



CITY OF LLOYDMINSTER
Governance and Priorities Committee- AGENDA

Date: Monday, June 13, 2022
Time: 1:30 pm
Location: Council Chambers

Pages

1. Call to Order and Silent Moment of Personal Reflection

The City of Lloydminster and the Council of Lloydminster would like to acknowledge that the chambers in which we are holding today's meeting is situated on Treaty 6 territory, traditional lands of First Nations and Métis people.

We will now pause for a silent moment of personal reflection.

Reminder, all members of Council are obligated to declare a conflict of interest OR a pecuniary interest (as per S. 133 of the Lloydminster Charter) regarding any item on the agenda.

2. Approval of the Agenda

Recommendation:

That the Agenda dated June 13, 2022 be approved.

3. Approval of the Previous Meeting Minutes

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Recommendation:

That the Governance and Priorities Committee Minutes dated May 16, 2022 be approved.

4. Public Presentations

4.1. Lloydminster Youth Council (LYC)

6 - 20

Presented By: Rylee Wood

5. Administration Presentations

5.1. Event Facility Public Survey Findings

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Presented By: Leo Pare

5.2. Lloydminster Place Design Update #2

36 - 83

Presented By: Joel Turcotte

5.3. 2021 Trails and Sidewalk Master Plan – Project Update

84 - 424

Presented By: James Rogers, P. Eng.

- 5.4. Public Safety Canada Grant 425 - 426

Presented By: Doug Rodwell

- 5.5. Community Safety and Well Being Plan Grant 427 - 428

Presented By: Doug Rodwell

6. Governance and Priorities Matters

- 6.1. Draft Records Management Bylaw 429 - 449

Presented By: Chelsie Green

- 6.2. Draft License of Occupation Policy 450 - 456

Presented By: Marilyn Lavoie

7. Inquiries from the Media

Recommendation:

That the June 13, 2022 Governance and Priorities Committee recess for a short break at ____ PM.

8. In Camera Session

Recommendation:

That the June 13, 2022 Governance and Priorities Committee Meeting go into a closed session at ____ PM.

Recommendation:

That the June 13, 2022 Governance and Priorities Committee Meeting resume open session at ____ PM.

- 8.1. Policy Options/Advice (Section 16(1)(a) of LAFOIP)

- 8.2. Policy Options/Advice (Section 16(1)(a) of LAFOIP)

- 8.3. Policy Options/Advice (Section 16(1)(a) of LAFOIP)

9. Adjournment

Recommendation:

That the June 13, 2022 Governance and Priorities Committee Meeting be adjourned at ____ PM.



LLOYDMINSTER

City of Lloydminster

Minutes of a Governance and Priorities Meeting

Date: Monday, May 16, 2022
Time: 1:30 PM
Location: Council Chambers

Members Present
Mayor Gerald Aalbers
Councillor Aaron Buckingham
Councillor Michael Diachuk
Councillor Glenn Fagnan
Councillor Lorelee Marin
Councillor Jonathan Torresan
Councillor Jason Whiting

Staff Present
Dion Pollard, City Manager
Doug Rodwell, City Clerk
Denise MacDonald, Chief Financial Officer
Don Stang, Executive Manager Operations
Wendy Leaman, Executive Coordinator
Marilyn Lavoie, Manager Legislative Services
Chelsie Green, Legislative Services Coordinator
Samantha Shibley-Hornby, Legislative Services Admin

1. Call to Order and Silent Moment of Personal Reflection

Mayor Aalbers called the meeting to order at 1:30 PM.

2. Approval of the Agenda

Motion No.: 207-2022

Moved By: Councillor Whiting

Seconded By: Councillor Diachuk

That the Agenda dated May 16, 2022 be approved.

CARRIED

3. Approval of the Previous Meeting Minutes

Motion No.: 208-2022

Moved By: Councillor Whiting

Seconded By: Councillor Diachuk

That the Governance and Priorities Committee Minutes dated April 11, 2022 be approved.

CARRIED

4. Public Presentations

5. Administration Presentations

5.1 Update from the Downtown Area Redevelopment Committee

The Committee was provided with an update from the Downtown Area Development Committee.

5.2 Council Advocacy Priority List

Administration provided a list of Council Advocacy Priorities for the Committee to review and provide feedback on.

5.3 Bud Miller All Seasons Park Security Services Agreement

The Committee was provided with an update on the Bud Miller All Seasons Park Security Services Agreement.

6. Governance and Priorities Matters

6.1 Financial Statements for the Month Ending March 31, 2022

Administration provided the Committee with the Financial Statements for the Month Ending March 31, 2022.

Additional Matters: Councillor Marin congratulated the Flight Athletics Cheer Team who won second place in their category at an international competition.

7. Inquiries from the Media

Media requested to speak with Mayor Aalbers.

Motion No.: 209-2022

Moved By: Councillor Diachuk

Seconded By: Councillor Fagnan

That the May 16, 2022 Governance and Priorities Committee recess for a short break at 3:06 PM.

CARRIED

The media interviews were conducted and then the May 16, 2022 Governance & Priorities Committee Meeting reconvened at 3:16 PM.

8. In Camera Session

Motion No.: 210-2022

Moved By: Councillor Buckingham

Seconded By: Councillor Diachuk

That the May 16, 2022 Governance and Priorities Committee Meeting go into a closed session at 3:17 PM.

CARRIED

Motion No.: 211-2022

Moved By: Councillor Buckingham

Seconded By: Councillor Fagnan

That the May 16, 2022 Governance and Priorities Committee Meeting resume open session at 4:27 PM.

CARRIED

9. Adjournment

Motion No.: 212-2022

Moved By: Councillor Marin

That the May 16, 2022 Governance and Priorities Committee Meeting be adjourned at 4:28 PM.

CARRIED

MAYOR

CITY CLERK



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YOUR 2021-2022

LLOYDMINSTER YOUTH COUNCIL

EXECUTIVE



RYLEE W. CHAIR



AMY L. VICE CHAIR



LARA P. SECRETARY



AUBREE T. TREASURER

www.LloydYouthCouncil.com





Jessie Mann

LYC Coordinator



Lorelee Marin

Steering Committee Chair

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1



Lloydminster Youth Council

- become informed
- create opportunities for engagement
- promote perspectives
- create opportunities for youth
- work collaboratively

3

**ACT today
to protect
youth.**



lloydminsteryouthcouncil.com

**An
Influential
Generation**

A Conversation about Mental Health

**An
Influential
Generation**

A Conversation about Vaping

**An
Influential
Generation**

A Conversation about Alcohol

4



5

Public Service Announcement In It Together (2021)



6

8



7

Public Service Announcement How do you cope? (2022)



8

9



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Recent Highlights



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Partnership Agreement

- In August 23, City Council approved the partnership between the City of Lloydminster and the Lloydminster Youth Council.
- The agreement is in effect for 3-years, with the city providing a yearly budget to the youth council, in-kind access to recreation facilities, and administrative support.

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Paint the Town Positive

Spreading kindness and positivity around local care homes!



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Hoop Factory

Open gym day for younger kids to come and play basketball with LYC Members



Vaping Video Creation

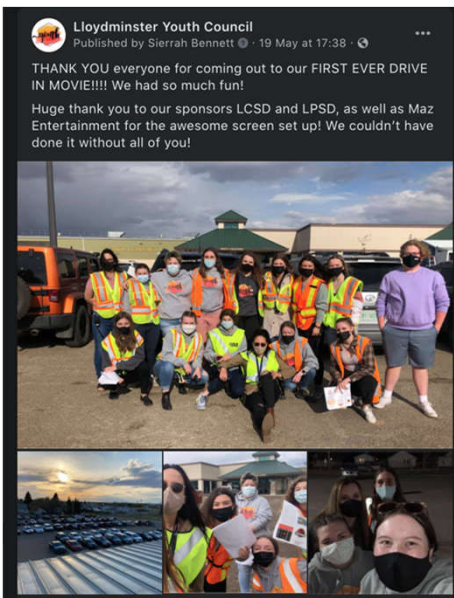
LYC Members are developing a provincial campaign asking government to ban the sale of flavoured vaping products.

We are currently working with Lorelee to get An Influential Generation page up on our website to house our vaping videos and share more about the campaign.

We also have a few LYC members participating in podcasts about vaping! Cool right?

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Drive in Movie Night




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Talent Shows (1st)

Lloydminster Youth Council
Published by Sierrah Bennett · 30 March ·

Congratulations to our Top 5 Border Idol contestants!
Top 3 will be awarded prizes sponsored by the New Nissan Lloydminster and Jolie Co.!

Thank you so much to our sponsors, as well as the community of Lloydminster! We reached over 21,000 votes. INCREDIBLE!



THE NEW NISSAN LLOYDMINSTER & THE LLOYDMINSTER YOUTH COUNCIL

LYC BORDER IDOL

TOP 5

Kieran D. (1st)
Mackenzie D. (2nd)
Rachel H. (3rd)

Davie Josh C.
Brianna G.

Over 21,000 votes were cast! WOW!
VOTES TALLIED: 50% VOTING AND 50% JUDGES CARDS
Top 3 receive cash courtesy The New Nissan Lloydminster.
Kindness Wins! - shirt, a gift card for lunch on us and a head band by Tie Dye with Jolie Co.



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THE NEW NISSAN LLOYDMINSTER & THE LLOYDMINSTER YOUTH COUNCIL

LYC BORDER IDOL

TOP 3

Zacharie S. (1st) \$300
Kieran D. (2nd) \$150
Julia G. (3rd) \$50

Over 850 valid votes! WOW!
VOTES TALLIED: 50% VOTING AND 50% JUDGES CARDS
Top 3 receive cash courtesy The New Nissan Lloydminster.

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POSTPONED

NEW YEAR SKATE DETAILS TO COME



DECEMBER 19

SANTA SKATE

COME HAVE SOME CHRISTMAS FUN!
#HUSKY ENERGY SPEED SKATING OVAL

FOR KIDS
EVERYONE WELCOME
FAMILY EVENT
2-4PM

TEENS
GRADES 9-12
7:30PM-9PM

- ✓ Skate with Santa and friends
- ✓ Featured sports teams
- ✓ Free snacks
- ✓ PRIZES, PRIZES, PRIZES
- ✓ Mascots, games and surprise guests
- ✓ Music and more...




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RESCHEDULED

VALENTINE'S SKATE EVERYONE WELCOME

~~SANTA SKATE~~

VALENTINE'S DAY SKATE

FEBRUARY 13, 2022

COME HAVE SOME VALENTINE'S FUN!
#HUSKY ENERGY SPEED SKATING OVAL

FOR YOU!
EVERYONE WELCOME
2-5PM



Lloydminster & District



SASK LOTTERIES

- ✓ Come skate with your favourite person
- ✓ Free snacks
- ✓ PRIZES, PRIZES, PRIZES
- ✓ Mascots, games and surprise guests
- ✓ Music and more...

Amazing community partners helped us pull off... an awesome event.

Lloyd Coop
TJ's Pizza
Sask Lotteries
Art Soul Life
Walkn on Water
Tim Hortons








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Please join us:
 The Lloydminster Youth Council is excited to host the Small Fires Indigenous Team from LCHS to share a Blanket Activity with LYC & Friends
Thursday, March 17th @ 7:00pm
Civic Centre Auditorium
 RSVP by Noon, March 16th to info@LloydYouthCouncil.com




The Blanket Activity is a powerful, experiential learning activity used to explore the nation-to-nation relationship between Indigenous and Non-Indigenous people in Canada.

Small Fires Indigenous Mentorship Program is designed to engage and connect First Nations, Métis and Inuit and non-Indigenous students through culturally based programming. Through mentorship, students are involved in building relationships; they have opportunities to develop leadership, responsibility and interpersonal skills by educating others about the history of Indigenous people and the enduring impacts of colonization.



SFIM responds to the Truth and Reconciliation Commission of Canada's (TRC) 94 calls to action to advance reconciliation by offering programming that strengthens the learning connected to Indigenous perspectives, cultures, histories and Indigenous ways of knowing. "Reconciliation begins for each of us with one very simple concept reflected in the events at first contact and in the Treaties: I want to be your friend, and I want you to be mine. When you need me, I'll have your back, and when I need you, you'll have mine". Sinclair, (2015)

We aim to start a path of education, raise awareness and build relationships so all our youth believe in themselves and are empowered to invest in their future.

FUNDED BY:



SASK LOTTERIES

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FREE YOUTH REC EVENT this Wednesday!

- ✓ Servus Sports Centre
- ✓ March 30, 2022
- ✓ Grades 4-9
- ✓ No Registration Necessary
- ✓ Drop in's are welcome! Come anytime.
- ✓ BRING YOUR FRIENDS!
- ✓ Bounce House, Basketball, Volleyball, Yard Games & more...

We look forward to hanging out with you Wednesday!

Thank you Sask Lotteries!



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LYC, LCSD and LPSD present...

PECHA KUCHA 5

May 17, 2022



POWER






2022 PRESENTERS

DRAKE H.
AMY L.
AKNOOR K.
RYAN L.
AVA D.
HARMONY S.
ELIZABETH R.
DELARA J.
FADAK A.
LYLEE O.

LYC, LCSD and LPSD present...

PechaKucha Night™




POWER

Tuesday, May 17, 2022

Pecha Kucha presenters take the Vic Juba Community Theatre stage at 7PM. Tickets are \$10 at the door or \$5 in advance (under 18 are free with proof of ID). For more information please email: info@lycayouthcouncil.com





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Thank you to Ben Acquaye for coming to spend hours and hours supporting our Pecha Kucha presenters. Wow! We are already so proud and tonight we were so thankful. May 17th! Mark those calendars. You don't want to miss this!



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Lloydminster Youth Council
Published by Lorelee Marin · 17 May at 22:22 ·

Amy and Rylee
Lloydminster Youth Council

City of Lloydminster
17 May at 19:30 ·

Listen to the leaders of tomorrow! The [Lloydminster Youth Council](#) wants to hear from you. Whether you are 13 or 82 this is something you can do. Complete the s... [See more](#)

Lloydminster Youth Council
Published by Jessie Mann · 17 April ·

"Lloyd Needs" YOUR FEEDBACK, fill out the form to have your voice heard today:
<https://www.surveymonkey.com/r/lloydneeds2022>

MERIDIANSOURCE.CA
Youth council hops on needs survey - Meridian Source
Patrick Lancaster, manager of social programs and services with Lloydminster Family a...

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We had 11 local business mentors work with our 11 youth entrepreneurs, had practice pitch nights and youth could pop by Start Up for support for their business before Lions' Lair.



Meet and Mentor *The Safari*

Elenee Young and Maria Kokonas
Spiro's
We will provide insight and ideas into your business planning, pitching and overall business concept. As the former "Entrepreneur in Residence" let us guide you in making the most of your business pitch opportunities and minimize any potential challenges.

Wendy Plandowski
STARTUP LLOYDMINSTER
We will provide insight and ideas into your business planning, pitching and overall business concept. As the former "Entrepreneur in Residence" let us guide you in making the most of your business pitch opportunities and minimize any potential challenges.

Kristine Knourek
Lloydminster and District Co-op
The Lloydminster and District Co-op will share strategies on giving back to the local community as part of your business model.

Dr. Alice Wainwright-Stewart
Lakeland College
I will share insight for creating a foundation to develop your goals, knowledge, and skills to become a successful leader.

Maverick Hann
Lloydminster Chamber of Commerce
Maverick will share insight on being involved in the community and how networking and business connections is important to not only growing your business but continuing to succeed.

Nicole Hayce
NOYCE PHOTOGRAPHY
Let's talk how to value your service while creating more value for your customer! If you are producing a quality product, charge for what you do... after doing your market research in your community.

Kara Johnston
ALBERTA INNOVATES
Kara is a Technology Development Advisor for Alberta Innovates and she is excited to use her network in conjunction with her coaching and mentoring skills to support your business and foster that entrepreneurial spirit!

Deanna Wandler
REID & WRIGHT ADVERTISING
We will share insight on how you can transform your brand into effective signage and marketing materials to widen the breadth and depth of your company's advertising efforts.

Tom Hall
ARMSTRONG HITTINGER MOSKAL
Learn some of the key nuts and bolts with BUSINESS LAW that you need to know to run your business.

Jill Kelly
redbicycle COMMUNICATIONS
Let's review the power of branding and how you can leverage it to further your business.

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THE CUBS *The Safari*

Welcome to the Safari! Find your leading expert and mentor. You will rotate through the list until you return back to your original sponsor. When there is a brain break, head to an empty table for your planning/brain/bathroom break. There is a break built into THE SAFARI. We will prompt movement throughout the mentors.

Reese and Sophie
Spiro's
We are helping young business and are expanding our lake based ice cream business to include some of other products.

Elyse Grace
STARTUP LLOYDMINSTER
Elyse is moving to Connecticut for grad and hoping to earn money creating posters and creating community in her new home.

Kage
CO-OP
I design and create fish hooks to inspire people to get out and enjoy the great outdoors and have fun!

Jageth
Brain Break
We are creating an online art store.

Layla
Lakeland College
I make over time boxes (dinner boxes).

Kerlie
LLOYDMINSTER CHAMBER OF COMMERCE
I make everything from scratch: cakes, pastries, breads and so much more. I customize my products.

Savanna
NOYCE PHOTOGRAPHY
I am a food writer and love seeing people wearing my creations.

Taylor
ALBERTA INNOVATES
I will be starting a business that sells handmade shirts featuring dogs and cats who aren't here right now!

Alyssa
REID & WRIGHT ADVERTISING
Creating a library art store.

Olivia
ARMSTRONG HITTINGER MOSKAL
I hope to be a well known community non-profit created by Olivia. She is looking to continue and evolve the work of bringing comfort and love to her children in a time of need.

Maria
redbicycle COMMUNICATIONS
I want to make high quality websites on for everyone's business.



Thank you also to our LIONS!

Supportive Lions

Ryan Topley
Terri-Lynn Mackie
Tyler Lorenz

Official Lions

His Worship Mayor Gerald Aalbers
Kara Johnston
Elenee Young
Wendy Plandowski
Tracy Klotz

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What's next?



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 LLOYDMINSTER	City of Lloydminster Information Report (IR)
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Subject Matter: Event Facility Public Survey Findings
Department: Community Development Services
Presented By: Leo Pare
GPC Meeting Date: June 13, 2022

Topic: The City of Lloydminster continues to engage the community in the planning and design of a new event facility to be constructed in southeast Lloydminster. The most recent 'Your Place, Your Experience' survey, opened on May 12, 2022, and closed on May 31, 2022, garnering 654 completed responses and more than 1,300 written comments.

Background: After meeting with key stakeholders for in-person engagement sessions through early 2022, the City of Lloydminster embarked on a regional public information and engagement campaign to keep area residents and businesses apprised of progress and ensure local insights and wishes for the new facility are factored into important decisions as the project advances. Already, public input has had a significant impact on the amenities and accessibility features included in the early draft design proposal. Engagement opportunities are actively advertised via social media and traditional local media, including billboards, radio, and newspaper ads. Updated information, including options for engagement, are regularly shared via the project website, www.lloydminsterplace.ca.

Objective: Construction of the Lloydminster Place event facility represents one of the most significant recreational investments in Lloydminster's history. Throughout the design and construction phases of the event facility, it has been a priority of Council and the project team to engage the public using different mediums and strategies to reach the broadest possible cross-section of residents, visitors, and user groups.

Options:

1. That the Committee accept this report as information.
2. That the Committee request more information and that the item be brought forward to a future Regular Council meeting for decision.
3. That the Committee request more information and that the item be brought forward to a future Governance & Priorities Committee meeting.

Alignment with Strategic Plan: This item is in alignment with the following strategic area: Delivering Good Governance. The City ensures residents, businesses and stakeholders have the opportunity to shape important infrastructure projects that will serve the community for decades to come.

Governance Implications: N/A

Budget/Financial Implications: N/A

Environmental Implications: N/A

	<p align="center">City of Lloydminster Information Report (IR)</p>
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Report Approval Details

Document Title:	Event Facility Public Survey Two.docx
Attachments:	- What We Heard Report- YP,YE 2.pdf
Final Approval Date:	Jun 10, 2022

This report and all of its attachments were approved and signed as outlined below:

Tracy Simpson

Doug Rodwell

Dion Pollard



WHAT WE HEARD REPORT

Your Place, Your Experience
Second Public Engagement

June 13, 2022
Communications

Background

From November 2019 to July 2020, the City commissioned a Feasibility Study to determine the future of arenas in the City of Lloydminster; specifically, the future of the Centennial Civic Centre (CCC). It was recommended that the City prioritize the construction of a new event facility to replace the Centennial Civic Centre due to its condition and limited life expectancy.

TBD Architecture & Urban Planning was hired as the Architectural Services Consultant to create a detailed design of the new event facility. With construction currently estimated at \$50 million, this new facility will represent one of the most significant recreational investments in Lloydminster's history. Throughout the design and construction phases of the event facility – temporarily named Lloydminster Place – it has been a priority of Council and the project team to engage with the public using different mediums and strategies to reach the broadest possible cross-section of residents, visitors and user groups. After meeting with key stakeholders for in-person engagement sessions, the City of Lloydminster reached out to the public regarding the future experiences and amenities of Lloydminster Place. This was done through the *Your Place, Your Experience* engagement campaigns.

Engagement Techniques

The City of Lloydminster launched the second *Your Place, Your Experience* engagement campaign on May 12, 2022. The campaign consisted mainly of an online survey that was available at www.lloydminsterplace.ca, which closed on May 31, 2022. More than 640 completed surveys were received, along with more than 1,300 written comments.

In addition to the survey, the Lloydminster Place Project Team also participated in a drop-in *Share Your Voice* event at Lloyd Mall on May 12, where guests had the opportunity to speak directly with members of Council and Administrative project leaders. Attendees were also encouraged to complete the latest *Your Place, Your Experience* survey.

Target Audience

The target market for this campaign was broad as it pertains to residents of Lloydminster and the surrounding areas that would be likely to travel to the new event facility. This campaign had elements to engage individuals of all ages (18-75+), however, marketing strategies primarily targeted area residents in their 20s to 50s, a large demographic most likely to attend events and programs at Lloydminster Place, once built.

Survey Advertising

Print Media

- Newspaper
 - Meridian Source
 - Morning News
 - Weekly Bean
- Lobby Displays
 - City Hall
- Posters
 - At all City facilities
 - Lloyd Mall
 - Co-op
 - Spiro's
 - Second Cup
 - Home Hardware

Digital Media

- Social Media: City of Lloydminster and Lloydminster Place accounts
 - Facebook (*boosted*)
 - Twitter
 - Instagram
 - LinkedIn
- Websites
 - Lloydminsterplace.ca
 - yourvoicelloyd.ca
- Radio
 - Real Country 95.9
 - HOT 93.7
- Newsletters
 - Ec Dev Lloydminster
 - Community Engagement Newsletter
 - Lloydminster Place Newsletter
 - School Districts
- Digital Billboards
 - 52B Ave and 12 St
 - 52 Ave and 44 St
 - Corner of 62 Ave and 44 St
 - City Hall TV

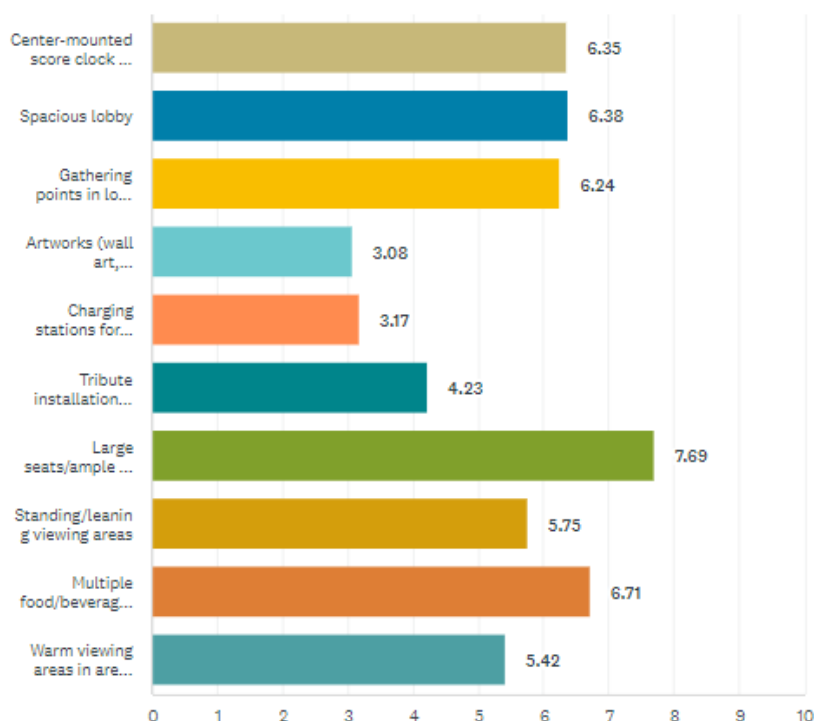
Engagement Findings

Your Place, Your Experience Second Survey

The second *Your Place, Your Experience* survey was open for a total of 20 days with a closure date of May 31, 2022. It was made up of 15 questions regarding future Lloydminster Place amenities, architecture, inclusivity and demographic questions. The survey received a total of 654 responses.

Q1.

Please rank the following specific experiential features being considered in the new building (1 being your highest priority and 10 being your lowest)



The top highest priority options that respondents chose were the following in order:

1. Large seats/ample leg room
2. Multiple food/beverage options
3. Spacious lobby
4. Center-mounted score clock on event arena
5. Gathering points in lobby / concourse (ie: chairs, tables, leaning benches etc)
6. Standing/leaning viewing areas
7. Warm viewing areas in arenas (i.e. windows from lobby to ice)
8. Tribute installations (hometown hero walls, local sport history, etc)
9. Charging stations for mobile devices
10. Artworks (wall art, sculptures, murals etc.)

Q2.

Please comment below any additional wants or ideas regarding features in the new event facility.

We received 246 responses to this open-ended question. Major themes in order included:

- Adequate amount of spacious washrooms
- Seat space, comfort, full lines of sight and luxury boxes
- Accessibility for seniors and those with physical limitations
- High quality and spacious dressing rooms
- Various food vendors including a restaurant and bar
- Indoor play areas for children

Q3.

Thinking about food and beverage options you or your family might prefer during a visit to the event facility during games, practices or other events, please rank the following:

	NOT IMPORTANT	SLIGHTLY IMPORTANT	IMPORTANT	VERY IMPORTANT	TOTAL	WEIGHTED AVERAGE
Traditional concession-style options (burgers, fries, etc)	5.61% 36	20.09% 129	51.40% 330	22.90% 147	642	2.92
Healthy options	8.10% 52	27.26% 175	41.59% 267	23.05% 148	642	2.80
Speed of service	1.56% 10	11.53% 74	54.36% 349	32.55% 209	642	3.18
Variety of options	3.74% 24	22.43% 144	52.65% 338	21.18% 136	642	2.91
Special dietary options	26.17% 168	36.14% 232	26.79% 172	10.90% 70	642	2.22

The highest-ranked option was 'speed of service'. Most respondents value getting their food and beverages in a timely manner. The next options that were ranked as high importance were 'traditional concession-style options' and a 'variety of options'. There were 57 'other' comments that covered the following in order:

- Gluten-free and vegetarian/vegan options
- Emphasis on offering healthy options
- Importance of affordable food and beverage options

Q4.

Thinking about what makes a public facility truly family-friendly, what sort of features might you value as a parent or caregiver from the following:

	NOT IMPORTANT	SLIGHTLY IMPORTANT	IMPORTANT	VERY IMPORTANT	N/A	TOTAL	WEIGHTED AVERAGE
Nursing areas	12.13% 77	25.98% 165	34.33% 218	21.57% 137	5.98% 38	635	2.70
Arcade games	55.59% 353	23.62% 150	14.33% 91	4.09% 26	2.36% 15	635	1.66
Device charging stations	33.70% 214	37.01% 235	20.16% 128	7.40% 47	1.73% 11	635	2.01
Mini-stick area	22.05% 140	28.19% 179	30.71% 195	14.96% 95	4.09% 26	635	2.40
Snack/drink vending machines	10.24% 65	31.02% 197	42.52% 270	14.33% 91	1.89% 12	635	2.62
Play area/features	8.19% 52	18.11% 115	42.83% 272	28.03% 178	2.83% 18	635	2.93
Small coin-operated rides	66.61% 423	21.73% 138	5.51% 35	1.89% 12	4.25% 27	635	1.40

The most important feature that respondents value is play areas/features for children. Nursing areas are second in importance and snack/drink vending machines are third. The options of small coin-operated rides and arcade games were voted as least important. The majority of parents/caregivers value free activities for children to do. The major theme that came from the 36 'other' comments reiterated not having arcade-like games.

Q5.

Availability and accessibility of restrooms are critical to the design of any public facility.

Thinking about your past experiences visiting large public venues, please rate your level of importance with the following options:

	NOT IMPORTANT	SLIGHTLY IMPORTANT	IMPORTANT	VERY IMPORTANT	TOTAL	WEIGHTED AVERAGE
Quick access	1.62% 10	12.80% 79	50.57% 312	35.01% 216	617	3.19
Close proximity to my seat	7.46% 46	34.04% 210	44.41% 274	14.10% 87	617	2.65
Number of toilets/urinals	1.13% 7	3.73% 23	41.65% 257	53.48% 330	617	3.47
Privacy	2.59% 16	12.80% 79	40.84% 252	43.76% 270	617	3.26
Esthetics and finishing	9.89% 61	36.79% 227	40.68% 251	12.64% 78	617	2.56
Spaciousness	2.92% 18	23.50% 145	53.48% 330	20.10% 124	617	2.91
Separate family restrooms	14.42% 89	30.31% 187	35.17% 217	20.10% 124	617	2.61

The following options are in order of importance to the majority of respondents:

1. Number of toilets/urinals
2. Privacy
3. Quick access
4. Spaciousness
5. Close proximity to my seat
6. Separate family restrooms
7. Esthetics and finishing

Additional comments received for this question emphasized accessible restrooms, hands-free restroom amenities and toddler-height sinks.

Q6.

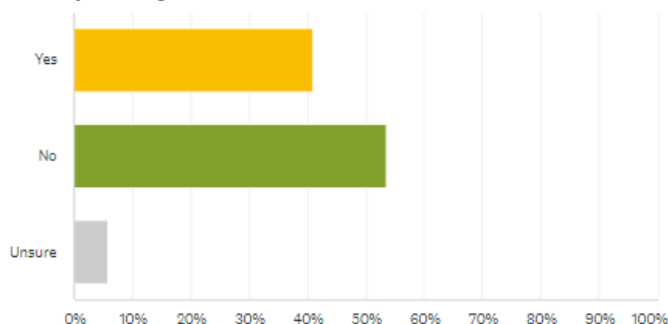
What does the word 'accessible' mean to you in the context of public buildings?

This open-ended question received 476 responses regarding accessible public buildings. The following is a phrase made up from the most shared comments from respondents.

- Everyone should be able to easily access the building, its parking, seating and amenities no matter their family status, gender, ethnicity, age, or physical and mental ability.

Q7.

Have you ever visited a facility with gender-neutral restrooms?

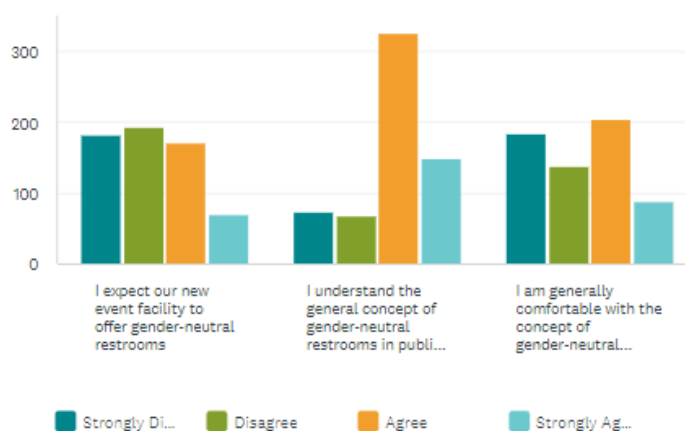


Approximately 41% of respondents said they have been to a facility with gender-neutral washrooms and 54% said they have not.

Q8.

