HIGHLANDS PUMP TRACK
CONCEPT DESIGN REPORT

JANUARY 2024

Highlands est. 1921 COMMUNITY LEAGUE

Edmonton

ISL

NEWLINE SKATEPARKS

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DOCUMENT IS DESIGNED TO BE READ ON SCREEN IN ‘SIDE-BY-SIDE’ VIEW

1.0 EXECUTIVE SUMMARY

This executive summary outlines a City led project, initiated by the community under the Neighbourhood Parks Development Program, to construct a pump track in Gaby Haas Park, a neighbourhood-scale amenity designed for users of all ability levels. The initiative has progressed through key stages, demonstrating community support and a comprehensive approach to addressing potential challenges.

PROJECT OVERVIEW:

- Needs Assessment and Business Case: The initiative began with a needs assessment and business case, identifying the demand for a pump track and establishing the project's economic viability.
- Concept Options: In August 2023, the team successfully developed two options of different sizes of pump tracks along with corresponding cost estimates.
- Community Engagement: Extensive community engagement ensued, featuring the presentation of concept options. The feedback garnered demonstrated support for the project, favoring the larger pump track, as well as additional seating areas and landscaping elements.
- Preferred Concept Development: The community's input was integrated into the development of a preferred concept, offering a well-rounded design. This preferred concept is accompanied by a detailed cost estimate, providing a clear road map for project implementation.

TIMELINE AND MILESTONES:

- Preliminary Design and Fundraising: The intention is to complete the preliminary design and fundraising phase in 2024, securing the necessary resources for project execution.
- Tender and Construct: If fundraising is successful, the project would enter the tender and construction phase in 2025.
- The pump track would be in operation in 2026.

PROJECT RISKS:

- Community Funding Shortfall: A potential risk lies in a funding shortfall by the community group. Mitigation strategies include exploring additional funding sources and optimizing project costs.
- Unknown Ground Conditions: Unforeseen ground conditions may impact construction costs. The project team will conduct thorough site assessments to minimize surprises and plan contingencies.
- Local Resident Resistance: Continued resistance from a group of local residents is acknowledged as a risk. Ongoing community engagement efforts and transparent communication will be crucial in addressing concerns and building consensus.

In summary, the Highlands Pump Track Initiative has progressed through key stages, garnering strong community support. The comprehensive approach to project development, coupled with risk mitigation strategies, positions the initiative for success, providing an inclusive recreational amenity for the community.

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2.0 PROJECT BACKGROUND

The Highlands Pump Track Project is an initiative to build a multi-use asphalt pump track suitable for a wide range of abilities, from introductory to advanced level, for an inclusive experience for the current and future community. The design is intended to be suitable for all-wheels access for scooters, skateboards, roller blades, bikes of all types & wheelchairs, The amenity is intended to be a recreation space for fitness and skill development. It will be suited for all ages and abilities, from 3+ upwards.

Initiated by a small group of community members as a project of the Highlands Community League, the project was formalized in 2022 through the development of a Neighbourhood Park Development Program (NPDP) Business Case that outlines the strategy for the project, including estimated funding requirements.

A Needs Assessment was completed in November 2022 that collected input from the Highlands community on the level of support for a pump track (called a “bike bump” in the Needs Assessment survey). The results demonstrated support for the development of a pump track in Gaby Haas Park.

Following approval of the Business Case by the City of Edmonton, ISL Engineering and Land Services was retained to support the project by developing a concept plan and cost estimate. ISL partnered with New Line Skateparks to undertake the work described in this report.

3.0 GOALS AND OBJECTIVES

The objective of the project is to create a place for Highlands residents of all ages and abilities to recreate by developing an amenity that is safe, while still presenting a challenge. This pump track presents a unique opportunity for active recreation and will establish a new gathering spot in the neighborhood. Gaby Haas Park will be revitalized with an increase in users to the space.

PROJECT GOALS (SHORT TERM)

- Increase recreation opportunities for residents of all ages in the community.
- Create another location for families and kids of all ages to gather, build community, and have fun.
- Animate the currently underutilized Gaby Haas park.
- Create a local amenity that increases the physical literacy skill of its users.

PROJECT BENEFITS/OUTCOMES (LONG TERM)

- The pump track amenity is aimed at attracting and retaining a diverse population in the neighborhood.
- The asphalt surface will provide an amenity that is usable earlier in the spring, later in the fall, and during or after rainfall. Required maintenance would be reduced and longevity would be increased.
- Key stakeholders and the community at large will be involved in the design process, which helps to build a sense of community. The fundraising campaign for the pump track will energize the community promote collaboration.
- Once the amenity is built, residents will have a local gathering place and a space to go for a unique recreation experience. Not many communities in Edmonton have a similar amenity, so it will be a source of pride that Highlands has a pump track.

