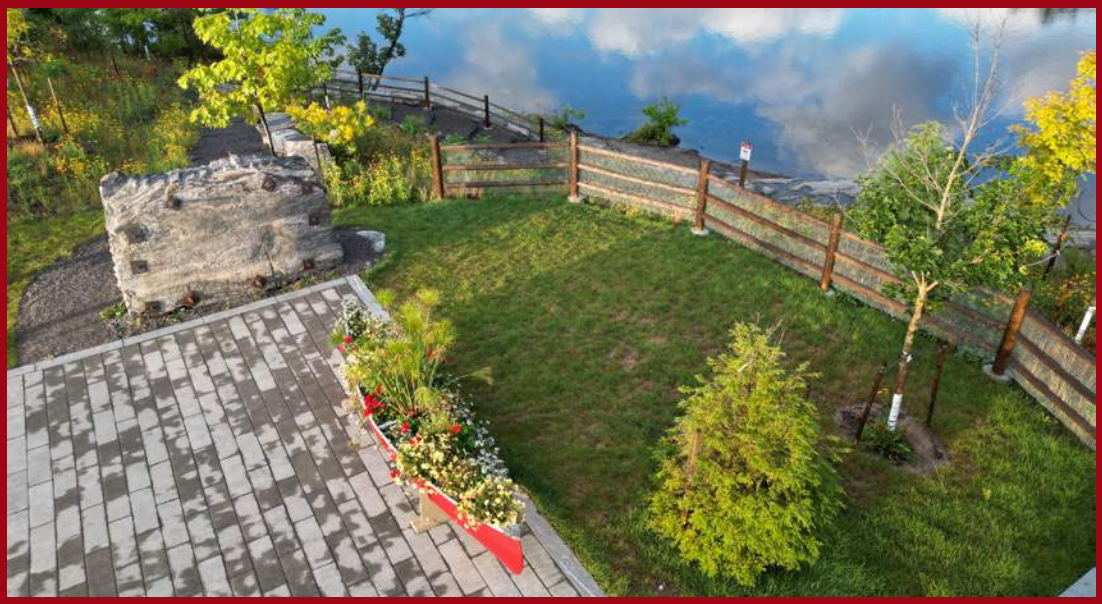
Design Manual for Parks and Trails in Muskoka

a guide for designing parks and trails that blend seamlessly with the Township of Muskoka Lake's natural scenery



TOWNSHIP OF MUSKOKA Lakes

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kfla
Kendall Flower Landscape Architecture

TOWNSHIP OF MUSKOKA Lakes

1.0 INTRODUCTION

The 2022 Parks and Recreation Master Plan emphasized the need for a Parks and Trails Design Manual to guide future development endeavors. The resulting document will play a pivotal role in shaping the Township's parks and open spaces, and will seek to incorporate best practices while also encouraging responsiveness in design, taking into account each site's unique attributes and context.

The Muskoka region boasts a long history as a recreation-based destination, centred around the area's iconic water, granite and forested landscapes. In the development of parks, open spaces and trails systems, the Township faces a significant challenge in balancing the needs of permanent residents, seasonal residents and short term visitors, all while preserving the natural ecology that has drawn so many to the Muskoka Lakes.

This design manual is intended to serve as a comprehensive guide to the development and maintenance processes for parks, open spaces and trails throughout the Township. The policies, standard drawings and Best Management Practices (BMPs) contained herein provide a manual to guide Township staff, consultants (planners, landscape architects and engineers etc.), and contractors through the planning, design, construction, maintenance and renewal of parks, trails and recreational open space within the Township of Muskoka Lakes.

This document sets a high standard for the development of sustainable, high performance parks and trails landscapes within often sensitive ecologies. Implementation of these guidelines will result in the gradual expansion and enhancement of a beautiful, equitable, inspiring and sustainable network of open space assets throughout the Township of Muskoka Lakes.


MUSKOKA
RAYMOND TRAIL
LEAVE ONLY YOUR FOOTPRINTS

REGULATIONS & POLICIES

2.1 Planning Criteria

Parks, trails and open space policies are described in the Consolidated Official Plan. Parks and trails development is subject to Township Policies and By-laws including, but not limited to:

- Site Plan Control By-Law
- Comprehensive Zoning By-Law
- Development Charges By-Law
- Applicable Environmental, Fiscal and Planning Township Policies

2.2 Applicable Regulations

The development of parks, trails and open space is subject to applicable provincial regulations, including but not limited to:

- Ontario Planning Act
- Ontario Building Code (OBC)
- Accessibility for Ontarians with Disabilities Act (AODA)
- Construction Act of Ontario

2.3 Public Parks and Open Space Zoning Designations

Refer to the Comprehensive Zoning By Law for detailed descriptions. Note that private parks are required to conform to site plan and zoning requirements, however Township parks are not required to do so.

Institutional Zone (I)	Arenas, community centres, cemeteries, educational institutions and ancillary open space uses (including playgrounds, sports fields, courts, parking etc.)
Environmental Protection Zone (EP)	Passive recreation, including: boardwalks, pedestrian trails, ancillary low-impact uses.
Waterbody Open Space Zone (WBOS)	Public boat launch and dock, water sports centre, cranberry production/tourism area, future water-based trail system.
Open Space (OS, EP)	Conservation and forestry uses, museums, open space recreation (including parks, fields, courts and beaches etc.), trails and ancillary buildings and parking.
Other	Recreation and hiking trails by access/easement agreement

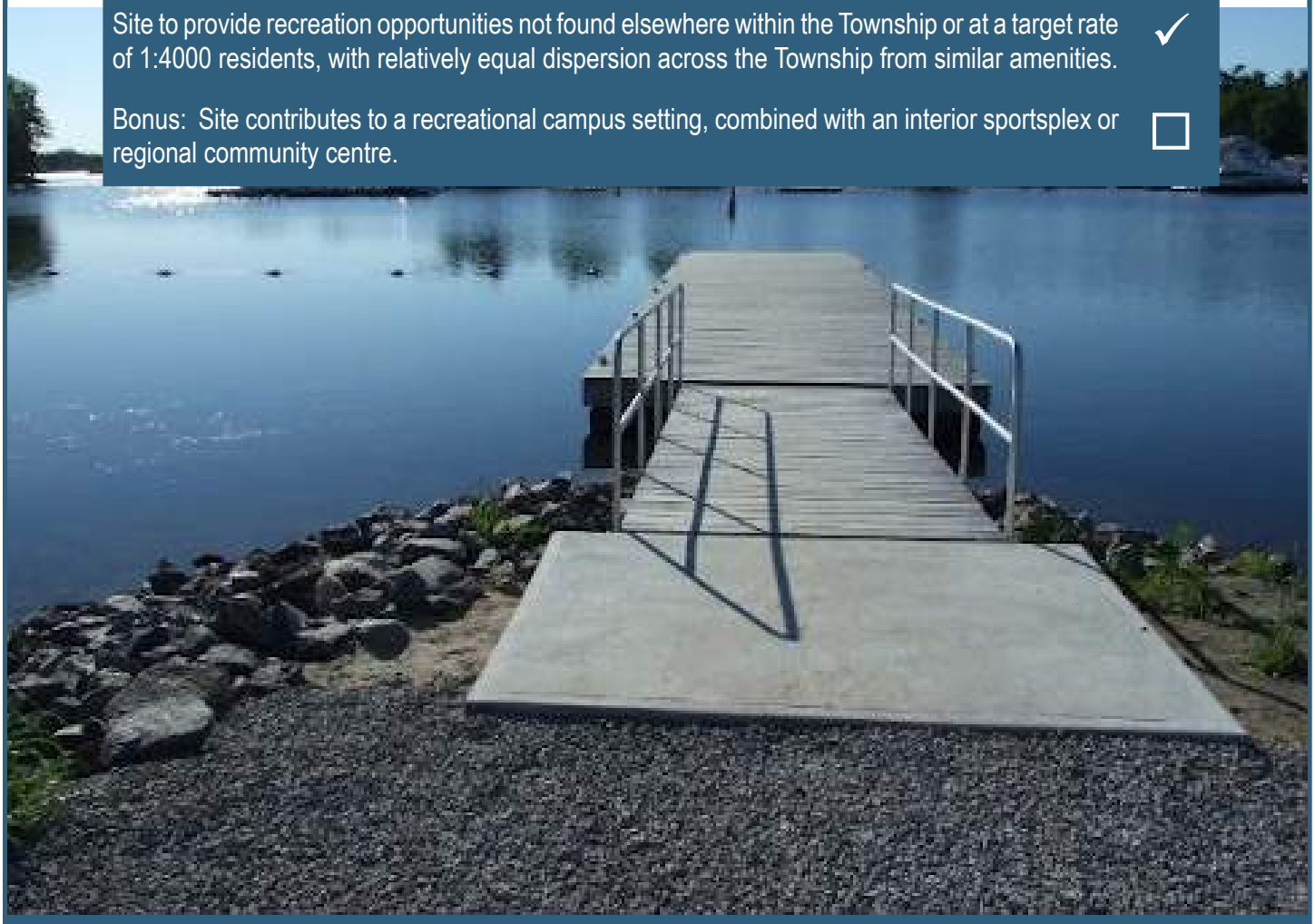
CLASSIFICATION OF PARKS AND TRAILS

3.1 Destination Parks

May be of any size, but typically greater than 6 hectares in size. Including either natural features or active programming of significance within the region. Includes active and/or passive recreation opportunities that meet the needs of Township residents and are also of interest to visitors/tourists. May be comprised of significant natural open space or programmed open space. Often related to the provision of major recreation or leisure activities and may include significant active recreation draws such as competition scaled multi-field or court hubs and campus-style recreation hubs, combined with a regional interior recreation centre or sportsplex.

Destination Park Location Criteria:

Site to provide multiple recreation opportunities at a scale suitable to service the Township's year-round and seasonal populations.	✓
Site to provide recreation opportunities not found elsewhere within the Township or at a target rate of 1:4000 residents, with relatively equal dispersion across the Township from similar amenities.	✓
Bonus: Site contributes to a recreational campus setting, combined with an interior sportsplex or regional community centre.	☐



3.2 Community Parks

Serving more than one neighbourhood within the Township, but are not intended to serve the Township as a whole. May include active and/or passive uses. May include intensive recreational uses such as sports fields, sports courts, playgrounds and water play, amenity/support buildings and parking facilities.

Community Park Location Criteria:

Site contributes to a general, even spacing and coverage of community parks across the Township, with a target rate of 1.2 hectares of community park area per 1000 population.	✓
Site can provide both active and passive recreation uses, typically including a large and unique playground area, and sitting and walking opportunities, and ideally including one or more active sports field or court type facility, or specialty amenity (E.g. off leash dog area, beach, etc.).	✓
Bonus: Site is typically not less than 4 hectares in size.	☐
Bonus: Site can be accessed by multiple modes, including trail or on-road bicycle lane connections to the site, boat access, vehicular access and/or walkability from nearby residential areas.	☐
Bonus: Partnership development and management model (E.g. in a school-park campus setting).	☐

3.3 Neighbourhood Parks

Catering to the recreation needs of residents who live in the general vicinity and can easily walk or bike to the park. May include a combination of active and passive recreation uses, including minor sports fields, multi-purpose courts, playgrounds and open/flexible play areas and trails.

Neighbourhood Park Location Criteria:

Site to provide a walkable and/or bikable recreation opportunity for residents in the immediate and nearby vicinity, typically including a playground area and additional minor amenity (E.g. non-standard or class 'C' type field for self-organized sports, volleyball court, walking trail).	✓
Site typically not less than 0.5 hectares in size.	✓
Bonus: Site functions as a node along a recreational trail or biking route.	☐
Bonus: Site has an active community advocacy group with an interest in utilizing the provided amenities and providing input to the planning and development process.	☐

3.4 Parkettes

Local, and generally located in urban or residential ares, providing connections to larger parks and open spaces. Small open spaces that have limited recreational facilities. May include a small playground structure, but more typically consisting of passive programming, including seating (rest) areas or a small gathering space.

Parkette Location Criteria:

Site is in a central location, where people are likely to encounter and interact with the space by happenstance.	✓
Site is typically small, and may only be capable of supporting one minor amenity feature (E.g. simple play structure, heritage feature and/or short walking path to a seating or small gathering area.).	✓
Bonus: Site utilizes a parcel of land with otherwise limited development potential.	☐
Bonus: Parkette use and features compliment the immediate natural heritage or community context, including potential combination with a vista type function.	☐

3.5 Vistas

May be located in urban centres or in natural areas. Ideally accessible by multiple transportation types, such as trails, bicycle lanes, water and/or roadway. Include significant or quintessential 'Muskoka' views informative signage and opportunities for photography and seating areas.

Vista Location Criteria:

Site provides an opportunity for residents and visitors/tourists to view significant, quintessential or exemplary views of Muskoka waterbodies, ecology, heritage and/or geological formations.	✓
Site may be of any size.	✓
Bonus: Site functions as a node or rest location along an established recreational trail, biking route and/or scenic driving route.	☐
Bonus: Site has an active community advocacy group with an interest in utilizing the provided amenity and providing input to the planning and development process.	☐

3.6 Natural Open Space (Zoning OS, EP) & Trails

Including Township lands with significant natural features and landscapes such as forests, hazard lands, river and lakeside corridors, significant geological formations, environmentally sensitive areas and areas of significant wildlife habitat. These areas perform important biological and ecological functions and may provide passive recreational opportunities. Programming within natural open space areas may include hiking trails, multi-use recreation trails, boardwalks, docks, lookouts, passive rest areas and minor ancillary support buildings and site functions including washrooms, gazebo type shelters and parking facilities.

Natural Open Space - Programming & Development Criteria:

Site provides an opportunity for residents and/or visitors/tourists to explore and experience the Township's natural areas in a minimally developed context.	✓
Bonus: Site provides an opportunity to expand access to the Township's natural areas to broader user groups (E.g. Developing trails suitable for expanded winter use, including snowshoeing and x-country skiing. Developing trails in association with off-leash dog friendly and designated areas. Developing a water-based recreational trail system).	☐
Bonus: Development of trails or passive amenities within the natural open space area contribute to a greater network or system of trails and open space linkages and/or provide an opportunity to experience a particularly interesting or beautiful natural area.	☐

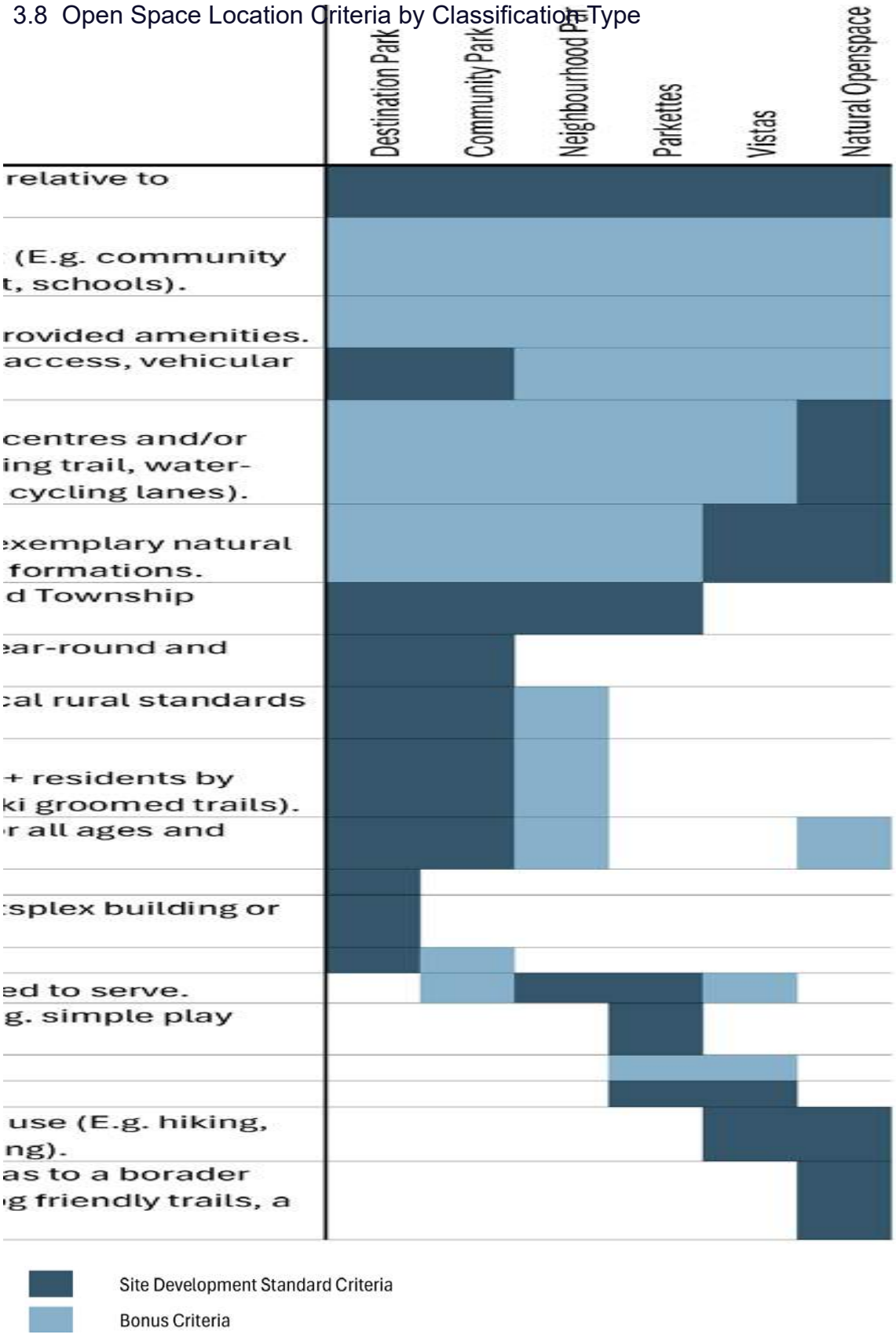
3.7 Trail Partnerships

In addition to Township open space lands with trail systems, Township-managed trail segments and tracts may also exist on lands not owned by the Township. Non-owned trails development should be pursued where an access/use agreement or easement can been established, or where other opportunities for formalized partnerships exist, including unopened road allowances and crown lands.

Trail Partnerships - Development Criteria:

Implementation of a trail (segment, connection or system) through lands that are owned by another entity will contribute to the overall connectivity of the Township's network of trails and/or open space linkages.	✓
The opportunity exists to establish a clear (legal) long-term agreement for use, which ideally includes the establishment of a permanent access or conservation easement across the portion of a parcel to be developed as a trail	✓
Bonus: The trail (segment, connection or system) will be located in an interesting, beautiful context, and/or leads to an interesting or beautiful destination.	☐

3.8 Open Space Location Criteria by Classification Type



3.9 Docks and Boat Launches

Docks and boat launches should be incorporated into larger waterfront parks where shoreline and waterbody conditions support boat access to the site. Docks and boat launches may be incorporated into any park classification type, with the size and type of docks reflecting level of anticipated use. In heavy-use areas, seek to provide a minimum 2200mm wide dock on permanent piers, with welded steel structural framing members. In lighter neighbourhood use areas, floating docks of minimum 1800mm width may be appropriate. Seek to incorporate boat launches where day parking facilities for vehicles and trailers can be provided, at a minimum target rate of one boat launch per Township lake or waterbody and where environmental impacts can be mitigated.

3.10 A Water-Based Recreational Trail System

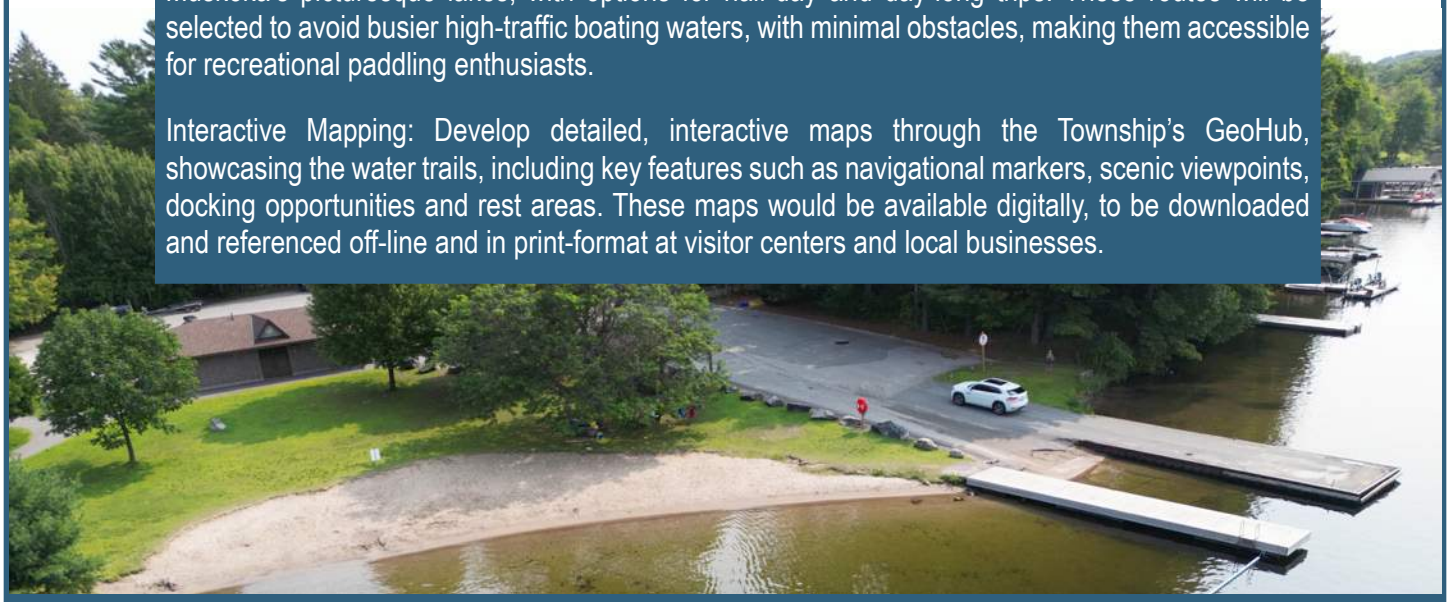
The Township of Muskoka Lakes is renowned for its stunning lakes and vibrant outdoor lifestyle. An opportunity exists to creatively integrate the region's lakes and rivers as an extension of the Township's parks and trails.

A proposed 'Water-Based Recreational Trail System' aims to seamlessly integrate canoeing, kayaking, stand-up paddleboarding (SUP), and boating into the municipality's recreational framework. This system would function much like a regional cycling network, with interconnected water routes and access points leading to engaging and supportive destinations throughout the Township.

Beginner-Friendly Canoe and Kayak Trails

Scenic Water Routes: Design a beginner-friendly, canoe, kayak and SUP trail that winds through Muskoka's picturesque lakes, with options for half-day and day-long trips. These routes will be selected to avoid busier high-traffic boating waters, with minimal obstacles, making them accessible for recreational paddling enthusiasts.

Interactive Mapping: Develop detailed, interactive maps through the Township's GeoHub, showcasing the water trails, including key features such as navigational markers, scenic viewpoints, docking opportunities and rest areas. These maps would be available digitally, to be downloaded and referenced off-line and in print-format at visitor centers and local businesses.



Access Points: Establish well-equipped access points at the beginning and end of each trail. These drop-in locations will include amenities such as boat ramps, canoe and kayak racks, parking, and restrooms, ensuring a smooth and convenient experience for users. Accessibility will be a top priority, with Accessibility for Ontarians with Disabilities Act (AODA) paths of travel as the minimum standard and consideration for wheelchair-accessible canoe/kayak launch systems.

Trail Signage: Install clear, informative signage along the trails to guide users and provide educational content about the local environment, wildlife, and history. Signage will also include safety tips and emergency contact information.

Comfort Stations: Set up basic amenities along the water-based trails, such as picnic areas, shaded rest stops, and emergency stations. These will offer comfort and safety, encouraging users to explore and enjoy the routes for extended periods.

Boating Day-Trip Itineraries

Curated Itineraries: Create a variety of day-trip itineraries starting from municipal boat-launch locations. Each itinerary will highlight different themes, such as cultural landmarks, natural wonders, waterfront dining experiences, or an interactive/online-linked swim-scavenger game with hub-targets, similar to 'Pokemon Go'. The various itineraries will provide diverse options for exploring Muskoka's waterways, encouraging participation from visitors and long-time residents alike.

Boat-Access Docks: Expand and enhance the Township's network of accessible docks in key urban centers and popular waterfront destinations. These docks will allow boaters to easily reach town centers, parks, and attractions, facilitating seamless exploration and enjoyment of Muskoka's vibrant communities. Accessibility will be a top priority in the design and enhancement of docks.

Waterfront Parks: Enhance waterfront parks along the routes with features like picnic tables, playgrounds and a balance of accessible scenic recreation trails vs. wilderness hiking trails, swimming and day-anchorage locations. Existing and enhanced Township parks and town docks will serve as ideal rest stops and destinations, offering opportunities for relaxation, discovery and recreation.

Local Partnerships: Partner with local businesses, other levels of government and tourism operators to offer additional docking locations, special promotions for boaters, such as discounts on meals, guided tours, or equipment rentals. These partnerships will enrich the visitor experience and support the local economy.

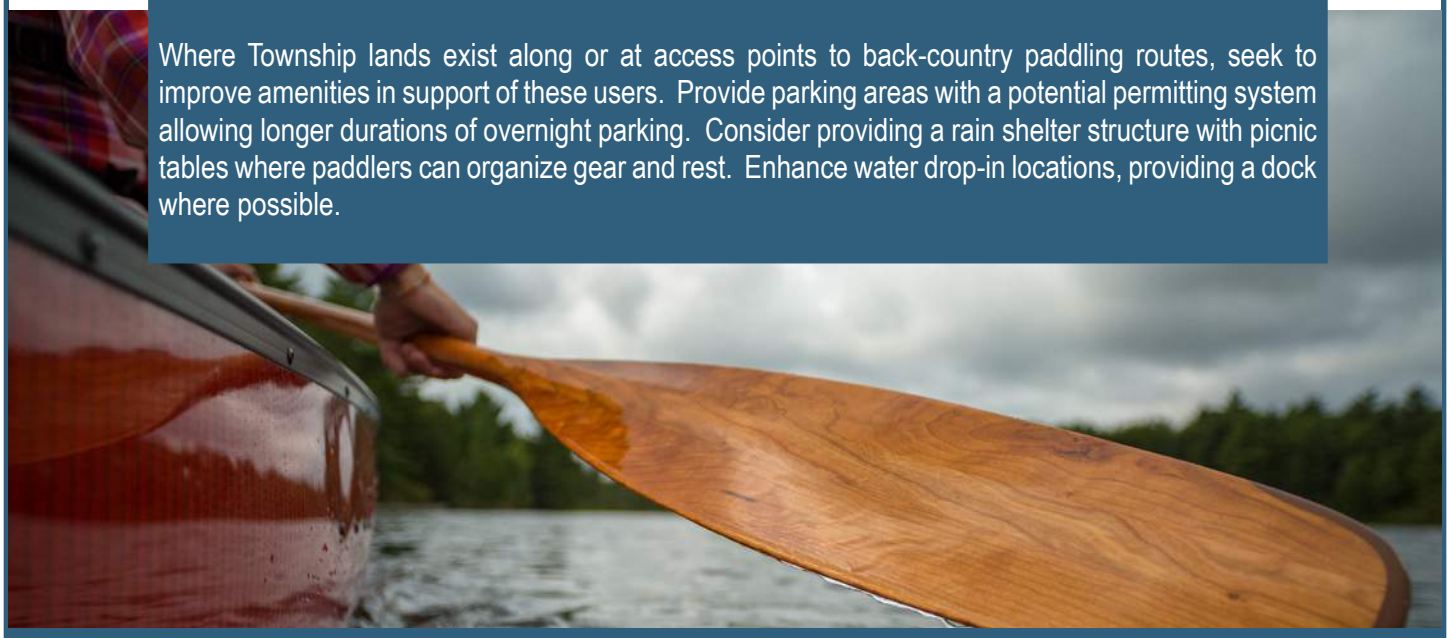
Safety and Accessibility: Ensure that all day-trip itineraries include comprehensive safety information and accessibility features. This may include providing clear directions to emergency services, accessible docking facilities, hazards along the route to be aware-of and first-aid stations along the routes.

The Nine-Mile Lake, to Gibson River, to Georgian Bay canoe route is one example of a long-established yet informal back-country adventure. This plan aims to elevate the route's accessibility, safety, and enjoyment for more advanced paddlers while preserving the backcountry nature and natural beauty of the area.

Back-Country Paddling Routes

Provide high-level mapping through the Township's GeoHub along with supporting information on existing back-country paddling routes with access points within the Township limits. Include information on gear rental, guide or purchasing opportunities in support of local businesses. Include key route highlights and hazards. Include educational information for paddlers on topics such as safe trekking, fire safety, environmental stewardship, pack-in-pack-out and leave no trace practices.

Where Township lands exist along or at access points to back-country paddling routes, seek to improve amenities in support of these users. Provide parking areas with a potential permitting system allowing longer durations of overnight parking. Consider providing a rain shelter structure with picnic tables where paddlers can organize gear and rest. Enhance water drop-in locations, providing a dock where possible.



Community Engagement and Educational Initiatives

Workshops and Training: Host workshops and training sessions focused on water safety, environmental stewardship, and paddling techniques. These educational programs will be offered at local parks and community centers to promote safe and responsible use of the water trails. Partner with local water-focused organizations with expertise in workshop topics.

Volunteer Programs: Launch volunteer programs to engage the community in maintaining and enhancing the water trail system. Volunteers can assist with trail upkeep, signage installation, and event coordination, fostering a sense of community and stewardship of the lakes.

Seasonal Events: Organize seasonal events such as canoe races, regattas, cardboard boat building contests, kayaking festivals, and waterway clean-up initiatives. Collaborate with local businesses and resident-groups to support water-based community-run events. These events will attract visitors, build community spirit, and highlight Muskoka's commitment to preserving its natural beauty.

The Water-Based Recreational Trail System will offer a Muskoka-made approach to enhancing recreational opportunities while celebrating the Township's lakes and waterways.

(Image compliments of SWS Ski School)

3.11 Existing Township Open Space Assets Matrix
Parks & Community Centres

Legend: Corresponding to Map Figure 3.13

- Destination Scaled Asset (None Existing)
- Commuity Scaled Asset
- Neighbourhood Scaled Asset
- Micro- Asset (E.g. Parkettes & Vistas)
- Under-represented Open Space Ammenity
- x — Existing Ammenity
- x — Future Ammenity Potential

	Washrooms / Changerooms	Portapotties	Township Building/Indoor Facilities	Parking	Playground	Dock	Boat Launch / Ramp	Beach	Beach Volleyball	Disc Golf	Accessible Kayak/Canoe Launch	Accessibility Upgrades (Paths Etc.)	AODA Accessible Park/Beach	Athletic Field	Un-programmed Open Space	Tennis	Pump Track	Pickleball	Basketball or Multipurpose Court	Baseball	T-Ball or Softball	Splash Pad or Wading Pool	Swimming Pool	Skate Park	Off Leash Dog Area	Community Garden	Outdoor Ice Rink	Groomed X-Country Ski Trails	Recreational Walking Trail	Wilderness Hiking Trail	Significant Views	Seating Areas	Picnic Tables	Picnic Shelter	Outdoor Waste Bins
Trails																																			
Hardy Lake Trails (Provincial)		x		x																										x	x	x			x
Torrance Barrens Trails (Provincial)		x		x																										x	x	x			x
Huckleberry Rock Lookout Trail		x		x																										x	x	x			x
Walker's Point Lookout Trail		x		x																										x	x				
Hazelwood Trail		x		x																										x	x				
Skeleton Lake Fish Hatchery Trail		x		x																										x	x				
Raymond Trail				x																										x	x				
Weir Lake Trail				x																										x	x				
Bala Historic Walk																													x		x	x			x
Port Carling Mural Walk																													x		x	x			x
Future Trails Development Op.																															x				
Torrence Ball Park																															x				
Urban Connection																															x				
Hekkla Area																															x				
Water Based Trail System																															x				
Lions Park / Ferndale Area																															x				
Parks/Beaches/Picnic Areas																																			
Cenotaph Park	x			x																												x	x		x
Jaspen Park	x			x	x	x		x				x	x		x										x			x		x	x	x	x	x	x
Muskoka Lakes Sports Park	x			x	x									x										x				x			x	x	x	x	x
Windsor Park	x			x		x					x	x																			x	x			x
Bala Town Dock Park						x																									x	x			x
Baycliffe Park	x			x		x	x	x				x	x																		x	x			x
Valley Green Beach		x				x		x																							x	x			x
Archdekin Park						x																									x				x
Hanna Park	x			x	x	x	x	x	x	x			x						x			x						x		x	x	x	x	x	x
Indian Crescent Park		x				x		x	x			x																			x	x			x
Port Sandfield Park	x																														x	x			x
Sunset Park	x			x	x			x					x																		x	x			x
Torrance Ball Field				x															x					x					x		x			x
Torrance CC Park			x	x	x													x	x							x								x
Dee Bank Park																															x				x
Walker's Point CC Park					x										x		x							x	x			x				x		x
Mildford Bay CC Park				x	x										x		x	x		x				x	x			x				x		x
Bala CC Park			x	x	x																												x		x
Fish Hatchery Park		x		x											x															x	x	x			x
Skeleton Lake Park		x						x																											x
Four Mile Point Park		x		x				x							x																x	x			x
Windermere Park	x			x				x			x	x	x																			x			x
Walker's Point Beach		x		x				x																									x		x
Windermere Village Hall Parkette			x	x	x																											x	x		x
Parks Development Opportunities																																			
Milford Manor Golf Course	x			x	x					x							x	x						x			x	x						
Schools and Potential Partnerships																																			
Port Carling Lions Park		x		x	x										x	x		x	x		x			x	x				x					
Glen Orchard Public School				x	x										x				x											x					
Watt Public School				x	x										x				x											x					
Community Centres																																			
Bala Community Centre	x		x	x	x																														
Foot's Bay Community Centre	x		x	x																															
Hekkla Community Centre	x		x	x																															
Milford Bay Community Centre	x		x	x	x										x	x			x						x							x	x		
Peninsula Recreation Centre	x		x	x																															
Port Carling Community Centre	x		x	x																															
Raymond Community Centre	x		x	x											x																				
Torrance Community Centre	x		x	x															x	x							x								x
Ullswater Community Centre	x		x	x																															
Walker's Point Community Centre	x		x	x	x											x																			
Windermere Community Centre	x		x	x											x																				
Windermere Village Hall	x		x	x	x																														

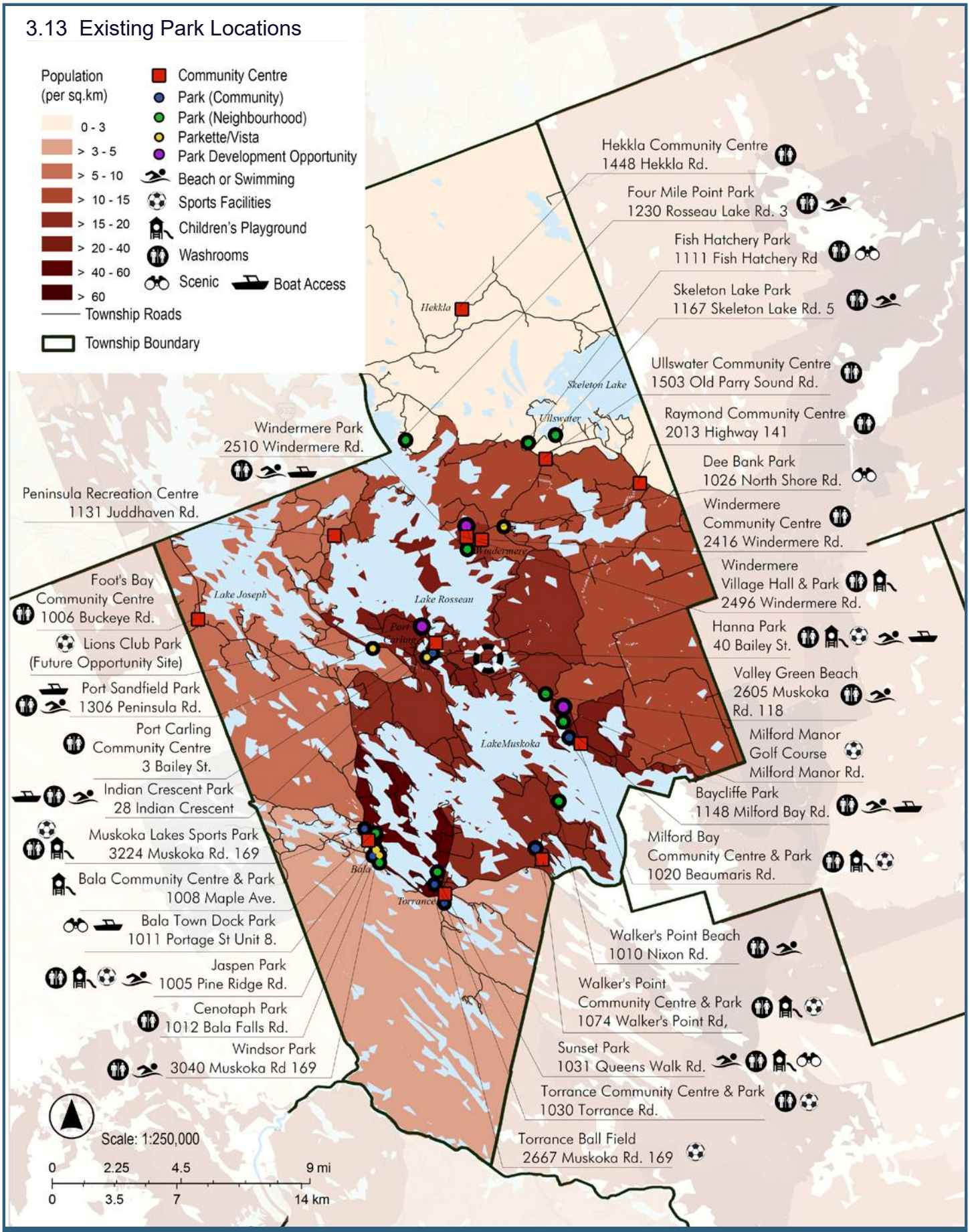
3.12 Existing Township Open Space Assets Matrix
Docks, Ramps & Wharfs

Legend: Corresponding to Map Figure 3.14

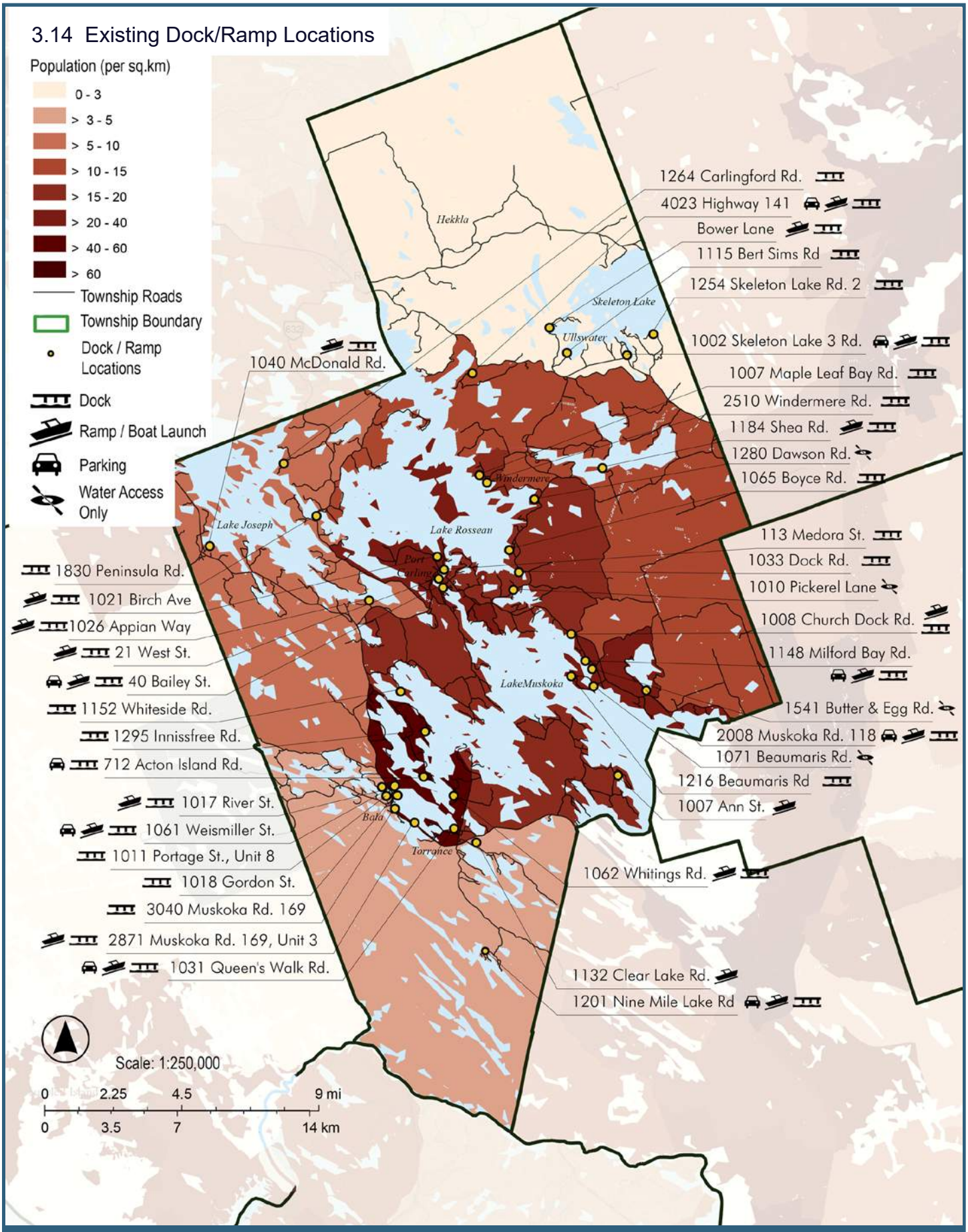
- Under-represented Open Space Ammenity
- x — Existing Ammenity
- x — Future Ammenity Potential

		Parking	Playground	Dock	Boat Launch / Ramp	Accessible Kayak/Canoe Launc	Wilderness Hiking Trail
Docks & Boat Ramps							
Lake Muskoka							x
1712 Acton Island +B63:B100Rd.	Acton Island	x		x			
1295 Innissfree Rd.	Acton Island			x			
1018 Gordon St.	Bala			x			
1061 Weismiller St.	Bala	x		x	x		
3040 Muskoka Rd. 169	Bala (Windsor Park)			x			
1216 Beaumaris Rd	Beaumaris			x			
1148 Milford Bay Rd.	Milford Bay	x		x	x		
1071 Beaumaris Rd.	Milford Bay						
1541 Butter & Egg Rd.	Milford Bay						
1008 Church Dock Rd.	Milford Bay			x	x		
40 Bailey St.	Port Carling	x		x	x		
113 Medora St.	Port Carling			x			
21 West St.	Port Carling			x	x		
1152 Whiteside Rd.	Glen Orchard			x			
1031 Queen's Walk Rd.	Torrance	x		x	x		
1062 Whitings Rd.	Torrance	x		x	x		
1007 Ann St.	Walker's Point				x		
Lake Rosseau							x
1033 Dock Rd.	Brackenrig			x			
1280 Dawson Rd.	Brackenrig						
1021 Birch Ave	Port Carling	x		x	x		
1065 Boyce Rd.	Brackenrig			x			
4023 Highway 141	Ullswater	x		x	x		
1007 Maple Leaf Bay Rd.	Windermere			x			
2510 Windermere Rd.	Windermere			x			
Lake Joseph							x
1040 McDonald Rd.	Foot's Bay	x		x	x		
1026 Appian Way	Glen Orchard	x		x	x		
1264 Carlingford Rd., Unit 5	Minett			x			
1830 Peninsula Rd., Unit 3	Minett			x			
Other Lakes							
1132 Clear Lake Rd.	Clear Lake, Torrance	x			x		
1011 Portage St., Unit 8	Moon River, Bala			x			
1017 River St.	Moon River, Bala			x	x		
2871 Muskoka Rd. 169, Unit 3	Long Lake, Bala	x		x	x		
1115 Bert Sims Rd	Skeleton Lake, Ullswater			x			
1002 Skeleton Lake 3 Rd.	Skeleton Lake, Ullswater	x		x	x		
1254 Skeleton Lake Rd. 2	Skeleton Lake, Ullswater			x			
1184 Shea Rd.	Three Mile Lake, Ufford	x		x	x		
2008 Muskoka Rd. 118	Leonard Lake, Milford Bay	x		x	x		
1201 Nine Mile Lake Rd	Nine Mile Lake	x		x	x		x
1010 Pickerel Lane	Brandy Lake, Brackenrig			x	x		
Bower Lane	High Lake			x	x		
Wharfs							
1216 Beaumaris Rd	Beaumaris			x			
1040 McDonald Rd	Foot's Bay			x	x		
2510 Windermere Rd	Windermere			x		x	

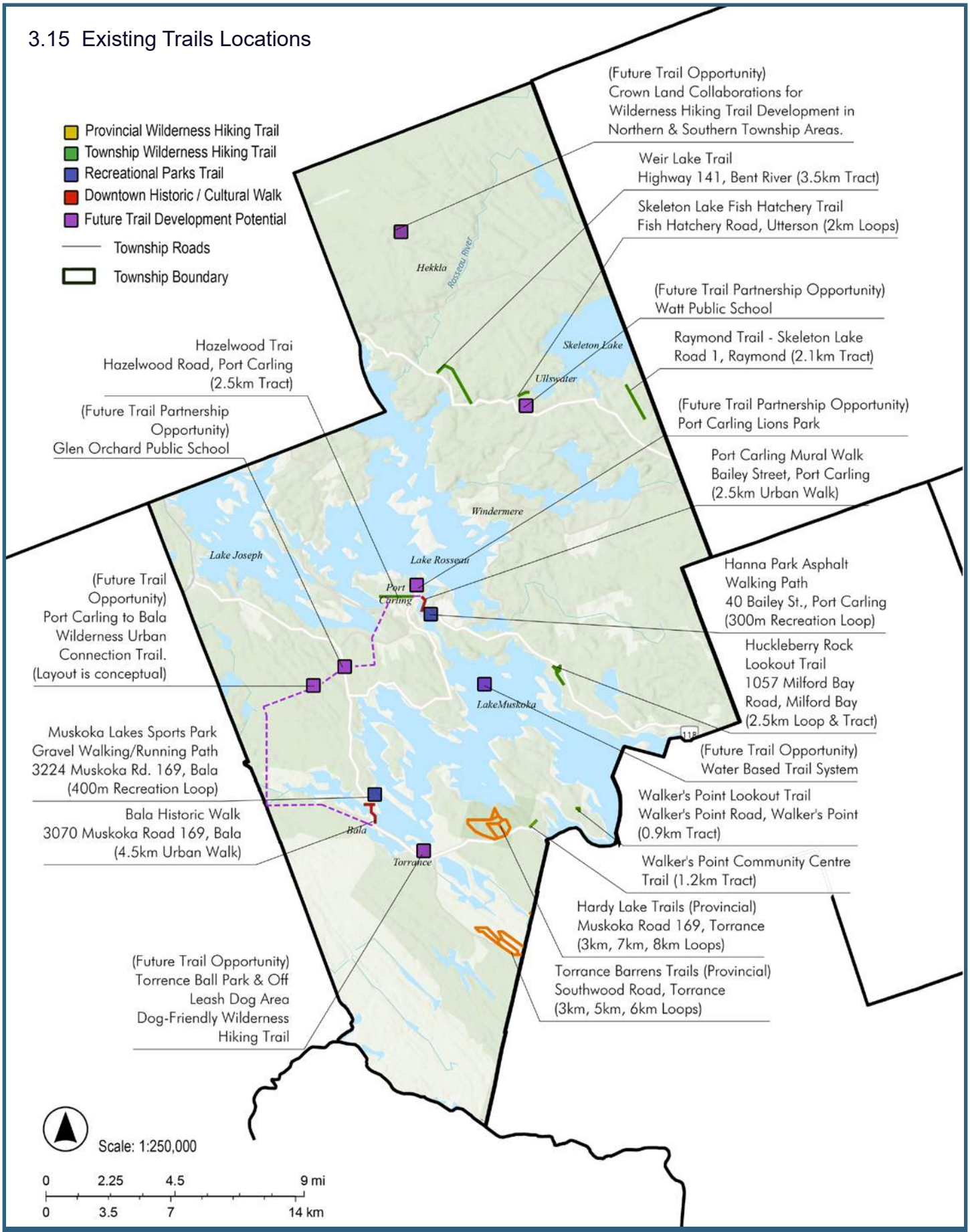
3.13 Existing Park Locations



3.14 Existing Dock/Ramp Locations



3.15 Existing Trails Locations



3.16 Existing Washroom Facilities Inventory

	Open Year-Round	Stalls Configuration M/F Configuration	Gender Neutral Individual Entrances	Change Room Facilities	AODA Compliant Path of Travel to Parking to Entrance	AODA Compliant Automated Openers	AODA Compliant Spatial Layouts	AODA Compliant Grab Bars	AODA Compliant Parking Space(s)	Baby Change Table(s)	Adult Change Table(s)	Rest Bench(es)	Sharps Container(s)
Public Washrooms													
Baycliffe Park Washroom/Change RM		x		x									
Muskoka Lakes Sports Park Washroom/Change RM		x		x	x								
Cenotaph Washroom		x											
Hanna Park Washroom/Change RM	x	x		x	x								
Jaspen Park Washroom /Change RM		x		x									
Port Sanfield Washroom		x											
Sunset Park Washroom		x											
Windermere Washroom/Change RM		x		x									
Windsor Park Washroom	x	x		x	x	x	x	x	x	x			x

Porta Potty Locations

Four Mile Park (x2)	Skeleton Bay Launch
Skeleton Road 5	9 Mile Lake Launch
Deebank Park	Indian Crescent Park
Valley Green (x2)	Fish Hatchery Park
Milford Bay Community Centre Playground	Huckleberry Rock Trail
Walker's Point Community Centre Playground	Walker's Point Beach
Appian Way Boat Launch	Torrance Ball Diamond

PARKS LOCATIONS & ACQUISITIONS

4.1 Location of Parkland

In the interest of good community planning and the preservation of and integration with the natural environment, regardless of the disposition of land ownership, parkland will be located as deemed most appropriate by the Township for the population it is intended to serve.

Parkland as a result may become a joint conveyance from two or more ownerships. In such instances where multiple landowners are involved in the conveyance of a park, the owners are to attempt to reach agreement as to their cost-sharing, design and performance obligations under the subdivision agreements or other planning requirements of the Township with regard to the conveyance; thereby avoiding the need for mediation from the Township in this regard.

4.2 Parkland Acquisition

If land required for a park and its anticipated programming exceeds the available parkland dedication from development under policy, the Township may choose to acquire the balance needed, ensuring that the park location and configuration satisfies the Township's standards for facility layout, setbacks, and orientation. Such land will be subject to the same performance standards as the surrounding conveyance and developers shall be responsible to ensure the lands are free of encumbrances, fully prepared as described herein and in a condition acceptable to the Township. The Township will acquire such lands in fair and reasonable manner in consideration of policy, market value for unserviced developable land and open negotiations with owners.

4.3 Parkland Acquisition Through Development (via. Subdivision Agreement)

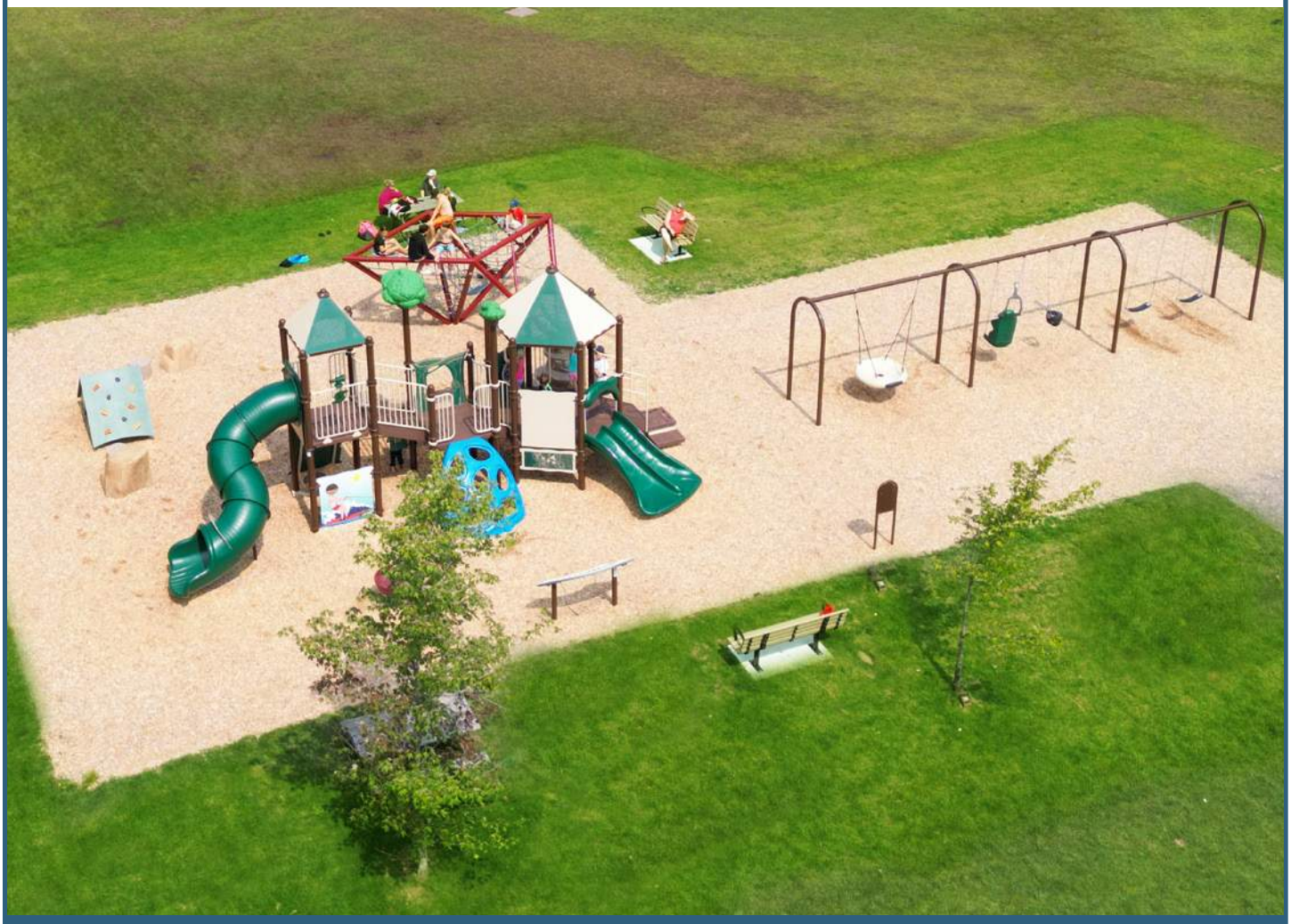
Parkland will be conveyed to the Township by the developer in accordance with the Planning Act and the Official Plan. Land will be conveyed free and clear of any legal or physical encumbrances above and below grade. Easements in favour of Utility Companies, commissions or other levels of government present limitations on the land for park uses, and as such shall not be considered as a part of the calculation of land dedication for park purposes. Parkland shall be of sufficient shape, size and topography to:

- Accommodate the intended use as parkland;
- Satisfy the standards for grading, drainage, facility setback, fencing and other requirements as outlined within this design manual;
- Supply the recreational facilities required by the Township within the development area, as articulated through the Official Plan and the Parks and Recreation Master Plan.

In specific cases within subdivision and site plan development, the Township at its discretion, may negotiate an alternative cash-in-lieu of parkland dedication (in accordance with the provisions of the Official Plan, the Planning Act, and the Township's By-laws) for the acquisition of lands for park purposes elsewhere within the Township.

4.4 Parkland Conveyance and Registration

In accordance with the Planning Act, timing of conveyance of parkland will be stipulated in the Subdivision Agreement. As a standard, the Township will require conveyance be made to the Township during registration of the first phase of a subdivision. If the Township deems it necessary to delay conveyance until later in the development phasing, the Township will secure a letter-of-credit for the full value of lands to be conveyed. Condition of the land to be conveyed shall be as described herein or as stipulated in the Subdivision Agreement. The developer shall supply the Township with an approximate schedule of timing for the development, allowing the Township to forecast capital investments and expenditures under the Development Charges By-law.



4.5 Parkland and Schools Partnerships

The Township will endeavour to share park facilities with schools, locating parks and schools together where deemed advantageous and efficient for the benefit of community and public land use. The Township recognizes the efficiencies of joint uses of public lands in a campus-type approach to open-space planning. The Township will consider siting community parks with structured playground and sports facility type programming adjacent to or abutting with school lands where siting is compatible with existing uses, and where there is no significant interference with normal site function for either party.

To further the objectives of efficient use of publicly controlled land and open spaces, the Township will consider joint-use of public lands where deemed to be in the best interest of both/all parties. The Township and school boards may choose to share facilities across a common boundary within a park/school collaboration, to provide operational and programming advantages to each agency.

4.5.1 Parkland and Schools Agreements for Use and Cost Sharing

The Township and Board shall establish agreements, clearly defining the sharing of capital development costs and future maintenance costs and servicing of shared facilities.

4.5.2 Parkland and School Efficient Design Considerations

Design of shared parkland and school facilities shall be subject to site plan control. With the exception of trees, natural vegetation or topographic features, design considerations should include minimizing or eliminating fencing, vehicular circulation routes and other obstructive features between the two sites, with the objective of the two sites reading as one continuous, publicly accessible open space.

4.6 Community Partnerships in Parks Development

The Township values community-driven initiatives and encourage groups to collaborate with staff and Council to bring forward ideas that reflect the needs and vision of local residents. Proposals can range from the design and development of new parks sites, to enhancements of existing spaces. The Township is committed to working together to explore funding options, including opportunities for community contributions and fundraising to financially support community-driven initiatives.

Community-Driven Initiatives Process

Prepare a proposal in a short presentation format. Include the following:

- ❑ Location and brief description of the site with supporting photos;
- ❑ Scope of project, details (E.g. theme of a desired playground, number of slides, climbers, swings or other elements) and photo examples;
- ❑ Indication of community support (E.g. letters of support);
- ❑ Estimated project costs;
- ❑ Outline of community fundraising plan;
- ❑ Identify the 'Official Ask' of Council.

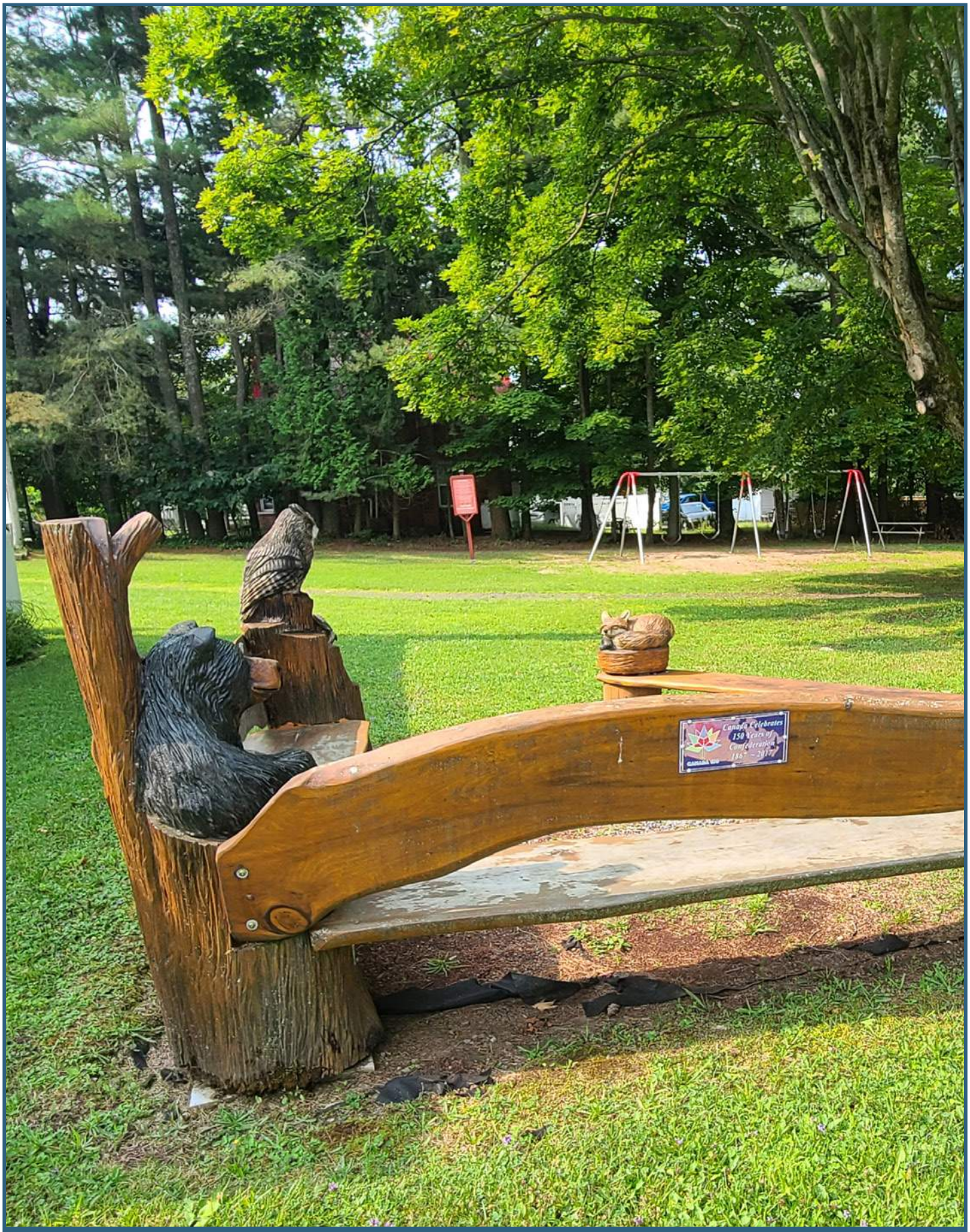
Request to delegate to an upcoming Committee Meeting.

- ❑ Contact Township Clerk requesting to present the proposal to Council.
- ❑ Provide a copy of the presentation to the Clerk for inclusion with Agenda materials.
- ❑ Present the proposal to Council.
- ❑ Receive direction from Council, by way of Staff Report.

If the proposal is supported by Council:

- ❑ Undertake fundraising initiatives.

Once the project is financially viable, the Township will manage development of the park or open space project in accordance with Section 5.2, continuing to engage with the partner community group, along with other stakeholders through the development process.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Confederation
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DEVELOPMENT PROCEDURES

5.1 Park Development by Design/Build

The preferred approach to parks design and development is outlined in section 5.2, where lands are acquired by the Township followed by a Township-led process for park design, community engagement and open-bid by contractors for construction. This process balances the community's interests in engaging in the park development process along with the need for high quality, and durable park and open space amenities with responsible fiscal management.

The Township at its discretion, may negotiate an alternative arrangement where a developer or design-build general contractor is responsible for completing both the design and construction of a park. In this instance, Township Staff are to remain as active project managers in this process, attending regular project meetings and representing the Township and Community's interest in the responsible and high-quality development of park and open space facilities. Where Township Staff do not possess the professional skills or designations required to review drawings and documents produced by consultants working under the developer, Township Staff may at their discretion hire third-party, independent reviewers with the applicable required professional experience and qualifications.

5.2 Township Led Parks Design & Development

The typical park development design process for Community and Destination scaled parks should be anticipated to take anywhere from 3 to 6 years to complete, under a two-phase process. Phase one is to include preliminary community engagement, facilities fit planning and early concept designs, followed by capital budgeting. Phase two is to include schematic design, further community engagement, working drawings and bid/tender.

