(a) rough grading, followed by fine grading, to ensure the park elevation, relief and contours are appropriate with the intended design of the park

(b) applying 200mm topsoil to the finished grade for the establishment of turf

(c) seeding of grass or appropriate cover species at the recommended rate

(d) construction of a road from the developing neighbourhood to the park in its final designed condition, with final elevations, road profile, sidewalks, street trees, road crossings, street furniture and lighting installed.

(e) accessible connection from the road to the park

.4 The Weed and Seed park space must be maintained by the Developer as follows:

(a) regular and frequent moving of turf

(b) irrigation / watering to ensure seed establishment

(c) weed removal

.5 Maintenance of the Weed and Seed interim park development will continue until 2-3 weeks before the park is scheduled for the full build-out and/or as specified in the Weed Management Plan.

.6 Weed control (see Pt-3 Section 2.5) must be conducted on unoccupied land adjacent to the park to prevent weed establishment and transfer of weed seeds to the park.

2.2 Planting Design

Character, quality, quantity and style of planting are the key defining features in park design, and assist in creating not only a sense of place but also ecological resilience. The type and location of planting in parks help to define its functions and character.

Standards for type and location of planting in parks include:

.1 All planting design must be sustainable and promote climate resilience by including the following:

- (a) hardy, disease-resistant, and drought-tolerant plant species that require a low degree of maintenance and respect local climate conditions
- (b) protecting and integrating existing landforms and vegetation into planting design
- (c) watering needs provided by natural drainage and/or re-use of treated stormwater for irrigation (see Pt-3 Section 3.7)
- (d) weed control measures (see Pt-3, Section 2.5)
- (e) minimize amount of turf to reduce need for mowing and irrigation

.2 Design should address grading, plant massing and species selection that enhance opportunities for year-round recreation activities. All park planting will consist of any of the following:

- (a) individual trees
- (b) planting bed containing trees, shrubs, perennials, grasses and/or ground covers
- (c) turf - primarily grass that will be mowed and have the appearance of a lawn
- (d) drought Resistant Dryland - mix of grasses and native perennials that is mowed less frequently than turf
- (e) naturalization - planted area that will regenerate naturally, see Pt-3 Section 1.3 Naturalization
- (f) community gardens

.3 Park designs will include planting for all of the following, where applicable:

- (a) tree planting for shading of seating and play areas where a shade structure is not provided
- (b) tree planting along the primary accessible route where a shade structure is not provided
- (c) trees and/or planting beds at park entrances
- (d) planting to satisfy naturalization target for the park
- (e) planting to highlight key park features, where deemed appropriate by the Parks Department

.4 All park planting must meet maintenance provisions in this plan and expectations of the Parks Department.

2.3 Size, Layout and Visibility

All planting in parks must have the appropriate size, layout and visibility so that a high quality, low maintenance and safe landscape is created.

Standards for plant size, layout and visibility include:

.1 Tree and planting bed design must conform to the set-back standards in the current Parks SCS(P) and the standards set out in this document.

.2 Minimum deciduous tree sizes shall be as indicated in SCS(P).

.3 Selection of plant material and spacing between plants should consider branching pattern, mature size and ensure planting can be easily maintained.

.4 Planting should enhance sight lines to key features and conform with CPTED principles for visibility, natural surveillance and no hidden spaces, particularly along road frontages.

.5 Planting should clearly differentiate planting layout based on the intended use to assist in understanding the space and promote visibility.

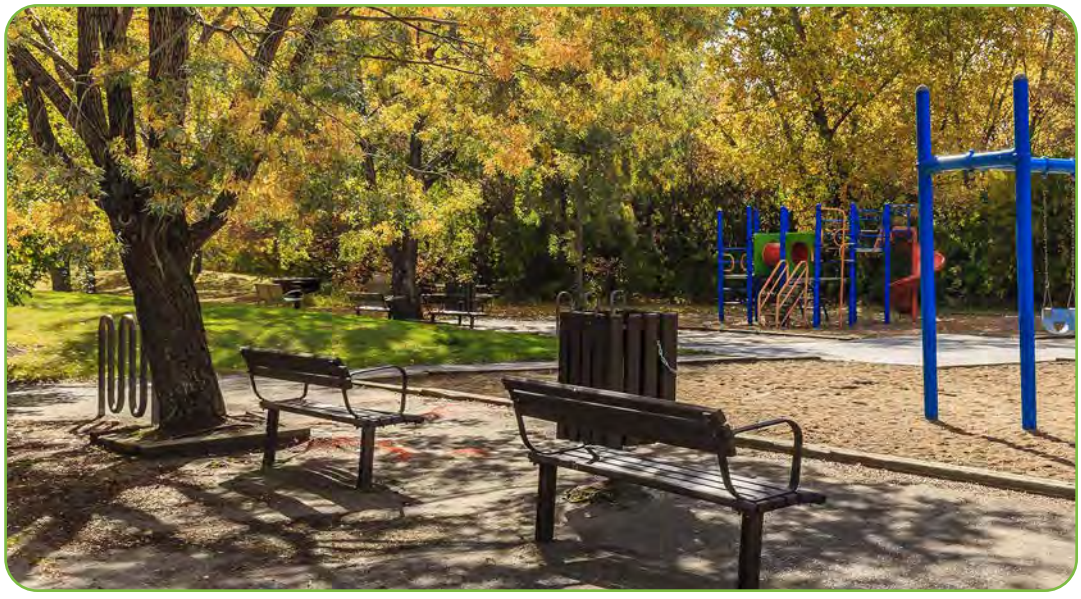
.6 Ensure trees have the branching structure and size to permit natural surveillance.

.7 Ensure tree and plant size and setbacks will not interfere with light standards.

.8 Avoid dense landscaping or trees near predictable stopping points, entranceways to walkways and linear parks, and near road crossings, except where natural surveillance can be achieved.

.9 The location and species of trees will be compatible with required setbacks from public infrastructure and utilities, both above and below ground.

Meadowlark Park



2.4 Plant Species

Plant species must be appropriate for public places, be low maintenance and appropriate for Saskatoon's natural heritage.

Standards for plant species in parks include:

.1 Plants used in parks should have the following characteristics:

- (a) low maintenance (annual pruning, fertilization, pest resistant. Minimum amounts of pruning and fertilization required)
- (b) drought-tolerant and pest resistant
- (c) at least 60% native species
- (d) salt-tolerant if located within 15m of a road or pathway that is maintained in winter with road salt
- (e) shows winter interest
- (f) diverse mix of tree species with 40% coniferous and 60% deciduous
- (g) maximize use of long-lived, large shade trees where space and planting sites allow

.2 Plants to be avoided include:

- (a) plants with thorns in close proximity to playgrounds or spray pads
- (b) invasive plant selections
- (c) plants that require high levels of on-going maintenance

.3 Planting beds that contain species of shrubs that spread shall not contain, in the same bed, shrubs of a non-spreading habit.

.4 Planting should always be based on growth rates and maintenance requirements.

.5 Planting beds, naturalization areas, and LID features should have vertical integration of plant canopy: ground cover, grasses, bulbs, perennials, shrubs, trees, where appropriate.

.6 A mix of 40% coniferous and 60% deciduous trees should be a design goal in all parks. To ensure a diversity of tree species, there shall be no more than 25% from any single genus.

.7 Long-lived, large shade trees shall be selected where space and planting site allow.

2.5 Weed Control

Reducing the opportunity for weed establishment and proliferation is an important part of planting design.

Standards for weed control in new park construction include:

.1 All required park plans must demonstrate all of the following weed control measures in park design, construction, and maintenance during the 3-year warranty:

(a) park design to reduce potential for weeds

(b) site preparation measures to remove weed seeds and suppress roots

(c) intense seeding - double the traditional application rate

(d) watering - from early spring to the fall

(e) weed removal during 3-year warranty period - by hand, non-toxic herbicide, or other means acceptable to the City of Saskatoon

.2 Parks will be designed to remove potential for weed establishment by including the following techniques:

(a) limit turf areas in parks by installing any of the following in appropriate locations:

- permeable paving
- artificial turf potentially for sports fields in District and Multi-District Parks
- in extremely high traffic areas where natural turf is unable to sustain

(b) ensure maintained turf areas are located where there will be the most foot-traffic, such as sport fields, play areas, picnic areas. Place LID features, Drought Resistant Dryland or naturalization areas where foot-traffic is expected to be low.

(c) all fencing will be centered on a 400 mm wide weed suppression strip installed for the length of the fencing, that will consist of any of the following:

- 100mm depth concrete

.3 Seeding rate for turf areas, Drought Resistant Dryland and naturalization area should be double the traditional rate, to the satisfaction of the Parks Department.

.4 Weed removal during the 3-year warranty period shall be done by hand, non-toxic herbicide, or other means acceptable to the Parks Department.

.5 Parks will not be assumed by the City unless weed control measures have been implemented and parks are at least 90% weed free.

.6 Inspections for weed control during the 3-year maintenance period shall be in accordance with the SDC, Weed Control Act of Saskatchewan, Integrated Pest Management Policy, or other such document.

2.6 Maintenance Setbacks

Planting must be placed appropriately within parks and have the proper edge treatment to achieve low maintenance objectives.

Standards for setbacks and edge treatment in parks for low maintenance include:

.1 Setback requirements to permit grass cutting and other park maintenance vehicles and activities include:

(a) individual trees - min. 5.0m apart

(b) planting beds

- minimum 2.0 m between the planting bed edge and the next nearest landscape feature or park boundary, or
- directly adjacent to a pathway or fence

(c) Drought Resistant Dryland and naturalization areas - minimum 5.0m setback from the edge to a pathway or fence, or it extends all the way to the pathway or fence.

.2 Plant material in beds shall be setback an appropriate distance so that the expected size at maturity will not extend past the edge of the beds. Exceptions to this standard, to achieve a particular design character or style, will be considered and approved by the Parks Department.

.3 Planting beds shall not be placed to obstruct views to a play area. A minimum 2.0 m setback between the planting bed and play area must be installed.

.4 Planting beds must be located a minimum of 2.0 m from the property line along a road frontage, or be installed directly along the property line.

.5 Refer to Parks SCS(P) document for all other safety setback requirements.

Harold Tatler Park

2.7 Natural and Naturalization Areas

Planting in natural areas and naturalization areas requires an approach that responds to topography, exposure, hydrology and an understanding of natural succession so the planting area can be left to generate naturally.

Standards for natural areas and naturalization areas include:

.1 All planting should use native species of the Aspen Parkland and Moist Mixed Grassland indigenous to Saskatoon as a top priority.

.2 Planting of natural areas intended to regenerate into a bluff (trees, shrubs and ground cover) should:

(a) create bluff edge conditions by planting a mix of evenly-spaced or dense groups of grasses, perennials, ground covers, shrubs, and seedlings for 5-10m on the outer boundary

(b) create bluff interior conditions by planting the following in the interior:

- tight groupings of early successional species (e.g.. cedar, aspen), including saplings and seedlings, and
- a mix of randomly-spaced later successional trees (e.g.., jack pine, spruce) distributed between groupings, and
- ground cover (native perennials, vines, seedlings, seeding)

(c) apply woodchip mulch to areas that are not seeded according to SCS(P) details.

.3 Plantings for an existing or constructed water body (river, wetland, stormwater management pond) should:

(a) create a naturalized buffer of shrubs, grasses, perennials and ground covers extending 30m from the water's edge, or less based on site conditions

(b) create a naturalized buffer of trees, saplings, seedlings, shrubs, grasses, perennials, and ground covers where a regenerated bluff is desired

(c) use hydric species that can withstand flooding on the water's edge extending to the anticipated height of the 5-year storm

(d) plant trees along the water's edge where cooling of water temperature is needed for fish habitat

(e) follow all design and construction standards in the Low Impact Development Guidelines (LIDG) for all LID features.

Gabriel Dumont Park

Wiggins Park

2.8 Drought Resistant Dryland

Drought Resistant Dryland helps parks to be more sustainable and reduce GHG emissions by decreasing the amount of maintenance and irrigation needed. Drought Resistant Dryland will be maintained by regular mowing, but at a rate that is less than maintained turf areas.

Standards for Drought Resistant Dryland include:

.1 Site preparation and seeding rate for Drought Resistant Dryland must conform to the standards in Pt-3 Section 2.5 (Weed Control).

.2 Species shall include primarily native grasses and a mix of annuals and perennials that are native and Indigenous to Saskatoon.

Lakewood Park

2.9 LID Planting

Planting for low impact development (LID) features, such as bioswales and stormwater management ponds (SWM) must conform with the Low Impact Development Guidelines (LIDG).

Standards for LID planting include:

.1 All planting plans should use native species that are indigenous to Saskatoon.

.2 Planting should be appropriate to hydrological conditions.

.3 For SWM ponds, planting should consist of :

(a) floating species placed within permanent standing water for naturalized SWM ponds

(b) submergent species planted so that they are partially submerged for most of the season

(c) emergent species planted above the water's edge and on slopes subjected to annual flooding

(d) prairie grasses and forbs

(e) shrubs

(f) seedlings and trees

.4 For bioswales, planting should consist of:

(a) emergent species planted at the bottom and partially up side slopes that are subjected to annual flooding

(b) prairie grasses and forbs

(c) tree, shrub and seedlings planted at the top of the bioswale for visual appeal and/or to increase biomass

.5 Bioswales will have soft, planted edges, while rain garden will have a hard, constructed perimeter.

.6 Rain gardens shall be constructed with the following features:

(a) porous soil

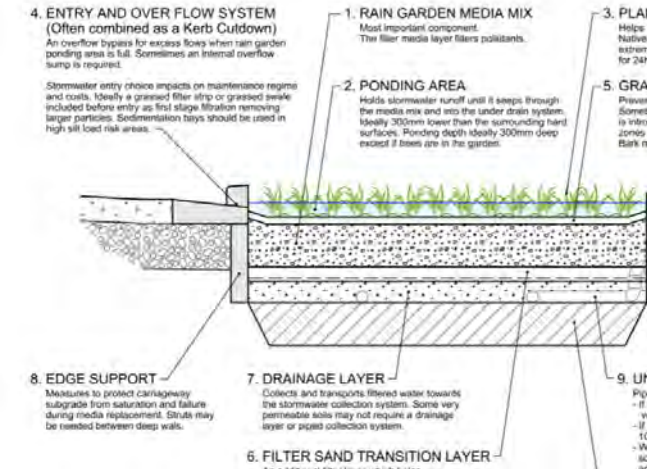
(b) hard edge (concrete, stone, paver) with inlets for water intake

Foster Park

(c) overflow intake that connects to a bioswale, storage area, or other suitable area

(d) sized according to stormwater management calculations for the site grading plan

Figure 4: Bioswale Section



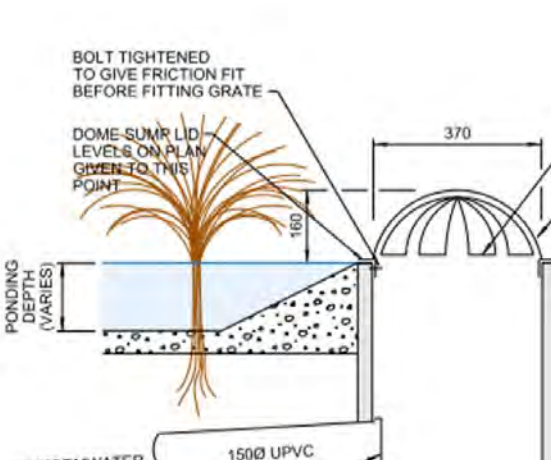


Figure 5: Bioswale Overflow Valve

2.10 Warranty

All newly constructed and re-constructed parks and buffer strips will be subject to a 3-year warranty to guarantee the quality of workmanship prior to the City assuming the park or buffer.