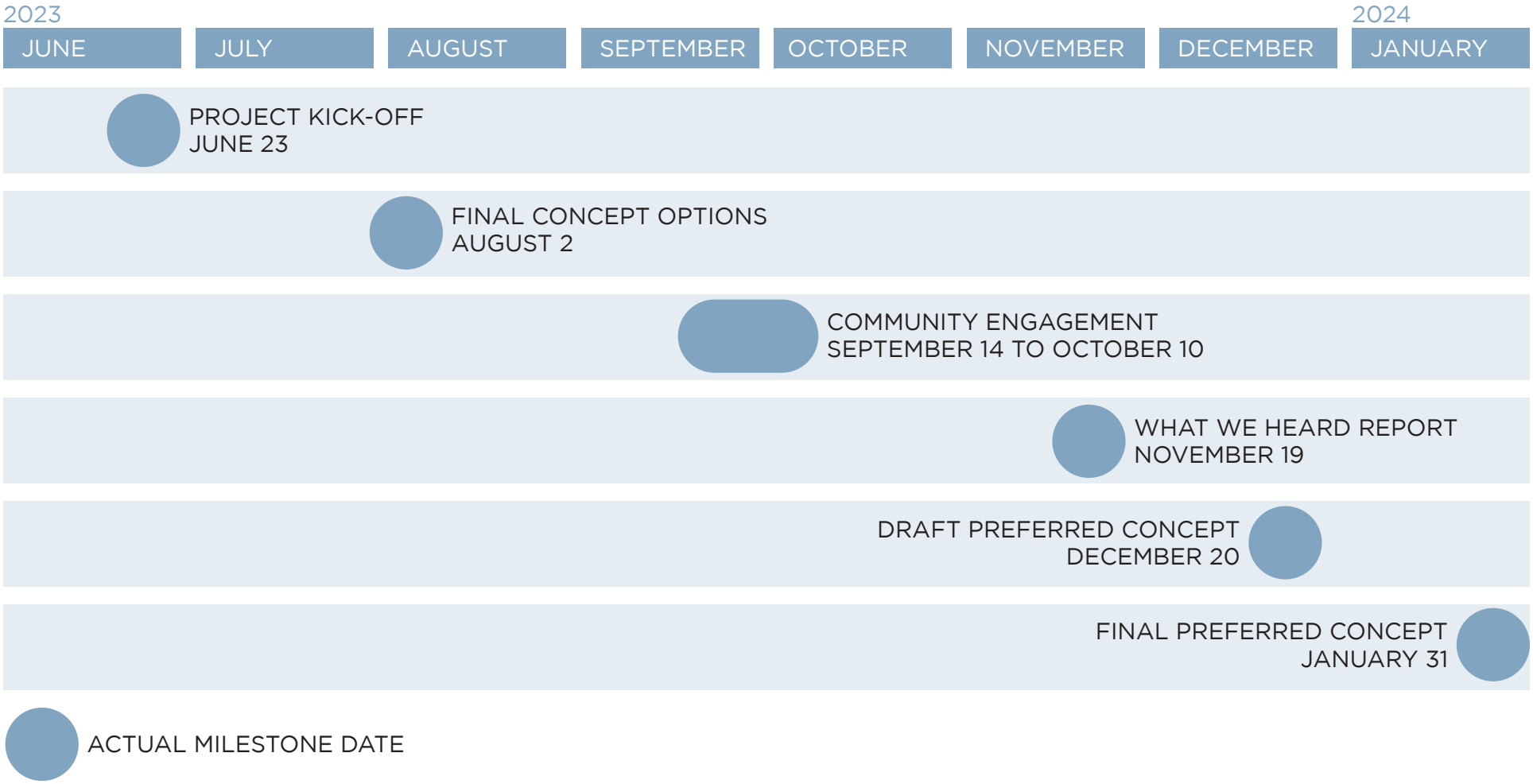
4.0 PROJECT TIMING, DURATIONS, & MILESTONES

The Highlands Pump Track Concept project began in June of 2023 and was completed in January of 2024. Refer to the project schedule on the following page for the milestone dates. Some delays were encountered to accommodate community requirements and engagement.

Key Milestones were:

- Project Kick-Off Meeting (June 23, 2023)
- Final Concept Options (August 2, 2023)
- Community Engagement (September 14 to October 10, 2023)
- What we Heard Report (November 19, 2023)
- Draft Preferred Concept (December 20, 2023)
- Final Preferred Concept Report (January 31, 2024)

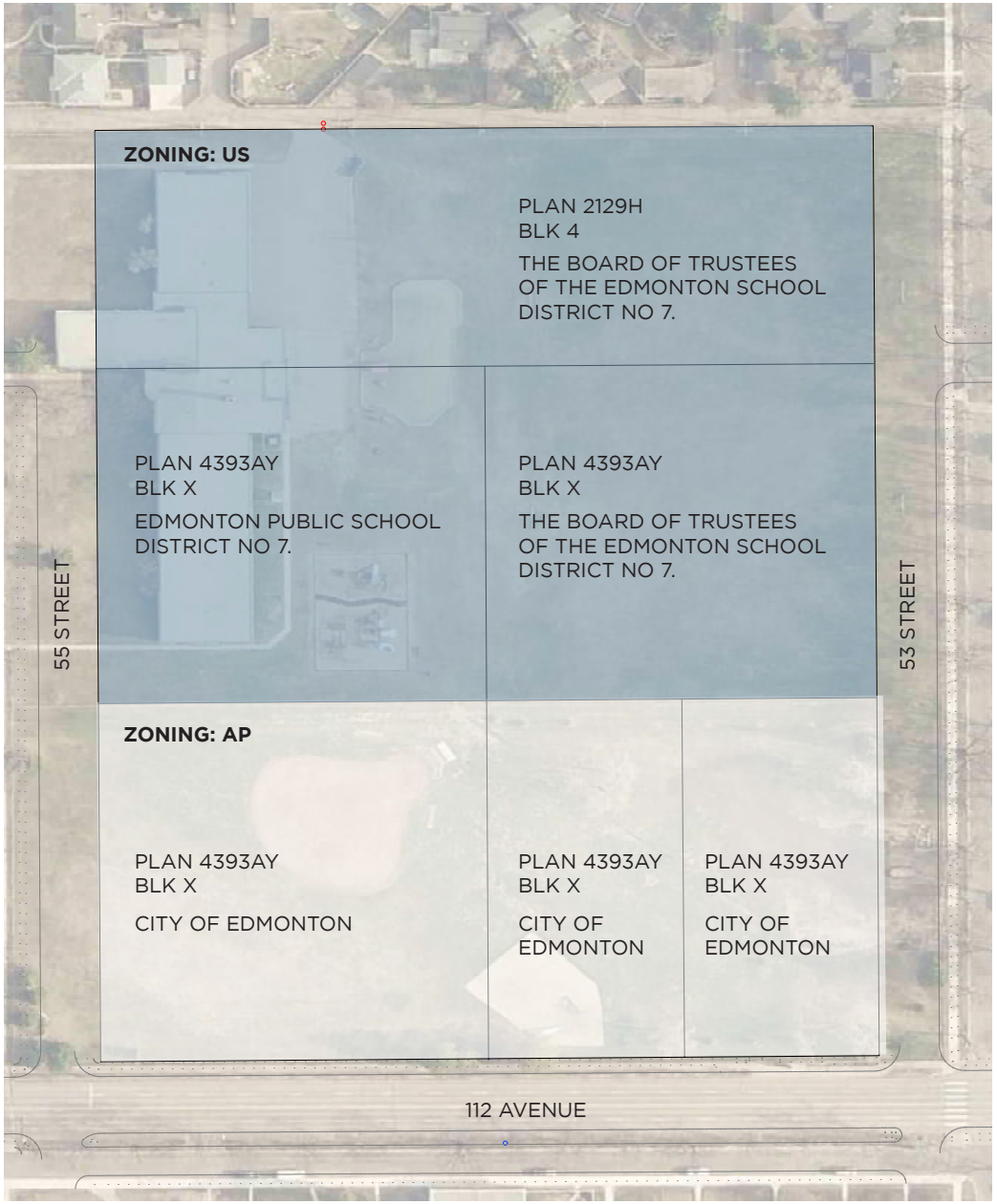
5.0 PROJECT SCHEDULE



6.0 PROJECT SITE

The project is located in Gaby Haas Park in the Highlands neighbourhood. Situated on the north side of 112 Avenue, between 53 Street and 55 Street, the park consists of a number of separately titled parcels. The north half of the park is zoned US and is titled to the Edmonton Public School District No. 7. The existing Mount Royal School is no longer in use and potential future uses for the building and the land are unknown at this time. The south half of the park is zoned AP and is titled to the City of Edmonton. Refer to the Zoning & Land Use Plan on the following page.