5.2.1 Preliminary Community Engagement

Preliminary community engagement is intended to identify the needs and wishes of the community for the parkland development site, or for open space and recreation in general at the time of site development. This may take the form of online notices and invitations to participate in a simple survey, including specific questions, along with an opportunity to provide written input.

At this stage, Township Staff should consider whether any special interest groups should be specifically invited to participate in general community engagement efforts, and whether or not an additional engagement process specific to those groups may be beneficial. Special interest groups to consider may

include First Nations with traditional lands extending across the proposed parkland site, groups who have been informally using the site for recreational purposes prior to development as parkland (E.g. informal hiking trails), those in the community with accessibility needs, and/or those in the immediate surrounding neighbourhood who are most likely to make regular use of the parkland once developed.

5.2.2 Facility Fit Plan

The Facility Fit Plan acts as a preliminary concept plan for the park. It is used to determine potential layouts of the park and any facilities that are required. The plan also identifies potential conflicts or challenges with implementing the desired facilities, the proposed park parcel, and neighbouring land uses. The Facility Fit Plan may be prepared in-house by Township Staff, or by engaging a professional (Landscape Architect) consultant.

5.2.3 Capital Budgeting

The park project is identified in the 10 Year Park Capital Budget Forecast and the Development Charges Study by Township staff. Funding for design development and remaining community engagement processes also need to be identified at this step. Budgeting for the park development project is based on the Facility Fit Plan, including proposed programming and features, phasing and construction timeline considerations. The allocation of funding is required to complete the next steps.

5.2.4 Schematic Design

A minimum of two schematic designs with corresponding budget estimates are required. Schematic designs are to be based on the Facility Fit Plan, including preliminary community engagement input. Each schematic design should include at minimum a labeled, full colour plan with supporting precedent images and/or perspective renderings. Schematic Designs may be prepared in-house by Township Staff, or by engaging a professional (Landscape Architect) consultant.

5.2.5 Community Engagement

Schematic Design options prepared in the previous step form the basis of community engagement for the park development project, where an opportunity to comment and indicate preferences for various features, facilities and layout solutions is provided.

Community engagement follows the guidelines for public notifications in the Planning Act. At a minimum, residents within a 120 meter radius of the proposed park facility must be notified of any public meetings or engagement opportunities. For Destination/Regional Parks, Community Parks and the development

of significant Natural Open Space projects, it is recommended that Township Staff provide engagement opportunities to all Township residents, regular visitors and any applicable special interest groups.

Community engagement opportunities may be provided in-person, however given the high seasonal and second-home population in the Township, it is recommended that at least one opportunity to review schematic plans and engage in the process be provided in a virtual/online open-time-frame format.

5.2.6 Working Drawings

Township Staff lead this process, procuring a team of any required professional consultants to prepare working drawings and tender documents, based on refinement of the preferred schematic design option and community engagement feedback. The professional consulting team is selected by open or invitation RFP process depending on project value. The makeup of each project's professional consulting team will vary based on the proposed park context and facilities, but may include: landscape architect (OALA), architect (OAA), arborist (ISA), engineers (PEO) (civil, structural, geotechnical, electrical, mechanical), ecologists and other professional consultants.

Where existing natural plant communities, trees, forests or shoreline ecosystems exist, a consulting ecologist and/or arborist should be required to complete an inventory of existing conditions, as well as an assessment and plans to minimize park development impacts on sensitive species and plant communities.

5.2.7 Bid/Tender Process

Project consultants prepare detailed drawings specific to, and coordinated between each discipline. Drawings are supported by written specification sections and an itemized bid form as prepared by project consultants, for use by Township Procurement Staff in a public bid/tender process for construction of the park. Award of the bid is based on an open points system, including weighting of points for proposed project costs, contractor personnel experience and comparable past projects with favourable references provided.

A separate warranty maintenance contract is to be executed at the same time as the park construction contract, in the amount of 5% of the park construction contract amount. The warranty maintenance contract is to be paid in full to the Contractor at the end of the 2-year construction warranty, once any warranty repairs or replacements have been completed to the satisfaction of Township Staff. While Township Staff will complete basic and normal park maintenance throughout the warranty period, the Contractor is expected to complete any works necessary to ensure successful establishment of the park

under the terms of the warranty maintenance contract. These works may include, but are not limited to: over-seeding of sparse areas, replacement of failed plantings, preventative watering of plantings during periods of drought, and repairs to any shifts or settlements in paving after frost cycles.

5.2.8 Progress Construction Review

Township Staff oversee the park construction progress, attending progress site review meetings along with professional consultants to ensure the park is constructed in accordance with the design drawings and documents.

5.2.9 Substantial Performance

The project is eligible for *Substantial Performance* once construction has met the requirements as outlined under the *Construction Act of Ontario,* and is fully usable for its intended purpose, including permits closed out and any required third party inspections (E.g. CSA playground safety testing and inspections) successfully completed. At this time, the Contractor, in accordance with the *Construction Act of Ontario*, can apply for a release of the statutory holdback after 60 days. The Contractor must also correct any deficiencies or outstanding work within 30-days of substantial performance, allowing time for review of corrected works prior to release of securities.

5.2.10 Park Maintenance

The Contractor is responsible for maintenance and establishment of the park facilities and plantings until the point of substantial performance, at which time the Township assumes park maintenance.

5.2.11 Warranty Period

Parks construction is subject to a 2-year warranty period (1-year additional beyond the standard CCDC contract warranty term). The warranty period commences automatically upon issuance of Substantial Performance. Throughout this period, Parks Maintenance Staff will notify the Township's project manager of any warranty work that may require completion. Ahead of the close of the 2-year warranty period, Staff will schedule a warranty review site meeting with applicable project consultants and contractors present to identify any works requiring remediation. Ahead of the close of the 2-year warranty period, it is recommended that Township Staff engage with applicable residents and user groups with a performance review survey.

5.2.12 Asset Renewal Forecasting

As of 2024, parks are required to be included in municipal asset management planning. It is recommended that playgrounds, sports fields, sports courts and ball diamonds be forecast within the budget for replacement/updating/renewal in the range of 10-15 years.

Parkland Development Roles and Process (Figure 1)

STAKEHOLDER ENGAGEMENT STANDARDS

6.1 Commitment to Stakeholders

Stakeholder engagement gives residents and visitors the opportunity to participate in Township decisions that are of interest to them. Effective community engagement results in stronger decision making, plans or projects that:

- Maximize benefits
- Minimize negative or unintended consequences
- Support a wide range of stakeholders

These standards aim to clarify roles, responsibilities and practices for community and stakeholder engagement in Township open-space planning projects. When designing a public engagement process, we apply the following values:

The Township believes that:

- Stakeholder engagement is integral to an equitable and inclusive approach to creating positive social change and solving issues of common concern.
- Meaningful engagement builds trust between community members and the Township and strengthens community capacity and the community's sense of ownership over parks and open spaces.
- People who are affected by a decision have the right to be involved in the decision-making process.
- Sustainable decisions are made by communicating and acknowledging the needs and interests of all participants, including decision-makers.

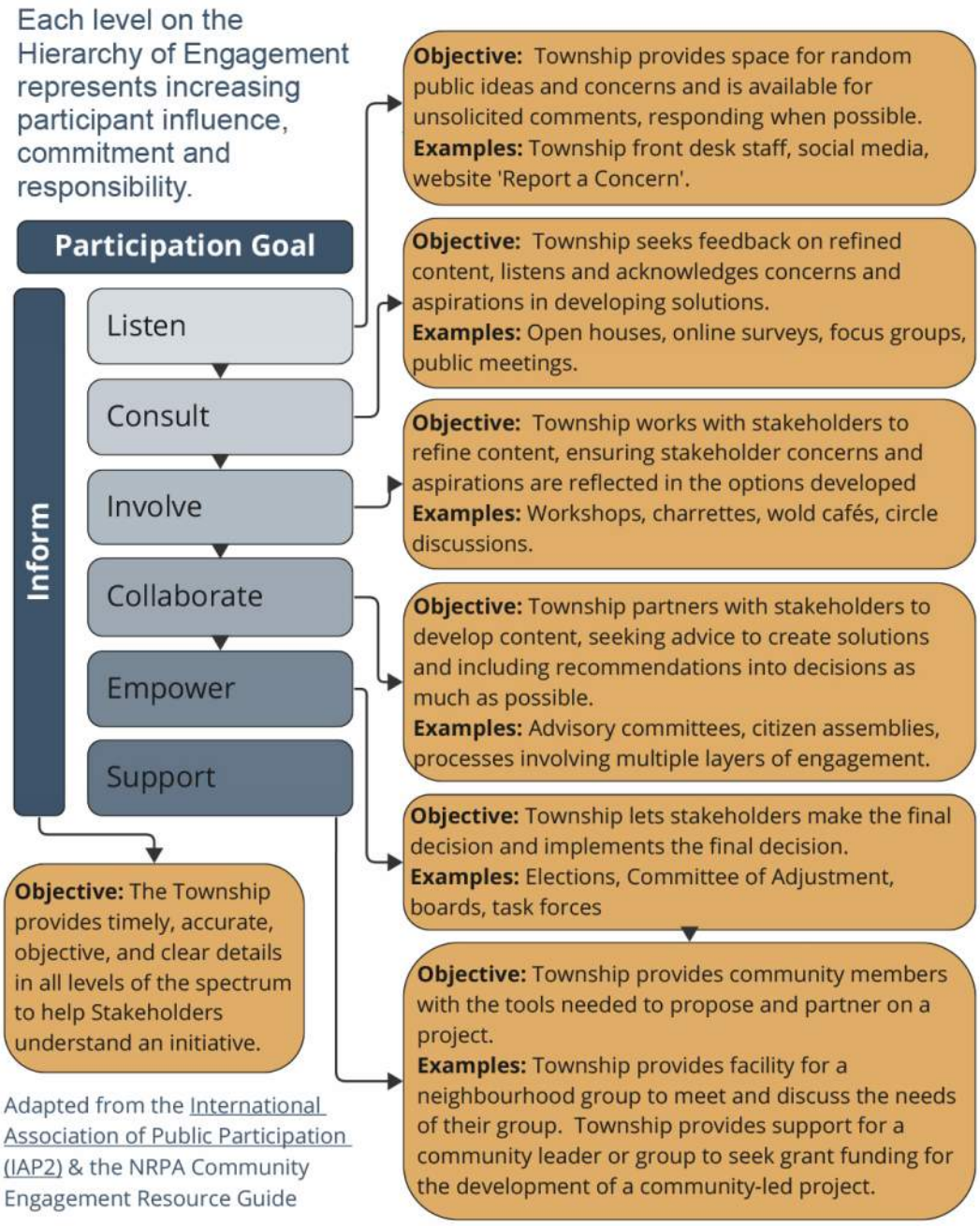
The Township makes the commitment that through the planning and development process for parks, trails and open-spaces:

- In addition to providing open opportunities to participate, the Township will seek out the involvement of people potentially affected or interested in a decision, and will thoughtfully consider how best to design an appropriate engagement process.
- The Township will provide participants with the information and types of processes they need to participate in a meaningful way.
- Stakeholder's contributions will influence the decision.
- The Township will communicate to participants how their input affected the decision.

6.2 Hierarchy of Engagement

The Hierarchy of Stakeholder Participation (Figure 2) illustrates the stakeholder's role in the decision making process. Township objectives are outlined for each level of engagement. Some projects and processes may use multiple layers of engagement for different stakeholder groups and at different stages of a project. Note that greater stakeholder influence in a decision-making process comes with greater commitment on the part of the stakeholder.

Hierarchy of Stakeholder Participation (Figure 2)



6.3 Stakeholder Engagement Checklist

The following checklist is included as a guide for the Township in designing a stakeholder engagement process appropriate to the scale, complexity and reach of a particular park, trail or open space planning and development project.

Earning Trust with Stakeholders:	
Acknowledge Past Experiences	✓
Involve Local Community Leaders and Partners	✓
Be Transparent and Deliver on Promises	✓

Stage 1 - Defining the scope of decision-making:

- ❑ Clearly define the goal(s) of the project, policy, program, or service (the project). Include metrics to measure success.
- ❑ Determine whether there is a possibility for stakeholders to meaningfully influence decision-making on a project put forward either by Council resolution, legislated requirement or in response to a community-led request.
- ❑ Identify whether a duty to consult exists for the project under the Accessibility for Ontarians with Disabilities Act (AODA). The Township must consult the public, including those with disabilities and their Accessibility Advisory Committee regarding: trail design and slope, need for and design of ramps, rest areas, passing areas, viewing areas, amenities, signage and other features on trails, and constructed pathways, boardwalks, ramps, amenities, features and signage within parks.
- ☒ The Township may not engage stakeholders if: it is a matter of public safety, change is legislated from other levels of government, no community interest is shown in response to a call for participation, the Township cannot meaningfully do so or there is low likelihood of stakeholders influencing decision-making due to other considerations or constraints.

Stage 2 - Identifying the need for stakeholder engagement in a park, trail or open space planning and development project:

- ❑ Determine whether a community or group(s) of people will be impacted by the project. The community impacted by projects will be different for a small parkette as compared to a large destination park or trail system. Identify who needs to be engaged, with particular attention

paid to identifying any vulnerable populations that require representation for an inclusive and equitable process.

- ❑ Assess whether the project may result in long-term changes to the site's appearance or function.
- ❑ Assess whether the project may result in long-term (positive or negative) impacts to surrounding areas or groups.

Stage 3 - Defining the Engagement Process. The Township will develop an engagement approach and methodology that aligns with the engagement objectives set out in Stage 2.

- ❑ Identify whether any vulnerable population or special interest groups require a designated engagement process to ensure representation of those viewpoints in the process.
- ❑ Outline goals and anticipated outcomes specific to the engagement process and what success will look like. Include metrics to measure success.
- ❑ Determine the most effective methods for engaging various stakeholder groups. Consider including virtual engagement opportunities given the Township's seasonal and second-home resident population. A small parkette may only require one instance and method for public engagement following the development of concept options. A large destination park or new trail system my warrant multiple instances of engagement, including early input toward defining project goals and continuing on through concept design and occupancy. Typically, a mixed-methods approach, using multiple engagement strategies will result in a more equitable and inclusive process with multiple viewpoints being represented. Consider including online processes with a generous timeline and opportunities for multiple-choice type inputs as well as unstructured comments for general community and stakeholder engagement. Consider in-person or online open-house or World Café type methods for medium to large sized stakeholder group engagement where a more meaningful opportunity for stakeholder influence on decision-making exists. Consider focus-groups or a professionally facilitated Circle-Discussion process for smaller, vulnerable population groups or small groups with strong objections, or complex views on a project.
- ❑ Identify communication methods required to reach all potential stakeholder groups. This may include the Township's website and social media for general public input, mailed or hand delivered notifications for those within proximity to the project as defined under the Planning Act, or targeted outreach and invitations to vulnerable population or special interest groups.
- ❑ Identify timelines that align with project goals and stakeholder group needs.

Stage 4 - Resourcing the Process.

- ❑ Develop an overall project budget and timeline to ensure the project is attainable. Include the stakeholder engagement process, project design development, construction, ongoing maintenance and eventual renewal or replacement. Consider costs and timeline implications for potential project phasing.
- ❑ Secure funds for early project phases, including engagement process and applicable early project design phases. Consider internal funds, grant funding and potential donations (monetary or in-kind)

Stage 5 - Facilitate the community engagement process as outlined in Stage 3.

- ❑ Promote stakeholder engagement over the course of the project, using a variety of communication methods.
- ❑ Host engagement activities in the community and/or online.
- ❑ Collect and carefully analyze all data received through engagement processes.
- ❑ Continuously revisit and evaluate engagement goals, methods and communications approaches throughout the project, adjusting course as required to ensure an equitable and inclusive project and overall project success.

Stage 6 - Update Stakeholders

- ❑ Share data and insights gained from stakeholder engagement with process participants and the public. For smaller projects, this may occur in one instance, whereas both interim and final decisions, data, insights and directions should be shared on larger projects, typically following each instance of engagement.
- ❑ Share information in plain language. Tell stakeholders how engagement activities, balanced with other project considerations, led to a project decision or recommendation.
- ❑ Explain to stakeholders if, when and why feedback did not inform a decision, including challenges or limitations of the project.
- ❑ Reflect on each project engagement process, noting tools, methods and practices that did or did not work as intended and where improvements can be made for future engagement processes. Invite community feedback on engagement practices. Try new approaches to engagement and retire outdated or under-performing approaches, evolving the Township's engagement process as required to respond to the needs of the community and stakeholders.

6.4 Communication and Engagement Methods

Communication Methods:

Post information or updates on the Township Website

Post on Social Media

Create an interactive, multilingual, AODA compliant project-specific web-page

Attend community events or markets with an information booth and/or handouts

Send personal invitations to events through the mail or by hand-delivery

Make use of Township email or text messaging capabilities

Engagement Approaches:

Surveys or questionnaires posted on the Township's 'Engage Muskoka Lakes' site.

In person or online community information session or presentation, including opportunities for questions and discussion.

Host an online or in-person World Café to encourage a large group dialogue.

Hold a design charette or competition

Organize and host a tour or information meeting on the project site.

Conduct interviews with key stakeholders or community leaders.

Conduct Focus Groups with key stakeholder groups.

Facilitate a Circle-Discussion with a key stakeholder group.

Knock on doors and visit homes in the project vicinity for open-discussions with note-taking or in-person surveys.

Performance Standards and Servicing Requirements

7.1 Trails Standards

Township trails design, development and maintenance standards are intended to apply to Township owned, sponsored and co-sponsored off-road recreation trails. Where trails exist within the Township which are operated by other levels of government and non-governmental organizations, the standards which apply will be those developed and approved by that partner. Where appropriate, partners will be encouraged to follow Township standards to achieve integration of trails networks.

As an integral recreational asset in the Township, it is imperative that trails are accessible to all people within the population. New and renovated recreational trails and beach access routes are subject to the Accessibility for Ontarians with Disabilities Act (AODA), Design of Public Spaces (DOPS) Standard, with the exception of trails solely intended for:

- Cross-country skiing, mountain biking or the use of motorized snow and off-road vehicles.
- Wilderness trails, backcountry trails and portage routes.

Other limited instances where exceptions are permitted to AODA requirements for recreational trail and beach access routes are outlined within the AODA (DOPS) standard.

7.1.1 Recreational Trails - Accessibility Requirements

Recreational trails are required to adhere to the latest version of AODA (DOPS) standards, including, but not limited to:

- A requirement to consult with the public and Accessibility Advisory Committee, including people with disabilities before beginning to build or renovate a recreational trail.
- Trail heads are to have signage, including high colour contrast, sans serif font and details regarding: how long the trail is, how wide the trail is on average and at its narrowest point, which amenities exist with a map showing where they can be found, how steep the average and maximum running and cross slopes are, and the trail surface composition material.
- Trails must have firm and stable surfaces, suitable for use of canes, crutches, or the wheels of a mobility device.
- Trails must have a minimum clear width of 1000mm.
- Trail entrances are to have a clear opening between 850mm and 1000mm, defined by a gate, bollard or other entrance design.
- Trails must have a minimum head clearance height of 2100mm.

- Trails next to water, steep slopes or drop-offs must have edge protection, a raised barrier protecting people from falling off of the trail.

7.1.2 Beach Access Routes - Accessibility Requirements

Permanent and temporary (seasonal roll-out or similar) beach access routes are required to adhere to the latest version of AODA (DOPS) standards, including, but not limited to:

- A requirement to consult with the public and Accessibility Advisory Committee, including people with disabilities before beginning to build or renovate a recreational trail.
- A minimum clear width of 1000mm.
- A minimum head clearance height of 2100mm.
- A firm and stable surface.
- Where the surface is constructed and not naturally occurring, the surface must have: a maximum cross slope of 1:50, a 1:2 bevel at changes in elevations between 6 and 13mm, a maximum running slope of 1:10, a ramp where changes in level are greater than 200mm, no openings greater than 20mm.
- A maximum cross slope as required for positive drainage where surface is not constructed.
- A maximum running slope of 1:10 where surface is not constructed.
- A minimum clear opening of 1000mm.

7.1.3 Recreational Trails and Beach Access Routes - Additional Township Standards

Additional Township standards for recreational trails and beach access routes include:

- Where recreational trails are developed through cultural landscapes, a minimum 15m wide corridor is recommended to provide sufficient buffering from adjacent land uses. In urban/town areas, a minimum 3m corridor may be permitted where no other alternative exists to maintain continuity of the trail network.
- All amenities in the vicinity of a recreational trail or beach access route, including parking, washrooms, accessory buildings, garbage receptacles, seating, informative signage and playgrounds are to be connected by an accessible path of travel.
- Asphalt, permeable asphalt, permeable resin-bound aggregate or boardwalk type surfacing for recreational trails within a 2km radius of urban/town areas.
- Asphalt, permeable asphalt, permeable resin-bound aggregate, boardwalk or compacted gravel screening type surfacing for recreational trails outside of urban/town areas, with the exception of recreational trails in environmentally sensitive areas.
- A minimum clear width of 2100mm for short recreational walking trails.

- A standard clear width of 3000mm for multi-use recreational trails and those winter maintained.
- Wherever possible, route recreational trails and beach access routes to adhere to a maximum linear slope of 1:20, striving for universally accessible recreational trails. Ramps may be provided where steeper grades cannot be avoided. Where the linear slope of recreational trails must exceed 1:20 due to extreme natural topography, signage is to be provided indicating the maximum slope and length of trail segment in accordance with standard Township details.
- On long stretches of steep grades, introduce relatively flat rest areas with seating opportunities at approximately every 100-150 linear metres of trail distance.
- Steps are to be avoided wherever possible. Where steps are unavoidable due to extreme natural site topography, signage is to be provided indicating the presence of steps in accordance with standard Township details.

Township standards for recreational trails and beach access routes in environmentally sensitive areas include:

- Compacted Engineered Wood Fiber (EWF) mulch surfacing or compacted gravel screening type surfacing is permitted in environmentally sensitive areas where excavation for a granular base layer would be detrimental, including over the critical root zone of significant trees.

Township standards for recreational trails and beach access routes in flood prone areas include:

- Concrete paving with transverse saw-cut joints and a compacted granular base profile and depth as recommended by geotechnical engineer based on soil sampling on heavy-use short stretches, including beach, dock and boat ramp access routes.
- Asphalt paving with a minimum 300mm deep compacted granular base, geogrid base reinforcement and turn-down edges set below finished grade within 2km of town/urban areas.
- Compacted granular screening pathways, crowned with edges flush to finished grade outside of town/urban areas.

7.1.4 Boardwalks and Trail Bridges- Accessibility Requirements

Boardwalks, including those on recreational trails and beach access routes are required to adhere to the latest version of AODA (DOPS) standards, including, but not limited to:

- A minimum clear width of 1200mm. Best practice minimum 2200mm clear width.
- A minimum head clearance height of 2100mm.
- A firm and stable surface.
- No openings greater than 20mm in size.
- Edge protection at least 50mm in height.

- If a boardwalk has running slopes steeper than 1:20, running slopes must meet ramp requirements.

7.1.5 Ramps - Accessibility Requirements

Ramps, including those on recreational trails and beach access routes are required to adhere to the latest version of AODA (DOPS) standards, including, but not limited to:

- A minimum clear width of 900mm.
- A minimum head clearance height of 2100mm.
- A maximum running slope of no more than 1:10.
- A firm and stable surface.
- Edge protection with a curb at least 50mm high on any side of the ramp where no solid enclosure or guard is provide, or railings or other barriers that extend to within 50mm of the finished ramp surface.
- Where a guard is required, a guard of no less than 1070mm, in conformance with OBC requirements.
- No openings greater than 20mm in size.
- Landings at: the top and bottom of ramp, where there is a change in direction and at horizontal intervals of no more than nine metres apart.
- Landings must be 1670mm x 1670mm at top and bottom of ramp, and 1670mm in length and no less than the width of the ramp for in-line landings.
- Landings must have a cross slope no steeper than 1:50.
- The ramp must be equipped with handrails on both sides of the ramp.
- Handrails must: be continuously graspable with a circular cross-section, having an outside diameter not less than 30mm and not more than 40mm.
- Handrails not less than 865mm and not more than 965mm high and extending horizontally not less than 300mm beyond the top and bottom of the ramp and with a clearance of 50mm between handrail and adjoining wall.

7.1.6 Boardwalks, Trail Bridges & Ramps - Additional Township Requirements

- Surfacing, handrails and guards are to be constructed of western red cedar, black locust or composite wood.
- No gaps or openings greater than 13mm. Gaps or openings are to be oriented to run perpendicular to the path of travel.
- Structural framing members may be constructed of pressure treated wood or galvanized steel.

- Handrails where provided are to be constructed of hot dipped galvanized steel.
- Boardwalk, ramp and trail bridge details are to be reviewed and stamped by a structural engineer.
- Boardwalks and trail bridges in high-use areas and where part of a multi-use recreational trail are to have a minimum clear width of 3000mm.

7.1.7 Wilderness Hiking Trails

Wherever possible, (Township-managed) wilderness trail design should also adhere as closely as possible to the AODA Design of Public Spaces (DOPS) Standard for recreational trails.

- Where trails are developed through natural open space areas, including forest, native meadow, riparian, wetland, alvar and/or barren rock lands, an Ecological Impact Assessment shall be completed for the proposed trail alignment. Reroute trail alignments to minimize impacts on significant habitats and ecosystems. Avoid trail development within highly sensitive habitats and ecosystems where impacts cannot be mitigated.
- Provide widened trail areas at points of interest where hikers are more likely to congregate. Consider the addition of natural log or stone based informal seating at likely rest points.
- Design and develop trails to protect and enhance natural features that increase the quality of experience for trail users and that are integral to the sustainability of natural ecosystems.
- Trail surfacing is generally intended to be natural terrain. Reinforce sections traversing soft areas prone to ponding or significant mud, where hikers would otherwise have a tendency to re-route off trail, with natural (E.g. stepping rocks or perpendicular logs) or geo-grid reinforcement, or simple, wood boardwalk sections.

- Where trail surfacing is constructed, surfacing is to be permeable, firm and stable, and may be comprised of local granite crushed gravel or tamped Engineered Wood Fiber (EWF) mulch.
- Minimize the use of steps, which may be required on slopes exceeding 20% with unstable footing conditions or hazardous terrain. Switchback trail design is a desirable alternative to steps.
- Primary wilderness trail heads where parking and/or other Township amenities are provided are to have trail map signage in accordance with Township standard details, and meeting AODA requirements for recreational trail signage.
- Wilderness trails are to have directional trail signage and trail system 'blaze' type signage in accordance with Township standard details.

7.1.8 Trails Maintenance

Trail construction represents a significant capital investment by the Township and its partners, and a key component of open space recreation for residents and visitors. It is prudent to consider the associated roles, responsibilities and tasks for properly maintaining these assets.

These standards identify common and basic tasks associated with maintaining a multi-functional recreational trail system and wilderness hiking trail networks. As each trail section is unique in its context, the guidelines do not attempt to recommend one single approach to trails management. Different sections of trails will require varying frequency and types of maintenance based on trail deterioration, specific to surfacing type, climatic exposures, topography and flood water influences, and level of use. Township Staff should prepare a maintenance plan and schedule specific to each recreational and wilderness hiking trail. Templates are provided as the basis of the maintenance plans, including inspection and maintenance checklists for recreational and wilderness hiking trail types.

Trail maintenance plans are intended to be referenced and used during inspections and maintenance visits for the purpose of record keeping of trail conditions and issues. The plans and accumulated records in the form of completed checklists and notes are to be maintained in a 'Trail Maintenance Log', which may take the form of a physical binder or online file record (see also Liabilities and Risk Management Best Practices Section).

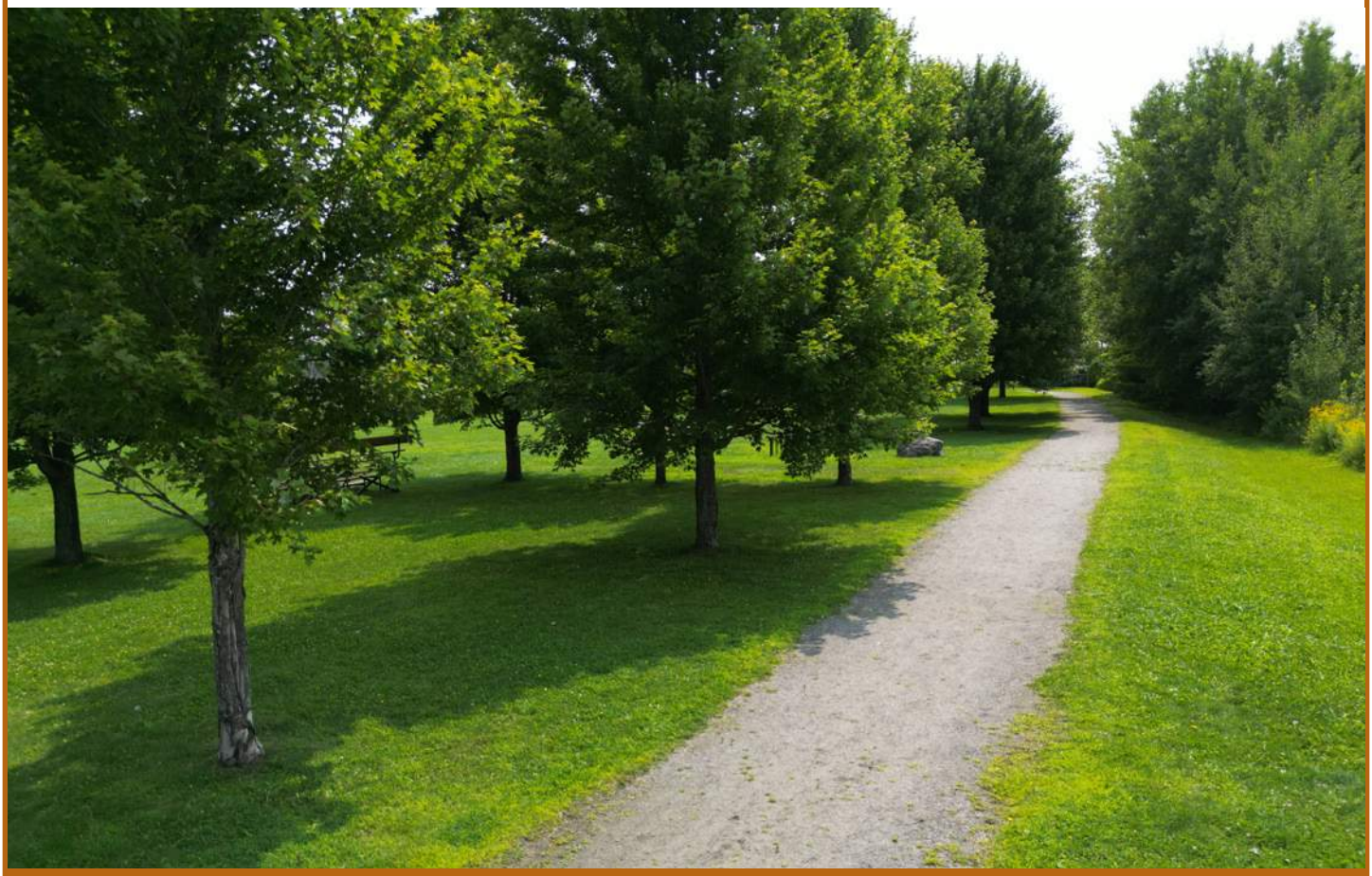
Both the maintenance plans and accumulated records of inspections and maintenance practices are intended to assist Township Staff in planning, cost estimating, scheduling, implementing and evaluating maintenance and renewal activities.

7.1.9 Annual Trail Review

An annual trail review is to be completed by Township Staff including a summary of issues and priorities for maintaining and improving recreational and wilderness hiking trail amenities.

Annual Trail Review Checklist:

- ❑ Annual, interim and routine maintenance and inspection occurrences were carried out based on prepared Trail Maintenance Plans.
- ❑ Checklists with appendiced notes and locations of identified issues have been collected and filed under a section of the 'Trails Maintenance Log' specific to each of the Township's trails.
- ❑ An annual trail report has been prepared, including feedback from trail operations and maintenance personnel, information on the condition and a prioritized list of maintenance and improvement activities prepared for each Township trail.
- ❑ Trail budgets have been reviewed for alignment with prioritized maintenance and improvement items.
- ❑ Individual Trail Maintenance Plans have been updated or revised where necessary.



Trail Maintenance Plan

To be reviewed, with checklist, notes and markup of trail map completed at each inspection and maintenance occurrence performed.

Trail Name

Trail Head Location 1:

Trail Head Location 2:

Secondary (un-signed) Trail Access Points:

Partner Agencies

(List partnership agencies involved in access and maintenance agreements, including key contacts)

Partner Agency Role in Maintenance:

(Describe partnership agency roles and responsibilities with trail maintenance and inspections).

Township Role in Maintenance

(Describe the Township's roles and responsibilities with trail maintenance and inspections).

Trail General Description

(Provide a description of the trail extents, amenities and signage features, surfacing type(s), special characteristics, conditions or features).

Items for Special Maintenance Attention

(Provide a description of any managed hazard areas, recurring maintenance issues which could pose a risk to the public, or areas with a higher than typical maintenance requirement).

Trail Map Appendix

(Provide a brief description of the appendix trail map) Example: The trail map is divided into 3 segments of trail by colour-coding, representing changes in surfacing type, including limestone screening, asphalt paving and boardwalk areas. Two primary trail head locations with trail map information signage, trail directional signs and seating/rest locations along the trail are referenced.

Trail Segment 1

(Provide a brief description of trail segment extents, surfacing type and features)

		Health & safety Issue?
Issue 1:	(operations personnel to list any identified, unresolved issues & mark these on the appendix map with item #)	
Issue 2:		
Issue 3:		
General Notes:		

Trail Segment 2

(Provide a brief description of trail segment extents, surfacing type and features)

		Health & safety Issue?
Issue 4:	(operations personnel to list any identified, unresolved issues & mark these on the appendix map with item #)	
Issue 5:		
Issue 6:		
General Notes:		

Trail Segment 3

(Provide a brief description of trail segment extents, surfacing type and features)

		Health & safety Issue?
Issue 7:	(operations personnel to list any identified, unresolved issues & mark these on the appendix map with item #)	
Issue 8:		
Issue 9:		
General Notes:		

General and long-term maintenance and renewal items noted:

Maintenance Activities Completed:

Report Completed By:

Date of Occurrence:

Parks & Trails Maintenance Checklist

Each Township-managed open space asset requires varying frequency and types of maintenance. This checklist is intended to assist Township staff with monitoring and inspections. Add new issues or maintenance actions to the blank spaces at the bottom of the checklist to carry forward for future inspections.

highlight boxes based on when items require inspection/maintenance when developing the asset maintenance plan. Check boxes as completed during inspection/maintenance.

Amenity Name

Inspection Date:

Annual Inspection Target Date: (May 1st or Other: _____

Interim Inspection Dates: (July 1st) (September 1st) (November 1st)

Routine Maintenance Frequency: (___x Monthly) or (___x Weekly)

	Annual	Interim	Routine
Signage			
Inspect for signs of structural damage and vandalism	☐	☐	☐
Repair, tighten fasteners, straighten	☐	☐	☐
Replace	☐	☐	☐
Refill Information Handouts	☐	☐	☐
Update Messaging on Community Information Boards	☐	☐	☐
Surfacing			
Seasonal Materials Stockpiling	☐	☐	☐
Crushed Stone - replenish, spread, rake, compact	☐	☐	☐
Asphalt - seal cracks, fill potholes	☐	☐	☐
Asphalt - remove & reapply damaged sections, (top layer resurfacing or full replacement)	☐	☐	☐
Concrete Paving - highlight any trip hazards	☐	☐	☐
Concrete Paving - remove, realign, lift or replace damaged sections	☐	☐	☐
Unit Pavers - remove, re-set where settlement or shifting has occurred	☐	☐	☐
Playground Safety Surfacing - (if applicable by material) repair, replenish, spread, rake, compact	☐	☐	☐
Playground Safety Surfacing - inspect for defects or low areas, test for impact attenuation	☐	☐	☐
Line Painting - minor touch-ups	☐	☐	☐
Line Painting - reapply	☐	☐	☐
Boardwalks - replace damaged deck boards, repair handrails and guards components	☐	☐	☐
Bridges/Boardwalks - inspect foundations and structural components for deterioration/damage	☐	☐	☐
Bridges - repair or replace damaged decking, handrail and guard components	☐	☐	☐
Steel Bridges - paint touch-ups / repaint	☐	☐	☐
Edging - repair, re-set, replace damaged	☐	☐	☐

	Annual	Interim	Routine
Infrastructure			
Lighting - replace burnt out bulbs			
Lighting - replace broken bulbs and luminaires			
Lighting - inspect for function, straightness and structural soundness, or need for replacement			
Drainage Culvert - clear debris, repair downstream washout areas			
Drainage Culvert - inspect for function or need for replacement			
Surface Drain - clear debris, inspect for function			
Edge Protection Fencing - inspect for signs of structural damage and complete repairs			
Vegetation			
Remove fallen branches or trees			
Prune overgrown vegetation (to a minimum 2.1m clear height above trails)			
Inspect for hazardous trees and branching & schedule pruning & removals			
Remove invasive plant species (garlic mustard, phragmites, buckthorne etc.)			
Mow grass maintenance strips alongside trails			
Clean or remove accumulated leaf and debris matter			
Amenities (playgrounds, sports facilities, waste receptacles, seating)			
Empty waste and recycle bins			
Inspect all amenities for damage and vandalism			
Check fasteners and anchors & tighten as needed on all amenities			
Touch up paint on all amenities			
Evaluate the need for additional amenities			
Playgrounds & Sports Facilities - inspect for damage or safety concerns & repair immediately			
Winter Maintenance			
Winterize water drinking fountains			
Plow or clear snow			
Apply sand for ice management			
Other:			
Winterize water drinking fountains			
Plow or clear snow			

7.2 Parks and Open Space General Standards

- All park development shall comply with the latest Local Service Policy, as set out in the Township's latest Development Charges Study and By-law.
- All parks shall be accessible, in accordance with the Accessibility for Ontarians with Disabilities Act (AODA), Design of Public Spaces (DOPS) Standard. AODA DOPS and all Township accessibility requirements as outlined herein.
- All play areas and play equipment shall comply with the CAN/CSA Standard Z614 - Children's Playspaces and Equipment (latest edition).
- All park development shall be subject to a two-year comprehensive warranty on all plant material, parks and open space construction works.
- Development Construction: Undeveloped, disturbed blocks intended for eventual park development shall be graded, seeded and maintained by the Owner until acceptance by the Township. No waste or surplus material is to be stockpiled or stored on the lands. The lands shall not be used for stockpiling, equipment or other construction material storage or temporary structures related to sales or construction operations.
- Development Construction: Where development is adjacent to a park or open space, throughout the duration of construction and as the finished condition: runoff from the development property shall not drain into the park or open space unless approved by the Township.

7.2.1 Parks and Open Space Pre-Development

- All parks and open space development including redevelopment of existing parks is to have a topographic and boundaries survey procured by the Township and prepared by an Ontario Land Surveyor (OLS) prior to issuance of RFP for design and contract administration services. At minimum, survey information is to including boundaries and easements information, utilities and services, a maximum 5.0m on-centre topographic elevation grid, the location of canopy limits of woodlands, and existing features within 12m of the identified limits of work, including any top of bank conditions, high water elevations and locations of existing individual and groupings of trees, with tree base locations and canopy diameters referenced.
- Applicable requirements for environmental impact assessments (EIS) and archaeological assessments are defined by the Ontario Ministry of Tourism, Culture and Sport, in the Ontario Heritage Act, and by the Ontario Ministry of the Environment, Conservation and Parks (MOECP), through the Environmental Assessment Act. Archaeological assessments and Environmental Impact Studies can require 1-3 years to complete depending on the complexity of

a site and early study findings. These requirements must be completed by the Township well in advance of issuance of RFP for parks design and contract administration.

7.2.2 Typical Park Features

- Prominent and front-of-site fencing is to be cedar post and pole type, with welded wire mesh in accordance with Township Standard Details.
- Fencing in back-of-site locations and specific to sports amenities (ball diamonds, courts etc.) is to be black vinyl chain link fencing in accordance with Township Standard Details, or an approved alternative. Galvanized chain link fencing is not an acceptable alternative.
- Site furniture is to be in accordance with Township Standard Details, including benches, chairs, waste receptacles, picnic tables. All site furnishings are to be secured in place to a permanent poured in place concrete pad, using minimum 304 stainless steel tamper proof anchors in accordance with Township Standard Details, unless otherwise approved by Township Staff.
- Supply of sports facilities, including soccer pitches, baseball diamonds, pickleball and tennis facilities, multi-purpose courts are to be based on Township Standard Details and further determined through consultation with Township Staff through the design review process.

7.2.3 Park Location and Grading

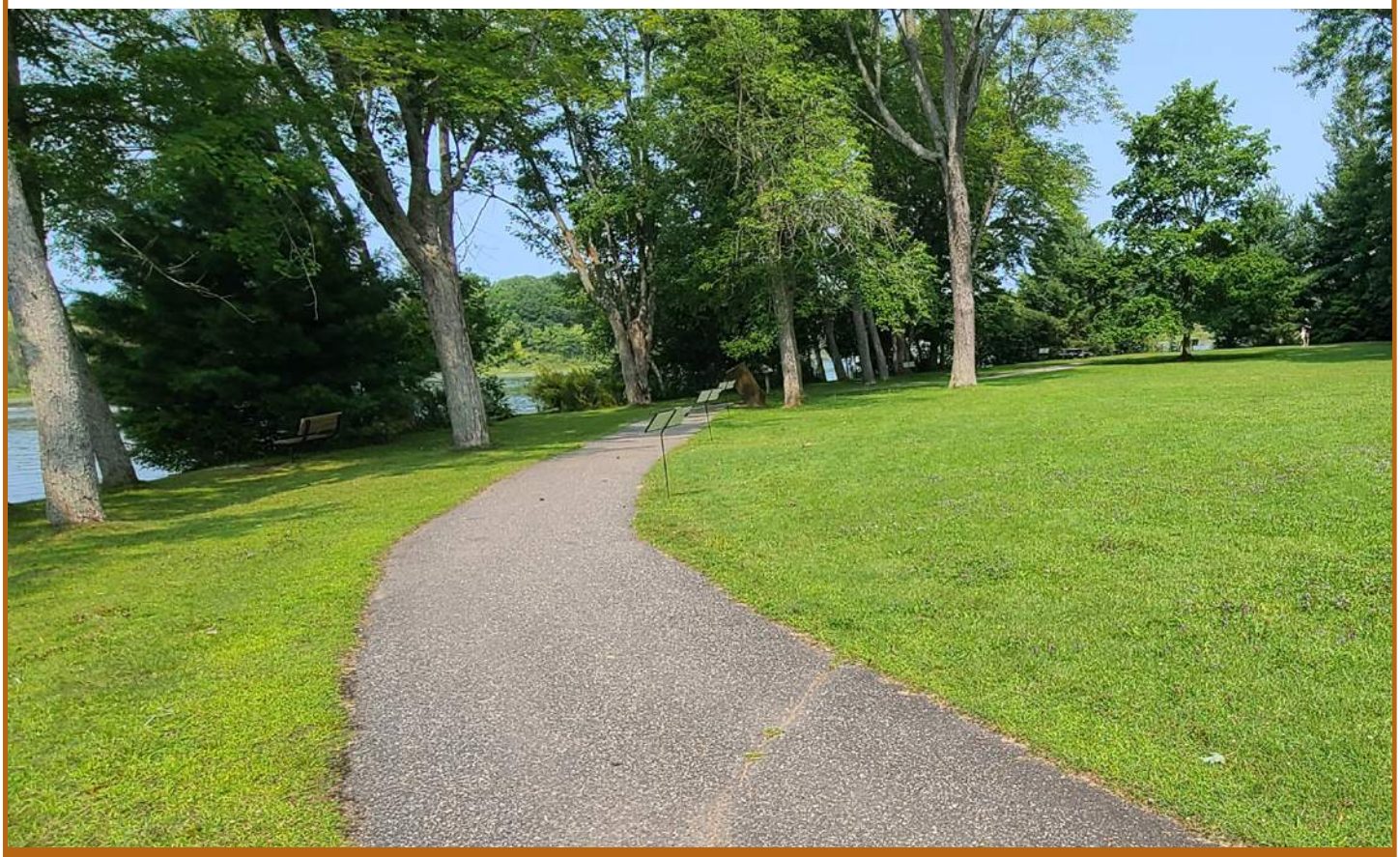
- Parks and open space may be located within flood-planes or below the historic high water mark, with the exclusion of: play structures, accessory buildings and parking areas which are to be located above the high water mark unless otherwise approved by Township Staff. Limit open space areas and amenities within flood prone areas to simple features and surfacing types that are resistant to flood conditions. Typical features suitable for flood prone areas include: open grass areas, beaches, anchored bench seating and waste receptacles, boat ramps, docks, recreational trails (see trails requirements for flood prone areas), native plantings tolerant of seasonal flood conditions. Design with consideration to minimize the additional annual/spring maintenance requirements for parks and open space amenities located in flood prone areas.
- A 15m buffer is to be provided from the stable top of slope or from high water elevation for buildings and playground structures unless otherwise approved by Township Staff.
- Parks and open space grading is to be a minimum of 2% slope for positive drainage, unless the area is intended to receive and manage rain water runoff (E.g. rain garden), natural barren rock surfacing or an existing naturally vegetated area to remain undeveloped.
- New parks and open space to be developed on undeveloped and naturally vegetated sites and/or waterfront sites are to undergo an Environmental Impact Study (EIS).

7.2.4 Park Paths

- Park paths of travel are to conform to standards within the Recreational Trails section. See also Township Standard Details.
- With the exception of concrete sidewalks associated with parking areas and amenity buildings, park trails and walkways that are to be maintained through the winter, as well as those that may require Township maintenance vehicle access, are to be 3m in width, asphalt or concrete paved surfacing in accordance with Township Standard Details.

7.2.5 Park Parking Standards

- Neighbourhood Parks, Parkettes and Vistas are not required to have dedicated parking. A parking lot or lay-by parking may be supplied if there are no parking opportunities in proximity.
- 16 parking spaces per ball field, 30 spaces if fields have lighting
- 16 parking spaces per standard sized soccer field, 30 spaces if fields have lighting
- 12 parking spaces for general park users
- 4 parking spaces for each tennis or pickleball court (2x courts = 8x spaces)
- Accessible parking types and quantities in accordance with Accessible Design Standards section



7.2.6 Parks and Open Space Planting Materials

- All tree, shrub, grass and herbaceous plant material used throughout parks and open space development projects are to be regionally native, with the exception of non-invasive ornamental annual plantings in limited feature areas. Refer to Township Standard Details for a list of approved plant species and native seed mixes.
- Plant species are to be selected for appropriate tolerance to site specific conditions, including: sun and wind exposure, seasonal and intermittent flooding, general soil moisture conditions, exposure to winter maintenance salt runoff.
- Unless otherwise indicated by Township Staff, planting beds are to be designed with substantially sized shrub, grass and herbaceous plant groupings so as to minimize the likelihood of operations and maintenance personnel mistakenly weeding out planted material in the early season.
- Plant species in planting beds are to be selected with a target of 50% pollinator-friendly, flowering plants and a minimum of two species flowering at a given time throughout the growing season, from early spring through late fall. Pollinator friendly plants can also include trees. Refer to Township Standard Details for a list of approved plant species, where pollinator-friendly species are identified.
- Riparian and emergent aquatic plants are to be secured in place and protected from ducks and geese throughout their establishment period. Refer to Township Standard Details.

7.2.7 Park Lighting

- Lighting of park walkways in neighbourhood parks is generally not recommended.
- Lighting of wilderness trails is generally not permitted.
- At least one light standard or building-mounted light is to be provided at playground structures for increased playground security and deterrence of vandalism.
- Lighting of sports fields and courts for extended use hours within community parks is at the discretion of Township Staff based on park context and scale of sports amenities being provided.
- Sports amenities including fields, ball diamonds and courts at District/Destination parks are to have lighting suitable for nighttime and extended seasonal use.
- Parks and open space light fixtures are to be LED. A lighting layout plan is to be prepared by an electrical engineer (PEO), with photometric design provided.
- Lighting design is to: provide sufficient light levels for navigation, safety or specific activities, eliminate direct upward light, minimize glare, spill and trespass light with the use of full cutoff fixtures, enhance urban design, use an appropriate colour temperature for the context (maximum 3000K in residential areas), and use dark sky compliant fixtures wherever possible.
- Parks and open space lighting is to be operated either by programmable light sensor or motion detector sensors.

7.3 Playgrounds

- Playgrounds shall comply with CAN/CSA Standards Z614 - Children's Playspaces and Equipment (latest edition), including Annex 'H', Children's Playspaces and Equipment that are Accessible to Persons with Disabilities.
- Playgrounds shall comply with the Accessibility for Ontarians with Disabilities Act, 2005.
- For any new playground structure, a minimum of two distinctly different playground options including playground equipment are to be prepared for stakeholder engagement.
- The preferred safety fall surfacing material is Engineered Wood Fiber (EWF) mulch in accordance with Township Standard Details. EWF is CSA compliant and AODA compliant while remaining in keeping with the Township's nature-rich context. EWF requires periodic maintenance top-ups to maintain compliance with CSA standards and should be tested on an annual basis for impact attenuation compliance.
- Sand is encouraged for use in beach and sand box / sand digging pit areas, but not for use as a safety fall surfacing material due to non-compliance with AODA standards.

7.3.1 Playground Area

- The playground safety fall surfacing area shall encompass all play equipment in accordance with CAN/CSA-Z614 (latest edition).
- Rocks, logs or other naturally occurring features in the immediate vicinity of the playground, which could be assumed to be of interest for children for climbing should be considered either for removal or relocation away from the playground area, or if appropriate, inclusion in the playground safety surfacing area.
- Ensure minimum setbacks, fall zones and clear zones are provided from each piece of play equipment in accordance with CSA standards.
- Provide an accessible recreational trail or walkway connection to playground areas.
- Walkways may be used as a border to retain safety surfacing materials. In these instances, provide rolled edges in accordance with Township Standard Details.
- Where walkways do not form a completed border surrounding safety surfacing area, provide a poured in place concrete curb to retain safety surfacing materials.
- Provide sub-drainage throughout safety surfacing areas in accordance with Township Standard Details, ensuring positive drainage and outlet for sub-drainage and ensuring that the placement of drainage pipes does not interfere with play equipment footings.

7.3.2 Playground Program Development

The development of a program and selection of playground equipment should be largely informed by stakeholder engagement, with the Township's primary responsibility being to establish an appropriate budget for the playground given the type of park (neighbourhood, community, destination) the playground will be located within, and to hold consideration for vulnerable populations who are deserving of equitable and inclusive playgrounds. In accordance with Stakeholder Engagement sections, it is recommended that stakeholders be involved in the early program development phase of a new playground, with subsequent review of concept drawings and renderings being the next stage of engagement.

The following conceptual playground programs are provided as a high level tool to guide appropriate budgeting for playground projects:

Typical Neighbourhood Park - Play Area Program
(for early budgeting purposes only)

Junior/Senior Combination Structure: 3-4 decks with 1 roof, transfer station with stairs or accessible ramp, 2-3 slides (plastic or metal), 2 vertical climber features, 2 horizontal climber, rock wall or similar activity, 4-5 activity panels (E.g. musical component, scavenger hunt).

Minimum 4-seat swing unit (basket swing + 2 belt seats) or (2 belt + accessible + toddler seats)

Sand digging area: 600mm depth sand digging area 16sq.m. - 36 sq.m. in size. Incorporate rockery at low seating height into perimeter edging.

Associated amenities including: CSA compliant playground signage (rules & contact information), 2x bench seating, accessible pathways or recreational trail access to each play space area(s), 4x tree plantings for future shade.

Typical Community Park - Play Area Program
(for early budgeting purposes only)

Junior/Senior Combination Structure: 3-6 decks with 1 roof, transfer station with stairs or accessible ramp, 2-3 slides (plastic or metal), 2 vertical climber features, 2 horizontal climber, rock wall or similar activity, 5-7 activity panels (E.g. musical component, scavenger hunt, rock climber, wobble pods).

Junior Structure: 1-3 decks with min. 1 roof, transfer station and stairs or ramp, 2 plastic or metal slides, vertical climber, 2-3 activity panels (E.g. angled wall, spin colour wheel).

Senior Structure: 3-6 decks with min. 1 roof, transfer station with stairs or ramp, 2-3 plastic or metal slides.

Minimum 6-seat swing unit (basket swing + 2 belt + 2 toddler seats) or (3 belt + accessible + 2 toddler seats)

Sand digging area: 600mm depth sand digging area 25sq.m. - 45 sq.m. in size. Incorporate rockery at low seating height into perimeter edging and with fall offsets within sand area. Consider including shade canopy.

Associated amenities including: CSA compliant playground signage (rules & contact information), 6x bench seating, additional informal (E.g. rock, grass berm, picnic table) seating areas, accessible pathways or recreational trail access to each play space area(s), planting bed areas, 10x tree plantings for future shade.

Typical District/Destination Park - Play Area Program
(for early budgeting purposes only)

A destination park for the Township is to include an iconic, one-of a kind, themed, custom play area, referencing the context, history and natural ecology of the Township. Play equipment should include the Township brand colour themes, reference iconic wildlife and shapes of the area (E.g. tall pine, rock shield, black bear, moose etc.). These custom play equipment pieces should envoke a sense of ownership, belonging and place.

Wood is the primary material choice for a destination park, combined with other organic elements including water, sand, net climbers, rocks and perimeter vegetation.

All fasteners are to be stainless steel.

At minimum, the destination play area should include:

- Iconic, custom themed junior, senior and combined play structures.
- Open ended play areas and connections to nature such as log-pile styled climbers.
- Log Swing, Basket Swing, Hammock Swing and Rope Swing Features.
- Opportunities for self-discovery, and calculated, graduated risk/challenge levels.
- Creative play areas including sand and water play, huts and berms.
- Inclusive components (E.g. metal slides with rampped access, quiet areas for passive and calm play.
- Shaded areas.

Examples of comparable themed, custom wood based playgrounds include:

- Joe Louis Greenway (Warran Gateway Playground), Detroit Michigan
- Downtown Cary Park, Cary, North Carolina
- St. Lawrence Market Playground, Toronto

Associated amenities including: CSA compliant playground signage (rules & contact information), 10x bench seating, additional informal (E.g. rock, grass berm, picnic table) seating areas, accessible pathways or recreational trail access to each play space area(s), planting bed areas, 30x tree plantings for future shade.

7.4 Splash Pad General Standards

Splash pads include spray, jetted or other water sources, not incorporating standing or captured water. Spray pads are a water based play opportunity typically requiring less maintenance than public pools, where one operations and maintenance personnel can monitor and run multiple splash pad locations.

Spray pads may be located in Neighbourhood, Community or Destination Parks. The size of the spray pad and number of components are proportional to the park class. A Community or Neighbourhood park may include limited or no vertical spray features, and may be comprised entirely of ground jets, whereas a Destination park will host a wide range of both vertical spray and dump type features, along with ground jets, bubble and spray features. Refer to the 'Township Standard Details' section

- Splash pad designs are subject to water servicing permits issued by the Township.
- All plumbing must comply with the latest plumbing codes.
- Waste water must be drained to a storm sewer. Where no storm sewer is present, all chlorine must be removed from waste water prior to discharge at surface. Do not discharge directly to water bodies. Water must be delivered to a sodium sulfite tablet system for dechlorination prior to discharging water either into the storm system or to a surface infiltration location.
- Electrical work must comply with the latest electrical codes.
- The location of spray pads is subject to Township approval and must be a minimum of 15m setback from the historic high water elevation.
- Mechanical rooms and control centres must comply with confined space entry regulations.

7.4.1 Splash Pad Surfacing and Layout

- Splash pad surfacing shall be cast in place concrete. Refer to Township Standard Details.
- There shall be no standing water. All water must drain to a surface drain location.
- A minimum of two surface drains must be included, and may be either a trench drain or catch basin style with non-slip cover having openings of not more than 9.5mm in diameter with no sharp edges. Drains are to have a powder-coat finish in a light colour to avoid hot metal.
- The concrete pad shall include a primary spray zone, encompassing the spray zone limits of each feature, as well as a minimum 2.0m over-spray zone. The over-spray zone shall be coloured concrete, with a tonal difference from the spray zone.
- The design of the splash pad must include both junior (18 months - 5 years) and senior (5-12 years) play areas.
- The layout must accommodate for accessibility, provide minimum 1.2m between spray zones.

7.4.2 Splash Pad Controls and Water Supply

- Splash pads shall be a fully automated system.
- Water supply to the splash pad shall be from the Township municipal water service. Water pressure at the street must be checked and the spray pad designed to work with available residual pressure. A pressure regulating valve is required.
- Splash pad controls shall be housed in an above ground control vault or vandal resistant, lockable park building. Adequate working space must be provided around the shut-off valves.
- Splash pad controller shall be programmed with an automated sequence of water feature control steps, initiated by the activator. Each sequence shall include a minimum of 5 minutes of customizable feature control. Each initial program shall be done by the manufacturer with the Township having the ability to make changes in the field.
- The controller shall be 'user-owned', meaning that the Township has the ability to re-program sequences, turn on and off components in the sequence without involving the manufacturer.
- The activator button shall 'beep' indicating when activated and have an LED light.
- Each feature in the splash pad shall have an activation switch on the electrical panel, providing the ability to turn individual features on and off from the mechanical room, without having to touch the activator.

7.4.3 Splash Pad Furnishings and Amenities

- Splash pads must provide seating opportunities with a minimum of two benches for Neighbourhood Parks, three benches for Community Parks and six benches for District Parks. Seating is ideally to be located in a mix of shade and sun locations.
- Waste receptacles are to be provided within close proximity to the splash pad.
- Note all metal components within 3m of the spray zone are required to be bonded/grounded, including but not limited to benches, waste receptacles, shade structures.

7.4.4 Splash Pad Documentation

- The manufacturer is required to supply the Township with engineer-stamped layout and servicing drawings for the splash pad.
- Prior to substantial performance, the installer is required to supply the Township with: as-built CAD and PDF format drawings, prepared by an OLS Surveyor, including splash pad layout and topography, warranty registration documentation, along with all instructional and operational materials in a PDF electronic file format, and with (1) complete print hard-copy (plastic cover, bound).

7.5 Parks and Open Space Structures

Architectural design of parks buildings and structures should reflect that of the local quintessential 'Muskoka' cottage aesthetic. This section outlines the architectural style guidelines for the development of significant and minor structures in Township parks and open spaces.

7.5.1 Major Structures

For significant park structures, the use of post and beam timber construction with mortise and tenon joinery is recommended. These beautiful and durable, long standing traditional building techniques resonate with teh natural surrounings and have been implemented throughout the Muskoka Lakes region for generations. The architectural style may be traditional, featuring high A-line peaks and elegant curved beams, or it may lean towards more modern interpretations, incorporating some steel structural elements, emphasizing clean lines and wide spans. Regardless of the chosen style, consistency is paramount; each park or open space site should reflect a cohesive architectural language, while also leaning into the Muskoka aesthetic.

7.5.2 Structures - Materials and Colours

Preferred roofing material is a mechanical-lock or standing seam metal. This roofing option provides excellent weather resistance and requires minimal maintenance, while its sleek profile can complement both traditional and contemporary designs.

Preferred wood species include local white cedar or Canadian Douglas fir, both of which offer excellent durability and a natural beauty.

Preferred accent materials include dimensional local granite masonry and concrete.

Preferred colours include clear stains and sealers on wood products, opaque wood stains in the Township's branding colours of red and blue with white accents, and a medium charcoal grey for metal roofing and accents.

7.5.3 Minor Structures

For smaller structures such as modular washrooms, change rooms, plumbing and mechanical buildings, and community garden sheds, we suggest the use of powder-coated metal and stained wood materials. This combination offers a balance of durability and aesthetic charm, allowing these structures to blend seamlessly into the landscape while providing necessary functionality. Prefabricated, kit and modular solutions may be considered for minor structures.

(Example image compliments of Urben Blu)

The above example image illustrates a modular, prefabricated approach to parks washrooms, with ancillary change room stalls included. Modular and prefabricated building solutions can offer a surprising amount of customization in finishing material selections, configurations and add-on options, such as the adult/child drinking fountain and change rooms in this example.

Best Practices

8.1 Inclusive Design and Accessibility

Township parks and open spaces shall be designed to be usable by all people, to the greatest extent possible, without the need for adaptation by users, or differentiation in how people of varying abilities navigate through or interact with a park or open space site. Inclusive parks and open space design is to accommodate the needs of persons with disabilities, including persons who are mobility, hearing, visually or cognitively impaired. This is in acknowledgment of the intent of the Ontario Human Rights Code in terms of respecting the dignity of persons with disabilities. Design of both newly constructed and retrofitted, permanent and temporary Township parks and open space facilities shall comply with requirements outlined in the Accessibility for Ontarians with Disabilities Act (AODA) and follow the Principles of Universal Design (NC State University, The Centre for Universal Design, Principles of Universal Design):

1. Equitable Use:
The design is useful and marketable to people with diverse abilities.

2. Flexibility in Use
The design accommodates a wide range of individual preferences and abilities.

3. Simple and Intuitive
Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

4. Perceptible Information
The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

5. Tolerance for Error
The design minimizes hazards and the adverse consequences of accidental or unintended actions.

6. Low Physical Effort
The design can be used efficiently and comfortably and with a minimum of fatigue.

7. Size and Space for Approach and Use
Appropriate size and space is provided for approach, reach, manipulation and use regardless of user's body size, posture or mobility.

It is noted that the majority of Township parks and open space facilities do not meet current standards for accessibility. Through the Asset Management Planning Process, a strong focus should be placed on improving AODA compliance with existing assets wherever possible given the constraints of retrofit design.

Exceptions: accessible design requirements do not apply to wilderness hiking trails, portage routes, or mechanical and janitor rooms. Under the Human Rights Code, allowances may be granted where modifications may alter or damage the essential nature of a: designated heritage facility, National Historic Site, historic site or monument, United Nations Cultural Heritage or Natural Heritage designated Site, or would adversely affect the ecological integrity of a site, or is not practicable due to significant physical or site constraints.

Refer to the standard construction details section for details related to inclusive design and accessibility.

8.1.1 Beyond the AODA

Parks and open space design is required to meet the minimum standards for accessibility outlined in the AODA. In many aspects, the AODA represents a conservative approach to providing accessibility. For example, minimum clear pathway widths outlined in the AODA will allow a traditional, manual operated wheelchair to tightly pass a person who is walking, but does not provide adequate space for a person using a scooter or assisted by a caregiver, or for a wheelchair and a double stroller to comfortably pass. There may be instances where the Township's best practice standards cannot be applied due to the physiography of a site and in these instances AODA requirements must be adhered to.

(Example image compliments of Boardsafe Inc.)

The following are Township best practices for inclusive and accessible design of parks and open spaces, including recreational trails:

- Provide a minimum 2.1m clear path of travel on all pedestrian circulation within parks, including connections from parking and between each programmed area and on recreational trails.
- Provide for a maximum of 4% linear-running slope on paths of travel and 2% cross slopes.
- Avoid stairs and ramps wherever possible. Where unavoidable, if stairs are used an AODA compliant ramp must also be provided in an equitable location.
- Provide universal, non-gender specific washrooms, with each toilet having a door to the exterior of the parks building, or to a main corridor on larger buildings. In each universal washroom, provide for accessibility including: for a minimum wheelchair turning diameter of 1500mm clear space, graspable L-shaped wall grab-bars, automated door opener, automated door lock button complete with a safety release option from exterior in case of emergency and baby change table.
- Provide a minimum of one universal-family washroom at each facility having toilets, including for the above noted requirements as well as one built-in counter type adult change table, suitable for special needs individuals, one fold-down toilet-side grab bar and an increased clear wheelchair turning space with a minimum 2100mm diameter.
- Provide additional equipment or design consideration as required to support people with a diverse range of abilities in using the main program areas and features within a park or open space. Some examples include: provision of a floating wheelchair for public use at key Township beach areas where an accessible beach access route is provided. Provide an accessible swing lift at dock-access popular swim areas or a launch stabilizer and swing lift at popular canoe/kayak entry points.
- Provide the following typical site amenities in accessible form at a rate of 20% and not less than one per site and located on an accessible path of travel: bench with adjacent wheelchair or mobility aid rest space, table with wheelchair accessible seating space.
- Provide both Type 'A' and Type 'B' accessible parking spaces, located in immediate proximity, as the closest parking spaces to the main park access point, and consisting of a hard-paved surfacing type at not less than one-each per site, or in accordance with the minimum parking space quantities table. Provide a 2000mm width aisle between accessible parking spaces, with a minimum of one aisle per parking space and with the ability for two spaces to share an aisle. Where accessible parking spaces are provided on a gravel parking lot, provide an extension to the accessible parking space paved area of a minimum 2000mm beyond the drive aisle end of the parking spaces.