Standards for the 3-year warranty period include:

.1 All seeded and planted areas must be maintained by the Developer until the park is assumed by the City in a manner that ensures that they are healthy and in good condition.

.2 All parks maintained by the Developer during the 3-year warranty period must ensure that parks are 90% to 100% weed-free when turned over to the City.

.3 All repairs to hardscape elements (pathways, park furniture, play structures, etc.) must be completed prior to the park being assumed by the City.

.4 Details of the warranty period in the construction contract will take precedence.

3.0 Park Amenities

3.1 Artwork and ICH Features

Parks can provide public spaces for enjoyment of Saskatoon's art, culture and heritage.

Standards for artwork and ICH (Indigenous, cultural and heritage) interpretive features include:

.1 All parks must have a minimum of one Indigenous interpretive feature such as the park name, signage, artwork, traditional plantings or representation of Indigenous heritage, artifact or experience.

.2 Artwork and ICH interpretive features may be placed in any of the following locations within a park:

(a) park entry

(b) adjacent to seating and gathering areas

(c) in a location related to historical, Indigenous, cultural or artistic reference

(d) at least 5.0 m away from adjacent park features

.3 Artwork and ICH interpretive features should be placed within a planting bed, where appropriate, or on a hard surface (e.g.. concrete, asphalt, paver) to reduce park maintenance.

.4 Hard surface for artwork and ICH interpretive features must have the following characteristics:

(a) low maintenance

(b) a clearly defined edge that will not be a tripping hazard

(c) accessible

.5 Identity and interpretative signage for artwork and ICH features should be strategically placed within a planting bed or in a hard surface to reduce maintenance, and should have a style that:

(a) reflects the materials, style and color of the artwork and/or ICH feature, or

(b) duplicates the materials, style and color of signage in other parts of the park

Fred Mitchell Park

3.2 Bridges

Bridges are an important part of active transportation, and should be designed to be safe, fully accessible, and a visual asset to the park.

Standards for bridges include:

.1 Design of bridges must demonstrate a commitment to using lower-rated GHG emissions materials by the use of materials and products with:

(a) longer life span

(b) reduced maintenance

(c) locally manufactured / supplied

(d) comparatively less GHG emissions

(e) recycled material

.2 All bridges in District, Multi-district and Neighbourhood Core Parks shall be designed to accommodate the width of a maintenance vehicle and equipment required to use the bridge. All other bridges must have a minimum width and slope to meet accessibility requirements (e.g.. min. 2.4 m width and less than 5% slope).

.3 Wherever possible, vehicle loading should be designed to accommodate the weight of associated snow removal and other typical maintenance equipment.

.4 Bridge design should be durable and of a material that is impervious to salt-based materials and fire. All transparent material must be bird-friendly.

.5 Bridge design should be complementary with the color, style and materials of park furniture, community branding, park theme.

.6 All bridges will contain safety railings appropriate for the size, width and function of the bridge.

.7 All bridge designs shall be designed and stamped by a structural engineer licensed with the Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS).

Foot bridge with railing

Green bridge in Saskatoon

3.3 Buildings

Park buildings include public washroom/amenity structures and park maintenance buildings. Other structures include piers, lookouts, ramps and other built-form park features not covered elsewhere in Part 3 Section 3.0.

Standards for the above-mentioned park building types and other structures include the following:

.1 All park buildings and other structures must comply with building codes and standards, and are subject to obtaining a Building Permit that includes the following design standards.

.2 Design of park buildings and other structures must demonstrate a commitment to reducing GHG emissions by the use of materials and products with:

(a) longer life span

(b) reduced maintenance

(c) locally manufactured / supplied

(d) comparatively less GHG emissions

(e) recycled material

Green roof

.3 All park buildings must be constructed with one or more of the following heat reduction strategies for roofing:

(a) green roof

(b) solar roof (panels, shingles, other)

(c) stormwater collection system on the roof

(d) UV resistant shingles, shakes, panels or sheets that maximize solar reflectivity (SR)

Solar shingles

.4 Park buildings must demonstrate a commitment to energy efficient design through use of glazing, insulation and lighting that maximize energy savings.

.5 Park buildings must have water reduction techniques such as low-flow water fixtures, compostable toilets, use of greywater from stormwater harvesting, where appropriate.

.6 Renewable energy for power supply must be part of building designs. Potential power sources include solar, wind, geothermal energy, other approved sources.

.7 Ventilation should rely on fans, windows, vents and louvers rather than a forced air system. Larger openings must be located on the windward facade to promote air circulation.

.8 Glazing must be bird-friendly.

.9 Lighting must be dark-sky compliant.

3.4 Community Garden

Any park type can be used for community garden space providing it does not interfere with recreational facilities, active transportation, play and seating features, and natural or naturalized areas.

Standards for a community garden include:

.1 Community gardens should be placed in close proximity to a water source.

.2 Park grading shall ensure positive drainage from the community garden

.3 An accessible route shall be provided to a community garden.

.4 Final location of the community garden space within a park must be endorsed by the Director of Parks based on consultation with the community at the detailed design stage.

3.5 Entrance

Park entries, consisting of a park identity sign, planting, ornamental features such as gates, low walls, boulders, artwork and ICH features) are important to help define the character and quality of the park and neighbourhood.

Standards for park entries include:

.1 A park entry, consisting of identity signage and a planting bed, must be located in every park as follows:

(a) multi-district and district parks – at all vehicular entrances and prominent locations

(b) Neighbourhood Core and Special Use parks – at the parking lot entrance (if appropriate) or at the main pathway entrance and other prominent locations

(c) linear parks – at both main pathway entrances, or in appropriate locations determined by the Parks Department for a series of linear parks that span across roadways

(d) pocket parks – at the main pathway entrance

.2 All park entries must be constructed and installed to reduce GHG emissions by having at least one of the following characteristics:

(a) locally manufactured material

(b) local materials

(c) low maintenance material (e.g.. wood composite, plastic, pavers)

(d) avoidance of high maintenance material (e.g.. powder-coated metal)

.3 All Park entry features must be constructed and grouped and installed within a planting bed and//or on a hard surface (e.g.. concrete asphalt, pavers).

.4 Artwork or ICH interpretive feature (see Pt-3 Section 3.1) and ornamental features (see Pt.3-Section 3.9) must be placed within the planting bed or on a hard surface to reduce maintenance.

3.6 Fencing

Fencing will be used to define park boundaries from adjacent land uses, restrict access to utilities, and to visually improve the park. It may consist of black vinyl chain link fencing or a more ornamental style.

Standards for fencing include:

.1 Fencing in parks shall be used as follows:

(a) fencing that restricts access but allows visibility along park boundaries in locations determined by the Parks Department

(b) to enclose and restrict access to utilities as per standards in the Parks SCS(P)

(c) as an ornamental feature along road frontages, at the boundary of play, adult fitness, or picnic areas where desired or for safety reasons

(d) to provide fall protection along retaining walls or other sharp changes in grade - 1.2m ht. (for grade difference of up to 0.9m) - 1.5m ht. (for grade changes 0.9m and above) picket or black vinyl chain link fence

Park sign located in a planting bed

Black vinyl chain link fence

3.7 Irrigation

All new parks will be irrigated according to the standards below to assist in plant establishment and long-term plant health. Parks must be designed in a way to conserve water as much as possible.

Standards for irrigation include:

.1 Irrigation (pipes from the water source and distribution (perforated pipes, nozzles, sprays) shall be supplied for the following park features:

(a) planting beds and feature areas (except rain gardens)

(b) maintained turf

(c) sports fields

.2 Irrigation must be appropriately sized and detailed to provide an adequate amount of water for the specified plant types.

.3 Irrigation systems must be designed to optimize evapotranspiration-based watering.

.4 Irrigation designs must maximize practical and efficient water delivery, and be low maintenance and vandal-resistant.

.5 All new irrigation systems and renovations shall be designed to the most current edition of Parks SCS(P).

.6 Manual water sources should be placed so that a sprinkler at the end of a 30m hose can reach any landscape element that may require water.

.7 All parks or buffer strips designed without an irrigation system must include a plan for plant establishment watering including method, source of water, safe access of site and must be approved by the Parks Department.

Irrigation in a Park

3.8 Lighting

Illumination of parks is an important safety feature.

Standards for park illumination include the following:

.1 All park illumination shall be timed so that it can be adjusted to meet the needs of the community.

.2 All light standards will direct the light cone toward the park such that light is not directly emitted onto neighboring properties.

.3 All illumination standards shall use energy efficient bulbs such as LED.

.4 To reduce GHG emissions, all pathway lighting shall be solar or wind powered.

.5 Style and appearance of light standards and fixtures shall be complementary with park furniture and signage.

.6 Lighting design shall follow all standards set out by Saskatoon Light and Power and SaskPower.

.7 Park light fixtures shall be a design selected for energy efficiency, Dark Sky compliance, safety, and of the best value over its life cycle.

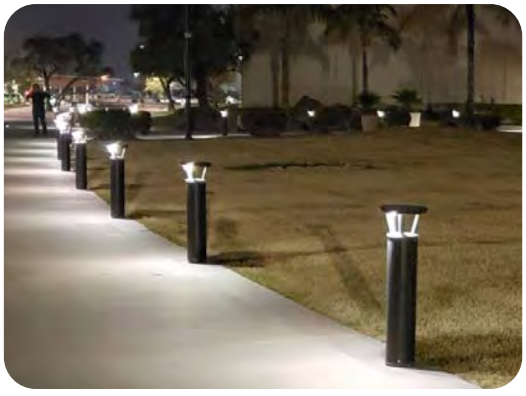
.8 Lighting shall only be provided along the primary pathways in neighbourhood core parks unless, for reasons of safety, secondary pathways require lighting. The Parks Department must approve additional pathway lighting plans.

.9 Park pathway light standard placement shall be determined to ensure an average pathway illumination of 3 foot candles (fc) along entire pathway.

.10 Light standards shall be placed 1.5m from the edge of park pathways.

.11 Lighting should be low (lowest wattage possible for purpose), long (use long wavelength such as amber, orange and red LED, and shielded (fixtures should exceed full cut off that shields lamps or glowing lenses from being directly visible). Lights turned off when not needed – motion sensors might be helpful.

Solar bollards



Street light in Briarwood Park

3.9 Ornamental Features

Ornamental features may be placed in parks to increase visual appeal and enhance park character.

Standards for ornamental features include:

.1 Ornamental features in parks include the following:
- (a) boulders
- (b) bollards
- (c) raised planters
- (d) columns / pillars
- (e) low decorative walls
- (f) other

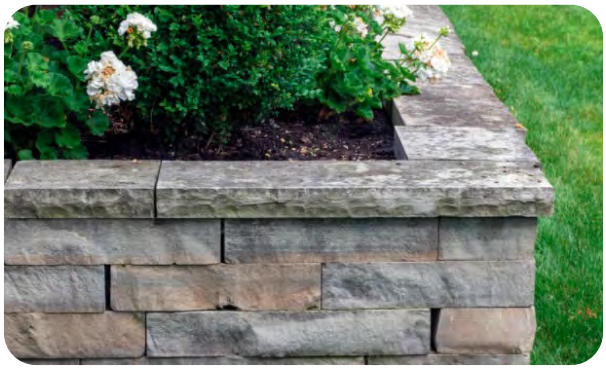
.2 Ornamental features shall not be sited or constructed to be a tripping or fall hazard.

.3 Wherever possible, ornamental features shall be placed in the following locations:
- (a) in a garden bed
- (b) on a low maintenance hard surface

.4 Minimum distance between ornamental features not located in a planting bed is 3.0 m.

.5 Appearance and style of ornamental features shall be complementary with park furniture and lighting.

Raised Planters



Columns/ Pillars

Boulders

3.10 Parking

Although parks will be sited to be connected with the city-wide active transportation system, larger parks will benefit from having parking areas within the park.

Standards for parking include:

Geogrid permeable paving

.1 Parking shall be provided for the following park types:

(a) Special Use, District and Multi-District parks – provided in dedicated parking areas within the park only

(b) Neighbourhood Core Parks – potentially provided in a dedicated parking area within the park and/or provided through on-street parking on adjacent local roads, or a combination

(c) Pocket and Naturalized parks – provided through on-street parking on adjacent local roads only.

Asphalt permeable paving

.2 Dedicated parking areas shall be provided according to rates specified in the Recreation and Parks Master Plan.

.3 To reduce GHG emissions and impacts of increasing precipitation due to climate change, all parking areas within parks will have one, some or all of the following characteristics:

(a) permeable paving (pavers with drainage holes)

(b) structural paving plastic

(c) drainage to a bioswale to contain parking lot runoff until absorption

.4 All parking areas will have a minimum of one accessible parking space, and more according to the rates contained in the FADS.

.5 All parking areas will have an accessible route from the accessible parking space to an accessible pathway in the park or to an adjacent sidewalk in the road right-of-way.

3.11 Park Furniture

Style and placement of park furniture (seating, trash receptacles, picnic tables and benches, outdoor bbq, decorative gates/pillars/walls, etc.) is important to define park character.

Standards for park furniture include:

.1 All park furniture must be constructed and installed to reduce GHG emissions by having at least four of the following characteristics:

(a) locally manufactured

(b) local materials

(c) low maintenance material (e.g.. wood composite, HDPE plastic, others approved by the Parks Department and Facilities Management Department)

(d) avoidance of high maintenance material

(e) designed to discourage vandalism

(f) contain UV inhibitors, colors and materials less prone to fading

(g) can be easily fixed without specialized equipment

.2 Each neighbourhood must have a coordinated style and appearance for all park furniture.

.3 All park furniture must be placed on a hard surface pad (e.g.. concrete). The hard surface must have a minimum clearance of 1.0 m^2 on at least one side to allow access for wheelchairs.

.4 Safety shall be included in the design of gates, pillars and walls by:

(a) design that discourages mounting or seating

(b) ensuring a fall-height of 0.6m or less if adjacent to a hard surface

(c) ensuring a fall-height of 1.2m or less if adjacent to a soft surface

.5 Trash receptacles should be located primarily at entranceways and next to high use play areas, with a minimum setback of 2.0 m to avoid stinging insects and odors. Receptacle design and placement should be located along pathways that will receive winter maintenance and be of an accessible design for people of all abilities.

.6 Trash receptacles shall have the following characteristics:

(a) be of sufficient size as required in Park SCS(P) details

(b) accessible to people of all abilities

.7 All parks where dogs are permitted shall contain dog waste disposal units.

Accessible picnic table types

Accessible bench types

3.12 Pathways

Pathways not only provide access to park features but contribute significantly to the shape, layout and character of the park

Standards for pathways include:

.1 Pathway layout shall provide an accessible route to all park features.

.2 Pathways shall connect to the active transportation system adjacent to the park. Priority will be given to pathways connecting to intersections, planned enhanced crossing, and/or traffic calming features.

.3 Materials for pathways shall consist of any of the following:

(a) concrete (except in Natural Areas or Naturalization Areas)

(b) asphalt (except in Natural Areas or Naturalization Areas)

(c) pavers (except in Natural Areas or Naturalization Areas)

(d) crusher dust on pathways with a slope of 3% or less and a cross-slope that ensures adequate drainage and no ponding of water.