CONTEXT PLAN



ZONING & LAND USE

PROJECT SITE CONTINUED

Gaby Haas Park contains a number of existing features and amenities. Refer to the Site Plan on the following page and the site photos on page 10. The previously mentioned Mount Royal School and associated parking lot on the northwest portion of the site. Two rectangular playing fields on the northeast portion of the site and a ball diamond is located on the southwest portion of the site. Three relatively small playground areas are present, two on the north side of the site near the school building and one on the south side close to 112 Avenue.

The site is fenced around the perimeter with chain link fencing. There is also chain link fencing running east/west within the park, separating the School District lands from the City lands. A number of trees, both mature and newly planted are present on the south half of the site.

No specific observations on site drainage were made, however it is noted that there is no storm sewer within the site. The closest storm sewer infrastructure is located near the intersection of 53 Street and 112 Avenue. Refer to the Utilities Plan on page 9. The site is generally flat and is covered in mown turf.


PARKING LOT
MOUNT ROYAL SCHOOL
EXISTING PLAYGROUND
EXISTING RECTANGULAR FIELD
EXISTING RECTANGULAR FIELD
EXISTING PLAYGROUND
55 STREET
53 STREET
EXISTING BALL DIAMOND
EXISTING PLAYGROUND
SITE ACCESS
112 AVENUE

SITE PLAN

UTILITIES PLAN

KEY PLAN

SITE PHOTOS

7.0 DESIGN CONSIDERATIONS

The following design considerations were created to inform the development of the concept options. They are used as a touchstone throughout the process to evaluate the design iterations.

A PLACE FOR GATHERING

The project creates a place for the community to gather for recreation and spectating. Seating is provided between the pump track and the playground to allow users to observe what is happening in both spaces.

NEIGHBOURHOOD SCALE AMENITY

The pump track is sized to fit into Gaby Haas Park without impacting existing uses (playground & ball diamond) or prohibiting other potential uses or future enhancements. It is a neighbourhood level amenity and is scaled accordingly.

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

The recommended location for the pump track is near 112 Avenue which allows for passive surveillance of the space by passers-by on the roadway and sidewalk.

NEIGHBOURLINESS

The pump track encourages interaction between community members in Gaby Hass Park. It is developed through a process of engaging with the community and listening to the feedback received.

SKILL & PROGRESSION LEVELS

The pump track is designed to accommodate users of all ability levels. Encouraging use by beginners while providing an appropriate challenge and diversity for advanced users. Refer to the description on the following page.

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8.0 CONCEPT OPTIONS

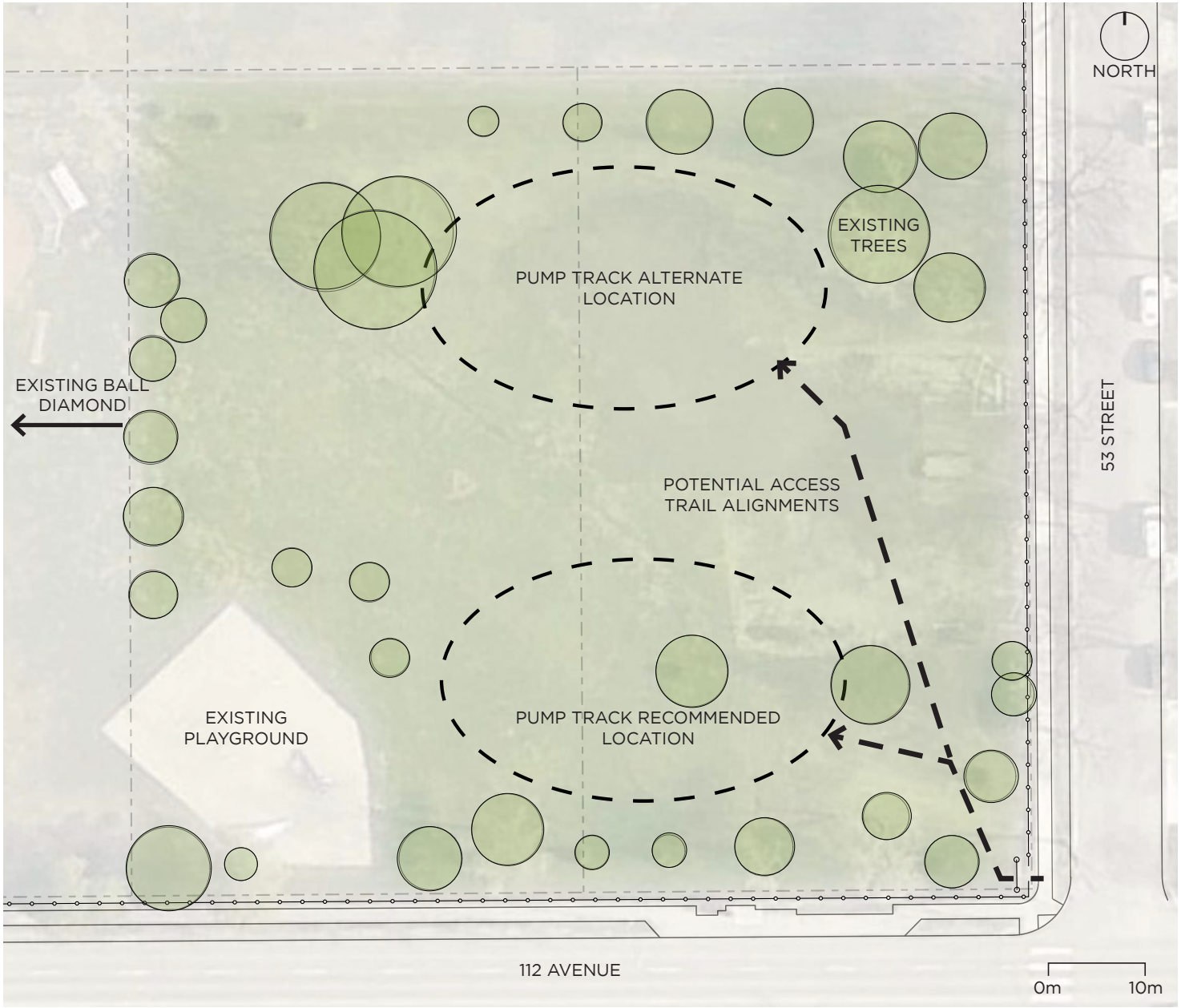
The first consideration in the creation of the concept options was where to locate the pump track on the site. Two potential locations were identified and are shown on the plan on the following page.