8.2 Sustainable Design

The design and development of parks and open spaces shall strive to have a net positive impact on the climate, ecological functions and biodiversity of the Township. Township objectives for sustainable design in parks and open space design and development are adapted from the American Society of Landscape Architects (ASLA) Climate Action Field Guide and include:

Design climate positive landscapes ✓
Target climate positivity for Township parks and open space development and renewal projects.

Design pedestrian and cyclist friendly communities ✓
Seek to link parks and open space assets with expansion of the Township's trails system, including multi-use recreational trails, sidewalks, on-street bike lanes and wilderness hiking trails.

Reduce energy usage and support renewables ✓
Target net-zero energy on operations for parks and open space projects. Include for electric vehicle charge stations at key Township open space assets for equal distribution and access across the Township.

Protect and enhance ecological services ✓
Seek to maintain Township ownership of natural sites with intact and high-value ecological services including wetlands, riparian and forested lands. Where natural sites are developed, place programming and development areas where disruption of ecological services will be minimal.

Protect, conserve, and enhance biodiversity ✓
Seek to maintain Township ownership of natural sites with intact and diverse plant communities and where significant habitat suitable for species at risk and species of special concern is present. Seek to include natural restoration areas as a component of parks and open space renewal and development projects, such as shoreline riparian naturalization plantings and slope reforestation initiatives.

Practice ecologically-sound land management ✓
Consider delaying mowing and cleanup of leaf drop in parks and open spaces until pollinator insects have emerged for the spring season. Refrain from use of pesticides including herbicides wherever possible, with the exception of targeted application when indicated as a best practice for invasive species management. Consider the gradual replacement of parks operations equipment with electric alternatives to gas where possible.

Support regenerative local agriculture and increase food security ✓
Design flexible spaces within parks and open space to host community events, including those with a focus on agriculture and food security (E.g. farmers markets, seed exchanges).

8.2.1 Climate Positive Design

The built environment is responsible for 75% of the world's greenhouse gas (GHG) emissions. Climate positive design seeks to sequester more GHG emissions over the lifetime of a project than are produced through the construction and ongoing maintenance practices of the site. This is accomplished by reducing greenhouse gas emissions during the construction and ongoing maintenance practices of a site, and by including carbon sequestering plants and materials to offset the emissions that are unavoidable.

The Climate Positive Design Challenge (https://climatepositivedesign.com) is a non-profit initiative providing free educational resources and a framework to calculate the carbon footprint and time-frame for climate positivity of an open space project during the design phase.

The Climate Positive Design Challenge sets its own targets for carbon neutrality within 5-years for parks, mixed use and campus type design, and 20-years for plazas and streetscapes. The Township is seeking climate-positivity in its parks and open space development projects the following, more flexible time-frame.

Climate Neutral - Open Space Development Requirement
Township parks and open space development projects are required to achieve carbon neutrality within their anticipated lifespan (before significant updates are required). For most parks and 'soft' open space assets this is a 15-year time-frame. For plaza and streetscape type open space assets, this is typically a 40-year time-frame.

Climate Positive - Open Space Development Best Practice
As a best-practice, Township parks and open space development and renewal projects should strive for climate neutrality within the 5 and 20 year time-frames outlined in the Climate Positive Design Challenge, ensuring years beyond neutrality for the project to become climate-positive.

Climate Positive Best Practices that are generally applicable to the development and renewal of Township open opace assets (adopted from the Climate Design Challenge Toolkit, refer to the online toolkit resources for more information at: https://climatepositivedesign.com/resources/design-toolkit/):

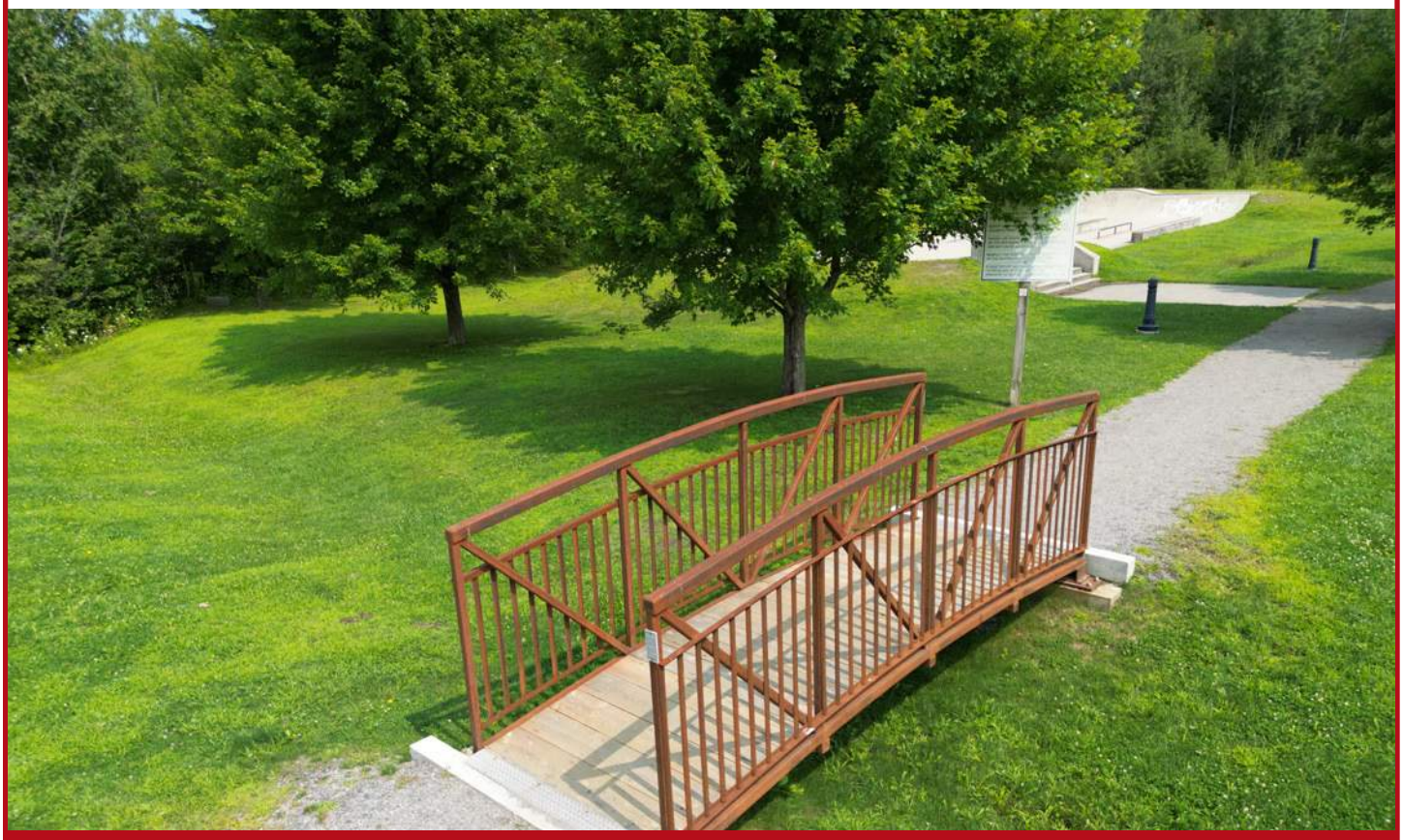
Minimize Hardscape and Structures	• Plant more, pave less • Minimize underground construction • Reduce concrete, steel and aluminum
Utilize Low-Carbon Materials	• Wood and wood products • Decomposed granite, aggregate, chip seal • Lightweight fill on structure • Green concrete and concrete reduction • Green steel and steel reduction • Recycled materials • Low carbon walls and structures • Natural drainage swales and biotreatment areas
Reduce, Reuse, Recycle	• Reduce and recycle materials • Minimize demolition and offhaul • Reduce transportation and offsite emissions
Conserve and Protect Topsoil and Soil Biodiversity	• Minimize grading and till • Minimize compaction and construction impacts • Design strategies that minimally impact soil • Existing soil amended in place
Protect Nature	• Do not specify sphagnum peat moss, virgin topsoil, or river gravel. • Preserve existing vegetation wherever possible.
Design Carbon-Smart Planting	• Maximize planting • Minimize lawn • Plant native species • Select species and design planting to maximize sequestration • Increase diversity of plant species and plant types
Certify Carbon Sinks	• Emerging carbon credit markets
Compact Neighborhoods	• Compact neighborhood design • District centers • Residential densities

Street Networks	• Complete streets • Shared streets • Street width and orientation • Bikeways • Micromobility • Break down barriers to walkability
Public Transit Communities	• Transit-oriented design • Provide direct, convenient, safe pedestrian and cycle routes to transit • Incorporate health and wellness facilities • Remove parking minimums
Design With Water	• Manage stormwater and wastewater within the landscape • Irrigate minimally with passive, gravity irrigation
Manage Site to Reduce Carbon Emissions and Increase Sequestration	• Minimize high-maintenance lawn • Specify electric and hand-powered equipment • Design low-maintenance landscapes • Minimize pruning and retain woody material • Compost on-site • Integrated pest management (IPM) • Build soil carbon
Reduce Building and Infrastructure Energy Usage	• Green roofs • Cool roofs • High-albedo materials • Shade buildings with trees • Constructed wastewater wetlands • Energy-efficient lighting • Reduce pumping and motor usage • Reduce Mechanical Electrical and Plumbing (MEP) energy usage
Support Renewables	• Design and plan for renewable energy deployment • Plan for development- and neighborhood-scale renewable infrastructure

8.3 Design for Stormwater and Spring Meltwater Management

In addition to the usual need to manage stormwater, the wilderness and lake-land context of the Township brings the added challenge of managing spring freshet seasonal floodwater. Like much of the world over the past 60 years, Canada has experienced a rise in temperatures and levels of precipitation, leading to less predictable seasonal weather patterns, and more severe weather events.

The Township is a community built upon a love of the water and seeks to maintain a strong relationship with its lakes. While building significant structures and infrastructure on flood-prone lands is not recommended, parks and open space recreational amenities can be developed in seasonal flood zones with a reasonable expectation for some increased maintenance requirements. The following best practices for design for stormwater management and flood prone areas were developed based on adaptation of principles identified in a review of the Dutch concept of “Leven met Water” (Living with Water) and the document ‘Designing with Water: Creative Solutions from Around the Globe” prepared by the Boston Harbour Association in partnership with Sasaki:



Design for Resilience	Resilience implies adapting to or bouncing back from a disturbance quickly. Resilient planning and design incorporates redundancy, and anticipates change over time. Examples include: Maintaining an awareness that the 100-year waterline can be surpassed, and including only elements and materials in the flood plain that have a relatively low replacement or touch-up time and cost associated. Limiting manicured areas to key features (E.g. beach and access trail) and placing a larger focus on natural and naturalized shoreline and riparian areas as recreational amenities unto themselves, with flood-resistant recreational trails and boardwalks. Limit parks buildings and built play structures to higher elevation areas, or consider elevating features on a platform construction, similar to typical Muskoka boathouse design or seaside hurricane architectural typologies.
Create Double-Duty Solutions	Double-duty solutions provide multiple benefits to maximize economic, ecologic and cultural gain. Example: The addition of a wet meadow area and naturalized shoreline areas form a buffer between manicured lawn and shoreline, and flank each end of a beach. The buffer areas serve to slow the movement of spring flood waters while also reducing the park maintenance area, increasing biodiversity and inviting new passive activities such as bird watching into a Township park. Example: in a park prone to flood damage, when asset renewal comes due, park grading is reconfigured to create a constructed depressed oval lawn area in the centre of the park. This area is equipped with subdrains for a durable multi-use turf area in low-water summer months, is intentionally flooded in winter for use as a community skating rink and receives spring flood water, protecting built structures located on bermed higher elevation areas in the park.
Strengthen Community Resilience	Community resilience maintains and enhances the cultural identity that defines municipality through resilient networks and social support systems. Strategies that strengthen social resilience can both cost less and provide meaningful benefits to participants. Example: expand the reach of municipal assets and programming by encouraging use of assets by community members, groups and organizations, such as the provision of a storage building, change rooms and docks to serve a rowing club, triathlon open-water swim training and volunteer-run SUP yoga classes. Partner with other agencies to run water, boating and ice safety courses.
Incentivize and Institutionalize preparedness	Municipal and regional adaptation plans are necessary to guide resiliency efforts. Example: include flood management considerations in asset management planning reports. Seek updated information including evolving flood plain mapping data, insurance implications and consideration for new or emerging flood-resistant materials or techniques.

8.4 Crime Prevention Through Environmental Design

Crime Prevention Through Environmental Design (CPTED) is a concept coined by criminologist C.Ray Jeffreys in 1971, further influenced in its application to urban design and landscape architecture by Jane Jacobs. CPTED principles are based on the understanding that proper design and effective use of the built environment contribute to the reduction of both incidence and community perceptions or fear of crime.

The following chart outlines CPTED principles with explanations as to how these are to be applied to the design, development and maintenance of Township Parks and Open Spaces (Principles Adopted from - CPTED Canada & Kaplan & Kaplan (1989)):

8.4.1 Natural Surveillance

Based on the principle that a person inclined to engage in crime will be less likely to act on their impulse if they can be seen. This applies to vandalism type crimes where incidents are lessened when a space can be seen from a nearby roadway or neighbouring properties, and violent crime reduced when a potential victim has the space, open views and lead-time to clearly see and identify a would-be offender before a planned assault can occur. Parks and open space design and maintenance applications for the Natural Surveillance principle need to be weighed and balanced with the wilderness context of the Township, and with the competing preference that humans have for a prospect-refuge landscape typology, including opportunities for discovery, exploration and quiet solitude in addition to open, shared active spaces.

Applicable Natural Surveillance Design and Maintenance Considerations:

- ❑ Orient driveways, parking areas and key programmed areas toward natural forms of surveillance, including building entrances, roadways and occupied neighbouring properties.
- ❑ Maintain visual permeability of vulnerable areas including building entrances, park access pathways and playgrounds through strategic selection of fencing materials and selection of vegetation types.
- ❑ Trim back overgrown vegetation in and around vulnerable areas.
- ❑ Light pathways and problematic areas where opportunities for natural surveillance exist, such as at either end of a long tunnel or bridge along a recreational trail or the pathway.
- ❑ Strategically generate activity to increase natural surveillance of parks and open space. Encourage use of park spaces by clubs and community organizations, host weekly markets etc..
- ❑ In particularly problematic areas, combine natural surveillance techniques with video surveillance and/or regular police patrol.

8.4.2 Natural Access Control

Based on the premise that a person who encounters a clearly defined or strategically placed boundary will tend to show the boundary some amount of acknowledgment or respect and can be combined with other CPTED principles to deter crimes of opportunity. For example, where access points to a site are limited to those with a high level of natural surveillance, this can increase the perception of risk in offenders, reducing their desire to engage in destructive or criminal activity in a given space.

Applicable Natural Access Control Design and Maintenance Considerations:

- ❑ Provide a clear defined border for the controlled or maintained space. This may take the form of constructed features such as buildings, fences or low walls, or natural land forms and natural vegetation.
- ❑ Limit uncontrolled and/or unobservable access onto the site.
- ❑ Leave or encourage dense or thorny understory and forest-edge vegetation to discourage unwanted entry points.
- ❑ Use spatial organization and strategic layout of parks to provide natural barriers between conflicting activities.

8.4.3 Territorial Reinforcement

Based on the premise that physical design can extend a sphere of influence, where users develop a sense of ownership that is noticeable to a potential offender. This principal includes the theory that well-maintained spaces are less likely to be purposefully damaged when compared to an underutilized or poorly maintained site, and that regular patrons who have developed a sense of ownership for a space tend to challenge destructive behaviour.

Applicable Territorial Reinforcement Design and Maintenance Considerations:

- ❑ Create a clear transition as people move into a community asset park or open space area.
- ❑ Provide amenities that encourage regular community activity and use.
- ❑ Design each space to have an intended purpose.
- ❑ Conduct timely maintenance and repairs.

8.4.4 Social Cohesion

Based on the premise that a socially-cohesive community, where residents and visitors participate in community life will tend to have lower rates of crime and vandalism. Parks and open space design can contribute to social cohesion by considering how people will use and experience a site.

Applicable Social Cohesion Design and Maintenance Considerations:

- ❑ Design parks and open spaces to accommodate a variety of community activities that can take place on a recurring/regular basis such as: sports clubs, self-organized sport, restorative or fitness classes and weekly farmers markets. Find equitable ways to allow community members, groups and other organizations to use these spaces.
- ❑ Design for seasonal or annual larger events to draw community members and visitors into the space who may not otherwise attend the site, including: festivals, antiques or arts markets.
- ❑ Encourage participation and name recognition in the design of the space itself including: commemorative plaque programs for benches and trees, donor name recognition opportunities for a playground or amenity feature, a community art competition for a painted mural or sculpture opportunity.

8.4.5 Threshold Capacity

Based on a premise that too little of one element or too much of another can destabilize a community. A diversity of size, scale, distribution and types of park and open space amenities provides the necessary conditions to support a sustainable social and physical environment within the community.

Applicable Threshold Capacity Design and Maintenance Considerations:

- ❑ Follow per-capita guidelines outlined in the Classification of Parks and Trails section of this document for larger community and destination type parks and open spaces.
- ❑ Aim for a relatively even distribution of neighbourhood, community and destination scaled parks and amenities across the Township.

8.4.6 Connectivity

Based on the understanding that communities do not exist in a vacuum, the principle of connectivity considers the ability for the Township to tackle larger problems through relationships with other entities and also for the physical connectivity of the Township's parks and open spaces.

Applicable Connectivity Policy, Design and Maintenance Considerations:

- ❑ Establish relationships with other levels of government, neighbouring municipalities and community organizations toward tackling larger social challenges.
- ❑ Seek to encourage equitable use of Township parks and open spaces. This may include the ability for community members and groups to reserve a park amenity area for self-organized sport or an event at little or no cost.
- ❑ Seek to encourage physical linkages between Township parks and open spaces, including for multi-model linkages such as trail networks, bicycle lanes and water access points.

8.4.7 Community Culture

Strong communities share a positive sense of identity, having a sense of place, shared history and celebration of significant events, people and places.

Applicable Community Culture, Policy, Design and Maintenance Considerations:

- ❑ Design and use parks and open spaces as venues for cultural events including festivals and markets with regional significance, educational and public art opportunities.
- ❑ In community and destination type parks, consider establishing a theme with relevance to the local area (E.g. nature, history) and incorporating Township branding colours and standards.

Signage Standards

To maintain consistency with Township branding and wayfinding signage, all Township standard signs are to be procured by the Township, for installation by supplier/manufacturer or project contractor.

Refer to the 'Township Standard Details section', Detail 3.3 for examples of standard parks and open space signage placement locations.

The Townships standard signs generally include Township branding components including:

- Primarily 'cranberry red' (cmyk 0/100/96/28, rgb 141/32/25, hex 8D2019) with white colouring.
- Secondary accent colours including: 'lake blue' (cmyk 58/17/0/46, rgb 71/97/123, hex 47617B) and 'autumn gold' (cmyk 0/56/100/30, rgb 151/92/30, hex 975C1E).
- Township of Muskoka Lakes logo.
- Font style 'Univers Black'.

Exterior and open space standard signage is generally comprised of the following materials:

- 6"x6" cedar posts in cast-in-place concrete footings, or with epoxy-anchored connections to bedrock where applicable.
- Cedar shake roof accents where applicable.
- Concealed wood framing/mounting members to be pressure-treated where applicable.
- All fasteners to be minimum 304 stainless steel, tamper-resistant.
- Digital print opaque vinyl with matte over-laminate on 6mm thickness, aluminum composite material (ACM) backer-board.

9.1 Types of Standard Signage

Township Entrance Signage

Locations: Main vehicular and boat access points to Township limits.

Key Information: Township logo and name.

(Concept signage imagery from Township of Muskoka Lakes Branding Standards)

Community Entrance Signage

Locations: major vehicular access points at town limits to village/town centres.

Key Information: Village/Town name and slogan, Township logo

(Concept signage imagery from Township of Muskoka Lakes Branding Standards)

Community Wayfinding Signage

Locations: at limits of density and/or key directional decision-making junctures within village/town centres.

Key Information: Directional arrows to key locations within and beyond the village/town, Township logo.

(Signage concept image compliments of Philcan Group)

Township Building and/or Parks Vehicular Site Entrances

Locations: Vehicular entrances to Township and/or key community building, parks or open space sites.

Key Information: Building or site address and name, Township logo.

(Signage concept images compliments of Philcan Group)

Trail Heads

Locations: Main trail-heads to major Township-managed recreational and wilderness hiking trails.
Key Information: Trail name, length of trail(s), typical and maximum slopes, accessibility considerations (ex stairs, narrow or steep sections), trail walking surface type(s), trail map, Township logo.

Note: Where trail head signs include brochure handout slots, or a QR code for access to a trails map, an AODA accessible pathway and node, with a clear turning diameter of 2000mm for viewers to equitably reach the brochures/handouts section is required.

(Signage concept images compliments of Philcan Group)

Trail Heads - Additional Option for What3Words Emergency Location Signage (https://developer.what3words.com/en-us/communicate/emergency/educate)

Community Information Signage

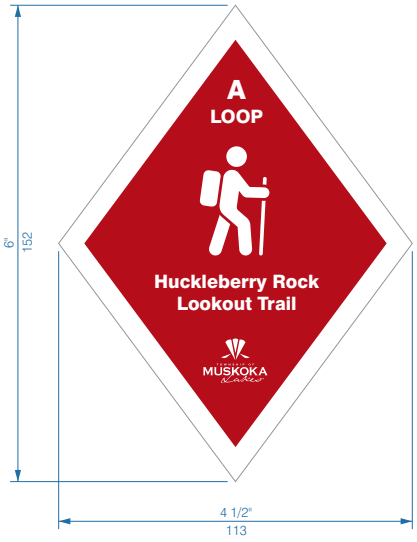
Locations: Central locations with easy pedestrian access. Examples: downtown central seating or view node, pedestrian pathway entrance to community and destination parks and open spaces.
Key Information: 'Information' title, community map with *you are here!* indicator and legend, Township logo, key destinations within walking distance listed, key community destination QR codes to further information, brochure/pamphlet holders.

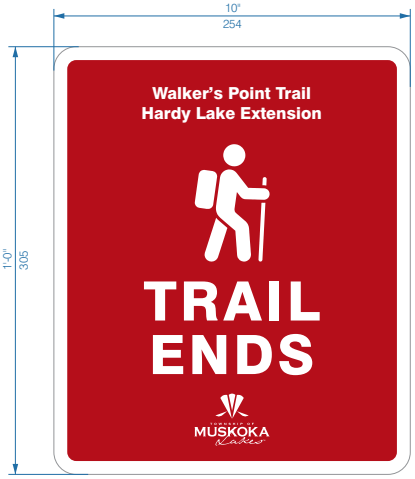
Note: Community Information Signage requires an AODA accessible pathway and node, with a clear turning diameter of 2000mm for viewers to equitably reach the brochures/handouts section.

Trail Directional and Trail Loop Signs (Blazes) and Trail Ends.

Locations: Maximum 75m intervals, and where trails intersect, or opportunities to go off-trail exist, or where the trace of trail becomes unclear.

Key Information: Trail name, Township logo, hiker symbol, loop identifier (where applicable).
Option to individualize trail directional signs (blazes) with the unique 3-Word individual combination corresponding to each trail blaze installation location.



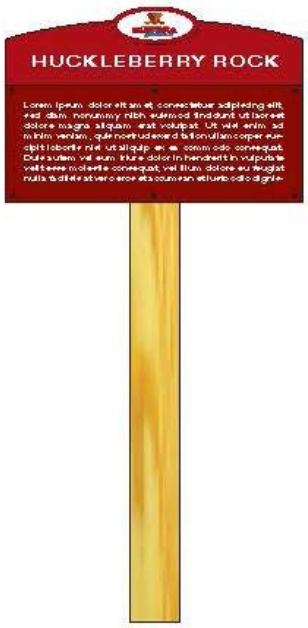


(Signage concept images compliments of Philcan Group)

Heritage and Feature Informative Signage

Locations: At key views or heritage features.

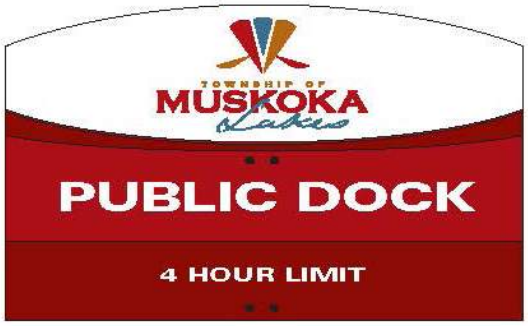
Key Information: Township logo, location name, informative narrative, QR code if applicable for additional information.

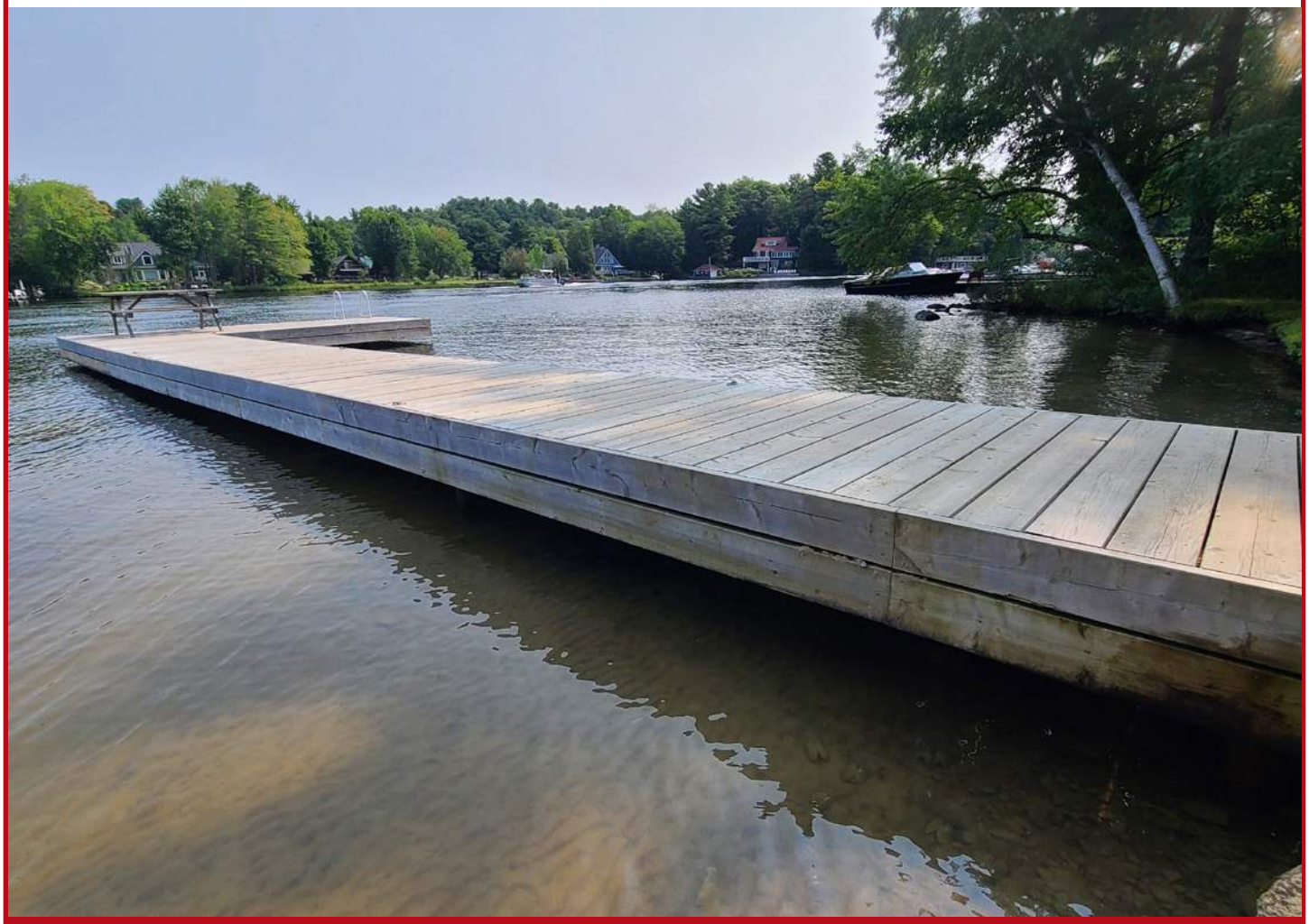


Major Amenity Signage

Locations: Announcing key open space recreation amenities, such as tennis courts, ball diamonds, playgrounds, skate parks etc.

Key Information: Township logo, name of major open space amenity.

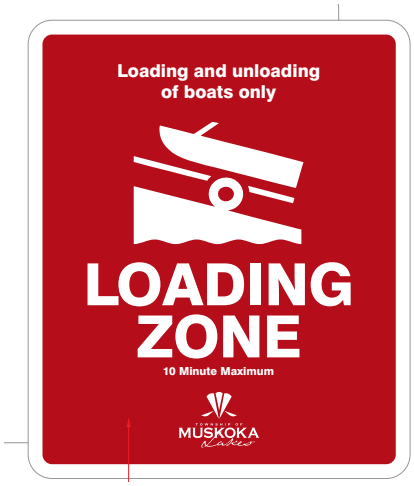




Minor Amenity Signage

Locations: Announcing minor or support-type open space amenities, such as bicycle repair stations, boat ramps/loading zones, parking areas, public washrooms.

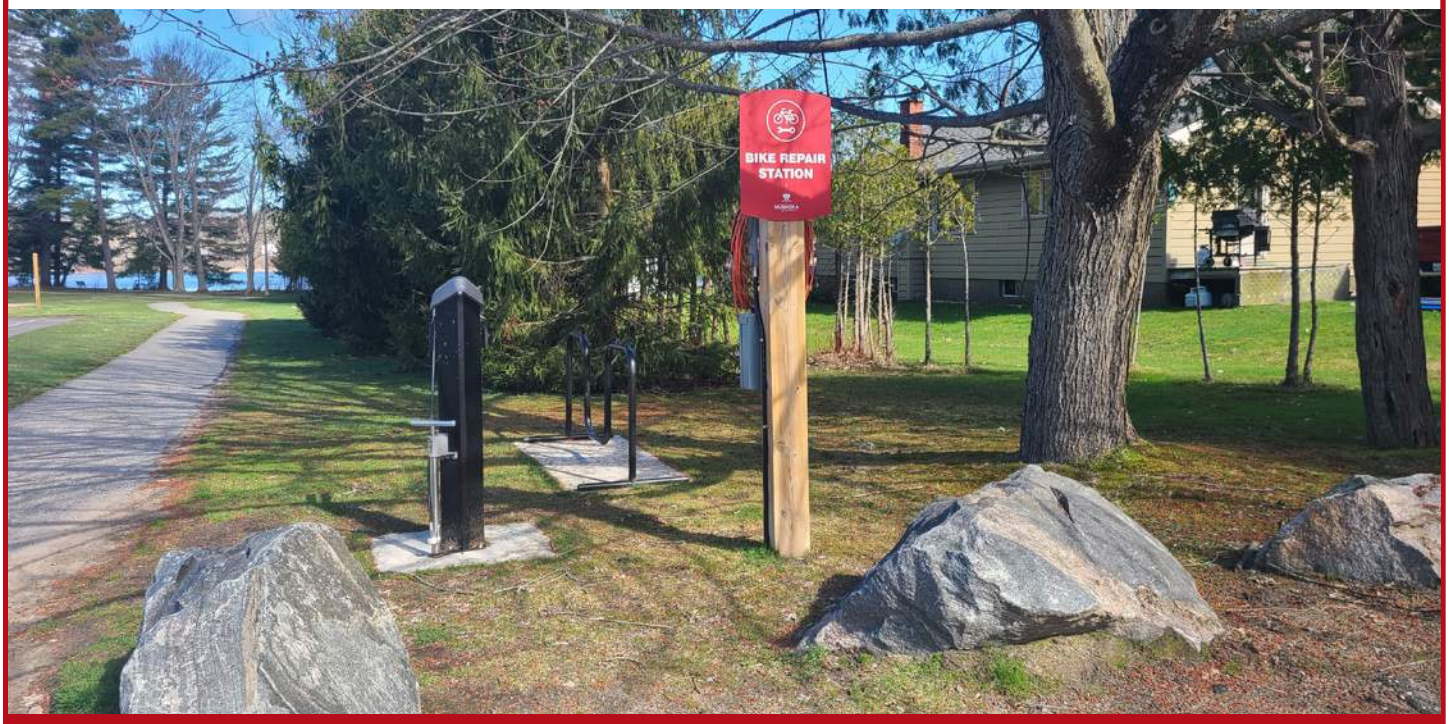
Key Information: Township logo, name of minor open space amenity.



(Style Type 1)

(Style Type 2)

(Signage concept images compliments of Philcan Group)



Rules and Requirements Signage

Locations: At minor or major Township amenities, including docks, boat launches, beaches, playgrounds, off-leash dog areas and sports facilities.

Key Information: Township logo, amenity name or type (E.g. “Boat Launch”, “Milford Bay Courts”), rules for use of the amenity, including booking/reservation information (if applicable), requirements or safety considerations for use of amenity, prohibited types of use, hours and or seasons for use and any other relevant information. Note that rules and contact signage is a requirement for CSA compliance on playgrounds.

Township contact information and wording to be included: “Contact Township Staff at _____ or _____ if this amenity is found to have been damaged or require maintenance. Do not use damaged or unsafe equipment/areas. Call 911 in case of an immediate emergency situation.

(Signage concept images compliments of Philcan Group)

Tree and Bench Dedication Plaques

Locations: On dedicated benches or mounted on a rock, at base of dedicated trees through the Parks donor program.

Placement Guideline:

- Space dedication benches a minimum of 20m apart, or where views between benches are separated by natural features for example, around the bend of a winding path.
- Space dedication trees a minimum of 10m apart.

Key Information: Name of individual to whom the bench is dedicated (ex. 'In loving memory of ...), short saying, year of birth and death.

9.2 Signage Location Guideline

Signage Type	Location Guideline
Township Entrance Signage	Main / highway vehicular routes into township
Community Entrance Signage Large	Main highway / vehicular routes into towns
Community Entrance Signage Small	Main highway / vehicular routes into villages
Community Wayfinding Signage Large	At limits of downtown or commercial areas within towns and villages
Community Wayfinding Signage Small	Within and speaking to downtown core areas and parks with multiple amenities
Building and Parks / Site Vehicular Entrances	At vehicular site entrances to Township-owned buildings, parks and notable sites
Trail Heads	At trail heads to Township owned and/or managed recreational & wilderness hiking trails
Trail Directional, Loop & End Signs	Maximum 75m intervals, and where intersecting trails or opportunities to go off-trail, or where the trace of trail becomes unclear. At the terminus point of a trail, where applicable (non-loop trails)
Heritate & Feature Informative Signage	At main pedestrian entrance points or immediately infront of key heritage features or sites, or at points or features of interest
Amenity Sign - Major	At the pedestrian entrance points to significant amenities, including Township docks, boat launches, beaches and sports facilities
Amenity Sign - Minor	At pedestrian or vehicular entrance points to support/utility type amenities including parking and washrooms, or as secondary amenity signage ex. identifying multiple courts or fields (E.g. Tennis 'A', 'B', 'C' courts)
Community Information Signage - Pedestrian	At main pedestrian entry points to community and destination type parks, and key pedestrian intersections or nodes within commercial town & village areas
Community Information Signage - Vehicular	At the point along access roads into villages and towns where density and commercial use intensifies
Rules Signage	At each major Township amenity main pedestrian access point, including docks, boat launches, sports and recreation amenitiies and playgrounds
Tree and Bench Dedication Plaques	Within Township parks and/or along Township owned trail sections, spaced a minimum of 20m apart, location to be approved by both donor & Township Staff


MUSKOKA
INFORMATION
LEGEND
PORT CARLING

10.0 Design In-feasibility Alternative Application

A process for proposing alternative solutions in park and open space design.

When parks and trails design and development standards as outlined herein are infeasible due to factors such as extreme topography, sensitive ecology, or flood-prone conditions, designers or contractors should follow this process to propose alternative solutions:

Assessment and Documentation:

- Document specific constraints that prevent adherence to standard design requirements. Provide an initial update to the Township Staff project lead describing the constraints and exploring potential solutions.
- Develop an alternative design proposal to address the identified constraints while meeting the overarching goals for the park or open space and adhering as closely as possible to the intent of the unattainable standard.
- Assess the technical feasibility of the proposed alternatives, including their construction, maintenance and long-term sustainability.
- Conduct an impact assessment to evaluate how the proposed solution will impact the environment, community use, accessibility requirements and overall project objectives.
- Prepare and submit a detailed proposal to the Township Staff project lead including the rationale for the alternative solutions, design schematics, feasibility analysis and impact assessments. Identify how the proposed solutions address the constraints and meet project goals. Identify any trade-offs or shortfalls.
- Obtain formal approval for the proposed alternative solutions from the Township Staff project lead.

11.0 Revision Log

Record of revisions with summary of changes:

- October 2024 - 1st Issue
-
-
-
-
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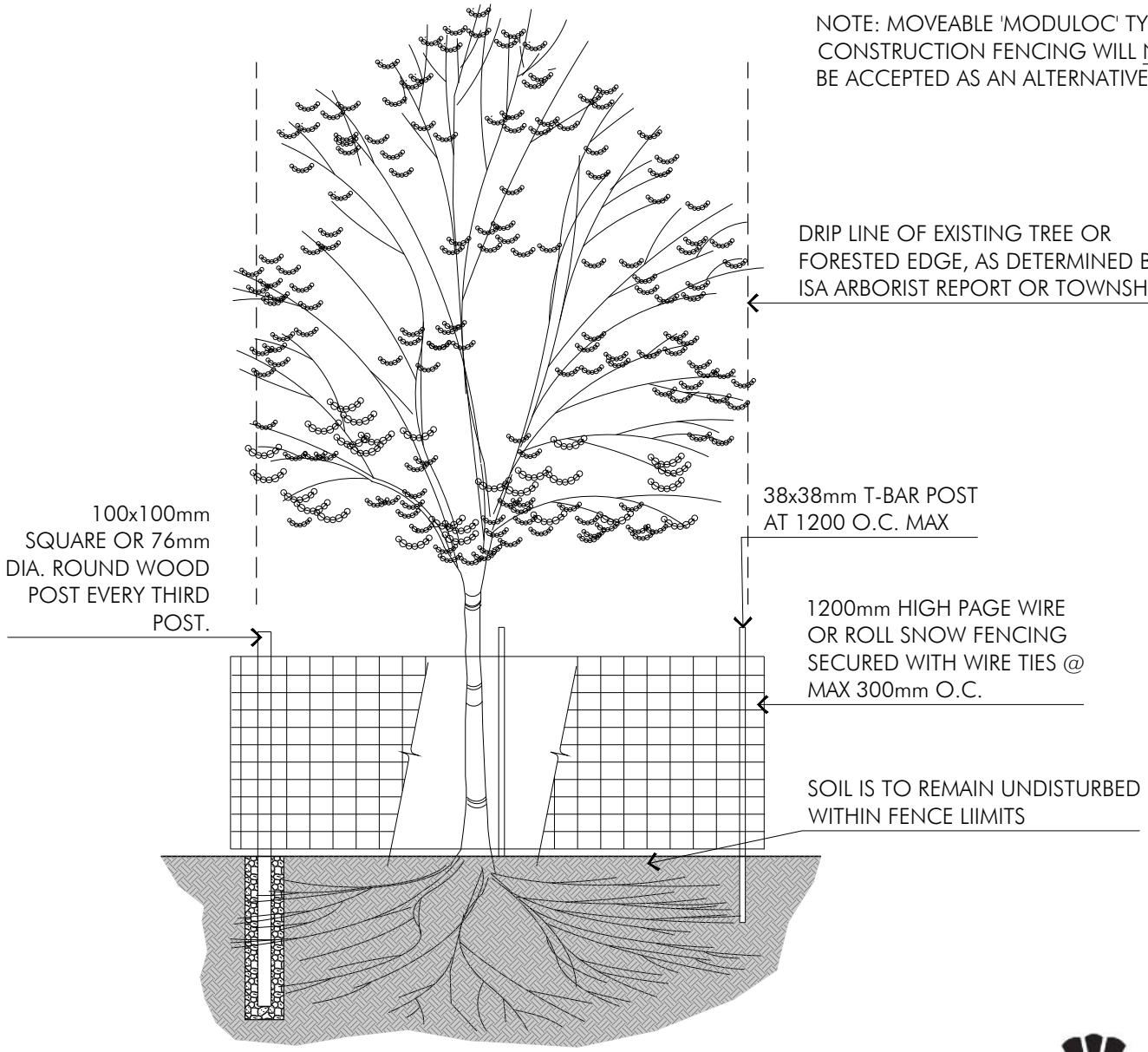
COMMONLY REFERENCED ONTARIO PROVINCIAL STANDARD DETAILS (OPSD) FOR PARKS CONSTRUCTION

- 219.180 Straw Bale Flow Check Dam
- 310.010 Concrete Sidewalk
- 310.030 Concrete Sidewalk Ramps at Intersections
- 400.110 Cast Iron, Square Frame with Square Overflow Type Flat Grate for Catch Basins, Perforated Openings
- 400.120 Cast Iron, Square Frame with Birdcage Grate for Catch Basins
- 401.010 Cast Iron, Square Frame with Circular Closed or Open Cover for Maintenance Holes
- 403.010 Galvanized Steel, Honey Comb Grating for Ditch Inlets
- 512.011 Concrete Steps, Slab on Grade
- 561.010 Interlocking Concrete Pavers on Granular Base
- 600.110 Concrete Barrier Curb
- 601.010 Asphalt Curb and Asphalt Gutter
- 603.020 Precast Concrete Curb
- 604.010 90 Concrete Outlet for Concrete Curb with Gutter
- 605.010 45 Concrete Outlet for Concrete Curb with Gutter
- 605.040 Asphalt Spillways
- 705.010 Precast Concrete Catch Basin, 600 x 600 mm
- 705.030 Precast Concrete Ditch Inlet, 600 x 600 mm
- 706.010 Precast Concrete Ditch Inlet, 600 x 1200 mm with 1500mm Diameter Flat Cap
- 706.020 Precast Concrete Ditch Inlet, 600 x 1200 mm with 1800mm Diameter Flat Cap
- 708.010 Catch Basin Connection for Rigid Main Pipe Sewer
- 708.020 Support for Pipe at Catch Basin or Maintenance Hole
- 801.020 End Section Details, Corrugated Steel Pipe
- 802.010 Flexible Pipe Embedment and Backfill, Earth Excavation
- 802.020 Flexible Pipe Arch Embedment and Backfill, Earth Excavation
- 802.030 Rigid Pipe Bedding, Cover, and Backfill, Type 1 or 2 Soil – Earth Excavation
- 804.030 Concrete Headwall for Pipe Less Than 900mm
- 804.040 Concrete Headwall for Sewer or Culvert Pipe Outlet
- 804.050 Grating for Concrete Headwall
- 810.010 Rip-Rap Treatment for Sewer and Culvert Outlets
- 810.020 Rip-Rap Treatment for Ditch Inlets
- 912.401 Guide Rail System, Steel Beam, Structure Connection, Component – Rail and
- 971.101 Fence, Highway, In Earth, Shale, Loose Rock or Friable Rock, Installation
- 972.102 Fence, Chain-Link, Component – Gate
- 972.130 Fence, Chain-Link, Installation – Roadway
- 3120.100 Walls, Retaining, Concrete Toe Wall
- 3121.150 Walls, Retaining, Backfill, Minimum Granular Requirement
- 3190.100 Walls, Retaining and Abutment, Wall Drain

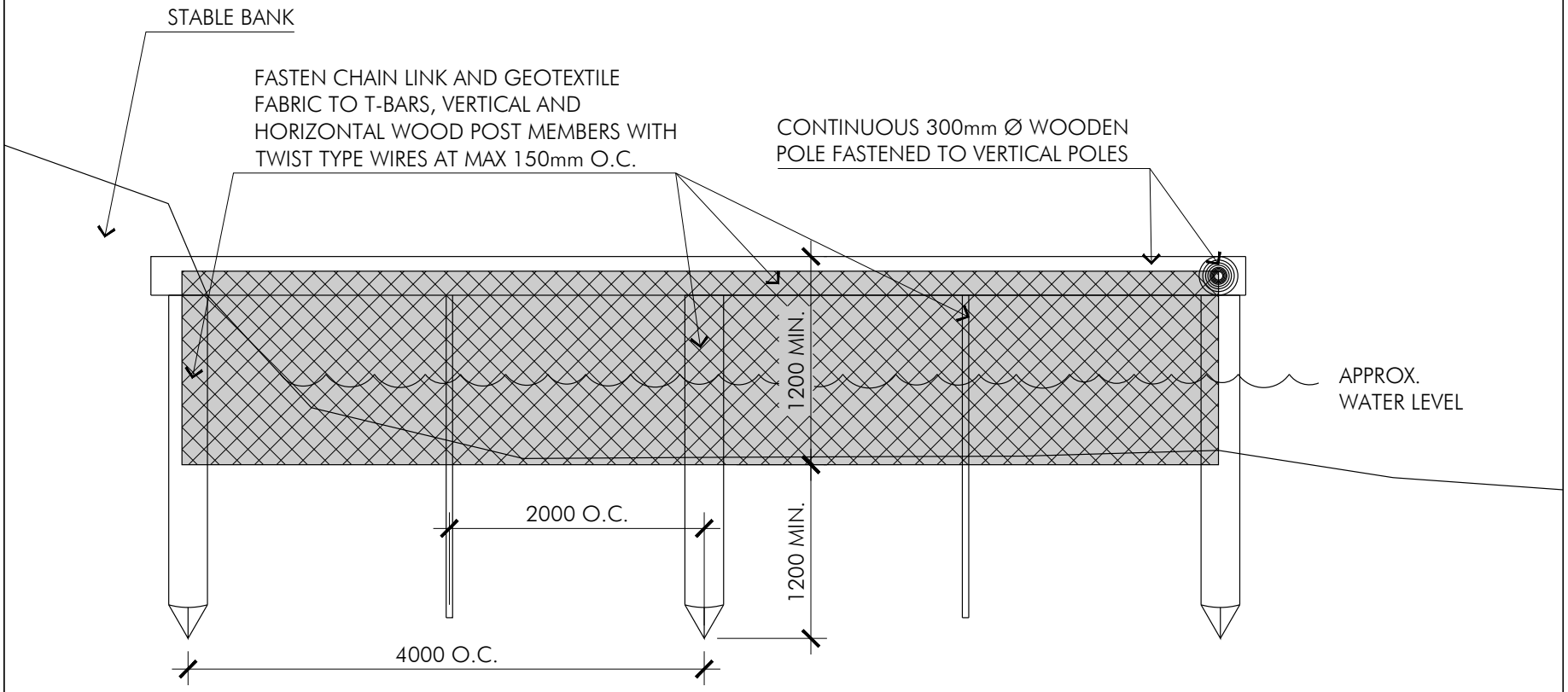
TOWNSHIP STANDARD DETAILS INDEX

The following standard details outline additional requirements and standards beyond the OPSD. Township standard details are to be used as a 'typical guideline' only, and are to be verified by consultants and contractors for suitability and sufficiency specific to each individual project, site or application.



ENVIRONMENTAL PROTECTION TREE PRESERVATION HOARDING	SCALE = 1:20 METRIC
	LAST REVISED: SEPTEMBER 2024 FIGURE 1.1

TOWNSHIP OF MUSKOKA Lakes



NOTES:

1. WORK TO CONFORM WITH ALL APPLICABLE CODES AND REGULATIONS, INCLUDING ALL PERMITTING REQUIREMENTS.
2. DETAIL IS 'TYPICAL' FOR PROJECT BUDGET PRICING ONLY. ENGINEER-STAMPED DRAWING REQUIRED FOR CONSTRUCTION PURPOSES.
3. BURRY MIN. 300mm DEPTH OF GEOTEXTILE FABRIC IN LAKE-BED TRENCH.
4. LENGTH OF WOOD POSTS DETERMINED BY DEPTH OF WATER.

FENCING TEMPORARY SEDIMENT CONTROL FENCING IN WATER	SCALE = 1:50	
	LAST REVISED: SEPTEMBER 2024	FIGURE 1.2

TOWNSHIP OF MUSKOKA Lakes

DECIDUOUS TREES

BOTANICAL NAME	COMMON NAME	SOIL MOISTURE	LIGHT REQ.	DROUGHT TOLERANCE	SOIL SALT TOLERANCE	NATIVE
Acer rubrum	Red Maple	WET-MOIST	SUN/PART SHADE	MOD	POOR	REGIONAL
Acer saccharinum	Silver Maple	MOIST/NORMAL/WELL DRAINED	SUN/SHADE	MOD	POOR	REGIONAL
Acer saccharum	Sugar Maple	MOIST/NORMAL/WELL DRAINED	SUN/SHADE	MOD	POOR	REGIONAL
Acer spicatum	Mountain Maple	MOST SOIL	SUN/SHADE	MOD	POOR	REGIONAL
Acer X freemanii	Hybrid Swamp Maple	MOIST-DRY	SUN	HIGH	MOD	REGIONAL
Acer X freemanii 'Jeffersred'	Autumn Blaze Maple	MOIST-DRY	SUN/PART SHADE	HIGH	POOR	N.CULTIVAR
Amelanchier canadensis (Multi)	Shadblow Serviceberry	WET-MOIST	SUN/PART SHADE	MOD	MOD	REGIONAL
Amelanchier canadensis (Single)	Shadblow Serviceberry	WET-MOIST	SUN/PART SHADE	MOD	MOD	REGIONAL
Amelanchier laevis	Allegheny Serviceberry	WET-MOIST	SUN/SHADE	MOD	MOD	REGIONAL
Betula alleghaniensis	Yellow Birch	WET/MOIST	SUN/SHADE	POOR	HIGH	REGIONAL
Betula papyrifera	White Birch, Paper Birch	MOIST	SUN/PART SHADE	MOD	MOD	REGIONAL
Betula populifolia	Gray Birch	WET-MOIST-DRY	SUN/SHADE	MOD	MOD	CANADA
Carpinus caroliniana	Hornbeam, Blue-Beech	WET-DRY	SUN/SHADE	MOD	POOR	REGIONAL
Carya ovata	Shagbark Hickory	MOIST/WELL DRAINED	SUN/PART SHADE	MOD	MOD	REGIONAL
Cercis canadensis	Eastern Redbud	MOIST-DRY	PART SH./SHADE	HIGH	POOR	CANADA
Crataegus crus-galli var. crus-galli	Cockspur Hawthorn	MOIST-DRY	SUN/PART SHADE	MOD	POOR	REGIONAL
Crataegus crus-galli var. 'Inermis'	Crusader Hawthorn	MOIST-DRY	SUN/PART SHADE	MOD	POOR	N.CULTIVAR
Fagus grandifolia	American Beech	MOIST/NORMAL	SUN/SHADE	MOD	POOR	REGIONAL
Gleditsia tri. var. in.	Thornless Honey Locust	MOIST-DRY	SUN/PART SHADE	HIGH	GOOD	N.CULTIVAR
Gymnocladus dioicus	Kentucky Coffee Tree	MOIST/NORMAL	SUN	HIGH	POOR	CANADA
Juglans nigra	Black Walnut	NORMAL/DRY	SUN	HIGH	MOD	REGIONAL
Malus coronaria	Wild Crab Apple				POOR	REGIONAL
Ostrya virginiana	American Hophornbeam	MOIST-DRY	SUN/SHADE	HIGH	POOR	CANADA
Populus deltoides	Cottonwood	NORMAL/WET/MOIST	SUN/PART SHADE	HIGH	HIGH	REGIONAL
Populus tremuloides	Trembling Aspen	WET-MOIST-DRY	SUN/SHADE	HIGH	MOD	REGIONAL
Prunus nigra	Black Plum	MOIST	PART SH./SHADE	MOD	HIGH	REGIONAL
Quercus alba	White Oak	MOIST-DRY	SUN/PART SHADE	HIGH	LOW	REGIONAL
Quercus macrocarpa	Bur Oak	WET-MOIST-DRY	SUN/PART SHADE	HIGH	GOOD	REGIONAL
Quercus rubra	Red Oak	MOIST-WELL DRAINED	SUN/PART SHADE	HIGH	HIGH	REGIONAL
Rhus typhina	Staghorn Sumac	DRY-NORMAL	SUN/PART SHADE	HIGH	HIGH	REGIONAL
Salix nigra	Black Willow	WET-MOIST	SUN/PART SHADE	POOR	HIGH	REGIONAL
Tilia americana	Basswood	MOIST-DRY	SUN/PART SHADE	MOD	POOR	REGIONAL

** Use only regionally native species in naturalization, woodlot edge, riparian and other ecologically sensitive areas.*

CONIFEROUS TREES

BOTANICAL NAME	COMMON NAME	SOIL MOISTURE	LIGHT REQ.	DROUGHT TOLERANCE	SOIL SALT TOLERANCE	NATIVE
Abies balsamea	Balsam Fir	MOIST	SUN/SHADE	POOR	POOR	REGIONAL
Abies concolor	White Fir	MOIST-NORMAL	SUN/SHADE	HIGH	POOR	CANADA
Juniperus virginiana var. virginiana	Eastern Red Cedar	DRY-MOIST	SUN/SHADE	HIGH	MOD	REGIONAL
Larix laricina	Tamarack Larch	MOIST	SUN/PART SHADE	LOW	POOR	REGIONAL
Picea glauca	White Spruce	MOIST-DRY	SUN	MOD	POOR	REGIONAL
Picea mariana	Black Spruce	MOIST-DRY	SUN/PART SHADE	MOD	MOD	REGIONAL
Pinus banksiana	Jack Pine	MOIST/WELL DRAINED	SUN	HIGH	HIGH	CANADA
Pinus resinosa	Red Pine	MOIST-DRY	SUN/PART SHADE	MOD	POOR	REGIONAL
Pinus strobus	White Pine	MOIST-DRY	SUN/PART SHADE	MOD	POOR	REGIONAL
Thuja occidentalis	White Cedar	MOIST-DRY	SUN/PART SHADE	MOD	MOD	REGIONAL
Tsuga canadensis	Eastern Hemlock	MOIST-DRY	SUN/SHADE	LOW	POOR	REGIONAL

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DECIDUOUS SHRUBS

BOTANICAL NAME	COMMON NAME	SOIL MOISTURE	LIGHT REQ.	DROUGHT TOLERANCE	SOIL SALT TOLERANCE	NATIVE
Amelanchier alnifolia	Saskatoon Berry	MOIST-DRY	SUN/PART SHADE	MOD	HIGH	CANADA
Amelanchier canadensis (Shrub)	Shadblow Serviceberry Clump	WET-MOIST	SUN/PART SHADE	HIGH	MOD	CANADA
Amelanchier laevis	Allegheny Serviceberry	MOIST-DRY	SUN/PART SHADE	LOW	HIGH	REGIONAL
Amalanchier spicata	Shadbush Serviceberry	MOIST-DRY	SUN/PART SHADE	LOW	MOD	REGIONAL
Aronia melanocarpa	Black Chokeberry	MOIST-DRY	SUN/PART SHADE	MOD	HIGH	REGIONAL
Ceanothus americanus	New Jersey tea	DRY-NORMAL-MOIST	SUN/PART SHADE	HIGH	MOD	REGIONAL
Clematis virginiana	Virgin's Bower Clematis	MOIST-WELL DRAINED	SUN/PART SH	MOD	MOD	REGIONAL
Cornus alternifolia	Alternate Leaf Dogwood	NORMAL-MOIST	PART SHADE/SHADE	MOD	MOD	REGIONAL
Cornus canadensis	Bunchberry	MOIST	SUN/PART SHADE/SHAI	MOD	MOD	REGIONAL
Cornus racemosa	Grey Dogwood	MOIST	SUN/PART SHADE/SHAI	HIGH	MOD	REGIONAL
Cornus sericea	Red Osier Dogwood	MOIST	SUN	MOD	LOW	REGIONAL
Diervilla lonicera	Bush Honeysuckle	DRY	SUN/PART SHADE	HIGH	MOD	REGIONAL
Hamamelis virginiana	Witch Hazel	MOIST-DRY	SUN/PART SHADE/SHAI	MOD	MOD	REGIONAL
Hydrangea paniculata 'Little Lamb'	Little Lamb Hydrangea	NORMAL-MOIST	SUN/PART SHADE/SHAI	MOD	MOD	NO
Hydrangea quercifolia	Oakleaf Hydrangea	DRY	SUN/PART SHADE	HIGH	HIGH	NO
Hypericum prolificum	Shrubby St. John's Wort	MOIST-DRY	SUN/PART SHADE	HIGH	MOD	REGIONAL
Ilex verticillata	Winterberry	NORMAL-MOIST-WET	SUN/PART SHADE	LOW	HIGH	REGIONAL
Myrica gale	Sweet Gale Bayberry	MOIST	SUN/PART SHADE	MOD	MOD	CANADA
Myrica pensylvanica	Bayberry	MOIST-DRY	SUN/PART SHADE	MOD	HIGH	CANADA
Physocarpus opulifolius	Common Ninebark	MOIST-DRY	SUN/PART SHADE	HIGH	MOD	REGIONAL
Physocarpus opulifolius 'Diablo'	Diablo Ninebark	MOIST-DRY	SUN/PART SHADE	HIGH	MOD	N.CULTIVAR
Physocarpus opulifolius 'Mindia'	Mindia Coopertinia Ninebark	MOIST-WELL DRAINED	SUN	MOD	MOD	N.CULTIVAR
Potentilla fruticosa	Shrubby Cinquefoil	MOIST-DRY	SUN/PART SHADE	HIGH	MOD	REGIONAL
Prunus pensylvanica	Pin Cherry	DRY-NORMAL-MOIST	SUN	HIGH	MOD	REGIONAL
Prunus virginiana var. virginiana	Common Chokecherry	DRY-NORMAL-MOIST	SUN/PART SHADE	HIGH	LOW	REGIONAL
Rhus aromatica 'Gro-Low'	Gro-low Sumac	DRY-NORMAL	SUN/PART SHADE	HIGH	HIGH	N.CULTIVAR
Rhus typhina	Staghorn Sumac	DRY-NORMAL	SUN/PART SHADE	HIGH	HIGH	REGIONAL
Ribes americanum	Wild Black Currant	DRY-NORMAL-MOIST	SUN/SHADE	HIGH	LOW	REGIONAL
Ribes aureum	Golden Current	DRY-NORMAL	SUN/PART SHADE	HIGH	MOD	CANADA
Rosa blanda	Meadow Rose	DRY	SUN	HIGH	HIGH	REGIONAL
Rosa carolina ssp. Carolina	Pasture Rose	DRY-MOIST-WET	SUN/SHADE	MOD	HIGH	REGIONAL
Rosa palustris	Swamp Rose	WET-MOIST	SUN/PART SHADE	LOW	HIGH	REGIONAL
Rubus allegheniensis	Common Blackberry	NORMAL-MOIST	SUN/SHADE	LOW	LOW	REGIONAL
Rubus occidentalis	Black Raspberry	NORMAL-MOIST	SUN/SHADE	LOW	LOW	REGIONAL
Rubus odoratus	Purple Flowering Raspberry	NORMAL-MOIST	SUN/PART SHADE	LOW	LOW	REGIONAL
Salix bebbiana	Beaked Willow	WET-MOIST	SUN/PART SHADE	LOW	MOD	REGIONAL
Salix discolor	Pussy Willow	WET-MOIST	SUN	LOW	MOD	REGIONAL
Salix interior	Sandbar Willow	DRY-MOIST-WET	SUN	HIGH	MOD	REGIONAL
Sambucus canadensis	Elderberry	WET-MOIST	SUN/PART SHADE	LOW	MOD	REGIONAL
Sambucus racemosa	Red Elderberry	WET-MOIST	SUN/PART SHADE	LOW	MOD	REGIONAL
Spiraea alba var. alba	Narrow Leaved Meadowsweet	NORMAL-MOIST-WET	SUN/PART SH	MOD	MOD	REGIONAL
Spiraea alba var. Latifolia	Broad Leaved Meadowsweet	NORMAL-MOIST	SUN/PART SH	MOD	MOD	CANADA
Staphylea trifolia	Bladdernut	MOIST	PART SHADE/SHADE	HIGH	LOW	REGIONAL
Symphoricarpos albus var. albus	Eastern SNOwberry	MOIST-DRY	SUN/PART SHADE	HIGH	MOD	REGIONAL
Viburnum acerifolium	Maple Leaved Viburnum	DRY-NORMAL-MOIST	SHADE	HIGH	MOD	REGIONAL
Viburnum lentago	Nannyberry	DRY-NORMAL-MOIST	SUN/PART SHADE	MOD	MOD	REGIONAL
Viburnum opulus var. americanum	Highbush Cranberry	WET-MOIST	SUN/PART SHADE	MOD	LOW	REGIONAL

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EVERGREEN SHRUBS

BOTANICAL NAME	COMMON NAME	SOIL MOISTURE	LIGHT REQ.	DROUGHT TOLERANCE	SOIL SALT TOLERANCE	NATIVE
Buxus 'Green Velvet'	Green Velvet Boxwood	NORMAL-DRY	SUN/SHADE	MOD	LOW	NO
Buxus mic.var.insularis Green Gem	Green Gem Boxwood	NORMAL-DRY	SUN/SHADE	MOD	LOW	NO
Juniperus communis var. depressa	Common Juniper	DRY	SUN	HIGH	LOW	REGIONAL
Juniperus communis 'Depressa Aurea'	Canadian Golden Juniper	DRY	SUN	HIGH	LOW	N.Cultivar
Juniperus horizontalis 'Hughes'	Hughes Juniper	DRY	SUN	HIGH	LOW	NO
Juniperus horizontalis 'Mother Lode'	Mother Lode Juniper	DRY	SUN	MED	LOW	NO
Juniperus horizontalis	Creeping Juniper	DRY	SUN	MED	LOW	REGIONAL
Juniperus horizontalis x virginiana	Hybrid Juniper	DRY	SUN	MED	LOW	REGIONAL
Juniperus procumbens 'Nana'	Japanese Garden Juniper	MOIST-DRY	SUN	MED	LOW	NO
Juniperus sabina	Savin Juniper	MOIST-DRY	SUN	HIGH	LOW	NO
Juniperus sabina 'Tamariscifolia'	Tam Juniper	MOIST-DRY	SUN	HIGH	LOW	NO
Juniperus scopulorum 'Wichita Blue'	Wichita Blue Juniper	MOIST-DRY	SUN	MED	MOD	NO
Juniperus x media 'Pfitzeriana Compacta'	Dwarf Pfitzer Juniper	MOIST-DRY	SUN	MOD	MOD	NO
Pinus mugo 'Slowmound'	Slowmound Mugo Pine	MOIST-DRY	SUN/PART SHADE	MOD	HIGH	NO
Pinus mugo var. pumilio	Mugo Pine	MOIST-DRY	SUN/PART SHADE	MOD	HIGH	NO
Rhododendron 'Northern Lights'	Northern Lights Azalea	MOIST/WELL-DRAINED	PART SHADE	MOD	MOD	NO
Taxus x media 'Densiformis'	Dense Yew	MOIST-DRY	SUN/SHADE	LOW	LOW	NO
Taxus x media 'Fairview'	Fairview Yew	MOIST-DRY	SUN/SHADE	MOD	LOW	NO
Taxus x media 'Hicksii'	Hicks Yew	MOIST-DRY	SUN/SHADE	MOD	LOW	NO
Taxus x media 'Hillii'	Hillii Yew	MOIST-DRY	SUN/SHADE	MOD	LOW	NO
Taxus x media 'Wardii'	Ward's Yew	MOIST-DRY	SUN/SHADE	MOD	LOW	NO
Thuja occidentalis 'Emerald'	Emerald Cedar	NORMAL-DRY	SUN/PART SHADE	HIGH	MOD	N.Cultivar
Tsuga canadensis 'Cole's Prostrate'	Cole's Prostrate Hemlock	MOIST-DRY	PART SH/SHADE	LOW	LOW	N.Cultivar