Please rate your level of agreement/disagreement with the following statements:

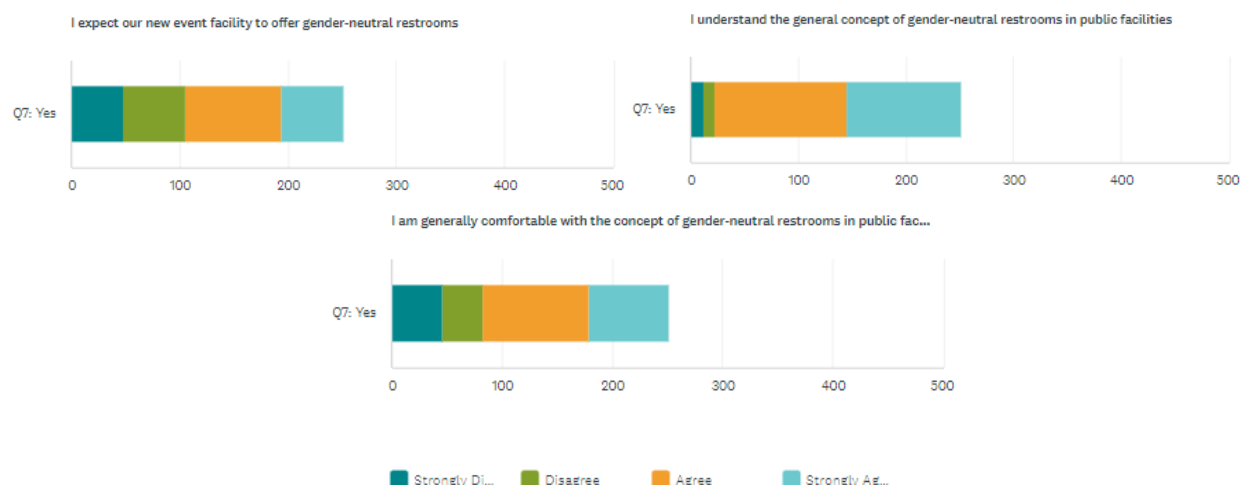
	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	TOTAL	WEIGHTED AVERAGE
I expect our new event facility to offer gender-neutral restrooms	29.66% 183	31.28% 193	27.71% 171	11.35% 70	617	2.21
I understand the general concept of gender-neutral restrooms in public facilities	11.99% 74	11.02% 68	52.84% 326	24.15% 149	617	2.89
I am generally comfortable with the concept of gender-neutral restrooms in public facilities	29.82% 184	22.53% 139	33.23% 205	14.42% 89	617	2.32



Most respondents agreed that they understand the general concept of gender-neutral restrooms in public facilities. However, the majority of survey takers do not expect the new event facility to offer gender-neutral restrooms. For the level of comfort with the concept of gender-neutral restrooms, about 47% of respondents leaned toward agreement and 53% leaned toward disagreement.

Comparisons between questions seven and eight are addressed on the next page.

Participants who have visited gender-neutral restrooms



Answers for question eight are shown above for participants who said they have visited a gender-neutral restroom. These respondents leaned towards agreement to expect the new facility to offer gender-neutral restrooms and almost all understand the general concept of gender-neutral washrooms. The majority of these participants are comfortable with this type of restroom in public facilities. These thoughts are opposite for those who have not visited a gender-neutral restroom before, as seen below.

Participants who have not visited gender-neutral restrooms



Q9.

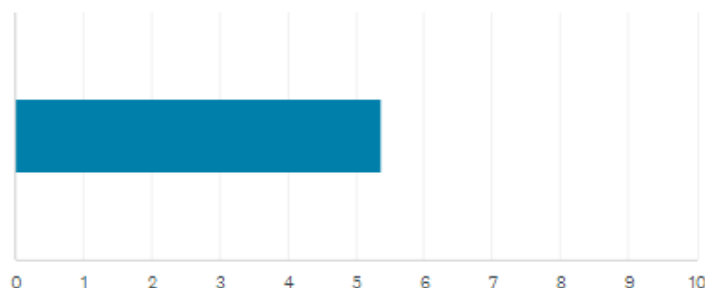
Do you have ideas about how we might make our facility restrooms genuinely inclusive?

This open-ended question was optional and received 296 answers. Key suggestions that emerged regarding making Lloydminster Place's restrooms inclusive include the following:

- Provide a majority of male-only and female-only restrooms with additional private restrooms for gender-neutral individuals and families.
- There is a worry about children in the same restroom as adults of the opposite sex, so find a way to provide traditional restrooms and separate private restrooms.
- If there are gender-neutral restrooms, ensure floor to ceiling stall doors

Q10.

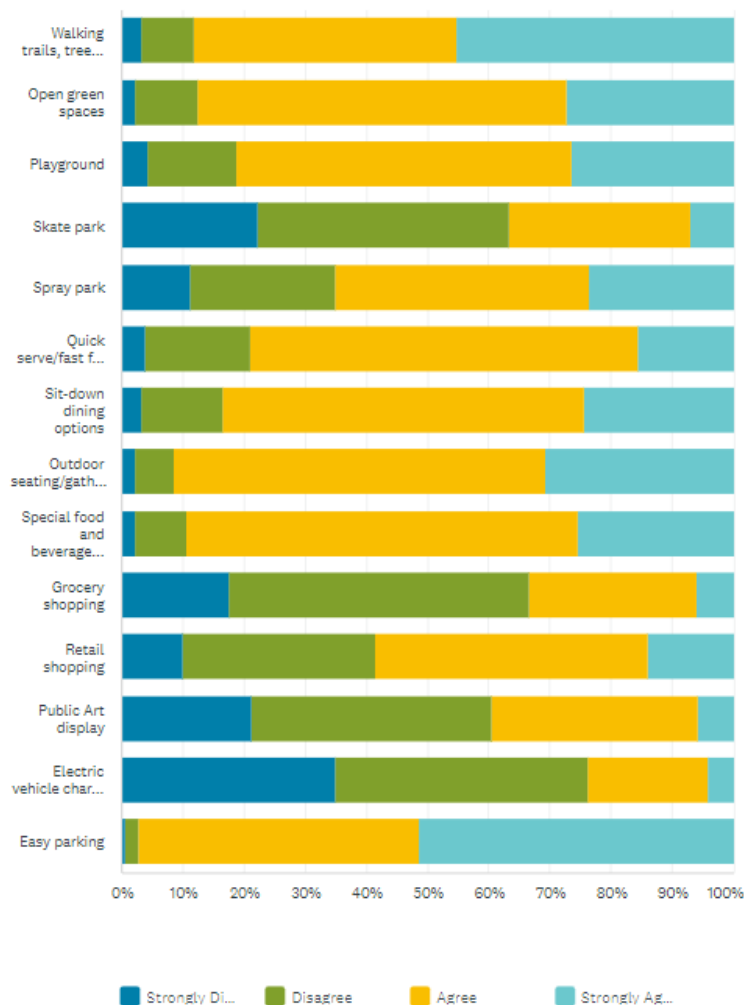
Thinking about architecture and the exterior esthetic of Lloydminster Place, use the slider below to indicate how you would like us to prioritize the appearance of the new building.



For this question, survey takers could move a slider to a higher number to prioritize the appearance and a lower number to not prioritize the appearance of the new event facility. The average number from all responses was 5.36 meaning participants had neutral thoughts regarding the importance of the exterior appearance of the building.

Q11.

If the site included _____, it would entice me to visit and spend time there.



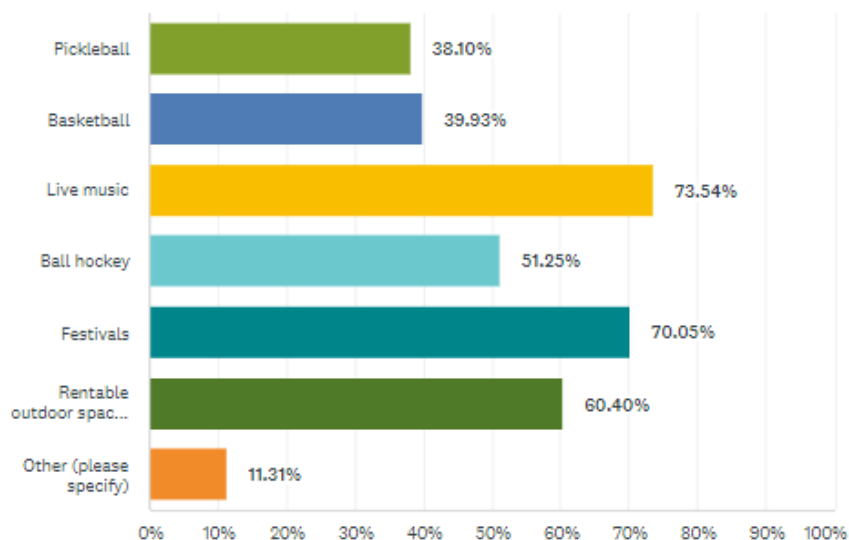
Respondents were asked to rate their level of agreement/disagreement regarding the fill-in-the-blank options given. Easy parking was the top option that would entice participants to spend time at the new event facility. Walking trails, trees and natural features, as well as outdoor seating, were other options that the majority of respondents said would entice them to visit. The options of electric vehicle charging stations, public art displays and a skate park were mostly disagreed on and would not entice the majority of visitors.

The following major themes came from the 90 'other' responses received:

1. Addition of swimming pool or splash park
2. Adequate parking spaces with optional shuttle service
3. Biking/walking trails
4. Outdoor stage/venue
5. Restaurants/bars with outdoor dining
6. Dog Park

Q12.

Thinking about the covered outdoor rink, how might you utilize it when the ice is out during the spring and summer? (check all that apply)



Survey-takers were given six options to select from regarding how they might use the building when there is no ice. The top three options selected were live music, festivals and rentable outdoor spaces (weddings, reunions and other special events). The options selected the least amounts were basketball and pickleball.

Major themes, in order, that were extracted from the 'other' responses include the following:

1. Lacrosse
2. Roller Skating
3. Farmers Markets
4. Tennis
5. Volleyball
6. Soccer

Conclusions

The last few questions of this survey were for marketing purposes and pertained to where respondents heard about the survey and if they would like to join the Lloydminster Place newsletter mailing list. The top sources that the public heard about this survey included social media, email, word of mouth and newspaper. We also received an additional 92 email addresses from respondents wanting to join the newsletter updates.

Thank you to everyone who participated in this campaign. The What We Heard Report is intended to share the information learnt through the public engagement process. The City of Lloydminster looks forward to future engagement opportunities as the Lloydminster Place project advances. More information about the project, and opportunities to provide comments, continue to be available at www.yourvoicelloyd.ca.

	<p align="center">City of Lloydminster Information Report (IR)</p>
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Subject Matter: Lloydminster Place Design Update #2
Department: Community Development Services
Presented By: Joel Turcotte
GPC Meeting Date: June 13, 2022

Topic: To provide the Committee with an update on the detailed design of the new Lloydminster Place Event Facility.

Background: Administration has been working with the consultant TBD Architecture & Urban Planning (TBD) on the design details for Lloydminster Place, the new event facility project.

During the initial planning meeting, the City team and TBD worked to define our vision for the facility – a place that celebrates the people, recreation, sport, and entertainment in Lloydminster. The vision of an Event District is one that supports the delivery of best-in-class opportunities for guests and provides an innovative space for purposeful programming that will maximize the value for the people of Lloydminster. The site will have the potential to be activated 365 days a year and deliver opportunities 52 weeks of the year for people to visit Lloydminster.

The attached presentation provides an updated site plan, a 3D aerial view of the building exterior, 3D viewing of the interior of the building, updated floor plans, and more detailed information of premium seating options, food service spaces, lobby, offices, elite team dressing rooms, accessibility features, universal washrooms, and the slo-pitch pavilion building.

The design team is now closely working on the operational components of the building (i.e., electrical, mechanical, civil, structural, audio/visual, etc.). These drawings will be constantly adapting throughout the next few months to accommodate the requirements of the specific elements.

Administration’s next update to the Committee will come in the fall.

Objective: To provide the Committee and the Community an update with the latest updated detailed design items for the Lloydminster Place Event Facility.

Options:

1. That the Committee accept this report as information.
2. That the Committee request more information and that the item be brought forward to a future Regular Council meeting for decision.
3. That the Committee request more information and that the item be brought forward to a future Governance & Priorities Committee meeting.

Alignment with Strategic Plan: This item is in alignment with the following strategic area: Managing our Environment and Infrastructure. Design, planning, and construction of a new event arena as part of an event district within the City.

Governance Implications: N/A

Budget/Financial Implications: The current budget for the project is displayed in the following table:

Funding Sources

• Approved 2022 Capital Project No. 2074008	\$2,060,000.00	
• Capital Project No. 1971209 Study/Plan Ball Diamond Complex Site Plan (transferred to Project No.2074008)	\$100,000.00	
		\$2,160,000.00

Expenses

Consultant Costs

• Architecture Contract	\$1,447,350.00	
		\$1,447,350.00

Change Orders on Architectural Services

• Change Order #1 Sponsorship Package	\$20,000.00	
• Change Order #2 Climate Lens Assessment	\$42,461.49	
• Change Order #3 Site Design Addition	\$138,510.00	
• Remaining Contingency (Approved \$144,735.00)	\$41,225.00	
		\$244,735.00

Geotechnical & Materials Testing

• Geotechnical Investigation and Phase 1 Environmental Assessment	\$25,180.00	
		\$25,180.00

Project Administration

• Travel, Research and Engagement Expenses	\$8,578.42	
		\$8,578.42

Total Costs to Date (including all change orders)	\$1,725,843.42
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Remaining Budget	\$436,317.97
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Expected 2022 Project Expenses

• CM Contract Pre-Construction Cost	\$150,000.00	
• Geotechnical & Environmental Assessment Phase 2	\$30,000.00	
• Structural Pile Load Testing	\$90,000.00	
• Permits	\$10,000.00	
		\$280,000.00

Remaining Budget	\$156,317.97
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Environmental Implications: A phase 1 environmental assessment has been completed on the site. Additional geotechnical and environmental assessments will be completed as the design progresses on the site.

Report Approval Details

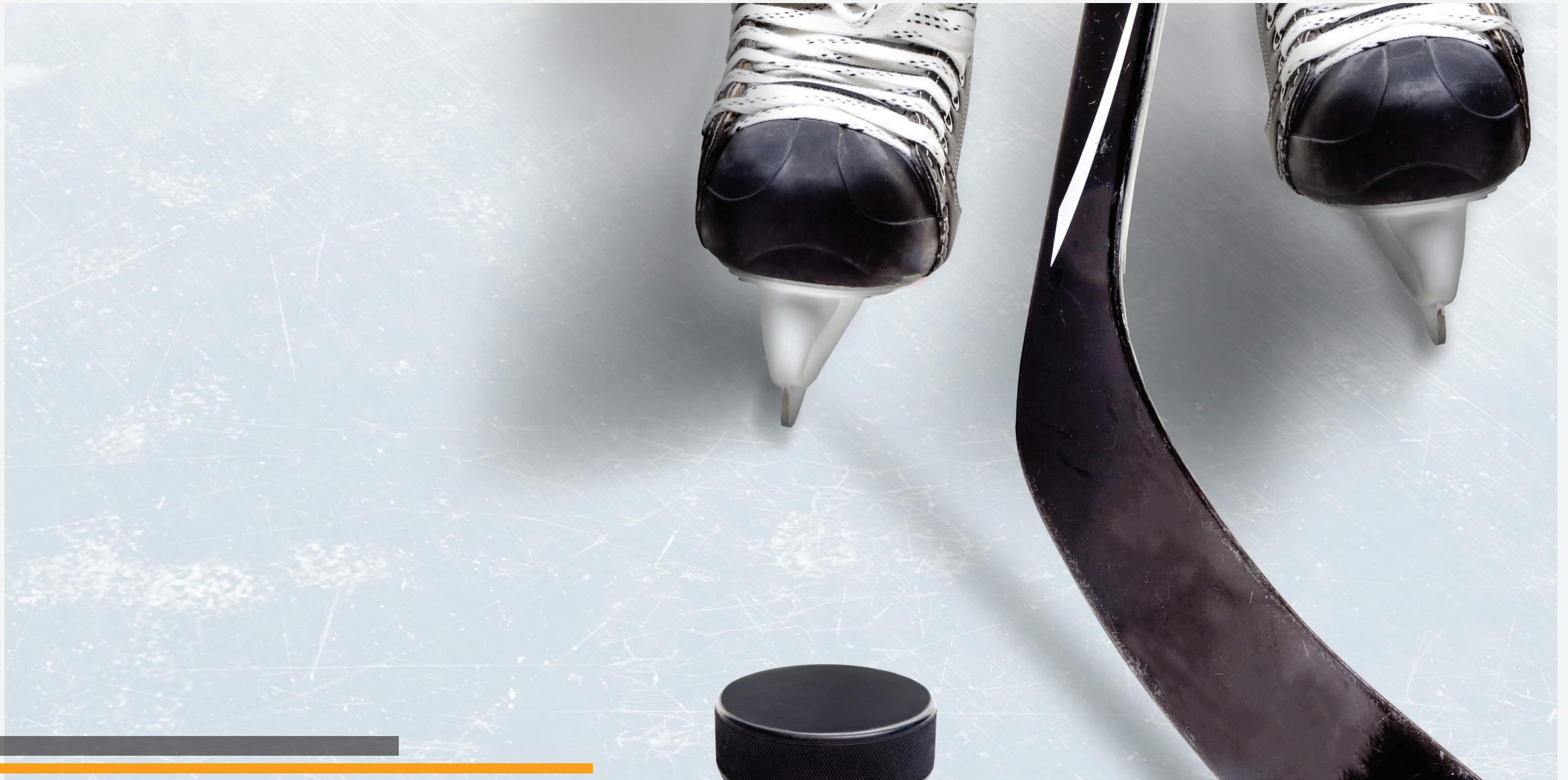
Document Title:	Lloydminster Place Design Update 2.docx
Attachments:	- 20220613 Design Update 2 Presentation GPC Meeting.pdf
Final Approval Date:	Jun 10, 2022

This report and all of its attachments were approved and signed as outlined below:

Tracy Simpson

Doug Rodwell

Dion Pollard



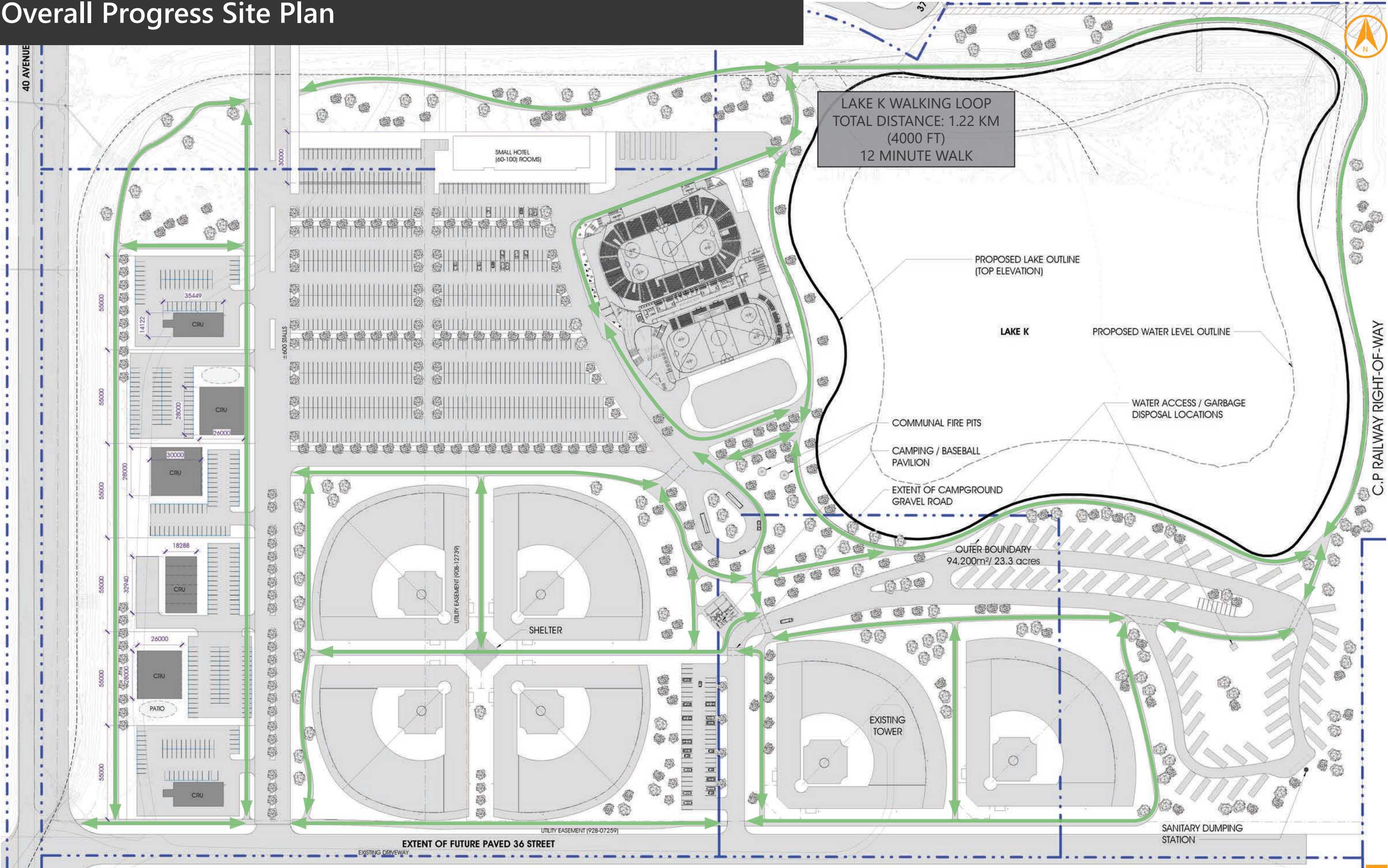
LLOYDMINSTER PLACE - Design Update 2



PREPARED BY
TBD ARCHITECTURE + URBAN PLANNING
ON JUNE 13, 2022

SITE

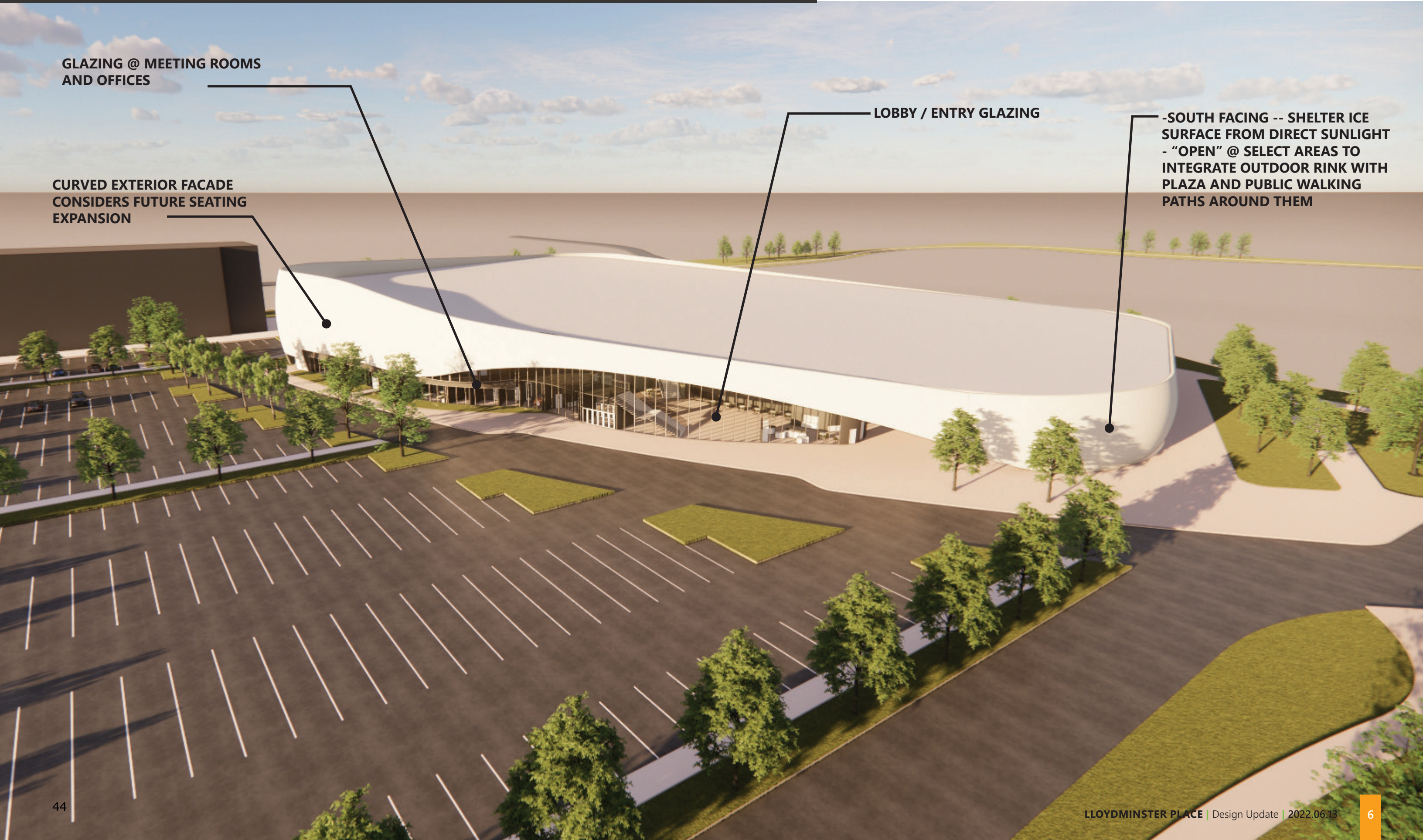
Overall Progress Site Plan





BUILDING EXTERIOR

3D Aerial View



GLAZING @ MEETING ROOMS
AND OFFICES

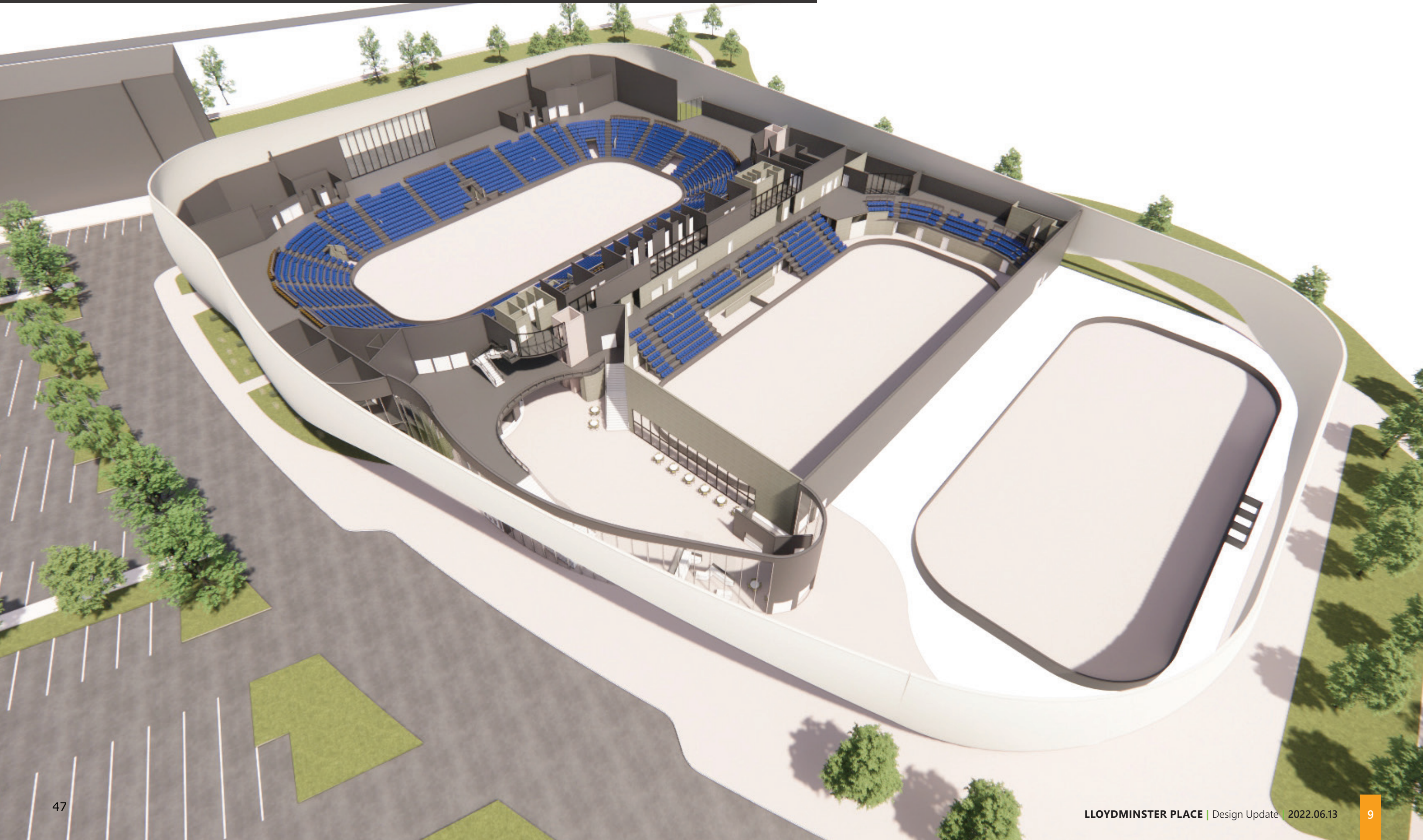
CURVED EXTERIOR FACADE
CONSIDERS FUTURE SEATING
EXPANSION

LOBBY / ENTRY GLAZING

-SOUTH FACING -- SHELTER ICE
SURFACE FROM DIRECT SUNLIGHT
- "OPEN" @ SELECT AREAS TO
INTEGRATE OUTDOOR RINK WITH
PLAZA AND PUBLIC WALKING
PATHS AROUND THEM

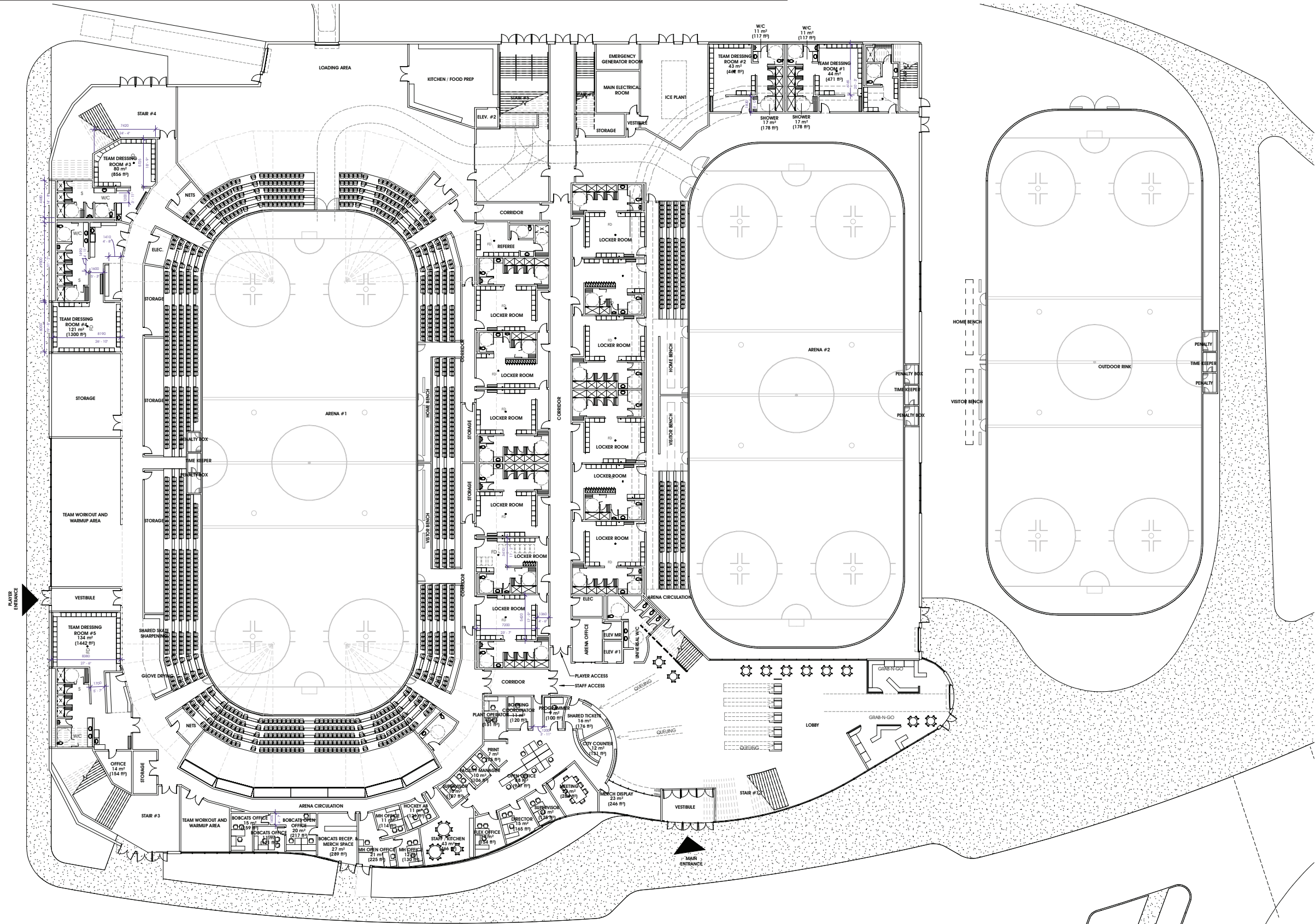






PROGRESS PLANS

EVENT LEVEL PLAN



FOR INFORMATION ONLY
NOT FOR CONSTRUCTION

**CLIENT
LOGO**

[illegible]