The recommended location is on the south end of the park, alongside 112 Avenue, between the playground and 53 Street. This location benefits from good visibility from the surrounding streets and a close proximity to the playground, enabling the development of a more integrated activity node. It is also close to the pedestrian site access at the intersection of 112 Avenue and 53 Street, minimizing the length of trail required to connect to the pump track.

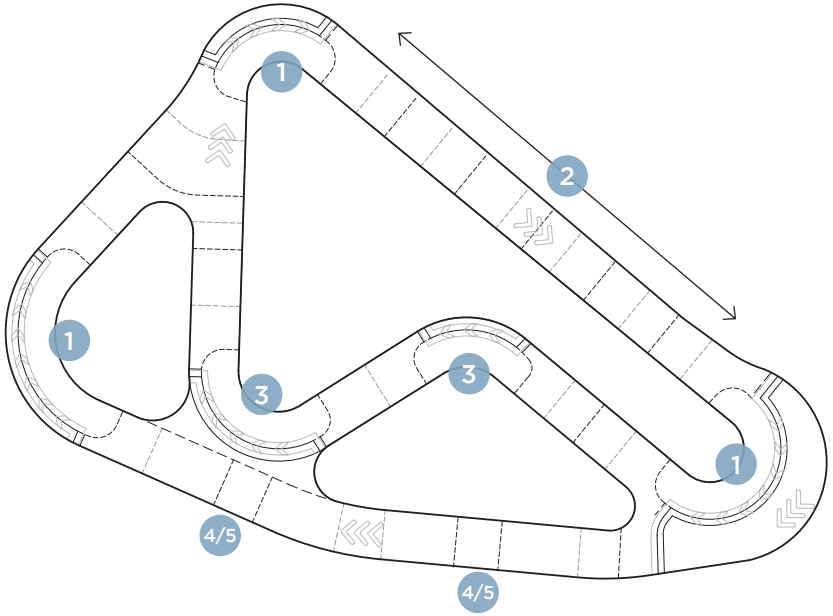
The alternate location is further to the north, near some mature trees. This location would benefit from the large trees which provide shade and some buffering from the wind. However, the pump track is located further from the surrounding streets which reduces visibility and requires a longer trail to connect to the site access point. This reduced visibility is not in alignment with the CPTED consideration described above.

In addition to the pump track, other amenities are proposed to support the creation of a gathering space and activity node for the community. Refer to the landscape plans on pages 17 & 19. In both options, an asphalt staging area is provided at the drop-in area of the pump tracks. This staging area allows riders to queue up for their turn on the track. Seating is provided for those having a rest. Additional seating is provided near the playground, enabling park users to observe what is happening in both spaces. The landscaped transition areas along the perimeter of the pump track are seeded with naturalized grasses, as is the interior pockets within the pump track. Naturalized grasses require little maintenance throughout the year, perhaps a single mowing in the fall, limiting the amount of effort required of City Operations staff to maintain the area.

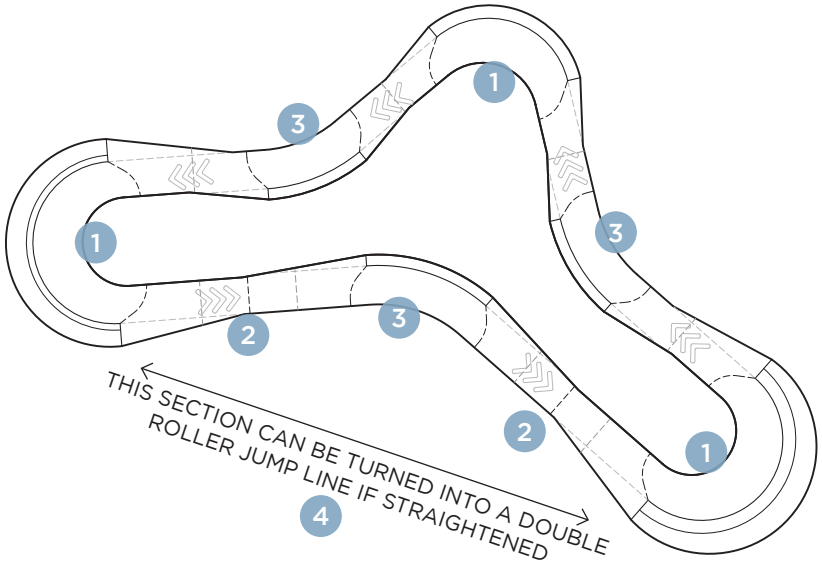
Surface drainage in the interior landscape pockets is captured in cobble sump pits, eliminating the need to install costly storm sewer. The feasibility of this approach will be confirmed following the completion of a geotechnical investigation.



PUMP TRACK LOCATION OPTIONS



PUMP TRACK OPTION 1 • FEATURES PLAN



PUMP TRACK OPTION 2 • FEATURES PLAN

Option 1 provides two loops within the pump track equaling 450 sq.m. of ridable area.

Option 2 consists of a single loop and totals 270 sq.m. of ridable area.

Both tracks have features that allow multiple skill levels to utilize the same terrain. As skill level increases the rider can use the same feature at higher speeds or get air off features. (eg. a beginner user can roll through a double bump, while an advanced user can ride at more speed and air between the double bump)

Terrain is balanced to allow for different styles of riding. Back to back bermed turns allow for flowing left and right sinuous turns. Straighter parts of the track introduce tabletops and double bumps that allow for jumps and airs by more advanced users, while still being approachable for beginner users to roll over.