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GRASSES / GRAMINOIDS

BOTANICAL NAME	COMMON NAME	SOIL MOISTURE	LIGHT REQ.	DROUGHT TOLERANCE	SOIL SALT TOLERANCE	NATIVE
Acorus americanus	Sweet Flag	MOIST-WET-FLOOD	SUN/PART SHADE	MED	MED	REGIONAL
Andropogon gerardii	Big Bluestem	MOIST	SUN	HIGH	HIGH	REGIONAL
Carex muskingumensis	Palm Sedge Grass	MOIST	SHADE	MED	MED	CANADA
Carex pensylvanica	Oak Sedge	MOIST-DRY	SUN/PART SHADE/SHADE	HIGH	MED	REGIONAL
Carex praegracilis	Field Sedge	MOIST-WET	SUN	HIGH	HIGH	CANADA
Bouteloua gracilis	Blue Grama Grass	DRY-MOIST	SUN	HIGH	HIGH	CANADA
Chasmanthium latifolium	Northern Sea Oats	MOIST-DRY	SUN/PART SHADE/SHADE	HIGH	HIGH	CANADA
Deschampsia cespitosa 'Bronzeschlier'	Bronzeschlier Tufted Hair Grass	MOIST-DRY	SUN/PART SHADE	MED	HIGH	N.CULTIVAR
Elymus canadensis	Canada Wild Rye	DRY-MOIST	SUN/PART SHADE/SHADE	HIGH	HIGH	REGIONAL
Elymus hystrix	Canada Wild Rye	DRY-MOIST	SUN/PART SHADE/SHADE	HIGH	HIGH	REGIONAL
Equisetum hyemale ssp. Affine	Scouring-Rush	MOIST-WET	SUN/PART SHADE	MED	MED	REGIONAL
Festuca glauca	Blue Fescue	DRY	SUN	HIGH	HIGH	NO
Festuca mairei	Atlas Fescue	MOIST-DRY	SUN/PART SHADE	MED	HIGH	NO
Helectotrichon sempervirens 'Sapphire'	Sapphire Blue Oat Grass	DRY	FULL SUN	MED	MED	NO
Hystrix patula	Bottle-brush Grass	DRY	SUN/PART SHADE	HIGH	MED	REGIONAL
Juncus effusus ssp. Solutus	Soft Rush	BOG-WATER GARDEN	SUN	MED	MED	REGIONAL
Panicum virgatum 'Cheyenne Sky'	Cheyenne Sky Switch Grass	MOIST-DRY	SUN/PART SHADE	HIGH	MED	N.CULTIVAR
Panicum virgatum 'Heavy Metal'	Blue Switch Grass	MOIST-DRY	SUN/PART SHADE	HIGH	HIGH	N.CULTIVAR
Panicum virgatum 'Northwind'	Northwind Switch Grass	MOIST-DRY	SUN/PART SHADE	HIGH	HIGH	N.CULTIVAR
Panicum virgatum 'Prairie Fire'	Red Switch Grass	MOIST-DRY	SUN/PART SHADE	HIGH	HIGH	N.CULTIVAR
Panicum virgatum var. virgatum	Switch Grass	MOIST-DRY	SUN/PART SHADE	HIGH	HIGH	REGIONAL
Schizachyrium scoparium var. scoparium	Little Bluestem	DRY	SUN	HIGH	HIGH	REGIONAL
Sorghastrum nutans	Indian Grass	MOIST-DRY	SUN/PART SHADE	HIGH	MED	REGIONAL
Sporobolus heterolepsis	Prairie Dropseed	MOIST-DRY	SUN	MED	HIGH	CANADA
Typha latifolia	Broad-leaved Cattail	MOIST-WET-FLOOD	SUN/PART SHADE	LOW	HIGH	REGIONAL

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HERBACEOUS PERENNIALS

BOTANICAL NAME	COMMON NAME	SOIL MOISTURE	LIGHT REQ.	DROUGHT TOLERANCE	SALT TOLERANCE	NATIVE
Achillea borealis var. borealis	Wolly Yarrow	DRY-MOIST	SUN	HIGH	HIGH	REGIONAL
Achillea millefolium L.	Common Yarrow	DRY-MOIST	SUN	HIGH	HIGH	ONTARIO
Agastache foeniculum	Anise Hyssop	MOIST-AVERAGE	SUN/PART SHADE	HIGH	HIGH	CANADA
Anaphalis margaritacea	Pearly Everlasting	MOIST-DRY	SUN	HIGH	MED	REGIONAL
Anemone canadensis	Canada Anemone	WET-MOIST	SUN/PART SHADE	HIGH	HIGH	REGIONAL
Apios americana	Ground Nut Vine	AVERAGE-MOIST	SUN/PART SHADE	MOD	LOW	REGIONAL
Asarum canadense	Canada Wild Ginger	NORMAL-MOIST	SHADE/PART SHADE	MED	MED	REGIONAL
Asclepias incarnata	Swamp Milkweed	MOIST-WET	SUN	HIGH	HIGH	REGIONAL
Asclepias syriaca	Common Milkweed	MOIST-DRY	SUN	MOD	MED	REGIONAL
Asclepias tuberosa	Butterfly Milkweed	MOIST-DRY	SUN	HIGH	HIGH	CANADA
Eurybia divaricata	White Woods Aster	DRY	PART SHADE/SHADE	HIGH	HIGH	REGIONAL
Symphyotrichum novae-angliae	New England Aster	WET-MOIST	SUN	MOD	MOD	REGIONAL
Baptisia alba	White Flowering Indigo	WET-MOIST	SUN/PART SHADE	HIGH	MED	CANADA
Baptisia australis	Blue False Indigo	MOIST-DRY	SUN/PART SHADE	HIGH	MED	CANADA
Coreopsis tripteris	Tickseed	DRY	SUN	HIGH	MED	CANADA
Cornus canadensis	Bunchberry	AVERAGE-MOIST	SHADE/PART SHADE	MED	LOW	REGIONAL
Dennstaedtia punctilobula	Hay Scented Fern	MOIST	SUN/PART SHADE/SHAD	HIGH	MED	REGIONAL
Echinacea purpurea	Purple Coneflower	MOIST-DRY	SUN/PART SHADE	HIGH	HIGH	CANADA
Eupatorium maculatum	Spotted Joe Pye Weed	WET-MOIST	SUN/PART SHADE	MOD	MED	REGIONAL
Eupatorium perfoliatum	Boneset	DRY-MOIST	SUN/PART SHADE/SHAD	MED	MED	REGIONAL
Fragaria virginiana	Wild Strawberry	MOIST-NORMAL	SUN/PART SHADE	MOD	LOW	REGIONAL
Geranium maculatum	Wild Geranium	MOIST	SUN/PART SHADE	HIGH	LOW	REGIONAL
Iris versicolor	Northern Blue Flag Iris	MOIST-WET	SUN/PART SHADE	MOD	MOD	REGIONAL
Leucanthemum superbum 'Alaska'	Alaska Shasta Daisy	MOIST WELL DRAINED	SUN/PART SHADE	HIGH	MED	NO (Naturalized)
Liatris ligulistylis	Meadow Blazingstar	MOIST-DRY	SUN/PART SHADE	HIGH	MED	ONTARIO
Liatris spicata	Dense Blazing Star	MOIST-DRY	SUN	HIGH	MED	REGIONAL
Lilium michiganense	Michigan lily	MOIST-WET	SUN/PART SHADE	HIGH	LOW	REGIONAL
Lupinus perennis	Wild Lupine	DRY	SUN/SHADE	HIGH	LOW	REGIONAL
Matteuccia struthiopteris	Ostrich Fern	MOIST-DRY	SUN/PART SHADE	MOD	MED	REGIONAL
Osmunda cinnamonea	Cinnamon Fern	MOIST	PART SHADE	MOD	LOW	REGIONAL
Parthenocissus quinquefolia	Virginia Creeper	MOIST-DRY	SUN/SHADE	HIGH	HIGH	REGIONAL
Penstemon hirsutus	Hairy Beardtongue	DRY-MOIST	SUN/PART SHADE	HIGH	LOW	REGIONAL
Polystichum acrostichoides	Christmas Fern	DRY-MOIST	PART SHADE/SHADE	MOD	LOW	REGIONAL
Rudbeckia hirta	Black-Eyed Susan	MOIST-DRY	SUN/PART SHADE	MOD	MED	REGIONAL
Solidago nemoralis ssp. nemoralis	Grey Goldenrod	MOIST	SUN	MOD	MED	REGIONAL
Solidago rugosa	Rough-stemmed Golden Road	MOIST-WELL DRAINED	SUN	MOD	MED	REGIONAL
Solidago canadensis var. canadensis	Canada goldenrod	MOIST	SUN/PART SHADE	MOD	HIGH	REGIONAL
Symphyotrichum oolentangiense	Skyblue Aster	DRY-MOIST	SUN	HIGH	HIGH	REGIONAL
Veronica americana	American speedwell	MOIST-DRY	SUN/PART SHADE	MOD	MED	REGIONAL
Viola canadensis var. canadensis	Canada Violet	MOIST-NORMAL	SUN/PART SHADE	MOD	LOW	REGIONAL

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APPROVED NATURALIZATION SEED MIXES

Riparian & Wet Grassland Meadow Mix

BOTANICAL NAME	COMMON NAME	% MIX
Asclepias incarnata	Red Milkweed	2%
Caltha palustris	Marsh Marigold	2%
Eupatorium maculatum	Joe Pye Weed	4%
Heliopsis helianthoides	Ox Eye Sunflower	2%
Iris versicolor	Blue Flag Iris	2%
Lobelia cardinalis	Cardinal Flower	2%
Lobelia siphilitica	Great Blue Lobelia	2%
Monarda fistulosa	Bergamot	2%
Oligoneuron rigidum	Stiff Goldenrod	4%
Ratibida pinnata	Yellow Coneflower	2%
Rudbeckia hirta	Black Eyed Susan	2%
Oenothera biennis	Common Evening Primrose	2%
Doellingeria umbellata	Flat Topped Aster	2%
Symphyotrichum laeve	Smooth Aster	2%
Verbena hastata	Blue Vervain	2%
Vernonia fasciculata	Ironweed	2%
Veronicastrum virginicum	Culver's Root	2%
Zizia aurea	Golden Alexanders	2%
Andropogon gerardii	Big Bluestem	10%
Carex bebbii	Bebb's Sedge	10%
Carex vulpinoidea	Fox Sedge	10%
Elymus canadensis	Canada Wild Rye	10%
Elymus riparius	Riverbank Wild Rye	10%
Panicum virgatum	Switchgrass	10%
		100%

(Apply moin seed mix ot a rote of 26kg.ha)

Cover Crop:		
Fagopyrum esculentum	Buckwheat	S0%
Lolium multiforum	Annual Rygrass*	S0%
* Note not to be confused with Perennial Rye (Lolium perenne)		100%

(Apply cover crop at a rate of 20kg.ha)

NOTE:
Minimum 300mm native topsoil is required for all native seeded areas.
For slopes greater than 30%., approved biodegradable erosion control blanket required.

Application to be by 'Hydroseed' or approved alternative method.
Complete Hydroseed slurry to be applied per hectare, unless otherwise approved:

main seed mix	26 kg
cover crop seed mix	20 kg
mulch	1000 kg
water (minimum)	10 000 litres
fertilizer	4S0 kg

Upland Dry Meadow Mix

BOTANICAL NAME	COMMON NAME	% MIX
Asclepias syriaca	Common Milkweed	2%
Agastache nepetoides	Giant Yellow Hyssop	2%
Penstemon hirsutus	Hairy Beard-Tongue	4%
Heliopsis helianthoides	Ox Eye Sunflower	2%
Symphyotrichum urophyllum	Arrow Leaved Aster	2%
Cinquefoil Potentilla arguta	Tall Praire Cinquefoil	2%
Lobelia siphilitica	Great Blue Lobelia	2%
Monarda fistulosa	Bergamot	2%
Oligoneuron rigidum	Stiff Goldenrod	4%
Ratibida pinnata	Yellow Coneflower	2%
Rudbeckia hirta	Black Eyed Susan	4%
Oenothera biennis	Common Evening Primrose	2%
Doellingeria umbellata	Flat Topped Aster	2%
Symphyotrichum laeve	Smooth Aster	2%
Verbena hastata	Blue Vervain	2%
Vernonia fasciculata	Ironweed	2%
Veronicastrum virginicum	Culver's Root	2%
Zizia aurea	Golden Alexanders	2%
Coreopsis tripteris	Tall Coreopsis	3%
Pycnanthemum virginianum	Virginia Mountain Mint	2%
Sporobolus asper	Tall Dropseed	8%
Sorghastrum nutans	Indian Grass	15%
Elymus virginicus	Virginia Wild Rye	15%
Panicum virgatum	Switchgrass	15%
		100%

(Apply main seed mix at o rate of 26kg.ha)

Cover Crop:		
Fagopyrum esculentum	Buckwheat	50%
Lolium multiforum	Annual Rygrass*	50%
* Note not to be confused with Perennial Rye (Lolium perenne)		100%

(Apply cover crop at a rate of 20kg.ha)

NOTE:
Minimum 300mm native topsoil is required for all native seeded areas.
For slopes greater than 30%., approved biodegradable erosion control blanket required.

Application to be by 'Hydroseed' or approved alternative method.
Complete Hydroseed slurry to be applied per hectare, unless otherwise approved:

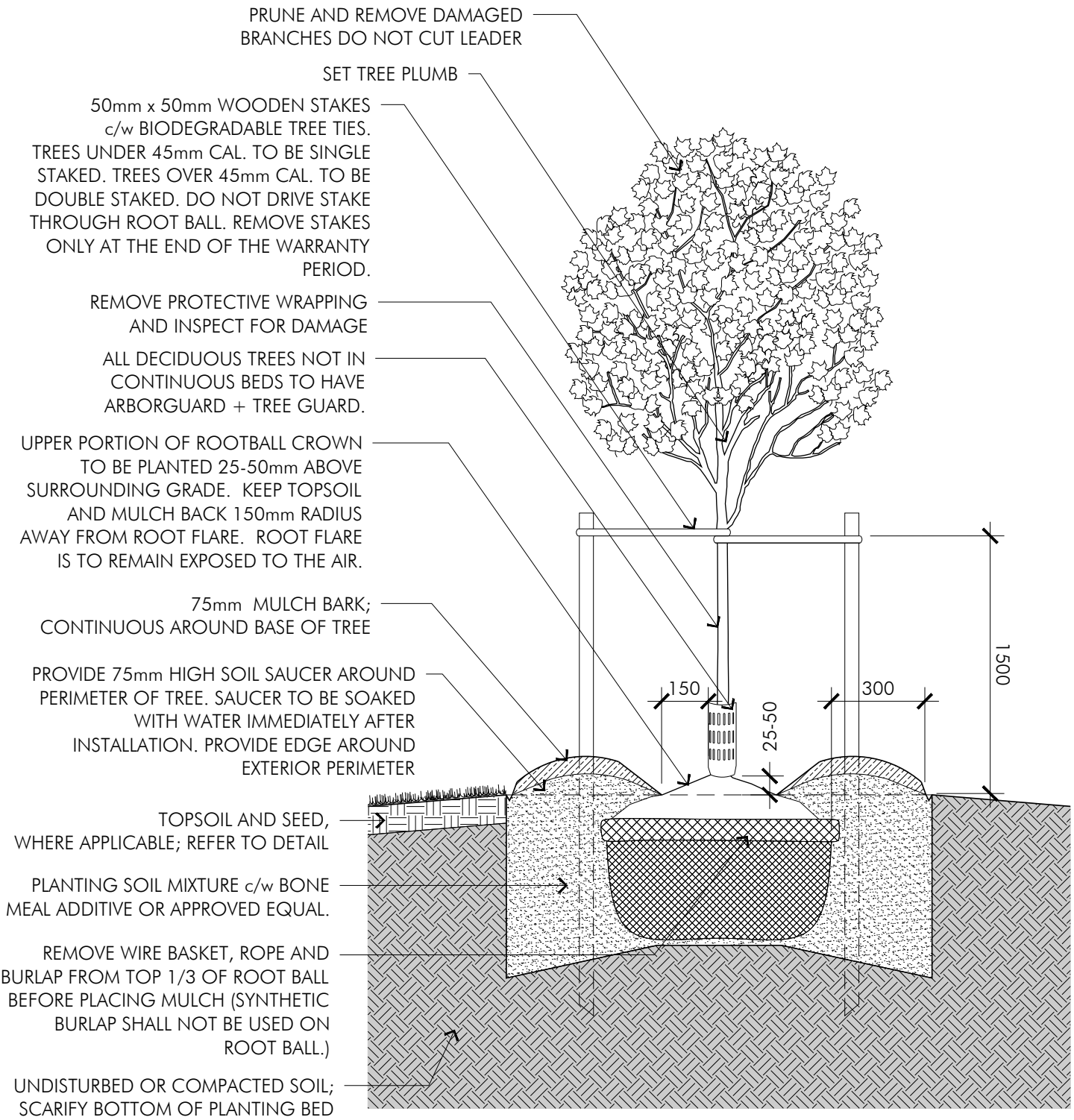
main seed mix	26 kg
cover crop seed mix	20 kg
mulch	1000 kg
water (minimum)	10 000 litres
fertilizer	4S0 kg

TOWNSHIP APPROVED NATURALIZATION SEED MIXES

SCALE = NOT TO SCALE

LAST REVISED: SEPTEMBER 2024 FIGURE 2.2

TOWNSHIP OF MUSKOKA Lakes

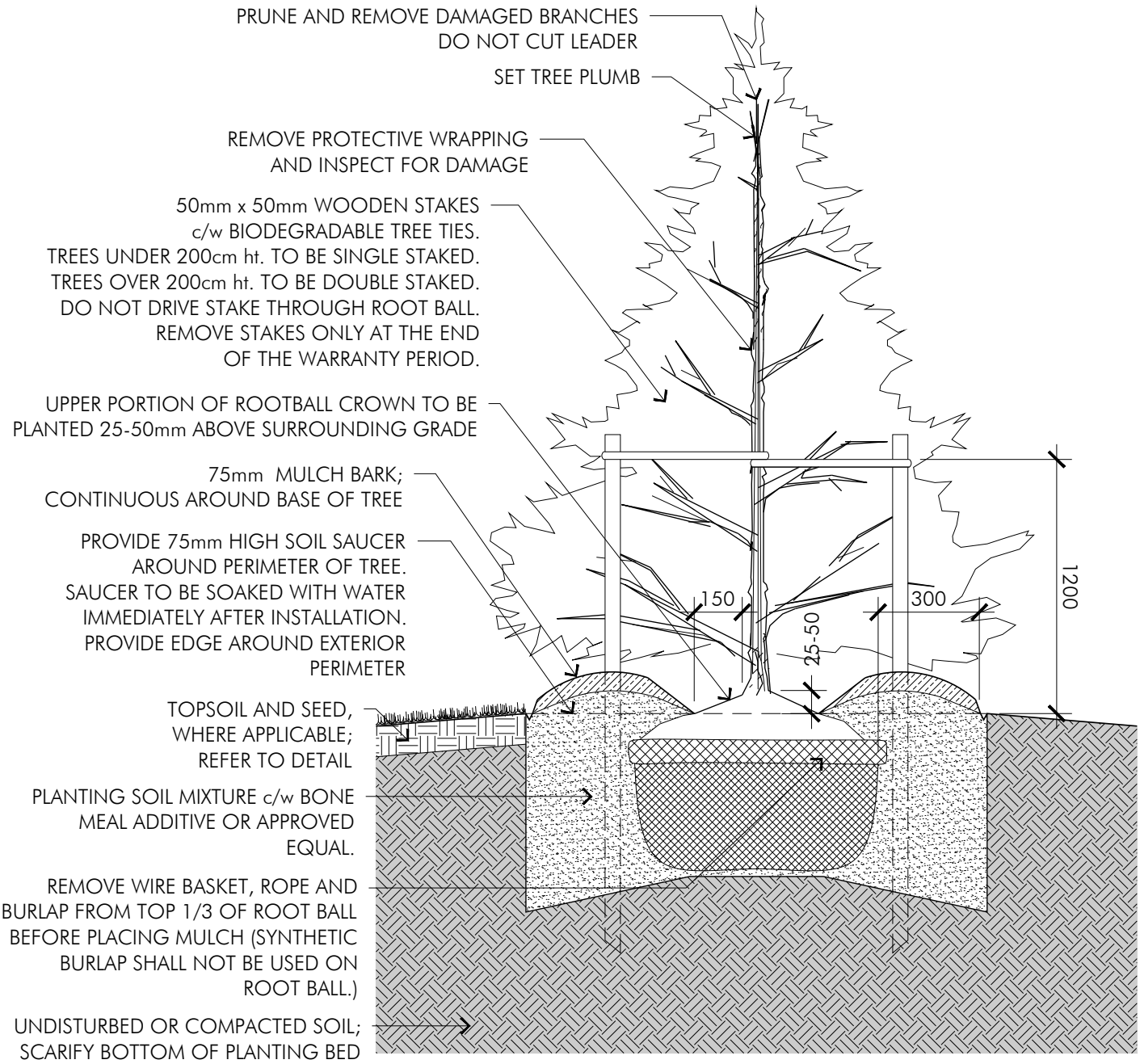


DESIGN NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. HAND DIG PLANTING HOLE AND LOOSEN SURFACE SOIL.
3. ALLOW FOR SETTLEMENT WHEN SETTING PLANTS, SET PLANTS 50mm HIGHER THAN ADJACENT FINISHED GRADE.
4. BACKFILL SOIL IN 150mm LIFTS AND HAND TAMP TO PREVENT AIR POCKETS.
5. CAREFULLY REMOVE ANY LOOSE SOIL FROM TOP OF ROOT BALL.

TREE PLANTINGS DECIDUOUS	SCALE = 1:20 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 2.3

TOWNSHIP OF MUSKOKA Lakes

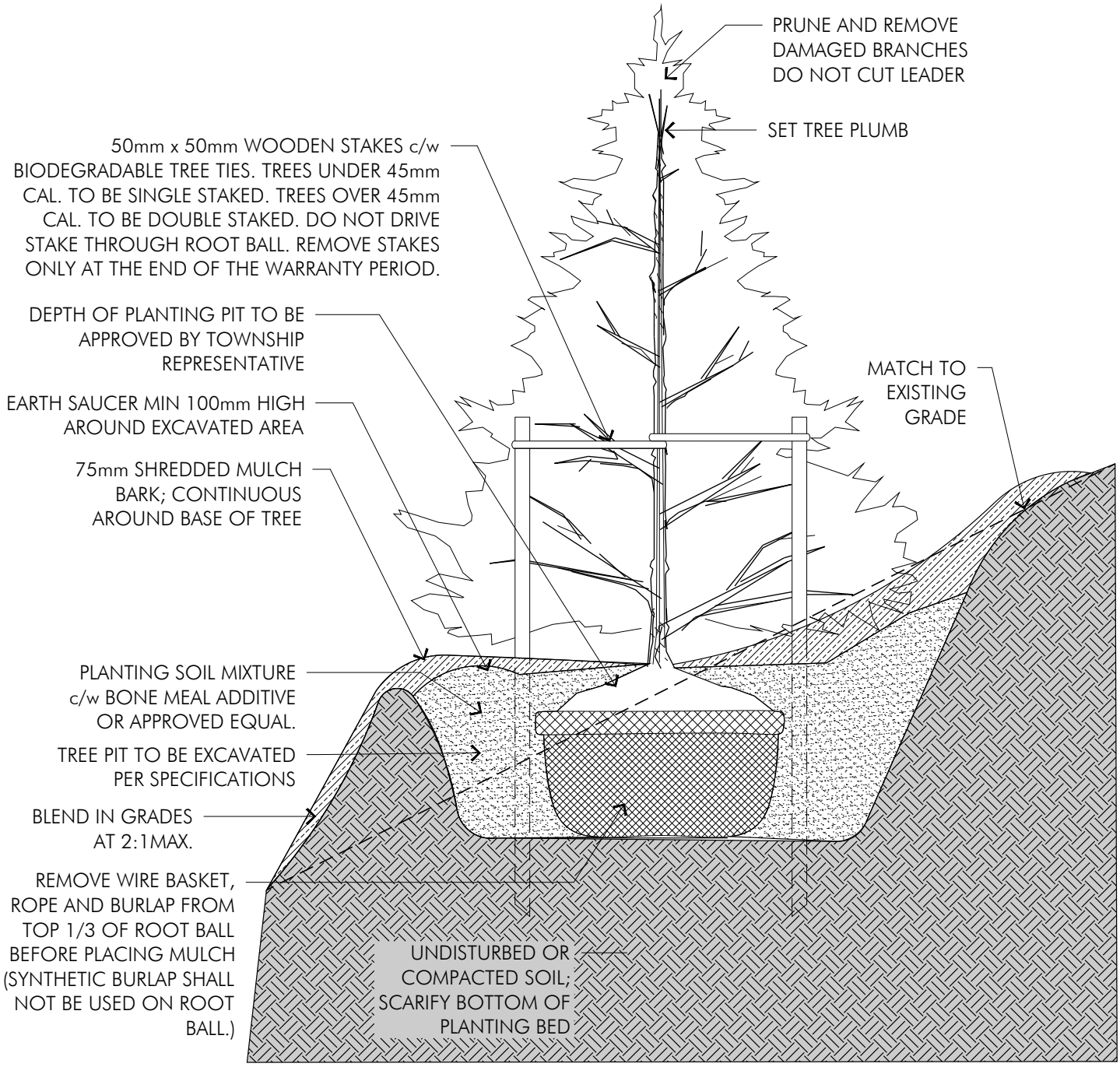


GENERAL NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. HAND DIG PLANTING HOLE AND LOOSEN SURFACE SOIL.
3. ALLOW FOR SETTLEMENT WHEN SETTING PLANTS, SET PLANTS 50mm HIGHER THAN ADJACENT FINISHED GRADE.
4. BACKFILL SOIL IN 150mm LIFTS AND HAND TAMP TO PREVENT AIR POCKETS.
5. CAREFULLY REMOVE ANY LOOSE SOIL FROM TOP OF ROOT BALL.

TREE PLANTINGS CONIFEROUS	SCALE = 1:20 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 2.4

TOWNSHIP OF MUSKOKA Lakes

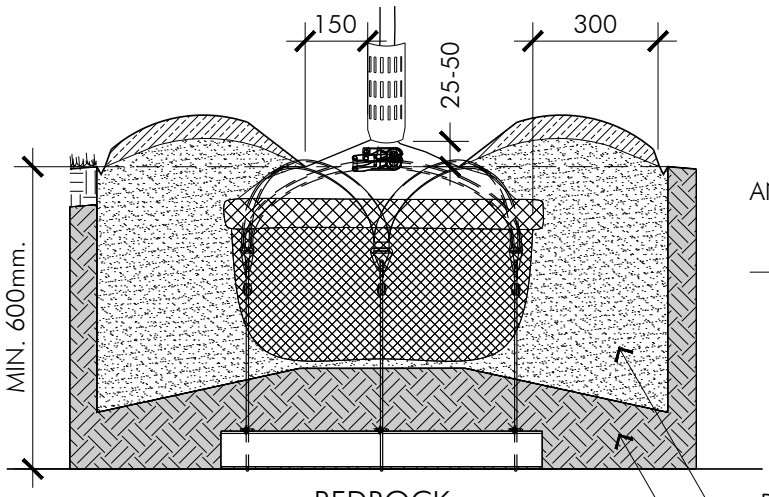


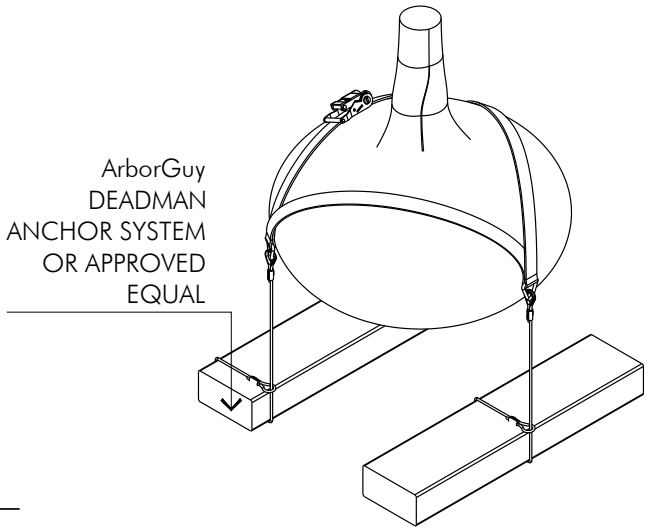
GENERAL NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. HAND DIG PLANTING HOLE AND LOOSEN SURFACE SOIL.
3. ALLOW FOR SETTLEMENT WHEN SETTING PLANTS, SET PLANTS 50mm HIGHER THAN ADJACENT FINISHED GRADE.
4. BACKFILL SOIL IN 150mm LIFTS AND HAND TAMP TO PREVENT AIR POCKETS.
5. CAREFULLY REMOVE ANY LOOSE SOIL FROM TOP OF ROOT BALL.

TREE PLANTINGS ON SLOPES	SCALE = 1:20 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 2.5

TOWNSHIP OF MUSKOKA Lakes





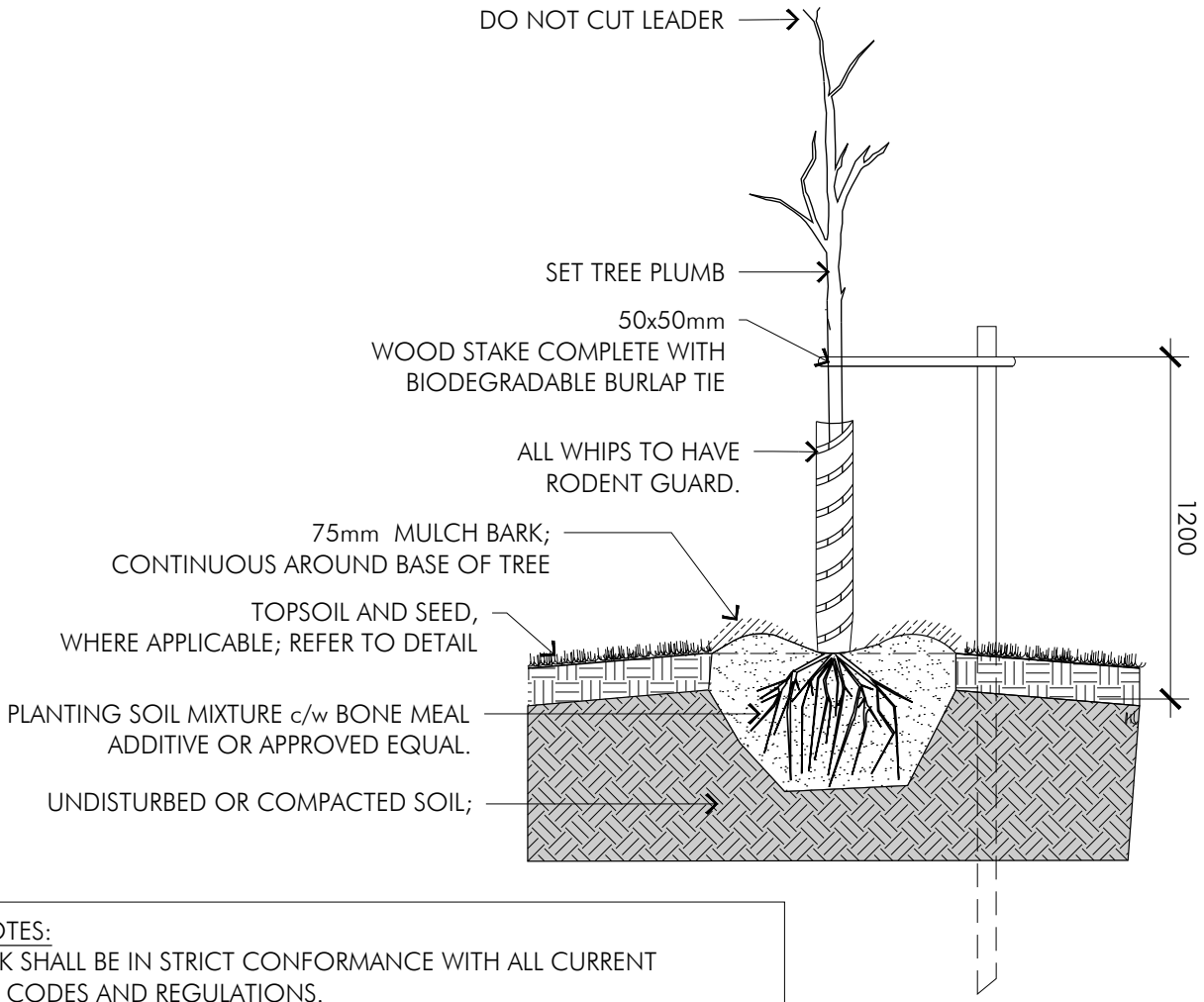
PLANTING SOIL MIXTURE
WITH BONEMEAL ADDITIVE

UNDISTURBED
NATIVE SOIL

**FOR TREE PLANTINGS WHERE SOIL DEPTH LESS THAN 900mm.

TREE PLANTINGS ON BEDROCK	SCALE = 1:20 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 2.6

TOWNSHIP OF MUSKOKA Lakes

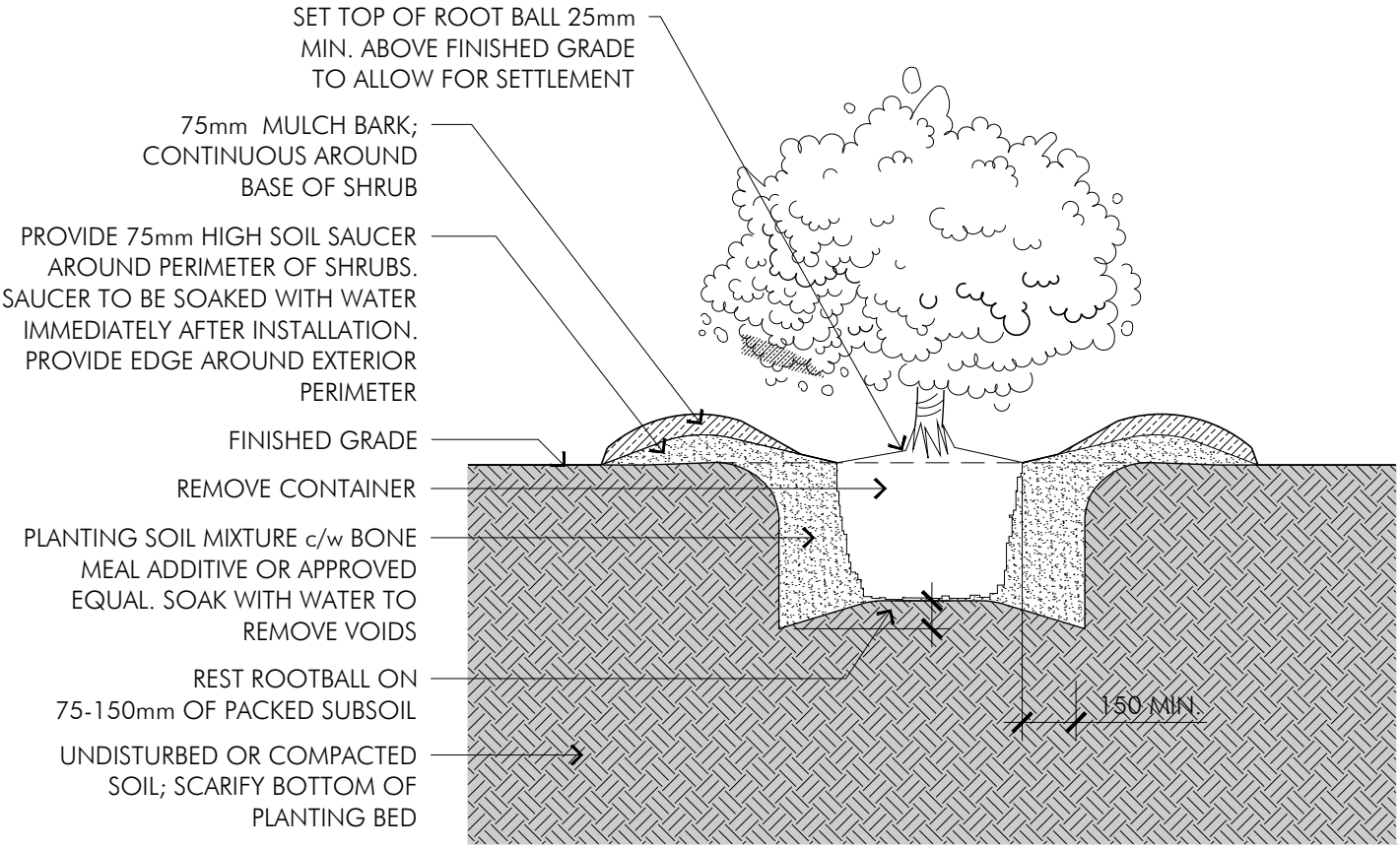


DESIGN NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. HAND DIG PLANTING HOLE AND LOOSEN SURFACE SOIL.
3. ALLOW FOR SETTLEMENT WHEN SETTING PLANTS, SET PLANTS 50mm HIGHER THAN ADJACENT FINISHED GRADE.
4. BACKFILL SOIL IN 150mm LIFTS AND HAND TAMP TO PREVENT AIR POCKETS.
5. CAREFULLY REMOVE ANY LOOSE SOIL FROM TOP OF ROOT BALL.

TREE PLANTINGS WHIPS	SCALE = 1:20 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 2.7

TOWNSHIP OF MUSKOKA Lakes

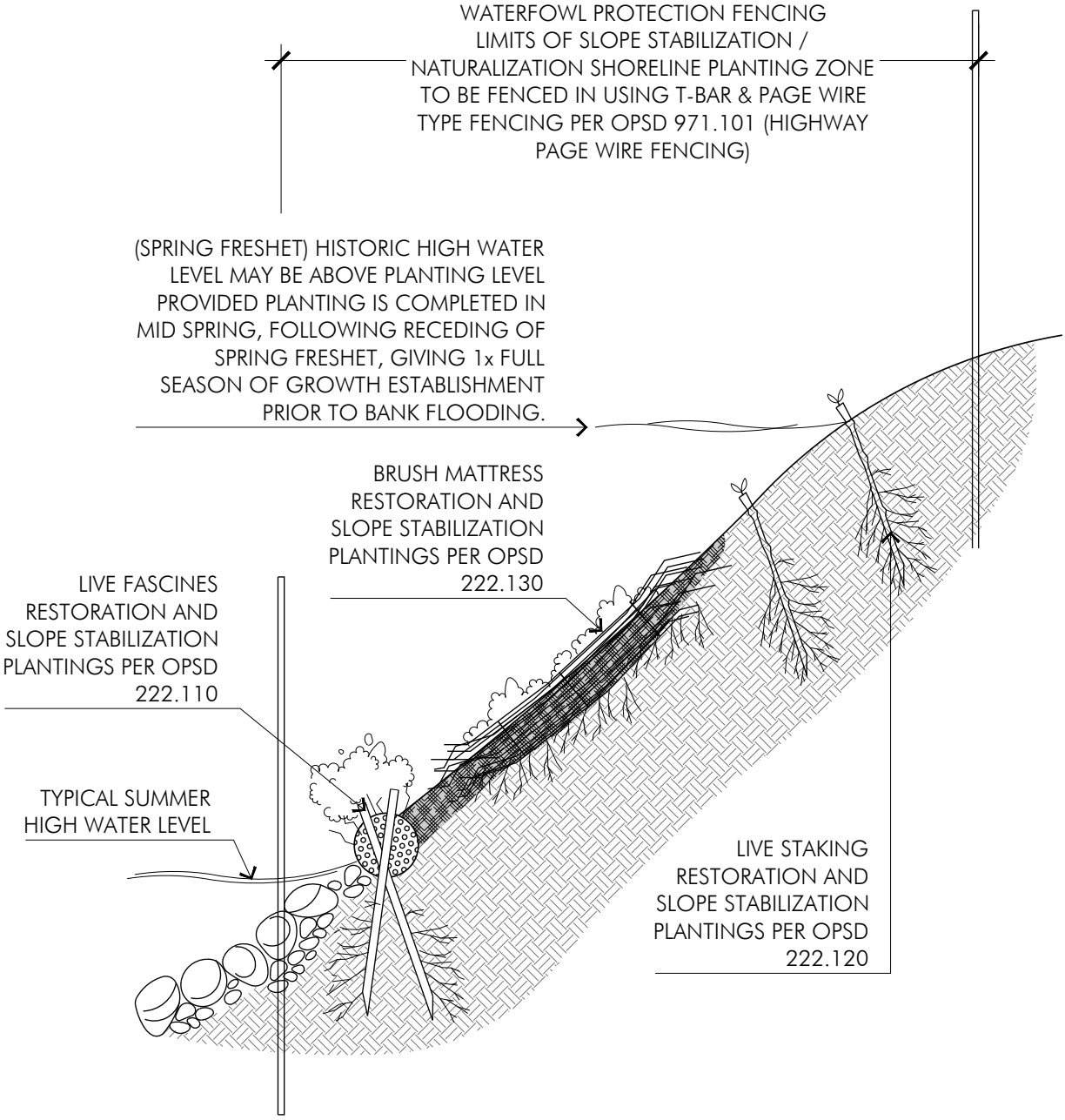


DESIGN NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. CONTAINER SIZE; AS SPECIFIED.
3. PLANTING BEDS TO HAVE 75mm SHREDDED BARK MULCH.
4. SAUCER OR BED TO BE SOAKED WITH WATER IMMEDIATELY AFTER PLANTING.

PLANTINGS CONTAINER STOCK	SCALE = 1:20 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 2.8

TOWNSHIP OF MUSKOKA Lakes



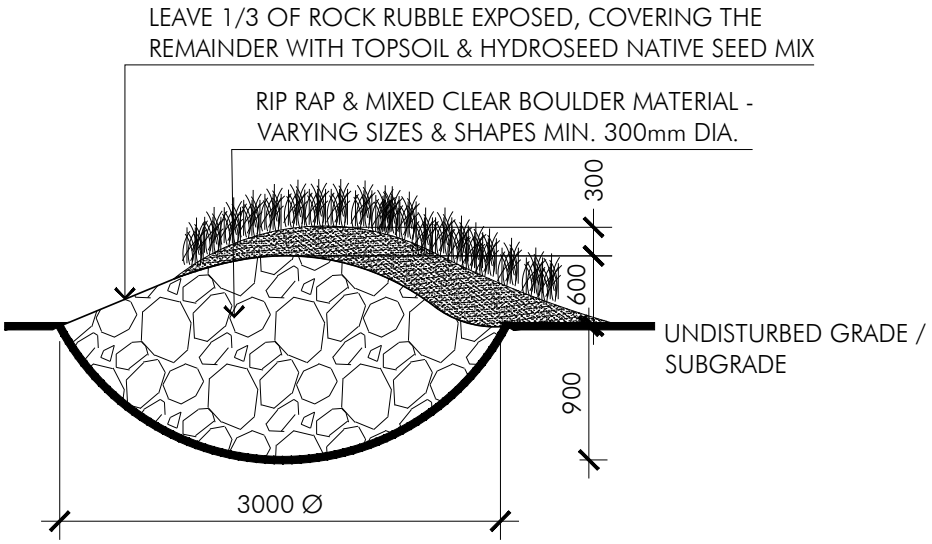
DESIGN NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. LIMIT DISTURBANCE TO EXISTING STABLE SHORELINE SOILS WHEREVER POSSIBLE THROUGH SELECTION OF APPROPRIATE PLANTING TECHNIQUE(S).
3. USE ONLY 100% TOWNSHIP-APPROVED, REGIONALLY NATIVE PLANT SPECIES IN SHORELINE STABILIZATION AND NATURALIZATION PLANTINGS.
4. ALL TAGS, TIES, NETTING, ACCESSORY HYDRAULIC SEEDING ETC. TO BE OF NATURAL, BIODEGRADABLE MATERIALS.
5. REMOVE ALL TAGS/TIES AND TEMPORARY WATERFOWL PROTECTION FENCING PRIOR TO WINTER FREEZ-UP.

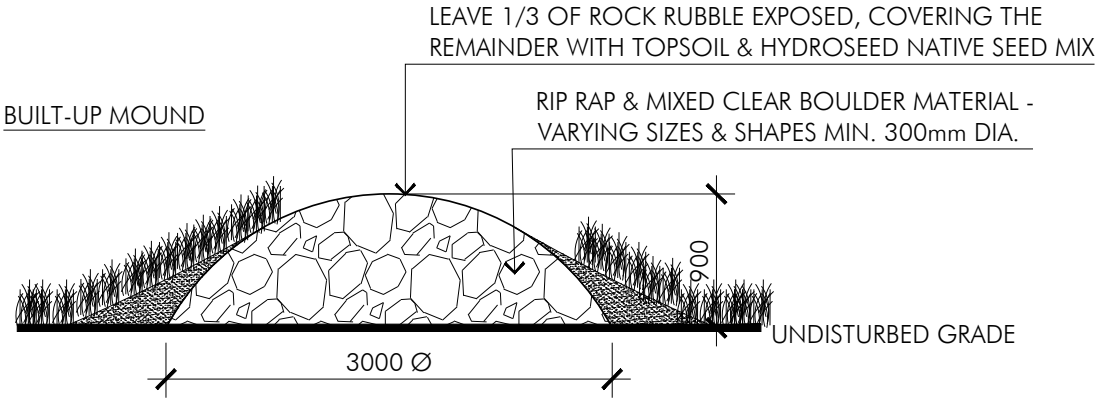
PLANTINGS SHORELINE STABILIZATION & NATURALIZATION PLANTING TECHNIQUES	SCALE = 1:40 METRIC
	LAST REVISED: SEPTEMBER 2024 FIGURE 2.9

TOWNSHIP OF MUSKOKA Lakes

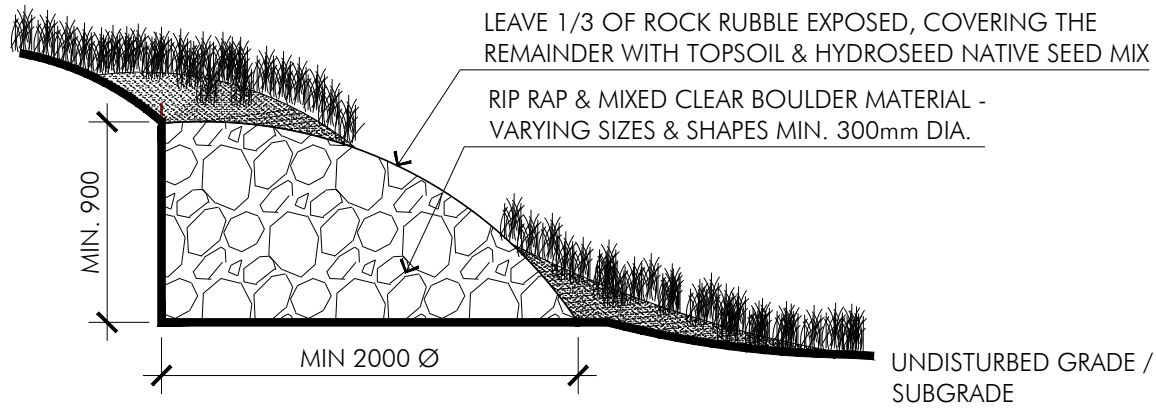
EXCAVATED-MOUND



BUILT-UP MOUND

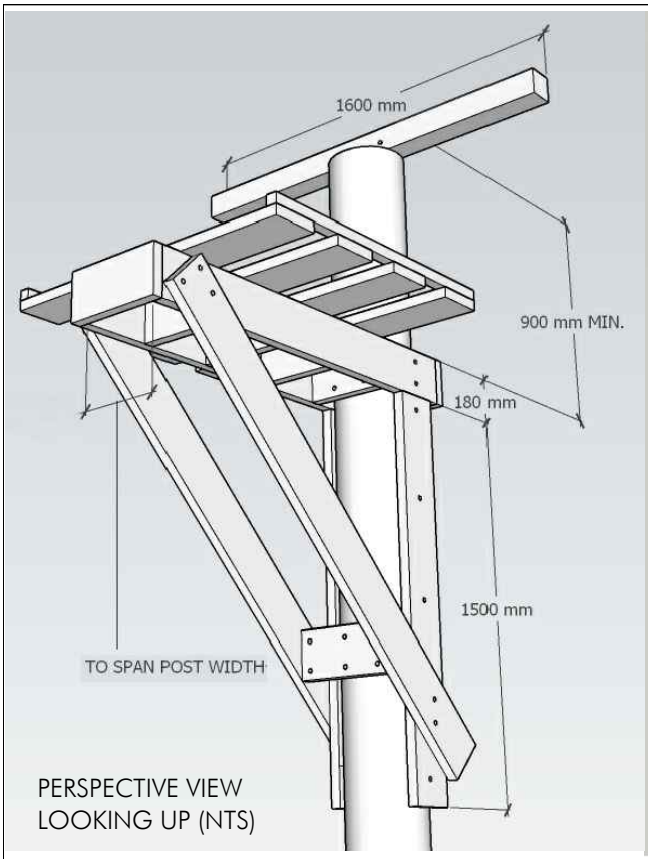


EXCAVATED HILLSIDE / TOE OF SLOPE

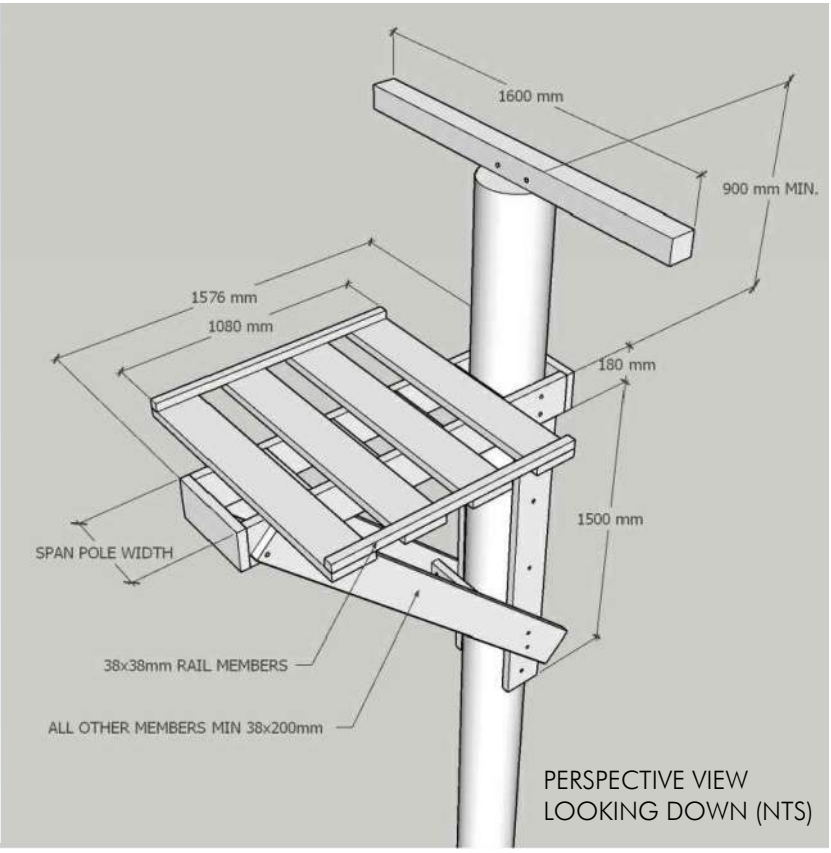


HABITAT CREATION SNAKE OVERWINTERING	SCALE = 1:50 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 2.10.1

TOWNSHIP OF MUSKOKA Lakes



PERSPECTIVE VIEW
LOOKING UP (NTS)



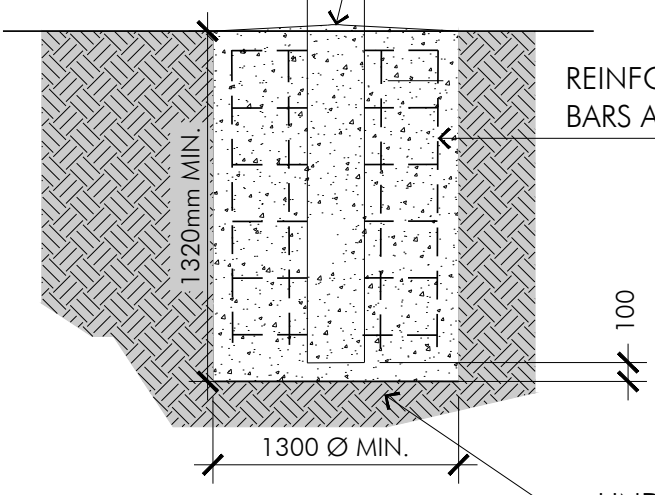
PERSPECTIVE VIEW
LOOKING DOWN (NTS)

ROUND WOODEN POST
MIN. 320mm Ø
MAX POST HEIGHT
ABOVE GRADE: 4700mm
(POST LENGTH: 6222mm)

DOME CIP CONCRETE
FOOTING ABOVE FINISHED
SURROUNDING GRADE
FOR POSITIVE DRAINAGE
AWAY FROM POST BASE

WOOD PERCH NOTES:

- ALL WOOD MEMBERS TO BE 2x8" PRESSURE TREATED LUMBER UNLESS OTHERWISE NOTED.
- ROUND/CHAMFER TOP EDGES OF UPPER PERCH MEMBER.
- ALL STRUCTURAL MEMBERS SECURED TO POST WITH EXTERIOR GRADE STRUCTURAL SCREWS.
- ALL DECK AND JOIST MEMBERS SECURED WITH EXTERIOR GRADE DECK SCREWS.



REINFORCE WITH 8-15M VERTICAL
BARS AND 10M TIES @ 300 o.c.

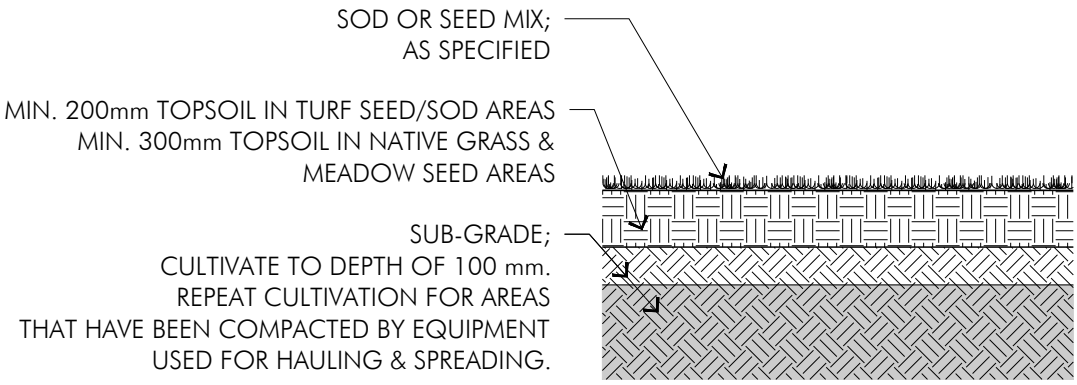
FOOTING NOTES: FOOTING DETAIL IS PROVIDED AS A GUIDE FOR PROJECT COST ESTIMATION AND PLACEMENT ONLY, AND IS ONLY APPLICABLE TO AREAS WITH SUITABLE INORGANIC, STABLE AND UNDISTURBED SOILS AT A DEPTH OF 1300mm OR GREATER. ALL INSTALLATIONS REQUIRE STRUCTURAL ENGINEER STAMPED DRAWINGS, INCLUDING SITE-SPECIFIC FOOTING DESIGN.

UNDISTURBED NATIVE SOIL

TYPICAL CONCEPT
FOOTING - SECTION VIEW

HABITAT CREATION RAPTOR PERCH	SCALE = 1:40 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 2.10.2

TOWNSHIP OF MUSKOKA Lakes

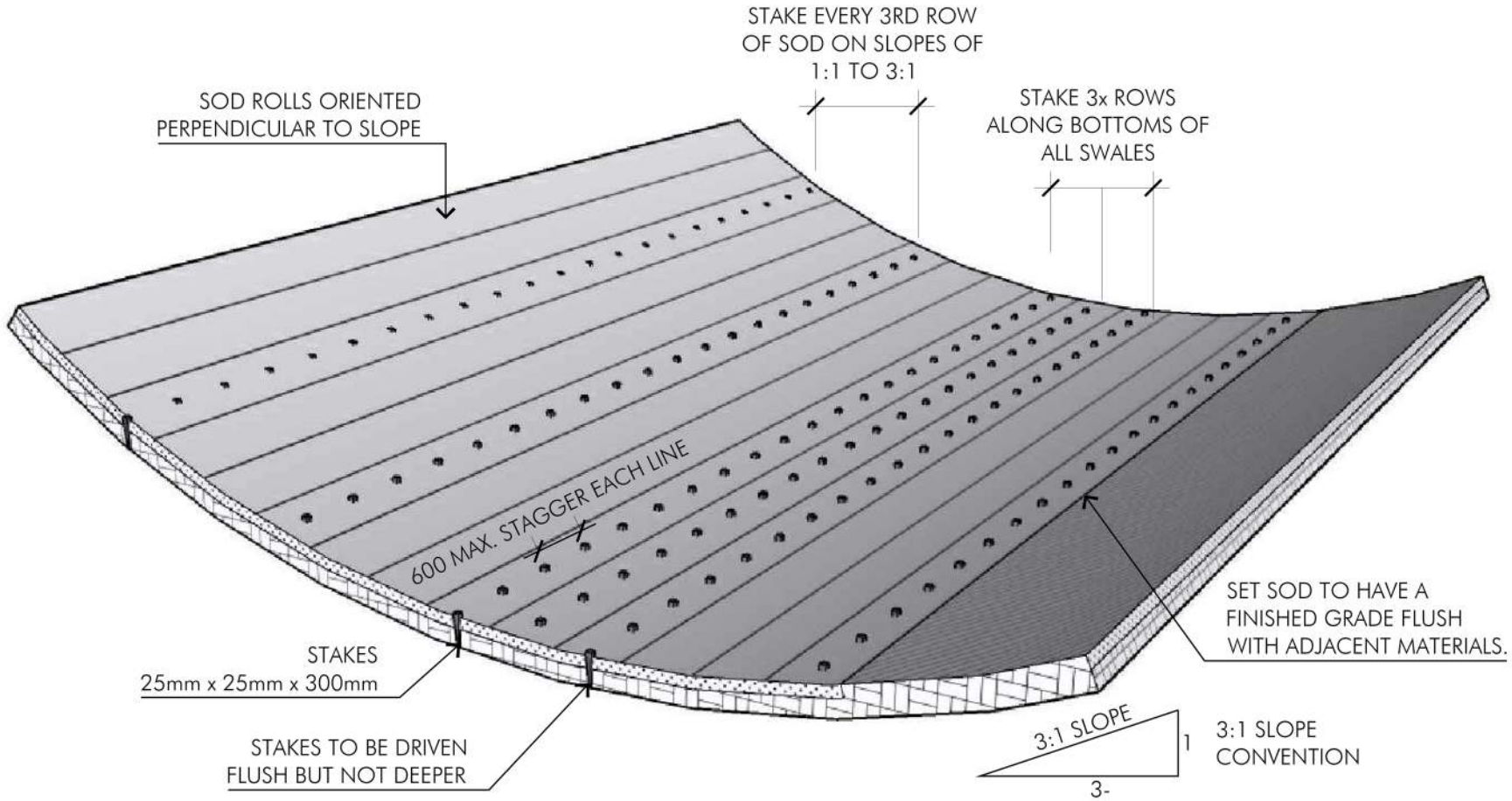


GENERAL NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
3. TOPSOIL MUST BE CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH AND TO BE FREE FROM SUBSOIL, ROOTS, VEGETATION, DEBRIS, TOXIC MATERIALS AND STONE OVER 50mm DIAMETER.
4. FOR AREAS TO RECEIVE SOD, SET TOPSOIL 15mm BELOW FINISHED GRADE.
5. ENSURE THAT GRADES AND CROSS SLOPE PROVIDE POSITIVE DRAINAGE AND ADHERE TO GRADING PLAN (WHERE APPLICABLE).

PLANTINGS - SOD AND SEED	SCALE = 1:20 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 2.11

TOWNSHIP OF MUSKOKA Lakes

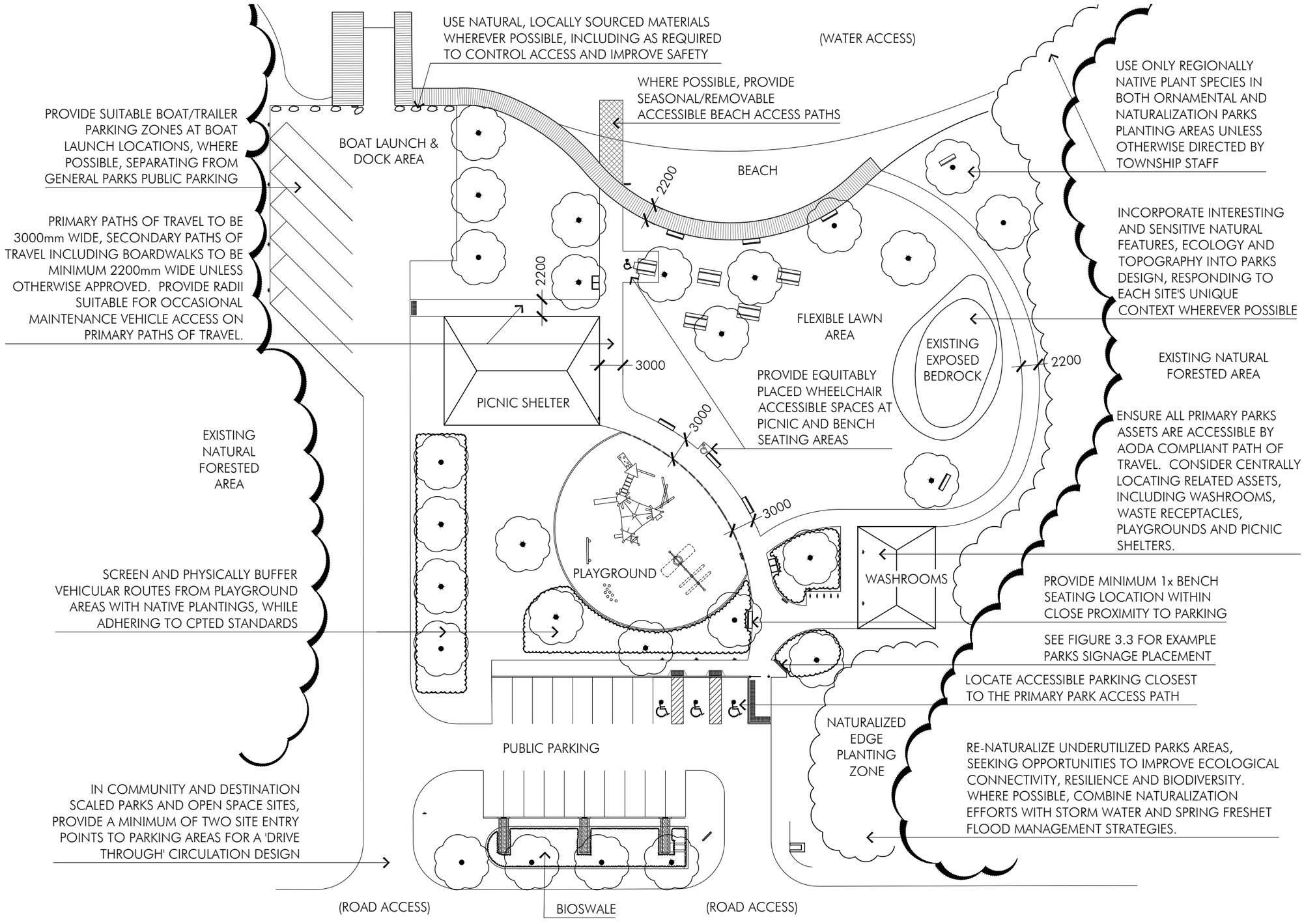


DESIGN NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. SODDING ROWS SHALL RUN ACROSS/PERPENDICULAR TO SLOPE DIRECTION AS SHOWN.
3. SODDING IS TO EXTEND TO EDGE OF SHOULDER ROUNDING AND TO BE COUNTERSUNK TO EXISTING GRADE, LEVEL AT EDGES OF SHOULDER OR ADJACENT MATERIAL, TO ALLOW FREE FLOW OF WATER.
4. JOINTS IN ADJACENT ROWS SHALL BE STAGGERED.
5. ON SLOPES FROM 1:1 TO 3:1 INCLUSIVE, THE BOTTOM THREE ROWS AND EVERY 3RD ROW SHALL BE STAKED. ON SLOPES GREATER THAN 1-3/4:1 EACH AND EVERY ROW SHALL BE STAKED PER OPSS-571.