LLOYDMINSTER EVENT ARENA

PROGRESS SET - MAY 31, 2022

CONSULTANT

DD
architecture + urban planning
9916 - 81 Ave Edmonton, Alberta, T6E 1W6
780-428-8001 tbdarch.com

101
Event Level

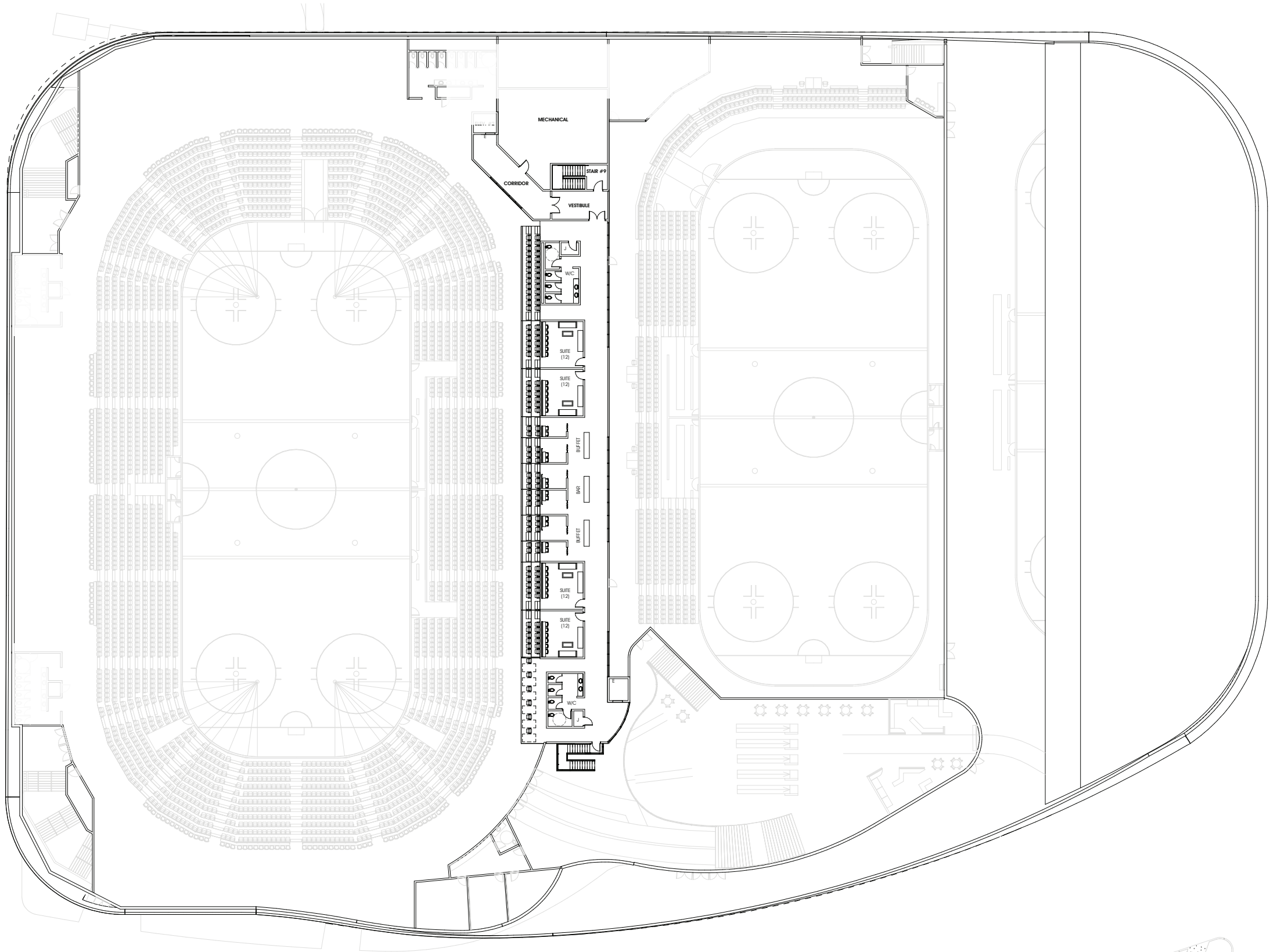
50



102
Concourse Level

SUITE LEVEL PLAN

PLOTTED: 2022-06-02 1:51:28 PM



FOR INFORMATION ONLY
NOT FOR CONSTRUCTION



architecture + urban planning
9915 - 87 Ave Edmonton Alberta T6E 1W6
780-428-8001
tdarch.com

LLOYDMINSTER EVENT ARENA

PROGRESS SET - MAY 31, 2022

103
Suite Level

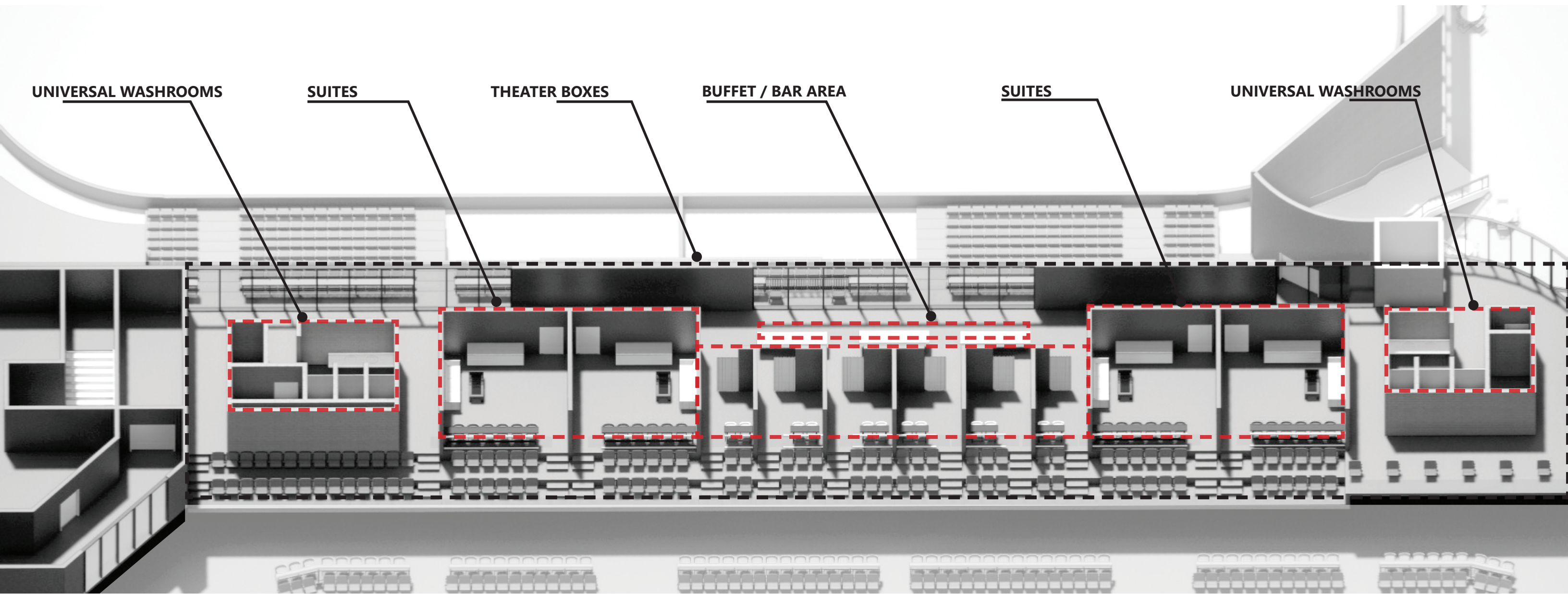
SEAL

Project No.	21-219
Scale	1 : 200
Revision	
Sheet	
Drawing Number	103
	Suite Level

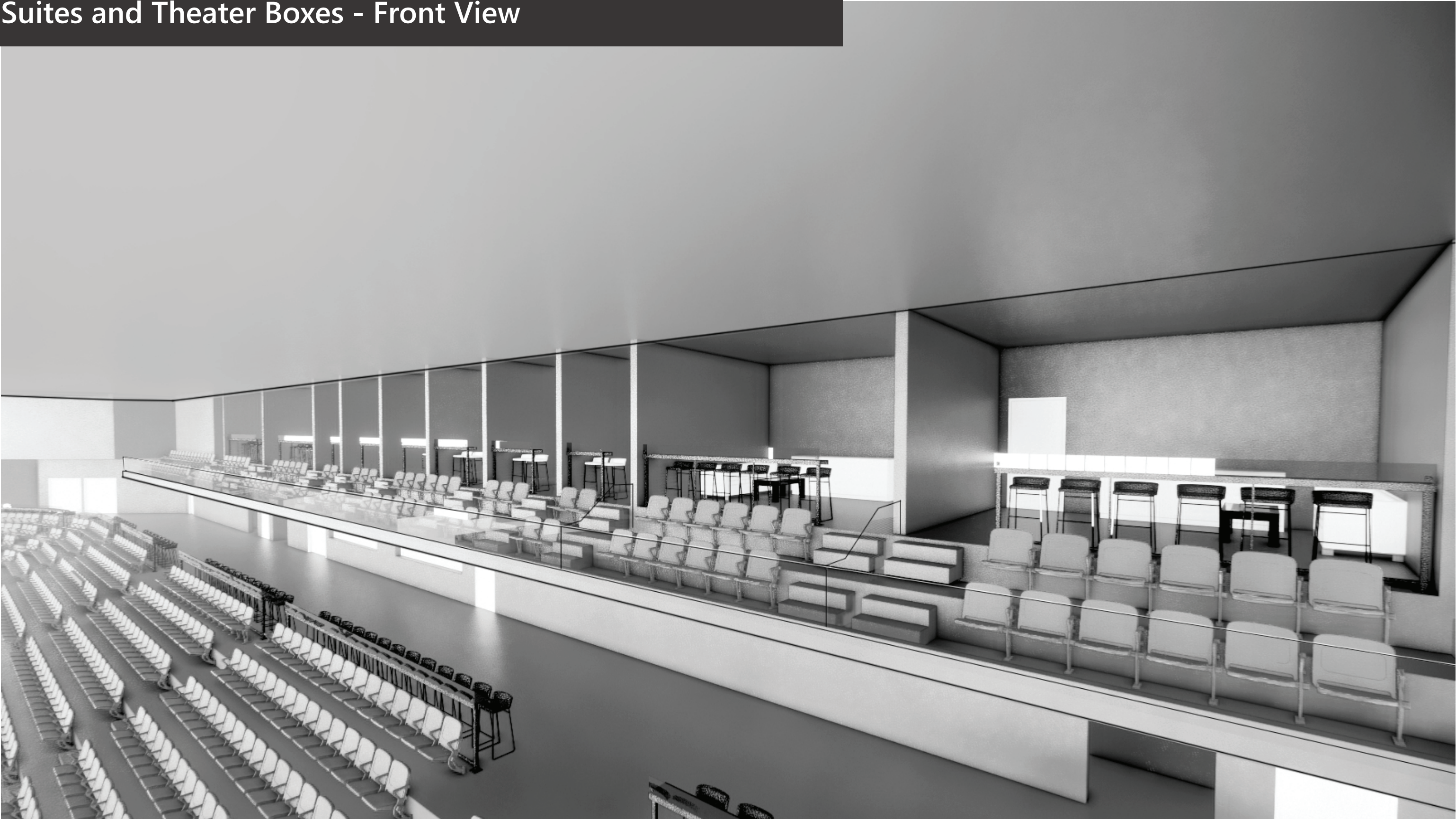
DESIGNED BY: VVVVMMDS
CHECKED BY: VVVVMMDS
APPROVED BY: VVVVMMDS
DATE: 2022-06-02
PROJECT: LLOYDMINSTER EVENT ARENA
SHEET: 103
DRAWING: SUITE LEVEL
NOTED: FOR INFORMATION ONLY, NOT FOR CONSTRUCTION
DESIGN AND DRAWINGS ARE THE PROPERTY OF VVVVMMDS ARCHITECTURE + URBAN PLANNING

PREMIUM SEATING PRODUCT

Suite Level - Overhead View



Suites and Theater Boxes - Front View

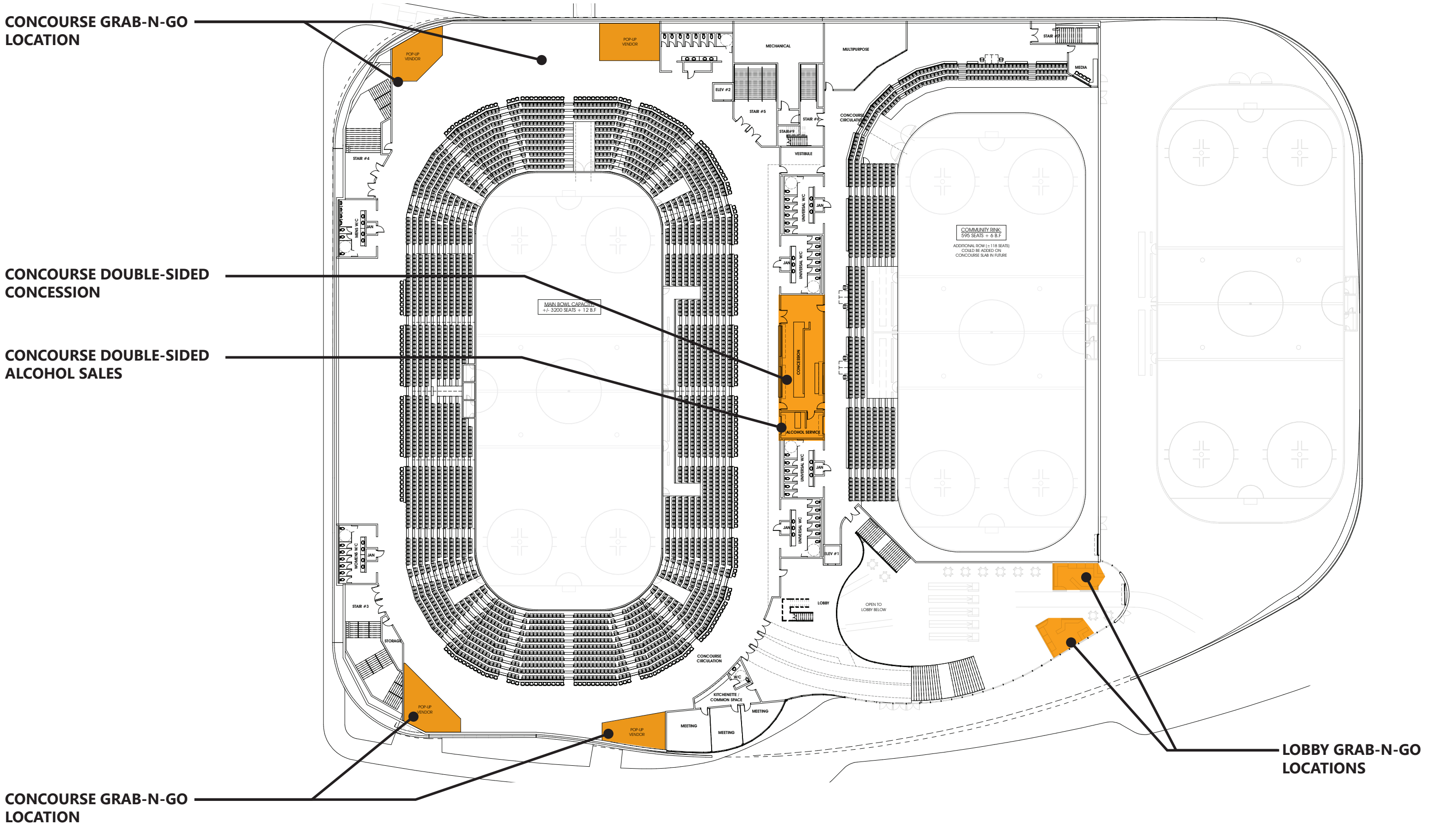




TOTAL SEATS:
- 180 TOTAL EXEC RAIL SEATS

FOOD SERVICE SPACES

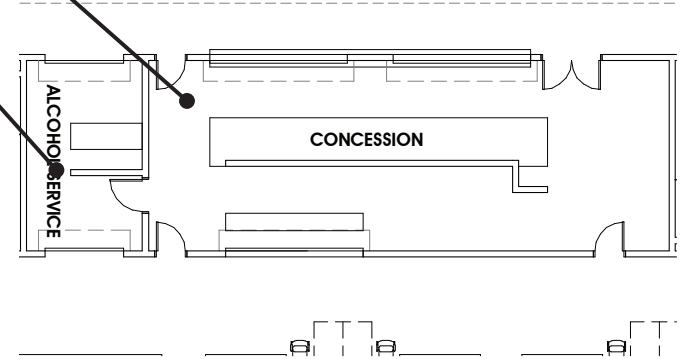
Food Service Space Locations



Concourse Double-Sided Concession

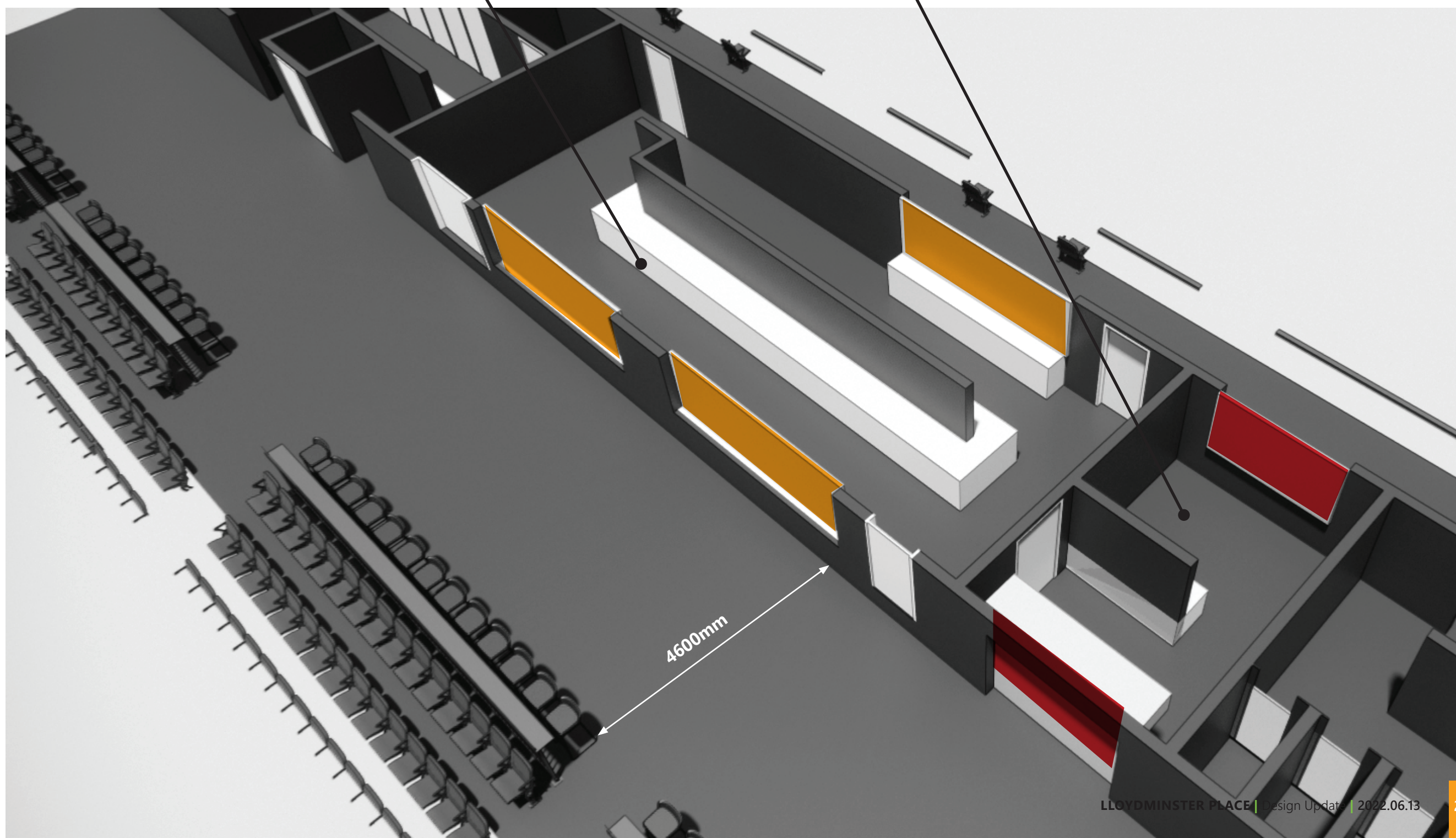
2-SIDED
CONCESSION

ALCOHOL SALES



2-SIDED
CONCESSION

ALCOHOL SALES



Grab N Go - Precedent - Brandt Centre (Regina, SK)



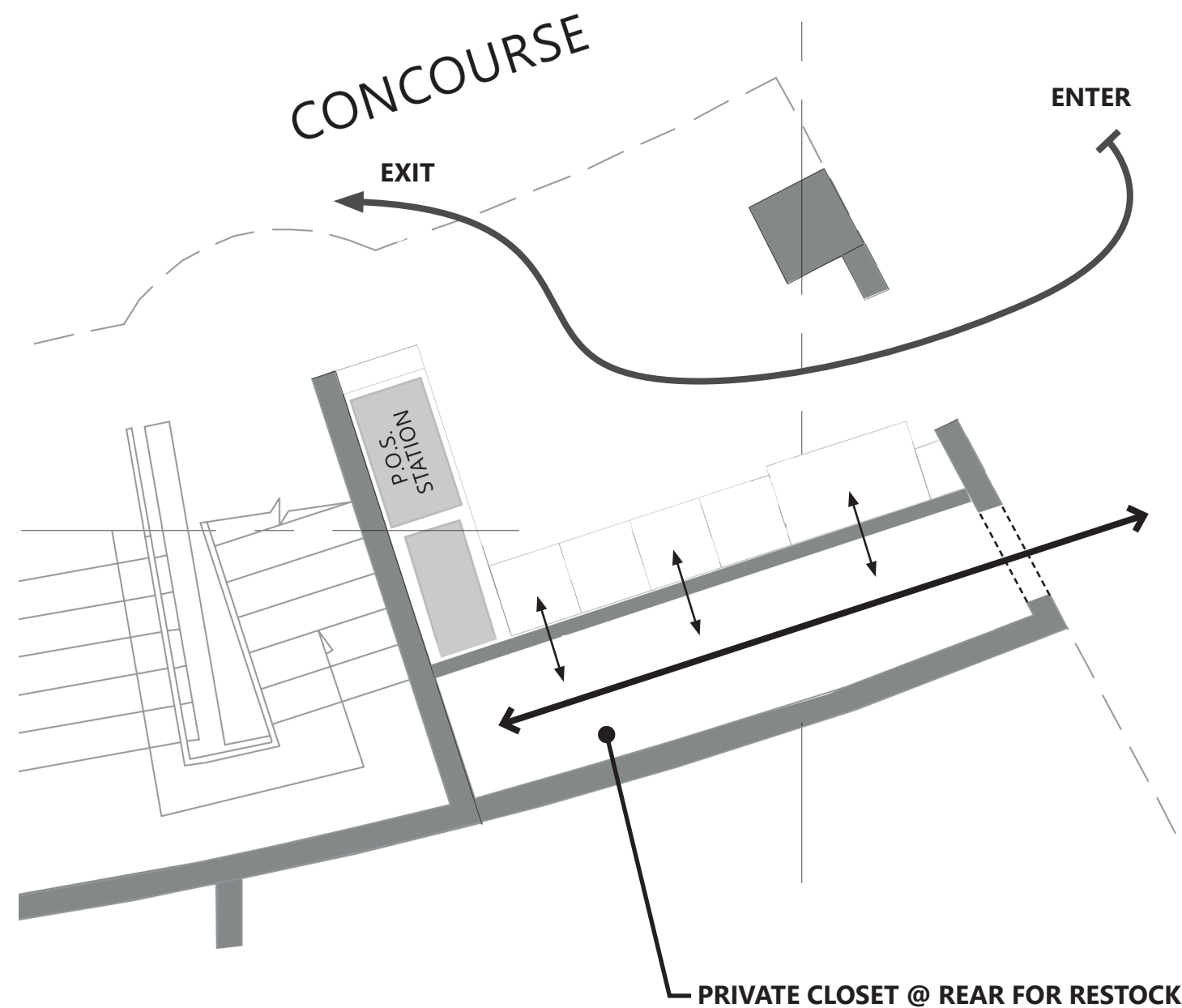
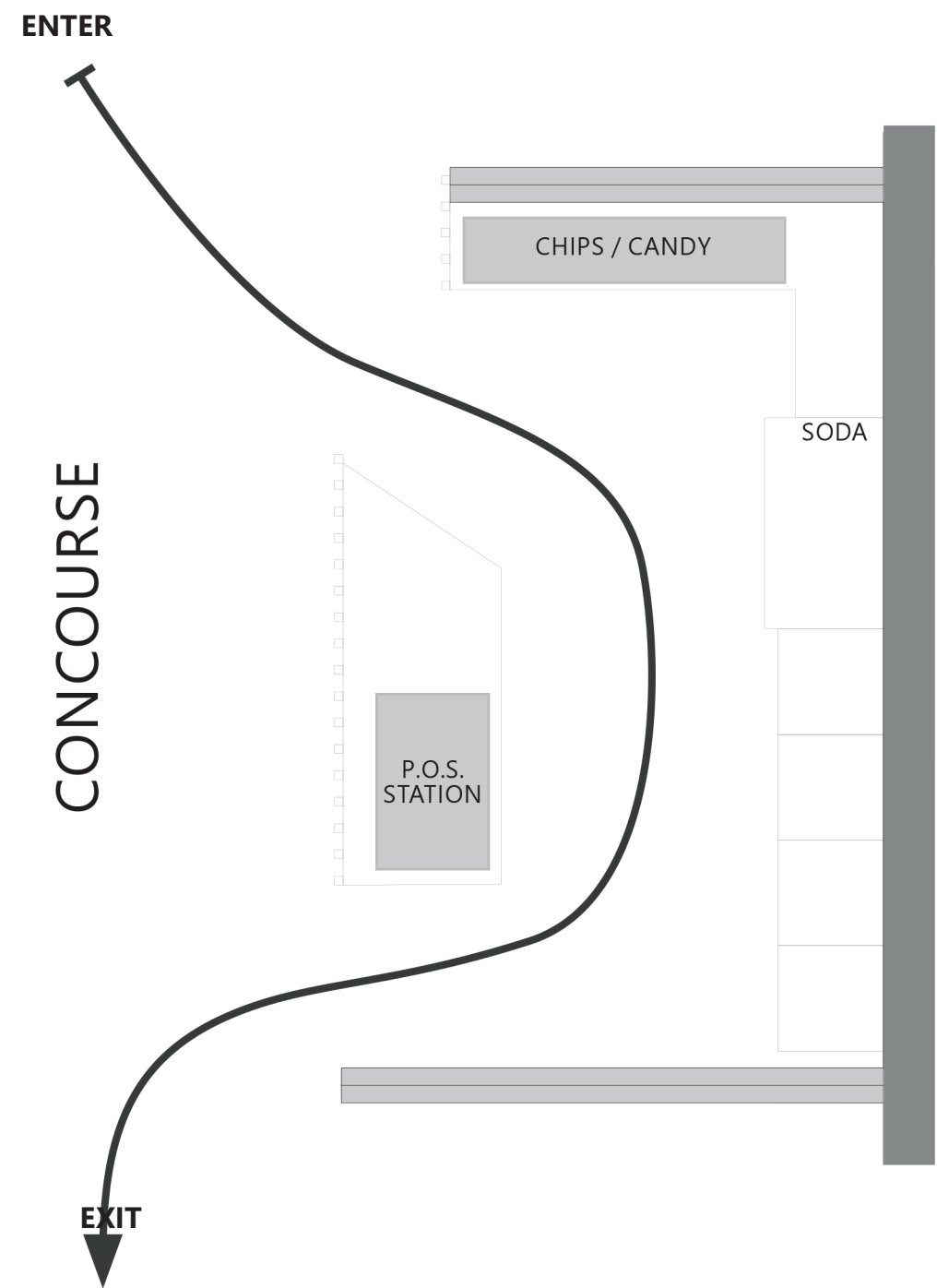
Before