The pumptracks are sized for a community/neighbourhood development to allow local riders to have a safe location to practice. The scale and approachability caters for younger or beginner riders to develop skills that can be transferable to larger district or destination parks, while also balancing terrain features sizes to allow for skills development to intermediate and beyond, and not have the park become “boring” too quickly for the local riders.

1

TURNING BERM

2

ROLLERS / PUMP BUMPS

3

SWITCHBACK BERMED TURNS

4

DOUBLE ROLLER JUMPS

Easier to navigate if skill level is not able to jump the gap.

5

TABLE TOP JUMPS

Advanced jumps with sharper takeoff and landing lips than double rollers.

EXAMPLES OF PUMP TRACK FEATURES

PUMP TRACK OPTION 1 • LANDSCAPE PLAN

1

ACCESS TRAIL

1.8m (6') wide asphalt walk provides an accessible connection from the sidewalk to the staging area of the pump track. 1.8m provides sufficient width for two bicycles or wheelchairs to pass each other. Barrier fence (in red) is proposed to be removed.

2

STAGING AREA

Asphalt staging area (minimum of 1.8m (6') width) allows a spot for riders to take a break, or wait to drop-in. Bench and garbage can provided.

3

INTERIOR LANDSCAPE POCKETS

Landscape areas inside the pump track are covered in naturalized grasses to minimize mowing requirements. A few trees are proposed to reinforce the existing character of the site.

4

PERIMETER LANDSCAPING

Naturalized grasses may be used around the perimeter of the pump track to cover slopes, minimize mowing requirements, and create a consistent appearance with the interior landscape pockets.

5

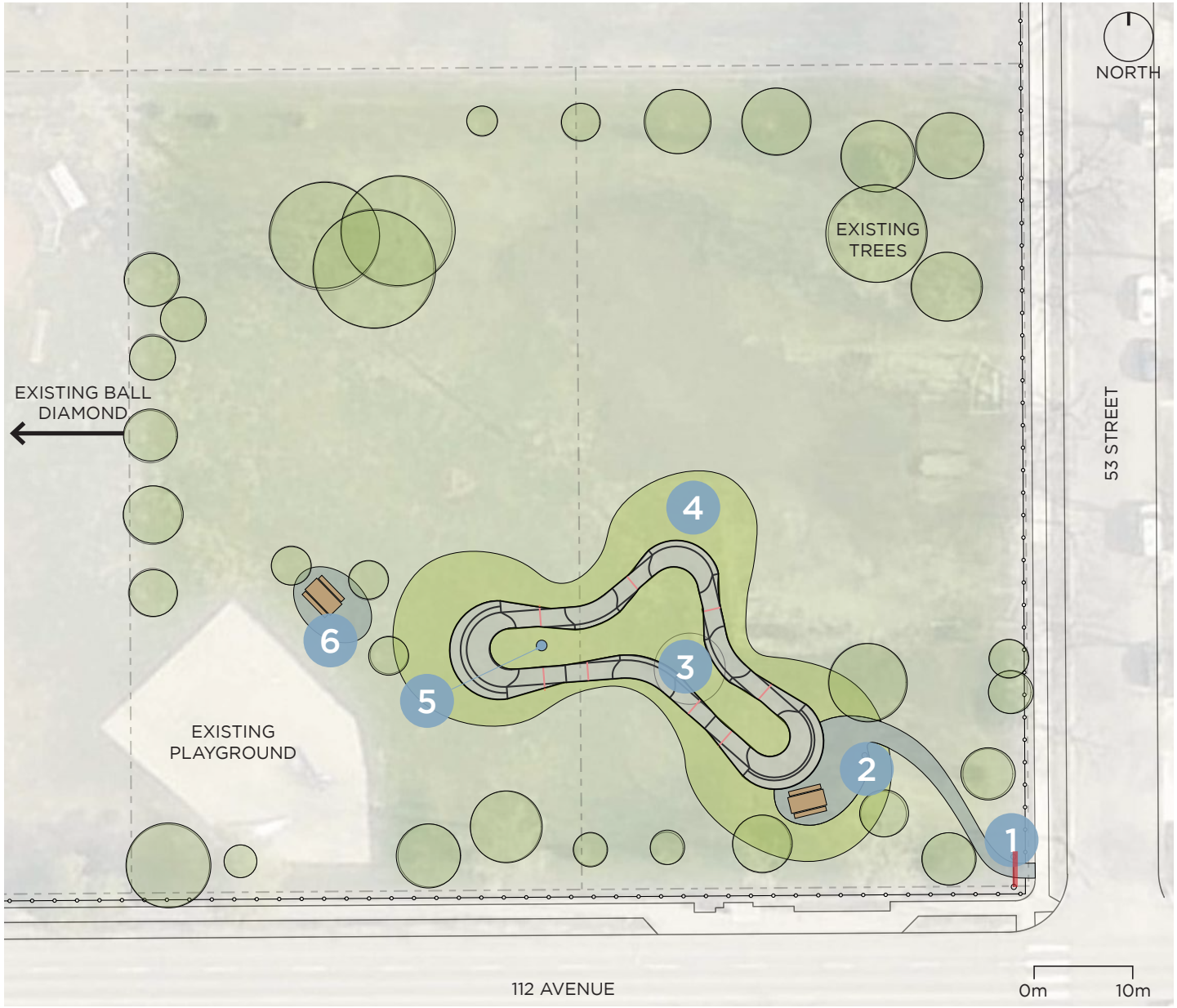
SUMP PITS

Cobble sump pits are used to capture the surface run-off within the interior landscape pockets. This is much more economical than providing catch basins connected to the storm sewer. Requirements to be confirmed by geotechnical investigation.

6

SEATING AREA

Benches or a picnic table are provided between the playground and pump track to provide a space for users or spectators to sit and rest.



PUMP TRACK OPTION 2 • LANDSCAPE PLAN

1

ACCESS TRAIL

1.8m (6') wide asphalt walk provides an accessible connection from the sidewalk to the staging area of the pump track. 1.8m provides sufficient width for two bicycles or wheelchairs to pass each other. Barrier fence (in red) is proposed to be removed.

2

STAGING AREA

Asphalt staging area (minimum of 1.8m (6') width) allows a spot for riders to take a break, or wait to drop-in. Picnic table and garbage can provided.

3

INTERIOR LANDSCAPE POCKET

Landscape area inside the pump track is covered in naturalized grasses to minimize mowing requirements.

4

PERIMETER LANDSCAPING

Naturalized grasses may be used around the perimeter of the pump track to cover slopes, minimize mowing requirements, and create a consistent appearance with the interior landscape pockets.