SODDING ON SLOPES	SCALE = NOT TO SCALE	
	LAST REVISED: SEPTEMBER 2024	FIGURE 2.12

TOWNSHIP OF MUSKOKA Lakes

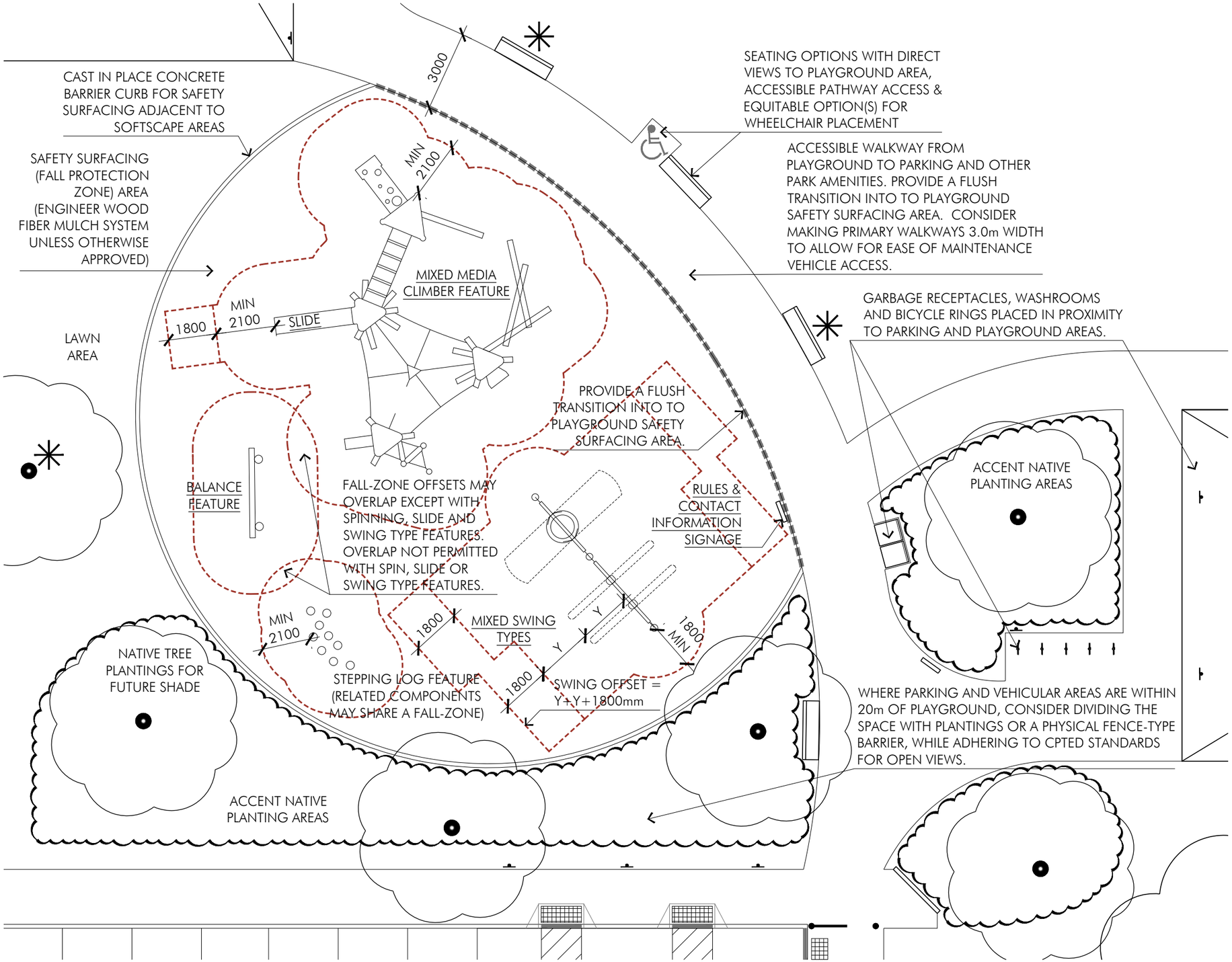


THIS ILLUSTRATION SHOWS TOWNSHIP LAYOUT STANDARDS AND REQUIREMENTS FOR A TYPICAL, CONCEPTUAL (COMMUNITY SCALED PARK). THE PARK DESIGN SHOWN IS A CONCEPTUAL EXAMPLE ONLY. REFER TO THE 'DESIGN MANUAL FOR PARKS AND TRAILS IN THE TOWNSHIP OF MUSKOKA LAKES', PARKS AND PLAYGROUNDS SECTIONS FOR ADDITIONAL REQUIREMENTS AND INFORMATION.

ALL ASPECTS OF PLAYGROUND DESIGN ARE REQUIRED TO ADHERE TO THE CSA Z614:20 STANDARD FOR CHILDREN'S PLAYGROUND EQUIPMENT AND SURFACING AS MINIMUM REQUIREMENTS.

PARKS & PLAYGROUNDS EXAMPLE (COMMUNITY-SCALED) PARK LAYOUT	SCALE = 1:500
	LAST REVISED: SEPTEMBER 2024 FIGURE 3.1

TOWNSHIP OF MUSKOKA Lakes



THIS ILLUSTRATION SHOWS TOWNSHIP LAYOUT STANDARDS AND REQUIREMENTS FOR A TYPICAL, CONCEPTUAL PLAYGROUND. THE PLAYGROUND AND PARK DESIGN SHOWN IS A CONCEPTUAL EXAMPLE ONLY. REFER TO THE 'DESIGN MANUAL FOR PARKS AND TRAILS IN THE TOWNSHIP OF MUSKOKA LAKES', PARKS AND PLAYGROUNDS SECTIONS FOR ADDITIONAL REQUIREMENTS AND INFORMATION.

ALL ASPECTS OF PLAYGROUND DESIGN ARE REQUIRED TO ADHERE TO THE CSA Z614:20 STANDARD FOR CHILDREN'S PLAYGROUND EQUIPMENT AND SURFACING AS MINIMUM REQUIREMENTS.

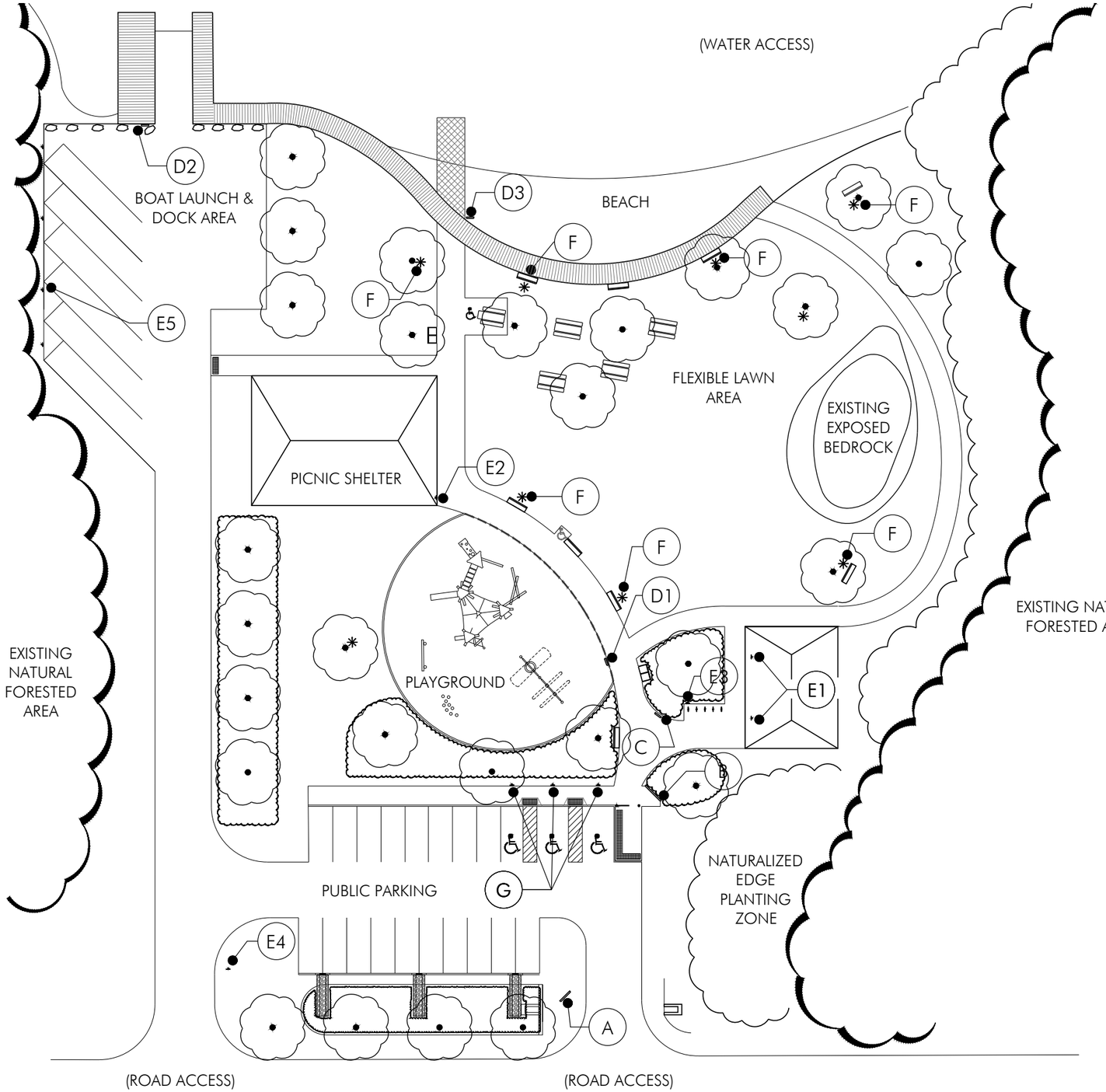
THIS CONCEPTUAL ILLUSTRATION AND THE 'DESIGN MANUAL FOR PARKS AND TRAILS IN THE TOWNSHIP OF MUSKOKA LAKES' INCLUDE ADDITIONAL REQUIREMENTS AS TOWNSHIP STANDARDS OF BEST-PRACTICE.

PARKS & PLAYGROUNDS
EXAMPLE PLAYGROUND LAYOUT

SCALE = 1:150

LAST REVISED: SEPTEMBER 2024 FIGURE 3.2

TOWNSHIP OF MUSKOKA Lakes



- (A) SITE VEHICULAR ENTRANCE & ADDRESS SIGNAGE
- (B) COMMUNITY INFORMATION SIGNAGE
- (C) PEDESTRIAN WAYFINDING SIGANGE TO VARIOUS AMENITIES WITHIN SITE
- (D1) PRIMARY AMENITY SIGN & RULES SIGNAGE (PLAYGROUND)
- (D2) PRIMARY AMENITY SIGN & RULES SIGNAGE (BOAT LAUNCH & DOCK)
- (D3) PRIMARY AMENITY SIGN & RULES SIGNAGE (BEACH & MOBI MAT)
- (E1) SECONDARY AMENITY SIGN RULES SIGNAGE (WASHROOMS)
- (E2) SECONDARY AMENITY SIGN (PICNIC SHELTER)
- (E3) SECONDARY AMENITY SIGN (BICYCLE REPAIR STATION)
- (E4) DIRECTIONAL SECONDARY AMENITY SIGNS (PUBLIC PARKING & BOAT LAUNCH)
- (E5) DIRECTIONAL SECONDARY AMENITY SIGNS (DESIGNATED BOAT/TRAILER PARKING AREA)
- (F) COMMEMORATIVE BENCH & TREE PLAQUES (TYPICAL LOCATIONS)
- (F) ACCESSIBLE PARKING REGULATORY SIGNAGE

THIS ILLUSTRATION SHOWS TOWNSHIP SIGNAGE PLACEMENT STANDARDS AND REQUIREMENTS FOR A TYPICAL, CONCEPTUAL COMMUNITY SCALE PARK. THE PARK DESIGN SHOWN IS A CONCEPTUAL EXAMPLE ONLY. REFER TO THE 'DESIGN MANUAL FOR PARKS AND TRAILS IN THE TOWNSHIP OF MUSKOKA LAKES', SIGNAGE SECTION FOR ADDITIONAL REQUIREMENTS AND INFORMATION.

PARKS & PLAYGROUNDS EXAMPLE PARKS SIGNAGE PLACEMENT	SCALE = 1:500
	LAST REVISED: SEPTEMBER 2024 FIGURE 3.3

TOWNSHIP OF MUSKOKA Lakes

FENCED OFF LEASH RECOMMENDED AREA SIZING:

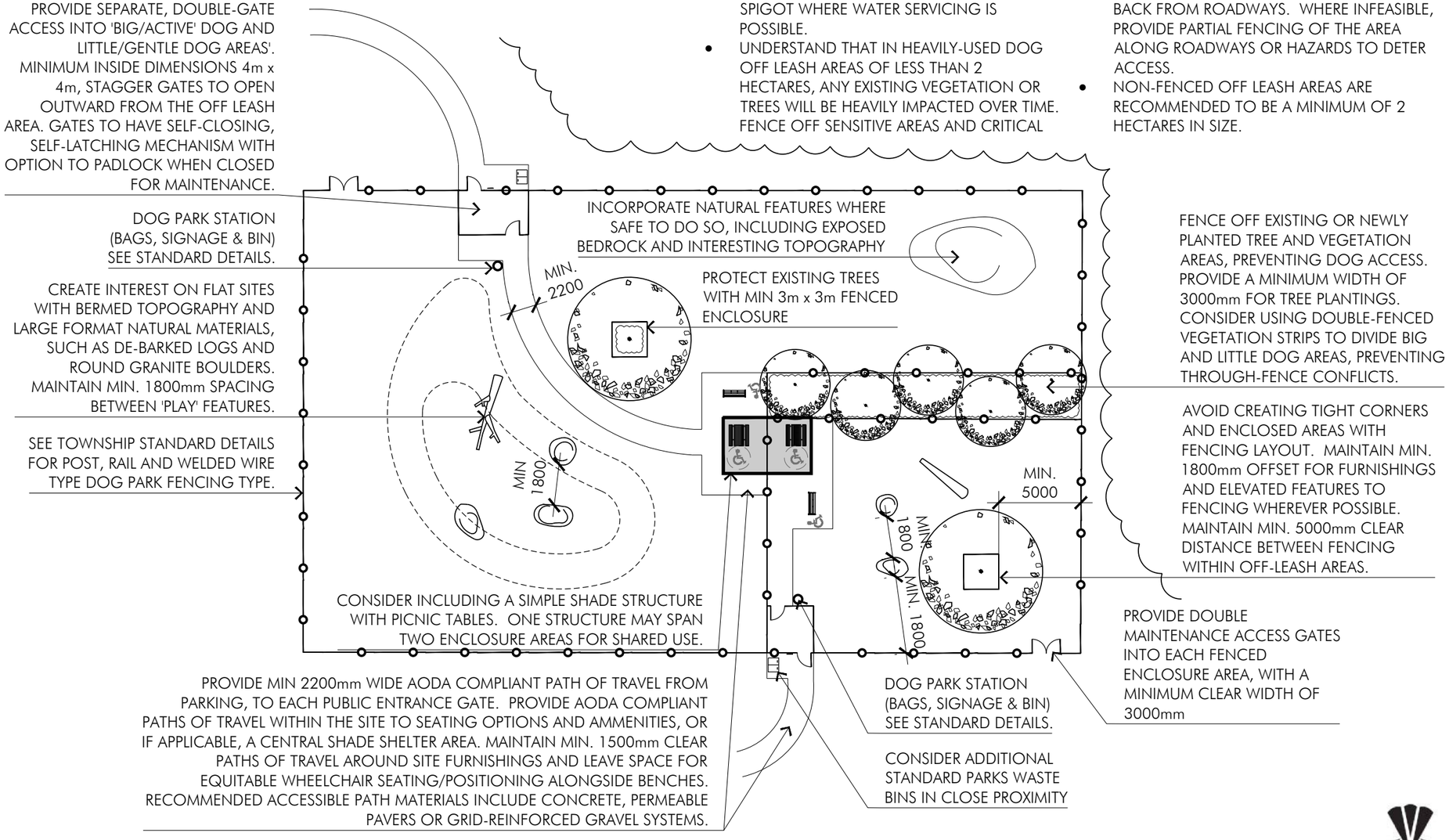
- BIG/ACTIVE DOG AREAS: *MINIMUM* 2000sq.m.
- LITTLE/GENTLE DOG AREAS: *MINIMUM* 600 sq.m.
- COMBINED/SINGLE AREAS: *MINIMUM* 2200sq.m.

FURTHER CONSIDERATIONS:

- SITE DOG OFF LEASH AREAS TO MINIMIZE IMPACT TO SENSITIVE NATURAL AREAS AND ADJACENT RESIDENTIAL USES.
- THE SMALLER THE OFF-LEASH AREA, THE MORE MAINTENANCE WILL BE REQUIRED TO MAINTAIN SURFACING FROM BECOMING MESSY AND UNPLEASANT. RECOMMENDED SURFACING TYPES INCLUDE SHREDDED BARK MULCH OR TURF, BOTH WITH CLEAR STONE DRAINAGE LAYER AND SUBDRAINAGE NETWORK (TILING) TO PREVENT SATURATION. TILING MAY NOT BE REQUIRED ON LARGER FENCED SITES WITH GOOD NATURAL DRAINAGE. GRAVEL IS NOT AN APPROPRIATE SURFACING TYPE FOR OFF LEASH DOG AREAS.
- CONSIDER ADJACENCY TO EXISTING TREES TO PROVIDE SHADY AREAS WITHIN FENCED ENCLOSURES.
- PROVIDE AN AUTOMATED DOG WATER FOUNTAIN WITH SELF-CLOSING HOSE SPIGOT WHERE WATER SERVICING IS POSSIBLE.
- UNDERSTAND THAT IN HEAVILY-USED DOG OFF LEASH AREAS OF LESS THAN 2 HECTARES, ANY EXISTING VEGETATION OR TREES WILL BE HEAVILY IMPACTED OVER TIME. FENCE OFF SENSITIVE AREAS AND CRITICAL TREE ROOT ZONES WHERE LONG TERM PRESERVATION OF VEGETATION IS A PRIORITY. WHERE VEGETATION IS SMALLER SIZED, OR LESS SIGNIFICANT THESE MAY BE INCORPORATED INTO THE SITE AS FEATURES OF INTEREST, WITH THE UNDERSTANDING THAT THEY MAY DECLINE OVER TIME.

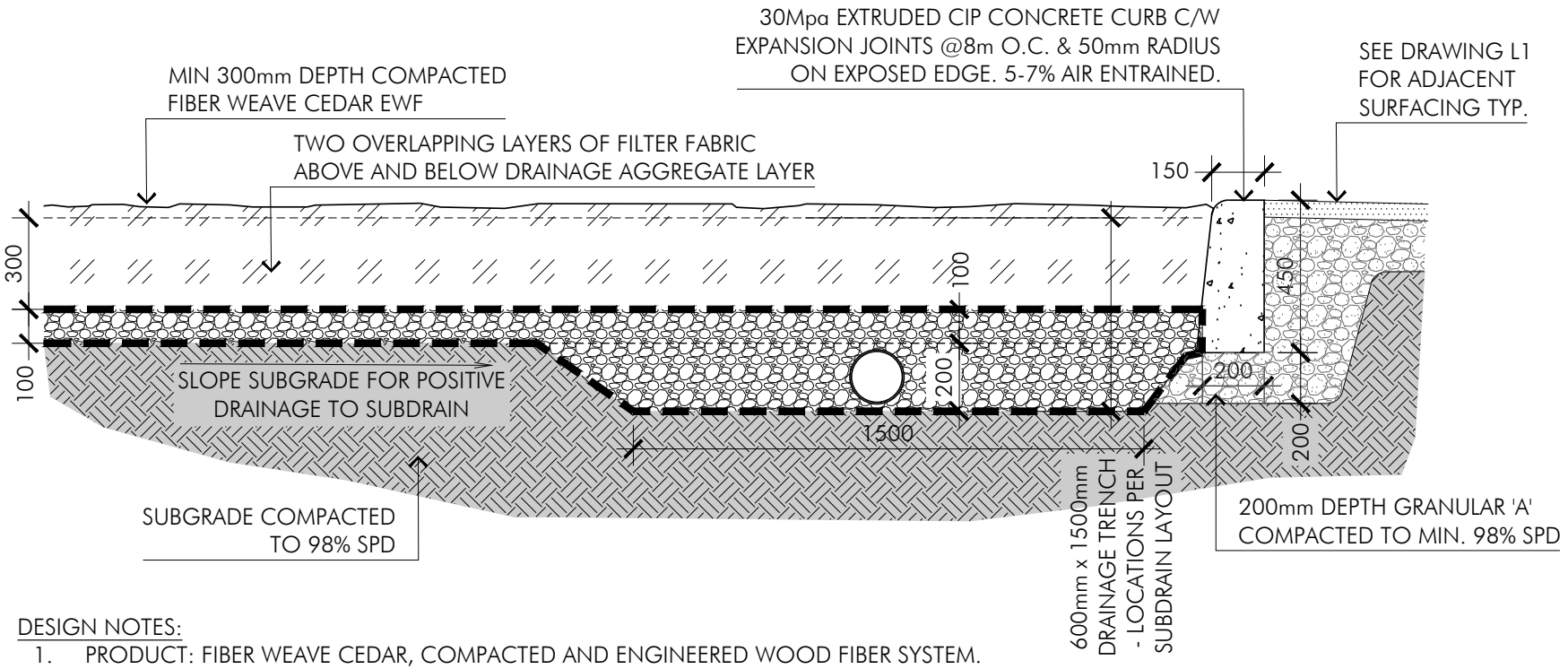
NON-FENCED OFF LEASH DESIGNATED AREAS:

- SITE NON-FENCED OFF LEASH AREAS AND TRAIL ACCESS POINTS A MINIMUM OF 30m BACK FROM ROADWAYS. WHERE INFEASIBLE, PROVIDE PARTIAL FENCING OF THE AREA ALONG ROADWAYS OR HAZARDS TO DETER ACCESS.
- NON-FENCED OFF LEASH AREAS ARE RECOMMENDED TO BE A MINIMUM OF 2 HECTARES IN SIZE.



PARKS & PLAYGROUNDS EXAMPLE DOG PARK LAYOUT	SCALE = 1:200
	LAST REVISED: SEPTEMBER 2024 FIGURE 3.4

TOWNSHIP OF MUSKOKA Lakes

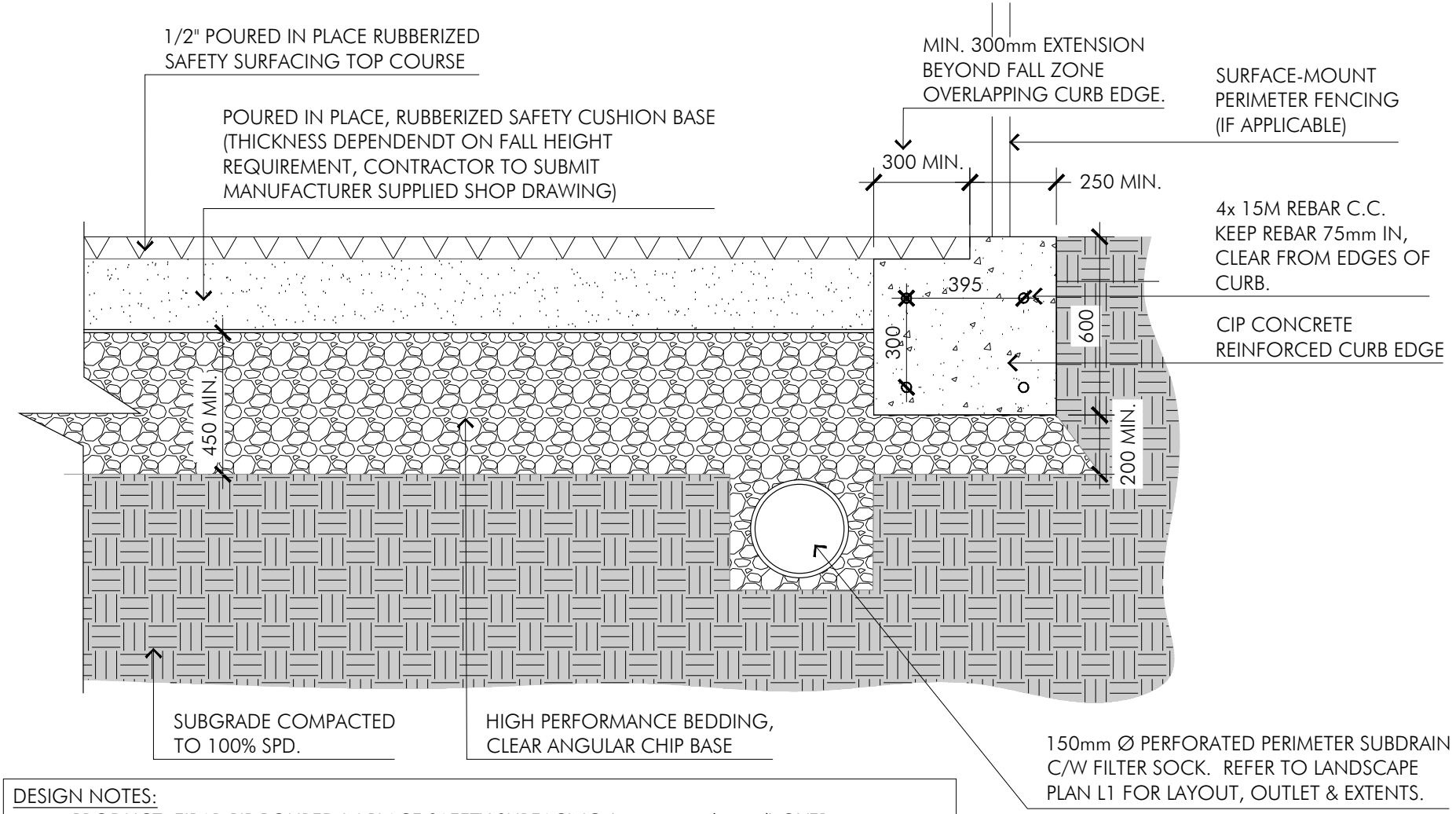


DESIGN NOTES:

1. PRODUCT: FIBER WEAVE CEDAR, COMPACTED AND ENGINEERED WOOD FIBER SYSTEM.
2. DETAIL IS 'TYPICAL' PROVIDED FOR PROJECT COSTING PURPOSES ONLY. SAFETY SURFACING DEPTH AND COMPOSITION TO BE DETERMINED BY MANUFACTURER TO MEET THE SITE-SPECIFIC FALL HEIGHT REQUIREMENTS.
3. BASE PROFILE SUITABILITY TO BE CONFIRMED BASED ON SITE SPECIFIC CONDITIONS.
4. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS, APPROVED SHOP DRAWINGS, AND IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS.
5. PROJECT CONSULTANT & CONTRACTOR TO VERIFY ALL SITE CONDITIONS.

ENGINEERED WOOD FIBER (EWF) SAFETY SURFACING & CIP CONCRETE CURB EDGE - TYPICAL DETAIL	SCALE = 1:20 METRIC
	LAST REVISED: SEPTEMBER 2024 FIGURE 3.5

TOWNSHIP OF MUSKOKA Lakes



DESIGN NOTES:

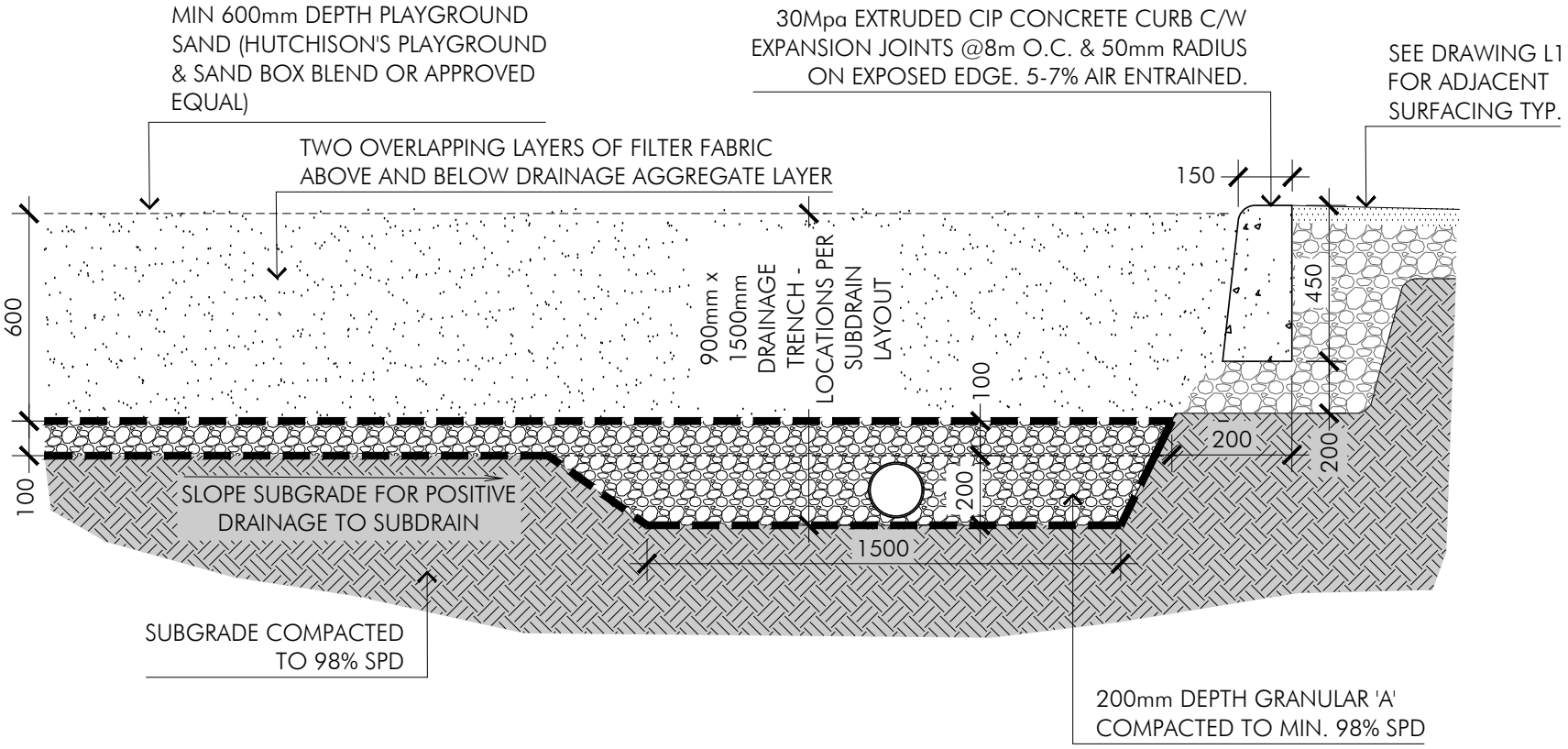
1. PRODUCT: FIBAR-PIP POURED IN PLACE SAFETY SURFACING (or approved equal) OVER AGGREGATE BASE WITH CONCRETE CURB EDGING.
2. DETAIL IS 'TYPICAL' PROVIDED FOR PROJECT COSTING PURPOSES ONLY. SAFETY SURFACING DEPTH AND COMPOSITION TO BE DETERMINED BY MANUFACTURER TO MEET THE SITE-SPECIFIC FALL HEIGHT REQUIREMENTS.
3. BASE PROFILE SUITABILITY TO BE CONFIRMED BASED ON SITE SPECIFIC CONDITIONS.
4. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS, APPROVED SHOP DRAWINGS, AND IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS.
5. PROJECT CONSULTANT & CONTRACTOR TO VERIFY ALL SITE CONDITIONS.

PLAYGROUNDS
POURED IN PLACE RUBBERIZED SAFETY SURFACING

SCALE = NOT TO SCALE

LAST REVISED: SEPTEMBER 2024 FIGURE 3.6

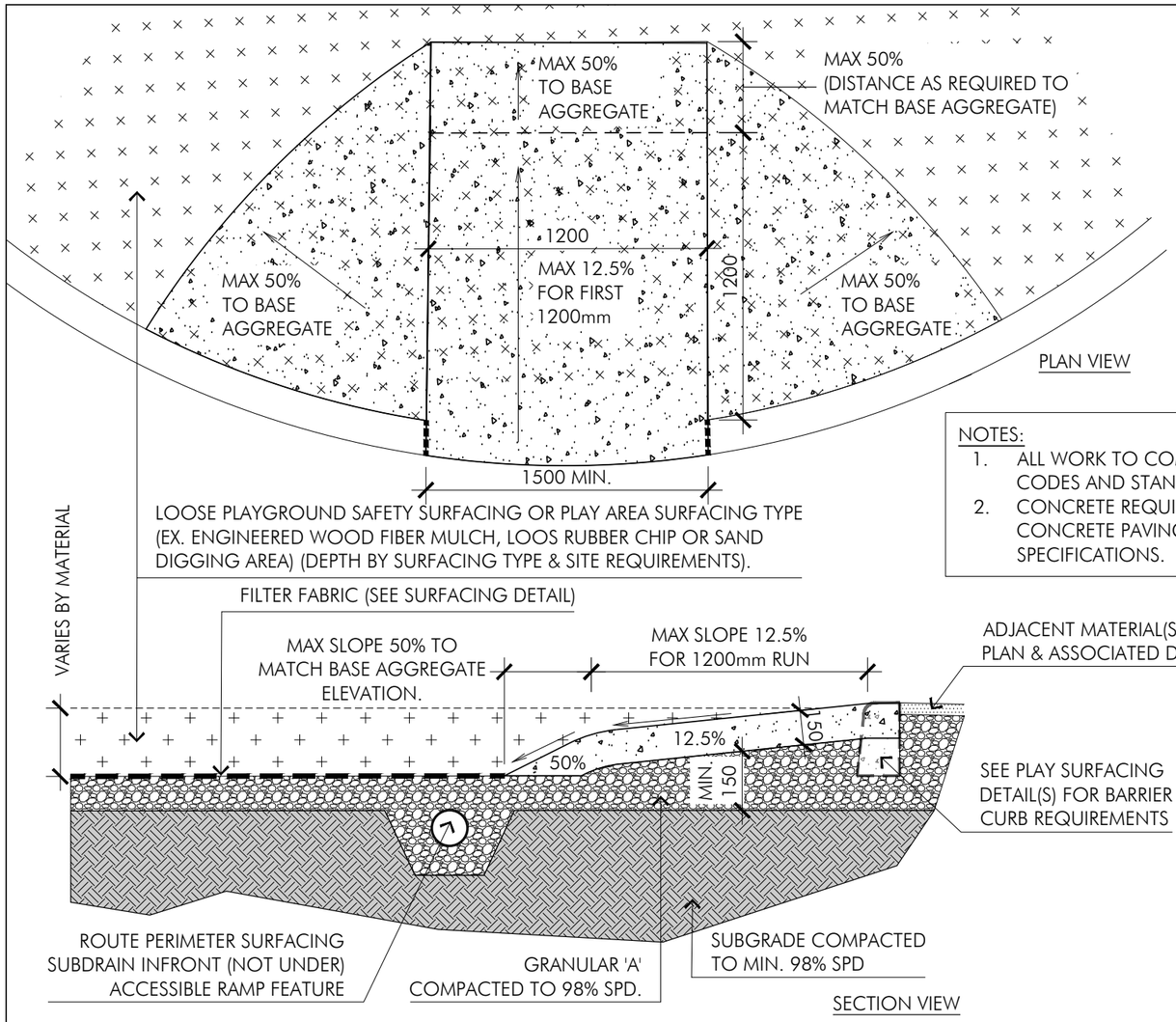
TOWNSHIP OF MUSKOKA Lakes



* NOTE: SAND DIGGING AREAS ARE NOT INTENDED FOR USE AS PLAYGROUND OR FALL ATTENUATION SAFETY SURFACING.

PLAYGROUNDS SAND DIGGING AREA	SCALE = 1:20 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 3.7

TOWNSHIP OF MUSKOKA Lakes



NOTES:

1. ALL WORK TO COMPLY WITH APPLICABLE CODES AND STANDARDS.
2. CONCRETE REQUIREMENTS PER CIP CONCRETE PAVING DETAILS AND SPECIFICATIONS.

PLAYGROUNDS
ACCESSIBLE RAMP INTO LOOSE TYPE PLAY SURFACING

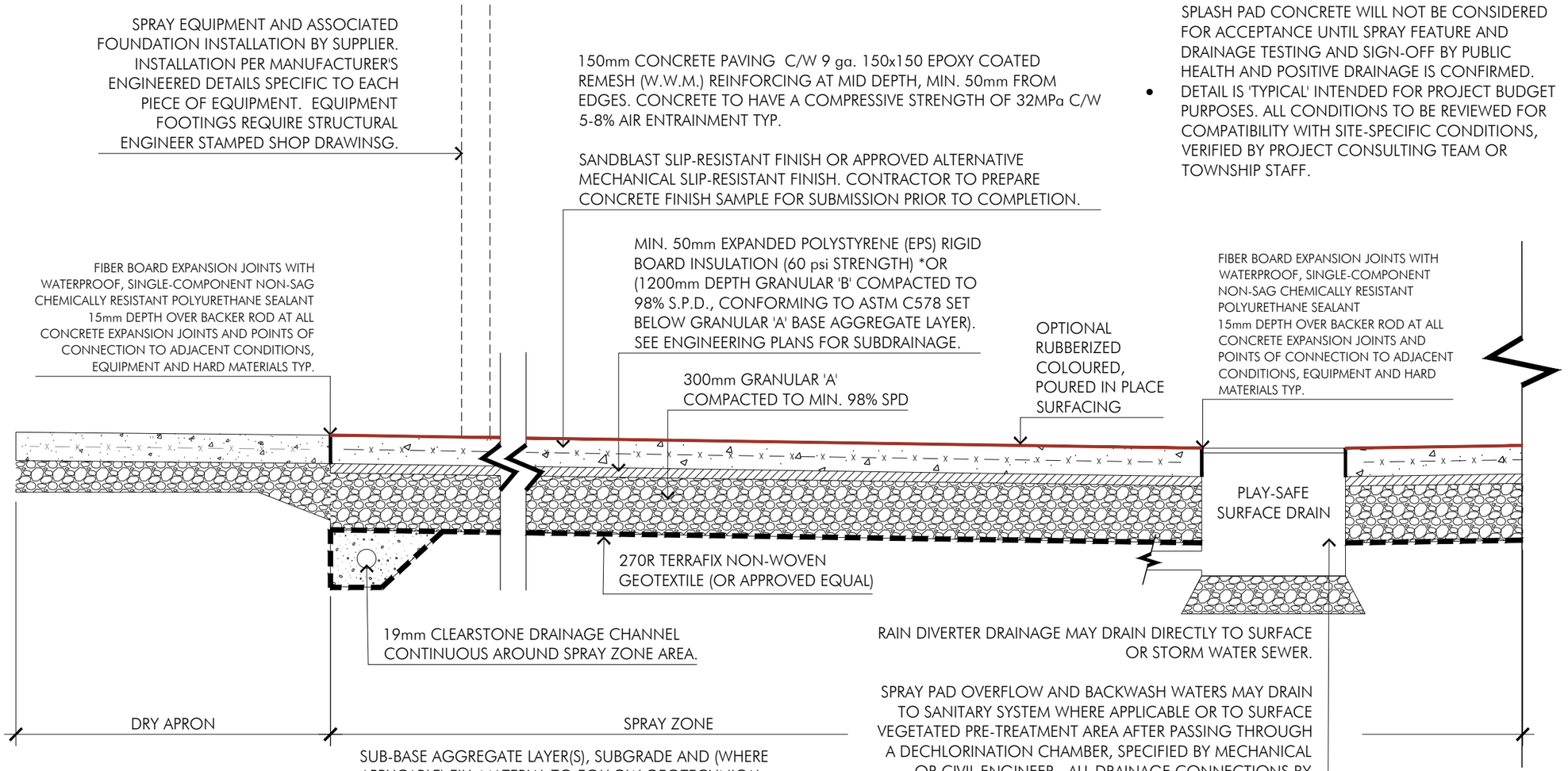
SCALE = 1:25

LAST REVISED: SEPTEMBER 2024 FIGURE 3.8

TOWNSHIP OF MUSKOKA Lakes

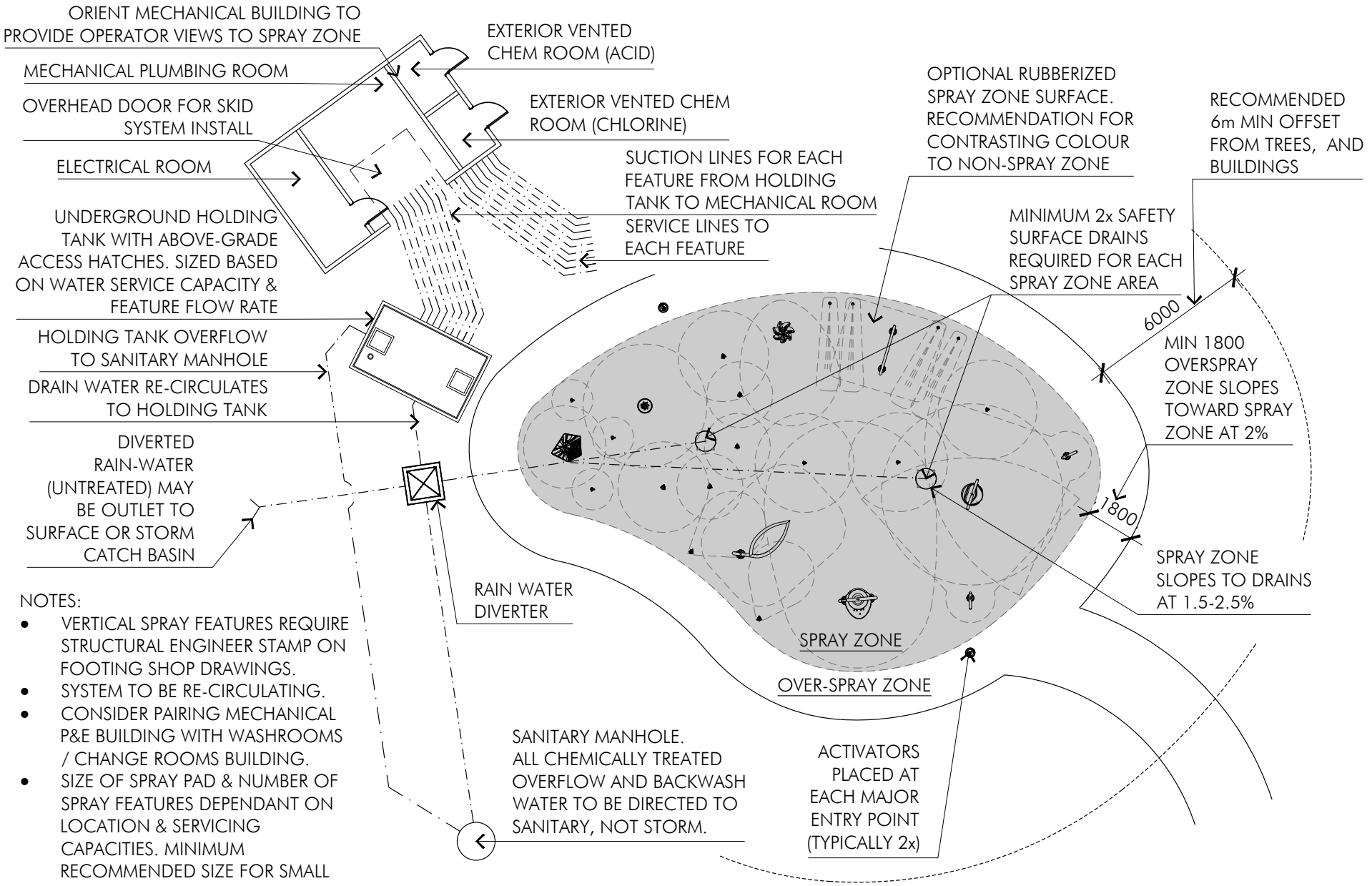
NOTES:

- SITE-SPECIFIC GRADING PLAN TO BE PREPARED FOR SPRAY PAD GRADING. NOTE THAT IN ACCORDANCE WITH ONTARIO PROVINCIAL HEALTH REGULATIONS AND GUIDELINES, NO AMOUNT OF PONDING OR PUDDLING WILL BE ACCEPTED. SPLASH PAD CONCRETE WILL NOT BE CONSIDERED FOR ACCEPTANCE UNTIL SPRAY FEATURE AND DRAINAGE TESTING AND SIGN-OFF BY PUBLIC HEALTH AND POSITIVE DRAINAGE IS CONFIRMED.
- DETAIL IS 'TYPICAL' INTENDED FOR PROJECT BUDGET PURPOSES. ALL CONDITIONS TO BE REVIEWED FOR COMPATIBILITY WITH SITE-SPECIFIC CONDITIONS, VERIFIED BY PROJECT CONSULTING TEAM OR TOWNSHIP STAFF.



SPRAY PADS SPRAY PAD SURFACING	SCALE = NOT TO SCALE LAST REVISED: SEPTEMBER 2024 FIGURE 4.1

TOWNSHIP OF MUSKOKA Lakes



NOTES:

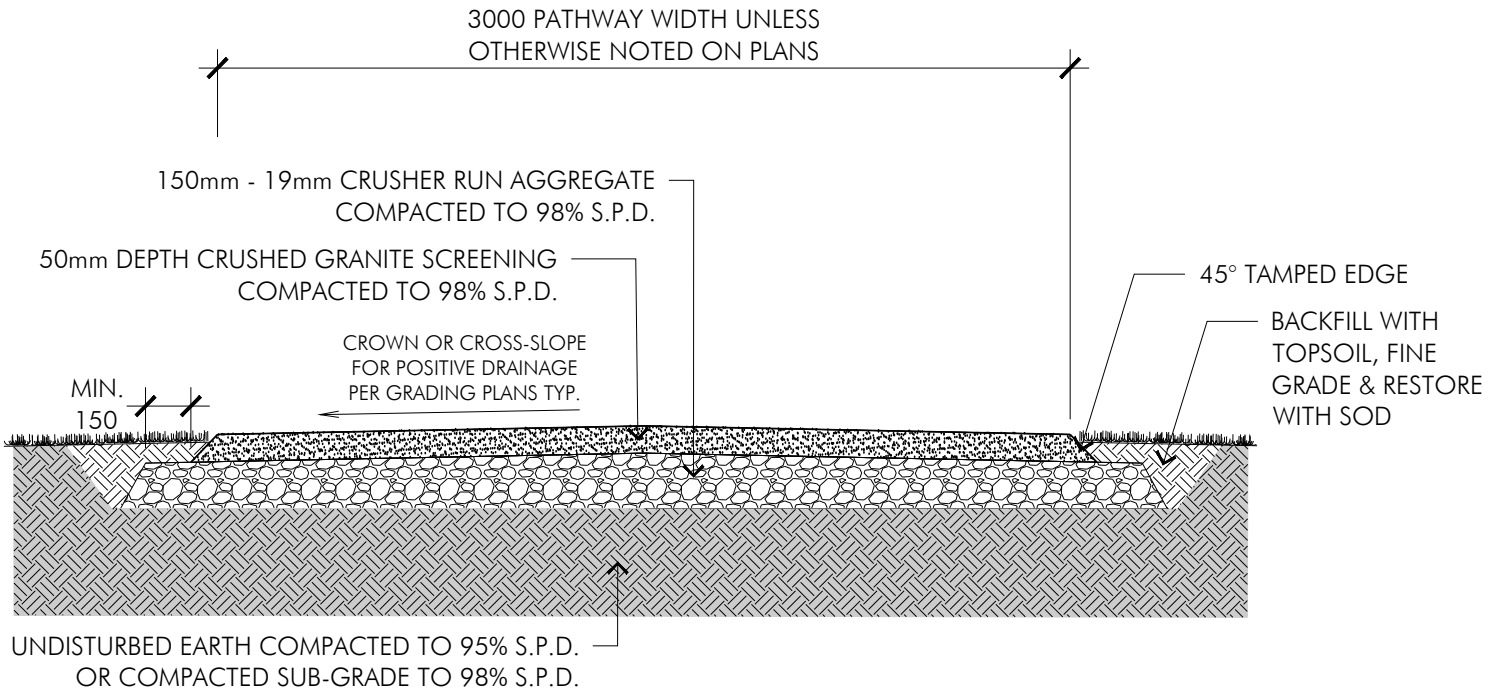
- VERTICAL SPRAY FEATURES REQUIRE STRUCTURAL ENGINEER STAMP ON FOOTING SHOP DRAWINGS.
- SYSTEM TO BE RE-CIRCULATING.
- CONSIDER PAIRING MECHANICAL P&E BUILDING WITH WASHROOMS / CHANGE ROOMS BUILDING.
- SIZE OF SPRAY PAD & NUMBER OF SPRAY FEATURES DEPENDANT ON LOCATION & SERVICING CAPACITIES. MINIMUM RECOMMENDED SIZE FOR SMALL SPRAY PAD: 3x VERTICAL FEATURE SPRAYERS, 6x GROUND SPRAYERS.

SPRAY PADS
SPRAY PAD (CONCEPTUAL/SCHEMATIC) LAYOUT

SCALE = 1:200

LAST REVISED: SEPTEMBER 2024 FIGURE 4.2

TOWNSHIP OF MUSKOKA Lakes

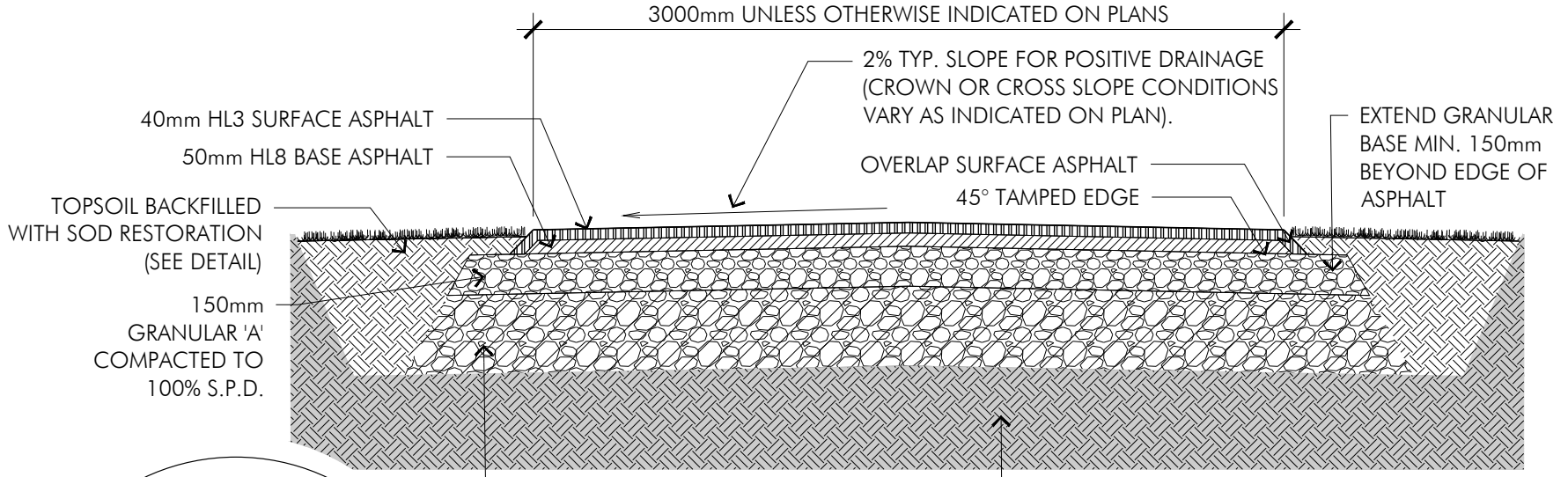


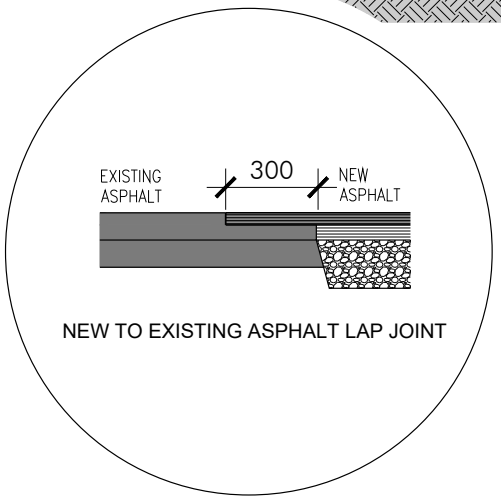
GENERAL NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. ENSURE A CLEAN, FLUSH TRANSITION BETWEEN ADJACENT PAVING & SURFACING.
3. ENSURE THAT PATHWAY GRADES AND CROSS SLOPE PROVIDE POSITIVE DRAINAGE AND ADHERE TO GRADING PLAN (WHERE APPLICABLE).
4. TOP OF LIMESTONE SCREENING EDGES TO BE SET 25mm ABOVE ADJACENT FINISHED GRADE FOR POSITIVE DRAINAGE AWAY FROM PATHWAY.
5. ALL TOWNSHIP STANDARD PAVING AND SURFACING DETAILS ARE 'TYPICAL' AND PROVIDED FOR PROJECT BUDGET PURPOSES. SUITABILITY FOR SITE-SPECIFIC CONDITIONS TO BE VERIFIED BY PROJECT CONSULTING TEAM OR TOWNSHIP STAFF.

TRAILS AGGREGATE SCREENING SURFACED TRAILS	SCALE = 1:25
	LAST REVISED: SEPTEMBER 2024

TOWNSHIP OF MUSKOKA Lakes





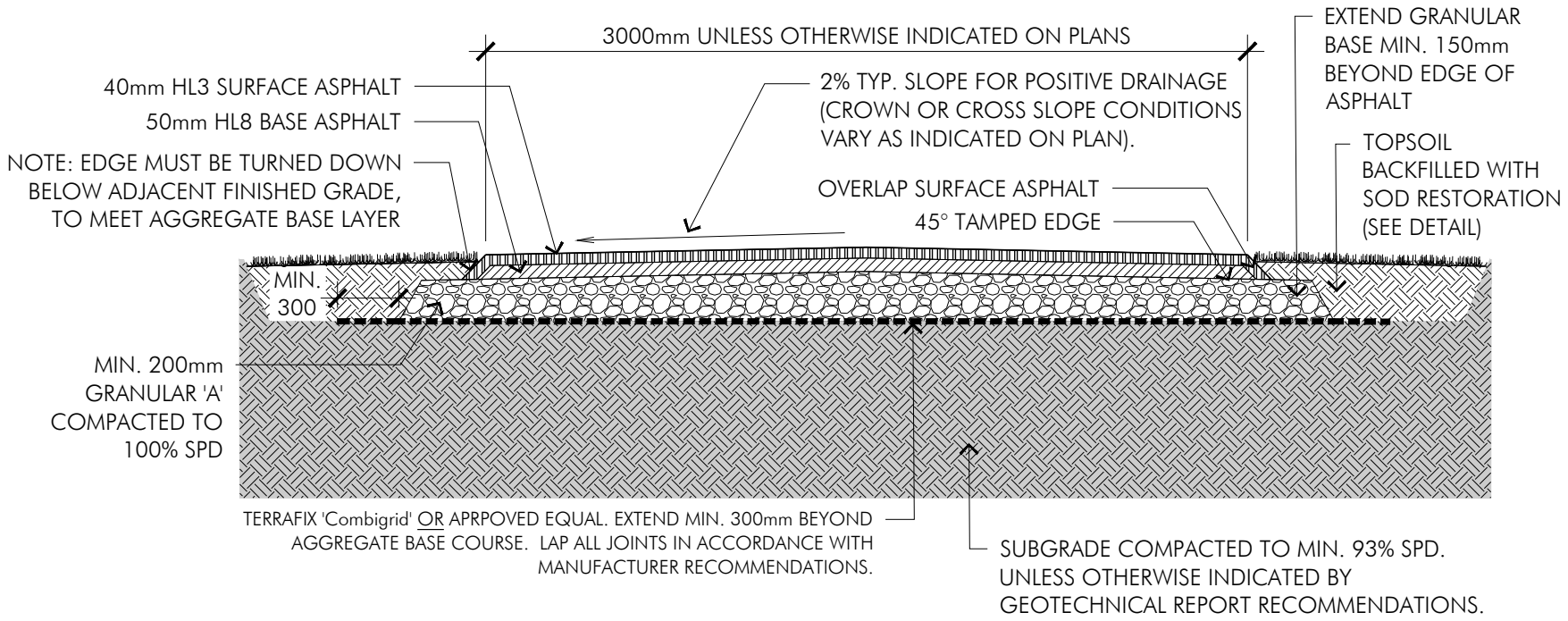
NEW TO EXISTING ASPHALT LAP JOINT

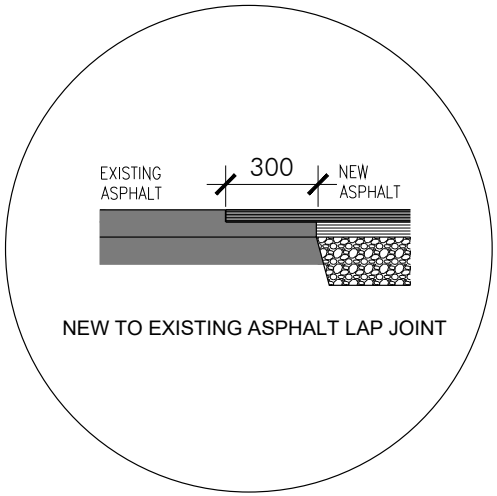
GENERAL NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. CONTRACTOR TO EXCAVATE AND REMOVE/STOCKPILE ALL ORGANIC MATERIAL TO SUITABLE BASE MATERIAL OR AS OUTLINED IN GEOTECHNICAL REPORT. ADDITIONAL DEPTHS BEYOND REQUIRED PROFILE FOR WALKWAY TO BE COMPRISED OF ADDITIONAL DEPTH TO THE GRANULAR 'B' SUB-AGGREGATE BASE LAYER, INSTALLED IN MAX. 200mm DEPTH LIFTS WITH EACH LIFT COMPACTED TO 100% S.P.D.
3. ASPHALT TO CONFORM TO OPSS.MUNI.1150 AND TO BE COMPACTED TO A MINIMUM OF 92.0% OF THE MAXIMUM RELATIVE DENSITY (MRD) AS PER OPSS.MUNI.310 REQUIREMENTS.
4. ASPHALT TO BE SMOOTH AND EVEN THROUGHOUT
5. ALL JOINTS TO BE STRAIGHT, CLEAN, VERTICAL AND FREE OF BROKEN OR LOOSE MATERIAL
6. ENSURE A CLEAN, FLUSH TRANSITION BETWEEN ASPHALT PAVING AND ADJACENT MATERIALS.
7. PROVIDE 300mm LAP JOINT WHERE NEW ASPHALT MEETS EXISTING ASPHALT.
8. ALL THICKNESS' REFER TO COMPACTED THICKNESS.
5. ALL TOWNSHIP STANDARD PAVING AND SURFACING DETAILS ARE 'TYPICAL' AND PROVIDED FOR PROJECT BUDGET PURPOSES. SUITABILITY FOR SITE-SPECIFIC CONDITIONS TO BE VERIFIED BY PROJECT CONSULTING TEAM OR TOWNSHIP STAFF.

PAVING ASPHALT PATHWAYS AND RECREATIONAL TRAILS	SCALE = 1:25	
	LAST REVISED: SEPTEMBER 2024	FIGURE 5.2

TOWNSHIP OF MUSKOKA Lakes





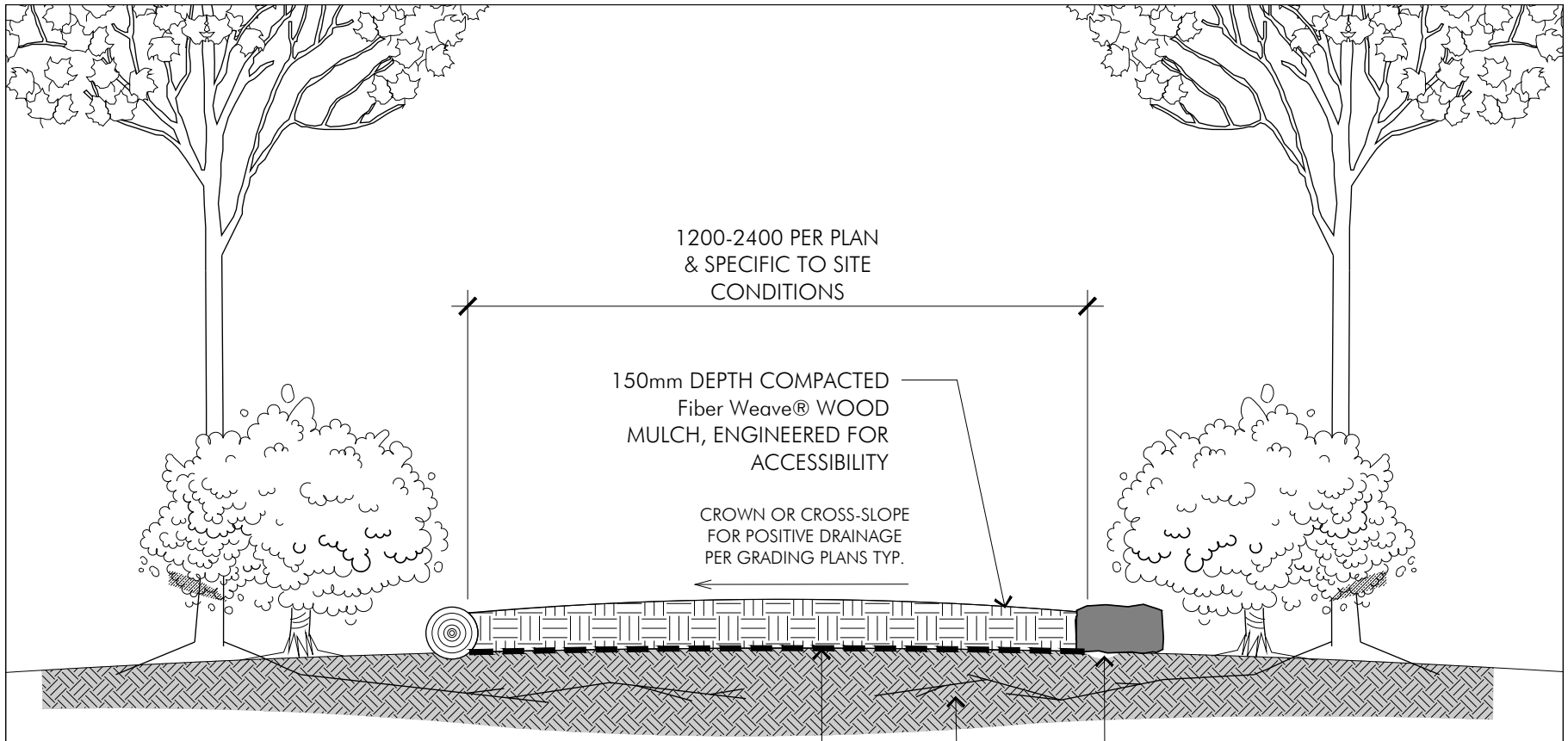
NEW TO EXISTING ASPHALT LAP JOINT

GENERAL NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. CONTRACTOR TO EXCAVATE AND REMOVE/STOCKPILE ALL ORGANIC MATERIAL TO SUITABLE BASE MATERIAL OR AS OUTLINED IN GEOTECHNICAL REPORT. ADDITIONAL DEPTHS BEYOND REQUIRED PROFILE FOR WALKWAY TO BE COMPRISED OF ADDITIONAL DEPTH TO THE GRANULAR 'B' SUB-AGGREGATE BASE LAYER, INSTALLED IN MAX. 200mm DEPTH LIFTS WITH EACH LIFT COMPACTED TO 100% S.P.D.
3. ASPHALT TO CONFORM TO OPSS.MUNI.1150 AND TO BE COMPACTED TO A MINIMUM OF 92.0% OF THE MAXIMUM RELATIVE DENSITY (MRD) AS PER OPSS.MUNI.310 REQUIREMENTS.
4. ASPHALT TO BE SMOOTH AND EVEN THROUGHOUT
5. ALL JOINTS TO BE STRAIGHT, CLEAN, VERTICAL AND FREE OF BROKEN OR LOOSE MATERIAL
6. ENSURE A CLEAN, FLUSH TRANSITION BETWEEN ASPHALT PAVING AND ADJACENT MATERIALS.
7. PROVIDE 300mm LAP JOINT WHERE NEW ASPHALT MEETS EXISTING ASPHALT.
8. ALL THICKNESS' REFER TO COMPACTED THICKNESS.
5. ALL TOWNSHIP STANDARD PAVING AND SURFACING DETAILS ARE 'TYPICAL' AND PROVIDED FOR PROJECT BUDGET PURPOSES. SUITABILITY FOR SITE-SPECIFIC CONDITIONS TO BE VERIFIED BY PROJECT CONSULTING TEAM OR TOWNSHIP STAFF.