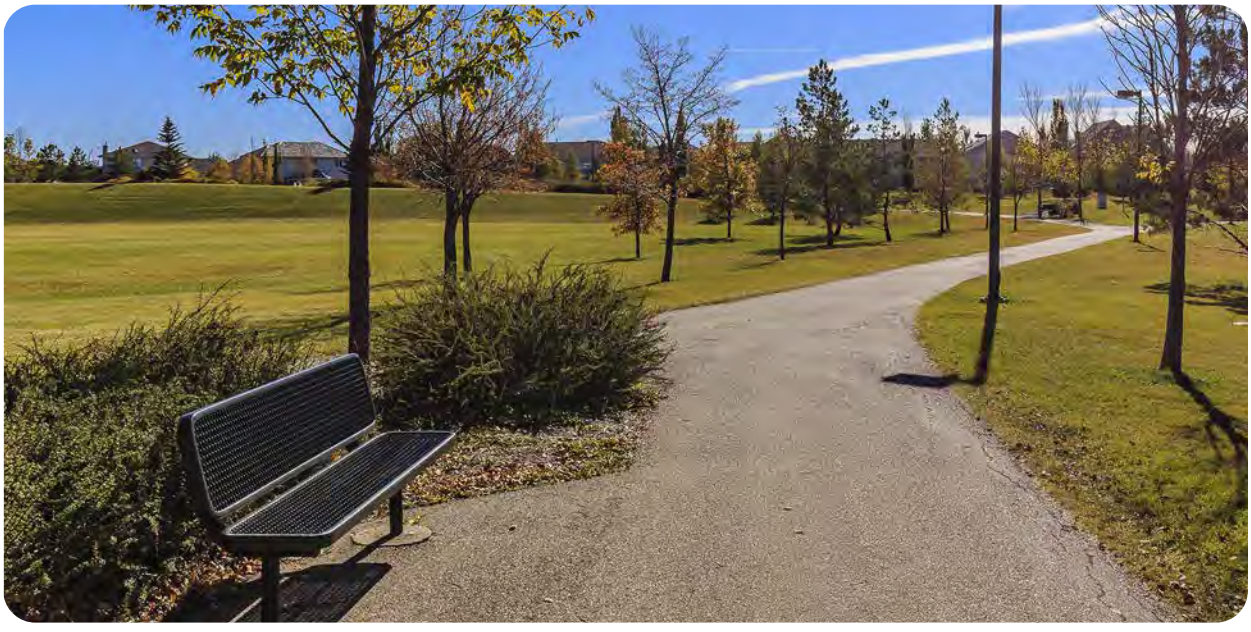
(e) other material acceptable to the Parks Department.

.4 Minimum pathway width shall be 2.4m. Pathway widths to be confirmed by the Parks Department based on anticipated community usage.

.5 Pathways shall not be interrupted by drainage channels - swales and culverts must be constructed under a pathway, where necessary,

.6 Pathway designs shall include a base design that will provide the load bearing capacity of the intended pathway including maintenance vehicles.

Briarwood Park



3.13 Play and Fitness Equipment

Play and fitness equipment become focal points within a park and are often the most visited and used park features.

Standards for play and fitness equipment include:

.1 Play and fitness equipment must be constructed and installed to reduce GHG emissions by having at least one of the following characteristics:

(a) locally manufactured

(b) local materials

(c) low maintenance material (e.g.. wood composite, plastic, pavers)

(d) avoidance of high maintenance material

.2 Play and fitness equipment must be installed on a surface with adequate fall protection, such as padded rubber or other material acceptable to the Parks Department and in accordance with playground manufacturer's specifications..

.3 Play areas shall not be located in low areas where spring pumping will be required or within the holding area of a storm water management basin.

.4 Play surfaces must have adequate drainage to avoid pooling of water.

.5 Appropriate safety setbacks must be followed for placement of nearby park furniture and landscaping.

.6 At least one play feature in every park must be accessible. The degree or number of accessible play features will be determined by the Parks Department in consultation with the community.

.7 Consultation with the Parks and Facilities Departments shall be required when planning for the use of substantially new materials for surfaces or play equipment.

Brighton Park

3.14 Signage

Park signs are important placemaking features that help to define the character of the park and neighbourhood. Park signs should have a consistent appearance throughout the city.

Standards for park signs are as follows:

.1 All parks shall have an entry sign and/or identity sign that contains the park name and year the park opened.

.2 A common design theme (material, style, color, font) should be used for all park signs.

.3 Other signs that may be placed in any park type, at the discretion of the Parks Department, include:

- (a) Information Signs (park map, site history, fun facts)
- (b) Directional Signs (wayfinding)
- (c) Parking Signs (wayfinding, parking lot identity)
- (d) Regulatory Signs (permissions, fines)
- (e) Interpretive Signs (describing artwork or ICH feature)

.4 Opportunities to combine signs onto a single pole (existing or new) will take precedence.

.5 Signs shall be placed within planting beds, where appropriate.

Blair Nelson Park

Exhibition Park

3.15 Shading

Shading in parks is increasingly important in summer months during extreme heat events and an important strategy for climate adaptation.

Standards for shade structures include:

Shaded solar seating option

.1 Shading in parks may consist of one, some or all of the following:

(a) shelter or gazebo

(b) removable shade sails

(c) integrated shading

(d) appropriate placement and selection of trees and shrubs

(e) appropriate placement of walls, pillars or gates

.2 Shading for at least one accessible bench or picnic table must be provided in every park.

.3 Shade structures must be constructed and installed to reduce GHG emissions by having at least one of the following characteristics:

(a) locally manufactured

(b) local materials

(c) low maintenance material (e.g.. wood composite, plastic, pavers)

(d) avoidance of high maintenance material

.4 Shade structures should have a style and appearance that is complementary with park furniture and signage.

Playground with trees for shading

Solar roof on picnic shelter

3.16 Sports Fields

Sports fields are important recreational activities and should be designed to be functional and add to the user experience.

Standards for sports fields include:

.1 Sports fields shall be distributed among park types as follows:

(a) District and Multi-District Parks – regulation-sized and constructed sports fields for use by sport organizations, with potentially smaller practice fields

(b) Special Use and Neighbourhood Core Parks – regulation-sized sport fields, smaller practice fields, or no sports fields

(c) Pocket Parks – no sports fields

.2 Regulation-sized sports fields shall have shaded players benches and be accessible.

.3 Practice fields may have basic field equipment / measurements only.

.4 Spectator seating will be provided where determined appropriate by the Parks Department

Brevaart North Park

3.17 Utilities

Utilities are to be placed in utility corridors as part of the land dedication process.. However, if utilities are placed in parks, the following standards apply:

.1 All above-ground utilities enclosed with fencing will have a concrete surface to remove the necessity for grass-cutting.

.2 Trees and other park elements shall be setback a safe distance from utilities.

3.18 Water Features

Water features are an important adaptation feature in parks as a means of cooling during increasingly hot summers due to climate change. They should be designed to provide access to all regardless of geography, economic status and physical ability. Outdoor summer water play provides health, social and creation benefits to many and are a defining experience of summer for Saskatoon residents.

Standards for water features include:

.1 Water features are restricted to the following park types:

(a) spray pads – district, multi-district and neighbourhood core parks

(b) misting station – all parks except Naturalization Parks

(c) water fountain (drinking) – all parks except Naturalization Parks

(d) swimming pool – restricted to indoor pools as part of a city recreational centre development

Arbor Creek Park

.2 All spray pads, misting station, water fountains and padding pools prone to wetting should have a non-slip, hard-scape surface such as concrete, asphalt, pavers, or rubber.

.3 All spray pads, misting stations and padding pools must use a limited amount of municipal potable water and be constructed with one or both of the following water supply options:

(a) re-circulating, chlorinated water supply where feasible

(b) distribution of water from water features to contribute to park irrigation requirements.

.4 To adapt to extreme heat, misting stations shall be provided in all parks, the number of stations proportional to the park size. Misting stations need not be placed in Neighbourhood Core Parks, Pocket Parks, Village Square Parks and Linear Parks that have a spray pad or paddling pool.

Mister in a Park

Water Fountain

Mister

3.19 Winter Activities

Providing winter use of parks is an important neighbourhood features.

Standards for winter activities include:

.1 Winter activities that may be provided according to park type include:

(a) skating rinks (outdoor) - all park types

(b) cross-country ski trail - all park types

(c) toboggan hill - all park types

(d) seasonal warming hut - all park types

(e) community fire pit - all park types

.2 Provide a winter water supply for ice skating rinks in appropriate locations.

.3 Provide identity and directional signage for cross-country trail routing.

.4 Ensure toboggan hills have appropriate setbacks from pathways, water courses, fencing and vertical elements (light standards, park benches, and the like).

.5 Seasonal warming huts may be installed in locations approved by the Parks Department.

.6 Ensure community fire pits are enclosed in non-flammable material and have an adequate safety setback from surrounding park features and neighboring properties.

PART 4: Submission and Procedural Requirements

4

PART 4: SUBMISSION AND PROCEDURAL REQUIREMENTS

LIST OF FIGURES

Submission and Procedural Requirements

Detailed submission and procedural requirements outlined in Part 4 are important implementation tools that ensure that park development standards in Parts 1, 2 and 3 are effectively integrated into the planning and approval process.

Scope

Standards in Part 4 apply to the preparation of all plans for all stages of park planning and development:

Figure 1: Park Plans Required by Park Planning Stage

Planning Stage	Required Park Plan	Administered by
Sector Plan	**Open Space Layout Plan**	Planning and Development
Neighborhood Concept Plan	**Open Space Master Plan** **Park Amenity Layout Plans**	Planning and Development
Plans of Subdivision	**No Requirement**	Planning and Development
Conceptual Design	**Park Concept Plan**	Parks
Detailed Design	**Park Detailed Design Drawings**	Parks
Tender Drawings	**Park Tender Drawings**	Parks

Sustainability-First Checklist

To ensure sustainability and climate resilience are primary considerations in all new park designs, Developers are required to submit a Park Sustainability-First Checklist for each stage in the park development approval process except the final tender drawing stage.

Part 4 provides a brief description of the scope for each park planning stage,. A full description is outlined in Pt-5 Park Sustainability-First Checklists.

Compliance

All submission and procedural requirements in this section must be complied with when submitting plans for approval.

See the chart in Pt-1 Section 1.4 for a complete list of related documents that must also be complied with.

Related Documents

Other documents that should be referenced and complied with are listed in Pt-1 Section 1.6. Of note is the Contractor Environmental Guidelines which contains standards and procedures to be followed during construction to manage impacts of construction on the natural environment.

1.0 Sector Plan Requirements

Submission 1 - Open Space Layout Plan for Sector Plans

Prepared by: City staff as part of a new or updated Sector Plan

1.1 Open Space Layout Plan

- Provide a conceptual bubble-diagram style layout plan illustrating:
  - location of multi-district, district, and neighborhood core parks in the sector along with minimum or approximate sizes in hectares
  - location of arterial roads, known transit routes
  - conceptual location of collector roads to connect parks
  - location of trails, active transportation routes
  - location of green infrastructure - natural and proposed wetlands, stormwater management ponds, LID features (if known), ecological corridors, natural areas to be retained
  - location of utility corridors including potential conflicts with green infrastructure
  - identify utility corridors to be used for sport fields or other recreational uses
  - location of indigenous, cultural and heritage features (ICH) identified in the Heritage Resource Impact Assessment prepared for the Sector Plan, and consultation with key groups and individuals
  - location of utility corridors / location of existing and proposed utilities

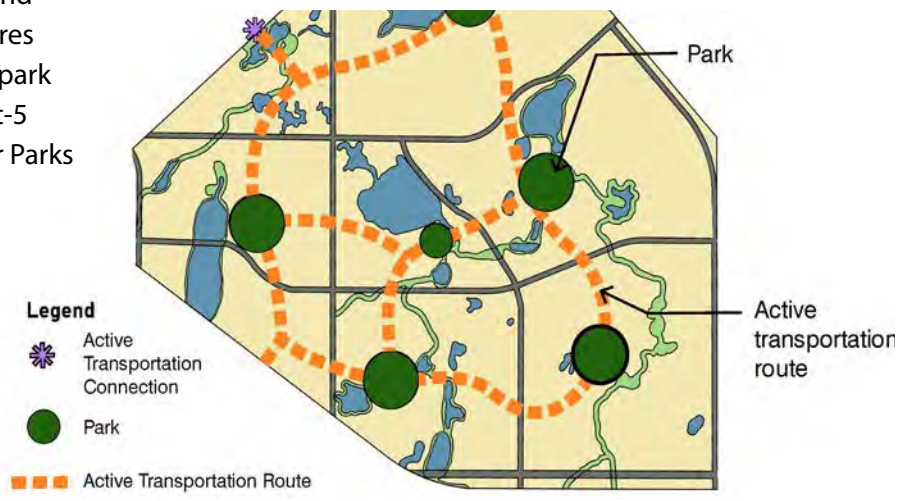
1.2 Sector Grading Concept for Parks

- Submit a Park Grading Elevation plan illustrating high point elevation and low point elevation for all parks, based on grading prepared for the Sector Plan. Plan must show elevations and arrows for direction of site drainage for:
  - site boundary and arterial roads
  - stormwater management ponds and drainage channels

1.3 Park Sustainability-First Checklist

- List of sustainability and climate action measures to be integrated into park design (included in Pt-5 Sustainability-First for Parks Checklists)

Figure 1: Open Space Layout Plan Example



2.0 Neighborhood Concept Plan Requirements

Submission 2 - Open Space Master Plan and Park Amenity Layout Plans for Neighbourhood Concept Plan

Prepared by: Developer as part of a new or updated Neighborhood Concept Plan submission to the Planning and Development Department

2.1 Open Space Master Plan

- Provide an Open Space Master Plan of the neighbourhood illustrating:
  - location of multi-district, district, neighborhood core parks, pocket parks, linear parks, village square parks, industrial parks, special use parks in the neighborhood along with size in hectares
  - appropriate park size and shape to accommodate park features in the Park Amenity Layout Plans (see below)
  - location of arterial and collector roads, known transit routes ... also show local road and lotting pattern
  - location of trails, active transportation routes, cross-walks
  - green infrastructure - location of natural and proposed wetlands, stormwater management ponds and LID features, natural areas to be retained
  - location of above and below ground utility routes including potential conflicts with green infrastructure
  - location of existing and proposed trees, including size, species, and tree protection zone
  - location of utility corridors / location of existing and proposed utilities
  - proposed location of the green network along with existing identified green infrastructure (e.g., natural areas, wetlands, and other natural assets identified in the Sector Plan, as well as potential sites for LID and storm water management ponds and ecological corridors)

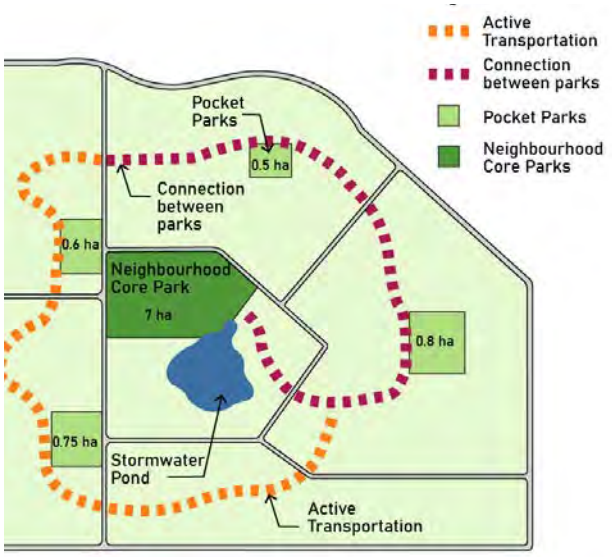


Figure 2: Open Space Master Plan Example

2.2 Neighborhood Grading Concept for Parks

- Submit a Park Grading Concept plan illustrating high point elevation and low point elevation for all parks, based on grading prepared for the Neighborhood Concept Plan. Plan must show elevations and arrows for direction of site drainage for:
  - site boundary and arterial roads
  - stormwater management ponds and drainage channels
  - parks
  - natural areas to be retained

2.3 Park Sustainability-First Checklist

- List of sustainability and climate action measures to be used in all park types and performance measures - for examples, Neighbourhood Core Park to have permeable paving to increase infiltration rate by 50%, (included in Pt-5 Sustainability-First for Parks Checklists)

2.4 Park Amenity Layout Plans

For each park in the proposed neighbourhood, create a Park Amenity Layout Plan that includes:

- Location of park amenities such as:
  - sports fields
  - playgrounds
  - active transportation and accessible route
  - natural features to be preserved, new naturalization areas
  - stormwater management and low impact development
  - park entry
  - gathering areas
  - other recreational uses
- Show relationship of functions/spaces/constructed features with respect to each other
- Provide an overall active transportation plan illustrating connections to adjacent neighborhoods, recreational amenities, and trail system, and note connections to existing sidewalks, pathways and crosswalks
- Show location of privacy, perimeter and safety fencing or access controls
- Location of utility corridors including potential conflicts with trees and green infrastructure
- Show water-saving measures such as stormwater treatment and re-use for irrigation
- Existing grades, proposed direction of drainage, slope percentages and elevations of adjacent land uses if data is available
- Proposed location of the green network along with existing identified green infrastructure (e.g., natural areas, wetlands, and other natural assets identified in the Sector Plan, as well as potential sites for LID and storm water management ponds and ecological corridors)
- Natural areas to be retained

Figure 3: Park Amenity Layout Plan Example

3.0 Park Concept Plan Requirements

Submission 3 - Detailed Park Concept Plan with Community Input

Prepared by: Developer or the City of Saskatoon after approval of the Plan of Subdivision

3.1 Detailed Park Concept Plan

Recreation and Community Development Department will contact residents and community groups to confirm community needs and identify resident priorities. This may include adjusting the types of sport fields, park amenities, and recreational uses, incorporating specific types of sustainability features, or providing input into the ecological and ICH features of the park.