5

SUMP PIT

A cobble sump pit is used to capture the surface run-off within the interior landscape pocket. This is much more economical than providing catch basins connected to the storm sewer. Requirements to be confirmed by geotechnical investigation.

6

SEATING AREA

Benches or a picnic table are provided between the playground and pump track to provide a space for users or spectators to sit and rest.

9.0 PUBLIC ENGAGEMENT IMPACTS ON DESIGN

Community engagement for the project was completed in September and October 2023. Input from the engagement activities that influenced the design are:

- The inclusion of seating and landscaping is appreciated, with a number of respondents identifying a desire for more seating areas than shown in the concept options.
- Pump Track Option 1 was preferred due to its additional complexity and greater variety of lines and features.
- Washrooms and a drinking fountain were identified as desirable elements, even though they were not included in the concept options. It was determined by the project team that these elements will not be included in the recommended concept as they are not considered to be neighbourhood level amenities..

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10.0 PREFERRED CONCEPT

Following the completion of the community engagement activities, the project team incorporated the input received and prepared the preferred concept. This plan includes a pump track similar in scale and complexity to Option 1, with multiple lanes and a greater variety of features. The pump track is located in the recommended location, on the southern end of the site near 112 Avenue.

The pump track design's multiple lanes allow for the variety of features to cater for two styles of track: a jump style line, and a berm style flowing turns line. The two tracks also allow for riders of differing skill levels to learn on the flowing turns line and gain confidence to take on the jump line. Emphasis on development prevents the pumptrack becoming stale and offers more opportunities as riders gain skill and speed using the track. Refer to the Pump Track Detail Plan on pages 25 &26 for the specific features and layout.

Like the concept options, the preferred concept contains additional amenities including an asphalt staging area beside the pump track, an asphalt trail connection from 53 Street, multiple benches on asphalt pads, and new tree planting and landscaping.

The concept proposes the removal of the existing barrier fence at the pedestrian access point at 53 Street and the relocation of one small tree. This tree was recently planted and is well-suited to being relocated on site.

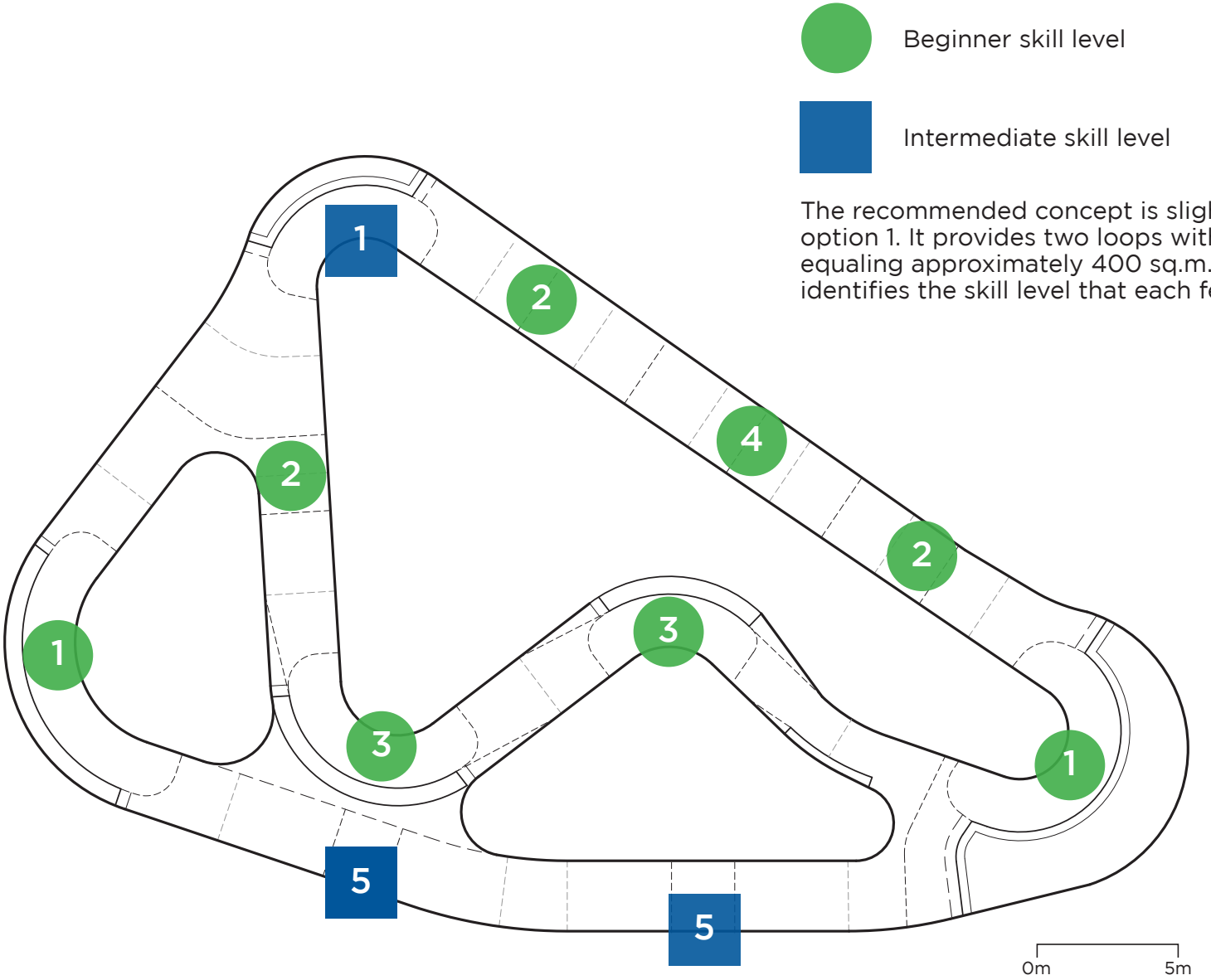
Enhancements that were suggested through the community engagement activities, but are not included in the scope of this project include:

- Washrooms
- Drinking fountain
- Lighting
- Increased pump track size
- Separate toddler track

Refer to the Landscape Plan on the pages 27 & 28 for a detailed description of the proposed site amenities. Precedent images are provided on page 31.

PREFERRED CONCEPT • BIRDS EYE VIEW

NOT TO SCALE



The recommended concept is slightly modified from concept option 1. It provides two loops within the pump track equaling approximately 400 sq.m. of ridable area. This plan identifies the skill level that each feature is designed towards.