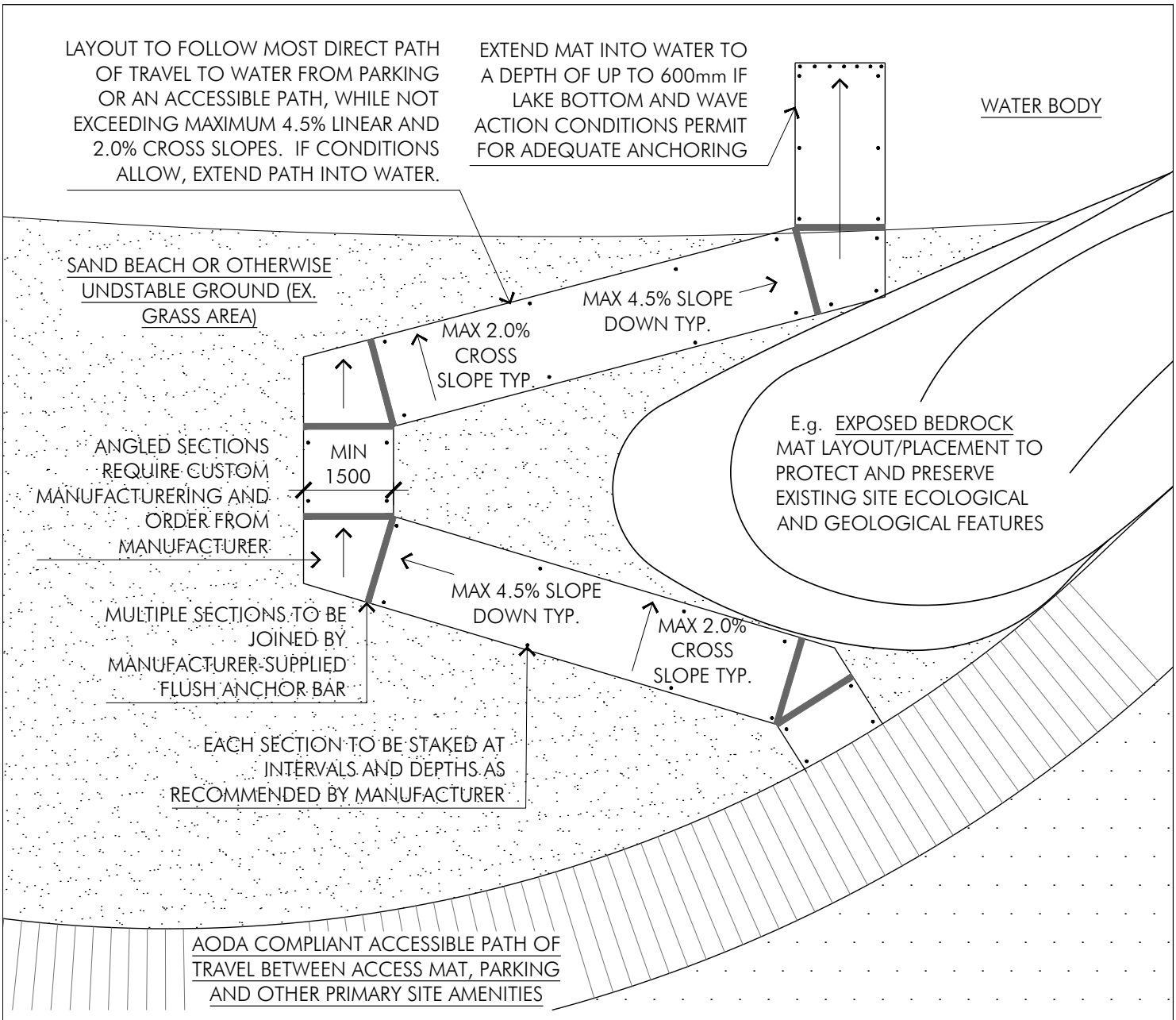
PAVING ASPHALT PATHWAYS AND RECREATIONAL TRAILS IN FLOOD-PRONE AREAS	SCALE = 1:25	
	LAST REVISED: SEPTEMBER 2024	FIGURE 5.3

TOWNSHIP OF MUSKOKA Lakes



TRAILS MULCH TRAIL SURFACING FOR ECOLOGICALLY SENSITIVE AREAS	SCALE = 1:25	
	LAST REVISED: SEPTEMBER 2024	FIGURE 5.4

TOWNSHIP OF MUSKOKA Lakes

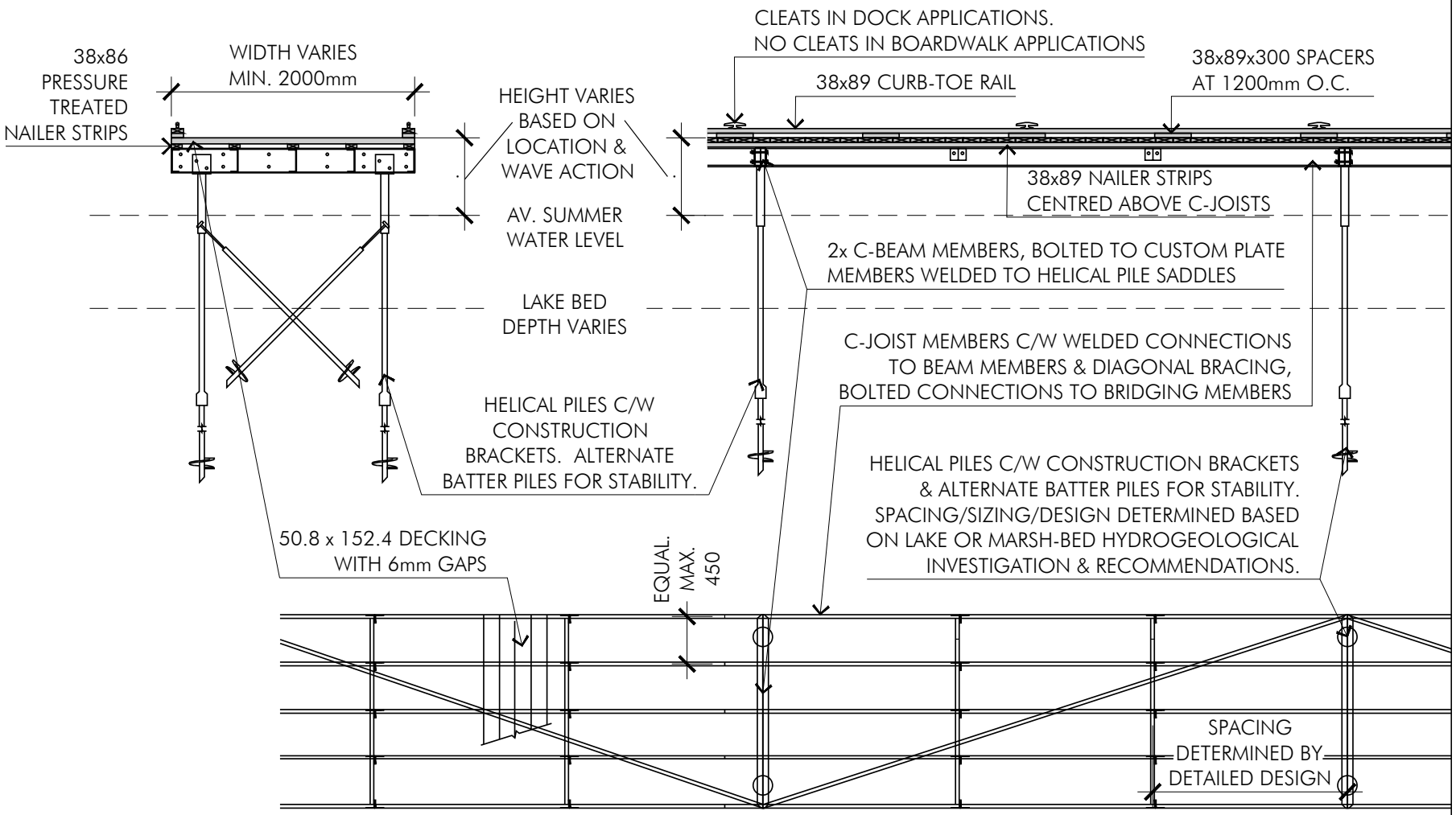


NOTES:

BEACH ACCESS MATS MAY BE COMPRISED OF FLEXIBLE WOVEN ROLL-TYPE MATERIAL OR RIGID FOLDABLE PANELS. SECTIONS MUST LINK TOGETHER AND HAVE A SUITABLE SYSTEM TO AFFIX THE MATS IN PLACE. PRODUCT MUST BE PURPOSE-MADE FOR AODA COMPLIANT BEACH ACCESS, UV STABLE, NON-SLIP, AND SUITABLE FOR PROLONGED SEASONAL OUTDOOR USE.

ACCESSIBILITY SEASONAL BEACH ACCESS MAT	SCALE = 1:100 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 5.5

TOWNSHIP OF MUSKOKA Lakes

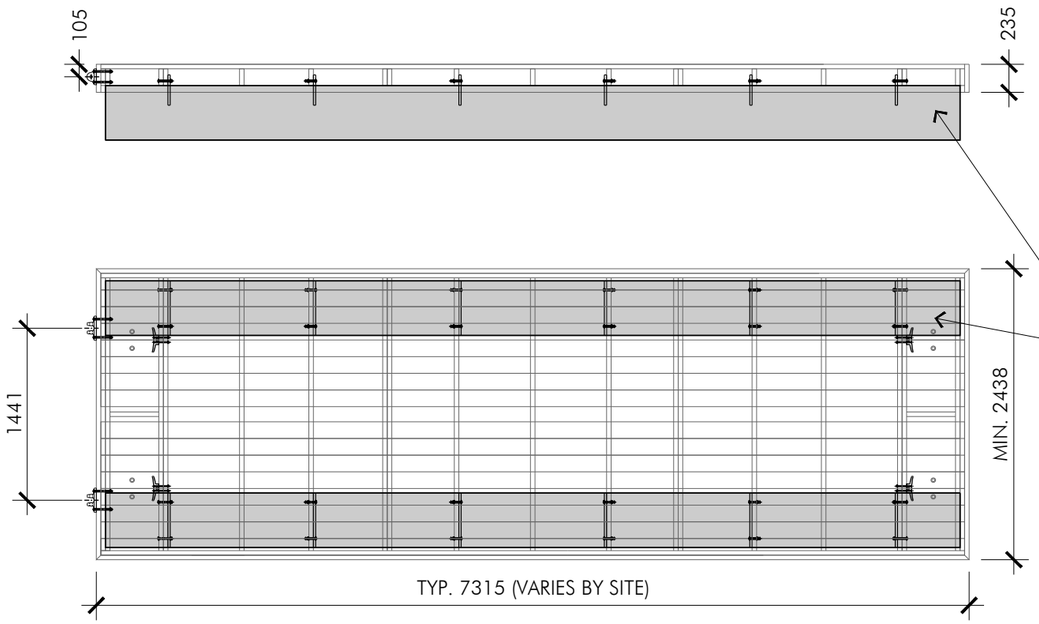


DESIGN NOTES:

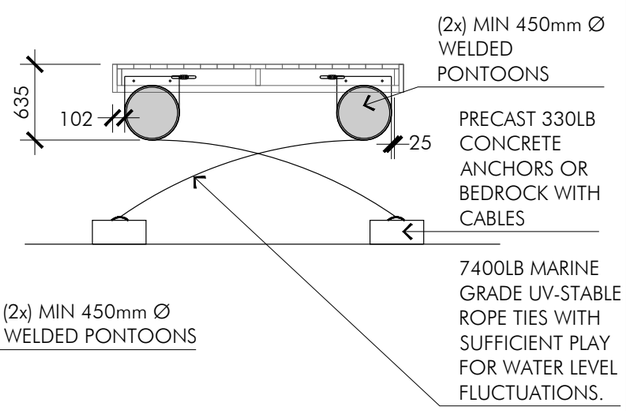
1. NOT FOR CONSTRUCTION. DETAIL PROVIDES A BASIS FOR DESIGN ONLY. DETAILED CONSTRUCTION DRAWINGS TO BE PREPARED AND STAMPED BY TWO STRUCTURAL ENGINEERS ON A PROJECT-SPECIFIC BASIS.
2. ALL STEEL MEMBERS TO BE HOT-DIP-GALVANIZED. TOUCH UP ANY FIELD-WELDED CONNECTIONS WITH ZINC COATING.
3. ALL WOOD MEMBERS TO BE EASTERN WHITE CEDAR OR APPROVED ALTERNATIVE UNLESS OTHERWISE NOTED.
4. HELICAL PILES TO BE DESIGNED FOR SUPPORT OF BOARDWALK OR DOCK + LIVE LOADS. PROVIDE BATTER PILES FOR LATERAL STABILITY.

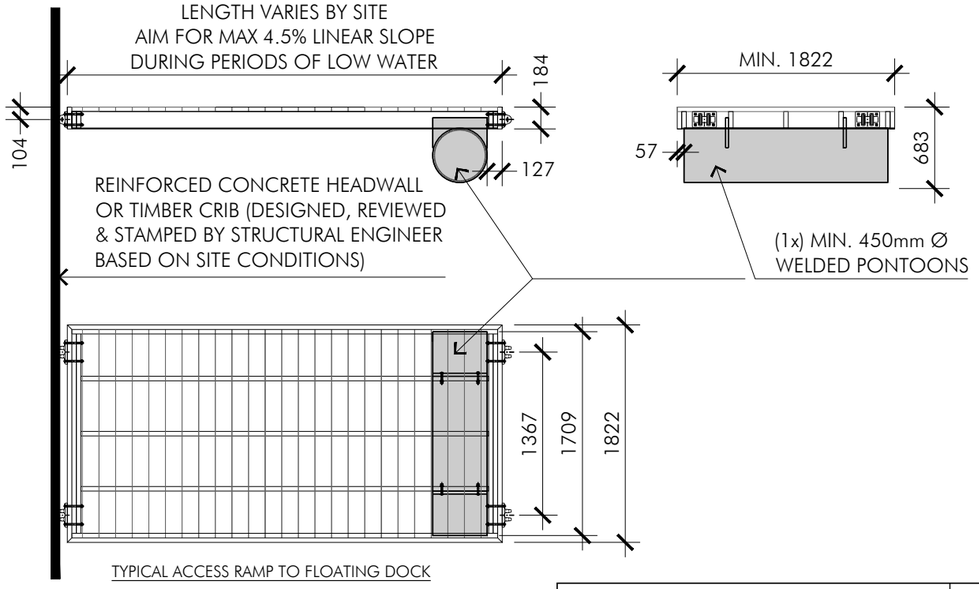
WATERFRONT TYPICAL BOARDWALK OR DOCK ON HELICAL PILES	SCALE = 1:25
	LAST REVISED: SEPTEMBER 2024 FIGURE 5.6

TOWNSHIP OF MUSKOKA Lakes



TYPICAL FLOATING DOCK





TYPICAL ACCESS RAMP TO FLOATING DOCK

DECKING: 2x6"
FASCIA: 2x10" ON DOCKS, 2x8 ON RAMPS.
FRAMING MEMBERS: 2x8" UNLESS OTHERWISE APPROVED.
CLEATS: 7" FLIP-UP CAST ALUMINUM, POWDER COATED
BRACKETS: FULLY WELDED $\frac{3}{4}$" THICK, 50" MIN WELD
PONTOONS: HDPE 450mm"Ø MIN. MIN. 12.7mm THICK
MIN. MIN 19mm THICK FUSION-WELDED END PLATES.
ATTACHED TO FRAMING WITH 19mm HDG CARRIAGE
BOLTS.

ALL FASTENERS TO BE STAINLESS STEEL, HOT DIP GALVANIZED OR OTHERWISE TREATED FOR USE WITH PRESSURE TREATED WOOD.

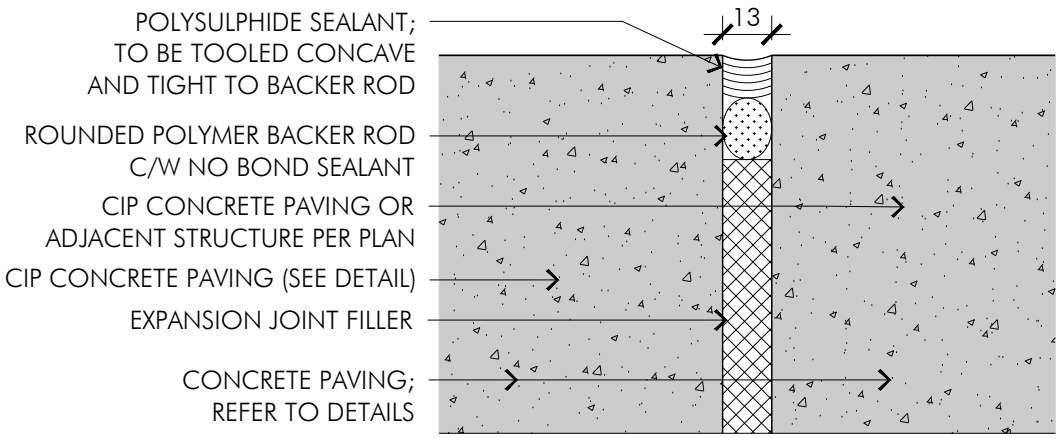
ENGINEER STAMPED SHOP DRAWING DETAILS ARE REQUIRED, INCLUDING FASTENERS SCHEDULE AND SHORE ANCHORING SYSTEM.

CUSTOMIZABLE DOCK SYSTEMS AVAILABLE FROM PIPEFUSION OR NYDOCK, OR EQUAL

PONTOONS TO HAVE MINIMUM 25 -YEAR WARRANTY ON PARTS AND LABOUR AGAINST LEAKS. FOAM FILLING (incl. ENCAPSULATED) IN FLOATS IS NOT PERMITTED.

TRAILS AND PATHWAYS FLOATING DOCK	SCALE = NOT TO SCALE
	LAST REVISED: SEPTEMBER 2024 FIGURE 5.7

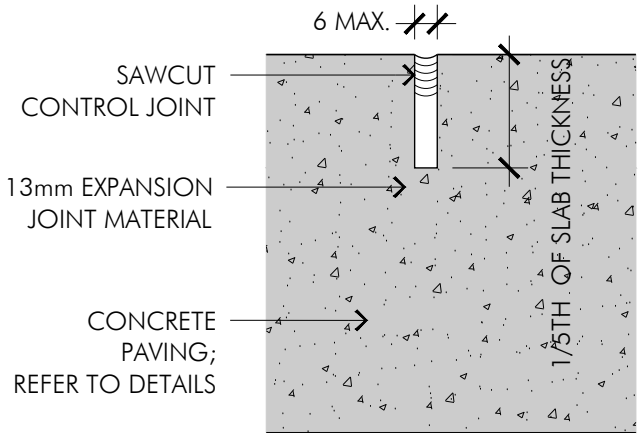
TOWNSHIP OF MUSKOKA Lakes



GENERAL NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. EXPANSION JOINTS TO BE PROVIDED AT ALL STRUCTURES.
3. JOINT SPACING TO BE AT 3000mm O.C. MAX. UNLESS OTHERWISE NOTED ON PLANS.

CIP CONCRETE EXPANSION JOINTS
SCALE = 1:2



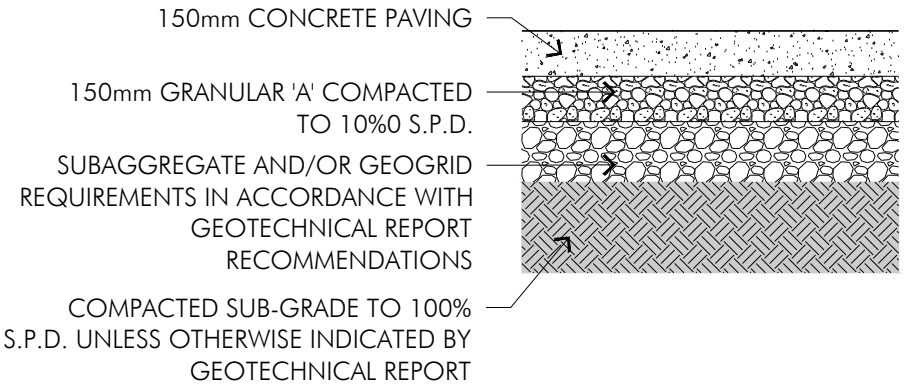
GENERAL NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. JOINT SPACING TO BE AT 1800mm O.C. MAX. UNLESS OTHERWISE NOTED ON PLANS.

CIP CONCRETE CONTROL JOINTS
SCALE = 1:2

GENERAL NOTES:

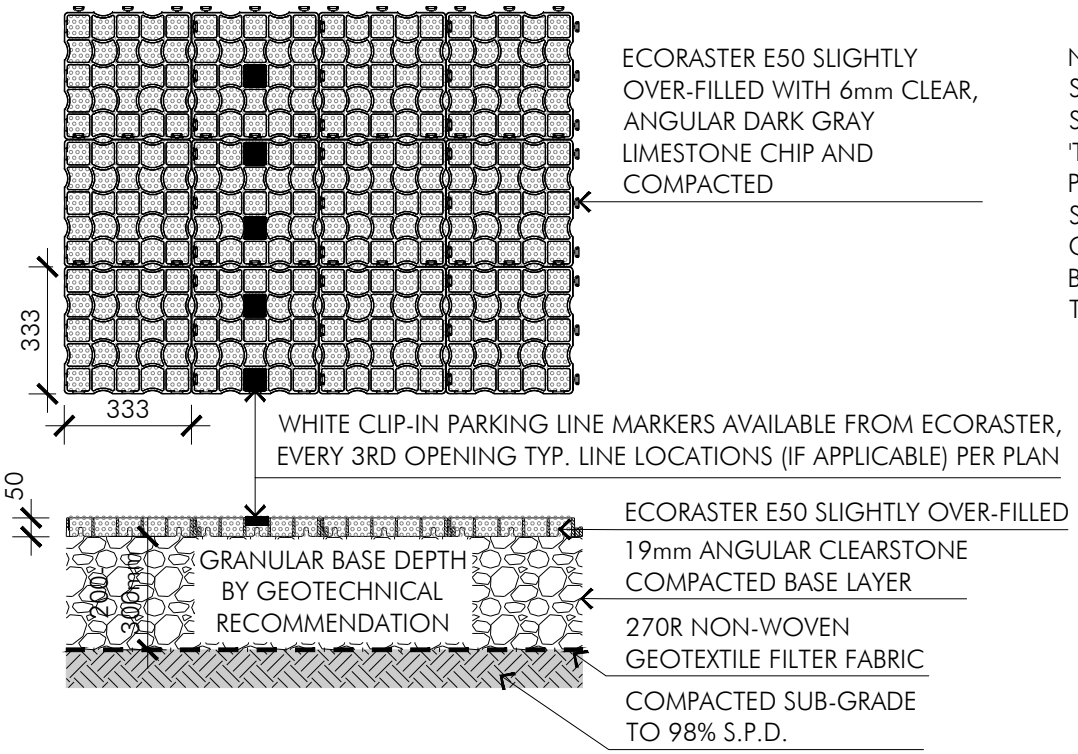
1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. ENSURE A CLEAN, FLUSH TRANSITION BETWEEN CONCRETE PAVING AND ADJACENT MATERIALS.
3. ALL EXPOSED SURFACES OF CONCRETE TO BE BRUSHED FINISH, RUNNING PERPENDICULAR TO DIRECTION OF PEDESTRIAN FLOW UNLESS OTHERWISE NOTED IN SPECIFICATIONS.
4. ALL CONCRETE TO HAVE A COMPRESSIVE STRENGTH OF 32MPa C/W 5-8% AIR ENTRAINMENT.
5. ALL TOWNSHIP STANDARD PAVING AND SURFACING DETAILS ARE 'TYPICAL' AND PROVIDED FOR PROJECT BUDGET PURPOSES. SUITABILITY FOR SITE-SPECIFIC CONDITIONS TO BE VERIFIED BY PROJECT CONSULTING TEAM OR TOWNSHIP STAFF.



CIP CONCRETE
PEDESTRIAN PAVING
SCALE = 1:25

PAVING CONCRETE PEDESTRIAN PAVING	SCALE = AS SHOWN
	LAST REVISED: SEPTEMBER 2024 FIGURE 6.1

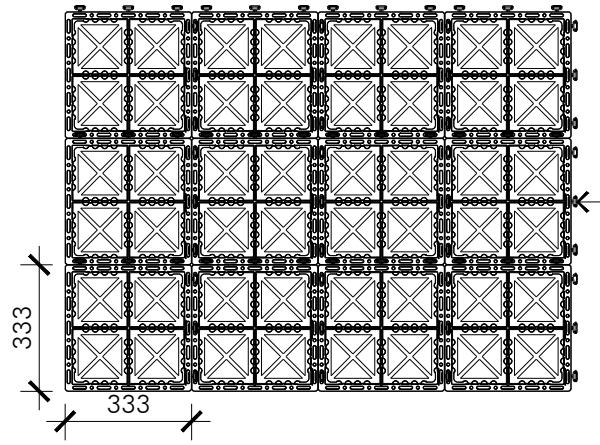
TOWNSHIP OF MUSKOKA Lakes



NOTE: ALL TOWNSHIP STANDARD PAVING AND SURFACING DETAILS ARE 'TYPICAL' AND PROVIDED FOR PROJECT BUDGET PURPOSES. SUITABILITY FOR SITE-SPECIFIC CONDITIONS TO BE VERIFIED BY PROJECT CONSULTING TEAM OR TOWNSHIP STAFF.

PAVING ECORASTER PERMEABLE PAVING	SCALE = 1:20 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 6.2

TOWNSHIP OF MUSKOKA Lakes



ECORASTER BLOXX:EACH FILLED WITH 4x CONCRETE PAVING STONES, (NOT SHOWN) AND TAMPED FLUSH

NOTE: SEE PLAN FOR BLOXX COLOUR LAYOUT WITHIN ACCESSIBILITY SPACES

NOTE: ALL TOWNSHIP STANDARD PAVING AND SURFACING DETAILS ARE 'TYPICAL' AND PROVIDED FOR PROJECT BUDGET PURPOSES. SUITABILITY FOR SITE-SPECIFIC CONDITIONS TO BE VERIFIED BY PROJECT CONSULTING TEAM OR TOWNSHIP STAFF.

ECORASTER BLOXX
WITH CONCRETE PAVING STONES

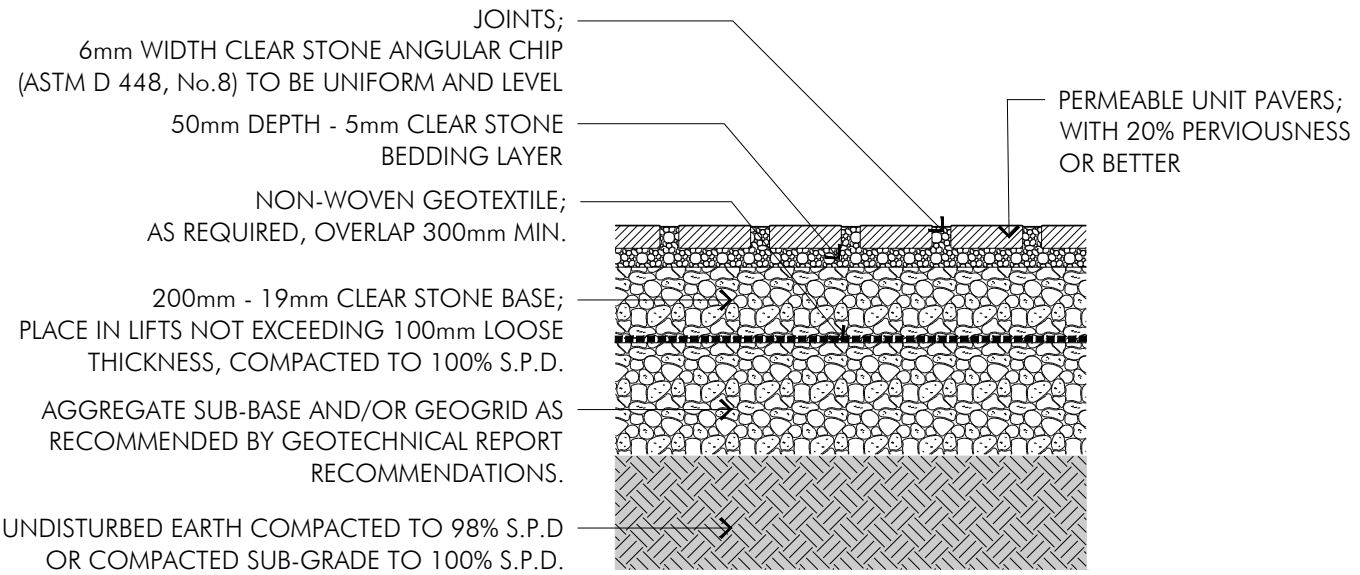
19mm ANGULAR CLEARSTONE
COMPACTED BASE LAYER

270R NON-WOVEN
GEOTEXTILE FILTER FABRIC

COMPACTED SUB-GRADE
TO 98% S.P.D.

PAVING ECOBLOXX PERMEABLE PAVING	SCALE = 1:20 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 6.3

TOWNSHIP OF MUSKOKA Lakes

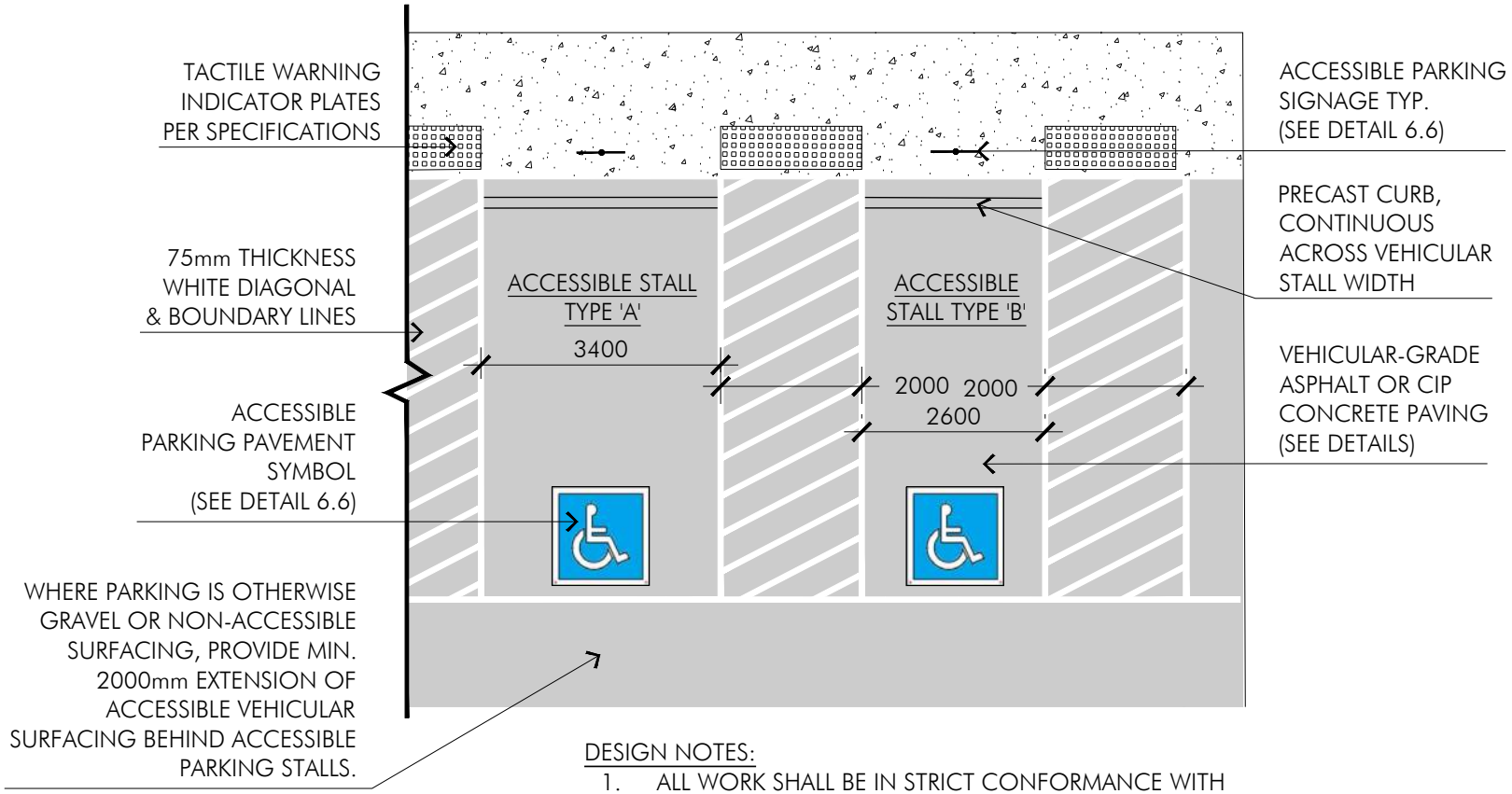


GENERAL NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. ALL TOWNSHIP STANDARD PAVING AND SURFACING DETAILS ARE 'TYPICAL' AND PROVIDED FOR PROJECT BUDGET PURPOSES. SUITABILITY FOR SITE-SPECIFIC CONDITIONS TO BE VERIFIED BY PROJECT CONSULTING TEAM OR TOWNSHIP STAFF.
3. ENSURE A CLEAN, FLUSH TRANSITION BETWEEN ADJACENT PAVING.
4. REFER TO LAYOUT PLAN FOR PAVING PATTERN.
5. GRANULAR:
   - 5.1. CLEAR STONE BASE: OPEN GRADED, ANGULAR GRANULAR MATERIAL MEETING ASTM C33 REQUIREMENTS FOR NO. 57 GRANULAR BASE OR OF OPEN GRADED DRAINAGE LAYER - OGDL (AGGREGATE ONLY) IN ACCORDANCE WITH OPSS 320 GRADATION REQUIREMENTS. PLACE IN LIFTS NOT EXCEEDING 100mm LOOSE THICKNESS. COMPACT TO 100% S.P.D.
   - 5.2. CLEAR STONE BEDDING LAYER & JOINTS: CLEAR, ANGULAR, 6mm NOMINAL CHIP STONE BEDDING MATERIAL IN ACCORDANCE WITH ASTM C 33 REQUIREMENTS FOR NO. 8 CHIP (OR EQUIVALENT GRANULAR BEDDING MATERIAL OR AS OTHERWISE RECOMMENDED BY PAVER MANUFACTURER).

PAVING PERMEABLE UNIT PAVERS	SCALE = 1:20 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 6.4

TOWNSHIP OF MUSKOKA Lakes



DESIGN NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. PARKING TYPE 'A' AND 'B' QUANTITY MINIMUMS PER PARKS AND TRAILS DEVELOPMENT MANUAL AND AODA REQUIREMENTS.
3. NOTE: BEST PRACTICE IS TO HAVE CLEAR AISLES PROVIDED ON BOTH SIDES OF ACCESSIBLE SPACES. A MINIMUM OF ONE AISLE IS REQUIRED FOR EACH PARKING STALL.

ACCESSIBLE PARKING STALL LAYOUTS AT PARKS AND TRAILS FACILITIES	SCALE = 1:100
	LAST REVISED: SEPTEMBER 2024 FIGURE 6.5

TOWNSHIP OF MUSKOKA Lakes

NOTE: RB-93 ACCESSIBLE PARKING SIGN, VAN ACCESSIBLE & MAXIMUM FINE SIGNS AVAILABLE FROM STINSON.CA OR APPROVED EQUAL.

BLACK 'P' SYMBOL & OUTLINES

15 RED REFLECTIVE INTERDICTORY STROKE & 20 ANNULAR BAND

WHITE REFLECTIVE SYMBOL, OUTLINE & BACKGROUND

BLUE REFLECTIVE BACKGROUND AND OUTLINE

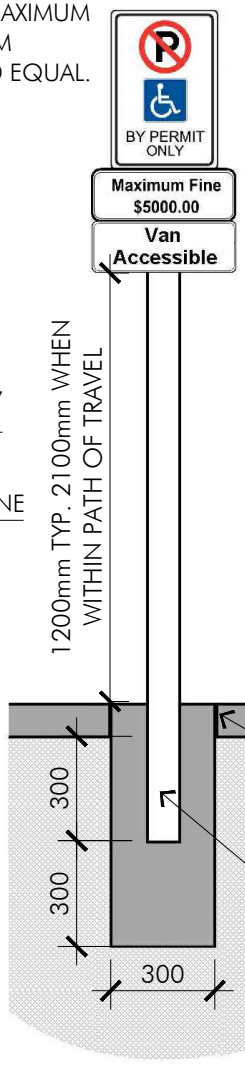
MIN. 30mm HEIGHT BLACK LETTERING

MAIN SIGN TYPE 'A' AND 'B' SPACES

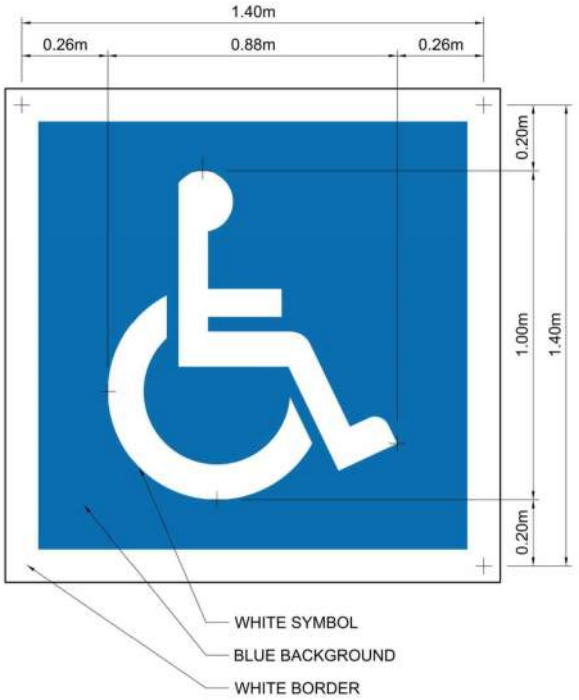
MIN. 30mm HEIGHT BLACK LETTERING & BLACK OUTLINES

'VAN ACCESSIBLE' SIGN TYPE 'A' SPACES ONLY

'MAXIMUM FINE' SIGN TYPE 'A' AND 'B' SPACES



ACCESSIBLE PARKING STALL SIGN POST



PARKING STALL PAVEMENT MARKING

EXPANSION JOINT SURROUNDING FOOTING

POST: 100mm x 100mm PRESSURE TREATED WOOD OR 75mm GALVANIZED STANDARD STEEL PIPE POST TO BE CAST IN PLACE IN 300mm Ø CONCRETE FOOTING. TOP OF FOOTING TO BE FLUSH WITH SURROUNDING FINISHED GRADE.

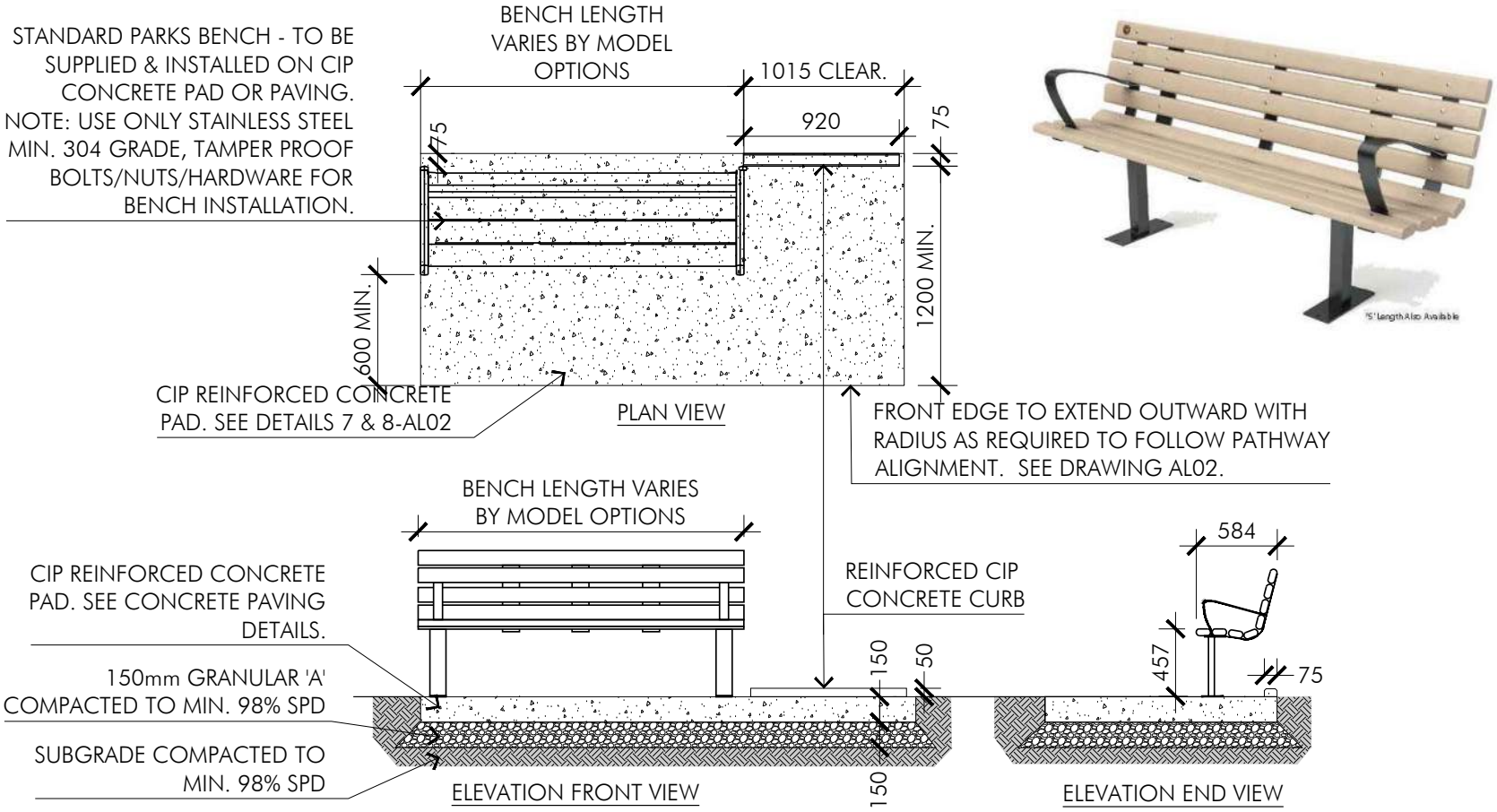
NOTES:

- FOR PERPENDICULAR PARKING, CENTRE ON PARKING SPACE.
- FOR PARALLEL PARKING, LOCATE TOWARD FRONT END OF PARKING SPACE.
- ALL SIGN FACE MEMBERS TO BE 0.064 mm GUAGE ALUMINUM WITH WHITE BACKGROUND, METRO-PUNCHED HOLES.
- SECURE SIGN FACES TO A POST OR WALL WITH TWO GALVANIZED 12mm HEX HEAD (LAG BOLTS ON WALLS) OR (BOLTS, AND NUTS WITH FLAT WASHERS ON BOTH SIDES ON POSTS).

ACCESSIBILITY ACCESSIBLE PARKING SIGANGE	SCALE = NOT TO SCALE
	LAST REVISED: SEPTEMBER 2024 FIGURE 6.6

TOWNSHIP OF MUSKOKA Lakes

STANDARD PARKS BENCH - TO BE SUPPLIED & INSTALLED ON CIP CONCRETE PAD OR PAVING.
NOTE: USE ONLY STAINLESS STEEL MIN. 304 GRADE, TAMPER PROOF BOLTS/NUTS/HARDWARE FOR BENCH INSTALLATION.



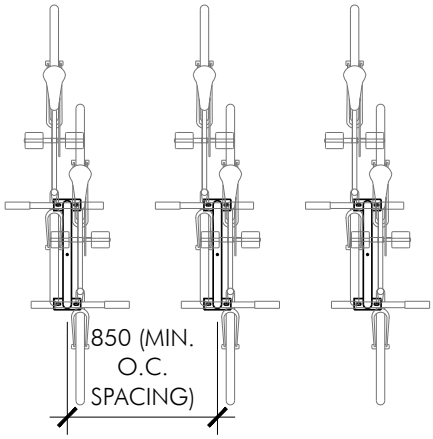
XBENCH NOTES:
MODEL: 'CONTOUR' BENCH BY CLASSIC DISPLAYS OR APPROVED EQUAL.
LENGTH VARIES SELECT FOR SUITABILITY TO SITE LOCATION: 610mm, 1210mm, 1829mm, 2438mm
DEPTH: 584mm
HEIGHT: 819mm
SEAT HEIGHT: 457mm
WEIGHT: 69kg.

SLATS: RECYCLED PLASTIC 'SAND'
METAL FINISH: BLACK POWDERCOAT BY MANUFACTURER.
INSTALLATION: SURFACE MOUNT BENCHES USING ONLY TAMPER-RESISTANT STAINLESS STEEL HARDWARE ON CIP CONCRETE PAVING OR PAD.

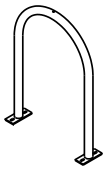
ACCESSIBLE REQUIREMENTS:
- ALL BENCHES TO HAVE 2x END ARMS
- NOT LESS THAN 1x BENCH OR 30% OF ALL BENCHES ON A SITE ARE TO BE LOCATED ON AN ACCESSIBLE (AODA COMPLIANT) PATH OF TRAVEL AND HAVE AN EXTENDED CONCRETE AREA SUITABLE FOR MOBILITY DEVICE OR STROLLER ADJACENT SEATING.

SITE FURNISHINGS BENCHES (PARKS & TRAILS LOCATIONS)	SCALE = NOT TO SCALE	
	LAST REVISED: SEPTEMBER 2024	FIGURE 7.1

TOWNSHIP OF MUSKOKA Lakes

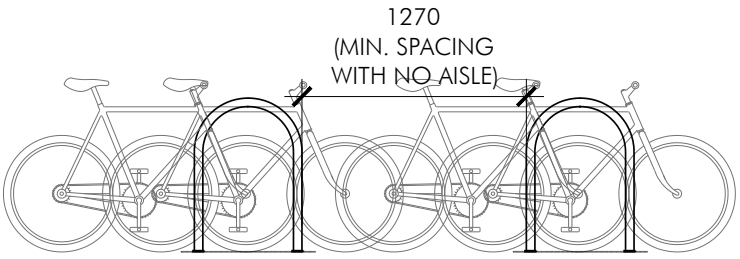


SIDE BY SIDE SPACING
PLAN VIEW

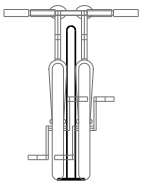


AXONOMETRIC VIEW

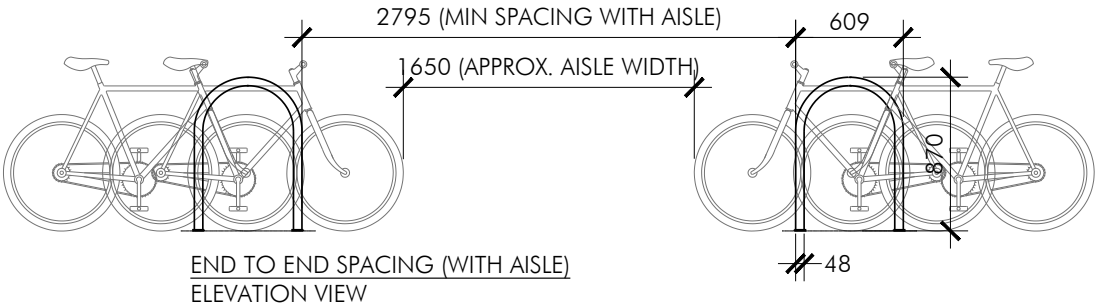
TOWNSHIP LOGO OPTION
USE TOWNSHIP LOGO OPTION IN DOWNTOWN PLAZA AND STREETSCAPE SETTINGS, AND AT COMMUNITY AND DESTINATION SCALED PARKS OR SIGNIFICANT TOWNSHIP BUILDINGS. WHERE A ROW OF BIKE RINGS ARE PROVIDED SIDE-BY-SIDE, END RINGS ADJACENT TO PATHS OF TRAVEL OR OPEN VIEWS ARE TO HAVE TOWNSHIP LOGO OPTION.



END TO END SPACING (NO AISLE)
ELEVATION VIEW



FRONT
ELEVATION
VIEW



END TO END SPACING (WITH AISLE)
ELEVATION VIEW

DESIGN NOTES:

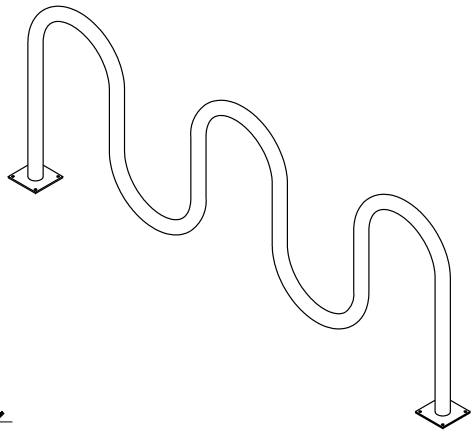
1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. DESIGN STANDARD IS BASED ON THE 'HOOP' BICYCLE RING AVAILABLE WITH OPTIONAL CUSTOM LOGO FROM DERO.COM. ALTERNATIVE EQUAL / MATCHING PRODUCTS WILL BE CONSIDERED AT FULL DISCRETION OF THE TOWNSHIP.
3. COLOUR/FINISH: POWDERCOAT RED BY MANUFACTURER
4. INSTALLATION: SURFACE MOUNT ON CIP CONCRETE PAVING OR PAD, USING ONLY MANUFACTURER-PROVIDED TAMPER RESISTANT STAINLESS STEEL MOUNTING HARDWARE.

SITE FURNISHINGS BIKE RACKS	SCALE = 1:20 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 7.2

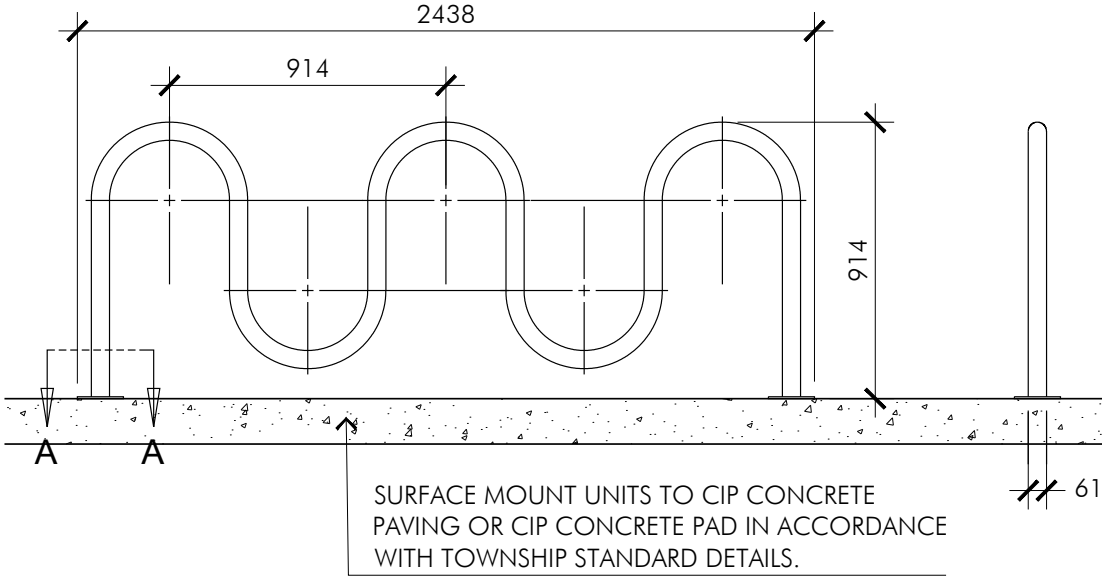
TOWNSHIP OF
MUSKOKA
Lakes

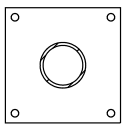
TOWNSHIP STANDARD PARK BICYCLE RACK

MAKE: HALT
MODEL: WAVE RACK
SIZE: VARIES 3-13 BIKES PER RACK
MATERIALS: POWDER COATED HOT DIP GALVANIZED 12 Ga. STEEL.
COLOUR: BLACK - TO BE CONFIRMED BY TOWNSHIP PROJECT LEAD.
SPACING: 1200mm BETWEEN PERPENDICULAR RACKS, 3048mm BETWEEN RACKS CENTRE TO CENTRE.



INSTALLATION:
MIN. 304 STAINLESS STEEL FLANGE MOUNT ANCHOR LAG BOLTS AND SHIELD (QTY 8). DO NOT OVER-TIGHTEN TO WHERE POWDERCOAT FINISH IS COMPROMISED.

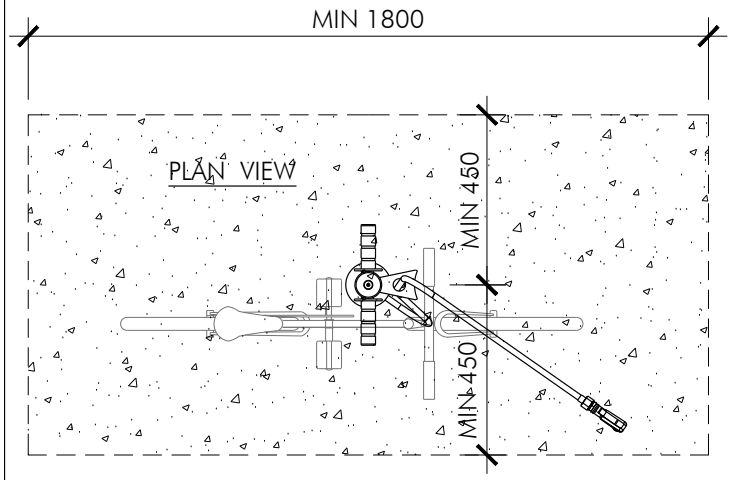




2X 6" X 6" X .25" SQUARE
FLANGE MOUNTING PLATE
WITH 4 ∅3/8" MOUNTING HOLES

SITE FURNISHINGS BIKE RACKS - PARKS	SCALE = 1:25 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 7.2.2

TOWNSHIP OF MUSKOKA Lakes



TOWNSHIP STANDARD BICYCLE REPAIR STAND

MAKE: HALT
MODEL: WAVE RACK
APPROVED MAKES AND MODELS:

- HALT (WAVE RACK)
- DERO (FIXIT)

FINAL MODEL AND COLOUR SELECTION TO BE APPROVED BY TOWNSHIP STAFF.

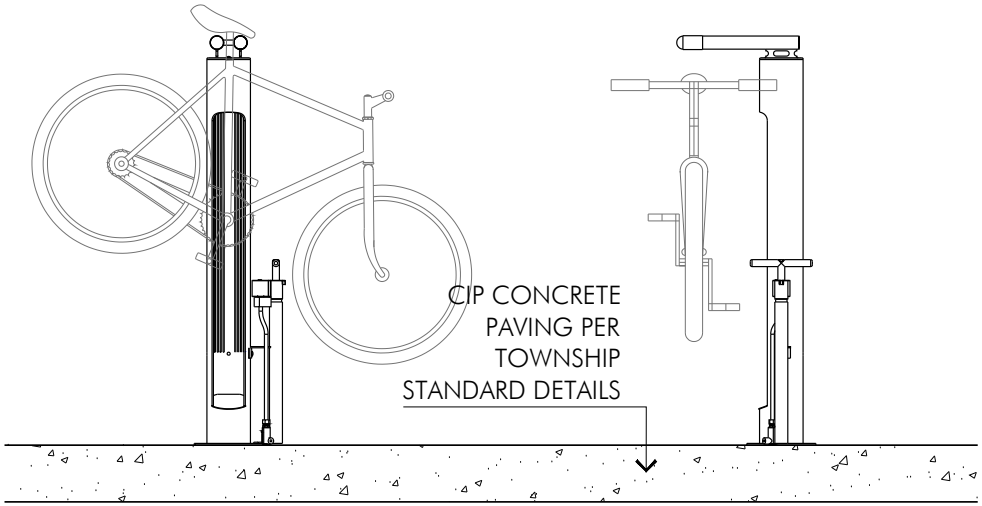
MATERIALS: POWDER COATED HOT DIP GALVANIZED STEEL.
COLOUR: BLACK - TO BE CONFIRMED BY TOWNSHIP PROJECT LEAD.

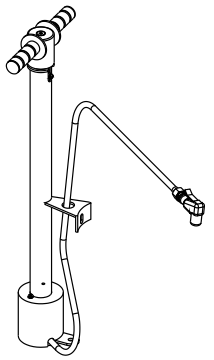
INSTALLATION:
MIN. 304 STAINLESS STEEL FLANGE MOUNT ANCHOR LAG BOLTS AND SHIELD (QTY 8). DO NOT OVER-TIGHTEN TO WHERE POWDERCOAT FINISH IS COMPROMISED.

FRONT ELEVATION VIEW

SIDE ELEVATION VIEW

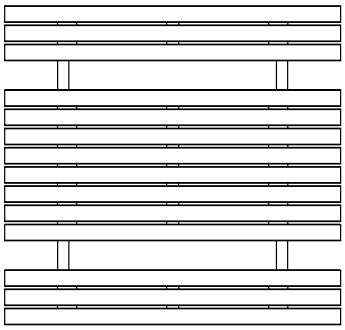
AXONOMETRIC VIEW

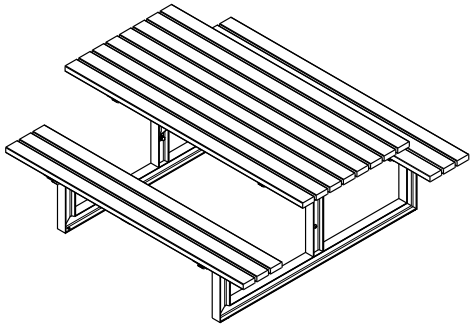




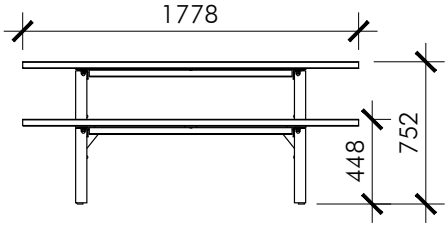
SITE FURNISHINGS BIKE REPAIR STATION	SCALE = 1:25 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 7.2.3

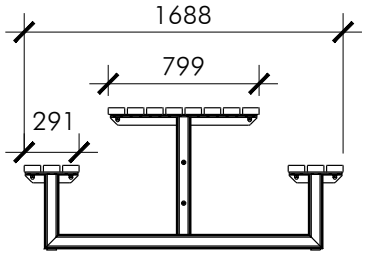
TOWNSHIP OF MUSKOKA Lakes





PICNIC TABLE (NON WHEELCHAIR ACCESSIBLE DUE TO LACK OF TURNING SPACE)
MODEL: MLPT210-S-W
INSTALLATION: SURFACE MOUNT PER MANUFACTURER INSTRUCTIONS.
REFER TO DRAWING L1 FOR LOCATIONS AND QUANTITIES.





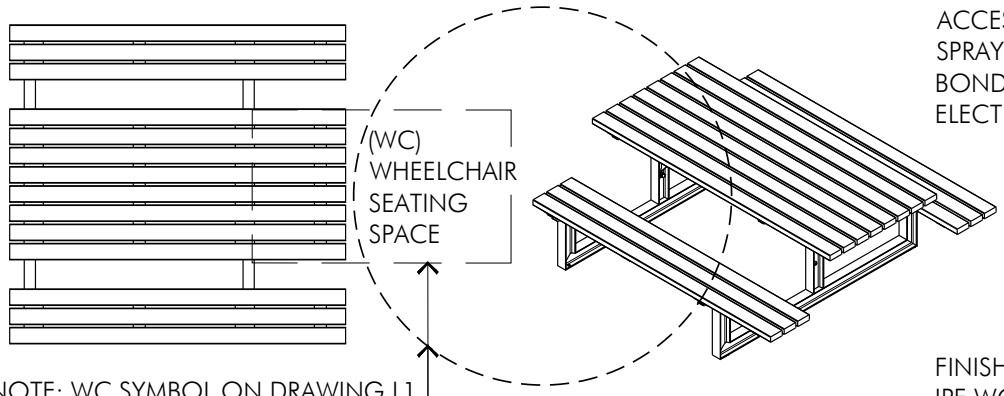
PICNIC TABLE (NON WHEELCHAIR ACCESSIBLE DUE TO TURNING AREA SPATIAL CONSTRAINTS)

BY:
MAGLIN SITE FURNITURE INC.
WWW.MAGLIN.COM
800-716-5506

CONTRACTOR TO ALLOW SUFFICIENT LEAD TIME FOR ORDERING, PRODUCTION AND SHIPPING.

USE ONLY STAINLESS STEEL (306 OR 316) FASTENERS. DO NOT OVER-TIGHTEN TO WHERE FINISH IS COMPROMISED.

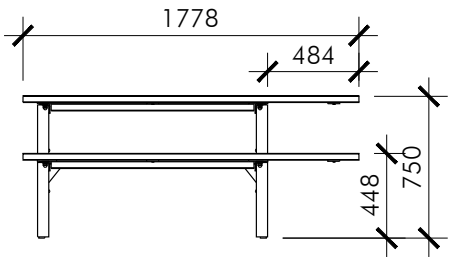
NOTE ALL METAL FURNISHINGS AND ACCESSORIES WITHIN 3.05m OF ANY SPRAY ZONES OR WATER REQUIRE BONDING/GROUNDING. SEE ELECTRICAL PLANS TYP.