- Submit a detailed conceptual plan (arch d (24 x 36 inches) illustrating layout and size of:
  - sports fields - dimensions, setbacks to adjacent park amenities
  - playgrounds - boundary, equipment type
  - active transportation and accessible route - width, materials, linkages
  - natural features to be preserved, new naturalization areas - size, location, strategy
  - stormwater management and low impact development - location, setbacks
  - park entry - location, signage, landscape enhancements
  - gathering areas - location, seating type
  - other recreational uses - location, type
  - fencing - location, type, height
  - parking (internal or on-street)
  - lighting (location, type)
  - cultural - location and type (park name, signage, artifact, interpretation, re-creation)
  - climate action - energy efficiency and renewable energy features, weather protection, reduced water use
  - landscape - location of trees, garden beds, tuft, low maintenance and regeneration areas

Figure 4: Detailed Park Concept Plan Example

- Location of utility corridors including potential conflicts with trees and green infrastructure
- Location of existing and proposed trees, including size, species, and tree protection zone
- Show the relationship of the functions/spaces/constructed features with respect to each other;
- Show location of privacy, perimeter and safety fencing or access controls
- Indicate the locations of the utility rights-of-way on site or in adjacent area
- Renderings - 3d and bird's eye view of overall park and specialty features on arch d (24 x 36 inches)
- Preliminary high-order cost estimate (class "c" equivalent)
- proposed location of the green network along with existing identified green infrastructure (e.g., natural areas, wetlands, and other natural assets identified in the Sector Plan, as well as potential sites for LID and storm water management ponds and ecological corridors)

3.2 Park Grading Concept Plan

- Provide a detailed park grading concept plan illustrating contours and elevations for all park amenities and features
- High and low point elevations
- Direction of flow
- Stormwater management ponds and low impact development features (layout, capacity, water holding period)

3.3 Park sustainability-first checklist

- List of sustainability and climate action measures and performance measures to be used in park - for examples, permeable paving to increase infiltration rate by 50%, minimum tree density of 25% to achieve biomass targets and reduce air temperature by 2° C, (included in Pt-5 Sustainability-First for Parks Checklists)

3.4 Community input

- Recreation and Community Development Department will contact residents and community groups to confirm community needs and identify resident priorities. This may include adjusting the types of sport fields, park amenities, and recreational uses; incorporating specific types of sustainability features; or providing input into the ecological and ICH features of the park.
- First and subsequent drafts of park layout plans and renderings to be reviewed by stakeholders and residents, and drawings adjusted until a final solution is reached

The initial submission concept plan shall be developed to a 30% complete level. The level of required detail shall permit the following items to be effectively completed:

- locate and identify the major functions/spaces/constructed features
- show relationship of the functions/spaces/constructed features with respect to each other
- show relationship of the site and pertinent amenities to adjacent, and local land uses
- determine a preliminary resolution of technical and programming requirements
- indicate locations of utility rights-of-way within project area and/or proposed utility corridors
- indicate existing grades, proposed direction of drainage, slope percentages, and adjacent land use information if data is available
- indicate intent for and extent of proposed irrigation
- provide a Class C itemized cost estimate in an electronic format (PDF)
- minimum drawing sheet size shall be: ARCH D (24"X 36")
- provide an appropriate site specific standard metric scale
- provide overall pedestrian circulation plan illustrating connections to adjacent neighbourhoods, recreational amenities, trail system and note connections to existing sidewalks, pathways, crosswalks
- provide a schematic environmental protection plan if applicable
- provide a tree protection plan if applicable
- provide a weed management plan if applicable

Identify potential utility or infrastructure conflicts with trees and other green infrastructure
The Concept Plan shall indicate the classification of the municipal park or Open Space and its associated theme/function.

4.0 Detailed Park Design Plan Requirements

Submission 4 - Detailed Park Design Plan

Prepared by: Developer or the City of Saskatoon after approval of the Plan of Subdivision

4.1 Detailed Park Design Plan

- Submit detailed design for all park features including:
  - layout and dimensions - park size and shape, boundaries, setbacks, adjacent land uses and structures, existing and proposed utilities, roads and public right-of-ways
  - park amenities (e.g. parking, bicycle parking, site furniture, lighting, signage), play structures/equipment, recycling and waste management enclosures, accessible access locations, green infrastructure, stormwater management and lid features
  - materials - park buildings, active transportation, park furniture, signage, play,
  - manufacturers /suppliers - play structures, park furniture, signage, lighting
  - installation methods
  - irrigation (mains, laterals, valves, etc.)
  - electrical conduit and light pole bases
  - planting plan with plant schedule of quantities and plant size, condition, installation
  - turf areas, drought resilient dry-lands, naturalization areas

4.2 Detailed Grading concept

- Submit a detailed park grading concept plan illustrating contours and elevations for all park amenities and features
- High and low point elevations
- Direction of flow
- Stormwater management ponds and low impact development features (layout, capacity, water holding period)

4.3 Park Sustainability-First Checklist

- Details of all sustainability and climate adaptation measures used and performance measures - for examples, Brentwood groundpro HDPE permeable paving with turf seed mix to increase infiltration rate by 72.5%, (included in Pt-5 Sustainability-First for Parks Checklists)

4.4 Drawing Requirements

- Title sheet, existing conditions and demolition/removal plan, layout plan, grading plan, planting plan, and irrigation plan details - minimum sheet size of arch d (24 x 36 inches)
- Itemized cost estimate (class "b" equivalent)
- Drawings shall be submitted for review by the parks department at 30% completion, 90% completion, and 100% completion
- 30% Completion drawings must show:
  - major functions/spaces/constructed features;
  - relationship of the functions/spaces/constructed features with respect to each other

    - relationship of the site and pertinent amenities to adjacent, and local land uses (as applicable)
    - preliminary resolution of technical and programming requirements
    - location of utility rights-of-way within the project area and/or proposed utility corridors, including landscape treatment for above-ground infrastructure
    - existing grades, proposed direction of drainage, slope percentages, and adjacent land use information if the data is available
    - intent and extent of proposed irrigation
    - overall pedestrian circulation plan illustrating connections to adjacent neighborhoods, recreational amenities, trail system and note the connections to existing sidewalks, pathways and crosswalks.
    - schematic environmental protection plan if applicable
    - tree location, planting layout, list of available plants and quantities
- 30% Drawing submission shall be accompanied by a Class B itemized cost estimate in an electronic format (PDF): 90% drawing submission shall be accompanied by a class c cost estimate in electron format (PDF).
- All drawings to be stamped and signed by a landscape architect registered with the SALA or other approved professional
- To have their project placed on the agenda of an upcoming meeting date. Any specific concerns/issues are discussed and an agreed-upon solution illustrated in the landscape plans.
- Digital files transmitted to the city and signed, where appropriate
- Digital files shall be submitted in a PDF format, and must provide a written response and rationale to red-line mark-ups not addressed from the previous submission.
- Provide appropriate site specific standard metric scale.
- North arrow, legend, key plan (showing location with respect to the street network), and a city standard title block (including name of owner/applicant, name and address
- All details within the working drawings shall be referenced through a clear note or symbol that correlates to the specification sections included within the drawing set.
- Plant schedule should provide quantity/key/botanical name/common name/condition/size/ spacing, and pertinent additional notes.
- Re-submissions after the 30% and 90% completion submissions shall contain a written response and rationale to red-line mark-ups from the previous submission and deviations from City of Saskatoon park development standards in the PDS and other related documents

5.0 Tender Submission Requirements

Submission 5 - Tender Documents

Prepared by: developer or the City of Saskatoon after approval of Submission 4

5.1 Tender Trawings

- Submit detailed design (for construction) drawings for all park features including:
  - demolitions and removals, site preparation, hoarding, construction access, temporary office location, traffic management
  - tree protection
  - topsoil stockpile areas, erosion protection measures, siltation fences
  - layout of park amenities - size, shape, setbacks
  - relationship of park amenities to adjacent land uses
  - materials - park buildings, active transportation, park furniture, signage, play,
  - manufacturers /suppliers - play structures, park furniture, signage, lighting
  - installation methods
  - irrigation (mains, laterals, valves, etc.)
  - electrical conduit and light pole bases
  - grading
  - planting layout, plant list, quantities, installation methods, storage area and protection measures prior to installation
  - protection measures for wetlands, green infrastructure, and natural assets/areas

5.2 Specifications

- Prepare a set of specifications for all park features, including standard construction details found in :
  - park department's SCS(P) - standard construction specifications
  - contractor environmental guidelines
  - engineering departments' SCS(P)- standard construction specifications

5.3 Bid Forms

- Prepare all bid forms required, including quantity take-off, insurance requirements, procedures

5.4 Park Sustainability-First Checklist

- Not required

5.5 Drawing Requirements

- Title sheet, existing conditions and demolition/removal plan, layout plan, grading plan, planting plan, and irrigation plan details - minimum sheet size of arch d (24 x 36 inches)
- Itemized cost estimate (Class "B" equivalent)
- All drawings to be stamped and signed by a registered landscape architect with current

membership in SALA and CSLA.

- Digital files transmitted to the city
- Digital files shall be submitted in DWG and PDF format, and must provide a written response and rationale to red-line mark-ups not addressed from the previous submission.
- Provide appropriate site specific standard metric scale.
- North arrow, legend, key plan (showing location with respect to the street network), and a City standard title block (including name of owner/applicant, name and address

6.0 Submissions/Procedures During Construction

Submissions During Construction

Prepared by: Developer or the City of Saskatoon after construction contract is awarded

The following applies to the circumstance where park construction is the responsibility of the Developer and/or the City of Saskatoon, and assumes one of the following:

1. Developer creates a set of tender drawings, awards the contract to a Contractor, and Developer is the Contract Administrator that assures quality control, safety, environmental protection
2. Developer creates a set of tender drawings as part of the overall Contract, and takes on the role of Installer and Contract Administrator
3. Developer creates a set of tender drawings as part of the overall Contract, awards the contract to a Contractor, and the City of Saskatoon is the Contract Administrator.
4. City of Saskatoon takes on all roles - preparation of tender drawings, awarding the contract to a Contractor, and Contract Administration

6.1 Construction Start to Substantial Completion

- **Construction Contract Review** - prior to start-up, the Developer shall meet with the City of Saskatoon to review and derive solutions for contract details regarding timing, road closures, safety, access, environmental protection, reporting, inspections, change and substitution procedures, substantial completion, warranty and maintenance, and final completion

- **During Construction** - The Contractor shall provide to the Contract Administrator a bi-weekly site report during the construction phase including, but not limited to, an update on grading, pathway construction, lighting, irrigation, play apparatus installation, plant material installation, and any items that will require addressing through the Proposed Change (PC), Change Orders (CO's), and the Force Account process. Throughout the project's construction phase it will be the Contract Administrator's responsibility to prepare and distribute site meeting notes to the City of Saskatoon, Contractor, and sub-contractors.

- **Inspections** - The City of Saskatoon will inspect the installation of the project for quality control, with the number of inspections and placement specified in the construction contract. For planting, a minimum of the following inspections will be conducted:
    - Contract Administrator shall provide a plant supplier list to the City of Saskatoon prior to purchase. All plant substitutions need to be approved by the City of Saskatoon
    - prior to installation of plants, park furniture, lighting, play structures, irrigation equipment, and any other item noted in the contract, the City of Saskatoon shall inspect all items at the site and recommend any replacements if there are noticeable defects
    - prior to Issuance of Proposed Change (PC), the City of Saskatoon will inspect all project items noted in the contract for quality
    - control, safety, and proper installation, and recommend any replacements as necessary

6.2 Substantial Completion to Final Acceptance

All park construction projects will be subject to a 3-year warranty period extending from the date of the Construction Completion Certificate (CCC) to Final Acceptance (FAC). The Developer / Builder to ensure the Contractor adheres to contract items during the warranty period so parks are accessible and safe for residents.

The Parks Division Landscape Development Coordinator shall be responsible for coordinating a monthly Maintenance Inspection Report for each park development project after Construction Completion Certificate (CCC) and until FAC as per the SCS(P). A copy of the monthly report shall be provided to the Contractor, Parks Department Superintendents, and the Contract Administrator within three working days of the inspection.

When maintenance deficiencies are not addressed within the deficiency deadline indicated and circulated on the 'Maintenance Inspection Report, the Contract Administrator shall be responsible for informing the City of Saskatoon who, in turn, shall determine the appropriate action which may include the reduction of payment until deficiencies are corrected. See Appendix C for a copy of the monthly 'Maintenance Inspection Report'. Measurements and Payments are specified in the Parks SCS(P) document.

6.3 Final Acceptance

Record Documents

The process and responsibility for ensuring comprehensive Record Documents begins with the Contract Administrator and then transfers to the Contractor. Producing Record Documents shall be part of the Construction Contract under a separate cost item. Record Documents must reflect all changes, variations and modification to the original design as the project proceeds. Record Documents shall be submitted to the Parks Department Landscape Development Coordinator.

Record Drawings

Prior to Final Acceptance, the Developer shall provide Record Drawings to the Contract Administrator, as per contract documents. The Contract Administrator will then submit it to the City of Saskatoon for approval. Record Drawings shall provide a record of the installed landscape material including all substitutions and changes made during construction, and shall represent a record of the conditions of the site and landscape materials at the time the Record Drawings are submitted for approval.

Issuance of Final Acceptance

When the City of Saskatoon is satisfied that all material has been submitted by the Contractor, that all submitted material is complete, that the project is properly installed and exhibit an acceptable degree of quality, that all warranty and maintenance requirements are satisfied, that all payment has been properly executed, and that all stipulations in the contract have been fulfilled, the City of Saskatoon will provide an Issuance of Final Acceptance to the Contract Administrator and Contractor and accept responsibility for the park from that day forward.

7.0 Contractor Environmental Guidelines

The Sustainability Department has enacted the Contractor Environmental Guidelines which provides details on how to protect the natural environment during construction. All tender drawings and specifications must comply with the standards in this document.