PUMP TRACK PREFERRED CONCEPT • FEATURES PLAN

1 TURNING BERM

2 ROLLERS / PUMP BUMPS

3 SWITCHBACK BERMED TURNS

PROPOSED PUMP TRACK FEATURES

4 DOUBLE ROLLER JUMPS

Easier to navigate if skill level is not able to jump the gap.

5 TABLE TOP JUMPS

Advanced jumps with sharper takeoff and landing lips than double rollers.

PREFERRED CONCEPT • LANDSCAPE PLAN

1

ACCESS TRAIL

1.8m (6') wide asphalt walk provides an accessible connection from the sidewalk to the staging area of the pump track. 1.8m provides sufficient width for two bicycles or wheelchairs to pass each other. Existing barrier fence (in red) is to be removed.

2

STAGING AREA

Asphalt staging area at minimum 3m width allows a spot for riders to take a break, or wait to drop-in. Bench and garbage are provided.

3

INTERIOR LANDSCAPE POCKETS

Landscape areas inside the pump track are covered in naturalized grasses to minimize mowing requirements.

4

PERIMETER LANDSCAPING

Naturalized grasses are used around the perimeter of the pump track to cover slopes, minimize mowing requirements, and create a consistent appearance with the interior landscape pockets. Shade trees are provided at the seating areas.

5

SUMP PITS

Cobble sump pits are used to capture the surface run-off within the interior landscape pockets. Requirements to be confirmed by geotechnical investigation.

6

SEATING AREA

Two backless benches are provided on an asphalt pad between the playground and pump track to provide a space for users or spectators to sit and rest.

PREFERRED CONCEPT • VIEW LOOKING WEST FROM STAGING AREA

NOT TO SCALE

PREFERRED CONCEPT • VIEW LOOKING EAST

NOT TO SCALE

BACKLESS BENCH

NATURALIZED GRASSES

TWO-LANE PUMP TRACK

BACKED BENCH

NATURALIZED GRASSES

TWO-LANE PUMP TRACK

PREFERRED CONCEPT • EXAMPLES OF SITE FEATURES

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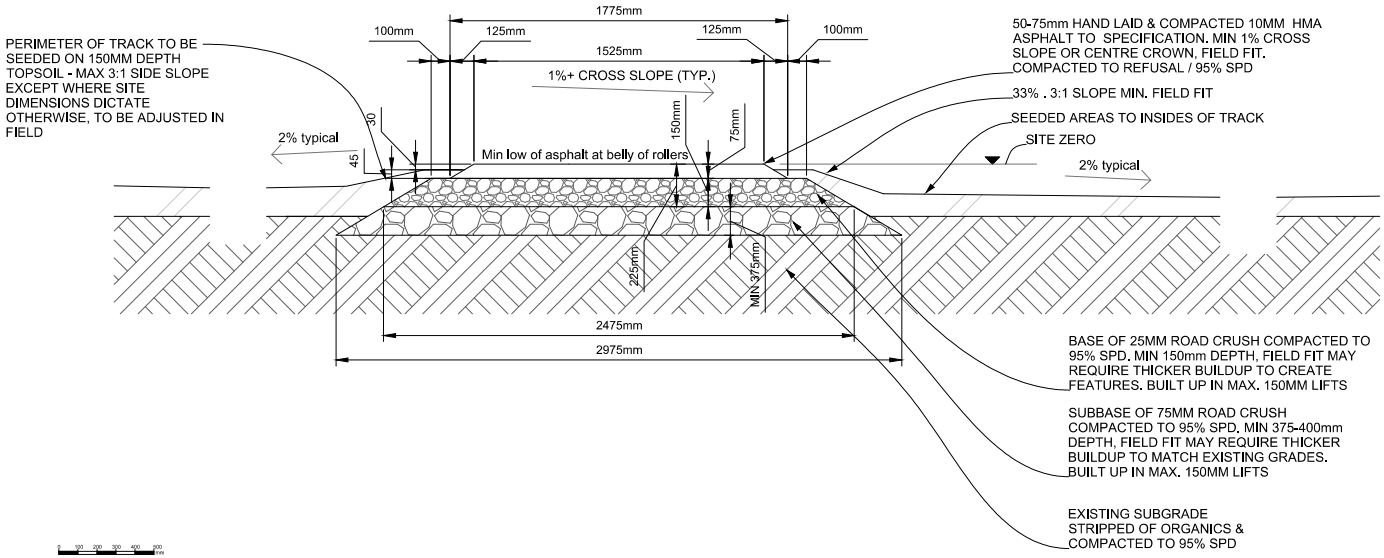
11.0 METHODOLOGY & CONSTRUCTIBILITY

The recommended concept design remains at a relatively high level, identifying the general location, size, configuration, and materiality of the proposed improvements. Construction methodology and details have not yet been developed and the lack of information on geotechnical conditions creates additional uncertainty on how the pump track and supporting amenities will be built. However, a high-level scope of work is identified below.

- Contractor mobilizes to site and erects site fencing and tree protection measures. No mature trees are impacted in the current plan. One small caliper tree is proposed to be relocated within the park.
- Contractor obtains a Tree Preservation Permit from the City of Edmonton for work done around existing trees.
- Surface stripping commences with all organic soils being removed from the pump track footprint. Soil may be stockpiled on site for reuse in final grading and landscaping if it is deemed to be suitable.
- Depending on geotechnical conditions, additional sub-grade excavation may be required. Engineered fill would be imported and placed to bring the sub-grade back up to the design elevations. The sub-grade would be sufficiently compacted.
- Cobble sump pits would be installed inside the pump track footprints.
- Clay fill is imported, placed and compacted to build up the elevated portions of the pump track.
- Granular base is placed and compacted to an assumed thickness of 150mm.
- Asphalt surfaces are placed to an assumed thickness of 75mm.
- Line painting is completed on the pump track.
- Furnishings such as benches and litter receptacles are installed on the asphalt surfaces.
- Topsoil is placed to the required final grade. Soil may be from the stockpile or imported if required. Soil is tested in-situ to confirm that it meets the requirements. Planting beds or pits are prepared for tree and shrub planting.

- Any proposed trees or shrubs are planted.
- Sod is laid to repair disturbed areas and to tie in to the existing lawn.
- Naturalized grass seed mix is applied, assumed to be by hydroseed method.
- The contractor obtains a Construction Completion Certificate and begins the maintenance warranty period, likely for two years.