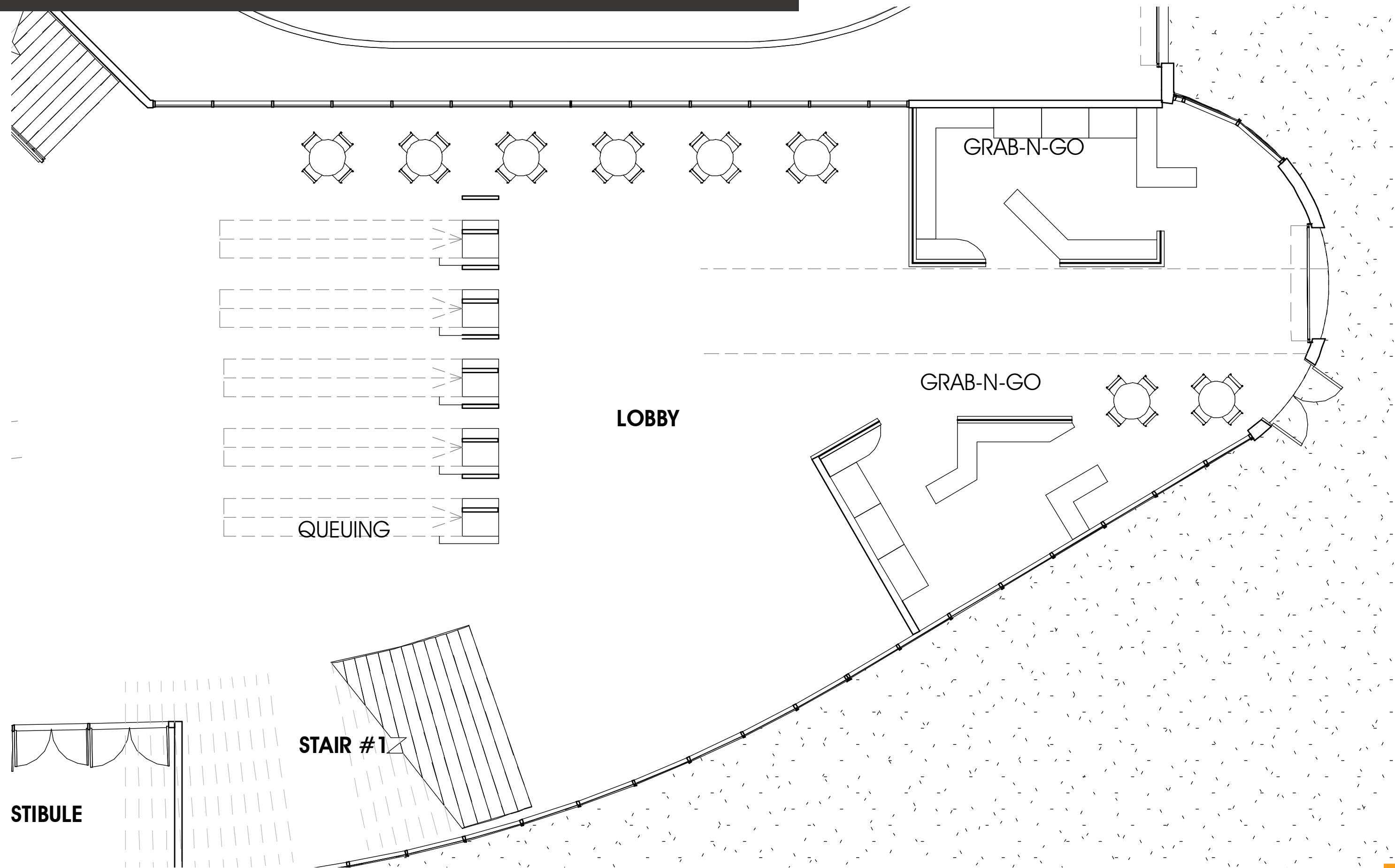
Design Render



AFTER

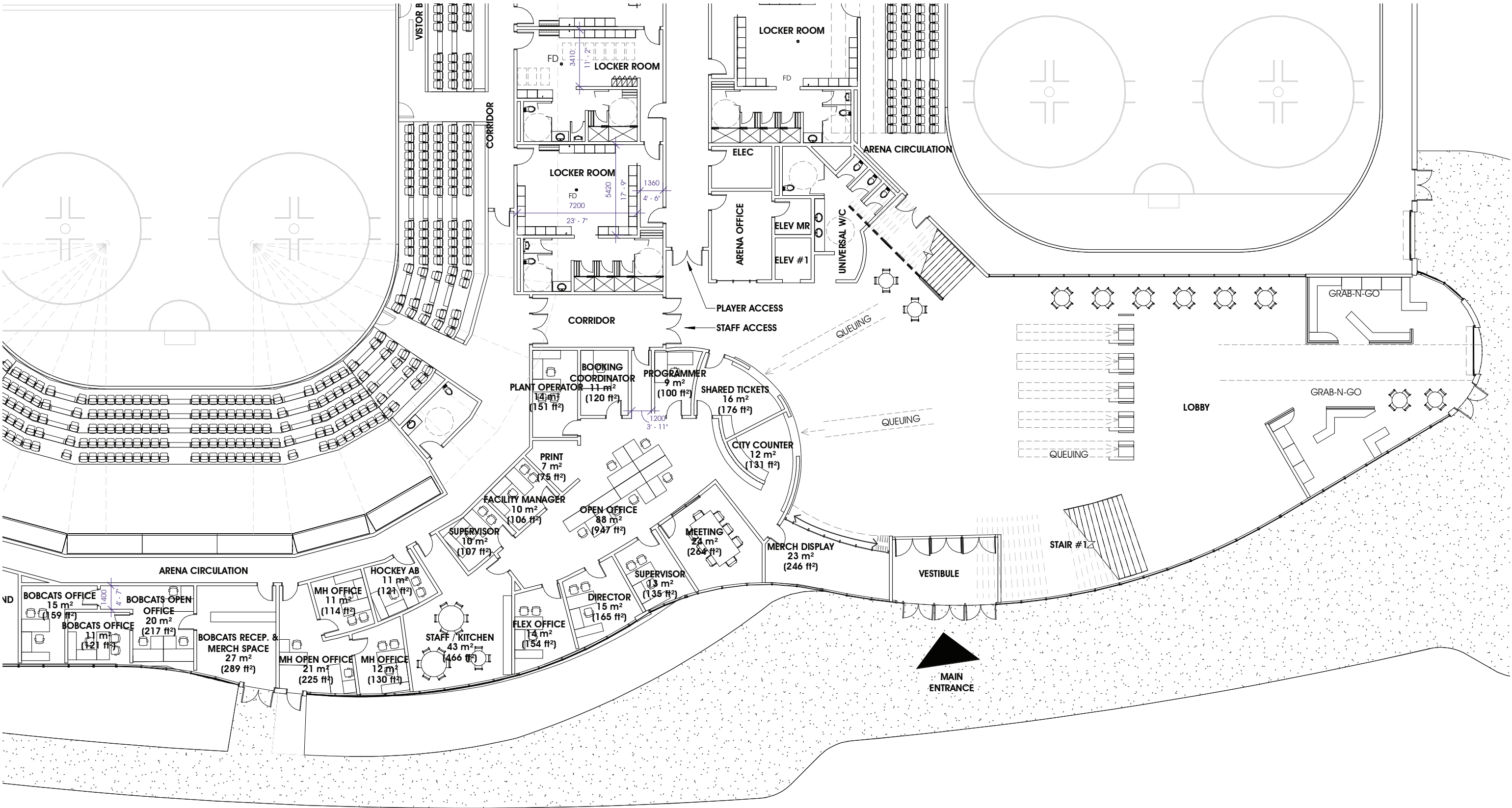


Lobby Grab N Go and Concession - Enlarged Plan

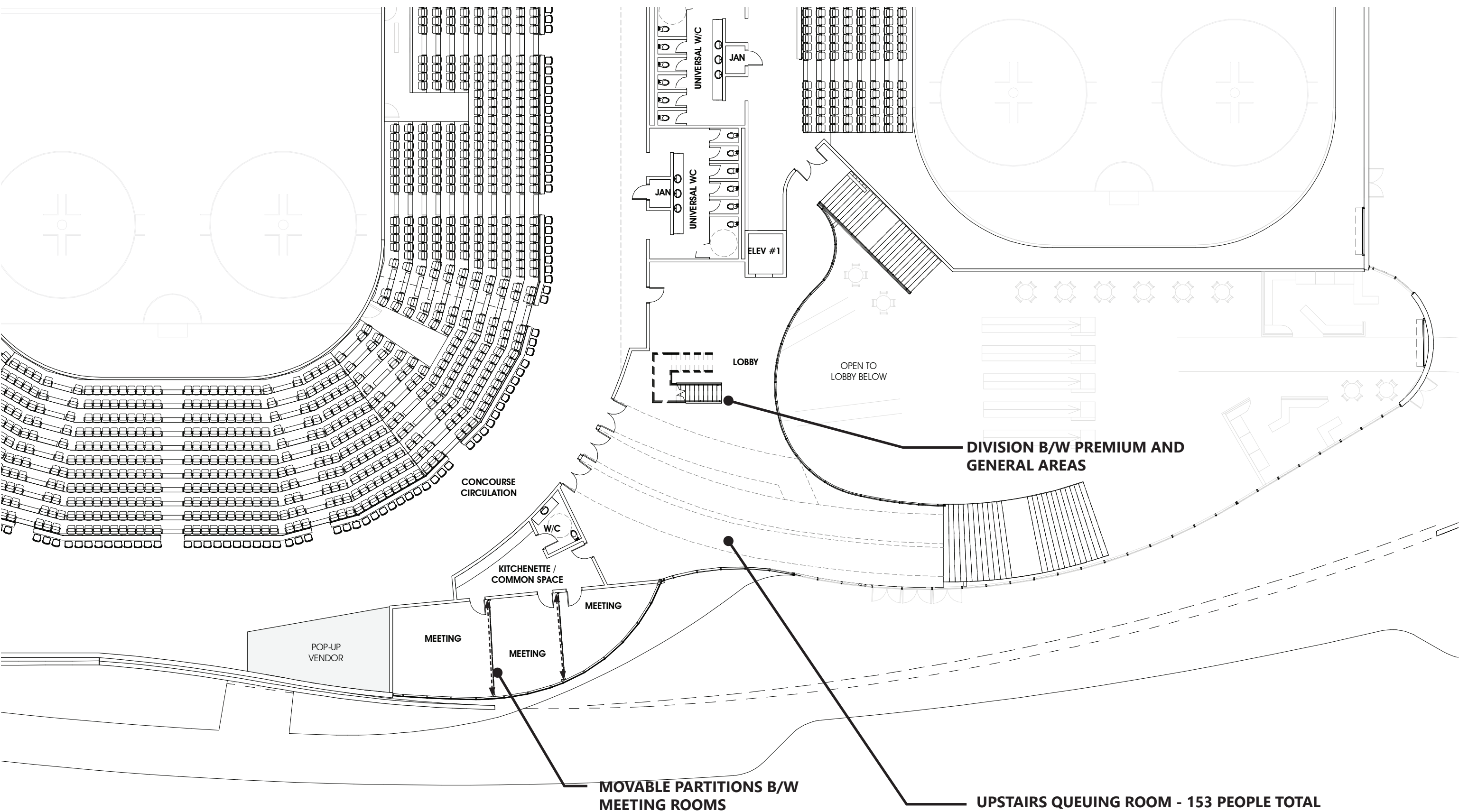


LOBBY / OFFICE CONFIGURATION

Lobby / Office - Main Floor



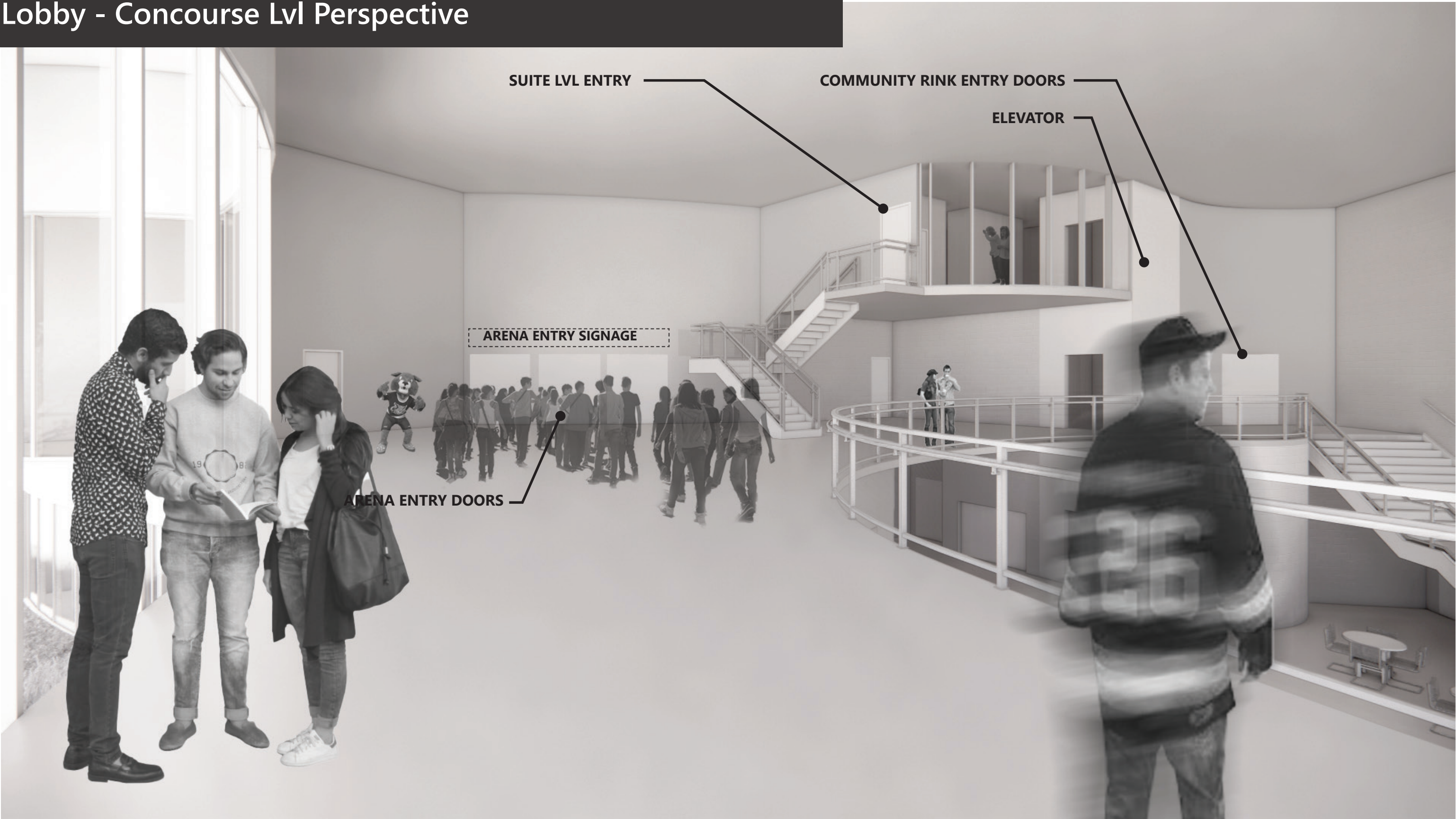
Lobby / Meeting Rooms - Second Floor



Lobby - Event Level Perspective Perspective



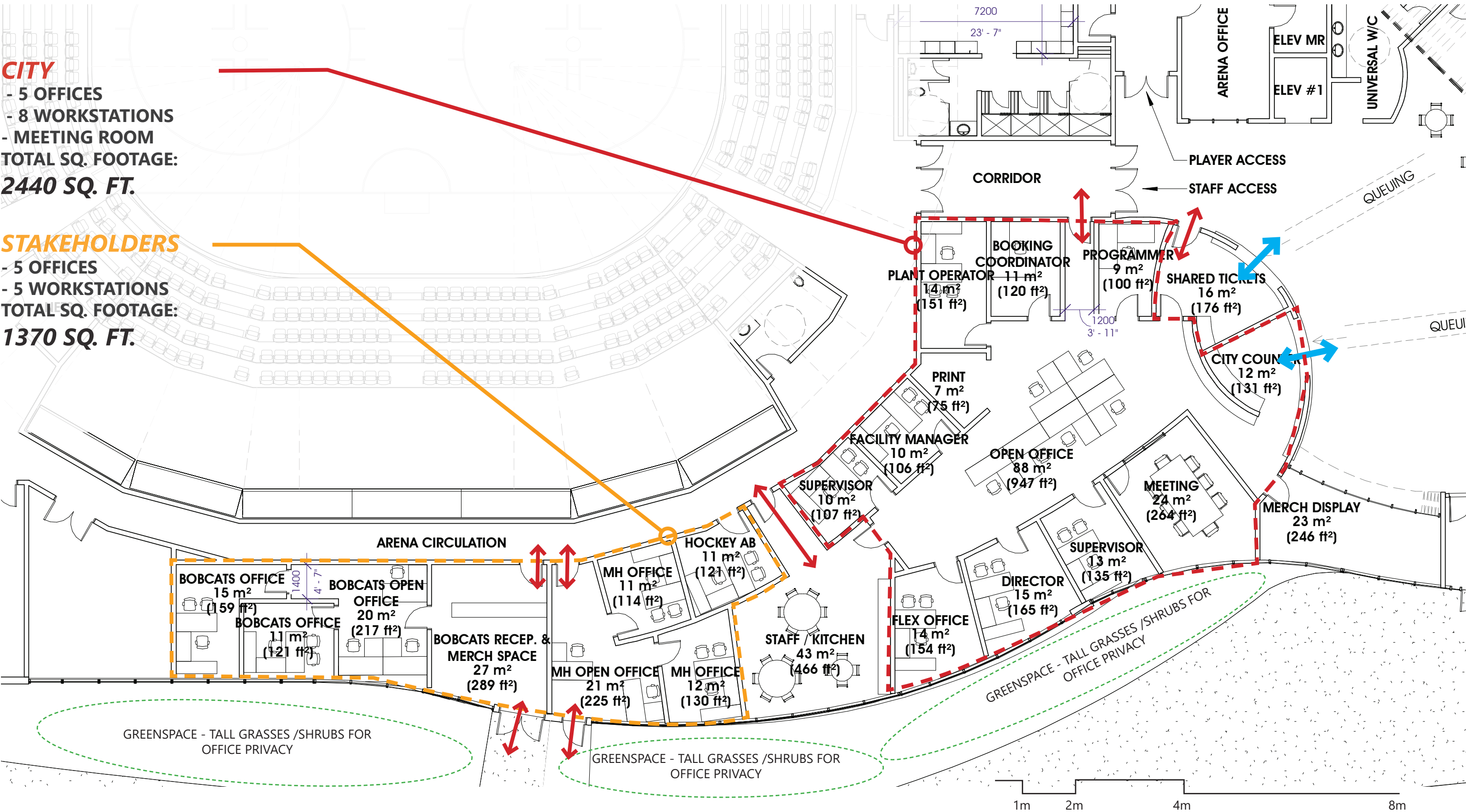
Lobby - Concourse Lvl Perspective



Office Layout - With Interior Curves

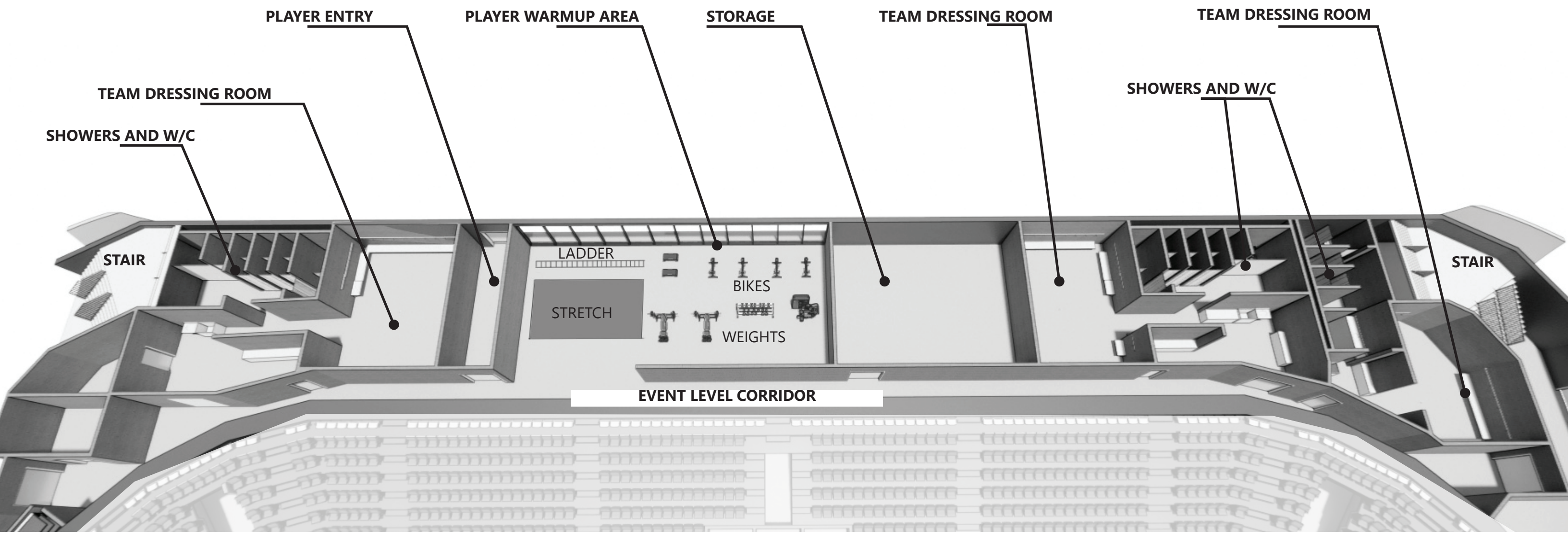
CITY
- 5 OFFICES
- 8 WORKSTATIONS
- MEETING ROOM
TOTAL SQ. FOOTAGE:
2440 SQ. FT.

STAKEHOLDERS
- 5 OFFICES
- 5 WORKSTATIONS
TOTAL SQ. FOOTAGE:
1370 SQ. FT.



DRESSING ROOMS

Dressing Room Corridor

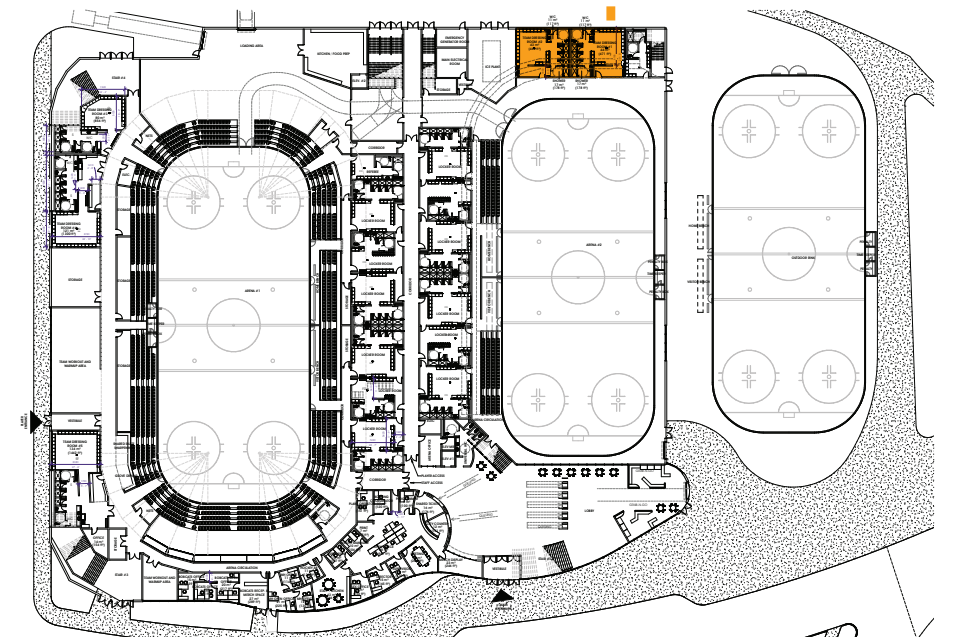
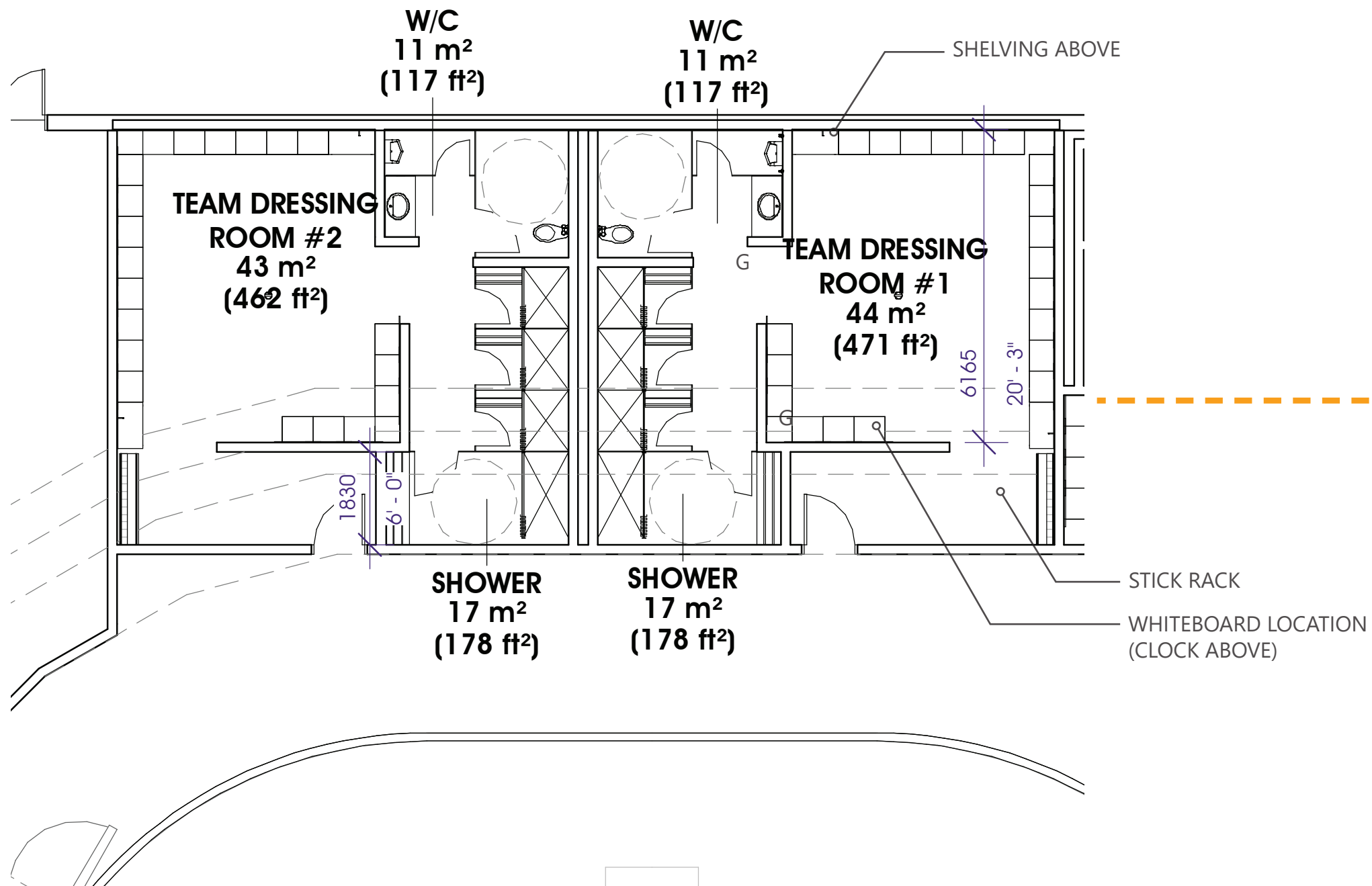


Team Dressing Rooms 1-2 -- Plan in Progress

TOTAL DRESSING ROOM AREA:

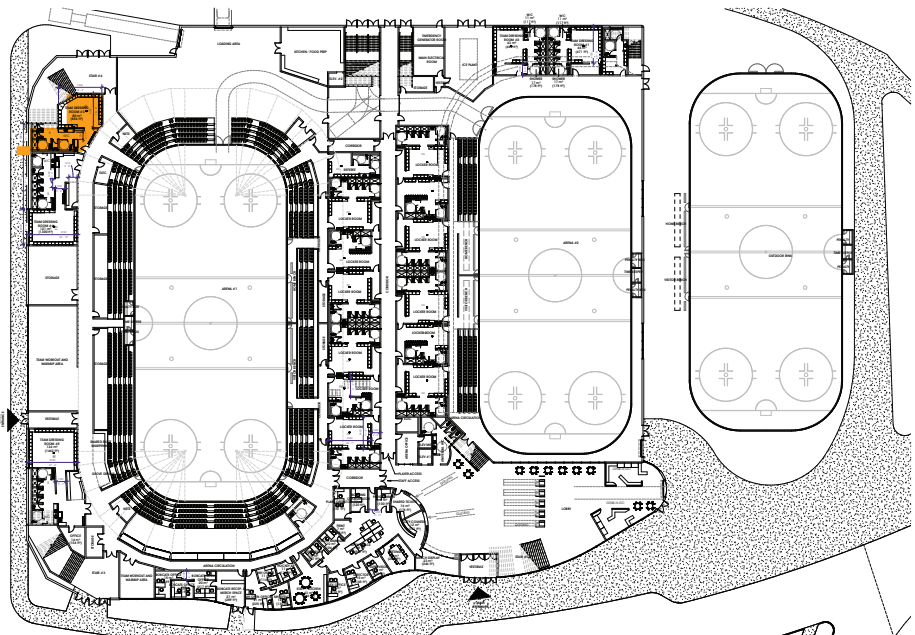
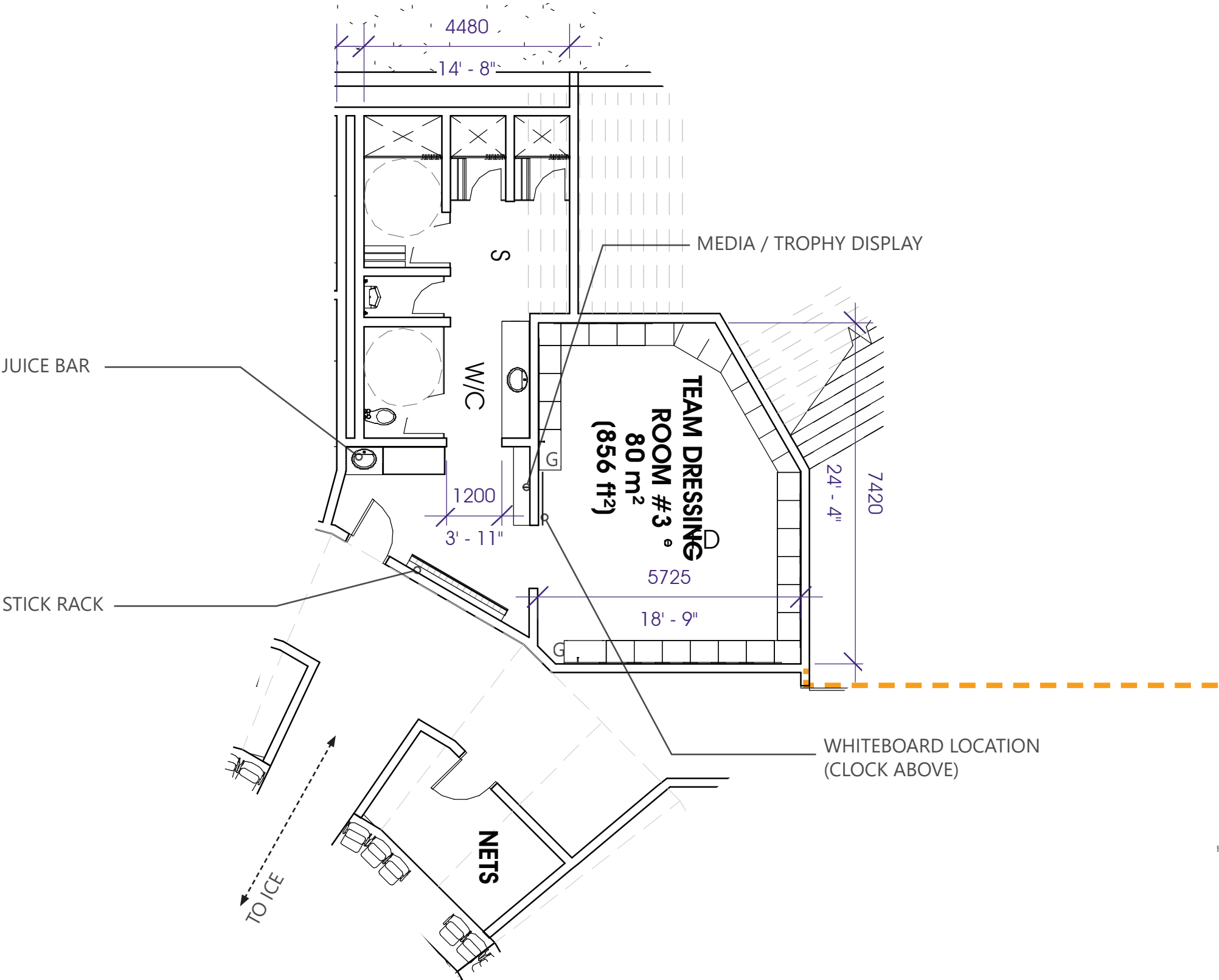
750 SQ. FT.

PER DRESSING ROOM 1-2

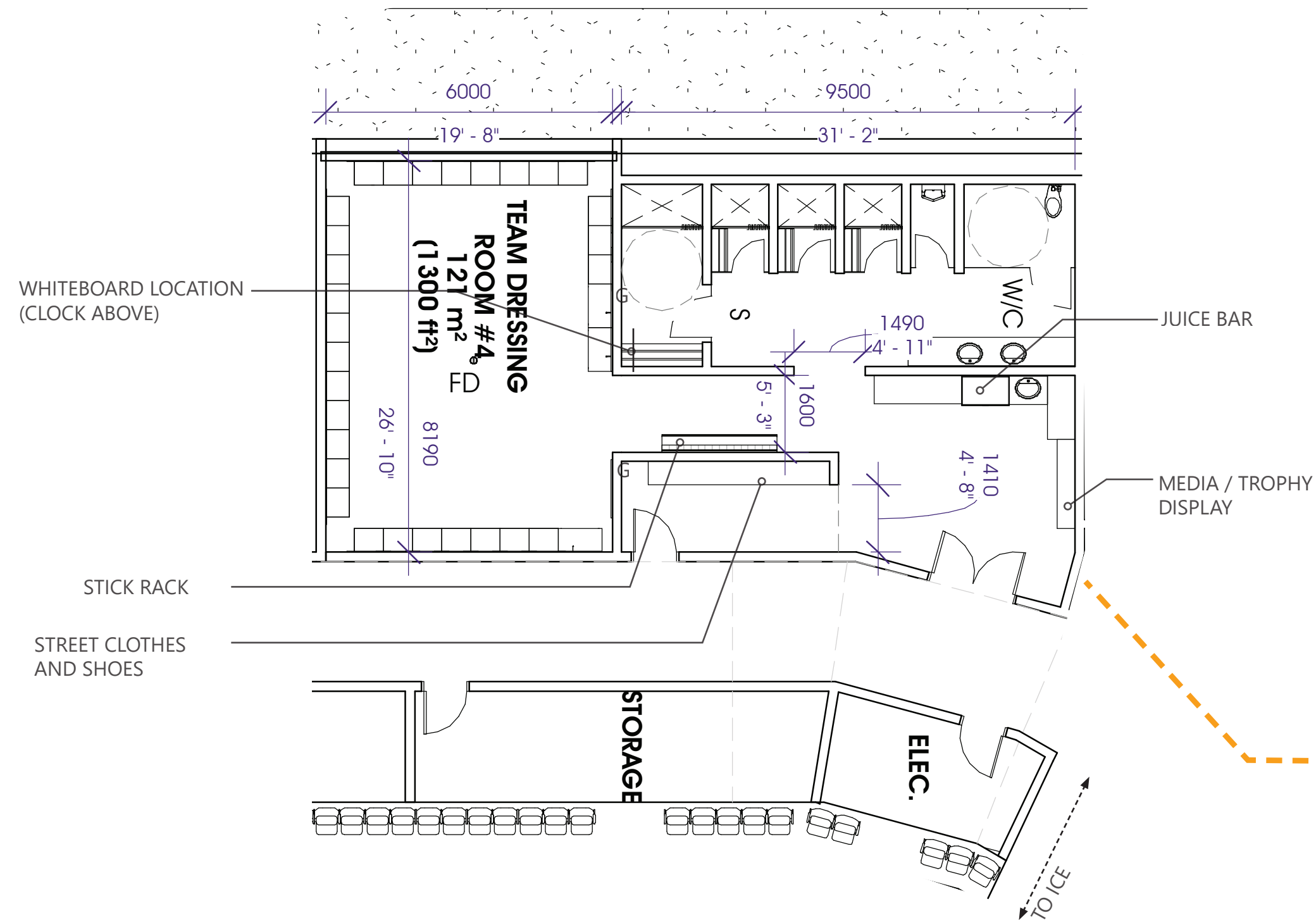


Team Dressing Room 3 -- Plan in Progress

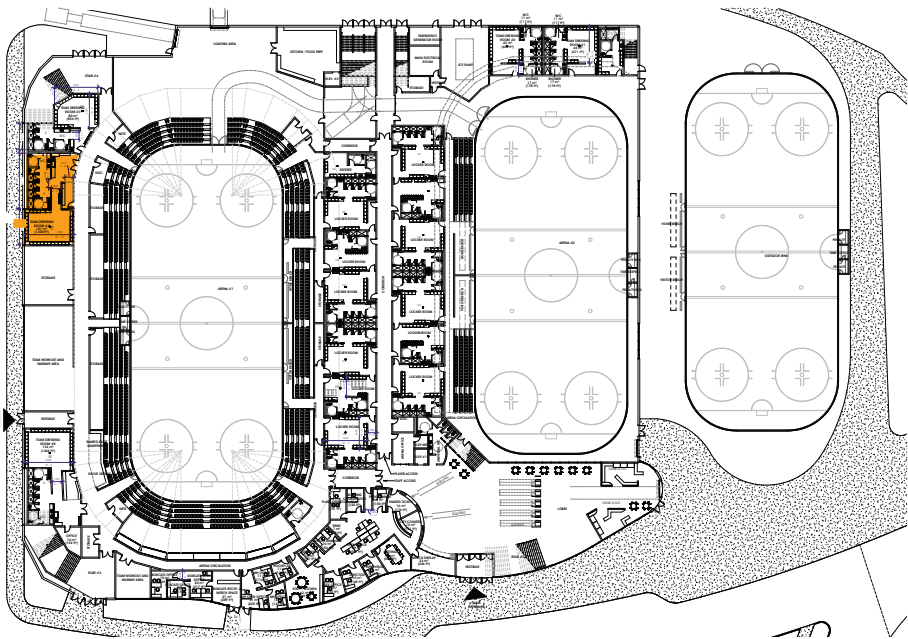
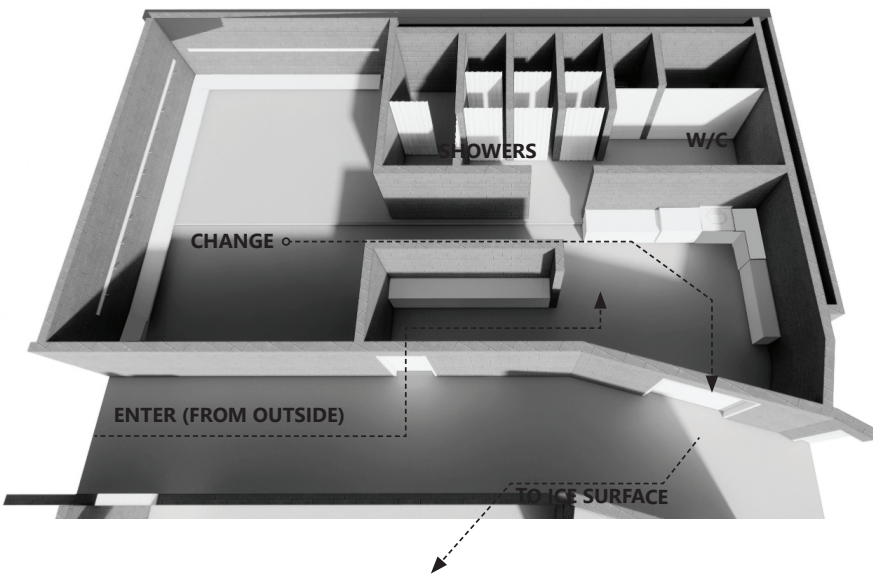
TOTAL DRESSING ROOM AREA:
850 SQ. FT.