PART 5: Sustainability-First for Parks Checklists

5

Open Space Layout Plan

Open Space Master Plan

Park Amenity Layout Plan

Park Concept Plan

Detailed Park Design

Submitted by Developer along with the above-noted plans

Reviewed by Parks Department and Sustainability

Park Sustainability-First Checklist

Open Space Layout Plan

Description

Location _____

Energy Efficiency

Parks used to generate or distribute energy ☐ Yes ☐ No

Air Quality

Neighbourhood Core Park on a transit route ☐ All ☐ Some ☐ None

Comments _____

Climate Adaptation

	Yes	No
Parks sited to resist flooding	☐	☐
Parks susceptibility to wildfire identified and mitigation strategies listed	☐	☐
Parks sited close to stormwater ponds with standing water, wetlands, rivers	☐	☐

Water Conservation

Stormwater management plan anticipates re-use of stormwater for irrigation in parks ☐ Yes ☐ No

Opportunities to reduce potable water use and/or utilize storm water, grey water, groundwater or raw water for irrigation have been identified ☐ Yes ☐ No

Siting and Connections

☐ Parks centrally located

☐ Parks located along a proposed trail network

☐ Parks located along an arterial or collector road

Neighbourhood Core Park on a transit route ☐ Yes ☐ No

Recreational Needs

Park sizes sufficient to accommodate proposed number of recreation activities and sports fields ☐ Yes ☐ No

List park sizes and recreation needs: _____

Social

Indigenous, cultural, heritage sites, features and spaces are connected to parks / green network

☐ Yes ☐ No

Naturalization

Biomass target to be achieved _____

Conservation areas in the sector

☐ Bluff ☐ Riparian ☐ Wetland ☐ Prairie ☐ Other

Other

Sustainable Design at Detailed Design Stages

List your commitment to incorporate the following sustainable design elements at the detailed design and construction stages. List all that apply:

	Yes	No
Water Conservation		
Re-use of stormwater for irrigation, re-circulating water for splash pads	☐	☐
Rainwater Harvesting and Re-use		
Irrigation	☐	☐
Water features	☐	☐
Washrooms	☐	☐
Energy Reduction		
Lower GHG building materials	☐	☐
Net-zero park buildings	☐	☐
Renewable energy to power facilities, lighting or features	☐	☐
Stormwater Management and LID		
Bioswales	☐	☐
Permeable paving	☐	☐
Rain gardens	☐	☐
Permeable paving	☐	☐
Cost Effective Maintenance Design		
Appropriate plant selection and installation	☐	☐
Minimum setbacks	☐	☐
Avoid unrecommended products	☐	☐
Reduced turf areas	☐	☐
Climate Adaptation		
Drought - zero irrigation design	☐	☐
Drought - xeriscaping	☐	☐
Wildfire - appropriate site grading	☐	☐
Wildfire - appropriate placement of park features	☐	☐
Wildfire - setbacks	☐	☐
Wildfire - firebreaks	☐	☐
Flooding - appropriate site grading	☐	☐
Flooding - appropriate placement of park features	☐	☐
Heat - Shade all play structures and seating areas	☐	☐
Heat - Shade walkways	☐	☐
Wind - provide windbreaks	☐	☐
Wind - provide berms	☐	☐
Snow - grading and planting to avoid snow drifts	☐	☐
Snow - warming huts	☐	☐
Naturalization / Green Infrastructure		
Minimum naturalization targets achieved	☐	☐
Appropriate species and planting techniques	☐	☐
Social		
Indigenous / cultural / heritage interpretation in parks	☐	☐
Community gardens	☐	☐
Assembly areas	☐	☐
Performance areas	☐	☐

Park Sustainability-First Checklist
Open Space Master Plan

Description

Location _____

Energy Efficiency

Use of Renewable energy in parks (%) _____

Commitment to lower GHG emissions products and construction materials ☐ Yes ☐ No

Air Quality

Neighbourhood Core Park on a transit route ☐ All ☐ Some ☐ None

Commitment to Net-Zero Park Buildings ☐ Yes ☐ No ☐ Not Applicable

Climate Resilience

	Yes	No		Yes	No
Parks sited to resist flooding	☐	☐	Parks located to reduce potential for wildfire spread	☐	☐
Parks are part of stormwater management system	☐	☐			
Drainage swales in Neighbourhood Core Parks	☐	☐	Mitigation strategy to reduce potential for wildfire	☐	☐

Water Conservation Strategy

No irrigation anticipated ☐ Yes ☐ No

Commitment to re-use stormwater for irrigation ☐ Neighbourhood Core Parks ☐ Pocket Parks ☐ Village Squares

Commitment to re-use of water for water play / splash pads ☐ Yes ☐ No ☐ Not applicable

Siting and Connections

Walkable community, check all that apply:

- ☐ Parks centrally located
- ☐ Parks located along a proposed trail network
- ☐ Parks connected to Green Network
- ☐ Parks located along arterial or collector road
- ☐ All residential lots / units within a 5-minute walking distance (400 m) of a park

Recreational Needs

Park size sufficient to accommodate proposed number of recreation activities and sports fields ☐ Yes ☐ No

List park sizes and recreation needs: _____

Naturalization

% of naturalization in neighbourhood:

Natural regeneration: _____ Riparian buffer: _____ Prairie: _____ Bluff : _____

Conservation areas in the neighbourhood:

☐ Trees ☐ Bluff ☐ Stream ☐ Landscape

Social

Indigenous, cultural, heritage sites, features + spaces are identified and connected to parks / green network

☐ Yes ☐ No

Management plan for Indigenous, cultural, heritage sites, features and spaces that will not be located in parks or public open space

☐ Yes ☐ No

Other

Sustainable Design at Detailed Design Stages

List your commitment to incorporate the following sustainable design elements at the detailed design and construction stages. List all that apply:

	Yes	No
Water Conservation		
Re-use of stormwater for irrigation	☐	☐
Re-cirulating water for spray pad	☐	☐
Greywater from spray pad used for park irrigation	☐	☐
Rainwater Harvesting and Re-use		
Irrigation	☐	☐
Water features	☐	☐
Washrooms	☐	☐
Energy Reduction		
Lower GHG building materials	☐	☐
Net-zero park buildings	☐	☐
Renewable energy for lighting	☐	☐
EV charging stations	☐	☐
Stormwater Management and LID		
Bioswales	☐	☐
Permeable paving	☐	☐
Rain gardens	☐	☐
Permeable paving	☐	☐
Low Maintenance Landscape Design		
Appropriate plant selection and installation	☐	☐
Minimum setbacks	☐	☐
Avoid unrecommended products	☐	☐
Reduced turf areas	☐	☐

	Yes	No
Climate Adaptation		
Drought - zero irrigation design	☐	☐
Drought - xeriscaping	☐	☐
Wildfire - appropriate site grading,	☐	☐
Wildfire - appropriate placement of park features	☐	☐
Wildfire - setbacks	☐	☐
Wildfire - firebreaks	☐	☐
Flooding - appropriate site grading	☐	☐
Flooding - appropriate placement of park features	☐	☐
Heat - Shade all play structures and seating areas	☐	☐
Heat - Shade walkways	☐	☐
Wind - provide windbreaks	☐	☐
Wind - provide berms	☐	☐
Snow - grading and planting to avoid snow drifts	☐	☐
Snow - warming huts	☐	☐
Naturalization / Green Infrastructure		
Minimum naturalization targets achieved	☐	☐
Appropriate species and planting techniques	☐	☐
Social		
Indigenous / cultural / heritage interpretation in parks	☐	☐
Community gardens	☐	☐
Assembly areas	☐	☐
Performance areas	☐	☐

Park Sustainability-First Checklist

Park Amenity Layout Plan

Description

Location _____

Energy Efficiency

Use of Renewable energy in parks (%) _____

Commitment to lower GHG emissions products and construction materials ☐ Yes ☐ No

Air Quality

Commitment to Net-Zero Park Buildings ☐ Yes ☐ No ☐ Not Applicable

Climate Resilience

Wildfire breaks shown ☐ Yes ☐ No ☐ Not Applicable

	Yes	No
Parks sited and graded to manage stormwater with no deterioration of park features	☐	☐
Drainage swales in Neighbourhood Core Parks do not impact features	☐	☐
Commitment to mitigation strategy to reduce potential for wildfire	☐	☐
Heat, wind, and snow protection shown and labelled in park	☐	☐

Water Conservation Strategy

Zero irrigation ☐ Yes ☐ No

Commitment to re-use of water for water play / splash pads ☐ Yes ☐ No ☐ Not applicable

Re-use of stormwater for irrigation:

☐ Neighbourhood Core Parks ☐ Pocket Parks ☐ Village Squares

Access and Connections

	Yes	No
Parks are accessed by a sidewalk or trail	☐	☐
Parks show connection to adjacent transit stops in road r.o.w.	☐	☐
All residential lots/units within a 5-minute walking distance (400 m) of a park	☐	☐

Parking ☐ On-street ☐ Parking lot # of parking spaces _____

Recreational Needs

Park sizes sufficient to accommodate proposed number of recreation activities and sports fields ☐ Yes ☐ No

List park sizes and recreation needs: _____

Naturalization

% of naturalization in neighbourhood:

Natural regeneration: _____ Riparian buffer: _____ Prairie: _____ Bluff : _____

Conservation areas in the neighbourhood:

☐ Trees ☐ Bluff ☐ Stream ☐ Landscape

Social

Indigenous, cultural, heritage sites, features and spaces located in park (list)

Location of community gardens, gathering areas, performance areas

Other

Sustainable Design at Detailed Design Stages

List your commitment to incorporate the following sustainable design elements at the detailed design and construction stages. List all that apply:

	Yes	No
Rainwater Harvesting and Re-use		
Use of grey water for irrigation	☐	☐
Water features	☐	☐
Washrooms	☐	☐
Energy Reduction		
Lower GHG building materials	☐	☐
Net-zero park buildings	☐	☐
Renewable energy for lighting	☐	☐
Stormwater Management and LID		
Bioswales	☐	☐
Permeable paving	☐	☐
Rain gardens	☐	☐
Permeable paving	☐	☐
Low Maintenance Landscape Design		
Appropriate plant selection and installation	☐	☐
Minimum setbacks	☐	☐
Avoid unrecommended products	☐	☐
Reduced turf areas	☐	☐
Climate Adaptation		
Drought - zero irrigation design	☐	☐
Drought - xeriscaping	☐	☐

	Yes	No
Wildfire - appropriate site grading,	☐	☐
Wildfire - appropriate placement of park features	☐	☐
Wildfire - setbacks	☐	☐
Wildfire - firebreaks	☐	☐
Flooding - appropriate site grading	☐	☐
Flooding - appropriate placement of park features	☐	☐
Heat - Shade all play structures and seating areas	☐	☐
Heat - Shade walkways	☐	☐
Wind - provide windbreaks	☐	☐
Wind - provide berms	☐	☐
Snow - grading and planting to avoid snow drifts	☐	☐
Snow - warming huts	☐	☐
Naturalization / Green Infrastructure		
Minimum naturalization targets achieved	☐	☐
Appropriate species and planting techniques	☐	☐
Social		
Indigenous / cultural / heritage interpretation in parks	☐	☐
Community gardens	☐	☐
Assembly areas	☐	☐
Performance areas	☐	☐

Park Sustainability-First Checklist

Park Concept Plan

Description

Location _____

Energy Efficiency

Commitment to lower GHG emissions products and construction materials ☐ Yes ☐ No

Renewable energy generation facilities ☐ EV charging station ☐ Solar panels ☐ Wind turbines

Solar/wind powered lighting ☐ Entry ☐ Pathway ☐ Park building

Air Quality

Commitment to Net-Zero Park Buildings ☐ Yes ☐ No ☐ Not Applicable

Climate Resilience

Wildfire breaks shown ☐ Yes ☐ No ☐ Not Applicable

	Yes	No
Parks graded to effectively manage stormwater with no deterioration of park features	☐	☐
Drainage swales do not impact park features	☐	☐
Commitment to mitigation strategy to reduce potential for wildfire	☐	☐
Heat, wind, and snow protection shown and labelled in park	☐	☐

Water Conservation Strategy

Zero irrigation ☐ Yes ☐ No

Commitment to re-use of water for water play / splash pads ☐ Yes ☐ No ☐ Not applicable

Re-use of stormwater for irrigation:

☐ Neighbourhood Core Parks ☐ Pocket Parks ☐ Village Squares

List and show locations of re-use of stormwater for irrigation:

☐ Bioswales ☐ Permeable paving ☐ Rain gardens Other _____

Access and Connections

	Yes	No
Parks are accessed by a sidewalk or trail	☐	☐
Parks show connection to adjacent transit stops in road r.o.w.	☐	☐

Parking ☐ On-street ☐ Parking lot # of parking spaces _____

Naturalization

Size and type of naturalization areas ☐ Natural regeneration: _____ ☐ Prairie: _____

☐ Riparian buffer: _____ ☐ Indigenous harvest: _____ ☐ Bluff : _____

Conservation areas in the

☐ Trees ☐ Bluff ☐ Stream ☐ Landscape

Biomass target to be achieved (please list) _____

Recreational Needs

Identify and describe type of recreational activities and sports fields _____

Social

Identify and describe type of Indigenous, cultural, heritage sites, features and spaces in park

Identify and indicate size of community gardens, gathering areas, performance areas

Low Maintenance

Appropriate setbacks for maintenance shown ☐ Yes ☐ No

Other

_____

Sustainable Design at Detailed Design Stages

List your commitment to incorporate the following sustainable design elements at the detailed design and construction stages. List all that apply:

	Yes	No
Water Conservation		
Re-use of stormwater for irrigation, re-circulating water for splash pads	☐	☐
Rainwater Harvesting and Re-use		
Irrigation	☐	☐
Water features	☐	☐
Washrooms	☐	☐
Energy Reduction		
Lower GHG building materials	☐	☐
Net-zero park buildings	☐	☐
Renewable energy for lighting	☐	☐
Stormwater Management and LID		
Bioswales	☐	☐
Permeable paving	☐	☐
Rain gardens	☐	☐
Permeable paving	☐	☐

	Yes	No
Low Maintenance Landscape Design		
Appropriate plant selection and installation	☐	☐
Avoid unrecommended products	☐	☐
Climate Adaptation		
Drought - zero irrigation design	☐	☐
Drought - xeriscaping	☐	☐
Wildfire - appropriate species and planting techniques	☐	☐
Flooding - appropriate site grading	☐	☐
Heat - Shade all play structures and seating areas	☐	☐
Heat - Shade walkways	☐	☐
Wind - provide windbreaks	☐	☐
Wind - provide berms	☐	☐
Snow - grading and planting to avoid snow drifts	☐	☐
Snow - warming huts	☐	☐
Naturalization / Green Infrastructure		
Appropriate species and planting techniques	☐	☐

Park Sustainability-First Checklist
Detailed Park Design Plan

Description

Location _____

Energy Efficiency

Renewable energy generation facilities ☐ EV charging station ☐ Solar panels ☐ Wind turbines

Solar/wind powered lighting ☐ Entry ☐ Pathway ☐ Park building

List lower GHG emissions products and construction materials

☐ Seating _____

☐ Sign _____

☐ Walkways _____

☐ Structures _____

Timers for sport field lighting ☐ Yes ☐ No Waste heat recovery technology ☐ Yes ☐ No

Air Quality

Net-zero park building features (if applicable)

☐ Green roof ☐ Solar roof ☐ Renewable Energy ☐ Composting toilets

☐ Greywater ☐ Shading ☐ Natural ventilation and cooling

☐ Lower GHG emission products and construction materials ☐ Not applicable

Climate Resilience

	Yes	No
Parks graded to effectively manage stormwater with no deterioration of park features	☐	☐
Drainage swales do not impact park features	☐	☐
Plant species and planting techniques reduce potential for wildfire spread	☐	☐
Plant species and seed mixes are drought tolerant	☐	☐