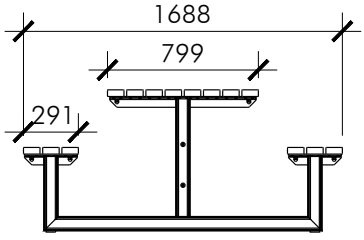


NOTE: WC SYMBOL ON DRAWING L1 DENOTES WHICH TABLES ARE TO BE WHEELCHAIR ACCESSIBLE AND ACCESSIBLE END ORIENTATION. PROVIDE FOR A 2000mm Ø.

ACCESSIBILITY STANDARD:
NO LESS THAN 1x OR 20% OF ALL TABLES ON A SITE ARE TO HAVE A WHEELCHAIR-ACCESSIBLE SEATING OPTION.

FINISH:
IPE WOOD SURFACE MEMBERS, NATURAL/UNFINISHED.
GUNMETAL GRAY METAL COMPONENTS.





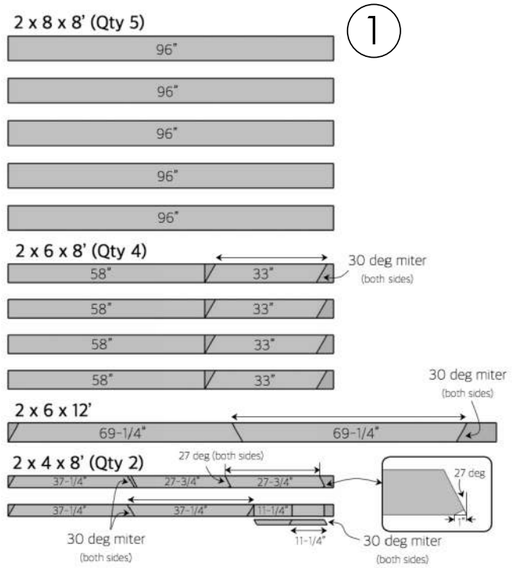
WHEELCHAIR ACCESSIBLE PICNIC TABLE BY
MODEL: MLPT210-S-W-WCA
INSTALLATION: SURFACE MOUNT PER MANUFACTURER INSTRUCTIONS.

WHEELCHAIR ACCESSIBLE PICNIC TABLE

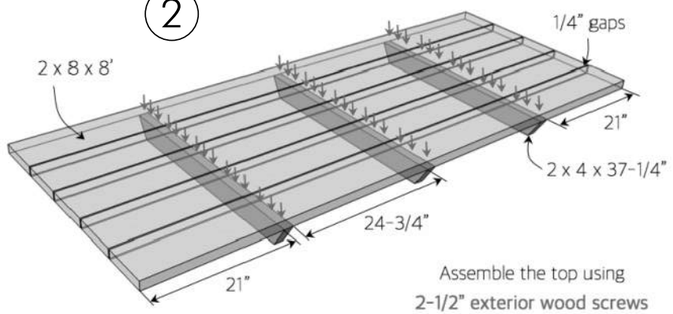
FURNISHINGS PICNIC TABLES - OPTION 1	SCALE = 1:20 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 7.3.1

TOWNSHIP OF MUSKOKA Lakes

1

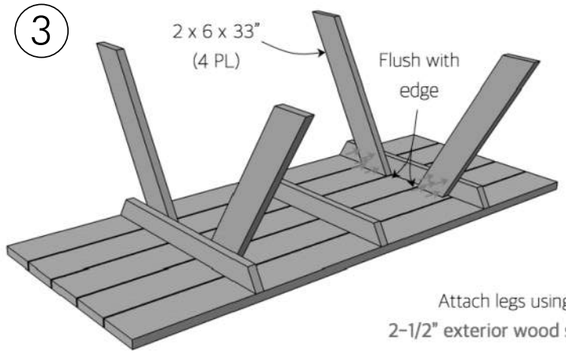


2



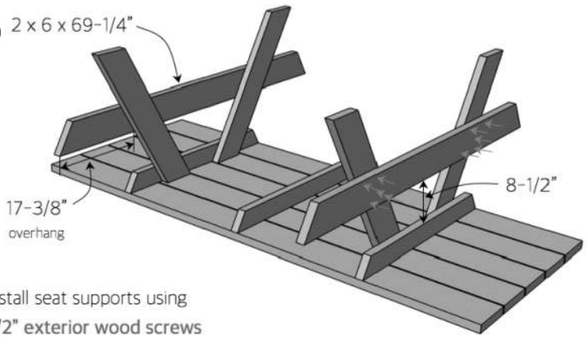
Assemble the top using
2-1/2" exterior wood screws

3



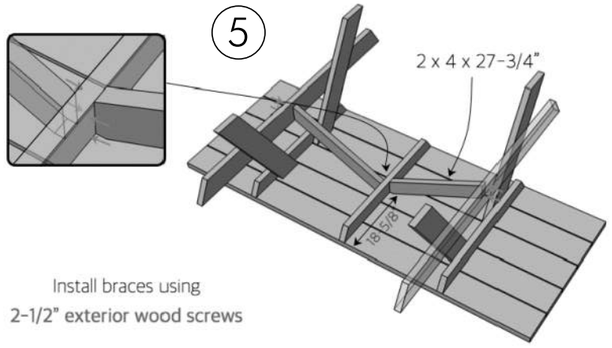
Attach legs using
2-1/2" exterior wood screws

4



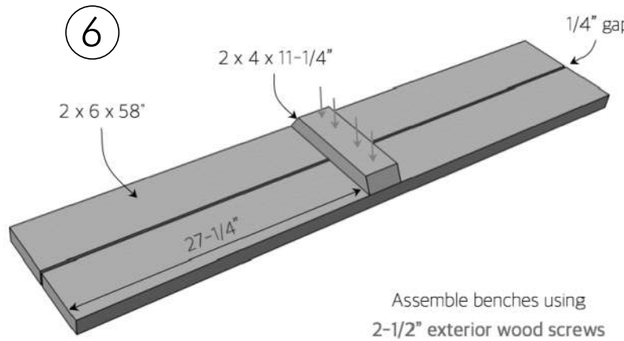
Install seat supports using
2-1/2" exterior wood screws

5



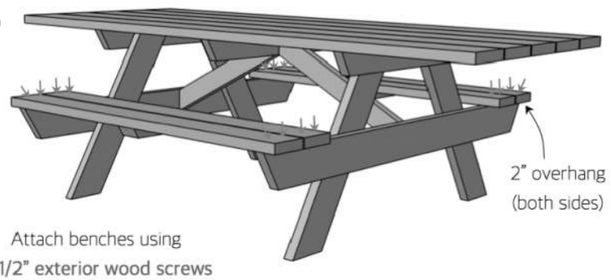
Install braces using
2-1/2" exterior wood screws

6



Assemble benches using
2-1/2" exterior wood screws

7



Attach benches using
2-1/2" exterior wood screws

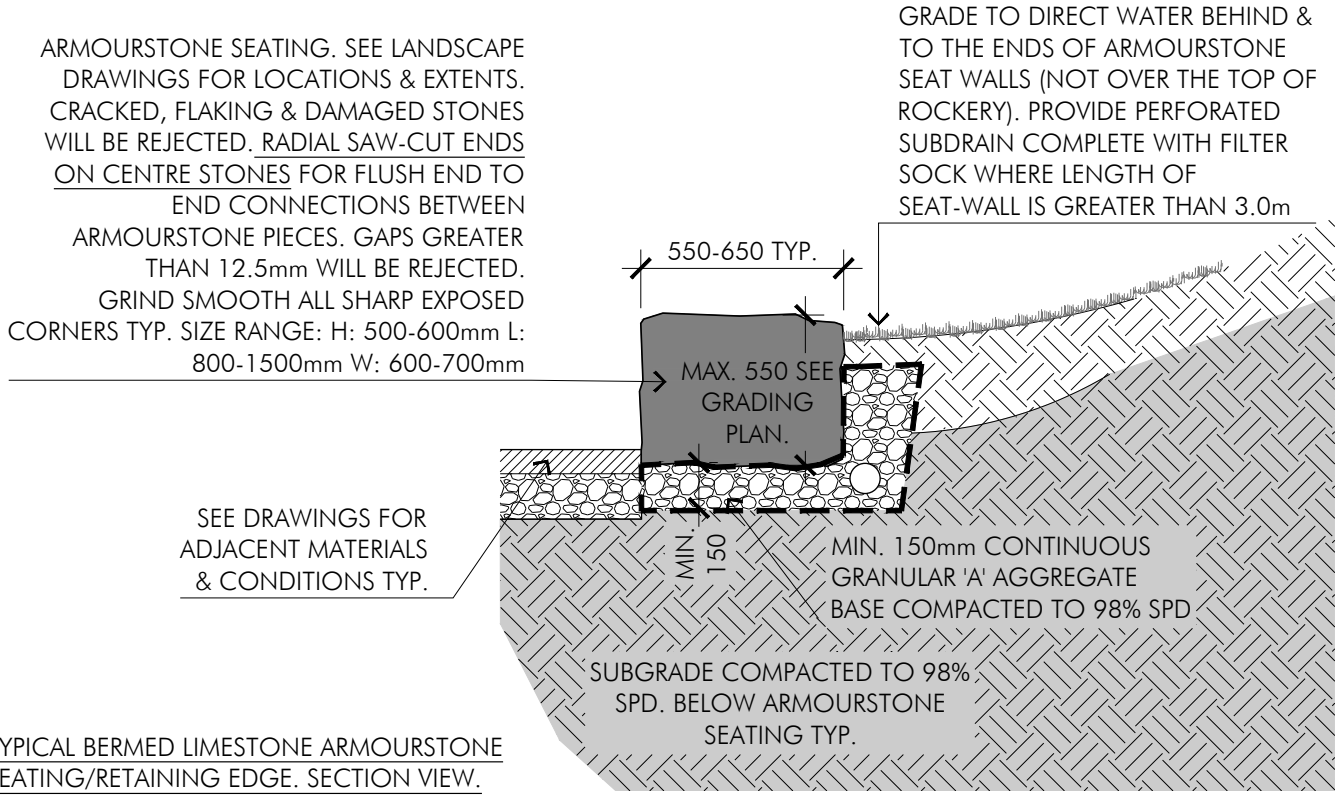
WHEELCHAIR ACCESSIBLE WOOD PICNIC TABLE.

ALL WOOD MEMBERS TO BE WESTERN RED OR EASTERN WHITE CEDAR.

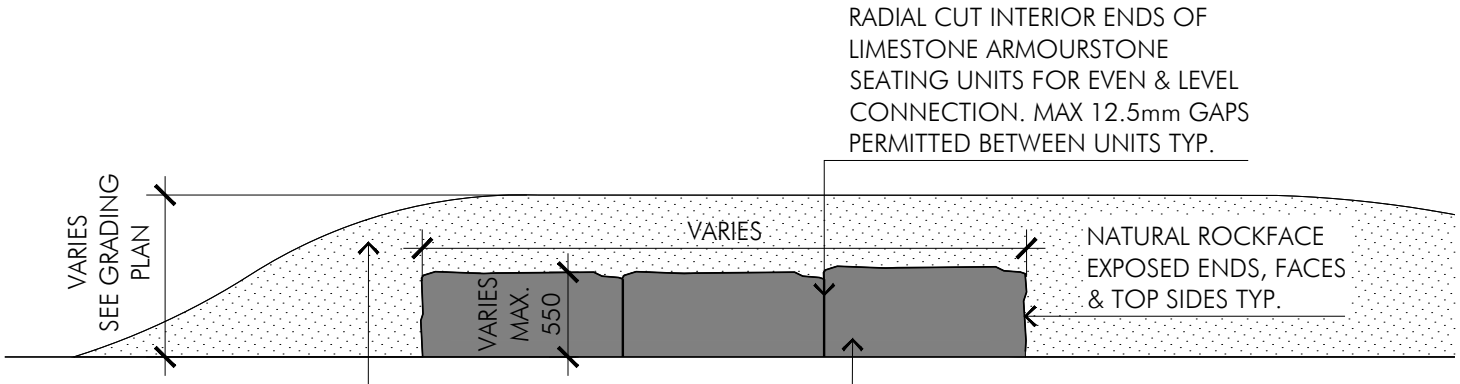
ALL WOOD FASTENERS TO BE HOT DIP GALVANIZED, STAINLESS STEEL OR OTHERWISE COATED FOR EXTERIOR USE.

FURNISHINGS PICNIC TABLES - OPTION 2 (WOOD)	SCALE = NOT TO SCALE
	LAST REVISED: SEPTEMBER 2024 FIGURE 7.3.2

TOWNSHIP OF MUSKOKA Lakes



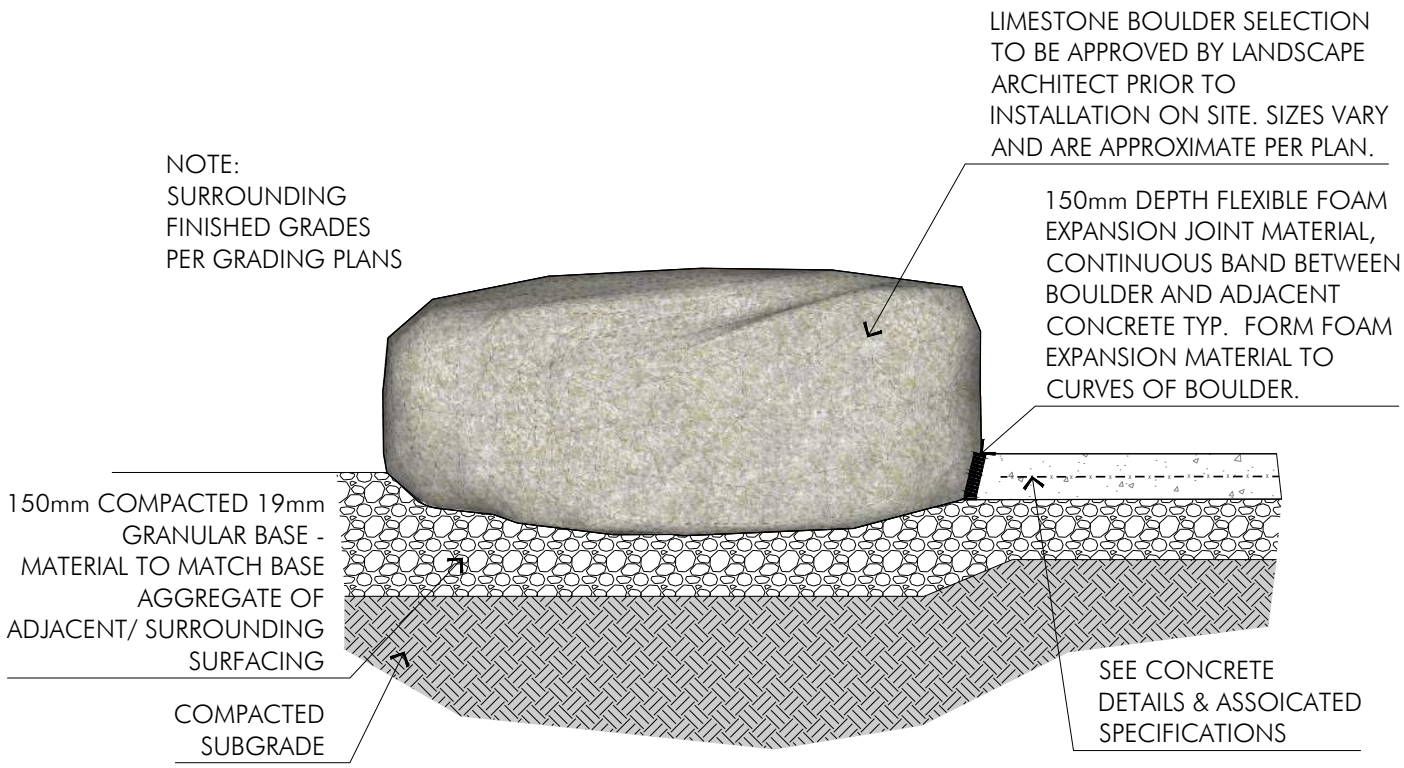
TYPICAL BERMED LIMESTONE ARMOURSTONE SEATING/RETAINING EDGE. SECTION VIEW.
SCALE 1:25



TYPICAL BERMED GRANITE ARMOURSTONE SEATING/RETAINING EDGE. FRONT ELEVATION VIEW.
SCALE 1:40

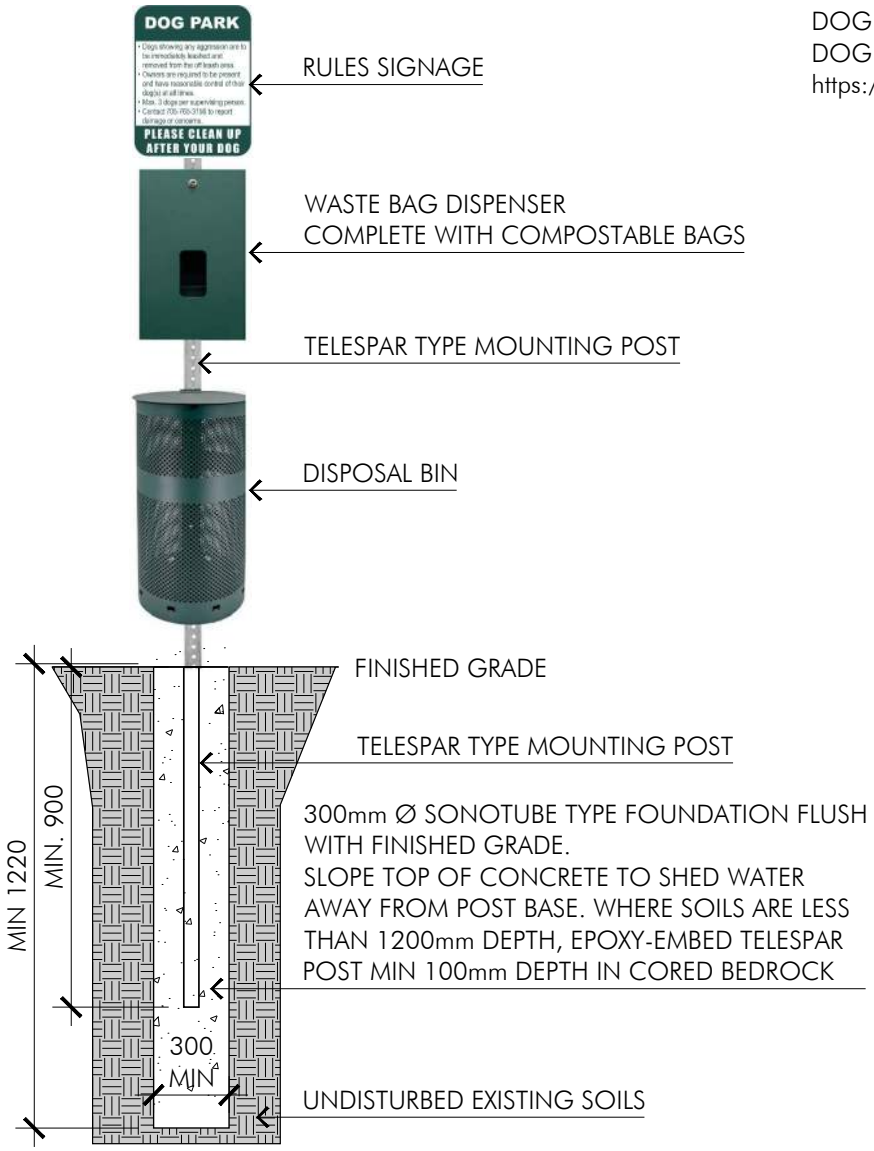
FURNISHINGS ARMOURSTONE SEAT WALLS	SCALE = AS SHOWN	
	LAST REVISED: SEPTEMBER 2024	FIGURE 7.4

TOWNSHIP OF MUSKOKA Lakes



FURNISHINGS ACCENT ROCKERY	SCALE = AS SHOWN	
	LAST REVISED: SEPTEMBER 2024	FIGURE 7.5

TOWNSHIP OF MUSKOKA Lakes



DOG STATIONS AVAILABLE FROM:
DOG WASTE SOLUTIONS (OR APPROVED EQUAL)
https://dogwastesolutions.ca

TYPICAL DOG PARK OR DOG OFF LEASH AREA SIGNAGE. CONTRACTOR TO SUBMIT MOCK-UP FOR TOWNSHIP APPROVAL PRIOR TO ORDERING. CONFIRM RULES & CONTACT INFORMATION PRIOR TO ORDERING.

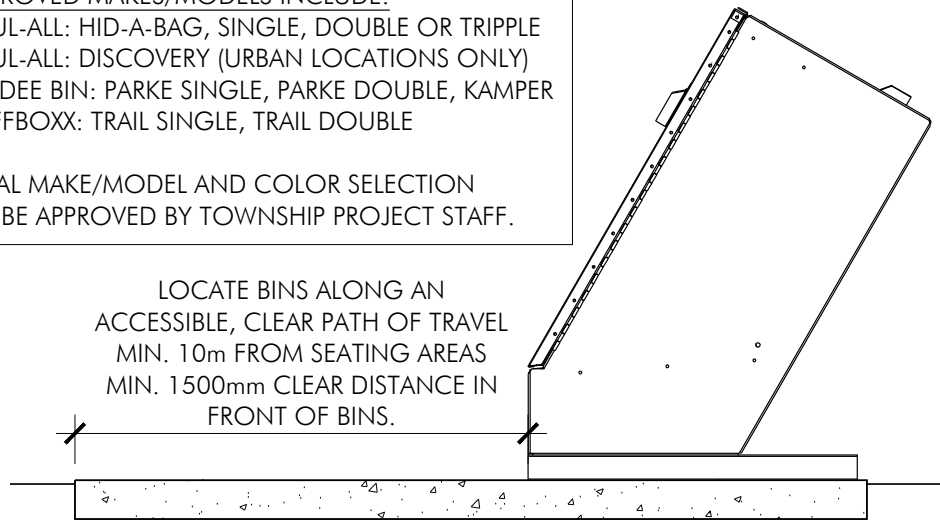
FURNISHINGS & FEATURES DOG PARK SIGN STATION	SCALE = 1:20 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 7.6

TOWNSHIP OF MUSKOKA Lakes

APPROVED MAKES/MODELS INCLUDE:
HAUL-ALL: HID-A-BAG, SINGLE, DOUBLE OR TRIPPLE
HAUL-ALL: DISCOVERY (URBAN LOCATIONS ONLY)
TYEDEE BIN: PARKE SINGLE, PARKE DOUBLE, KAMPER
TUFFBOXX: TRAIL SINGLE, TRAIL DOUBLE

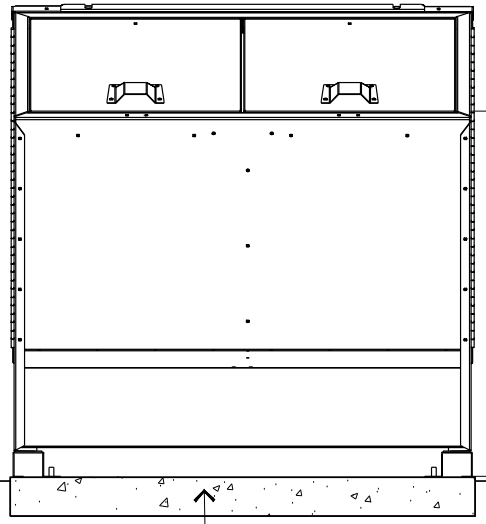
FINAL MAKE/MODEL AND COLOR SELECTION
TO BE APPROVED BY TOWNSHIP PROJECT STAFF.

SIDE VIEW



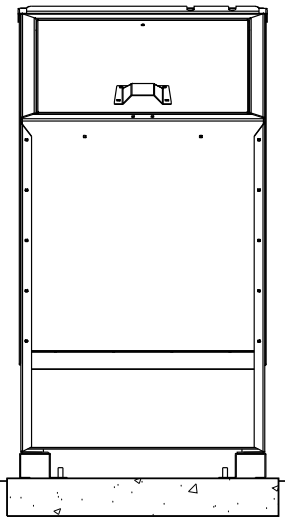
LOCATE BINS ALONG AN ACCESSIBLE, CLEAR PATH OF TRAVEL
MIN. 10m FROM SEATING AREAS
MIN. 1500mm CLEAR DISTANCE IN FRONT OF BINS.

EXAMPLE DOUBLE STREAM MODEL

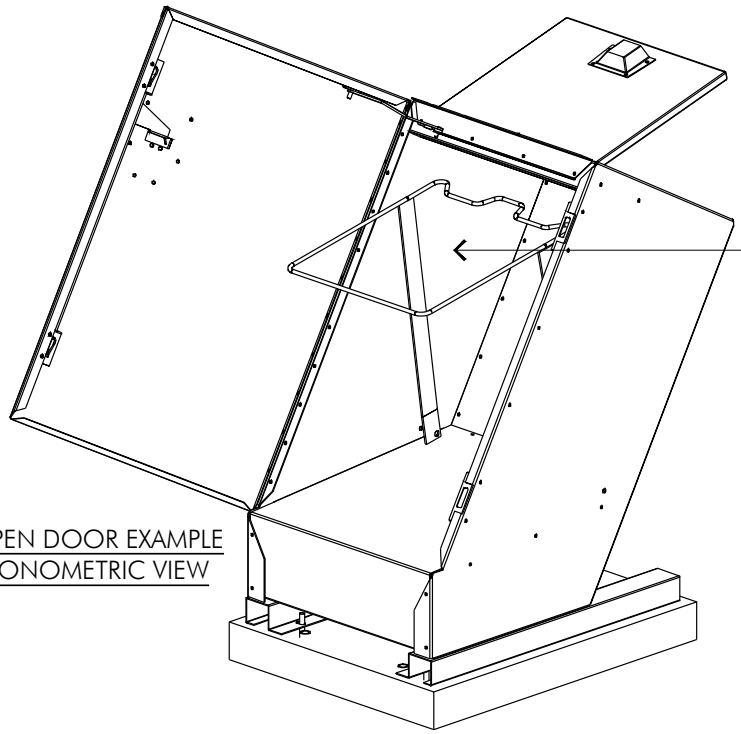


900-1300 OPENING HT.

EXAMPLE SINGLE STREAM MODEL

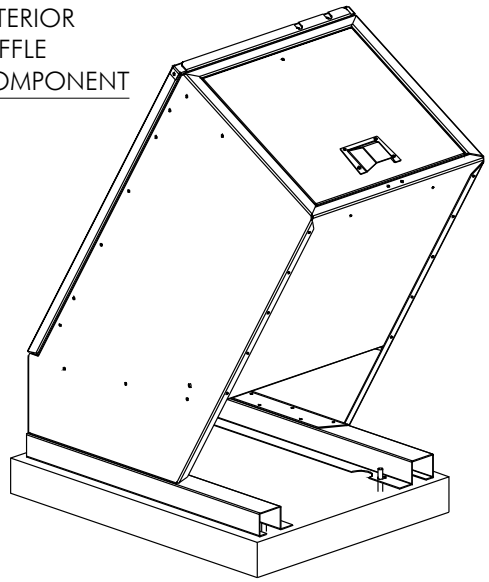


MIN. 100mm DEPTH POURED CONCRETE PAD ON MIN. 150mm COMPACTED GRANULAR 'A', OR SURFACE MOUNT ON CONCRETE PAVING.



OPEN DOOR EXAMPLE
AXONOMETRIC VIEW

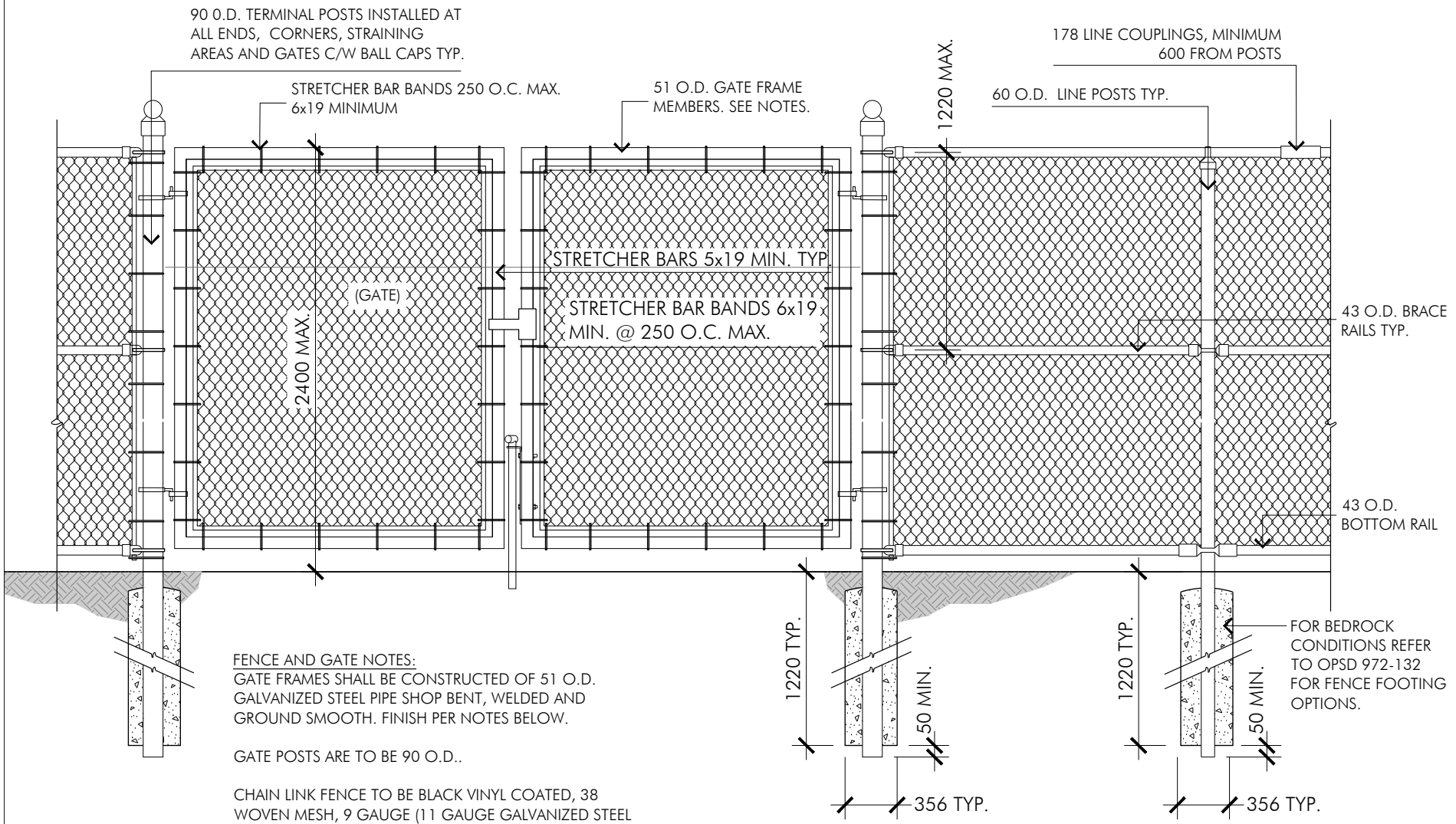
EXAMPLE INTERIOR BAFFLE COMPONENT



NOTES:
1. PARKS AND OPEN SPACE WASTE BINS TO BE 'BEAR RESISTANT' WITH SELF-CLOSING LID AND DEFLECTION OR TILT TYPE INTERIOR BAFFLE.
2. SIDE OR FRONT PANEL SWING OPENING REQUIRED FOR EASY BAG OR BIN REMOVAL.
3. MINIMUM 25-YEAR MANUFACTURE'S WARRANTY ON PARTS AND LABOUR.
4. MINIMUM 12 Ga. HOUSING/FRAME MEMBERS. HOT DIP GALVANIZED, POWDERCOATED STEEL.
5. MINIMUM 14 Ga. PANEL MEMBERS, HOT DIP GALVANIZED, POWDERCOATED STEEL.
6. ALL HINGES, FASTENERS AND SURFACE MOUNT HARDWARE TO BE MIN. 304 STAINLESS STEEL.
7. SURFACE MOUNT TO CAST IN PLACE CONCRETE PAD OR CONCRETE PAVING USING TAMPER-RESISTANT BOLTS.

FURNISHINGS WASTE BINS	SCALE = NOT TO SCALE
	LAST REVISED: SEPTEMBER 2024 FIGURE 7.7

TOWNSHIP OF MUSKOKA Lakes



FENCE AND GATE NOTES:

GATE FRAMES SHALL BE CONSTRUCTED OF 51 O.D. GALVANIZED STEEL PIPE SHOP BENT, WELDED AND GROUND SMOOTH. FINISH PER NOTES BELOW.

GATE POSTS ARE TO BE 90 O.D..

CHAIN LINK FENCE TO BE BLACK VINYL COATED, 38 WOVEN MESH, 9 GAUGE (11 GAUGE GALVANIZED STEEL CORE), FASTENED TO LINE POSTS, ALL RAILS, AND GATE FRAMES WITH 3.5 (9 GAUGE) KNUCKLED FASTENERS @ 300mm C.C. MAX. TYP.

FINISH TO BE BLACK GLOSS ENAMEL POLYESTER POWDER COATING. PRIOR TO POWDER COATING, ALL SURFACES TO BE TREATED WITH PARKER BONDERITE AND CHLOROETHYLENE OR APPROVED EQUALS. POWDER COATING MUST BE A POLYESTER 2000 SERIES, 5 MIL THICKNESS, APPLIED ELECTROSTATICALLY AND OVEN CURED TO A SMOOTH AND EVEN SURFACE.

PADLOCK RETENTION CLASP TO BE INSTALLED FOR ALL GATES TYP.

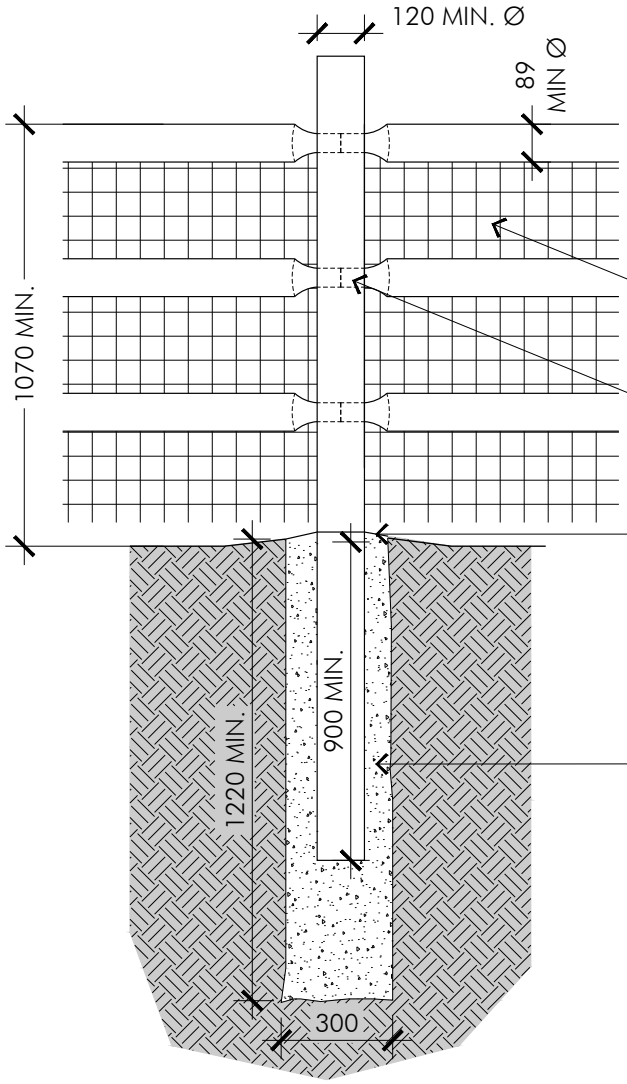
NO PLASTIC FITTINGS ARE TO BE USED.

GATE LOCATIONS INDICATED ON DRAWINGS SHALL BE CONFIRMED ON SITE BY THE CONSULTANT.

ALL MEASUREMENTS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.

FENCING CHAIN LINK (BLACK VINYL)	SCALE = NOT TO SCALE
	LAST REVISED: SEPTEMBER 2024 FIGURE 8.1

TOWNSHIP OF MUSKOKA Lakes



OFF-LEASH DOG AREAS & OTHERWISE OPTIONAL: HOT DIP GALVANIZED, CONTINUOUS WELDED WIRE MESH, SECURED TO BACK OF POSTS & RAILS USING 1" HDG PNEUMATIC STAPLES. 30x30mm OPENINGS. ga 14 WIRE TYP. AVAILABLE FROM GERARD DANIELS WORLDWIDE (OR EQUAL).

PROVIDE SNUG HOLE DIAMETER TO RECEIVE TAPERED RAILS, ALLOWING FOR NO MOVEMENT OR GAPS GREATER THAN 12mm IN FINISHED RAILS TYP.

TAPER TOP OF CONCRETE FOOTINGS AWAY FROM BASE OF POST FOR POSITIVE DRAINAGE

CIP CONCRETE POST FOUNDATIONS MIN. 300 Ø. 32mpa @ 28 DAYS TYP. FOR BEDROCK CONDITIONS REFER TO OPSD 972-132 FOR FENCE FOOTING OPTIONS.

ALL WOOD MEMBERS TO BE EASTERN WHITE CEDAR OR WESTERN RED CEDAR.

NOTE: CURVED LAYOUTS AND SLOPES REQUIRE CUSTOM POST HOLE ORIENTATION. CONTRACTOR TO PROVIDE SITE-CONFIRMED LAYOUT TO MANUFACTURER FOR ACCURACY.

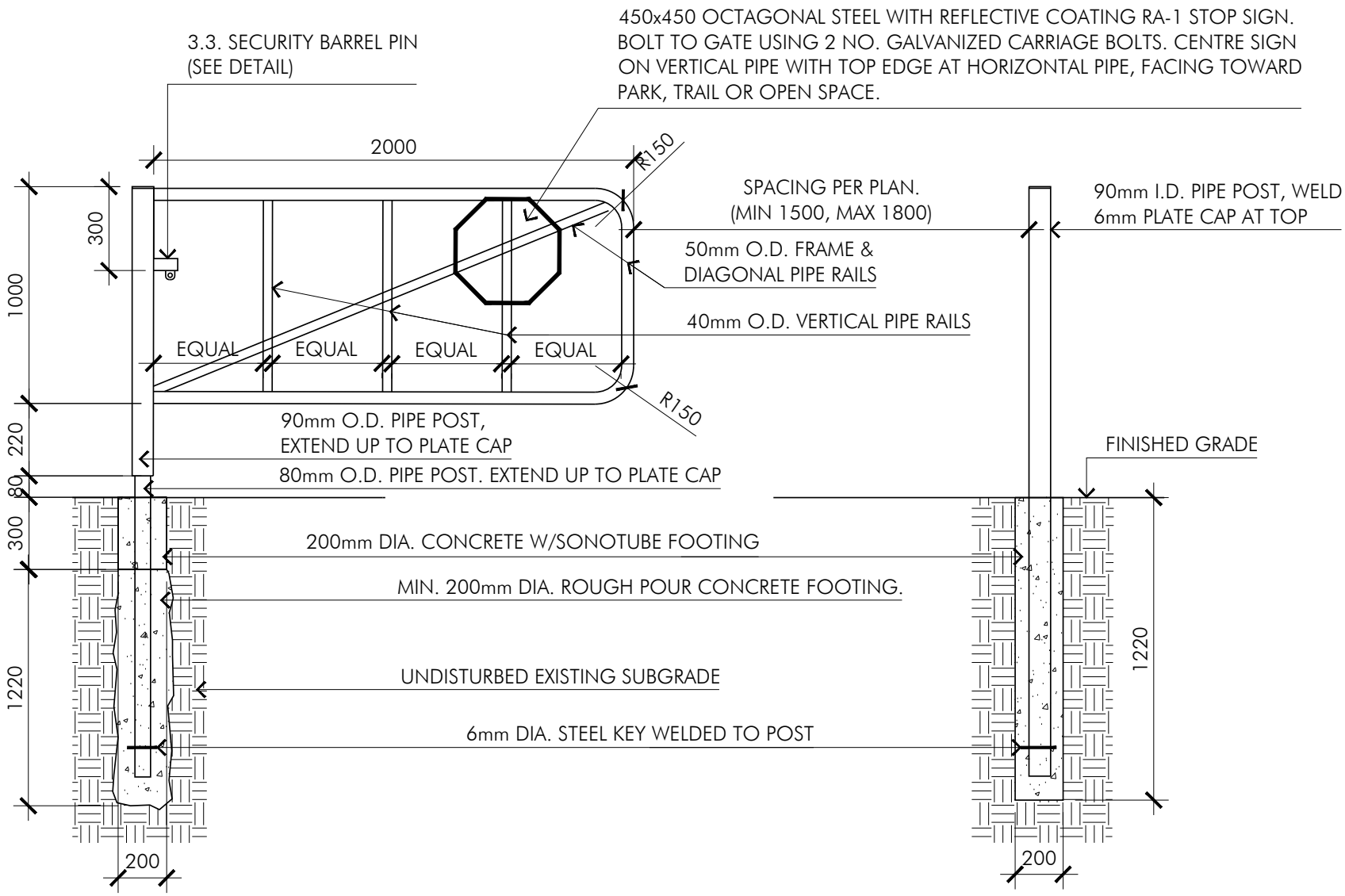
POSTS AND RAILS AVAILABLE FROM:
LANARK CEDAR
info@lanarkcedar.com
(613) 257-1107

OR APPROVED EQUAL.

NOTES:
1. ALL WORK TO COMPLY WITH APPLICABLE CODES AND STANDARDS.
2. CONTRACTOR TO PROVIDE ENGINEER STAMPED SHOP DRAWINGS WHERE FENCING IS USED AS A GUARD UNDER OBC REQUIREMENTS.

FENCING CEDAR RAIL	SCALE = 1:20 METRIC
	LAST REVISED: SEPTEMBER 2024 FIGURE 8.2

TOWNSHIP OF MUSKOKA Lakes

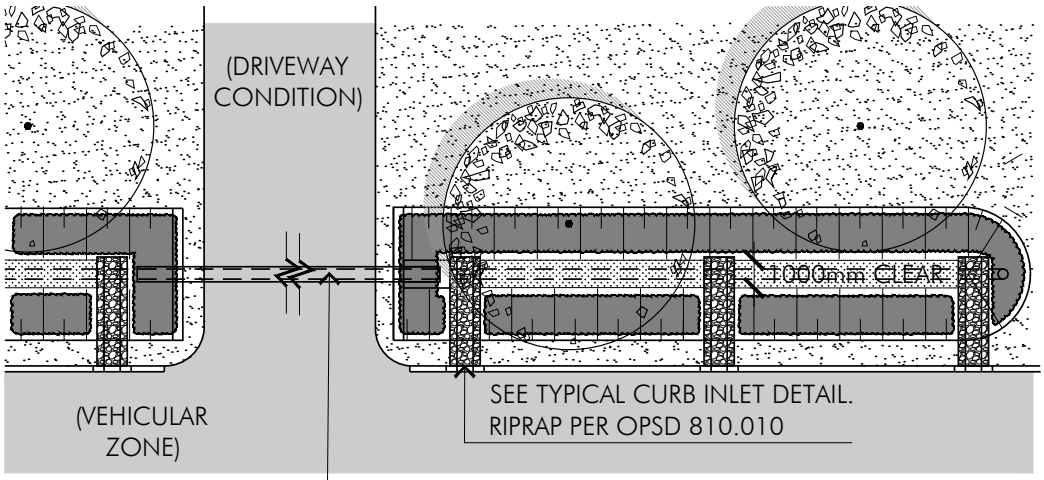


GENERAL NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. ALL GATE METAL EXCEPT S.S. SECURITY BARREL/PIN TO BE SCHEDULE 40 STEEL PIPE, HOT DIP GALVANIZED, TO MEET CSA-G164-M1981 AFTER FABRICATION. ALL WELDS TO MEET CSA W59-M1989 AND BE GROUND SMOOTH. TOUCH UP ALL MINOR DAMAGED AREAS WITH ZINC BASED PAINT AFTER INSTALLATION. POSITION DRAINAGE HOLES TO MINIZE WATER INGRESS. FILL HOLES IF DIRECTED BY TOWNSHIP REPRESENTATIVE.
3. EXACT LOCATION OF GATE AND POST TO BE AS DIRECTED ON SITE BY TOWNSHIP REPRESENTATIVE.

FENCING MULTI-USE TRAIL MAINTENANCE GATE	SCALE = NOT TO SCALE
	LAST REVISED: SEPTEMBER 2024 FIGURE 8.3

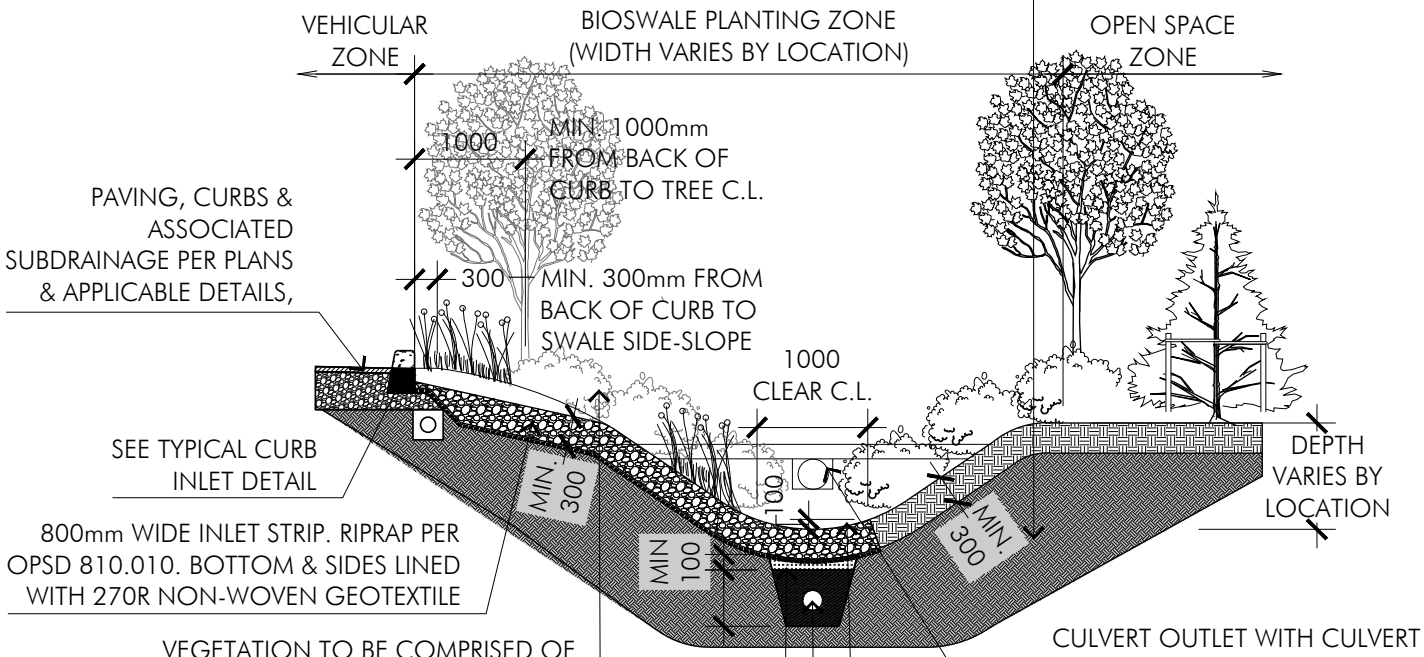
TOWNSHIP OF MUSKOKA Lakes



PLAN VIEW
NOT TO SCALE

CULVERT WITH HEADER PER OPSD 804.030 (WHERE APPLICABLE)

MIN. 300mm TOPSOIL 'TYPE 3' INFILTRATION AREA GROWING MEDIUM PER TOWN STANDARD. ENSURE TREES HAVE ACCESS TO MIN. 20cu.m. CONTINUOUS SOIL VOLUME PER TREE, OF DEPTHS BETWEEN 600-1200mm. TREE SOIL VOLUMES MAY INCLUDE EXISITNG SUBSOILS WHERE SUITABLE TO SUSTAIN GROWTH.



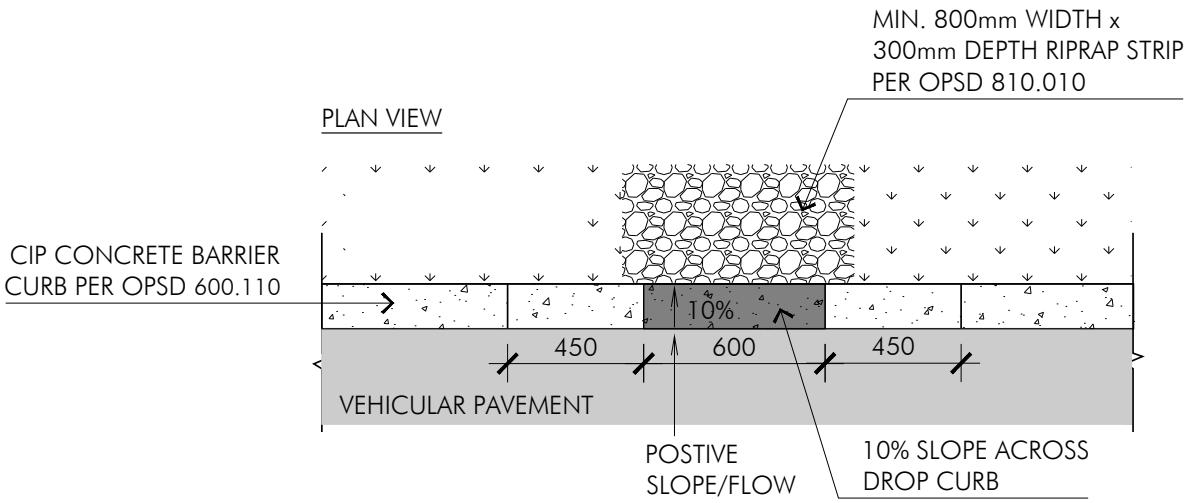
SECTION VIEW
1:75

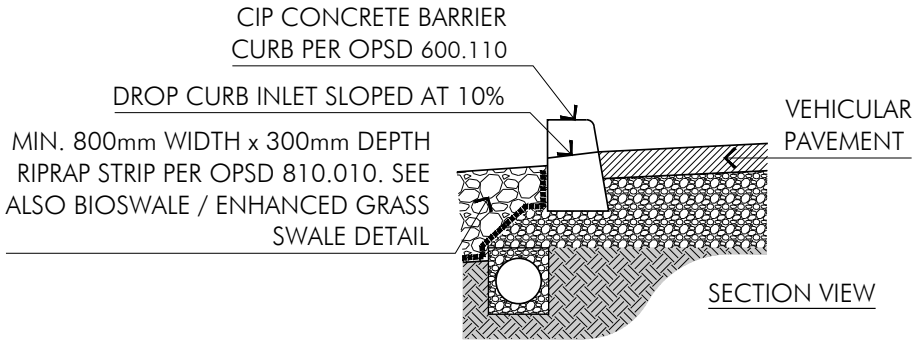
GENERAL NOTES:

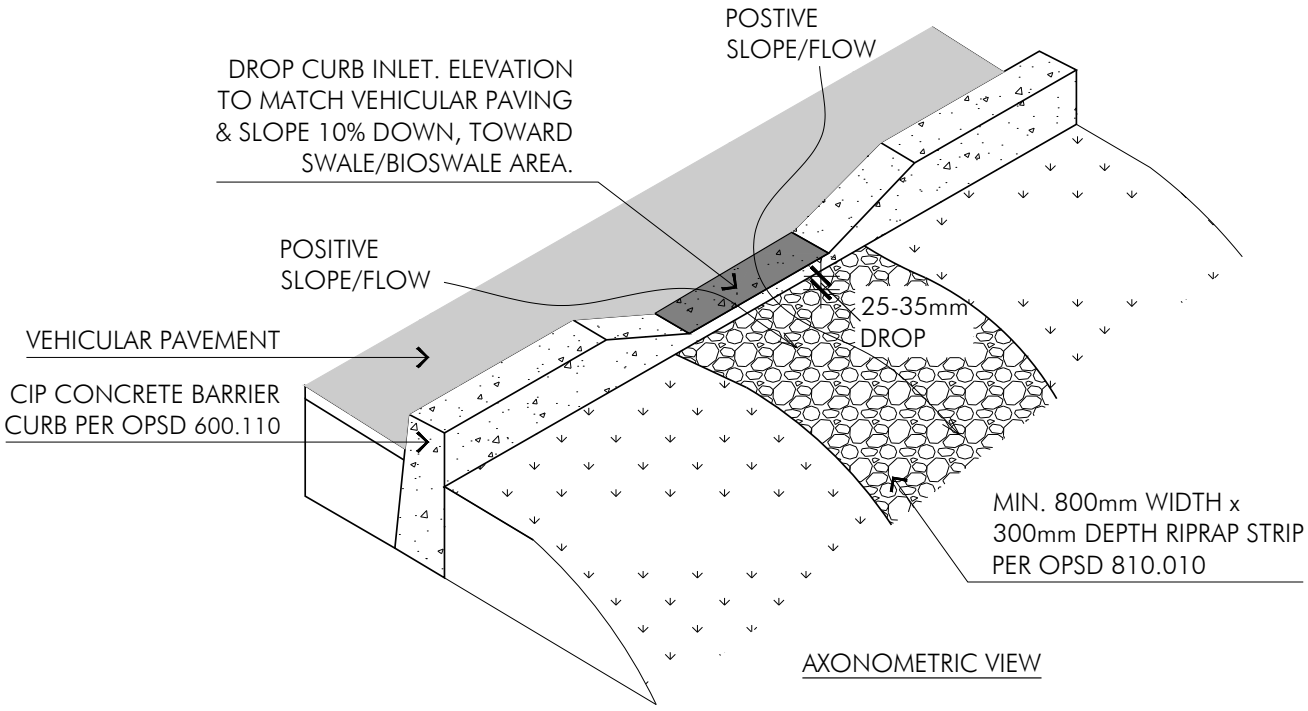
1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. BIOSWALE WIDTH AND DEPTH VARIES BASED ON SITE REQUIREMENTS FOR STORAGE CAPACITY. PIPED-OUTLETS AND CONTROLS TO BE SPECIFIED BY ENGINEER (IF APPLICABLE)
3. BIOSWALE SIDE SLOPES TO BE MAX. 3L:1V. PREFERRED SLOPE OF 4L:1V.

GREEN INFRASTRUCTURE TYPICAL BIOSWALE	SCALE = 1:75 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 9.1

TOWNSHIP OF MUSKOKA Lakes





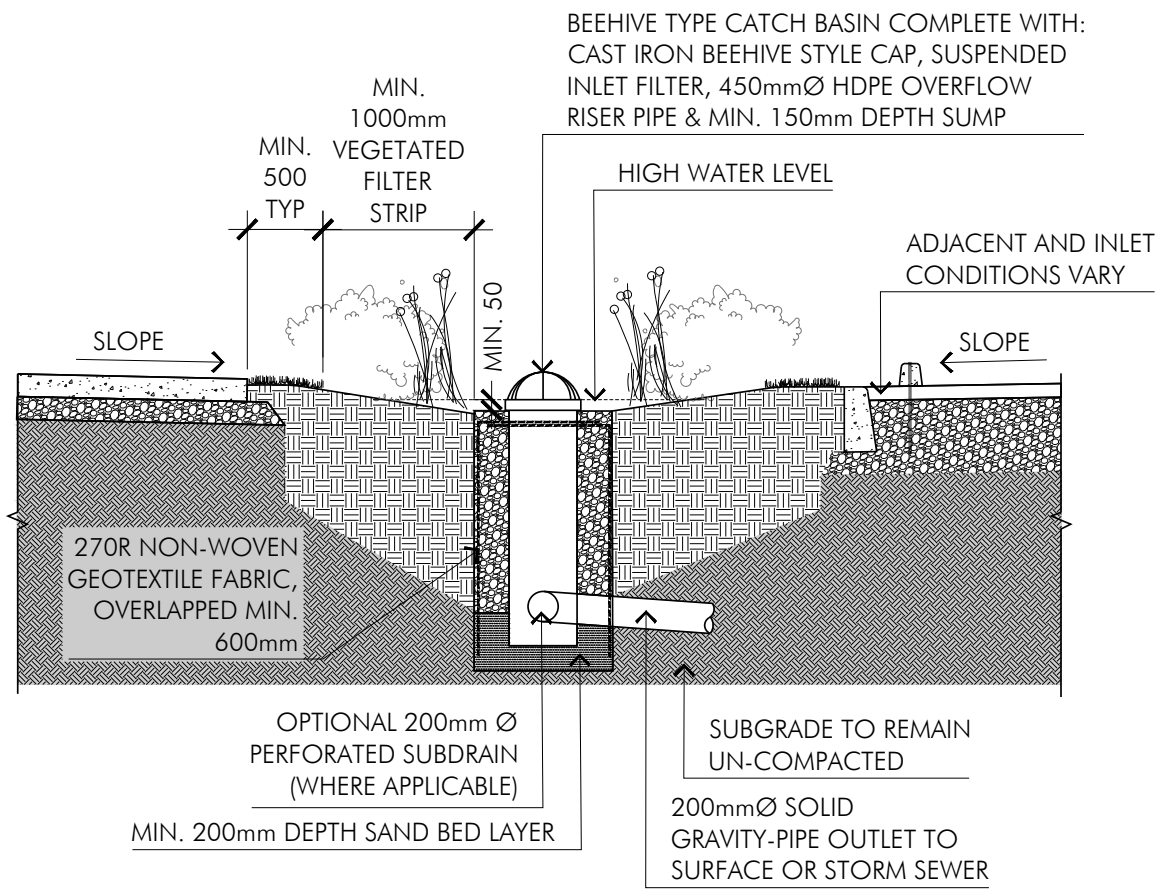


GENERAL NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. INLET SPACING TO BE MAX 8000 O.C., MIN 2x INLETS PER BIOSWALE AREA, UNLESS OTHERWISE SPECIFIED BY CIVIL ENGINEER.

GREEN INFRASTRUCTURE TYPICAL CURB INLET TO SWALE	SCALE = 1:25 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 9.2

TOWNSHIP OF MUSKOKA Lakes

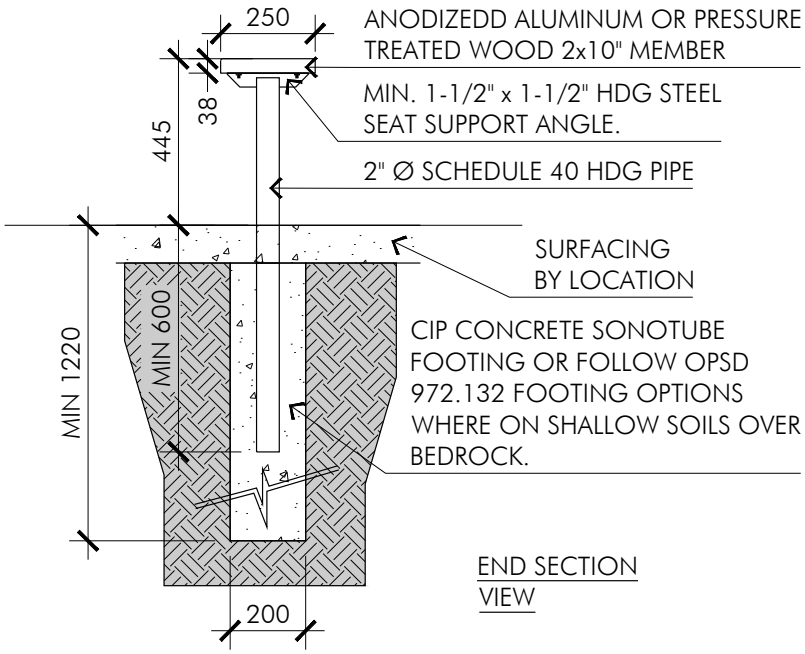


GENERAL NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. LENGTH AND WIDTH OF INFILTRATION TRENCH VARIES BASED ON REQUIRED/DESIRED CAPACITY. BOTTOM SURFACE OF TRENCH SHALL BE LEVEL, RANGING IN SIZE FROM 600mm TO 2400mm.

GREEN INFRASTRUCTURE TYPICAL BIOSWALE	SCALE = 1:75 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 9.3

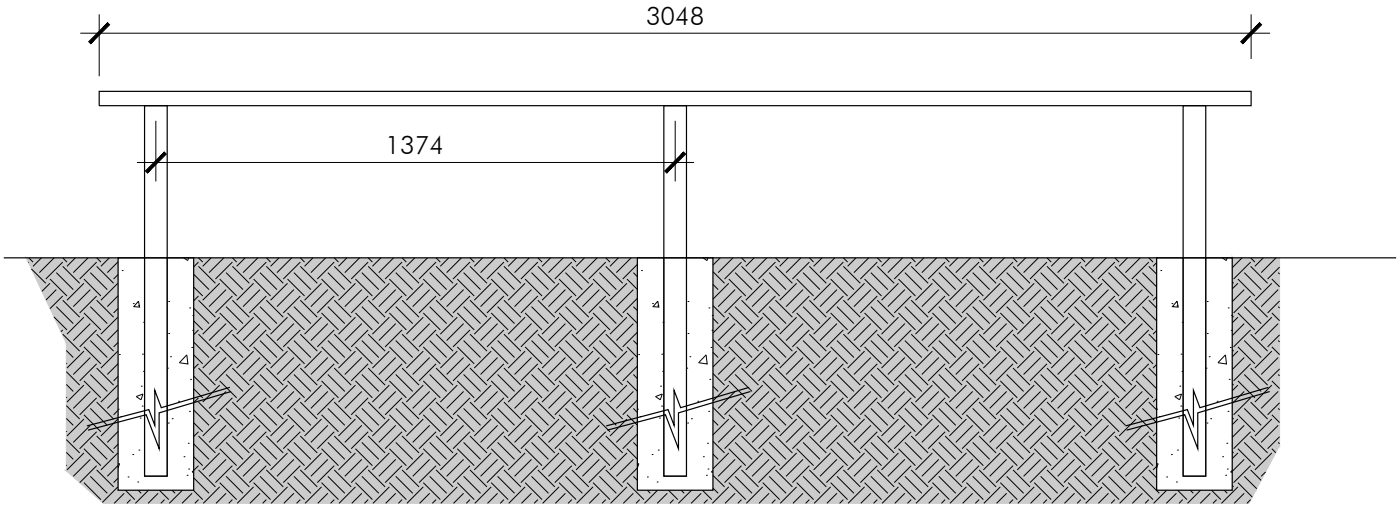
TOWNSHIP OF MUSKOKA Lakes



END SECTION VIEW

NOTES:

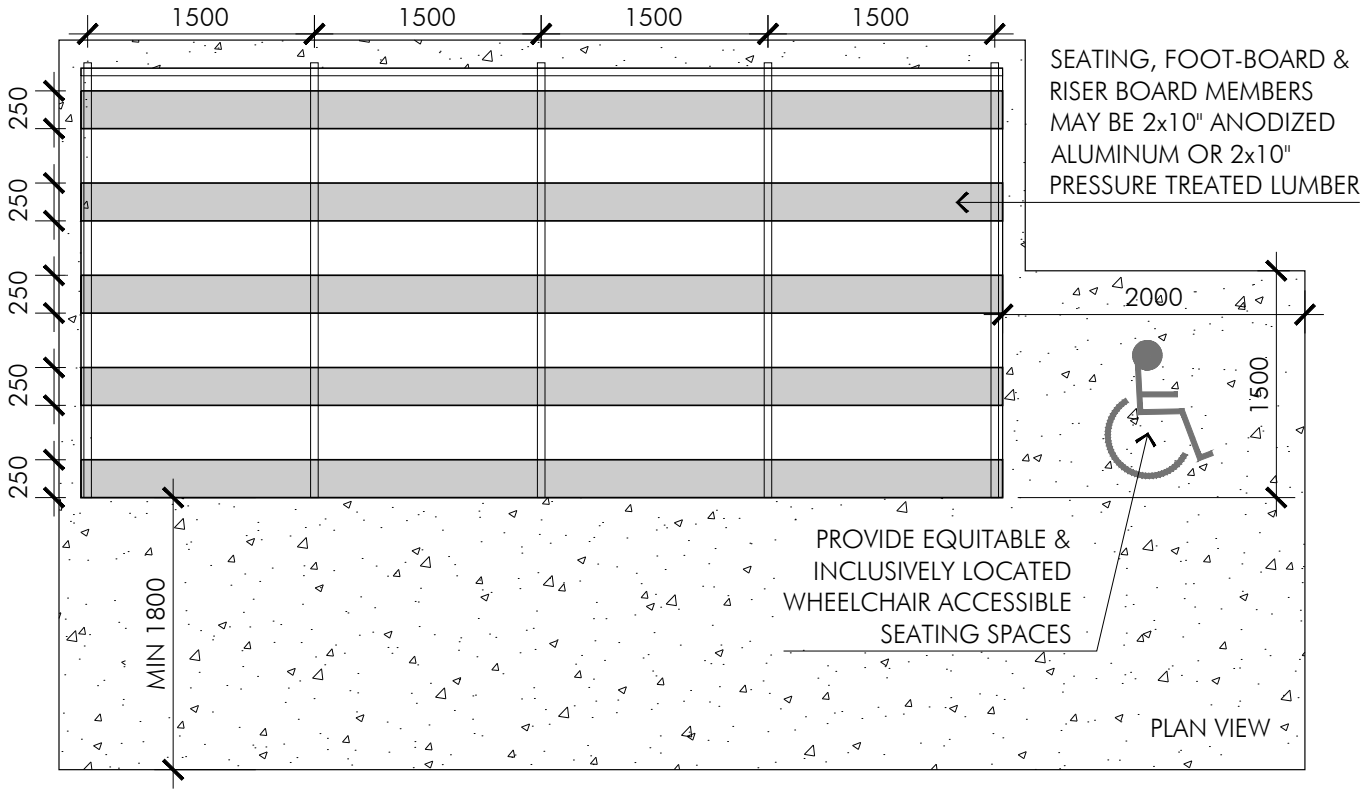
- STEEL TO CONFORM TO CSA G40.21-44W. YIELD STRENGTH FOR IRON PIPE TO BE 35 KSI.
- WELDING OF STRUCTURAL STEEL TO CONFORM TO CSA STANDARD W59, UNDERTAKEN BY A FULLY CERTIFIED WELDER, BY THE CANADIAN WELDING BUREAU, MEETING REQUIREMENTS OF CSA STANDARD W47.
- WELDING ELECTRODES TO CONFORM TO ELECTRODE CLASS E70XX.
- BOLTED CONNECTIONS TO USE ALVANIZED 1" Ø x 1-1/2" LONG BOLTS WITH A MINIMUM YIELD STRENGTH OF 36 KSI.
- WITHOUT DETRIMENTAL SETTLEMENT. ALLOW FOR SOIL BEARING CAPACITY OF NOT LESS THAN 150KPA
- ALL HOT DIP GALVANIZATION TO OCCUR AFTER MEMBER FABRICATION. COLD-GALV TOUCHUP WHERE FINISH IS DAMAGED IN FIELD.