Team Dressing Room 2 -- Plan in Progress



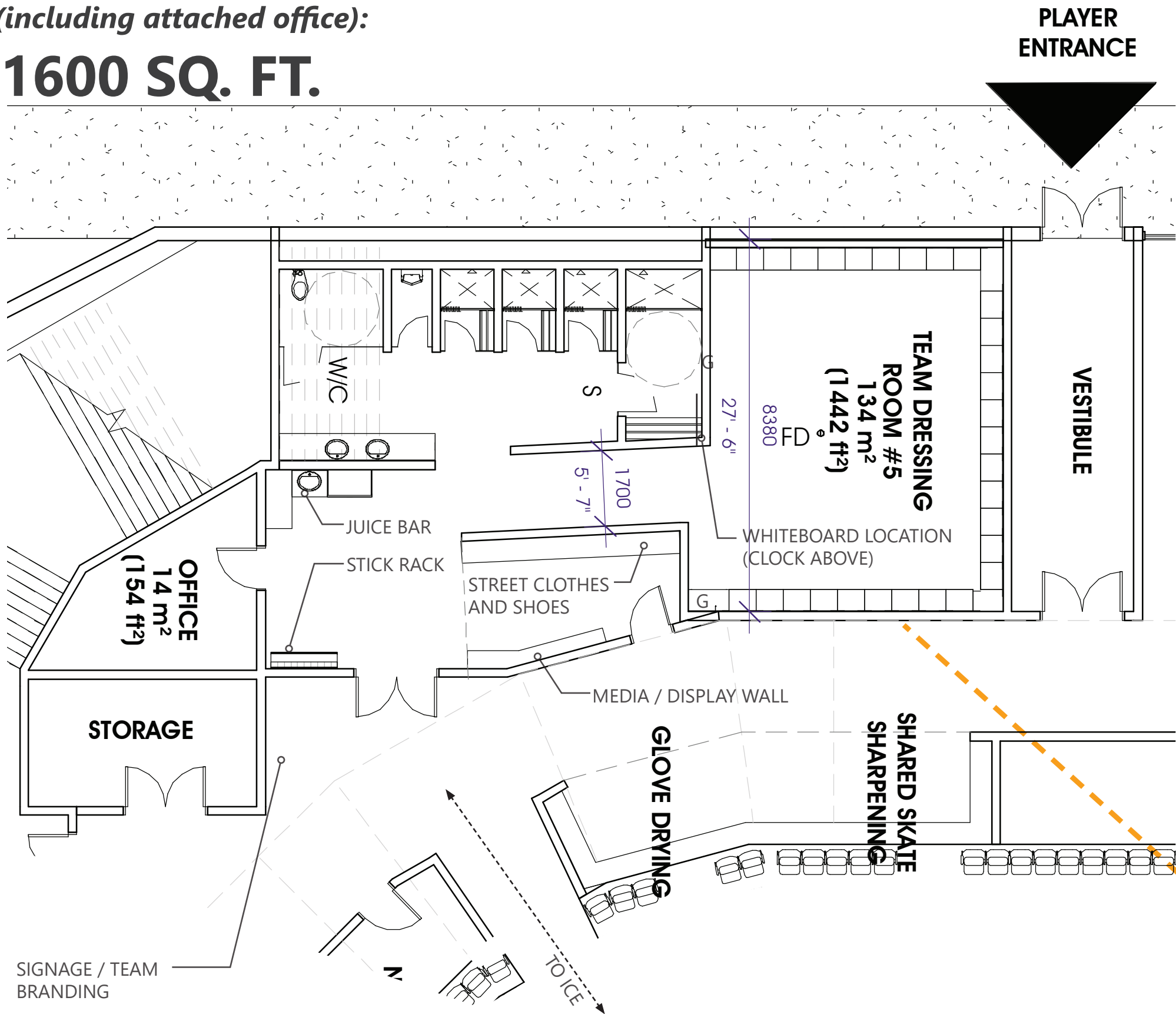
TOTAL DRESSING ROOM AREA:
1270 SQ. FT.



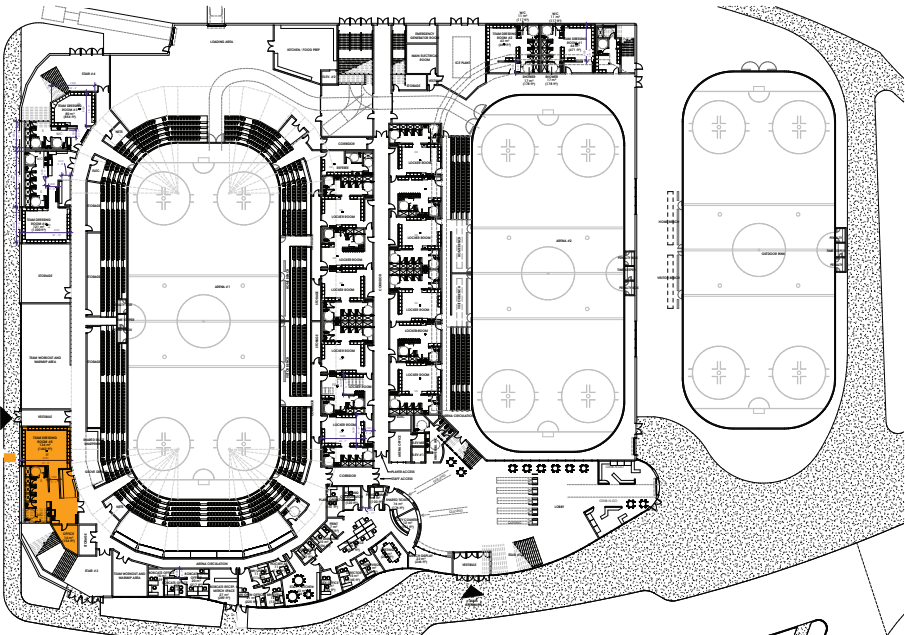
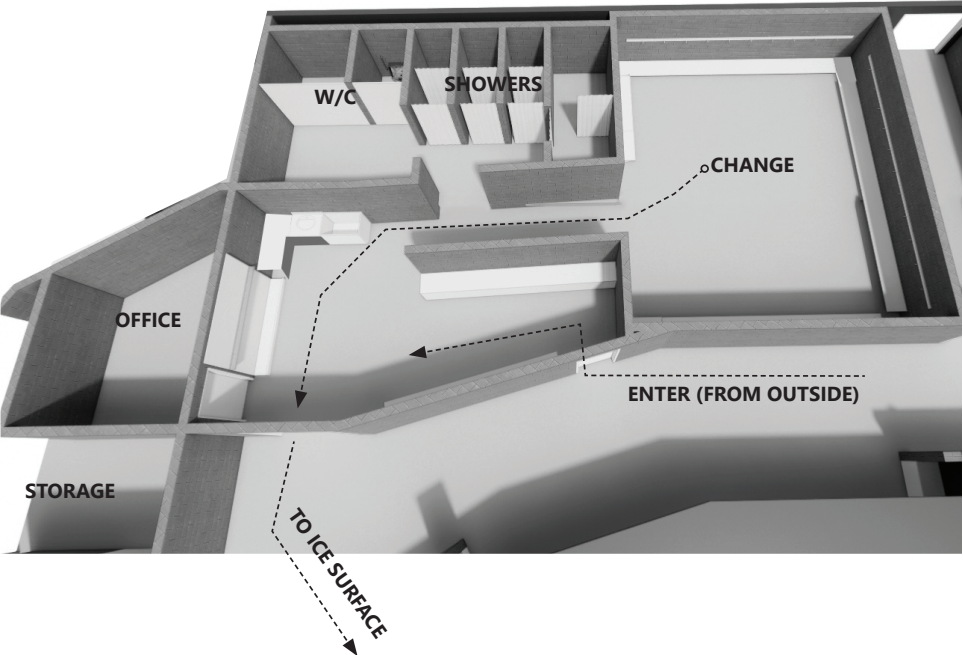
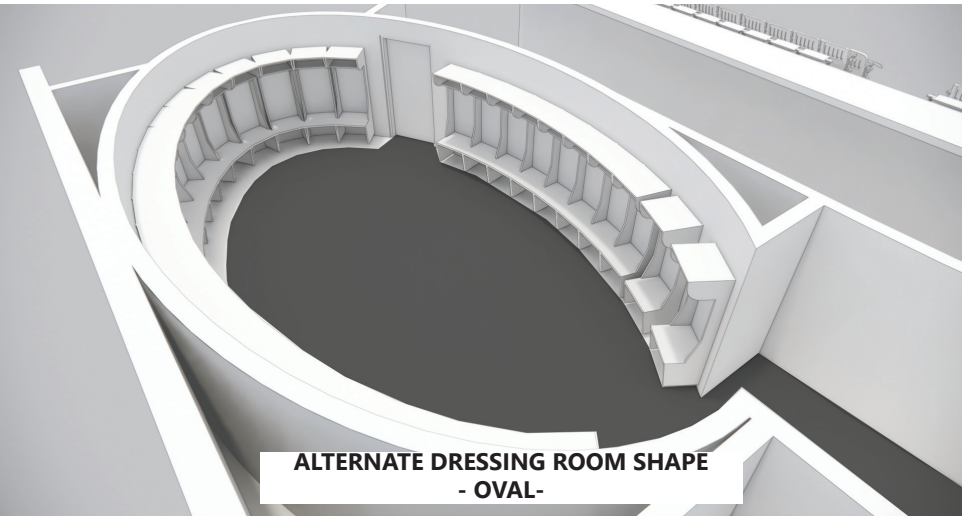
Team Dressing Room 1 -- Plan in Progress

TOTAL DRESSING ROOM AREA
(including attached office):

1600 SQ. FT.

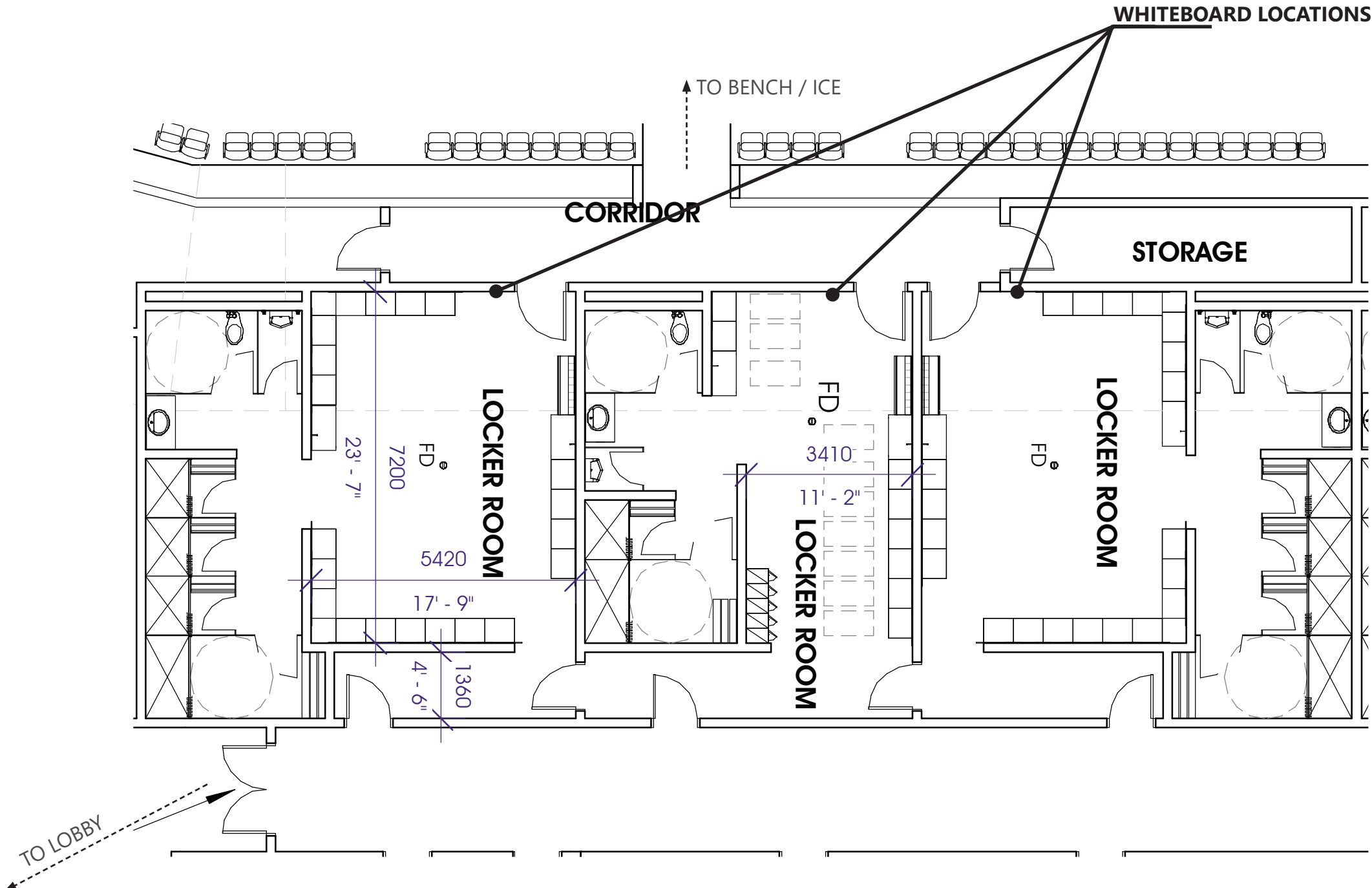


PLAYER
ENTRANCE

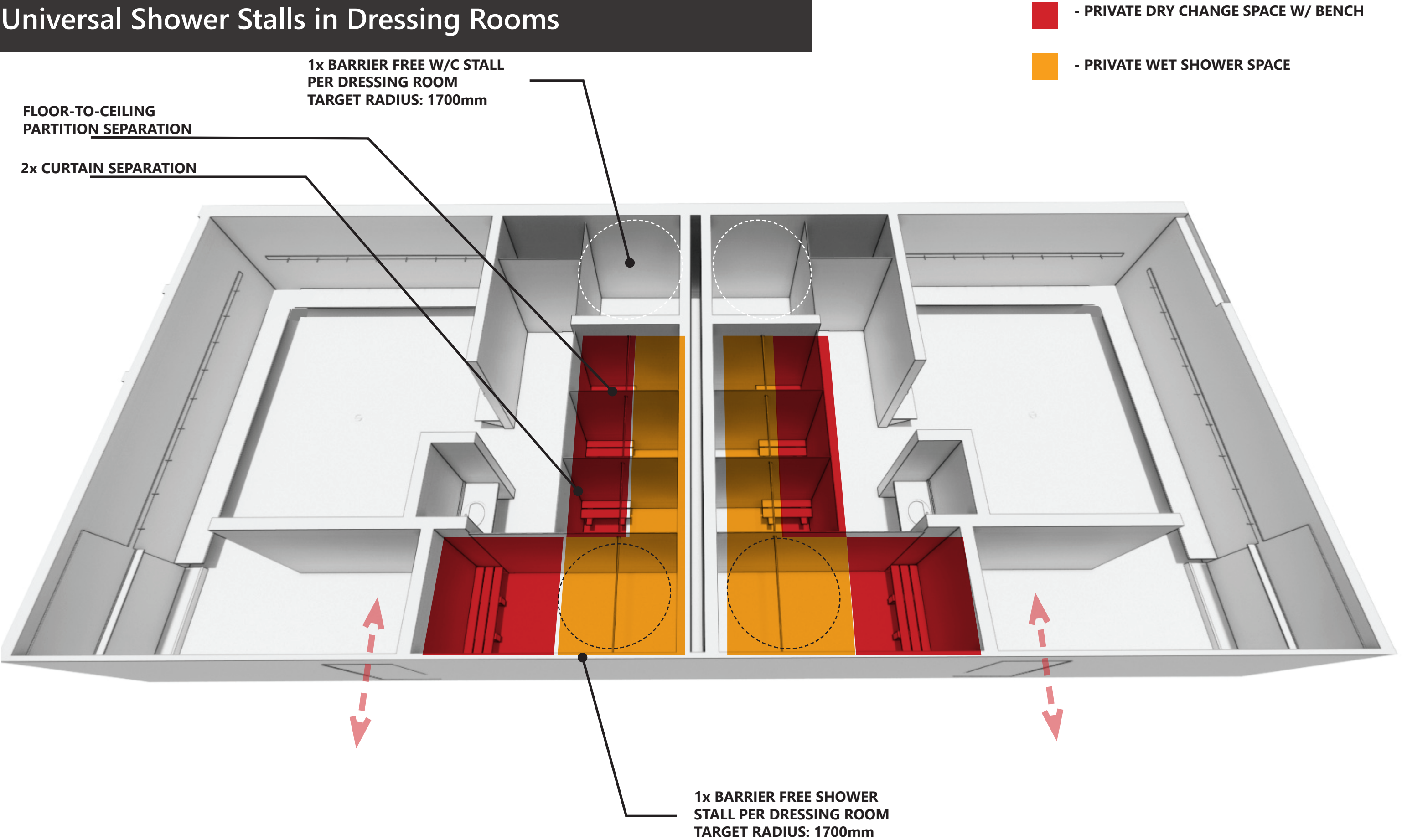


ACCESSIBLE DESIGN

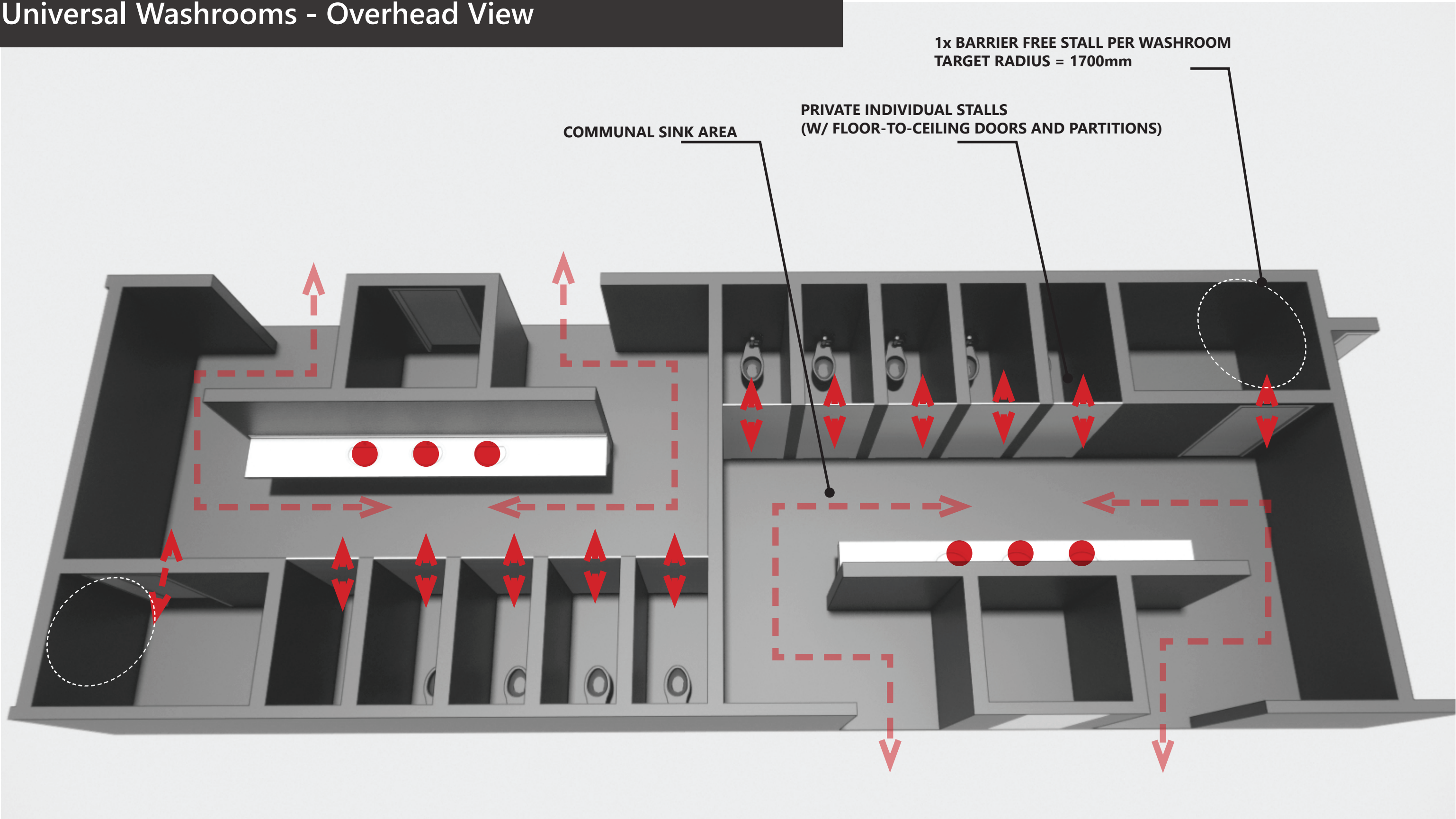
Flexible Locker Rooms - Enlarged Plan



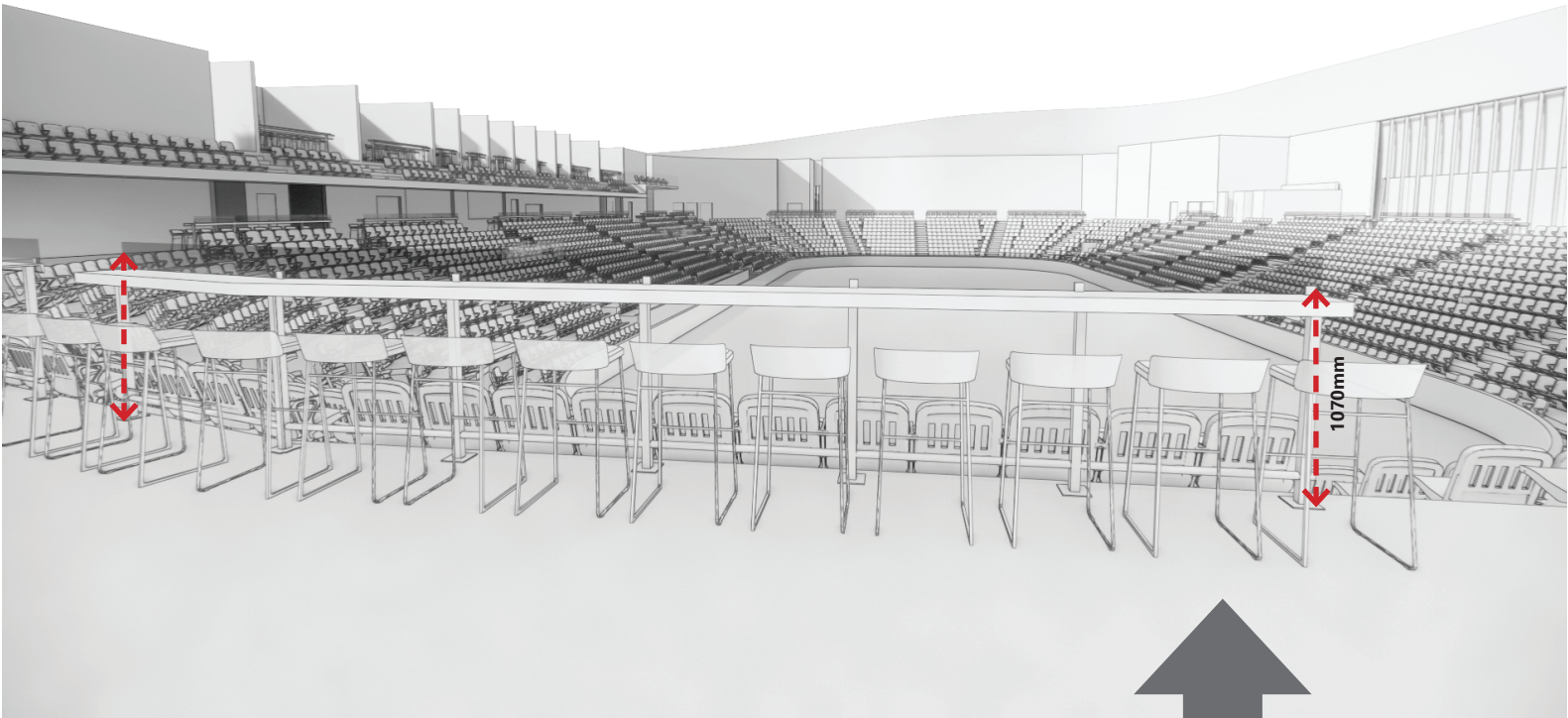
Universal Shower Stalls in Dressing Rooms