Wildfire breaks and setbacks shown:

☐ Yes

☐ No

☐ Not Applicable

Shading provided:

☐ Play areas

☐ Seating

☐ Feature areas (Indigenous, cultural, heritage signs, interpretation areas)

Wind protection provided:

☐ Berms

☐ Fencing

☐ Plantings

☐ Structures

☐ Other

Snow drift mitigation and cold protection provided:

☐ Berms

☐ Fencing

☐ Warming hut area

Naturalization

Planting type and area (sq. m) _____
(forest, prairie, riparian buffer, Bluff buffer, Indigenous Bluff)

Biomass target achieved _____

% of park conserved _____

Water Conservation Strategy

	Yes	No
Zero irrigation	☐	☐
Re-use of stormwater for irrigation in park	☐	☐
Re-use of water for water play/splash pads	☐	☐
Greywater use in park buildings	☐	☐
Meters for ice rinks, swimming pools, splash pads	☐	☐

LID facilities: ☐ Bioswales ☐ Permeable paving ☐ Rain gardens ☐ Other

Access and Connections

	Yes	No
Trails / walkways are connected to sidewalks and external trail network	☐	☐
Trails / walkway shows connection to adjacent transit stops in road r.o.w.	☐	☐
Parking for bicycles, e-scooters, and other sustainable vehicles	☐	☐

Parking ☐ On-street ☐ Parking lot # of parking spaces _____

Social

	Yes	No
Indigenous, cultural, heritage features provided (park name, interpretive signs(s), feature area, reconstruction, landscape)	☐	☐
Provision of community gardens, gathering areas, performance areas, other community space	☐	☐

Low Maintenance

	Yes	No
Appropriate setbacks for maintenance	☐	☐
Appropriate plant selection and planting area details	☐	☐
Appropriate materials for park furniture, lighting, signs, structures	☐	☐
Positive drainage for park feature and amenity areas	☐	☐

Park area in maintained turf (%): _____

Solid Waste

Use of composting toilets:
- ☐ All
- ☐ Part
- ☐ None

Dog parks:
- ☐ Feces removal service
- ☐ Waste compost area
- ☐ Not applicable

Recycling and trash bins:
- ☐ Recycling
- ☐ Trash
- ☐ Compost

Process

	Yes	No
Contractor Environmental Guidelines have been reviewed	☐	☐

Other

_____

Park Development Standards: New Scope and Changes

Park Development Standards:
New Scope and Changes

The following is a list of changes to current park development standards that are proposed as part of the update.

Combined Documents:

Currently, park development standards are contained in three main documents:

- PDG – Park Development Guidelines
- LDDS – Landscape Design and Development Standards
- SCS – Standard Construction Specifications

The new format will combine the first two documents, so that there are two park planning standards:

- PDS – Park Development Standards
- SCS – Standard Construction Specifications

The recommendation will be to ask Council to pass a motion to rescind the PDG and LDDS documents, and to adopt the PDS as the document containing standards that must be followed for new park developments and re-construction of existing parks. An Implementation Recommendations report will also be part of the motion for approval.

New Sustainable Standards

The PDS envisions a sustainable future and parks that are resilient to climate change. A number of park standards are listed that will require further investigation and refinement by the Parks Department before they are implemented. Although included in the PDS, the Parks Department intends to undertake investigative studies that will further define how these sustainable measures are designed and constructed in new parks in Saskatoon prior to requiring them in park designs. The list of sustainable items that require further investigation include:

Report Section	Sustainable standards requiring further investigation
Pt-3 Section 1.1.2	*Shading of play areas, seating, ICH signage, primary pathways*
Pt-3 Section 1.1.2	*Park seating with integrated shading structure (optional)*
Pt-3 Section 1.1.3	*Wind protection (grading, fencing, windbreaks) to be provided*
Pt-3 Section 1.1.4	*EV charging stations may be provided*
Pt-3 Section 1.1.5	*Parking for electric scooters, non-motorized transport in designated parking areas*
Pt-3 Section 1.2.3	*Rainwater storage (cisterns, bioswales, underground tanks) to be part of park irrigation*
Pt-3 Section 1.2.4	*Re-circulating water supply system for spray pads (optional)*
Pt-3 Section 3.1.1	*All parks must have a minimum of one Indigenous interpretive feature / space*
Pt-3 Section 3.3	*Sustainble park buildings - standards for green roofs and solar roofs, greywater gretement and re-use, renewable energy*
Pt-3 Section 3.8.4	*Solar pathway lighting required*
Pt-3 Section 3.10.3	*Sustainable requirements for parking lots*
Pt-3 Section 3.18.3	*Spray pads, misters designed with reduced reliance on municipal water supply*
Pt-3 Section 3.18.4	*Misters provided in every park, the number proportional to park occupancy*

New Approvals

The PDS proposes a parks approval system that allows the Parks Department to be more actively involved in parks planning and design at all stages in the development process. Developers will be required to prepare new conceptual park plans so that the size, shape, location and park features can be analyzed and revised to ensure park programming can be accommodated.

Detailed submission requirements for new approvals are outlined in Part 4 of the PDS. New submission requirements include the following:

Additional Drawings

- **Open Space Layout Plan – required for Sector Plan approval - prepared by City staff**

  (Will require Parks Department endorsement, and approved by Planning Department)

  Bubble-diagram style conceptual plan showing major roads, natural features, active transportation, and park types and sizes in the sector

- **Open Space Master Plan – required for Neighbourhood Concept Plan approval**

  (Will require Parks Department endorsement, approved by Planning Department, prepared by developer(s))

  Conceptual layout of park blocks showing size, shape and location in the neighbourhood along with major roads, natural features, active transportation, school blocks and community uses

- **Park Amenity Layout Plan – required for Neighbourhood Concept Plan approval**

  (Will require Parks Department endorsement, approved by Planning Department, prepared for all parks within a neighbourhood by each developer who is responsible for that land)

  Conceptual layout of each park in the subdivision showing location / size of park features including sport fields, play, pathways, parking (in the park or on-street), amenities, ICH feature. The purpose is to demonstrate that parks are configured to accommodate the minimum standards for parks (active sports fields, accessible route, naturalization, tree planting ... see Pt-2 Section 4.9

Additional Reports

- **Tree Assessment Report**

  (Approved by the Parks Department, submitted by Developer)

  Certified Arborist report mapping and listing existing trees with recommendations for preservation, enhancement and removal. Submitted along with Detailed Park Design plan.

- **Sustainability-First for Parks Checklists**

  (Approved by the Parks Department and Sustainability, submitted by Developer)

  Required for all submittals except tender documents. Developer submits the Sustainability-First Checklist for Parks along with the Open Space Master Plan and Park Amenity Layout Plan for each park (Neighbourhood Concept Plan stage), Park Concept Plan and Detailed Park Concept Plan. A Sustainability-First Checklist is not required for park tender drawings. Purpose at the conceptual stage is for the Developer to indicate the sustainable features that will be later implemented. At the detailed stage, it is a list of sustainable features the Developer commits to providing

New Terminology

- Riverfront Parks are now classified as Special Use Parks
- Pt-1 Section 1,7 pg. 11 – new definition for pocket park - *A small scale park that provides passive recreational opportunities for neighbourhood residents*
- Pt-2 Section 4.9 Low Maintenance now referred to as Effective Maintenance
- Pt-1 Section 1.7 Definitions … Dryland turf (low maintenance grassy area) is now called Drought Resilient Dryland
- Pt-1 Section 1.7 New Definitions for: Accessible route, bluff, erosion control blanket, maintained turf, natural area, naturalization, park features

New Standards

The following is a list outlining new requirements / changes for park standards that were not previously included in the PDG, LDDS or SCS:

Shared Use

- Pt-2 Section 1.3 – new policies for Shared Use list the types of shared use that are permitted, and policies for shared use of stormwater management ponds and green infrastructure

Remove Size Requirement for Neighbourhood Park

- Pt-2 Section 2.3 - To eliminate the need to have a new designation for "Secondary Core Parks", the minimum size requirement for Neighbourhood Core Park has been removed, and a new policy allows more than one neighbourhood core park per neighbourhood providing recreational needs (number and type of sports fields) are provided. This allows more flexibility to create a parks system that meets urban design objectives as well as accommodating recreational needs. NOTE: STILL UNDER INVESTIGATION AND SUBJECT TO CHANGE

Including ICH (Indigenous, Cultural, Heritage) in the early planning stages

- Pt-2 Section 3.3 – New policies require that information from the Heritage Impact Assessment prepared for Sector Plans, Neighbourhood Concept Plans and Plans of Subdivision be included in the Open Space Layout Plan, Open Space Master Plan and Park Amenity layout Plans, with varying degree of detail for each.

Climate Mitigation at Park Design Stage

- Pt-3 Section 3.1 – requires that all parks be designed according to climate mitigation principles, including a commitment to lower GHG emission products, provision of shading and wind protection, and parking for EV and alternative energy vehicles

Replace Number of Trees per park provisions

- Pt-3 Section 2.1.3 – the number of trees per park type provisions have been removed, and are replaced by the following description of where trees must be planted:

    - tree planting for shading of seating and play areas where a shade structure is not provided
    - tree planting along the primary accessible route where a shade structure is not provided
    - trees and/or planting beds at park entrances
    - planting to satisfy naturalization target for the park
    - planting to highlight key park features, where deemed appropriate by the Parks Department
- The above is supplemented by Pt-3 Section 1.3.2 which requires the amount of naturalization in a park to achieve standards set in the UFMP – thereby assuming that the UFMP will one day have this type of standard

Off-grid Self-Sufficient Park Buildings

- Pt-3 Section 3.3 - Options for roofing include a green roof and solar roof

Planting Design to promote Climate Resilience

- Pt.-3 Section 2.1.1 – requires that planting design promote climate resilience through the following:
    - hearty, disease-resistant, and drought-tolerant plant species that require a low degree of maintenance and respect local climate conditions
    - protecting and integrating existing landforms and vegetation into planting design
    - watering needs provided by natural drainage and/or re-use of stormwater for irrigation (see Pt-3 Section 3.5)
    - weed control measures (see Pt-3, Section 2.7)

Utility Location and Landscape Treatment

- P-3 Section 3.15 - Utilities permitted only on Utility Parcels and Buffers – not on Municipal Reserve land. If utilities must be placed in a park, they must have a hard surface surround

30m Buffer for Natural Wetlands

- Pt-2 Section 4.2.5 - Park layout plans should include a 30m buffer around significant natural wetlands and river corridors. The only park features permitted within the buffer would be pathway and signage. Landscape will be a naturalization area.

Water Re-Use Requirements

- Pt -2 Section 4.3 – park design must demonstrate commitment to water supply for irrigation to be supplied by non-municipal water supply sources and/or use of re-circulating water supply
- Pt-3 Section 3.16 - all water features (spray pads, misters, fountains (drinking and viewing) and wading pools) should use a limited amount of municipal water and have water supply stemming from stormwater re-use, and use re-circulating chlorinated water supply

systems

Minimum requirement for Drought Resilient Dryland and Naturalization

- Pt -2 Section 4.9 Effective Maintenance – all parks must have 20% Drought Resilient Dryland or naturalization or xeriscaping

Pathway Illumination to be Alternative Energy

- Pt-3 Section 3.7 – all pathways will be illuminated by solar or wind power

Effective Maintenance Design

- Pt-3 Section 3.10 – all park furniture must be mounted on a hard surface
- Pt-3 Section 3.8 - park ornamentation to be placed in a planting bed rather than be stand-alone features and/or be enclosed by a hard surface to serve as a mowing strip
- Pt-3 Section 3.1 - artwork and ICH features to be placed in a planting bed rather than be stand-alone features and/or be enclosed by a hard surface to serve as a mowing strip
- Pt-3 Section 2.5 - minimum distance separation between park features for mowing machinery
- Pt-3 Section 3.15 - utilities must be surrounded by a hard surface
- Low maintenance materials required for park furniture (Pt-3 Section 3.10), bridges (Pt-3 Section 3.2), play and fitness equipment (Pt-3 Section 3.11)

Shading Required

- Pt.-3 Section 3.13 -shading required for play areas and seating

Misting Station Requirement

- Pt-3 Section 3.16 – all parks will have a misting station

Weed Control Measures

- Pt-3 Section 2.4 - standards for proper siting, edge treatment, site preparation, seeding rates

Rain Garden

- Pt-3 Section 1.2 - requires all planting beds to be designed as rain gardens wherever possible to reduce irrigation demand
- Pt-3 Section 2.5.6 - construction standards for rain gardens

Winter Activities

- Pt-3 Section 3.17 - standards for toboggan hills, outdoor rinks, cross country skiing, snow mobilizing

Parking

- Pt-3 Section 3.9 requires any parking lot internal to the park to be constructed of permeable paving, and be connected to the sidewalk or active transportation system for accessibility
- Pt3 Section 3,9 lists park types that should have internal parking

Buffer Strip

- Pt-2 Section 5.0

Proposed Changes to Related Documents (to enable full and better implementation of the PDS)

- Recreation Master Plan needs to be updated to identify recreation targets (eg. 1 junior soccer field per 3,500 population, etc.)
- Recreation Master Plan needs to be updated to identify parking requirements (eg. 15 parking spaces per junior soccer field)
- SCS should have a number of details added (list to follow in next draft)
- Wetland Policy and/or Wetland Design Guidelines should be updated to include planting details, as opposed to putting the planting details in the PDS
- LIDG should be updated to include planting details, as opposed to putting planting details in the PDS
- Corporate Climate Adaptation Strategy - parks currently have only a small representation in the Strategy. After the PDS is adopted and the Sustainability-First Checklists are implemented, the Parks Department will be able to report on annual sustainability initiatives that have been taken, and these should be reported in the Corporate Climate Adaptation Strategy
- GIS Green Infrastructure Strategy - the most recent edition reports on Naturalized Parks only, while other parks are only represented in mapping. We recommend that parks become a more significant contribution to the green system by actively including them in the GIS
- Civic Heritage Policy (C10-020) - we recommend that this be updated to an ICH (Indigenous, Cultural, Heritage) policy and provide recommendations on how to collectively plan, design and build features in Saskatoon

Policies too Detailed for the OCP

2.3.2 (a) pg. 37

Due regard will be given to locating District, Multi-District, and Special Use Parks adjacent to storm water basins and drainage swales to facilitate integration.

Documents that should be revised to refer to the PDS:

- FADS Facility Accessibility Design Standards
- SG Safe Growth and CPTED

New Supporting Documents

Streetscape Design Guidelines

The LDDS contains some provisions for streetscape planting (street trees, medians). The new PDS will only pertain to parks and buffer strips. Therefore a new, stand-alone guideline for streetscape design is recommended. The new guideline would cover not only planting, but all aspects of streetscape design, including road profiles, sidewalk/MUP placement, street trees, medians, corner treatments, lighting, signage, street furniture, transit, accessibility and active transportation.