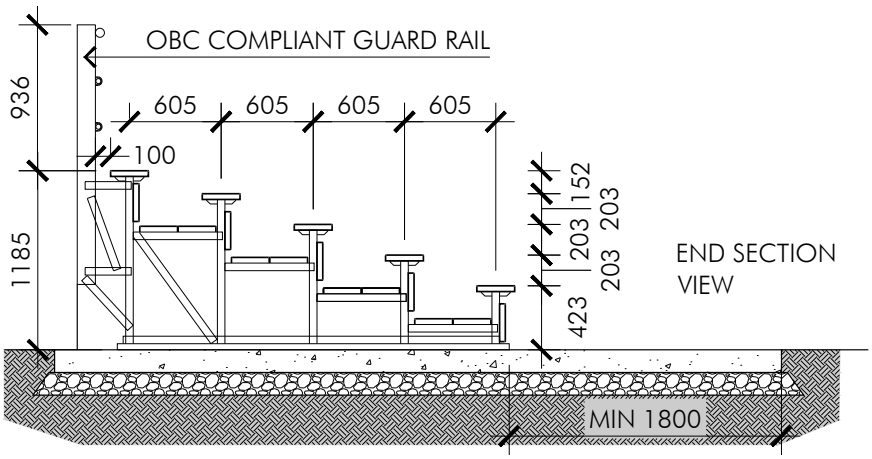


SIDE SECTION VIEW

SPORTS FEATURES TEAM BENCH	SCALE = 1:20 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 10.1

TOWNSHIP OF MUSKOKA Lakes



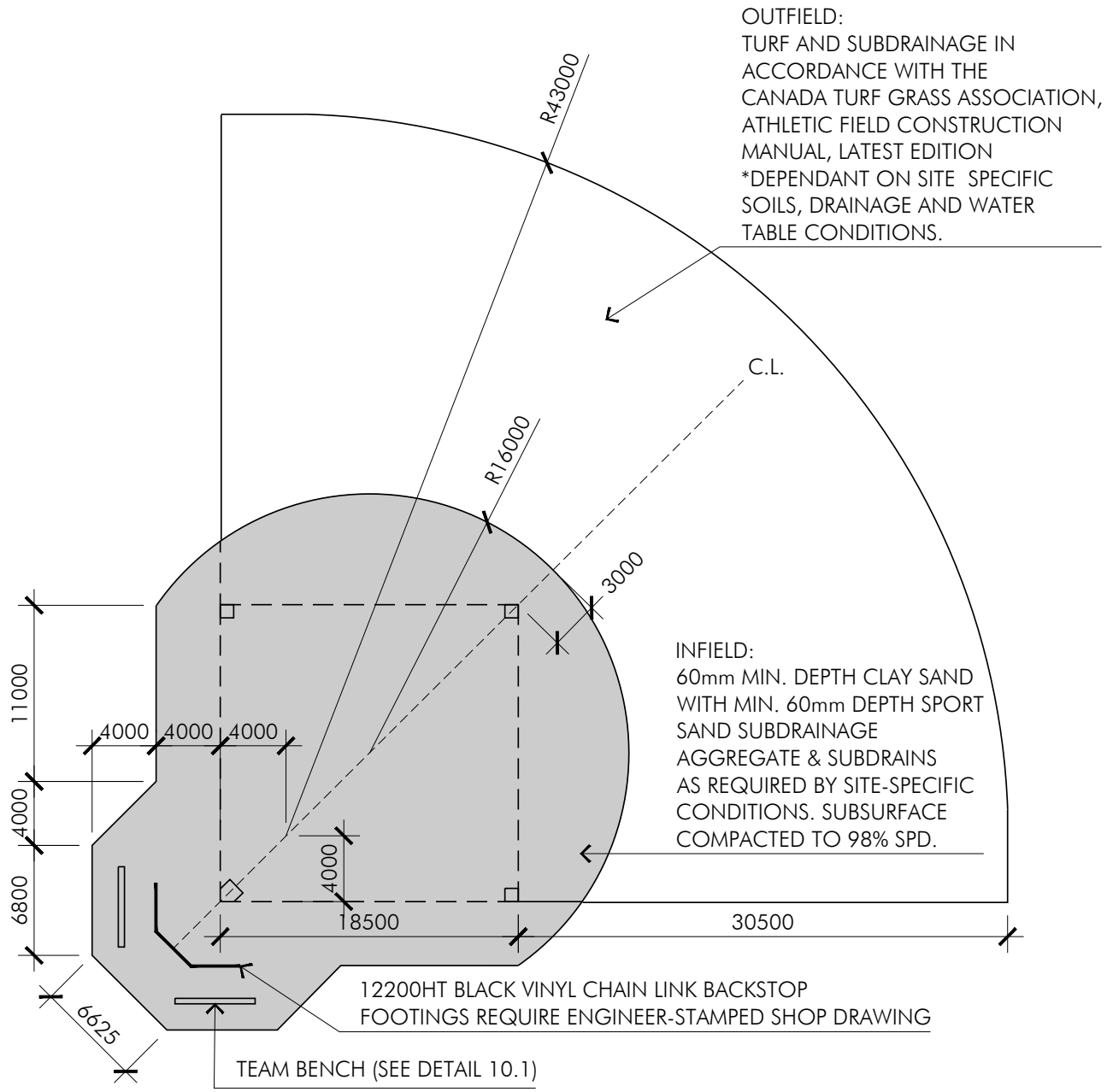


NOTES:

- ALL WORK TO CONFORM TO ONTARIO BUILDING CODE REQUIREMENTS.
- STRUCTURAL STEEL TO CONFORM TO CSA G40.21-44W. YIELD STRENGTH FOR IRON PIPE TO BE 35 KSI.
- WELDING OF STRUCTURAL STEEL TO CONFORM TO CSA STANDARD W59, UNDERTAKEN BY A FULLY CERTIFIED WELDER, BY THE CANADIAN WELDING BUREAU, MEETING REQUIREMENTS OF CSA STANDARD W47.
- WELDING ELECTRODES TO CONFORM TO ELECTRODE CLASS E70XX.
- CROSS BRACE EACH BAY.
- BOLTED CONNECTIONS TO USE ALVANIZED 1" Ø x 1-1/2" LONG BOLTS WITH A MINIMUM YIELD STRENGTH OF 36 KSI.
- SITE TO BE LEVELED, WITH A SOLID BASE PROVIDED, CAPABLE OF SUPPORTING BLEACHER + LIVE LOAD WITHOUT DETRIMENTAL SETTLEMENT. ALLOW FOR SOIL BEARING CAPACITY OF NOT LESS THAN 150KPA, WITH MINIMUM 98% SPD. BEST PRACTICE: PROVIDE CAST IN PLACE CONCRETE PAD WITH AODA COMPLIANT ACCESSIBLE WALKWAY CONNECTION AND EQUITABLE AODA WHEELCHAIR SEATING AREA IMMEDIATELY ADJACENT TO BLEACHERS.

SPORTS FEATURES BLEACHERS	SCALE = 1:50 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 10.2

TOWNSHIP OF MUSKOKA Lakes

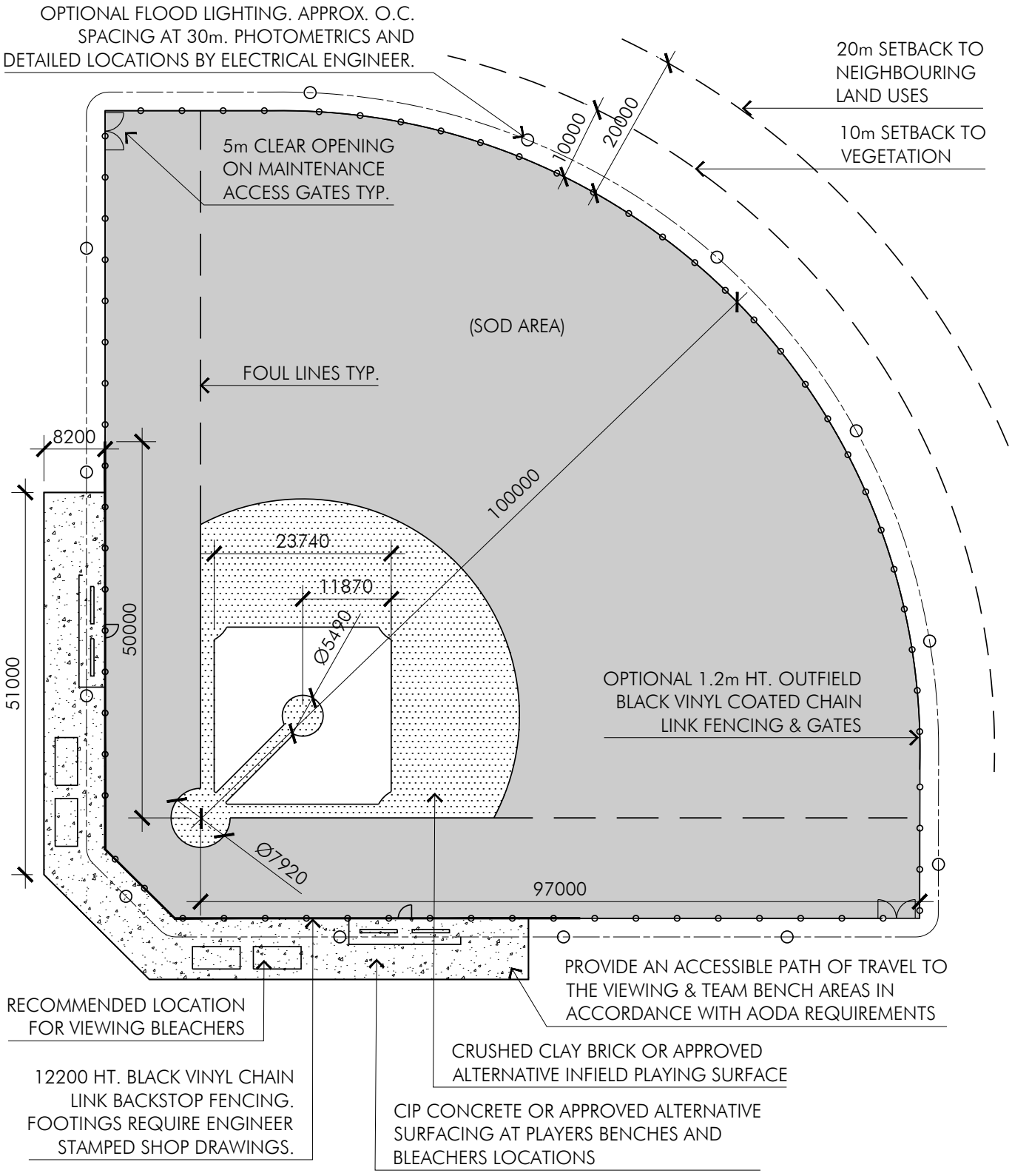


NOTES:

- 10m SETBACK TO PLANTINGS, 20m SETBACK TO PROPERTY LINES AND OTHER FACILITIES. 30m SETBACKTO RESIDENTIAL PROPERTY LINES WHEN ILLUMINATED.
- ALL RAILS TO BE 'FISH MOUNT' CUT. CRIMPING WILL NOT BE ACCEPTED.
- MESH TO BE ON PLAYING SIDE OF POSTS AND RAILS.
- ALL MEASUREMENTS ARE IN MILIMETRES UNLESS OTHERWISE STATED.

SPORTS FACILITIES T-BALL FIELD LAYOUT	SCALE = 1:400 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 10.3

TOWNSHIP OF MUSKOKA Lakes

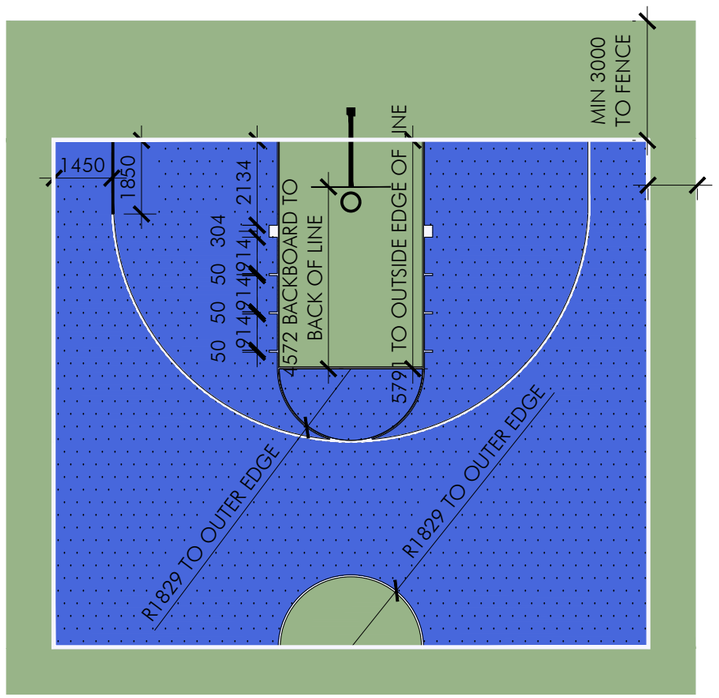


DESIGN NOTES:

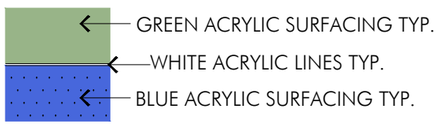
1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. SOD AREAS: TOPSOIL BLEND AND DEPTH, SUBDRAINAGE REQUIREMENTS AND IRRIGATION REQUIREMENTS IN ACCORDANCE WITH THE CANADA TURF GRASS ASSOCIATION, ATHLETIC FIELD CONSTRUCTION MANUAL, LATEST EDITION
   *DEPENDANT ON SPECIFIC SITE SOIL, DRAINAGE AND SUBSOIL CONDITIONS.

TREE PLANTINGS ON SLOPES	SCALE = 1:20 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 10.4

TOWNSHIP OF MUSKOKA Lakes

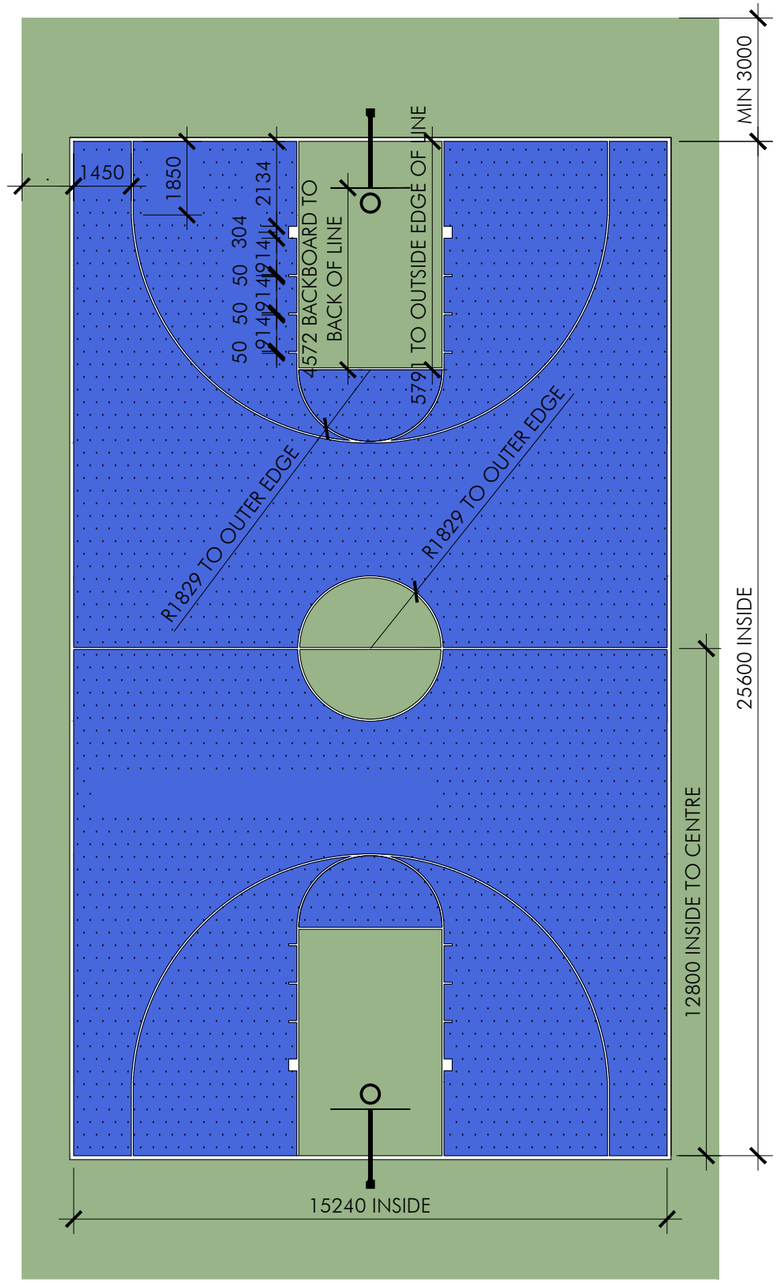


MUNICIPAL / RECREATIONAL STANDARD
HALF COURT (HIGH SCHOOL)
SCALE = 1:750

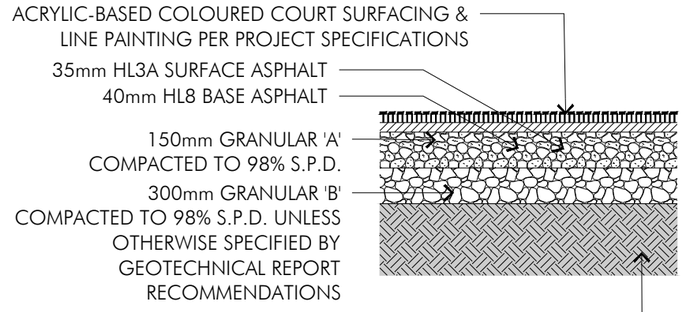


DESIGN NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. THESE DRAWINGS ARE 'TYPICAL' NOT SITE SPECIFIC. REFER TO SITE PLAN/LANDSCAPE PLAN FOR OVERALL LOCATIONS AND SPACING OF COURTS WITHIN SITE.
3. NETS TO BE: 42"x72" POLYCARBONATE BACKER BOARDS WITH BREAKAWAY RIMS & NETS. ON 152mm (6") SQUARE SCHEDULE 40 WALL HOT-DIP GALVANIZED TUBING POSTS, COMPLETE WITH POWDERCOAT OR APPROVED ALTERNATIVE FINISH (OR APPROVED ALTERNATIVE). NET FOOTINGS REQUIRE ENGINEER-STAMPED SHOP DRAWINGS.
4. ON FULL COURTS, CONSIDER FOR THE ADDITION OF A YARD HYDRANT AND RAISED CURBING WITH DRAINAGE OUTLET AND END CREASE LINEWORK FOR MULTI-SEASON FUNCTIONALITY AS A FLOODED RINK. OPTION TO HAVE A REFRIGERATED SURFACE IN MAJOR DESTINATION TYPE PARK SETTINGS.
5. ALL TOWNSHIP STANDARD PAVING AND SURFACING DETAILS ARE 'TYPICAL' AND PROVIDED FOR PROJECT BUDGET PURPOSES. SUITABILITY FOR SITE-SPECIFIC CONDITIONS TO BE VERIFIED BY PROJECT CONSULTING TEAM OR TOWNSHIP STAFF.



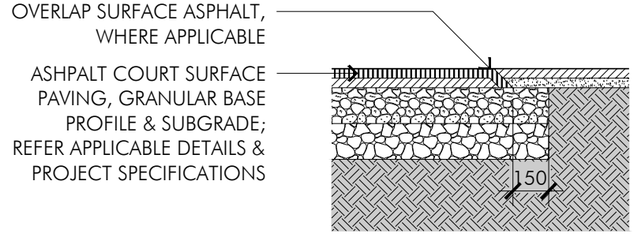
MUNICIPAL / RECREATIONAL STANDARD
FULL COURT (HIGH SCHOOL)
SCALE = 1:750



GENERAL NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. ASPHALT TO BE SMOOTH AND EVEN THROUGHOUT
3. ALL JOINTS TO BE STRAIGHT, CLEAN, VERTICAL AND FREE OF BROKEN OR LOOSE MATERIAL
4. ENSURE A CLEAN, FLUSH TRANSITION BETWEEN ASPHALT PAVING AND ADJACENT MATERIALS.
5. ALL THICKNESS' REFER TO COMPACTED THICKNESS.

TYPICAL COURT SURFACING
ASPHALT WITH COLOURED ACRYLIC COATING
SCALE = 1:25



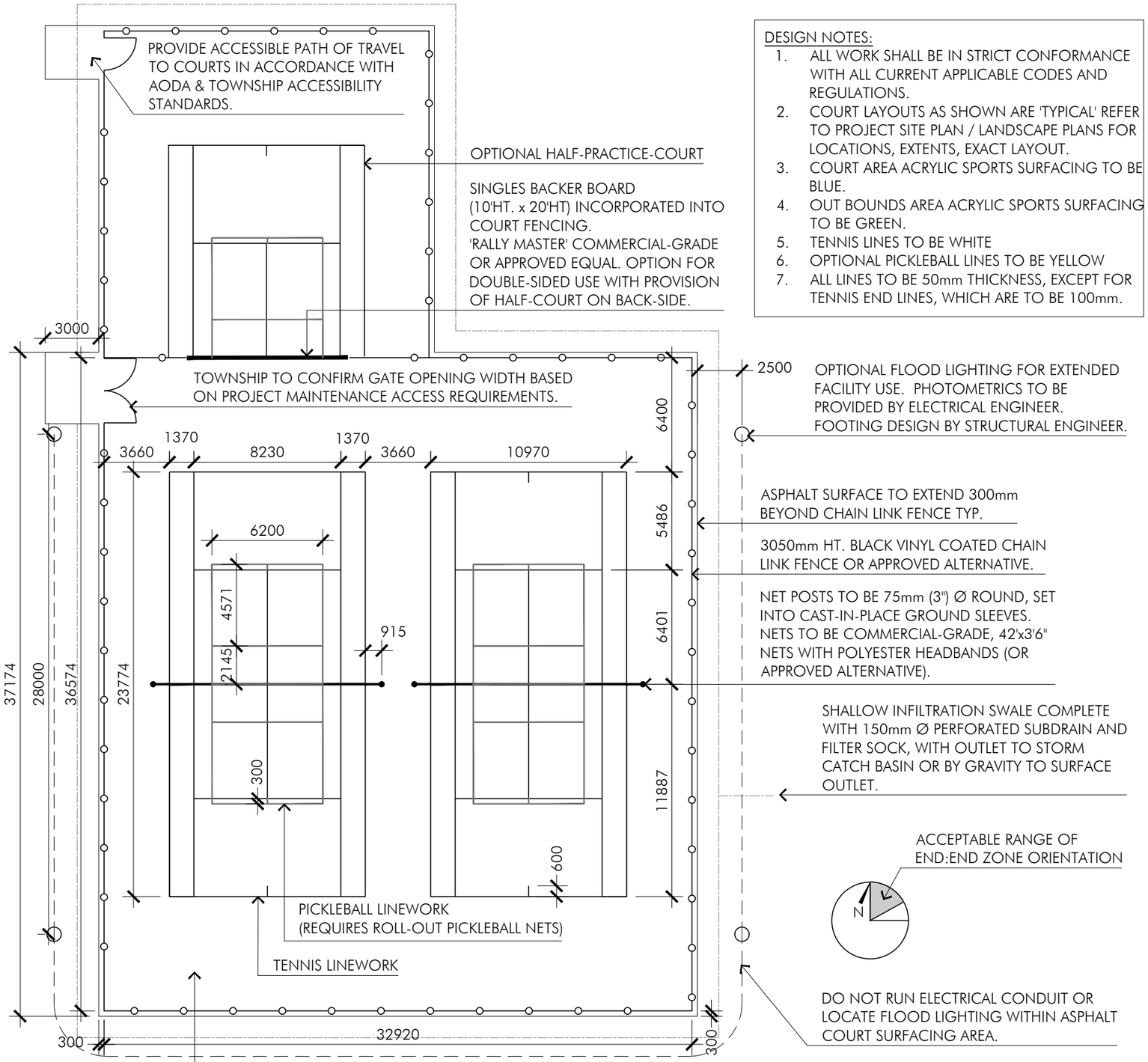
TYPICAL ASPHALT EDGE DETAIL
SCALE = 1:25

SPORTS FACILITIES
BASKETBALL COURTS

SCALE = AS SHOWN

LAST REVISED: SEPTEMBER 2024 FIGURE 10.5

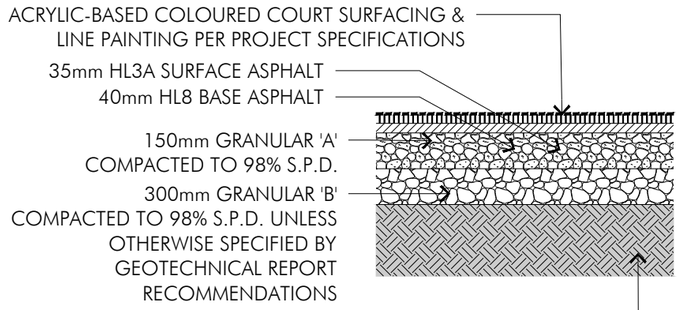
TOWNSHIP OF MUSKOKA Lakes



TYPICAL LAYOUT
SCALE = 1:250

DESIGN NOTES:

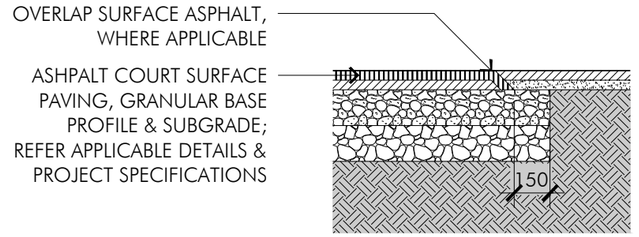
1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. COURT LAYOUTS AS SHOWN ARE 'TYPICAL' REFER TO PROJECT SITE PLAN / LANDSCAPE PLANS FOR LOCATIONS, EXTENTS, EXACT LAYOUT.
3. COURT AREA ACRYLIC SPORTS SURFACING TO BE BLUE.
4. OUT BOUNDS AREA ACRYLIC SPORTS SURFACING TO BE GREEN.
5. TENNIS LINES TO BE WHITE
6. OPTIONAL PICKLEBALL LINES TO BE YELLOW
7. ALL LINES TO BE 50mm THICKNESS, EXCEPT FOR TENNIS END LINES, WHICH ARE TO BE 100mm.



GENERAL NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. ASPHALT TO BE SMOOTH AND EVEN THROUGHOUT
3. ALL JOINTS TO BE STRAIGHT, CLEAN, VERTICAL AND FREE OF BROKEN OR LOOSE MATERIAL
4. ENSURE A CLEAN, FLUSH TRANSITION BETWEEN ASPHALT PAVING AND ADJACENT MATERIALS.
5. ALL THICKNESS' REFER TO COMPACTED THICKNESS.

TYPICAL COURT SURFACING
ASPHALT WITH COLOURED ACRYLIC COATING
SCALE = 1:25



TYPICAL ASPHALT EDGE DETAIL
SCALE = 1:25

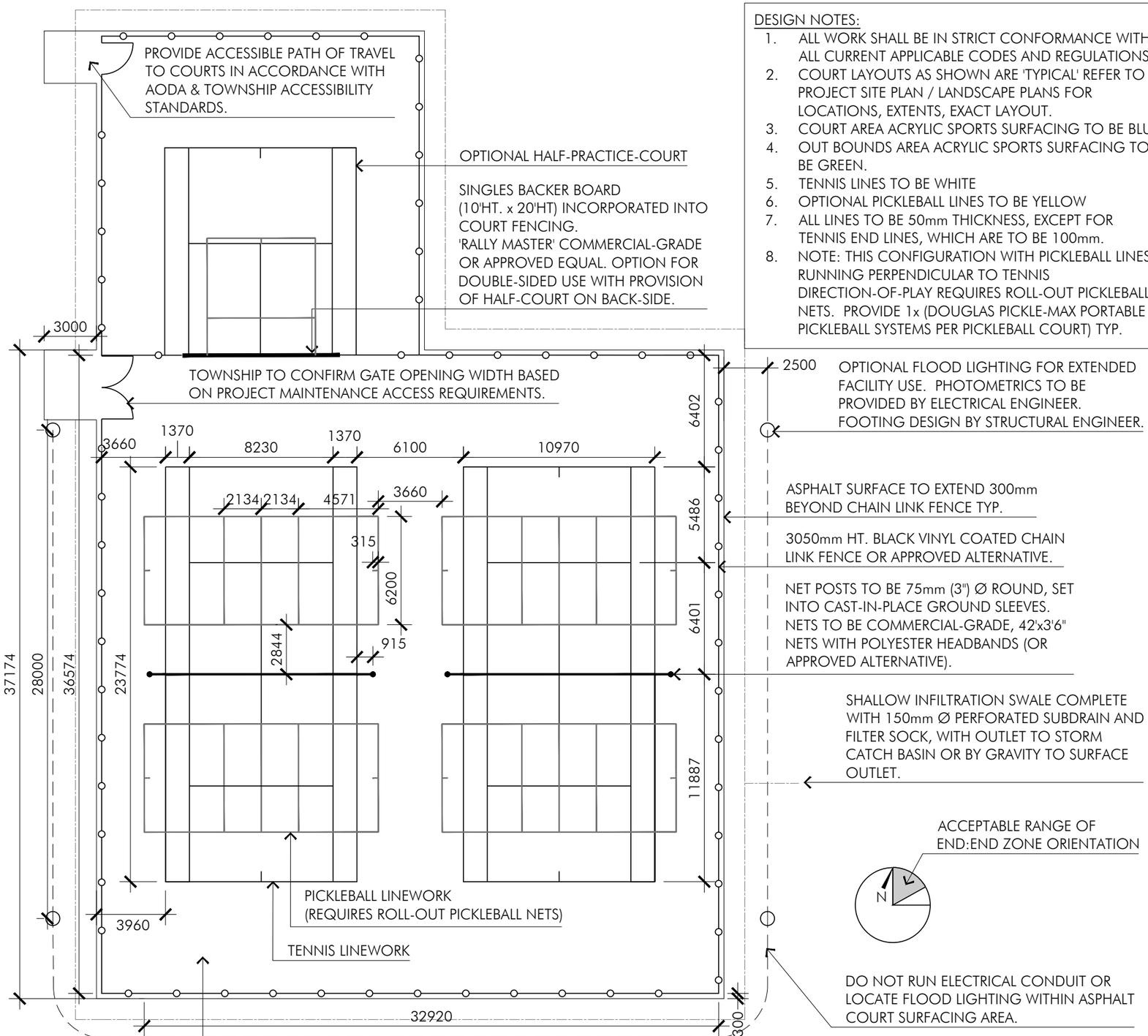
NOTE: ALL TOWNSHIP STANDARD PAVING AND SURFACING DETAILS ARE 'TYPICAL' AND PROVIDED FOR PROJECT BUDGET PURPOSES. SUITABILITY FOR SITE-SPECIFIC CONDITIONS TO BE VERIFIED BY PROJECT CONSULTING TEAM OR TOWNSHIP STAFF.

SPORTS FACILITIES
TENNIS COURTS
(WITH PARALLEL PICKLEBALL LINEWORK SHARING TENNIS NETS)

SCALE = AS SHOWN

LAST REVISED: SEPTEMBER 2024 FIGURE 10.6

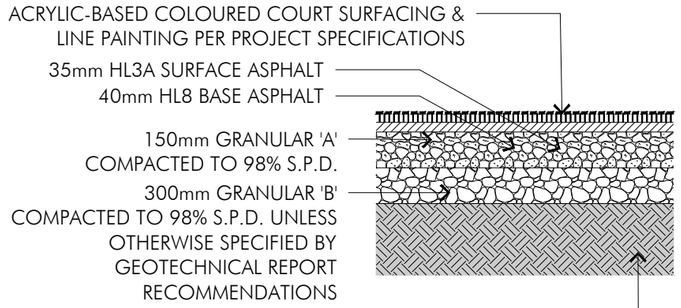
TOWNSHIP OF MUSKOKA Lakes



TYPICAL LAYOUT
SCALE = 1:250

DESIGN NOTES:

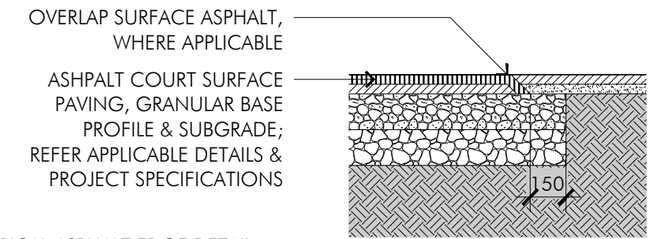
1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. COURT LAYOUTS AS SHOWN ARE 'TYPICAL' REFER TO PROJECT SITE PLAN / LANDSCAPE PLANS FOR LOCATIONS, EXTENTS, EXACT LAYOUT.
3. COURT AREA ACRYLIC SPORTS SURFACING TO BE BLUE.
4. OUT BOUNDS AREA ACRYLIC SPORTS SURFACING TO BE GREEN.
5. TENNIS LINES TO BE WHITE
6. OPTIONAL PICKLEBALL LINES TO BE YELLOW
7. ALL LINES TO BE 50mm THICKNESS, EXCEPT FOR TENNIS END LINES, WHICH ARE TO BE 100mm.
8. NOTE: THIS CONFIGURATION WITH PICKLEBALL LINES RUNNING PERPENDICULAR TO TENNIS DIRECTION-OF-PLAY REQUIRES ROLL-OUT PICKLEBALL NETS. PROVIDE 1x (DOUGLAS PICKLE-MAX PORTABLE PICKLEBALL SYSTEMS PER PICKLEBALL COURT) TYP.



GENERAL NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. ASPHALT TO BE SMOOTH AND EVEN THROUGHOUT
3. ALL JOINTS TO BE STRAIGHT, CLEAN, VERTICAL AND FREE OF BROKEN OR LOOSE MATERIAL
4. ENSURE A CLEAN, FLUSH TRANSITION BETWEEN ASPHALT PAVING AND ADJACENT MATERIALS.
5. ALL THICKNESS' REFER TO COMPACTED THICKNESS.

TYPICAL COURT SURFACING ASPHALT WITH COLOURED ACRYLIC COATING
SCALE = 1:25

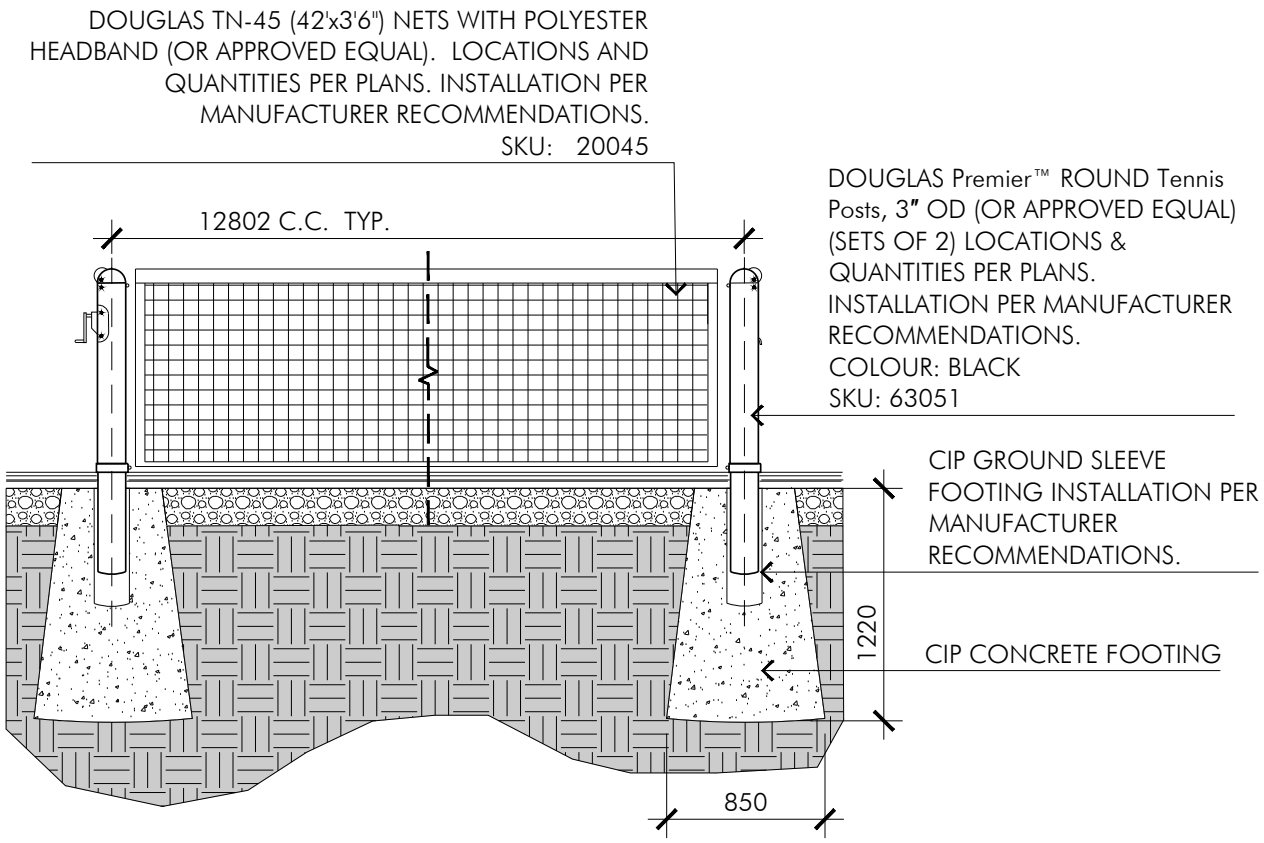


TYPICAL ASPHALT EDGE DETAIL
SCALE = 1:25

NOTE: ALL TOWNSHIP STANDARD PAVING AND SURFACING DETAILS ARE 'TYPICAL' AND PROVIDED FOR PROJECT BUDGET PURPOSES. SUITABILITY FOR SITE-SPECIFIC CONDITIONS TO BE VERIFIED BY PROJECT CONSULTING TEAM OR TOWNSHIP STAFF.

SPORTS FACILITIES TENNIS COURTS (PERPENDICULAR PICKLEBALL LINEWORK WITH ROLL OUT NETS)	SCALE = AS SHOWN LAST REVISED: SEPTEMBER 2024 FIGURE 10.7

TOWNSHIP OF MUSKOKA Lakes



NOTES:

FOOTINGS

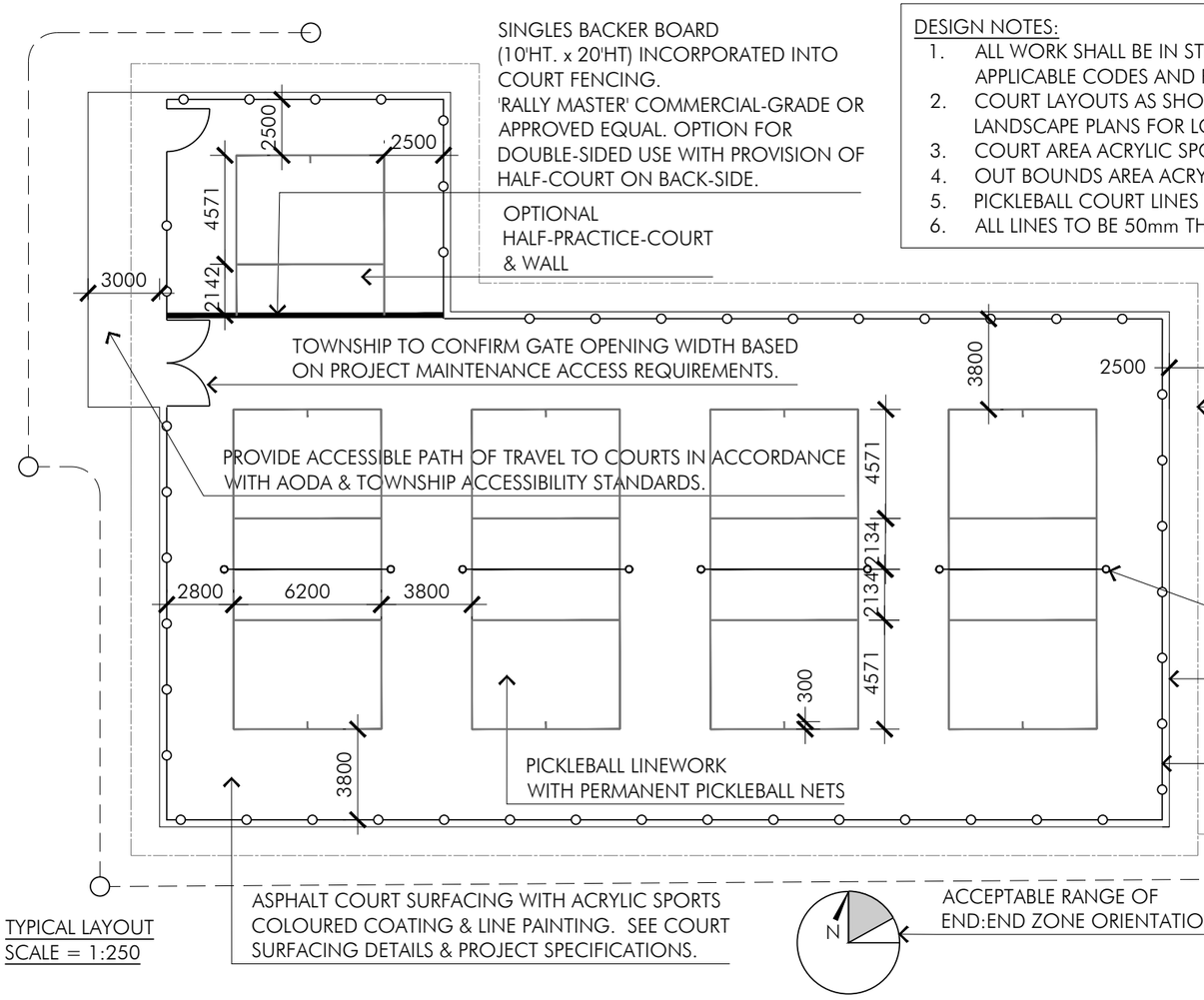
1. FOOTINGS SHALL BE PLACED ON UNDISTURBED SOIL.
2. PROTECT FOOTINGS EXPOSED TO FROST ACTION DURING CONSTRUCTION.

CONCRETE SPECIFICATION:

1. THE ULTIMATE 28 DAYS COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 32 MPA WITH MINIMUM AIR ENTRAINMENT CONTENT OF 5%-8% AND MAXIMUM WATER/CEMENT RATIO BY MASS OF 0.45.
2. ONLY READY MIX CONCRETE IS PERMITTED ON THIS JOB. THE CONCRETE SUPPLIER SHALL BE RESPONSIBLE FOR CONCRETE MIX DESIGN.
3. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH CSA A23 AND CSA G 30.

SPORTS FACILITIES TENNIS NETS	SCALE = 1:40
	LAST REVISED: SEPTEMBER 2024 FIGURE 10.8

TOWNSHIP OF MUSKOKA Lakes



TYPICAL LAYOUT
SCALE = 1:250

ACCEPTABLE RANGE OF END:END ZONE ORIENTATION

SHALLOW INFILTRATION SWALE COMPLETE WITH 150mm Ø PERFORATED SUBDRAIN AND FILTER SOCK, WITH OUTLET TO STORM CATCH BASIN OR BY GRAVITY TO SURFACE OUTLET.

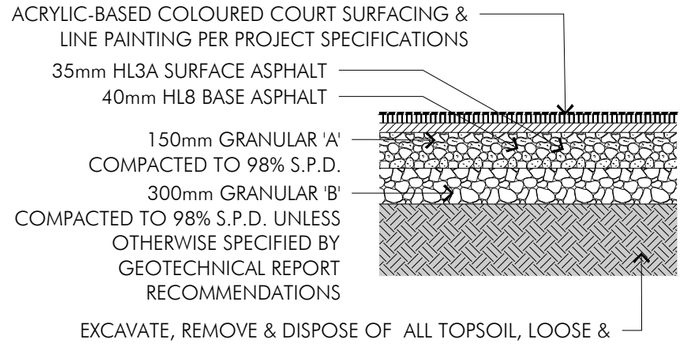
NET POSTS TO BE 75mm (3") Ø ROUND, SET INTO CAST-IN-PLACE GROUND SLEEVES.
NETS TO BE COMMERCIAL-GRADE, 42'x3'6" NETS WITH POLYESTER HEADBANDS (OR APPROVED ALTERNATIVE).

ASPHALT SURFACE TO EXTEND 300mm BEYOND CHAIN LINK FENCE TYP.

3050mm HT. BLACK VINYL COATED CHAIN LINK FENCE OR APPROVED ALTERNATIVE.

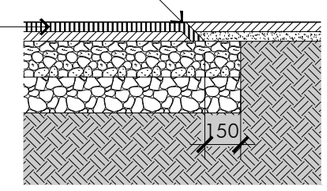
OPTIONAL FLOOD LIGHTING FOR EXTENDED FACILITY USE. PHOTOMETRICS TO BE PROVIDED BY ELECTRICAL ENGINEER. FOOTING DESIGN BY STRUCTURAL ENGINEER. DO NOT RUN ELECTRICAL CONDUIT OR LOCATE FLOOD LIGHTING WITHIN/UNDER COURT SURFACING.

DESIGN NOTES:
1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. COURT LAYOUTS AS SHOWN ARE 'TYPICAL' REFER TO PROJECT SITE PLAN / LANDSCAPE PLANS FOR LOCATIONS, EXTENTS, EXACT LAYOUT.
3. COURT AREA ACRYLIC SPORTS SURFACING TO BE BLUE.
4. OUT BOUNDS AREA ACRYLIC SPORTS SURFACING TO BE GREEN.
5. PICKLEBALL COURT LINES TO BE WHITE
6. ALL LINES TO BE 50mm THICKNESS.



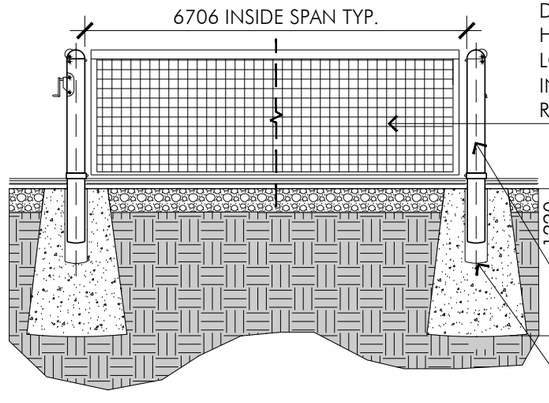
GENERAL NOTES:
1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. ASPHALT TO BE SMOOTH AND EVEN THROUGHOUT
3. ALL JOINTS TO BE STRAIGHT, CLEAN, VERTICAL AND FREE OF BROKEN OR LOOSE MATERIAL
4. ENSURE A CLEAN, FLUSH TRANSITION BETWEEN ASPHALT PAVING AND ADJACENT MATERIALS.
5. ALL THICKNESS' REFER TO COMPACTED THICKNESS.

TYPICAL COURT SURFACING ASPHALT WITH COLOURED ACRYLIC COATING
SCALE = 1:25



TYPICAL ASPHALT EDGE DETAIL
SCALE = 1:25

NOTE: ALL TOWNSHIP STANDARD PAVING AND SURFACING DETAILS ARE 'TYPICAL' AND PROVIDED FOR PROJECT BUDGET PURPOSES. SUITABILITY FOR SITE-SPECIFIC CONDITIONS TO BE VERIFIED BY PROJECT CONSULTING TEAM OR TOWNSHIP STAFF.



DOUGLAS PN30 (21'-9"'x31") NETS WITH POLYESTER HEADBAND (SKU 20103) (OR APPROVED EQUAL). LOCATIONS AND QUANTITIES PER PLANS. INSTALLATION PER MANUFACTURER RECOMMENDATIONS.

DOUGLAS SW-36 DELUX PICKLEBALL QUICKSTART POST SET (SKU 63079) (OR APPROVED EQUAL) (SETS OF 2) LOCATIONS & QUANTITIES PER PLANS. INSTALLATION PER MANUFACTURER RECOMMENDATIONS. COLOUR: BLACK

CIP GROUND SLEEVE FOOTING INSTALLATION PER MANUFACTURER RECOMMENDATIONS.

TYPICAL PICKLEBALL NETS
SCALE 1:50

PICKLEBALL NET NOTES:
FOOTINGS
1. FOOTINGS SHALL BE PLACED ON UNDISTURBED SOIL.
2. PROTECT FOOTINGS EXPOSED TO FROST ACTION DURING CONSTRUCTION.

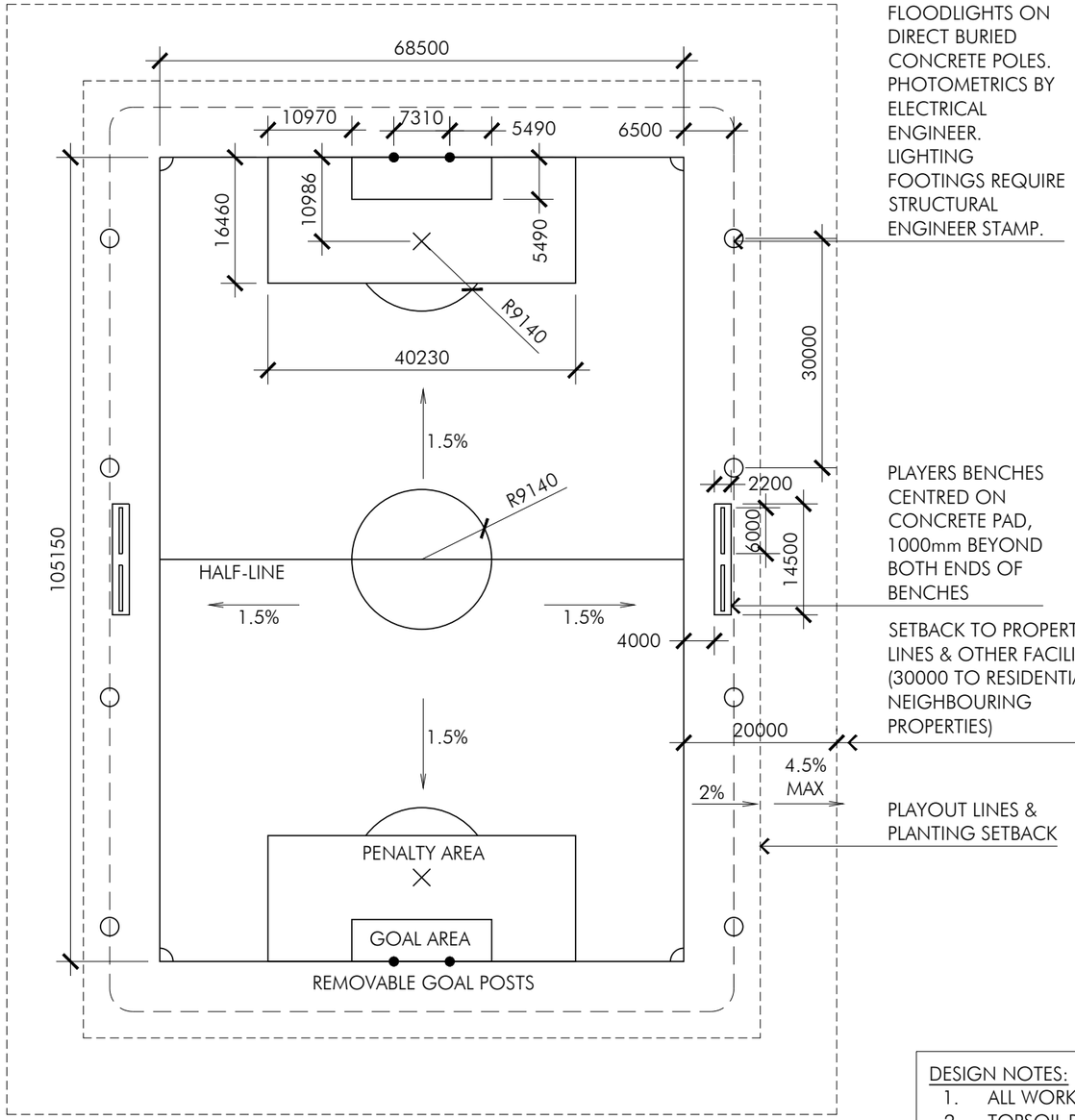
CONCRETE SPECIFICATION:
1. THE ULTIMATE 28 DAYS COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 32 MPA WITH MINIMUM AIR ENTRAINMENT CONTENT OF 5%-8% AND MAXIMUM WATER/CEMENT RATIO BY MASS OF 0.45.
2. ONLY READY MIX CONCRETE IS PERMITTED ON THIS JOB. THE CONCRETE SUPPLIER SHALL BE RESPONSIBLE FOR CONCRETE MIX DESIGN.
3. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH CSA A23 AND CSA G 30.

SPORTS FACILITIES
PICKLEBALL COURTS

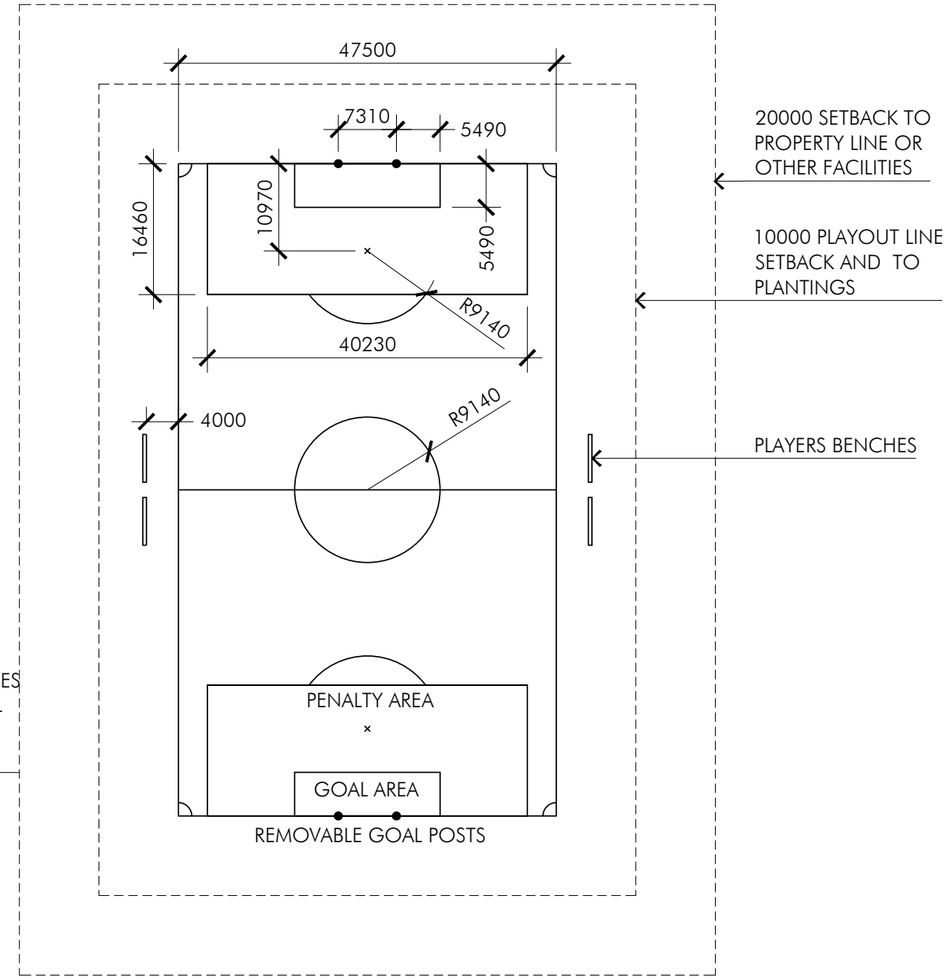
SCALE = AS SHOWN

LAST REVISED: SEPTEMBER 2024 FIGURE 10.9

TOWNSHIP OF MUSKOKA Lakes



TYPICAL SENIOR
SOCCER FIELD LAYOUT



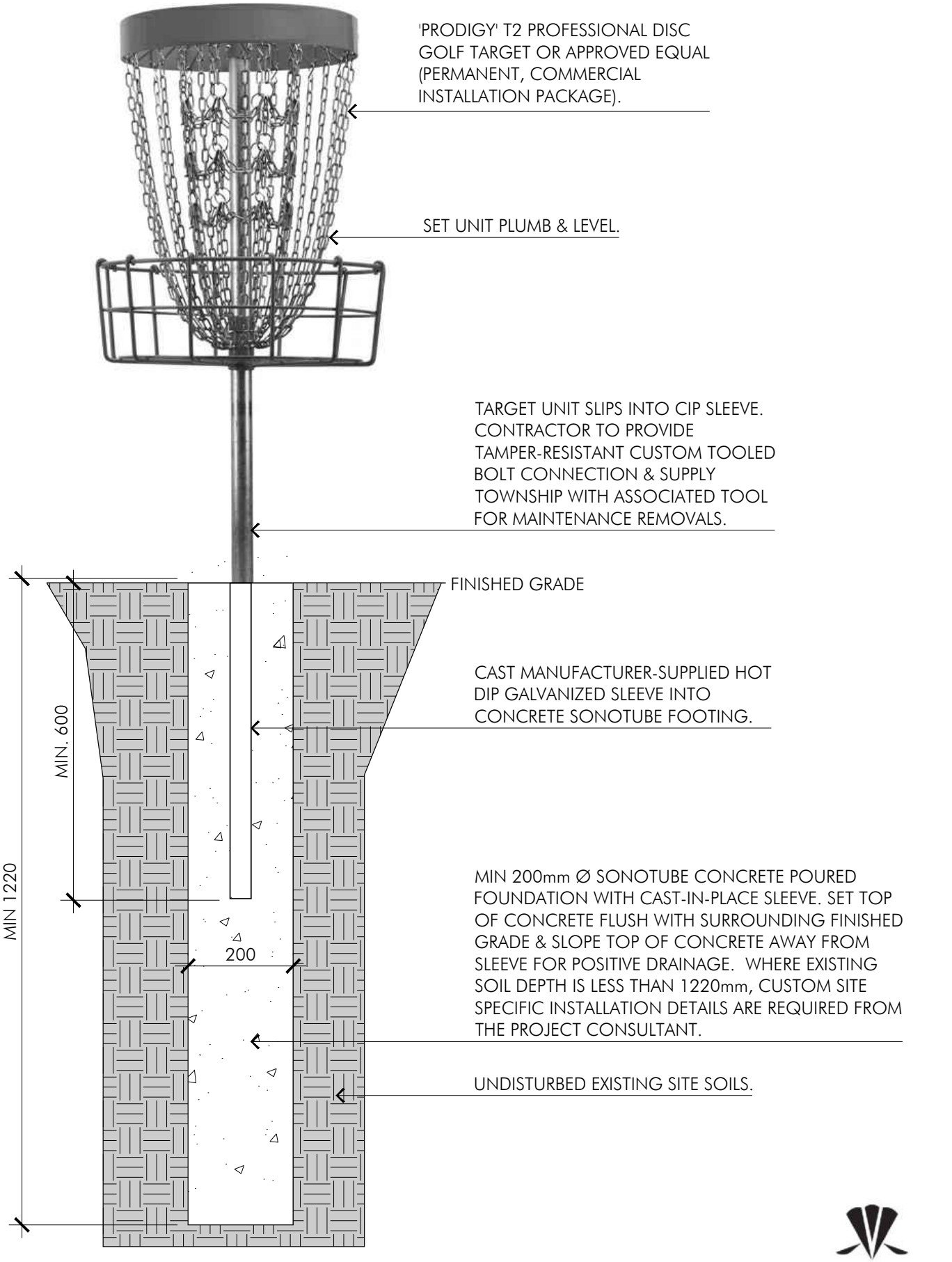
TYPICAL JUNIOR
SOCCER FIELD LAYOUT

DESIGN NOTES:

1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH ALL CURRENT APPLICABLE CODES AND REGULATIONS.
2. TOPSOIL BLEND AND DEPTH, SUBDRAINAGE REQUIREMENTS AND IRRIGATION REQUIREMENTS IN ACCORDANCE WITH THE CANADA TURF GRASS ASSOCIATION, ATHLETIC FIELD CONSTRUCTION MANUAL, LATEST EDITION *DEPENDANT ON SPECIFIC SITE SOIL, DRAINAGE AND SUBSOIL CONDITIONS.

SPORTS FACILITIES SOCCER PITCH LAYOUTS	SCALE = 1:750
	LAST REVISED: SEPTEMBER 2024 FIGURE 10.10

TOWNSHIP OF MUSKOKA Lakes



SPORTS FACILITIES DISC GOLF TARGET	SCALE = 1:10 METRIC	
	LAST REVISED: SEPTEMBER 2024	FIGURE 10.11

TOWNSHIP OF MUSKOKA Lakes