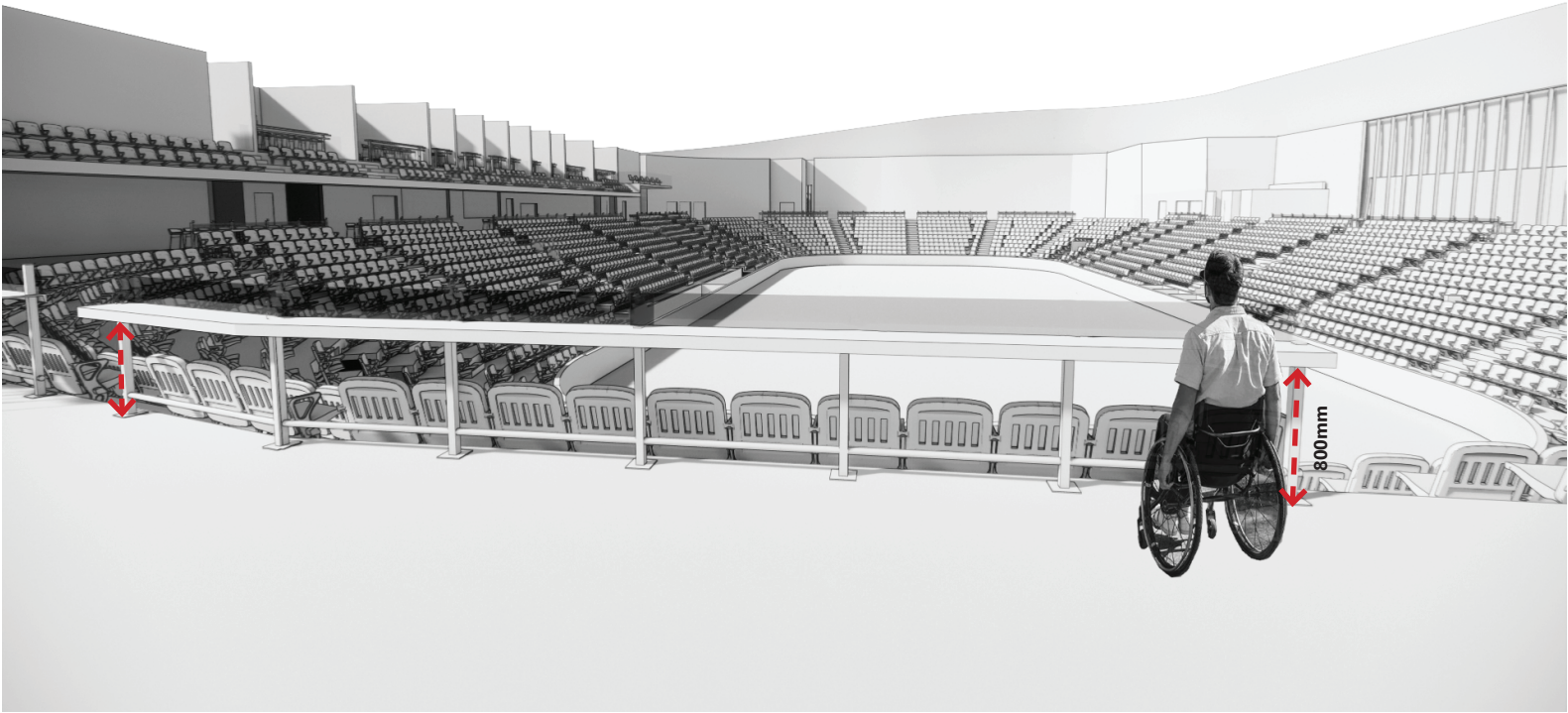
Universal Washrooms - Overhead View



**STANDING /
BARSTOOL HEIGHT**

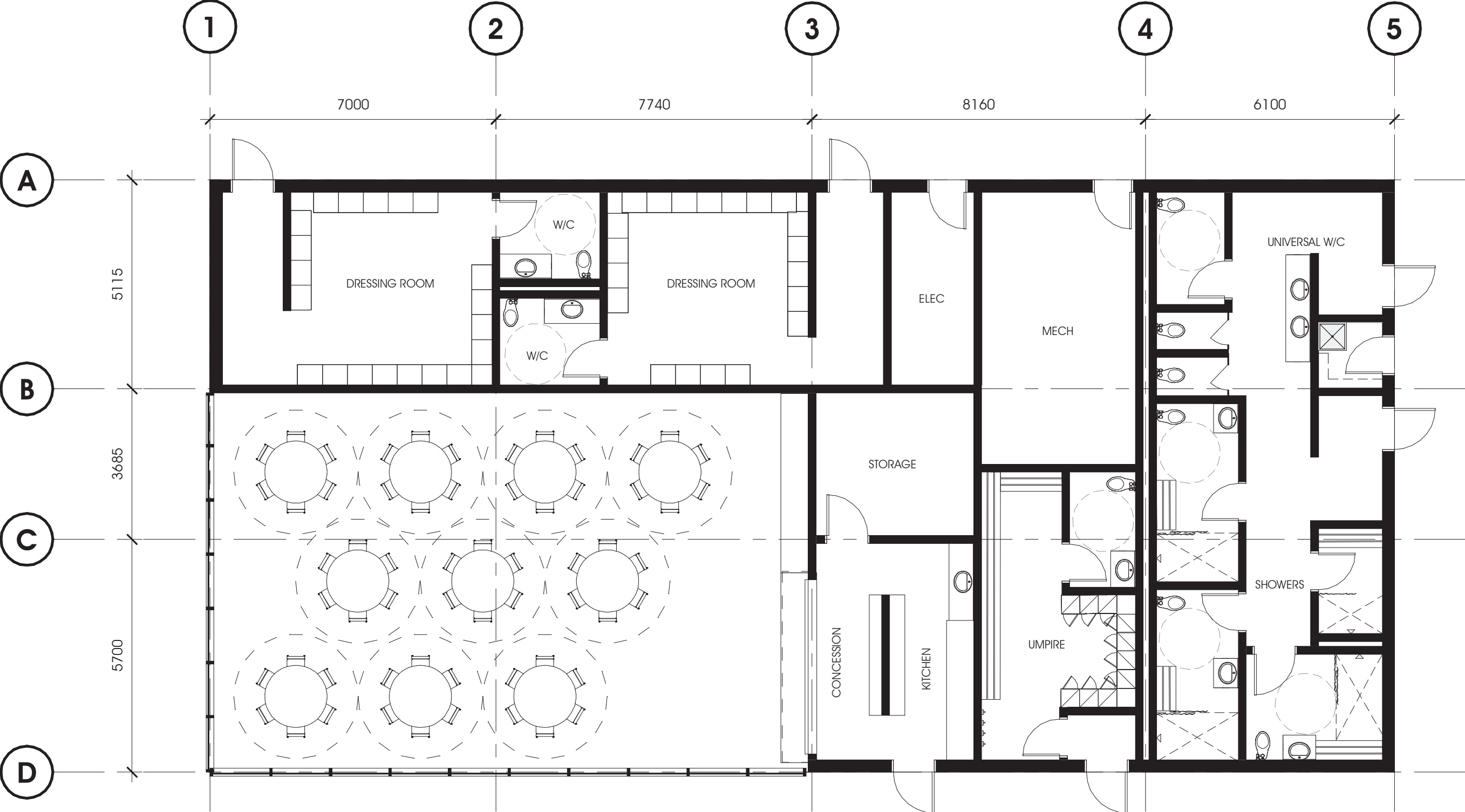


**SITTING /
WHEELCHAIR HEIGHT**

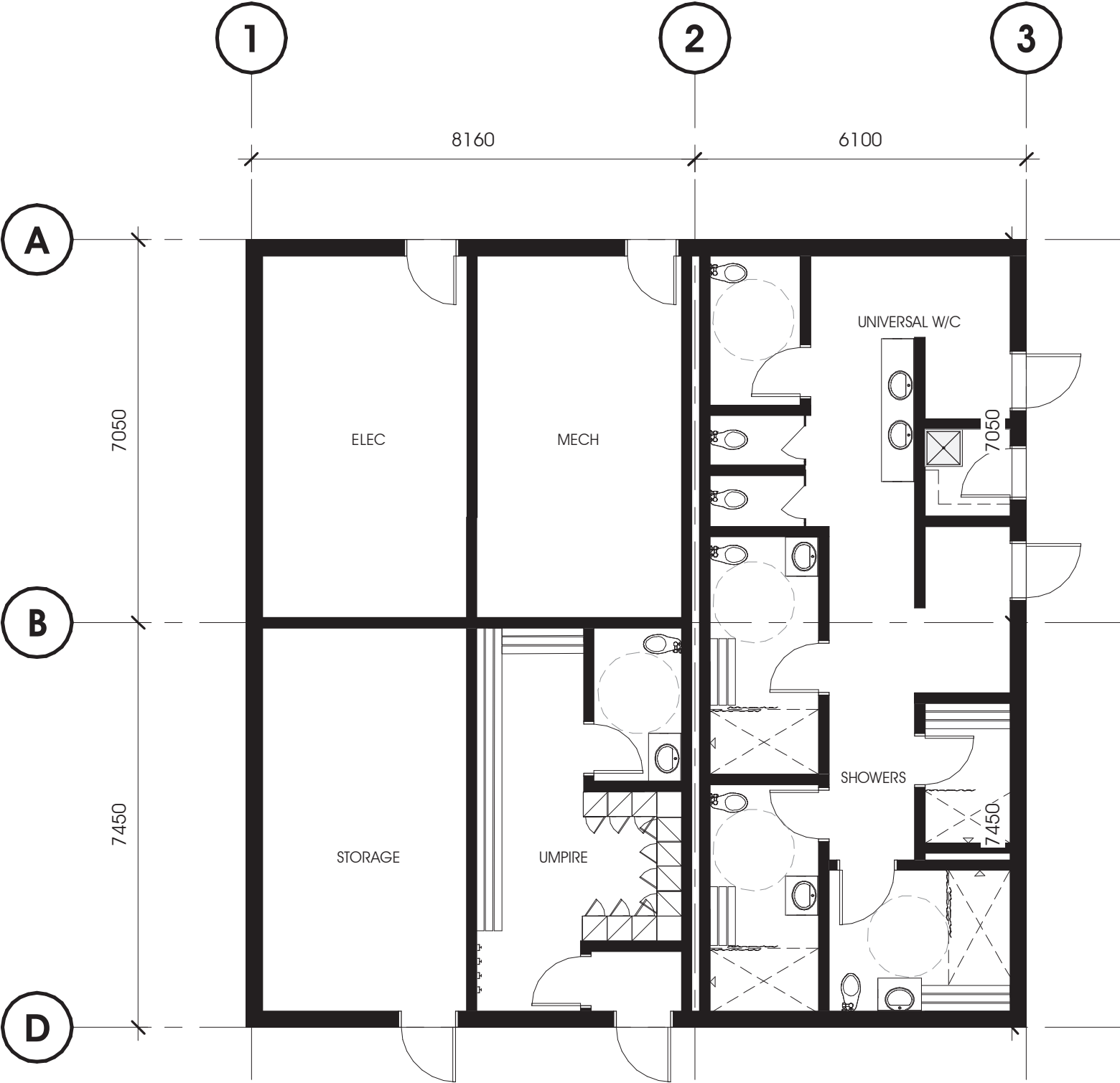


BASEBALL / SLO-PITCH PAVILION

Baseball Pavilion - Previous Floor Plan



Baseball Pavilion - Updated Floor Plan (SMALL)





	<p align="center">City of Lloydminster Information Report (IR)</p>
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Subject Matter: 2021 Trails and Sidewalk Master Plan – Project Update
Department: Operations
Presented By: James Rogers, P. Eng.
GPC Meeting Date: June 13, 2022

Topic: To provide the committee with an update associated with the Trails and Sidewalk Master Plan final report.

Background: Within the 2015 Transportation Master Plan a recommendation was for the City of Lloydminster (City) to complete a Trails and Sidewalk Master Plan. The Trails and Sidewalk Master Plan project was initiated in 2020 and has since undergone several phases of data collection that included numerous stakeholder consultations, online public surveys, as well as field inspections, and data logging. The Trails and Sidewalk Master Plan report has been finalized and reviewed by Administration.

Objective: The intent of the Trails and Sidewalk Master Plan is to provide Administration direction to improve upon the existing trail and sidewalk network while also providing insight to accommodate future growth and expansion of the trail and sidewalk network. The project involved the creation of a new master plan document through the development of the Trails and Sidewalk Master Plan. This document included updated network capital plans, development of a pedestrian crossing safety analysis matrix to determine required pedestrian crossing improvements, and the development of a long-term trail and sidewalk network vision that will allow the City to accommodate growth in an efficient manner. The recommendations contained within the master plan include trail and sidewalk network expansion opportunities, categorized as short, medium, and long term, as well as improved pedestrian crossings through upgraded pedestrian ramps as identified through the pedestrian accessibility review.

Master plans are documents typically geared towards system capacity improvements or missing gap analysis coupled with growth recommendations with little comment on existing asset condition and existing asset rehabilitation. As such, accompanying the Trails and Sidewalk Master Plan was the collection of existing asset condition information. This data was collected through the Road and Sidewalk Condition Survey project which was completed by Administration between 2019 and 2021. The existing asset condition information was compiled and presented within the Trail and Sidewalk Assessment report. This document aimed to collect real-time data associated with the condition of the City’s trail and sidewalk network in an effort to support the Trails and Sidewalk Master Plan.

Administration saw a benefit to complete these two processes concurrently to fully understand the existing state and the future direction of the entire trail and sidewalk network. As such, the master plan would inform capital projects associated with network expansion and capacity improvements whereas the condition assessment would inform capital projects associated with existing network rehabilitation.

Options:

1. That the Committee accept this report as information and that the Trails and Sidewalk Master Plan be brought forward to a future Regular Council Meeting for Council's consideration.
2. That the Committee request more information and that the item be brought forward to a future Governance & Priorities Committee meeting.

Alignment with Strategic Plan: This item is in alignment with the following strategic area: sustainable fiscal strategy. Completing master plans allows Administration to prioritize which Capital Projects should be contemplated and provide high-level timelines associated with implementation.

Governance Implications: N/A

Budget/Financial Implications: N/A

Environmental Implications: N/A

Report Approval Details

Document Title:	2021 Trails and Sidewalk Master Plan - Project Update.docx
Attachments:	- 15662_Final Report_ENTIRE.pdf - rpt_lloydminster_sw_20220511_fin - COL.pdf
Final Approval Date:	Jun 10, 2022

This report and all of its attachments were approved and signed as outlined below:

Don Stang

Task assigned to Doug Rodwell was completed by delegate Tracy Simpson

Dion Pollard



**City of Lloydminster 2019-2021
Trail and Sidewalk Assessment –
Final Report**

May 11, 2022

Prepared for:

City of Lloydminster

Prepared by:

Stantec Consulting Ltd.
200-325 25 Street SE
Calgary, AB T2A 7H8



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

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Executive Summary

The City of Lloydminster (City) retained Stantec Consulting Ltd. (Stantec) to conduct a condition assessment of all sidewalks, asphalt trails, gravel trails, and curb and gutter owned and maintained by the City. The project extended over a three-year period from 2019 – 2021. As part of the 2021 work scope, approximately 36.7 km of asphalt trail, 64.0 km of concrete sidewalk, and 5.0 km of gravel trail condition data was collected. Only sidewalks were previously surveyed from 2013 – 2015. The asphalt trail and gravel trail surveys were completed in their entirety in 2021. The Survey Year map is presented below in Figure ES.1.

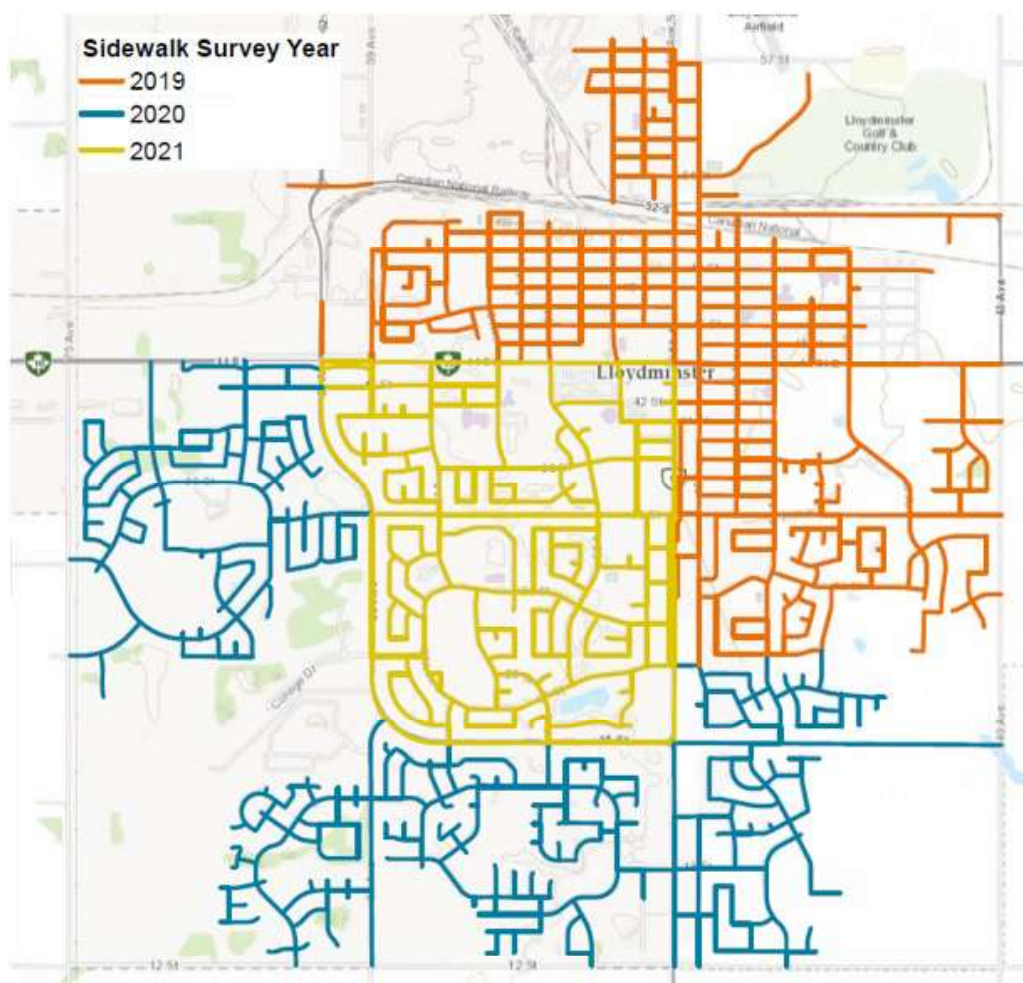


Figure ES.1: City of Lloydminster – Sidewalk Survey Year Map



This report summarizes the analysis results of the sidewalk, trails, ramps, and curb and gutter assessment. Based on the distresses observed, a Sidewalk Condition Index (SCI) was calculated and a performance rating was assigned for every concrete sidewalk section inspected. The SCI represents an overall condition index of a concrete sidewalk segment. An SCI of 100 indicates the best possible concrete sidewalk condition, and 0 indicates the worst possible sidewalk condition.

This report also summarizes asphalt trail condition and gravel trail condition and analysis results. Based on the distresses observed, a Pavement Condition Index (PCI) was calculated, and a performance rating assigned for every asphalt trail section. A PCI of 100 indicates the best possible asphalt trail condition, and a 0 indicates the worst asphalt trail condition. For gravel trails, a PASER Condition Index (PaCI) was calculated and a performance rating assigned for every gravel trail. A PaCI of 5 indicates excellent condition with little to no maintenance required and a 1 indicates a failed condition and would require complete reconstruction.

The results of the performance analysis for the survey in 2021 are summarized as follows:

- A mean SCI score of 40 was calculated for all concrete sidewalk sections surveyed in 2021.
- Approximately 22 % of the concrete sidewalk sections were observed to have a “Good” to “Very Good” condition rating; (SCI > 60).
- Approximately 27 % of the concrete sidewalk sections were found to have a “Fair” condition rating; (40 < SCI ≤ 59.9).
- Approximately 51 % of the concrete sidewalk sections were found to have a “Poor” to “Very Poor” condition rating; (SCI ≤ 39.9).
- 6 sections in the survey area did not have a concrete sidewalk.
- Cracking is the most common high severity distress, followed by broken panel and surface roughness.
- There are 242 asphalt trail sections, with a length-weighted average PCI of 63 in 2021. This sums up to a total of 279 asphalt trail sections, with an overall network PCI of 66, surveyed from 2019 to 2021.
- Of the 45 gravel trail sections surveyed in 2021, 30 (with a total length of 2.6 km) have a PaCI of 1 or 2 and require reconstruction.
- In 2021, 26 existing concrete curb ramps were rated as failed and require rehabilitation. A remaining 342 concrete curb ramps were considered to be in acceptable condition.
- Out of 473 sections with a curb and gutter, 7 are classified as fair, and the remaining 466 sections have curb and gutter in good condition.

The results of budget analysis and treatment recommendations are summarized below for the sections surveyed in 2021.

- Four types of treatments were recommended for concrete sidewalk sections surveyed in 2021 based on the current City’s sidewalk module parameters;
 - Concrete patching on 3,248 slabs;
 - PCC grinding on 7,727 slabs;
 - PCC sidewalk partial reconstruction with curb on 6,449 slabs; and
 - PCC sidewalk full reconstruction on 3,318 slabs over 61 sections.
- Utilizing the treatment unit costs provided by the City, approximately \$ 711,400 is required for the treatment of about 31 km of concrete sidewalks.



- Approximately 3 km of gravel trail sections require reconstruction. The reconstruction type is from Granular Base Course (GBC) to Asphalt Concrete Pavement (ACP). Using the treatment unit costs provided by the City, roughly \$ 1,157,800 is required for these sections.
- Maintenance and rehabilitation results indicate that a total of approximately \$2,920,900 is required for the reconstruction of about 10 km of asphalt trails.

It is recommended that the City focus on concrete sidewalks with high severity distresses and particularly those with high pedestrian traffic. These areas are identified on maps provided as attachments to this report.

The City may also wish to consider reconstructing concrete curb ramps where needed, as per the locations detailed in Table 4.8: Sections with Failed Ramp.

It is recommended that the City evaluate the validity of some parametric data used in the rehabilitation analysis. Cost of treatments should be reviewed and updated on an annual basis. Rehabilitation treatment types and the decision table should be reviewed and could be expanded to include other treatments such as mud-jacking.

The survey collection year of 2021 marks the final collection cycle of the three-year contract from 2019 to 2021.



Abbreviations

AC	Asphalt Concrete
PaCI	PASER Condition Index
PCC	Portland Cement Concrete
PCI	Pavement Condition Index
PMS	Pavement Management System
SCI	Sidewalk Condition Index



Glossary of Concrete Sidewalk and Gravel Trail Distresses

Asphalt Patching	An area where an asphalt patch has been applied to a sidewalk surface, including temporary utility repair patches. Severity levels are defined by the defects within the patch area and deterioration of the material.
Broken/Chipped Panel	An area of concrete sidewalk that has a hole, missing, or punch-out area resulting from a cracked, broken, chipped or missing piece of concrete within the concrete sidewalk surface.
Broken Panel	Multiple linear or transverse cracks within the concrete sidewalk slab.
Catch Basin	A gap or vertical change in elevation of a catch basin within a concrete sidewalk surface.
Concrete Patching	An area where a concrete patch has been applied to a sidewalk surface, including temporary utility repair patches. Severity levels are defined by the defects within the patch area and deterioration of the material.
Cracking	Single linear or transverse crack within the concrete sidewalk slab that causes a separation in the concrete sidewalk surface. Severity levels are defined by the widths of the cracks.
Excessive Grade	An area of concrete sidewalk that has an abrupt change in longitudinal grade of more than 13% over a short distance that can compromise the ground clearance of footrests or antitipping devices of wheelchairs or mobility devices.
Faulting	Faulting is the difference in elevation across a joint or crack. Some of the common causes of faulting are: settlement due to soft foundation, pumping or eroding of materials from under the slab, and curling of the slab edges due to temperature and moisture changes Severity levels are defined by difference in elevation across the joint or crack.



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Gap	Linear opening within a concrete sidewalk at a joint or within a grate. It does not include control joints or other surface scoring constructed according to design standards or grates that are not intended for pedestrian use.
Grinding	An area where a grinding or horizontal sawcut repair has been applied to a concrete sidewalk surface.
Heave	Location of abrupt change in elevation across a joint, crack or other protruding object that poses a potential tripping hazard.
Manhole	A gap or vertical change in elevation of a manhole within a concrete sidewalk surface.
Missing Panel	An area of concrete sidewalk that has a hole resulting from a missing concrete slab or portion of the slab.
Obstruction	An object is blocking or reducing the available width of concrete sidewalk for pedestrians that is a permanent installation such as a pole, guidewire, post or utility cabinet.
Obstruction - Temporary	An object is blocking or reducing the available width of concrete sidewalk for pedestrians that is a temporary installation.
Reverse Crossfall	Area where the concrete sidewalk surface is not graded towards the roadway or drainage feature and therefore is a potential location for ponding. Does not apply to crowned sidewalks.
Settlement	An area of concrete sidewalk that has settled or dipped relative to the intended grade of the sidewalk surface. Can also result in ponding.
Surface Roughness	Loss of surface materials in the concrete that creates a rough surface due to scaling, spalling, gouging, and/or pop-outs.
Utility Box or Valve	A gap or vertical change in elevation of a utility box or valve within a concrete sidewalk surface.



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Crown	The height and condition of crown and an unrestricted slope of trail from the centre to the ditches.
Drainage	The ability of trail side ditches and under-trail culverts to carry water away from the trail.
Gravel Layer	Adequate thickness and quality of gravel to carry the traffic loads.
Surface Deformations	Washboarding, Potholes and ruts.
Surface Defects	Dust and loose Aggregate.



1.0 BACKGROUND

The City of Lloydminster (City) retained Stantec Consulting Ltd. (Stantec) in 2019 to perform a condition assessment of the concrete sidewalk network owned and maintained by the City. The contract included sidewalk condition data collection over a three-year period, 2019 through 2021, for an average of approximately 52 lineal road-km each year. Conditions were assessed for concrete curb ramps as well as curb and gutter.

The City approved a scope change that included an assessment of the City's asphalt and gravel trail network. The additional scope included about 45.0 km of asphalt and gravel trails in 2021.

Concrete sidewalks, and asphalt and gravel trails are an integral component of the municipal landscape that should be safe and universally accessible. They should be capable of accommodating all users, including mobility and visually impaired users.

The information presented in this report can assist decision-makers to locate critical concrete sidewalk and asphalt and gravel trails distresses, prioritize and undertake immediate and preventative cost-effective maintenance actions to provide safe operations and to extend the service life of their infrastructure. Images were captured for concrete sidewalk high severity distresses and for observed defects on other concrete sidewalk elements including accessibility ramps.

The concrete sidewalk condition assessment data was loaded into the Sidewalk module within the City's RoadMatrix pavement management system (PMS). The sidewalk performance analysis has been run using RoadMatrix Version 7.0.10 to calculate the Sidewalk Condition Index (SCI). The SCI definition and calculation steps are presented under Section 3.1.1.

The asphalt trail condition assessment data was loaded into the Roads module within the City's RoadMatrix PMS. Performance analysis has been run using RoadMatrix Version 7.0.10 to calculate the Pavement Condition Index (PCI).

The gravel trails condition assessment data was also loaded into the Roads module, as a separate subset of data from the asphalt trails. Performance analysis has been run using RoadMatrix Version 7.0.10 to calculate the PASER Condition Index (PaCI).



2.0 SIDEWALK SURVEY ZONES

2.1 SURVEY ZONE DEFINITIONS

The City of Lloydminster (City) was divided into three concrete sidewalk survey zones, based on the major road network. The map below, Figure 2.1, shows how each concrete sidewalk survey zone was assessed per survey year.

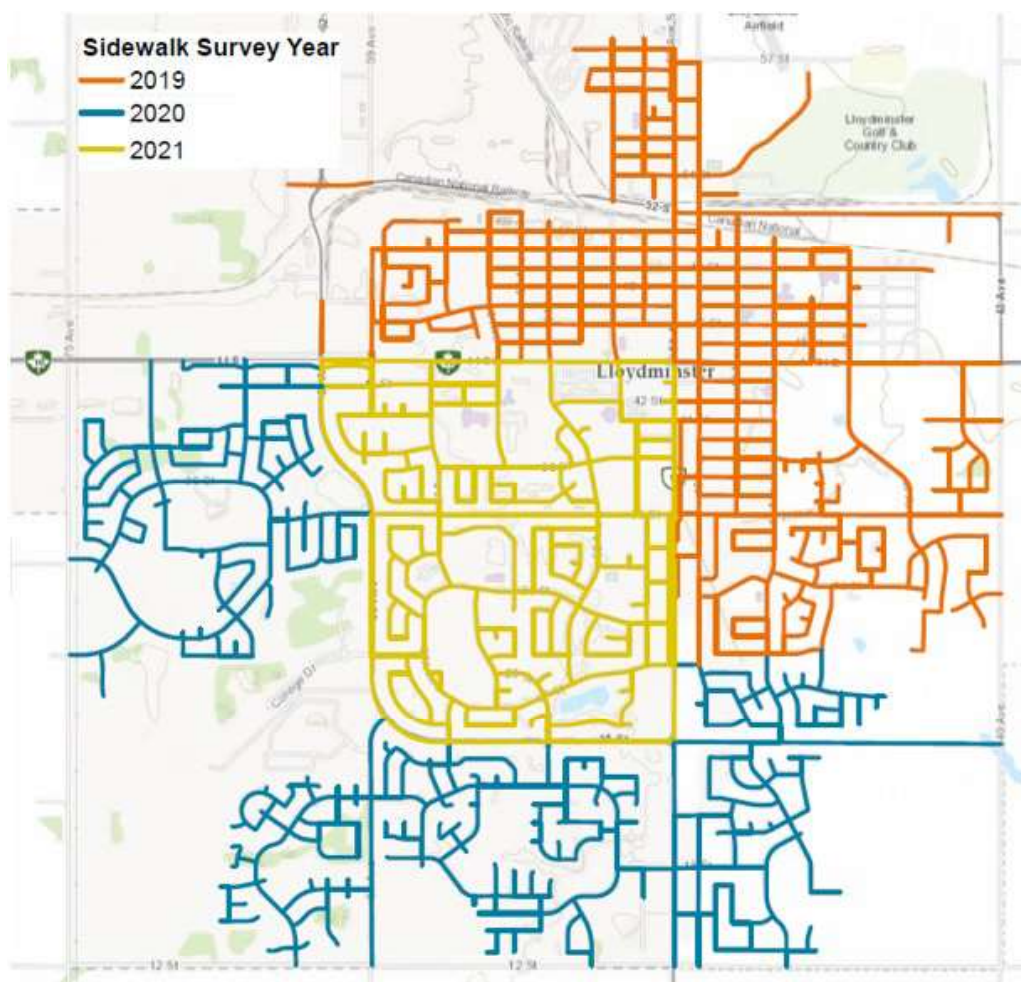


Figure 2.1: City of Lloydminster – 2021 Sidewalk & Trail Survey Map

An updated map showing the 2021 survey scope is also presented below in Figure 2.2. The locations of all high distresses identified during this year's data collection effort are depicted in Appendix B: High Severity Distress Location Maps. All asphalt and gravel trails were surveyed in 2021.



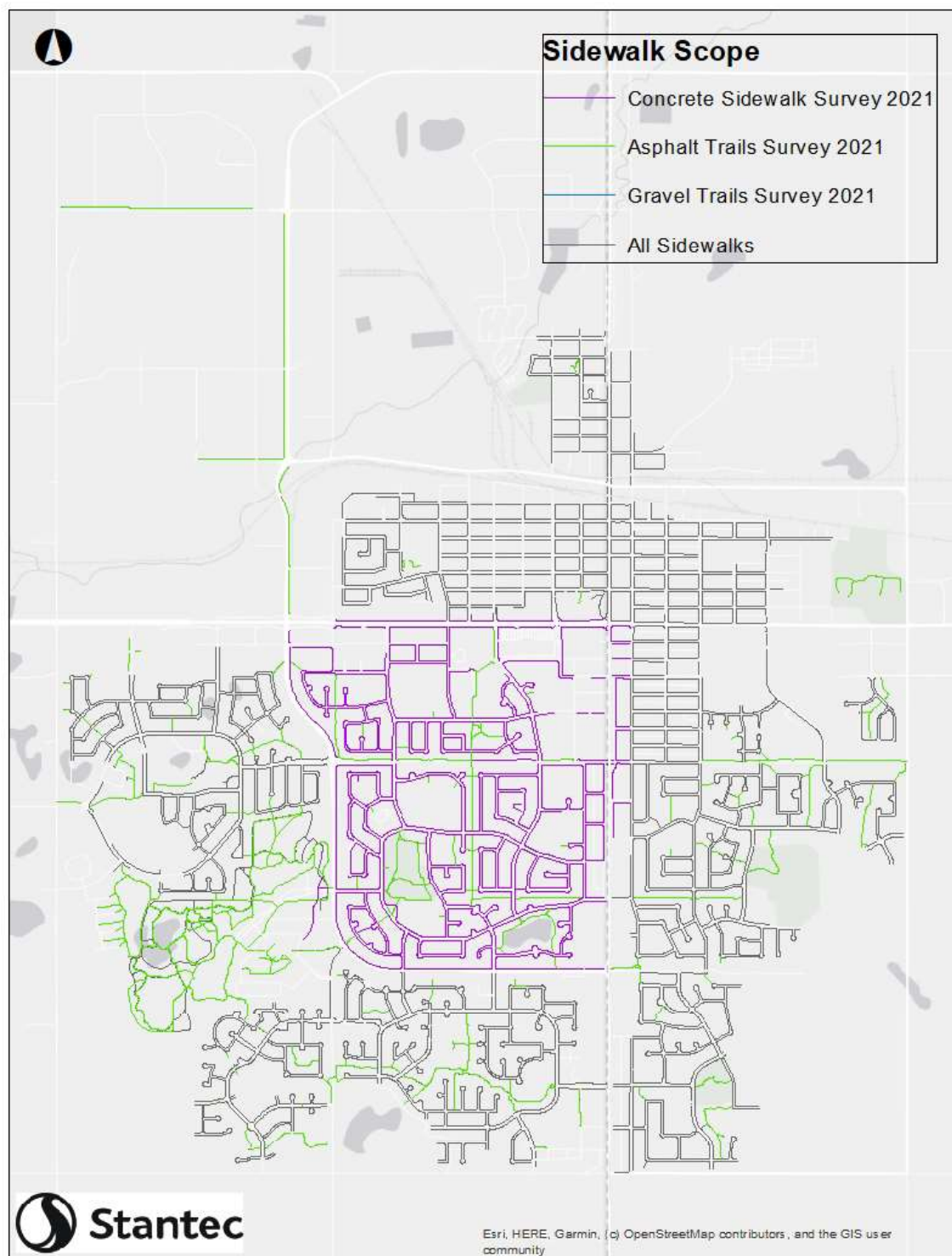


Figure 2.2: City of Lloydminster – 2021 Sidewalk & Trail Survey Map



A summary of the concrete sidewalk survey areas and corresponding road-centreline kilometres is presented below in Table 2.1. In 2021, 64.6 centreline-km of concrete sidewalk was assessed (sidewalk on both sides of the street, where constructed).

Table 2.1: Summary of Sidewalk Survey Zone Assessment Cycle

Survey Year	Asphalt Trail-km	Gravel Trail-km	Road Centreline-km
2019	4.3	-	62.3
2020	1.3	-	54.6
2021	36.7	5.5	64.6
Total:	42.3	5.5	181.5

3.0 DATA COLLECTION AND ANALYSIS

3.1 DATA COLLECTION APPROACH – CONCRETE SIDEWALKS

The concrete sidewalk condition assessment was completed through visual observation by a Stantec technician. Each concrete sidewalk distress type and severity were recorded according to the assessment criteria provided in Appendix C. All high severity distresses were catalogued with a geo-referenced photo taken to show the location and type of the distress, as well as for archival purposes. The locations of all high distresses, separated for asphalt trails and concrete sidewalks, are listed in Appendix B and include the type of distress (colour coded) as well as the RoadMatrix Road ID number.

In addition to concrete sidewalk distresses, a number of concrete sidewalk attributes were also collected. A summary of these attributes is provided below in Table 3.1.



Table 3.1: List of Collected Sidewalk Attributes

Attribute	Available Options	Description
DATE/TIME	---	Each section has a date and time stamp automatically attached
RATER	---	Shows the field personnel assessing the section
ROADMATRIX ID	---	Identification number associated with the road each section is paralleling
BLOCKFACE	N, S, E, W	Identifies which side of the road the section is located on
MATERIAL	Asph PCC Stone Mas Rubber	Asphalt Portland Cement Concrete Stone Masonry Rubber
PARARAMP	NONE PASS FAIL	Ramp does not exist Ramp is accessible and in acceptable condition Ramp is not in serviceable condition
CROSSING	X_PROVIDE PAINT_WLK OH-FLASH HALF_SIGN	Crossing Provided (Yes or No) Painted Crosswalk (Yes or No) Overhead Flashing Light (Yes or No) Half Signals (Yes or No)
TREE SHRUB IMPREDIMENT	NO YES	Weeds are not an issue with distresses or travel within the section of sidewalk Weeds are a factor in distresses, or they impede travel within the section of sidewalk
COMMENTS	---	Observation by field staff
CURB & GUTTER TYPE	Cr_Gtt Barr Mntbl Mower Other	Standard Curb & gutter Barrier Mountable Mower Other Types of C&G
CURB & GUTTER MATERIAL	Asph PCC Stone Mas Rubber	Asphalt Portland Cement Concrete Stone Masonry Rubber
CURB & GUTTER CONDITION	POOR FAIR GOOD	Badly cracked, settled or disintegrated. Pavement level close to top of curb. Cracked, spalled, or settled around catch basins. May need minor repairs. New or repaired curb, slightly spalled, cracked or distorted.