APPENDIX: A FireSmart List of Plants

A


DRAFT 2022-02-28

TREES		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
					Very Low	Low	Medium	High
Scientific Name	**Common Name**							
Gleditsia triacanthos	Honeylocust	3	fs	9 - 21 m		●		
Gymnocladus dioicus	Kentucky Coffee Tree	3	fs	12 - 15 m			●	
Juglans cinerea	Butternut	3	fs	12 - 18 m			●	
Juglans nigra	Black Walnut	4	fs	12 - 18+ m			●	
Koelreuteria paniculata	Golden Raintree	5	fs	9 - 12 m		●		
Laburnum watereri	Golden Chain Tree	5	fs-psh	3.5 - 4.5 m			●	
Larix occidentalis	Western Larch	4	fs	30 - 55 m			●	
Liquidambur styraciflua	Sweetgum	5	fs	18 - 23 m			●	
Liriodendron tulipifera	Tulip Tree	4	fs	21 - 27 m				●
Maackia amurensis	Amur Maackia	3	fs	6 - 9 m			●	
Malus spp.	Crab Apple - Ornamental	4 - 8	fs-psh	4.5 - 6 m		●	●	
Morus alba	Mulberry	4	fs-psh	9 - 15 m			●	
Nyssa sylvatica	Blackgum, Black Tupelo	3	fs-psh	9 - 15 m				●
Phellodendron amurense	Amur Corktree	3	fs	9 - 14 m				●
Pinus nigra	Austrian Pine	4	fs	15 - 18 m			●	
Pinus ponderosa	Ponderosa Pine	3	fs	18 - 30 m	●			
Platanus acerifolia	London Planetree	4	fs-psh	21 - 30 m			●	
Platanus racemosa	Western or California Sycamore	7	fs	12 - 24 m			●	
Populus spp. *	Cottonwood	2 - 3	fs	40 m			●	
Populus tremuloides	Trembling Aspen, Quaking Aspen	1	fs-psh	9 - 12 m			●	●
Prunus cerasifera	Flowering Plum	4	fs	4.5 - 9 m		●		
Prunus maackia	Amur Cherry	2	fs-psh	10.5 - 13.5 m			●	
Prunus padus commutata	Mayday Tree	3	fs-psh	9 - 12 m			●	
Prunus serotina	Black Cherry	3	fs-psh	15 - 18 m			●	
Prunus virginiana	Chokecherry	2	fs	6 - 9 m			●	

TREES		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
					Very Low	Low	Medium	High
Scientific Name	**Common Name**							
Acer circinatum *	Vine Maple	4	fs-psh	4.5 - 6 m			●	
Acer ginnala	Amur Maple	2	fs-psh	4.5 - 6 m			●	
Acer glabrum *	Rocky Mountain Maple	4	fs-psh	3 - 4.5 m			●	
Acer grandidentatum *	Big-tooth Maple	4	fs-psh	3 - 6 m			●	
Acer macrophyllum	Bigleaf Maple	5	fs	9 - 23 m				●
Acer palmatum	Japanese Maple	5 - 6	ps	4.5 - 7.5 m				●
Acer platanoides	Norway Maple	3	fs	12 - 15 m			●	●
Acer rubrum	Red Maple	3	fs	12 - 18 m				●
Acer saccharinum	Silver Maple	3	fs	15 - 21 m			●	●
Aesculus hippocastanum	Horsechestnut	3	fs	12 - 15 m			●	
Alnus rubra *	Red Alder	5	fs-psh	13 - 15 m			●	
Alnus tenuiflolia *	Mountain Alder	5	fs	6 - 7.5 m			●	
Amelanchier alnifolia	Saskatoon	4	fs-psh	2.5 - 3.5 m		●		
Arbutus menziesii *	Madrone	7	fs	6 - 30 m		●		
Betula occidentalis *	Water Birch	2	fs-sh	6 - 9 m				●
Betula spp.	Birch	2 - 9	fs	9 - 12 m				●
Carpinus betulus	Hornbeam	4	fs	12 - 18 m				●
Catalpa speciosa	Catalpa	4	fs	12 - 15 m			●	
Celtis occidentalis	Common Hackberry	2	fs-psh	12 - 15 m			●	
Cercis canadensis	Eastern Redbud	4	fs	7.5 - 10.5 m			●	
Cornus florida	Flowering Dogwood	5	fs	6 - 9 m				●
Crataegus spp.	Hawthorn	3 - 4	fs	4.5 - 6 m			●	
Fagus sylvatica	European Beech	4	fs	15 - 18 m				●
Fraxinus americana	White Ash	3	fs	12 - 18 m			●	
Fraxinus pennsylvanica	Green Ash	3	fs	12 - 18 m		●	●	●
Ginkgo biloba	Ginkgo, Maidenhair Tree	3	fs	15 - 25 m			●	

Prunus virginiana 'Schubert'	Schubert Chokecherry	3	fs-psh	6 - 9 m			●	
Pyrus spp.	Pear	3 - 8	fs	9 - 15 m			●	
Quercus alba	White Oak	3	fs	15 - 25 m				●
Quercus falcata	Southern Red Oak	7	fs	21 - 24 m				●
Quercus garryana *	Garry Oak	6	fs	12 - 27 m				●
Quercus macrocarpa	Bur Oak	2	fs	21 - 24 m			●	
Quercus palustris	Pin Oak	4	fs	15 - 21 m			●	
Quercus rubra	Red Oak	4	fs	18 - 23 m			●	
Rhus copallina	Shining Sumac	4	fs	8 m		●		
Rhus typhina	Staghorn Sumac	3	fs-psh	4.5 - 7.5 m		●	●	
Robinia psheudoacacia 'Purple Robe'	Purple Robe Locust	3	fs	9 - 12 m		●		
Salix babylonica	Weeping Willow	5	fs	9 - 12 m				●
Sassafras albidum	Sassafras	4	fs-psh	9 - 18 m				●
Sophora japonica	Japanese Pagoda Tree	4	fs-psh	15 - 21 m			●	
Sorbus aucuparia	European Mountain Ash	3	fs-psh	6 - 9 m		●	●	
Sorbus scopulina *	Western Mountain Ash	2 - 4	fs-psh	15 - 25 m				●
Tilia spp.	Linden						●	●

SHRUBS		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
					Very Low	Low	Medium	High
Scientific Name	**Common Name**							
Amelanchier sp.	Saskatoon, Serviceberry	4	fs-psh	2.5 - 3.5 m		●		
Amorpha fruticosa *	False Indigo, Indigobrush	4	fs-psh	4.5 m			●	
Aronia spp.	Chokeberry	3 - 4	fs-psh	1.8 - 3 m			●	
Atriplex sp. *	Saltbrush	6	fs	0.9 - 1.8 m	●			
Berberis sp.	Barberry	4 - 9	fs	0.45 - 1.5 m		●		
Buddleia sp.	Butterfly Bush	5	fs	3 - 4.5 m			●	
Caluna vulgaris	Heather	4	fs-psh	10 - 60 cm			●	
Caragana arborescens	Siberian Peashrub	2	fs-psh	4.5 - 6 m	●	●		

SHRUBS		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
					Very Low	Low	Medium	High
Scientific Name	**Common Name**							
Caryopteris x clandonensis	Blue-mist Spirea	5	fs-psh	0.90 - 1.5 m		●		
Ceanothus gloriosus	Point Reyes Ceanothus	7	fs-psh	30 - 90 cm		●		
Ceanothus ovatus	Ceanothus	4	fs-psh	60 - 90 cm		●		
Ceanothus prostratus *	Mahala Mat	5	fs	2.5 - 7.5 cm		●		
Ceanothus spp.	Snowbrush, Buckbrush, Sticky Laurel	4	fs-psh	0.5 - 3 m		●		
Chaenomeles spp.	Quince	4	fs-psh	0.6 - 3 m			●	
Chrysothamnus spp.	Rabbitbrush, Rabbitbush	3	fs	1 m	●			
Cistus purpureus	Orchid Rockrose	8	fs	0.90 - 1.20 m		●		
Cornus sericea	Red-twig Dogwood, Redosier Dogwood	2	fs	2.1 - 3 m		●	●	●
Corylus cornuta *	Beaked Hazelnut, Filbert	4	fs-psh	1.2 - 2.4 m		●		
Cotinus coggygria	Smoke Tree	4	fs	3 - 4. 5 m		●		
Cotoneaster acutifolius	Cotoneaster, Peking	4	fs-psh	1. 8 - 3 m		●	●	
Cotoneaster apiculatus	Cotoneaster, Cranberry	4	fs-psh	90 cm			●	
Daphne x burkwoodii	Daphne, Carol Mackie	4	fs-psh	0.60 - 1.2 m			●	
Elaeagnus commutata	Silverberry	2	fs	1. 8 - 3.5 m		●		
Euonymus alatus 'Compactus'	Burning Bush	4	fs-psh	1.2 - 1.8 m				●
Forsythia spp.	Forsythia	4 - 5	fs	2.5 - 3 m		●	●	
Gaultheria shallon	Salal	6	fs-psh	0.30 - 3 m				●
Hamamelis spp.	Witchhazel	3 - 5	fs-psh	1.8 - 9 m			●	
Hibiscus syriacus	Rose of Sharon	5	fs-psh	2.5 - 3.5 m			●	
Holodiscus discolor	Oceanspray	5	fs-psh	1.8 - 2.7 m			●	
Hydrangea quercifolia	Oakleaf Hydrangea	5	fs-psh	1.2 - 1.8 m			●	
Kerria japonica	Japanese Kerria	4	ps	0.9 - 1.8 m			●	
Ligustrum spp.	Privet	3-8	fs-psh	1.8 - 4.5 m			●	
Lonicera tatarica	Tatarian Honeysuckle	3	fs-psh	3 - 3.5 m			●	

SHRUBS		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
					Very Low	Low	Medium	High
Scientific Name	**Common Name**							
Mahonia aquifolium	Oregon Grape	3	fs-psh	1.5 - 1.8 m		●	●	
Mahonia repens	Creeping Holly	3	fs-psh	30 - 45 cm			●	
Paxistima myrtifolia	Oregon Boxwood	5	fs-psh	0.30 - 1.2 m				●
Philadelphus sp.	Mock Orange	4	fs-psh	1.8 - 2.4 m		●	●	
Physocarpus opulifolius	Ninebark	2	fs-psh	1.5 - 3 m		●	●	
Potentilla fruticosa	Potentilla, Cinquefoil	2	fs-psh	0.3 - 1.2 m		●		
Prunus besseyi	Western Sandcherry	3	fs-psh	1.2 - 1.8 m			●	
Prunus cistena	Purple-Leaf Sand Cherry	2	fs-psh	2 - 3 m			●	
Prunus tomentosa	Nanking Cherry	2	fs-psh	1.8 - 3 m			●	
Prunus triloba	Flowering Almond / Double Flowering plum	3	fs-psh	3.5 - 4.5 m		●	●	
Prunus virginiana melanocarpa*	Western Chokecherry	2	fs-psh	5.5 - 7.5 m			●	
Purshia tridentata *	Antelope Bitterbrush	3	fs	1 - 2 m			●	
Pyracantha coccinea	Firethorn / Pyrcantha	6	fs-psh	1.8 - 5.5 m			●	
Rhamnus frangula	Tallhedge Glossy Buckthorn	2	fs-psh	2.5 - 3.5 m			●	
Rhododendron macrophylum*	Pacific Rhododendron	6	fs-psh	1.8 - 3.6 m				●
Rhododendron occidentale	Western Azalea	6	fs-psh	1.5 m				●
Rhus aromatica	Fragrant Sumac	3	fs-psh	0.6 - 1.8 m	●			
Rhus glabra	Smooth Sumac	2	fs-psh	2.75 - 4.5 m		●		
Rhus trilobata *	Sumac, Skunkbrush	4	fs-psh	0.9 - 1.8 m		●		
Ribes alpinum	Alpine Currant	2	fs-psh	0.90 - 1.8 m		●	●	
Rosa rugosa 'Hansa'	Rugosa Rose	2	fs-psh	1.5 - 1.8 m		●	●	
Rosa woodsii *	Wood's Rose	4	fs-psh	0.90 - 1.8 m			●	
Rubus sp.	Raspberry	3 - 5	fs-psh	2 - 150 cm			●	
Salix spp.	Willow e.g. Blue Fox	2	fs	1.8 - 3 m				●
Sambucus spp.	Elderberry	3 - 5	fs-psh	1.5 - 9 m		●		

Santolina chamaecyparissus	Santolina, Grey Lavender, Lavender Cotton	6	fs	30 - 60 cm		●		
Shepherdia spp.	Buffaloberry	2	fs	1.8 - 3.0 m	●			
Spirea alba *	Meadowsweet	3	fs-sh	0.9 - 1.8 m			●	
Spiraea douglasii	Western Spirea, Hardhack	4	fs-psh	0.90 - 1.8 m			●	
Spiraea spp.	Spirea	3	fs-psh	0.60 - 1.2 m		●	●	
Symphoricarpos albus	Snowberry	3	fs-psh	1.2 - 1.8 m		●		
Syringa vulgaris	Common Lilac	3	fs-psh	1.5 - 4.5 m		●	●	
Vaccinum spp.	Blueberry	2 - 8	fs-psh	0.15 - 3.5 m			●	
Viburnum acerifolium	Maple Leaf Viburnum	3	sh	1.2 - 1.8 m			●	
Viburnum edule *	High-bush Cranberry	5	fs	1.8 - 2.5 m			●	
Viburnum trilobum	Cranberry Bush	2	fs-psh	1.2 - 3.5 m			●	

VINES AND GROUNDCOVER		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
					Very Low	Low	Medium	High
Scientific Name	**Common Name**							
Ajuga reptans	Carpet Bugle	4	fs-psh	10 - 25 cm			●	
Antennaria rosea	Pussytoes	4	fs	10 - 30 cm		●	●	
Arctostaphylos uva-ursi	Kinnickinnick	2	fs-psh	10 - 20 cm	●	●		
Armeria maritima	Thrift	4	fs-psh	15 - 25 cm		●		
Artemisia caucasica	Silver Spreader	4	fs-psh	15 - 20 cm		●		
Artemisia stelleriana	Beach Wormwood, Dusty Miller	3	fs	20 cm		●		
Campshis radicans	Trumpet Vine	4	fs	6 - 12 m			●	
Cerastium tomentosum	Snow-In-Summer	3	fs-psh	15 - 30 cm		●		
Clematis spp.	Clematis	3 - 5	ps	1.5 - 1.8 m				●
Cotoneaster dammeri	Cottoneaster, Bearberry	5	fs-psh	30 - 45 cm			●	
Cotoneaster horizontalis	Cotoneaster, Horizontalis	4	fs-psh	60 - 90 cm			●	
Duchesnea indica	Mock Strawberry	5	fs-psh	<15 cm		n/a		
Euonymus fortunei	Wintercreeper	4	fs-sh	10 - 15 cm			●	

Gaultheria procumbens	Wintergreen	3	fs-psh	15 cm			●	
Lamium sp.	Dead Nettle	3	fs-psh	10 - 30 cm			●	
Lathyrus latifolius	Perrenial Sweet Pea	3	fs-psh			●		
Liriope spicatum	Lily-turf	4	fs-sh	20 - 30 cm			●	
Lonicera sp.	Honeysuckle	4	fs-psh	spread 3+m		●		
Pachysandra terminalis	Japanese Spurge	5	fs-psh	15 - 20 cm			●	
Parthenocissus quinquefolia	Virginia Creeper	3	fs-sh	9 - 15+ m		●	●	
Potentilla neumanniana 'Nana'	Spring Cinquefoil, Creeping Potentilla	4	fs-psh	5 - 10 cm			●	
Rosa setigera	Climbing Rose	4	fs-psh	1.0 - 4.5 m			●	
Sedum sp.	Stonecrop, Sedum (creeping)	3	fs-psh	5 - 30 cm	●			
Thymus praecox	Creeping Thyme	3 - 4	fs-psh	2.5 - 10 cm		●	●	
Thymus pseudolanuginosus	Wooly Thyme	3	fs	7.5 - 10 cm		●		
Thymus spp.	Thyme	3 - 5	fs	1 cm		●		
Vinca major	Large Periwinkle	7	ps-sh	30 - 45 cm			●	
Vinca minor	Periwinkle	3	fs - sh	7 - 15 cm			●	