ASPHALT PUMP TRACK TYPICAL CROSS SECTION DETAIL

12.0 GEOTECHNICAL CONSIDERATIONS

A geotechnical investigation is required prior to commencing the preliminary design stage.

The geotechnical investigation would begin with the completion of private utility locates to detect any unknown/abandoned utilities. Then a series of shallow boreholes is drilled and a few standpipe piezometers are installed to check the stabilized groundwater level(s), Subsurface soil conditions are checked, identifying any organic layers, fill materials, compressible deposits, high plastic clays, etc.. Recommendations are provided regarding construction constraints (if applicable), subgrade preparation requirements, excavation and backfill, and surface drainage.

Depending on the final design, there could be extra investigation required during the detailed design stage. Particularly, drilling additional, deeper boreholes based on the elevation profile of the pump track. This cost is estimated at $15,000. This cost is highly dependent upon the soil conditions that are identified in the preliminary design stage.

The geotechnical consultant involvement during construction at the Build stage could include laboratory testing and approving of all imported backfill material, compaction testing and limited construction support.

13.0 PROJECT COST ESTIMATE

High level (Class D) cost estimates were prepared for both concept options as well as the preferred concept. The estimates were based on approximate quantities taken from the plans and using unit rates for the different elements derived from other recent, relevant projects in the region.

Associated project costs were developed as follows:

- Contractor Mobilization: determined as a percentage (5%) of the total construction costs, excluding landscape maintenance. The City of Edmonton allows for mobilization costs to equal a maximum of 6% of the total construction cost.
- Landscape Maintenance: determined as a percentage (15%) of the total soft landscape costs per year, for two years.
- A construction contingency of 15% was carried for the total construction cost, including contractor mobilization and landscape maintenance.
- A geotechnical investigation cost of $25,000 was carried. This cost would be borne by the community at the preliminary design stage. This assumes that no additional investigation is required in the detailed design stage.
- An additional $25,000 was carried for materials testing during construction. This would cover compaction testing and asphalt testing. This cost would be borne by the community at the build stage.
- Costs were rounded to the nearest hundred dollars.

The concept options estimates were based on 2023 market rates determined by historical pricing as well as input from representatives of the local construction industry. The preferred concept estimate utilizes projected 2024 rates that have been escalated from the 2023 rates, based upon input from the local construction industry.

Concept Option 1 was estimated at $421,600.

Concept Option 2 was estimated at $288,200.

Refer to the table on the following page for the preferred concept cost estimate.

ITEM	ESTIMATED COST
CONSTRUCTION COSTS	
MOBILIZATION*	$ 17,200
TREE RELOCATION	$ 800
COMMON EXCAVATION & DISPOSAL (LANDSCAPE AREA)**	$ 13,500
PUMP TRACK CONSTRUCTION**	$ 261,300
ASPHALT ACCESS TRAIL AND BENCH PAD**	$ 15,000
COBBLE SUMP PITS	$ 18,000
TOPSOIL & NATURALIZATION SEEDING	$ 17,000
TOPSOIL & SOD	$ 9,200
TREE PLANTING	$ 1,500
BENCHES	$ 7,500
LANDSCAPE MAINTENANCE (TWO YEARS)	$ 8,300
CONSTRUCTION SUBTOTAL	**$ 369,300**
15% CONTINGENCY	**$ 55,400**
CONSTRUCTION TOTAL	**$ 424,700**
ADDITIONAL PROJECT COSTS	
GEOTECHNICAL INVESTIGATION FOR PRELIMINARY DESIGN	$ 25,000***
MATERIALS TESTING	$ 25,000****
PROJECT TOTAL	**$ 474,700**

* Contractor overhead costs including providing any site facilities, site fencing, tree protection, etc.
** Assumes no marginal soils/remedial action required.
*** Per estimate provided by the City. Assumes no additional geotechnical investigation is required during detailed design.
**** Contingent upon soil conditions and remedial actions required (engineered fill). Per estimate from City.

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14.0 RISKS & OPPORTUNITIES

The project team collaboratively developed the following list of risks and opportunities. The risks will need to be mitigated as the project advances to the next stages of design while efforts should be made to capitalize on the opportunities.

RISKS

- There is a potential for unfavorable geotechnical conditions to be discovered in the next phase of project development. This would have a significant impact on cost due to additional excavation, placement of engineered fill, and materials testing.
- If the geotechnical investigation identifies that the soil conditions are not suitable for sump pits to be used to capture stormwater runoff, it would trigger the requirement for storm sewer to be brought into the site from the adjacent street, increasing design and construction costs significantly.
- Fundraising efforts may not yield the full budget amount required. This may result in extensive re-design in later stages to reduce costs or the need to secure additional funding. If neither of these approaches are sufficient to align the budget with the construction costs, the project would not be able to proceed.

OPPORTUNITIES

- Establish an accessible path to the pump track and seating areas from the intersection of 112 Avenue and 53 Street, enabling a broader range of users in the space.
- Minimize long-term maintenance requirements through the utilization of naturalized grasses and selective plantings.
- The Highlands Community League is accountable to continue to engage with the membership and provide updates on the project. The League will bring any feedback to the project team for consideration.

15.0 PROJECT RESTRICTIONS OR DEPENDENCIES

RESTRICTIONS

- Geotechnical investigation must be completed prior to advancing to the next stage of design. The results of the investigation will determine the required construction systems and resultant cost.
- The preferred concept cost estimate is based on current (2024) market rates. The project should account for an increase in construction costs year over year until implementation.

DEPENDENCIES

- The Highlands Community League must commit to advancing the project to the next stages of design.
- 10% of project funding must be secured prior to advancing to the next stages of project development.

16.0 IMPLEMENTATION PLAN

The Highlands Pump Track Concept project establishes a clear vision, design, scope of work, and estimated budget for the work. If it moves forward, the project will follow the Neighbourhood Park Development Process (NPDP). The schedule and deliverables will be established as the project moves through each subsequent phase.

17.0 IMAGE CREDITS

All images by ISL Engineering or New Line Skateparks unless noted otherwise.

- Page 29 - Top Pump Track Image: https://www.thenorthernview.com/sports/new-biking-asphalt-pump-track-proposed-for-prince-rupert-5987354
- Page 29 - Bottom Pump Track Image: https://www.instagram.com/parksfdncalgary/
- Page 29 - Benches: https://www.forms-surfaces.com/float-bench