3.1.1 Concrete Sidewalk Condition Index (SCI) Calculation Steps

The Sidewalk Condition Index (SCI) indicates the overall condition of a concrete sidewalk. SCI ranges in value from 0 to 100. An SCI of 0 indicates a sidewalk in the worst possible condition and 100 indicates a sidewalk in the best possible condition. A summary of the steps followed within RoadMatrix to calculate the sidewalk condition index (SCI) is provided below.

- For each concrete sidewalk section (one section typically consists of multiple slabs), condition data obtained from the concrete sidewalk survey is entered into a database.
- Distress scores are calculated for each distress type by multiplying the number of slabs for each distress type and severity by a weighting factor. A summary of the weighting factors is provided in the "Distress Types" table in RoadMatrix.



- The distress scores for each distress type are totaled to determine the overall score for each concrete sidewalk section.
- A normalization factor is applied to the overall score to calculate an average distress score for the concrete sidewalk section. This score is representative of the entire section. The default normalization factor in RoadMatrix is “TOTAL”, which represents the total number of individual slabs within the concrete sidewalk section. The normalized overall score ranges from 0 to 100.
- The normalized overall score is evaluated against Table F.1 in Appendix F and the SCI value for a concrete sidewalk section is returned based on the range of the normalized score.

Based on the calculated Sidewalk Index scores, a performance distress rating is assigned using a range of values. The distress rating ranges used are presented below in Table 3.2.

Table 3.2: Sidewalk Performance Rating Ranges

Distress Rating	SCI Range
Very Poor	0 – 19.9
Poor	20 – 39.9
Fair	40 – 59.9
Good	60 – 79.9
Very Good	80 – 100

Not all of the distress/asset information collected contribute to the SCI score. Inventory data such as catch basins, manholes, valves, and utility boxes can be evaluated by the City through prioritizing the investigation of high severity locations.

3.2 DATA COLLECTION APPROACH – ASPHALT TRAILS

An asphalt trail condition assessment was completed through visual observation by a Stantec technician. Each asphalt distress type and severity was collected following ASTM D 6433 “Standard Practice for Roads and Parking Lots Pavement Condition Index Surveys”.

In addition to asphalt trail distresses, a number of asphalt trail attributes were also collected, including:

- Hazard ratings (e.g. trip hazard, excessive grade and missing pavement)
- Observation ratings (e.g. vegetation encroachment, obstruction and ramp)

All high severity distresses were catalogued with a geo-referenced photo taken to show the location and type of the distress, as well as for archival purposes. The locations of all high distresses are included on the map in Appendix B, displaying the type of distress (colour coded) as well as the RoadMatrix Road ID number. A list of distress types rated during asphalt trail surveys is located in Table 3.3 below. Examples of distresses and severities observed can be found in Appendix C.



Table 3.3: Pavement Condition Index (PCI) Survey Criteria – Flexible Pavements

Category	Distress Type	Abbreviation	Unit	Severity ¹
Cracking	Alligator Cracking	ALC	m ²	L/M/H
	Block Cracking	BKC	m ²	L/M/H
	Edge Cracking	EGC	m	L/M/H
	Longitudinal Cracking	LGC	m	L/M/H
	Transverse Cracking	TVC	m	L/M/H
Surface Defects	Potholes	POT	count	L/M/H
	Raveling	RAV	m ²	L/M/H
	Bleeding	BLD	m ²	L/M/H
	Patching	PAT	m ²	L/M/H
Surface Deformation	Distortion	DIS	m ²	L/M/H
	Excessive Crown	ECW	m ²	L/M/H
	Shoving	SHV	m ²	L/M/H
	Rutting	RUT	m ²	L/M/H

¹L/M/H: Low/Medium/High

3.2.1 Pavement Condition Index (PCI) Model

For asphalt trails, Pavement Condition Index (PCI) is a measure of physical pavement cracking, deformations, and surface defects collectively referred to as distresses. The PCI of a pavement is assessed by identifying and rating the type, severity, and extent of surface distresses.

Asphalt trails had a PCI score calculated based on ASTM D 6433 where the distress ratings were transformed into values ranging from 0 to 100, for each of the distress types, and weighted to obtain an overall PCI.

A PCI of 100 indicates a perfect, distress free surface, whereas a PCI of 0 indicates a surface that has completely deteriorated.

Table 3.4: PCI Performance Rating

Distress Rating	PCI Range
Very Poor	0 – 19.9
Poor	20 – 39.9
Fair	40 – 59.9
Good	60 – 79.9
Very Good	80 – 100



3.3 DATA COLLECTION APPROACH – GRAVEL TRAILS

A gravel trail condition assessment was completed through visual observation by a Stantec technician. Each gravel trail was assessed for distress type and severity following the Gravel Pavement Surface Evaluation and Rating (PASER) Manual developed by the Wisconsin Transportation Information Center (Wisconsin Transportation Information Center, 2002).

3.3.1 Determination of PaCI

For gravel trails, the overall index is equivalent to the governing distress (distress with the lowest score). The governing distress will guide the rehabilitation and maintenance (M&R) needs in the section, as the M&R activity would simultaneously address any other minor deficiencies that are present. The following criteria were assessed for all gravel trail sections on a scale of 1 (failed) to 5 (excellent) as noted below in Table 3.5:

1. **Crown:** The height & condition of crown, and an unrestricted slope of trail from center to the ditches.
2. **Drainage:** The ability of trail side ditches and under-trail culverts to carry water away from the trail.
3. **Gravel Layer:** Adequate thickness and quality of gravel to carry the traffic loads.
4. **Surface Deformation:** Washboarding, potholes and ruts.
5. **Surface Defects:** Dust and loose aggregate.

Table 3.5: PASER Rating Scale and Description of Levels of PaCI

	Rating	Description
5	Excellent	New construction—or total reconstruction. Excellent drainage. Little or no maintenance needed.
4	Good	Recently regraded. Good crown and drainage throughout. Adequate gravel for traffic. Routine grading and dust control may be needed.
3	Fair	Shows traffic effects. Regrading (reworking) necessary to maintain. Needs some ditch improvement and culvert maintenance. Some areas may need additional gravel.
2	Poor	Travel at slow speeds (potential safety risk) is required. Needs additional new aggregate. Major ditch construction and culvert maintenance also required.
1	Failed	Travel is difficult and trail may be closed at times. Needs complete rebuilding and/or new culverts.



4.0 CONDITION ASSESSMENT RESULTS

This section provides a summary of the condition assessment results for all sections surveyed in 2021.

4.1 CONCRETE SIDEWALK

Analysis results indicate that approximately 6 % of all sections surveyed in 2021 have a Very Good distress rating, 16 % have a Good distress rating, 27 % have a Fair distress rating, 28 % have a Poor distress rating, and 23 % have a Very Poor distress rating. The performance summary for all concrete sidewalk sections surveyed in 2021 is provided below in Table 4.1. It should be noted that the SCI rating indicated is for the 2021 survey year. A table of past survey results is also shown below in Table 4.2

Table 4.1: 2021 Performance Summary Table for All Concrete Sections

Distress Rating	2021 Survey Results	
	Count	% of Total
Very Poor ($0 \leq \text{SCI} \leq 19.9$)	129	23
Poor ($20 \leq \text{SCI} \leq 39.9$)	161	28
Fair ($40 \leq \text{SCI} \leq 59.9$)	157	27
Good ($60 \leq \text{SCI} \leq 79.9$)	90	16
Very Good ($80 \leq \text{SCI} \leq 100$)	36	6
Total	573	100

Table 4.2: Historical Performance Summary Table for All Concrete Sections

Distress Rating	2019 Data		2020 Data		2021 Data	
	Count	% of Total	Count	% of Total	Count	% of Total
High ($\text{SCI} \leq 50$)	51	7	302	38	409	71
Medium ($50 < \text{SCI} \leq 70$)	103	14	161	20	66	12
Low ($\text{SCI} > 70$)	608	79	332	42	98	17
Total	762	100	795	100	573	100



The mean SCI for all concrete sidewalk sections surveyed in 2021 was approximately 40. This indicates an overall fair condition. The SCI summary statistics from 2019 to 2021 survey are presented below in Table 4.3

Table 4.3: SCI Statistics

Survey Year	2019	2020	2021
Minimum	0	0	0
Maximum	100	100	100
Mean	84	56	40
Standard Deviation	19	37	24
No. of Sidewalk Sections	762	795	573

A summary of the number of concrete sidewalk slabs surveyed in 2021 with a high severity distress (various distress types) is provided below in Table 4.4. The information in Table 4.4 indicates that cracking is the most common high severity distress followed by broken panel, and surface roughness. In total, 10,766 slabs were observed to have high severity distresses in all sections surveyed in 2021. A slab is a section of concrete sidewalk measuring approximately 1.4m wide by 1.4m long; also known as a sidewalk panel.

Table 4.4: Number of Slabs with High Severity Distresses per Zone and Distress Type

Distress Type	Number of High-Distressed Slabs
	2021
Asphalt Patch	4
Broken/Chipped Panel	229
Broken Panel	490
Catch Basin	1
Concrete Patch	2
Cracking	9,487
Excessive Grade	1
Faulting	162
Gap	2
Grinding	122
Manhole	3
Missing Panel	15
Reverse Crossfall	1
Surface Roughness	243
Utility Box or Valve	4
Total	10,766



Table 4.5: Number of Slabs with High Severity Distresses per Zone and Distress Type

Distress Type	Number of High-Distressed Slabs per Zone	
	2019	2020
Small Patch	15	4
Large Patch	5	3
Scaling	60	116
Shattering	108	156
Corner Break	64	256
Linear Cracking	400	1,225
Corner Spalling	24	100
Joint Spalling	155	193
Faulting	166	81
Total	997	2,134

A list of concrete sidewalk sections including the SCI and number of distressed slabs (all severities) is presented in Appendix D. Treatment recommendations are provided in Appendix E. Discussion on rehabilitation treatments is provided under Section 5.0.



4.2 ASPHALT TRAILS

Asphalt trails had a PCI score calculated based on ASTM D 6433. A list of asphalt trails including the PCI is included in Appendix D. There were 242 asphalt trails surveyed, with a length-weighted average of 63 for the 2021 survey. This sums up to a total of 279 asphalt trail sections from 2019 to 2021, with an overall length-weighted trail network PCI of 66. The PCI summary statistics from 2019-2021 survey of asphalt trail sections are presented below in Table 4.6 and Figure 4.1.

Table 4.6: PCI Statistics

Survey Year	2019	2020	2021
Minimum	72	60	0
Maximum	100	100	100
Length-Weighted Average	91	75	63
Standard Deviation	8	13	24
No. of Asphalt Section	27	9	242

**Network Present Status Distribution – 2021
Asphalt Trails Only**

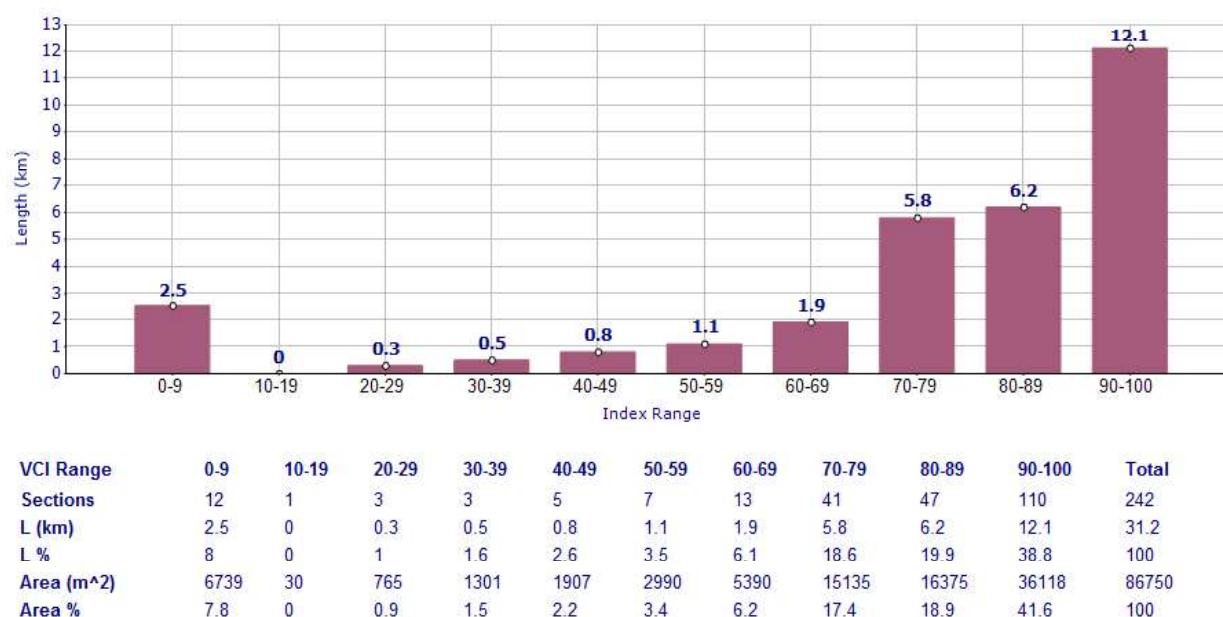


Figure 4.1: Asphalt Trails PCI Graph



4.3 GRAVEL TRAILS

Gravel trails were only surveyed in 2021 and consist of 45 sections. Gravel trails were surveyed in accordance with the PASER Condition Index rating scale. The performance summary for all gravel trail sections surveyed in 2021 is provided below in Table 4.7.

Table 4.7: Performance Summary Table for All Gravel Sections

Distress Rating	2021 Survey Results	
	Count	% of Total
Failed (1)	2	5
Poor (2)	28	62
Fair (3)	11	24
Good (4)	4	9
Excellent (5)	0	0
Total	45	100

A complete list of the gravel trail sections including the PaCI is presented in Appendix D.

4.4 ACCESSIBILITY RAMPS

Each sidewalk section has “to” and “from” attributes assigned in RoadMatrix. For sections that are connected without any interruption in grade, ramps are not required. Ramps may be required at the beginning, end, or at an intermediate location of a section, (e.g. to join across cul-de-sacs or an alley that cuts through the section), in order to facilitate safe crossing for all users.

Based on our observations, no ramps are missing and 26 ramps are rated as failed. A total of 342 ramps were considered to be in acceptable condition and provided adequate mobility in the concrete sidewalk network. It is noted that the numbers presented herein include sections with no concrete sidewalks, but which have curbs and/or ramps.

Sections with a failed ramp are summarized below in Table 4.8.



Table 4.8: Sections with Failed Ramp

Sidewalk Id	Street	From	To	Ramp Location
427E1SW	50 Avenue SR E	38 Street	41 Street	Begin
975E1SW	57A Avenue	39 Street	40 Street	Begin
1184W1SW	51A Avenue	30 Street	31 Street	Begin
1237S1SW	34 Street	49 Avenue	50 Avenue SR E	Begin
790N1SW	41 Street	57A Avenue Close	58 Avenue Close	Begin
1116N1SW	31 Street	55 Avenue	55A Avenue	Begin
795W2SW	56 Avenue	43 Street	44 Street	Begin
822W1SW	43 Street	56 Avenue	56A Avenue	Intermediate
948S1SW	40 Street	58 Avenue Close	59 Avenue Close	Intermediate
1015W1SW	56 Avenue	30 Street	31 Street	Intermediate
1152N1SW	27 Street	51 Avenue	52 Avenue	Intermediate
457N1SW	42 Street	49 Avenue	50 Avenue	End
1195N1SW	34 Street	51 Avenue	51A Avenue	End
910N1SW	26 Street	54 Avenue	57 Avenue	End
964E1SW	57 Avenue	42 Street	43 Street	End
1189N1SW	29 Street	51A Avenue	51B Avenue	End
1187W1SW	51A Avenue	29 Street	30 Street	End
1223N1SW	30 Street	54 Avenue	55 Avenue	End
1233E1SW	50 Avenue SR E	34 Street	36 Street	End
813N1SW	37 Street	56A Avenue	56B Avenue	End
773S1SW	41 Street	50 Avenue	51 Avenue	End
791N1SW	41 Street	57 Avenue	57A Avenue Close	End
1132E1SW	51B Avenue	29 Street	31 Street	End
1141E1SW	51A Avenue	30 Street	31 Street	End
975E1SW	57A Avenue	39 Street	40 Street	End
795W2SW	56 Avenue	43 Street	44 Street	End



4.5 CURB AND GUTTER

Curb and gutter condition was assessed for 561 sections in 2021 (including sections with no sidewalk). There were no sections with poor curb and gutter condition and 7 sections rated fair, as shown below in Table 4.9. An additional 88 sections are categorized as “null” curb condition, i.e. no curb and gutter exists.

The majority of sections surveyed (83%) have curb and gutter in good condition. Curb and gutter rating guidelines are summarized in Appendix C.

Table 4.9: Sections with Fair Curb and Gutter Condition

Sidewalk Id	Street	From	To	Section Length (m)
1048W1SW	57A Avenue	29 Street	30 Street	189
1142N1SW	31 Street	51 Avenue	51A Avenue	83
1238E1SW	50 Avenue SR W	31 Street	33 Street	125
1944N1SW	44 Street	57 Avenue	59 Avenue	652
2245S1SW				8
2246N1SW				7
2395SW				73



5.0 SIDEWALK AND TRAILS REHABILITATION TREATMENTS DISCUSSION

Stantec worked with the City to develop treatment recommendation criteria based on current practices. The treatment criteria are used in RoadMatrix to generate maintenance and rehabilitation present needs for the concrete sidewalk, asphalt trail and gravel trail sections. This section presents an overview of how treatments are assigned, and the results of the rehabilitation analysis.

5.1 TREATMENTS LIST – CONCRETE SIDEWALKS

The treatment recommendation criteria used for the concrete sidewalk rehabilitation analysis was provided by the City, based on current practices, and is summarized below in Table 5.1. The unit costs for each treatment are also provided in the table. It is recommended that the City update the treatment unit costs annually.

Table 5.1: Treatment Recommendation Criteria for Concrete Sidewalks

Treatment	Criteria	Application Level	Unit Cost (\$)
Asphalt Patching	Applied in areas of high severity scaling, medium to high severity shattering, and all severity levels of the following distresses: small patch, large patch, corner break, corner spalling and joint spalling	Slab	\$6.00
PCC Grinding	Used to treat faulting of all severities	Slab	\$4.00
Partial Reconstruction	Recommended when more than 40% of the slabs within a sidewalk section have high severity distress of any type, and SCI of the section is less than 50	Section	\$30.00
Full Reconstruction	Recommended when more than 60% of the slabs within a section have high severity distress of any type, and SCI of the section is less than 30	Section	\$40.00



5.2 TREATMENTS LIST – GRAVEL TRAILS

A decision tree was developed for the gravel trails to obtain present-needs data based on the City's criteria and current practices for treatment, noted below in Table 5.2. The unit cost for each treatment is also provided in the table below. Reconstruction type is from Granular Base Course (GBC) to Asphalt Concrete Pavement (ACP). It is recommended that the City update the treatment unit costs annually.

Table 5.2: Gravel Trail Treatment Selection Criteria

Condition	Treatment	Treatment Selection Criteria	Unit Cost / m ² (\$)
Excellent	Do Nothing	Where the overall score is 5	\$0.00
Good	Do Nothing	Where the overall score is 4	\$0.00
Fair	Do Nothing	Where the worst score is 3, not inclusive of the Drainage score	\$0.00
Poor	Reconstruction	Where the worst score is 2, not inclusive of the Drainage score	\$200.00
Fair	Do Nothing	Where the Drainage score is 3 or 4	\$0.00
Poor	Reconstruction	Where the Drainage score is 2	\$200.00
Failed	Reconstruction	Where the overall score is 1	\$200.00

The decision tree used to generate present needs maintenance rehabilitation recommendations for the gravel trails is presented in Figure 5.1 below.

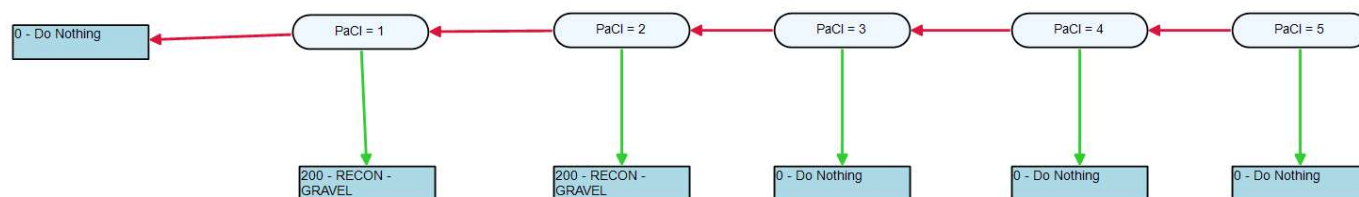


Figure 5.1: Gravel Trail Decision Tree



5.3 RECOMMENDED TREATMENTS – ASPHALT TRAILS

A decision tree was developed for the asphalt trails to obtain present-needs data based on the City's criteria and current practices for treatment, noted below in Table 5.3. The unit cost for each treatment is also provided. It is recommended that the City update the treatment unit costs annually.

Table 5.3: Asphalt Trail Treatment Selection Criteria

Treatment	Treatment Selection Criteria	Unit Cost / m² (\$)
Do Nothing	Pavement Condition Index (PCI) is equal or greater than 50	\$0.00
Reconstruction of Asphalt Trail	Pavement Condition Index (PCI) is less than 50	\$115.00

The decision tree used to generate present needs maintenance rehabilitation recommendations for the asphalt trails is presented in Figure 5.2 below.

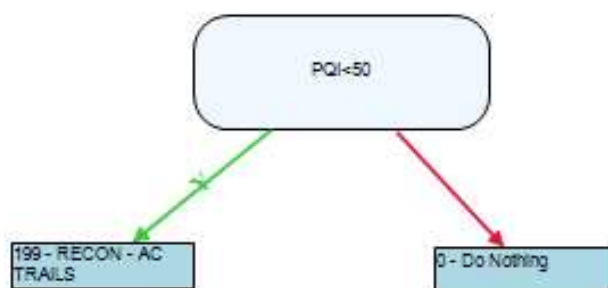


Figure 5.2: Asphalt Trail Decision Tree

A list of asphalt trail sections with a PCI less than 50, requiring reconstruction, is presented below in Table 5.4. A summary of the treatment lengths and costs to reconstruct the asphalt trail sections is provided below in Table 5.5. A total of approximately \$ 2,920,900 is required to provide recommended treatments to all trail sections surveyed from 2019 to 2021.



Table 5.4: Asphalt Trails Requiring Reconstruction

Section #	Length (m)	PQI
2148W1SW	187	0
2049SW	95	0
1884SW	248	0
2173SW	14	0
1916SW	168	0
1917SW	75	0
833N1SW	178	0
834SW	47	0
1846SW	196	0
1847SW	274	0
1886SW	176	0
2172SW	106	0
1868SW	105	0
2403SW	94	0
1893SW	493	0
2060N1SW	193	0
2422SW	144	0
1859SW	211	0
1861N1SW	27	0
1862SW	337	0
1863SW	77	0
1864SW	7	0
1871SW	355	0
1849SW	28	0
1883SW	252	0
1094SW	31	0
1449SW	278	0
1459SW	350	0
1550E1SW	170	0
1551SW	168	0
2176SW	192	0
1844SW	204	0
2174SW	177	0
2152SW	128	3
1866SW	113	5
788SW	293	6
1860SW	145	6
1842SW	114	7
1092SW	256	8
1887SW	12	12
1903SW	98	19
1036059061N1SW	136	26
1889N1SW	48	27



Section #	Length (m)	PQI
2213SW	85	27
1852SW	20	32
1881SW	71	32
805N1SW	141	38
955SW	77	40
252B52C015E1SW	93	40
2232S1SW	114	41
1096SW	44	42
1985W1SW	899	43
1775N1SW	447	43
1858SW	139	44
2056N1SW	435	44
2120SW	42	45
2230SW	60	46
2013SW	11	46
164SW	38	46
194W1SW	30	49
217SW	297	49

Table 5.5: Approximate Treatment Lengths and Required Funding for Asphalt Trails

Recommended Treatment	Number of Sections	Length (m)	Cost (\$)
Reconstruction	62	10,040	\$2,920,900

5.4 RECOMMENDED TREATMENTS – CONCRETE SIDEWALKS

A summary of the recommended treatments and the number of corresponding concrete sidewalk sections and slabs is provided below in Table 5.6. Detailed recommendations are provided under Appendix E for all sidewalk sections surveyed in 2021. The City does not have a treatment plan in place for asphalt sidewalk, and as such, they have been excluded from recommended treatments.

Based on the findings of the field investigation, recommended treatments were generated using RoadMatrix and had the following possible outcomes: Do Nothing, AC Patching, PCC Grinding, PCC Partial Reconstruction, or PCC Full Reconstruction.



Table 5.6: Treatment Summary by Sections

Recommended Treatment	2019		2020		2021	
	No. of Sidewalk Sections	No. of Slabs	No. of Sidewalk Sections	No. of Slabs	No. of Sidewalk Sections	No. of Slabs
AC Patching	578	3,827	647	9,150	335	3,248
PCC Grinding	585	8,641	506	4,125	369	7,727
PCC Partial Reconstruction	14	1,289	5	315	90	6,449
PCC Full Reconstruction	6	73	95	95	61	3,318

A summary of the approximate treatment lengths and costs is provided below in Table 5.7. A total of approximately \$ 711,400 is required to provide recommended treatments to all slabs surveyed in 2021.

Table 5.7: Approximate Treatment Lengths and Required Funding for Concrete Sidewalks

Recommended Treatment	2019		2020		2021	
	Length (m)	Cost (\$)	Length (m)	Cost (\$)	Length (m)	Cost (\$)
Asphalt Patching	5,800	\$48,000	12,800	\$91,000	4,875	\$36,500
PCC Grinding	13,300	\$53,000	5,800	\$23,000	11,539	\$46,200
PCC Partial Reconstruction	150	\$17,000	400	\$17,000	9,540	\$273,500
PCC Full Reconstruction	2,200	\$89,000	11,200	\$528,000	4,982	\$355,200
Total:	21,450	\$207,000	49,450	\$659,000	30,936	\$711,400



5.5 RECOMMENDED TREATMENTS – GRAVEL TRAILS

A list of gravel trail sections with a PaCI of 2 or lower, requiring reconstruction, is presented below in Table 5.8. Reconstruction type is from Granular Base Course (GBC) to Asphalt Concrete Pavement (ACP). A summary of the treatment lengths and costs to reconstruct the gravel trail sections is provided below in Table 5.9. A total of approximately \$ 1,157,800 is required to provide recommended treatments to all trail sections surveyed in 2021.

Table 5.8: Gravel Trails Requiring Reconstruction

Section #	Length (m)	PaCI
1901SW	105	1
278SW	54	1
1839SW	120	2
1841SW	75	2
1853SW	115	2
1854SW	29	2
1856SW	21	2
1857SW	35	2
1873SW	82	2
1874SW	50	2
1875SW	16	2
1876SW	15	2
1877SW	28	2
1890SW	62	2
1891SW	70	2
1892SW	120	2
1897SW	223	2
1898SW	195	2
1900SW	307	2
1904SW	31	2
1906SW	60	2
1907SW	80	2
1910SW	69	2
1912SW	60	2
1913SW	28	2
1925SW	197	2
1927SW	21	2
1929SW	111	2
1931SW	104	2
2521SW	102	2



Table 5.9: Approximate Treatment Lengths and Required Funding for Gravel Trails

Recommended Treatment	Number of Sections	Length (m)	Cost (\$)
Reconstruction	30	2,585	\$1,157,800

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

The following conclusions can be made based on the field survey and analysis results:

- The results of the concrete sidewalk survey indicate a mean SCI of approximately 40 for all sidewalk sections surveyed in 2021. This rating sits right on the boundary between Fair and Poor.
- There are 242 asphalt trail sections, with a length-weighted average PCI of 63 in 2021. This sums up to a total of 279 asphalt trail sections, with an overall network PCI of 66, surveyed from 2019 to 2021.
- Of the 45 gravel trail sections surveyed, 30 have a PaCI of 1 or 2 and require reconstruction.
- Concrete sidewalk survey results indicate that cracking is the most common high severity distress followed by broken slab and surface roughness. In total, 10,766 slabs were observed to have high severity distresses.
- Budget analysis results indicate that a total of approximately \$711,400 is required for the treatment of about 3 km of concrete sidewalks. Approximately 88 % of the funds should be allocated to reconstruction of concrete sidewalk slabs.
- Maintenance and rehabilitation results indicate that a total of approximately \$2,920,900 is required for the reconstruction of about 10 km of asphalt trails.
- Budget analysis results indicate that a total of approximately \$ 785,800 is required for the reconstruction of about 3 km of gravel trail sections, changing from gravel trails to asphalt trails.
- 26 existing ramps were rated as failed and require rehabilitation.
- The majority of sections with a curb and gutter are in good condition (83%), with 7 in fair condition and none in poor condition.

6.2 RECOMMENDATIONS

It is recommended that the City focus on concrete sidewalks, asphalt and gravel trails with high severity distresses and particularly those with high pedestrian traffic. These areas are identified on maps provided in Appendix B.

The City should consider reconstructing accessibility ramps where needed, as per the locations detailed in Table 4.8.

Moving forward, the City may wish to evaluate the validity of some parametric data used in the rehabilitation analysis. Costs of treatments should be reviewed and updated on an annual basis.



The City may wish to consider the full reconstruction treatment type, when a high volume of partial treatment has been selected. Partial rehabilitation normally includes saw cutting and breaking out relatively small sections of concrete. Depending on volume, full reconstruction may be done more efficiently with larger equipment, possibly resulting in a comparatively less expensive unit price. There is a cost breakeven point where the amount of partial replacement is equivalent to full reconstruction, but this will vary between jurisdictions depending on the competitiveness of the local industry.

Rehabilitation treatment types and the decision table could be expanded to include other treatments such as mud-jacking, for concrete sidewalks.

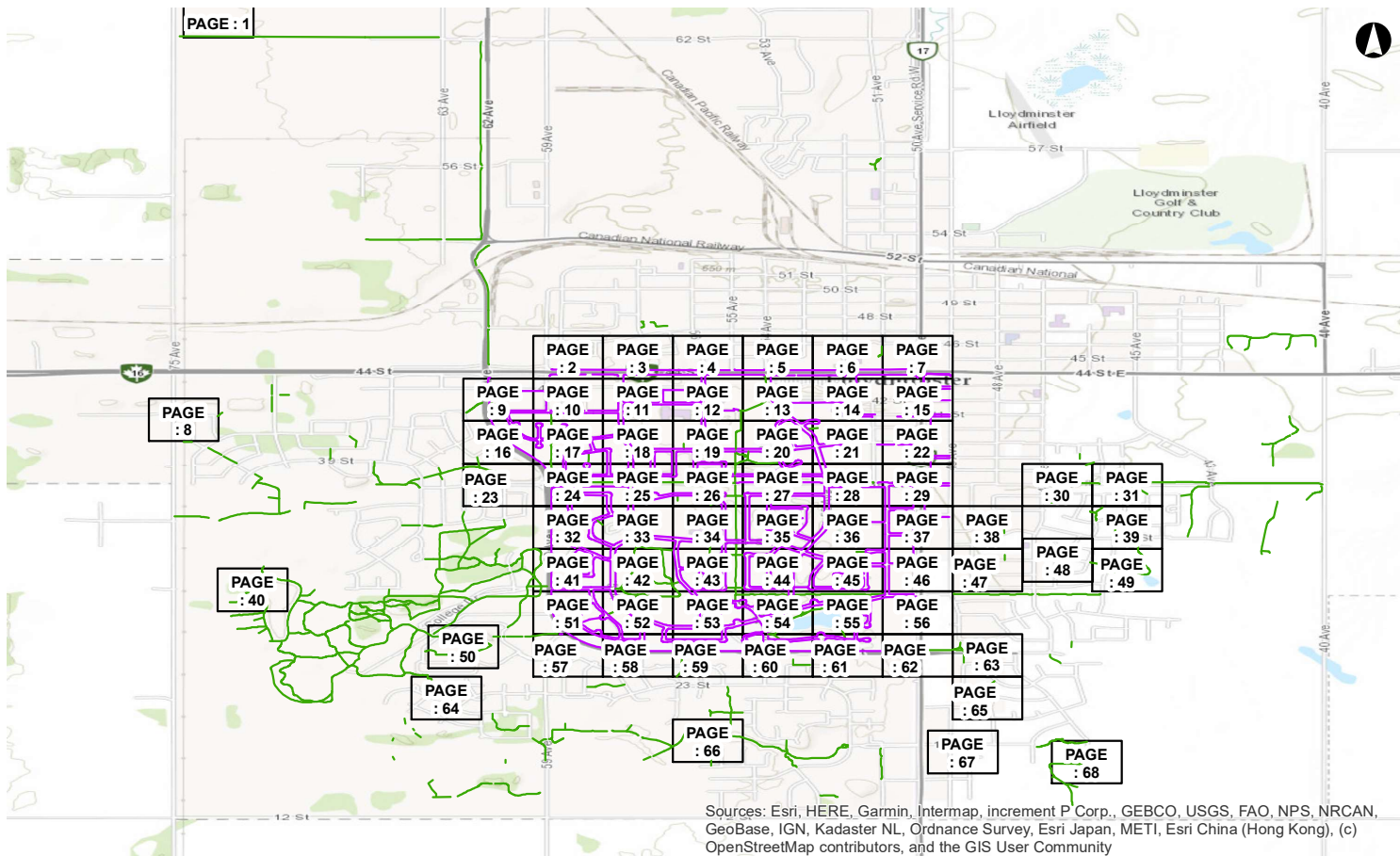
The City of Lloydminster should continue to assess and maintain its sidewalk and trail network. Sidewalks and trails are an integral piece of a safe and accessible city. Repairing severe distresses and eliminating tripping hazards will provide safe usage, minimize liability exposure, and extend the service life of this valuable infrastructure.