GRASSES		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
					Very Low	Low	Medium	High
Scientific Name	**Common Name**							
Agropyron cristatum	Wheatgrass, Crested, Western	3	fs	50 - 100 cm	●			
Bouteloua gracilis	Mosquito Grass, Blue Grama Grass	3	fs	30 cm	●	●		
Buchloe dactyloides	Buffalograss	4	fs	30 cm		●	●	●
Carex spp.	Sedges	4 - 8	fs-psh	30 - 45 cm				●
Dactylis glomerata *	Orchardgrass	5	fs-psh	30 - 60 cm		●		
Elymus elymoides *	Squirreltail Grass	3	ps	30 - 60 cm		●		
Festuca arundinacea	Fescue, Tall	2	fs-psh	1.2 m			●	●
Festuca cinerea	Fescue, Blue	4	fs-psh	10 - 20 cm		●		
Festuca rubra	Fescue, Creeping Red	5	fs-psh	5 - 7.5 cm				●

Koeleria macrantha	Junegrass	4	fs-psh	30 - 60 cm			●	
Lolium spp.	Ryegrass	4 - 6	fs	30 - 80 cm		●	●	
Pascopyrum smithii *	Western Wheatgrass	5	fs	30 - 90 cm		●		
Poa fendleriana *	Muttongrass	3	ps	30 - 60 cm			n/a	
Poa secunda *	Sandberg Bluegrass	2	fs	30 cm			n/a	
Scirpus atrovirens *	Bulrushes	3	fs	1 - 1.5 m			n/a	
Sporobolus cryptandrus *	Sand Dropseed	5	fs	1 m			n/a	
Heterostipa comata *	Porcupine Grass, Needle-and-thread Grass	3	psh	90 cm		●		

PERENNIALS AND BIENNIALS		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
					Very Low	Low	Medium	High
Scientific Name	**Common Name**							
Achillea sp.	Yarrow	4	fs	15 - 90 cm	●			
Aconitum spp. *	Monkshood	3	fs-psh	45 - 60 cm				●
Alcea rosea	Hollyhock	3	fs	120 - 180 cm			●	●
Alchemilla sp.	Lady's Mantle	3	ps	30 cm			●	
Allium sp.	Chives	4	fs-psh	30 - 60 cm		●	●	
Anaphalis margaritacea	Pearly Everlasting	4	fs	20 - 90 cm		●		
Anemone blanda	Windflower	5	fs-psh	15 - 30 cm			●	
Aquilegia sp.	Columbine	3	fs-psh	25 - 90 cm			●	
Arabis sp.	Rockcress	3	fs	<30cm			●	
Armeria maritima	Sea Pinks	3	fs-psh	15 - 30 cm			●	
Artemisia frigida *	Pasture Sage, Fringed Sage	3	fs	30 - 60 cm	●			
Asarum caudatum *	Wild Ginger, Winterfat	7	ps	10 cm			●	
Asclepias incarnata	Swamp Milkweed	3	fs-psh	1.2 m			●	
Aster puniceus *	Swamp Aster	2	fs-psh	50 - 100 cm			●	
Aster spp.	Aster	3	fs	0.15 - 1.8 m			●	
Aubrieta deltoidea	False Rockcress	4	fs-psh	7.5 - 20 cm		●		
Aurinia saxatalis	Basket of Gold	3	fs	20 - 45 cm		●	●	

PERENNIALS AND BIENNIALS		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
					Very Low	Low	Medium	High
Scientific Name	**Common Name**							
Bergenia cordifolia	Bergenia	3	fs-psh	30 - 35 cm				●
Campanula rotundifolia	Common Harebell	3	fs-psh	15 - 30 cm			●	
Centranthus ruber	Red Valerian	4	fs-psh	60 - 75 cm		●		
Claytonia lanceolata *	Spring Beauty	5	fs	15 - 45 m				●
Convallaria majalis	Lily-of-the-valley	2	sh	<30 cm				●
Coreopsis auriculata var. Nana	Coreopshis, Dwarf Mouse Ear	3	fs	30 - 60 cm		●		
Coreopsis sp.	Coreopshis, Tickseed	3	fs-psh	25 - 60 cm		●		
Delosperma cooperi	Ice Plant - Purple	5	fs-psh	2.5 - 10 cm		●		
Delosperma nubigenum	Ice Plant - Yellow	4	fs-psh	2.5 - 7.5 cm		●		
Delphinium sp.	Delphinium	3	fs-psh	30 - 210 cm			●	
Dianthus sp.	Dianthus, Garden Carnation, Pinks	3	fs-psh	5 - 30 cm			●	
Dodecatheon meadia	Shooting Star	4	sh-psh	50 cm				●
Doronicum sp.	Leopard's Bane	4	fs-psh	30 - 60 cm			●	
Echinacea purpurea	Purple Coneflower	3	fs	60 - 90 cm			●	
Epilobium angustifolium *	Fireweed	3	fs-psh	60 - 90 cm		●		
Erigeron hybrids	Fleabane	4	fs	<30 cm		●		
Erysimum asperum *	Western Wallflower	3	fs-psh	30 cm			●	
Eupatorium maculatum	Joe Pye Weed	5	fs-psh	1 - 1.5 m			●	
Eupatorium perfoliatum	Boneset	3	fs-psh	50 - 100 cm			●	
Euphorbia epithymoides	Cushion Spurge	3	fs	30 - 45 cm		●		
Fragaria sp. *	Strawberry, Wild	5	fs	20 - 25 cm			●	
Gaillardia sp.	Blanket Flower	3	fs	20 - 90 cm		●		
Galium boreale *	Northern Bedstraw	5	sh	<30 cm				●
Geranium cinereum	Cranesbill, Grayleaf	4	fs-psh	10 - 15 cm		●	●	
Geranium maculatum	Cranesbill, Wild Geranium	5	fs-psh	45 - 75 cm			●	

PERENNIALS AND BIENNIALS

Scientific Name	Common Name	Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
					Very Low	Low	Medium	High
Onoclea sensibilis	Sensitive Fern	4	sh-psh	50 cm				●
Opuntia polycantha *	Prickly Pear Cactus	3	fs	5 - 60 cm		●		
Papaver orientale	Oriental Poppy	3	fs-psh	60 - 90 cm			●	
Penstemon spp.	Penstemon, Beardtongue	3	fs-psh	10 - 120 cm		●		
Perovskia atriplicifolia	Russian Sage	4	fs	90 - 150 cm		●	●	
Phlox subulata	Moss Phlox	3	fs	10 - 15 cm			●	
Platycodon grandiflorus	Balloon Flower	3	fs	75 - 90 cm			●	
Polemonium spp.	Jacob's Ladder	2	fs-psh	30 - 90 cm			●	
Potentilla fissa *	Bigflower Cinquefoil, Leafy Potentilla	4	ps	30 cm		n/a		
Potentilla nepalensis	Nepal Cinquefoil	5	fs-psh	45 - 60		●		
Pulsatilla patens	Pasque Flower	5	fs-psh	30 cm			●	●
Ratibida columnifera	Prairie Coneflower, Mexican Hat	3	fs	60 cm			●	
Rudbeckia fulgida	Black-eyed Susan	3	fs	60 - 90 cm			●	
Salvia spp.	Sage, Perennial Salvia	3 - 5	fs	30 - 120 cm		●	●	
Saponaria sp.	Soapwort	2	fs	10 - 23 cm		●		
Saxifraga hirsuta	Saxifrage	5	fs-psh	15 cm			●	●
Sedum spectabile	Stonecrop, Sedum (upright)	3	fs-psh	30 - 45 cm		●		
Sempervivum sp.	Hen-and-chicks	4	fs-psh	5 - 15 cm	●			
Solidago missourinesis *	Prairie Goldenrod, Missouri Goldenrod, Smooth Goldenrod	3	fs	30 - 60 cm			●	
Stachys byzantina	Lamb's Ears	4	fs	30 - 38 cm		●	●	
Tanacetum coccineum	Painted Daisy	5	fs-psh	60 cm		●		
Thermopsis montana	False Lupine	3	fs-psh	60 - 90 cm			●	
Tradescantia occidentalis *	Prairie Spiderwort, Western Spiderwort	4	fs-psh	45 cm		●		

PERENNIALS AND BIENNIALS

Scientific Name	Common Name	Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
					Very Low	Low	Medium	High
Geranium sanguineum	Cranesbill, Blood-red	3	fs-psh	10 - 30 cm			●	
Geum triflorum *	Old Man's Whiskers, Prairie Smoke	5	fs-psh	45 cm			●	
Helianthemum nummularium	Sun Rose	3	fs-psh	30 - 50 cm		●		
Hemerocallis hybrids	Daylily	3	fs-psh	30 - 120 cm		●	●	
Heuchera sanguinea	Coral Bells, Heuchera	3	fs-psh	30 - 50 cm		●	●	
Hosta sp.	Hosta, Plantain Lily	3	fs-psh	15 - 90 cm				●
Iberis sempervirens	Candytuft	3	fs	23 - 30 cm			●	
Ipomopsis aggregata *	Scarlet Gilia	7	fs-psh	30 - 60 cm	●			
Iris hybrids	Iris	3	fs	40 - 60 cm		●	●	
Iris missouriensis *	Rocky Mountain Iris	3	fs	30 - 60 cm			●	
Kniphofia uvaria	Red-Hot Poker	4	fs	30 - 120 cm		●	●	
Lavandula sp.	Lavender	4	fs	30 - 60 cm			●	
Leucanthemum x superbum	Shasta Daisy	4	fs-psh	60 - 90 cm		●	●	
Leucocrinum montanum *	Sand Lily, Star Lily	6	fs	<30 cm		n/a		
Liatris puncata *	Dotted Gayfeather	3	fs	30 - 60 cm				
Limonium latifolium	Sea-lavender, Statice	4	fs	75 cm			●	
Linum perenne	Perennial Flax	2	fs-psh	30 - 50 cm		●		
Lupinus argenteus *	Silver Lupine	3	ps	30 - 90 cm		●		
Lupinus hybrids	Lupine, Russell Hybrids	4	fs-psh	45 - 120 cm			●	
Medicago sativa	Alfalfa	5	fs	100 cm		n/a		
Mertensia lanceolata *	Narrow-leaved Chiming Bells	3	ps	30 - 60 cm		n/a		
Mertensia virginica	Virginia Bluebells	3	ps	50 cm				●
Monarda fistulosa	Wild Bergamot, Native Beebalm	3	fs-psh	30 - 60 cm		●		
Nepeta racemosa	Catmint	3	fs	30 - 60 cm		●	●	
Oenothera spp.	Primrose	3	fs-psh	15 - 30 cm		●		

Verbena hastata	Blue Vervain	3	fs	50 - 150 cm			●	
Veronica spicata	Veronica, Speedwell	3	fs-psh	2.5 - 15 cm			●	
Viola canadensis *	Canadian Violet	3	fs-psh	30 cm				●
Waldsteinia sp. *	Barren Strawberry	4	ps	<30 cm		n/a		
Yucca filamentosa	Yucca	4	fs-psh	60 - 90 cm	●			

ANNUALS		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
					Very Low	Low	Medium	High
Scientific Name	**Common Name**							
Antirrhinum majus	Snapdragon	n/a	fs	60 - 90 cm			●	●
Gazania ringens	Gazania	n/a	fs	20 - 40 cm			●	
Geranium sp.	Geranium	n/a	fs-psh	30 - 45 cm		●	●	
Lantana sp.	Lantana	n/a	fs	45 - 75 cm		●		
Lathyrus odoratus	Sweet Pea	n/a	fs-psh	2 m			●	
Salvia spp.	Salvia	n/a	fs	15 - 45 cm			●	
Senecio cineraria	Dusty Miller	n/a	fs	30 - 60 cm		●	●	
Viola sp.	Pansy	n/a	fs-psh	15 - 20 cm			●	●

BULBS		Hardiness Zone(s)	Sun / Shade	Approx. Mature Height	Water Use Category			
					Very Low	Low	Medium	High
Scientific Name	**Common Name**							
Allium cernum	Nodding Onion	3	fs-psh	30 cm			●	
Crocus sp.	Crocus	5 - 8	fs	6 - 14 cm		●		
Lilium sp.	Lily	4 - 5	fs-psh	60 - 180 cm			●	
Narcissus sp.	Daffodil	4	fs	30 - 60 cm		●		
Tulbaghia violacea	Society Garlic	7	fs	30 cm			●	
Tulipa sp.	Tulip	4	fs-psh	15 - 90 cm			●	

APPENDIX: B
LID Prefered Species List

B

PLANT LIST

BOTANICAL NAME	COMMON NAME
TREES	
Deciduous	
Betula papyrifera	Paper Birch
Fraxinus americana	White Ash
Populus balsamifera	Balsam Poplar
Populus tremuloides	Trembling Aspen
Quercus alba	White oak
Quercus rubra	Red Oak
Coniferous	
Abies balsamea	Balsam Fir
Picea glauca	White Spruce
Picea mariana	Black Spruce
Pinus resinosa	Red Pine

SHRUBS	
Amelanchier laevis	Smooth Serviceberry
Cornus amomum	Silky Dogwood
Cornus racemosa	Gray Dogwood
Cornus stolonifera	Red Osier Dogwood
Prunus virginiana	Choke Cherry
Rubus odoratus	Purple Flowering Raspberry
Sambucus canadensis	Common Elderberry
Spiraea alba	Narrow-leaved Meadowsweet
Symphoricarpos albus	Snowberry
Viburnum trilobum	High-Bush Cranberry

BOTANICAL NAME	COMMON NAME
PRAIRIE	
	Brigade hard Fescue
	LOW MAINTENANCE GRASS MIX
	Sandpiper Chewiings Fascue

SUBMERGENT (WET MEADOW)	
Agrostis scabra	Tickle grass
Beckmania syzigachne	Slough grass
Calamagrostis spp.	Reed grass
Carex spp.	Sedge
Deschampsia cespitosa	Tufted hairgrass
Equisetum spp.	Horsetail
Glyceria spp.	Manna grass
Juncus spp.	Rush
Mentha arvensis	Wild mint
Spartina pectinata	Prairie cordgrass
Spartina pectinate	Prairie cordgrass
Scirpus cyperinus	Wool-grass
Scirpus microcarpus	Small-fruited bulrush
Symphyotrichum spp.	Aster
Triglochin maritima	Seaside arrowgrass
Veronica americana	American brookline

BRAIDED FASCINES	
Salix bebbiana (30%)	Beaked Wilow (30%)
Salix discolor (20%)	Pussy Willow (20%)
Salix exigua (50%)	Sandbar Willow (50%)

BOTANICAL NAME	COMMON NAME
EMERGENTS	
Acorus americanus	Sweet flag
Alisma spp.	Water Plantain
Alisma triviale	Water plantain
Beckmania syzigachne	Slough grass
Bolboschoenus maritimus	Alkali bulrush
Calamagrostis spp.	Reed grass
Calla palustris	Water arum
Caltha palustris	Yellow marsh-marigold
Carex spp.	Sedge
Comarum palustre	Marsh cinquefoil
Eleocharis spp.	Spike rush
Equisetum spp.	Horsetail
Juncus spp.	Rush
Sagittaria cuneata	Arum-leaved arrowhead
Schoenoplectus acutus	Hardstem bulrush
Schoenoplectus tabernaemontani	Softstem bulrush
Scirpus cyperinus	Wool-grass
Scirpus microcarpus	Small-fruited bulrush
Sium suave	Common waterparsnip
Sparganium eurycarpum	Giant bur-reed
Sparganium natans	Small bur-reed
Triglochin maritima	Seaside arrowgrass
Typha latifolia	Common cattail
Veronica americana	American brookline
Zizania palustris	Northern wild rice

BOTANICAL NAME	COMMON NAME
FLOATING	
	Canada Water Lily