APPENDIX A

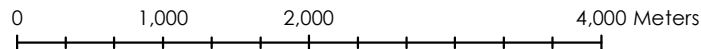
Key Map





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APPENDIX B

High Severity Distress Location Maps





Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



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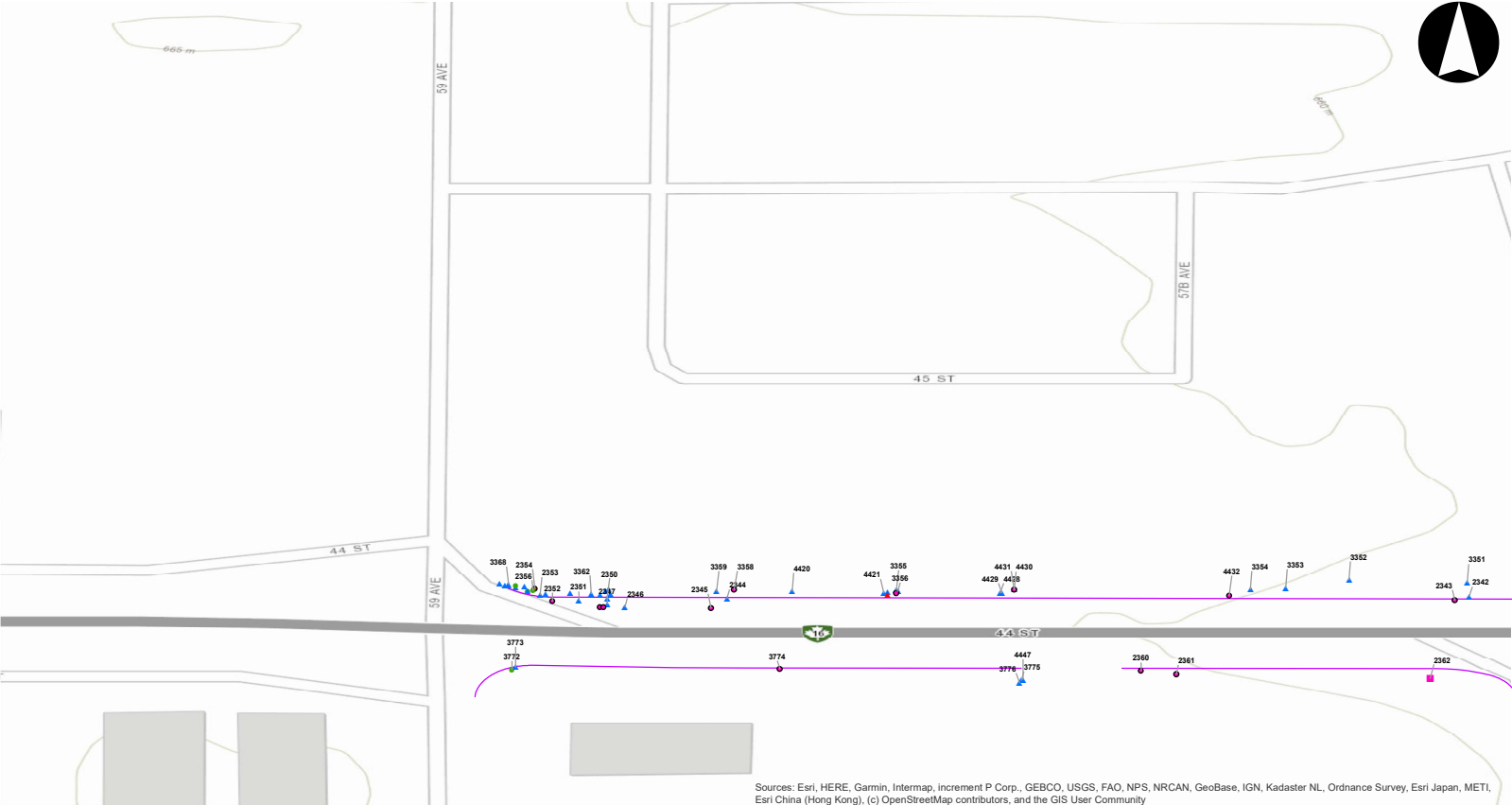
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Distress	Concrete Patch	Grinding	Trip Hazard
Asphalt Patch	Cracking	Heave	Utility Box
Broken Panel	Distortion	Manhole	
Catch Basins	Excessive Grade	Obstruction	
Chipped Panel	Faulting	Obstruction Temp	
	Gap	Surface Roughness	

0 40 80 160 Meters

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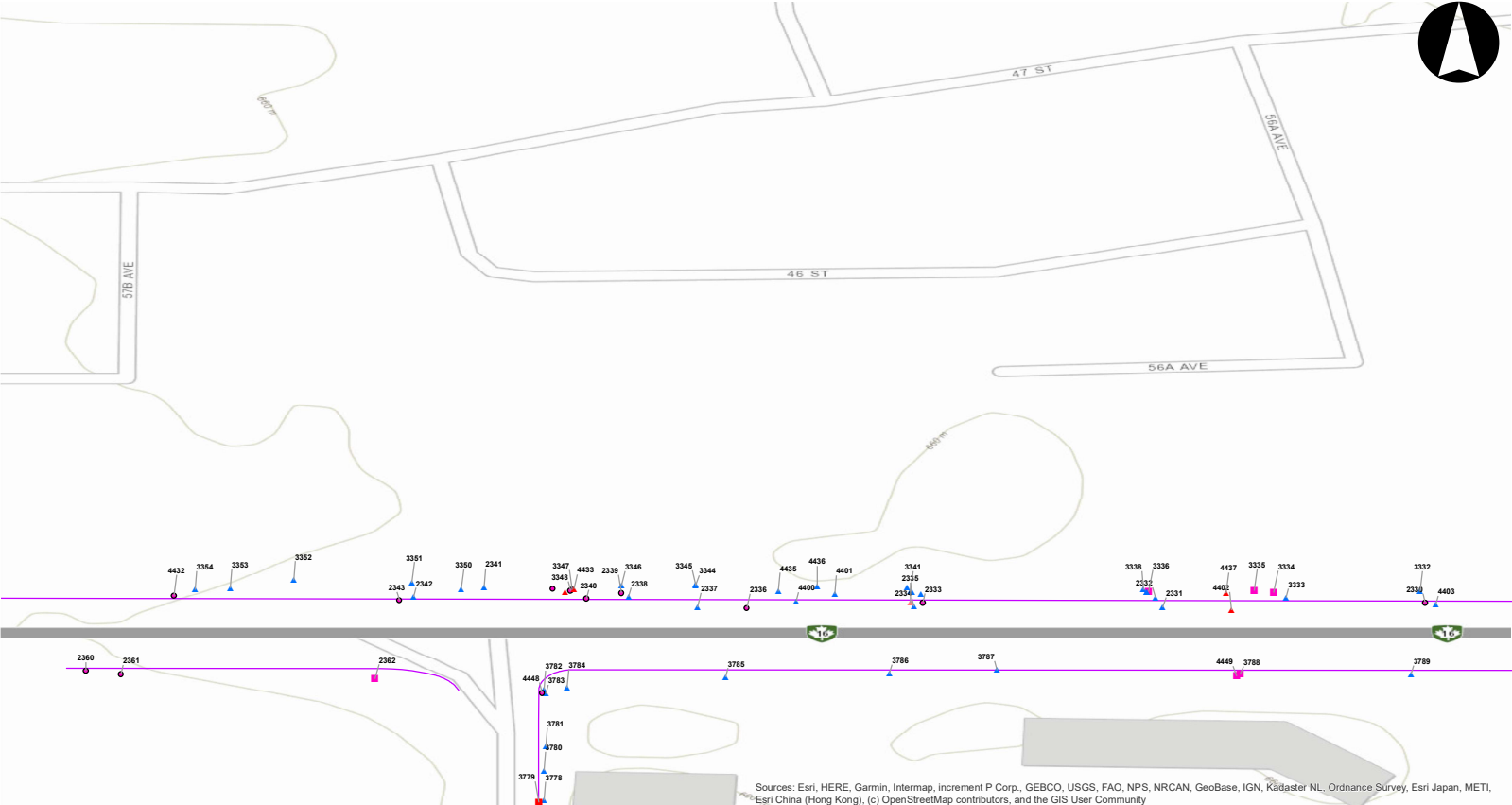
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● Chipped Panel	▲ Excessive Grade	■ Obstruction	
	▲ Faulting	■ Obstruction Temp	
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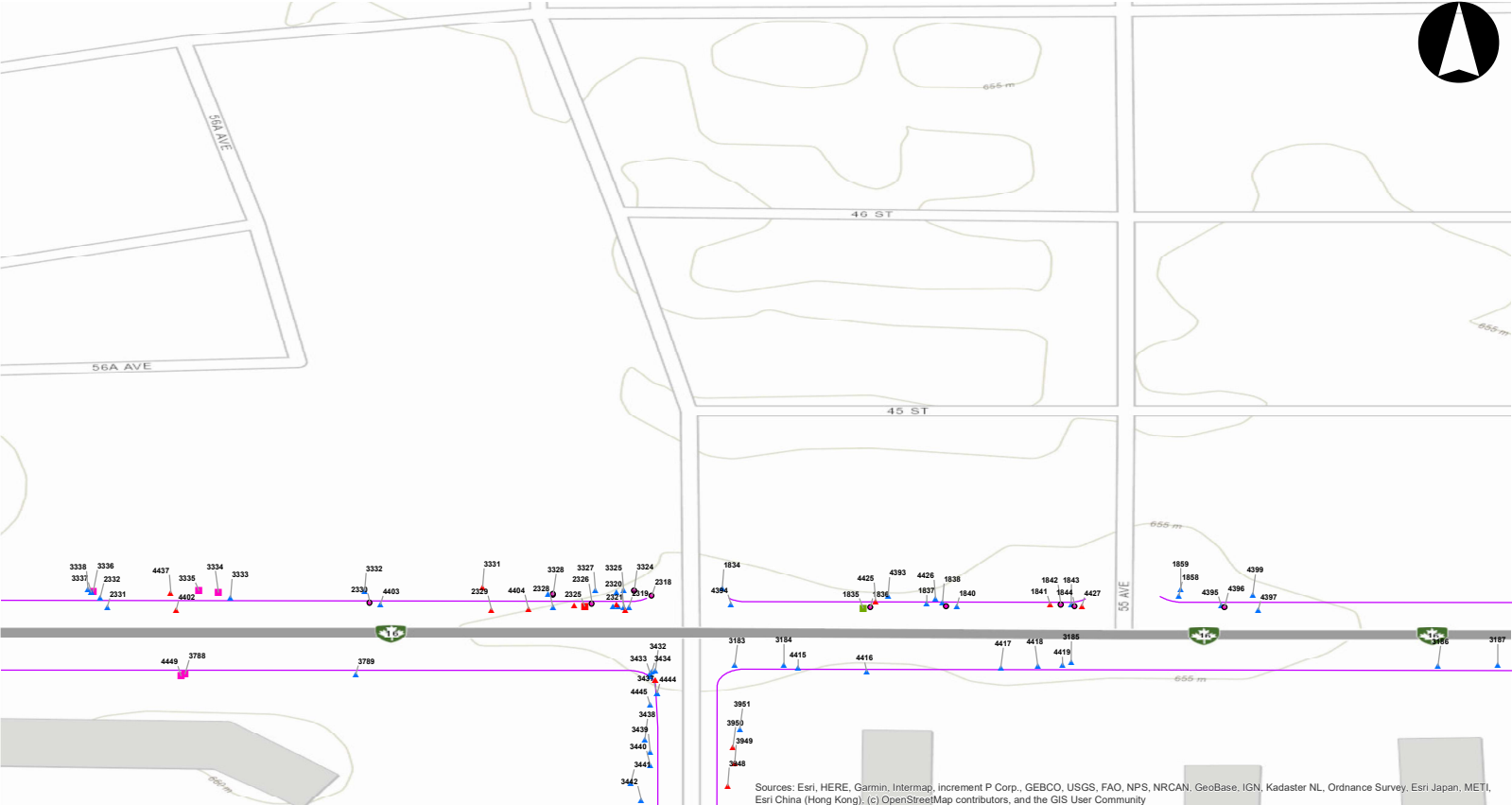
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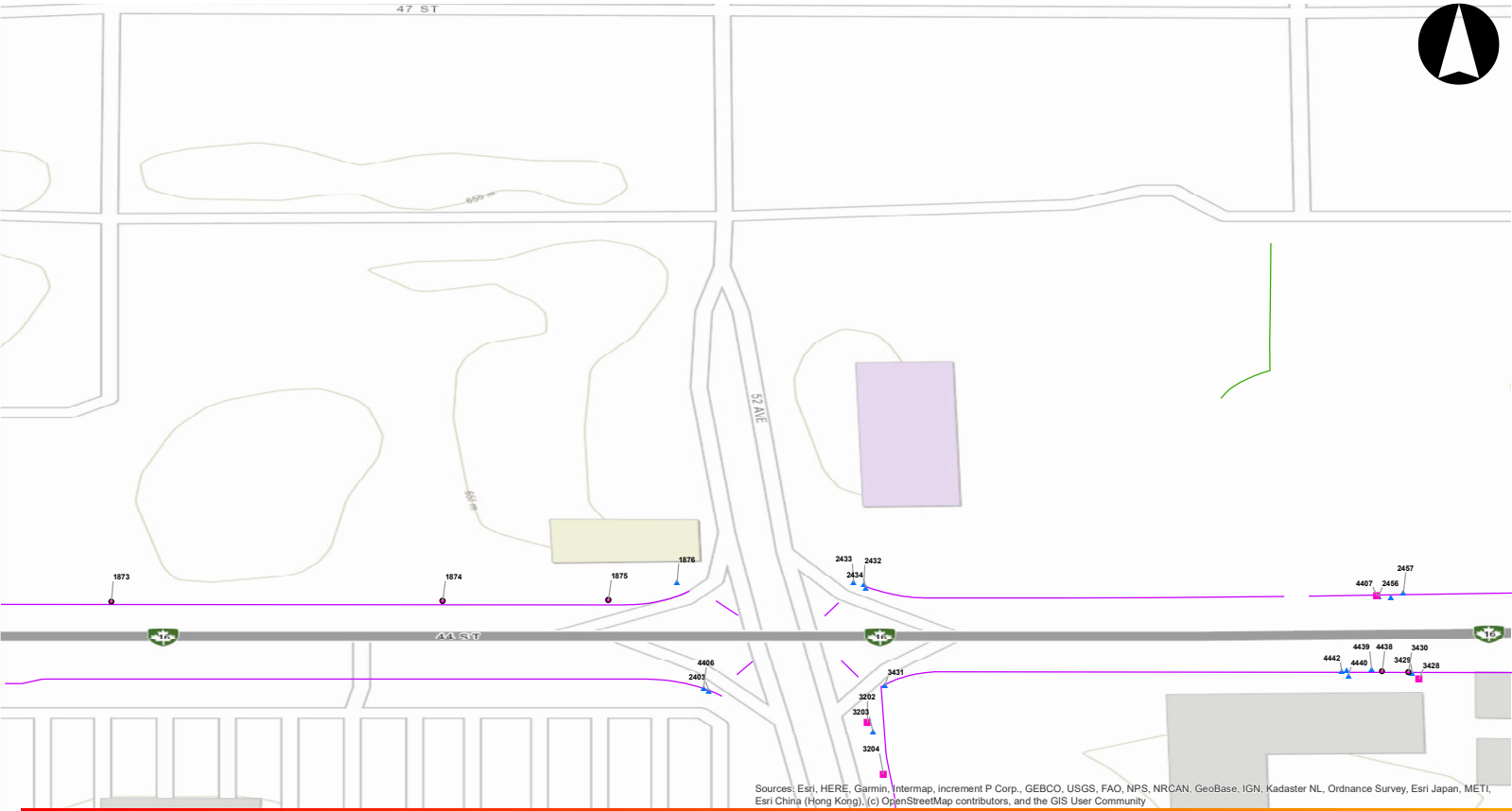


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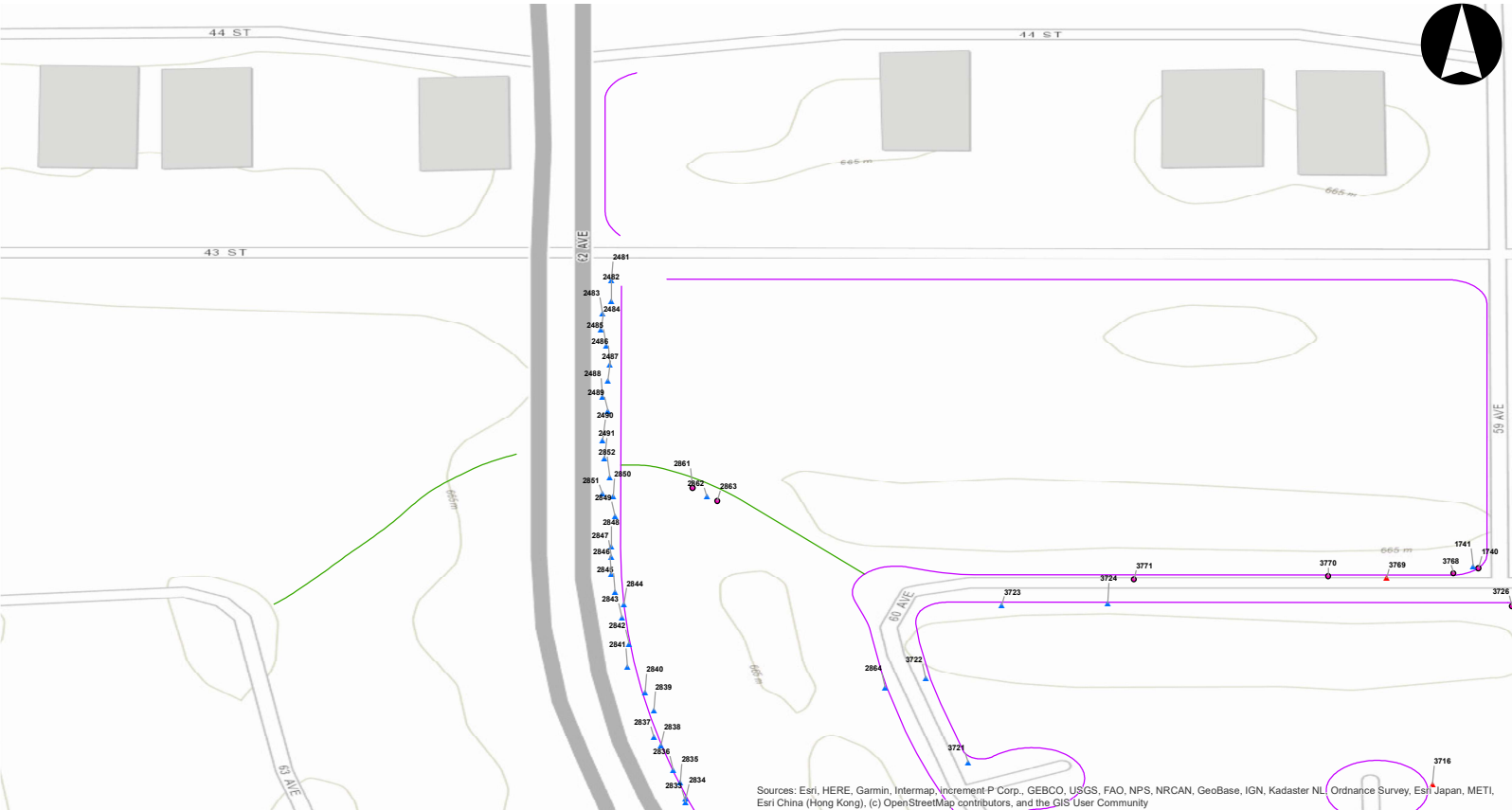
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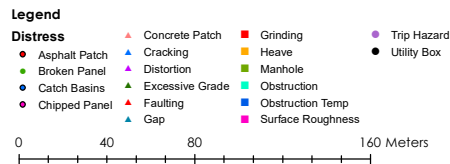
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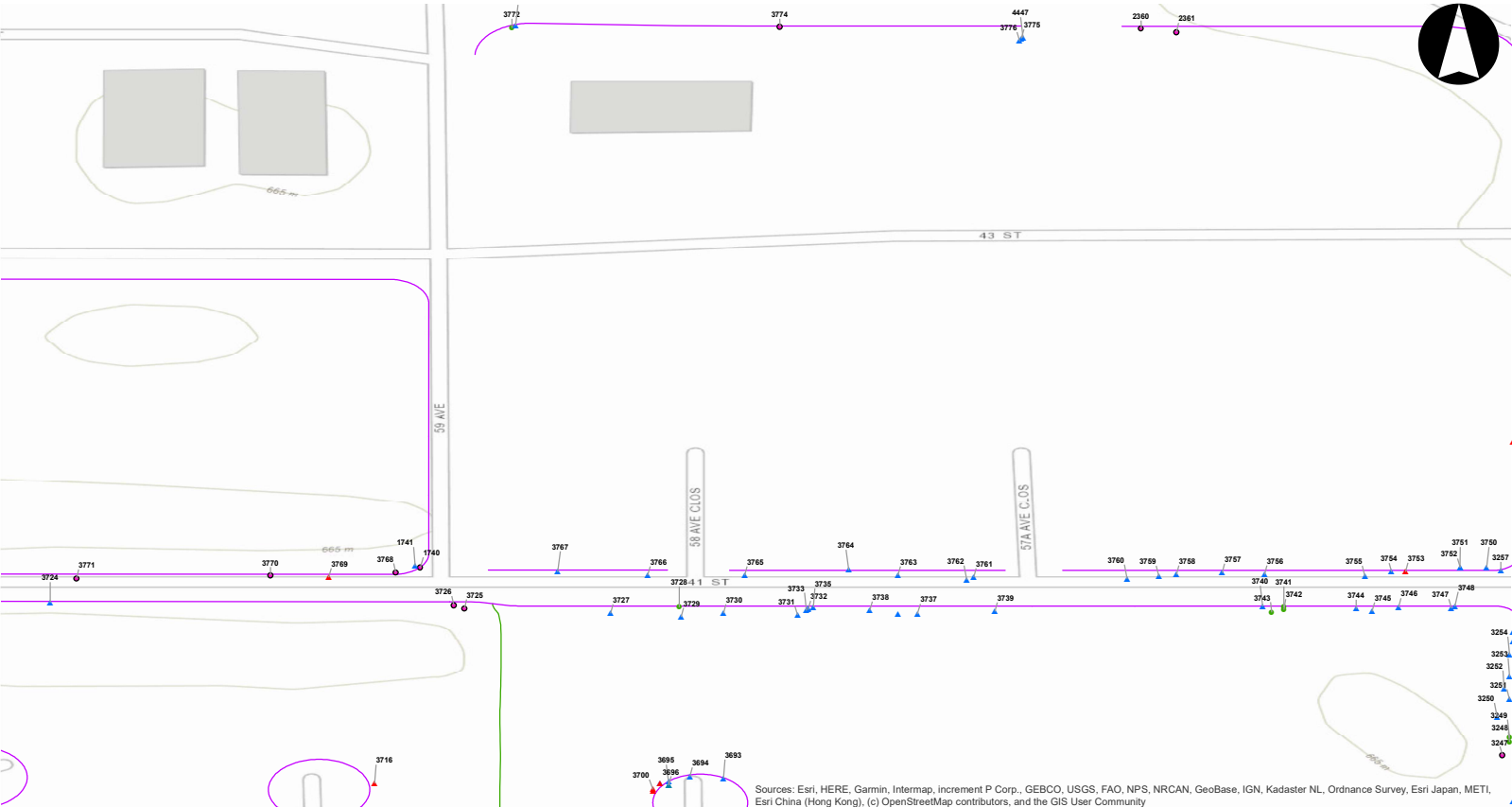
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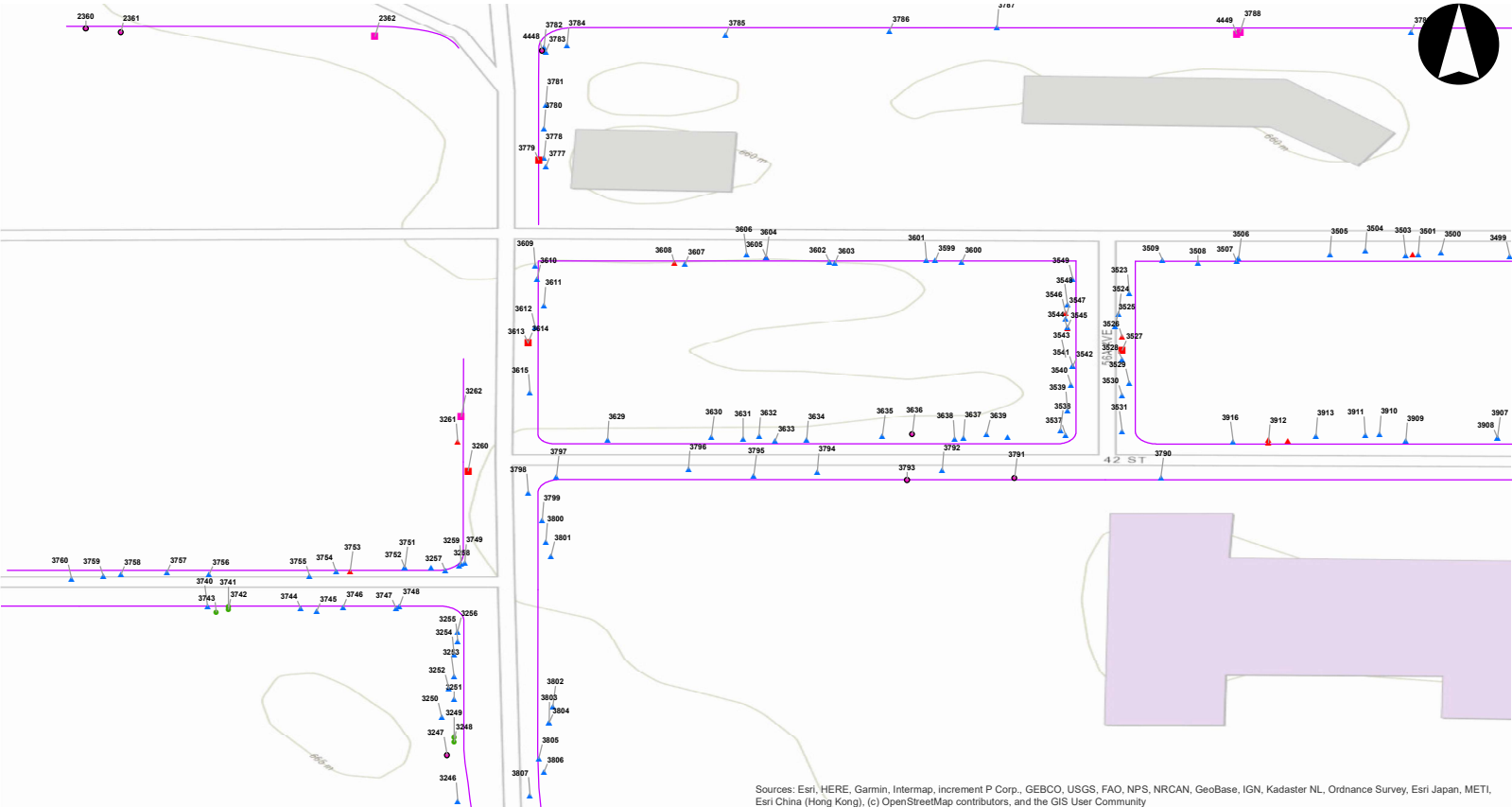
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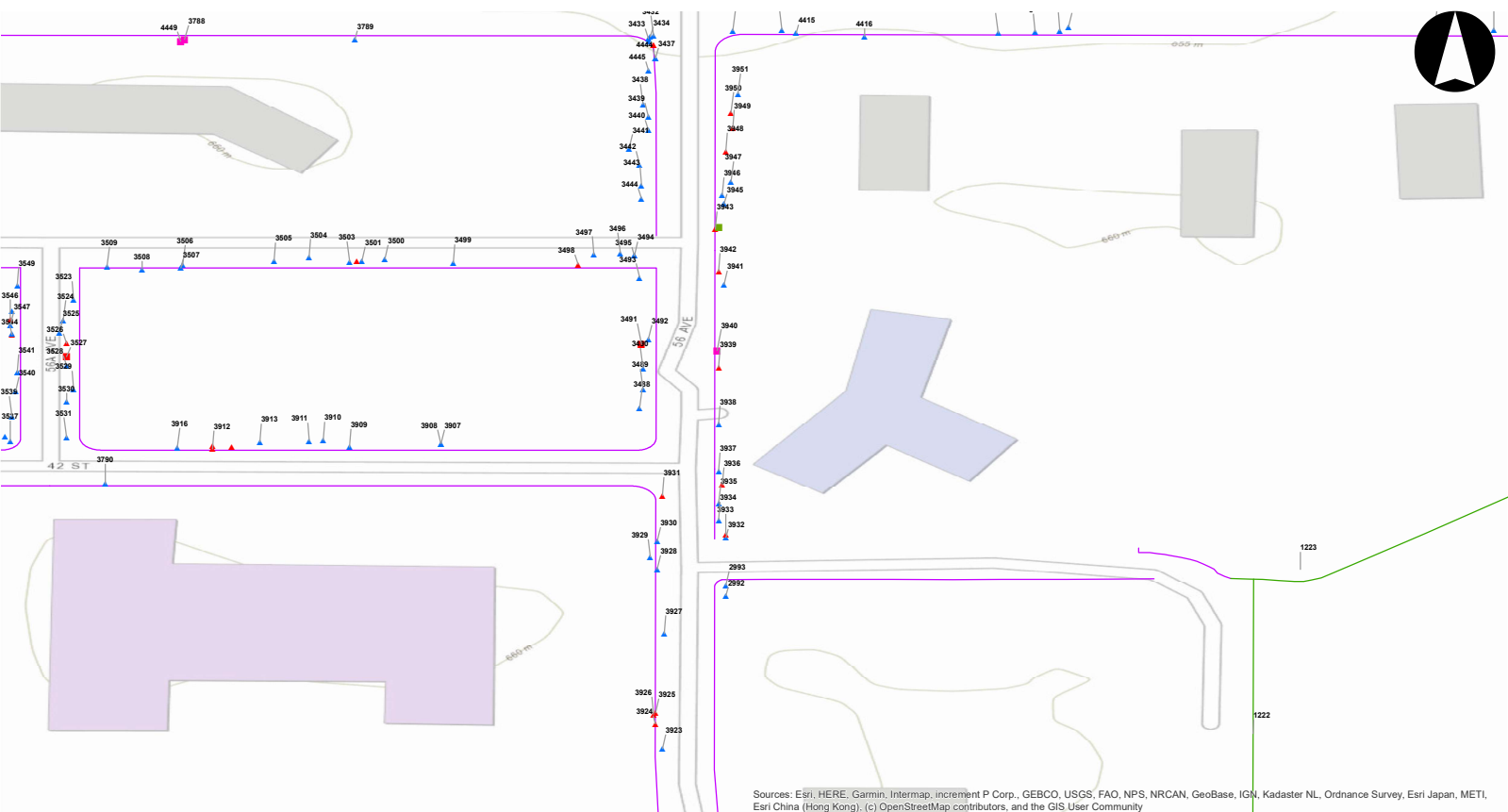
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Legend

Distress	Concrete Patch	Grinding	Trip Hazard
Asphalt Patch	Cracking	Heave	Utility Box
Broken Panel	Distortion	Manhole	
Catch Basins	Excessive Grade	Obstruction	
Chipped Panel	Faulting	Obstruction Temp	
	Gap	Surface Roughness	

0 40 80 160 Meters

Client/Project
City of Lloydminster
 2021 Sidewalk Survey
 Title
 High Distress Locations
 MapBook



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

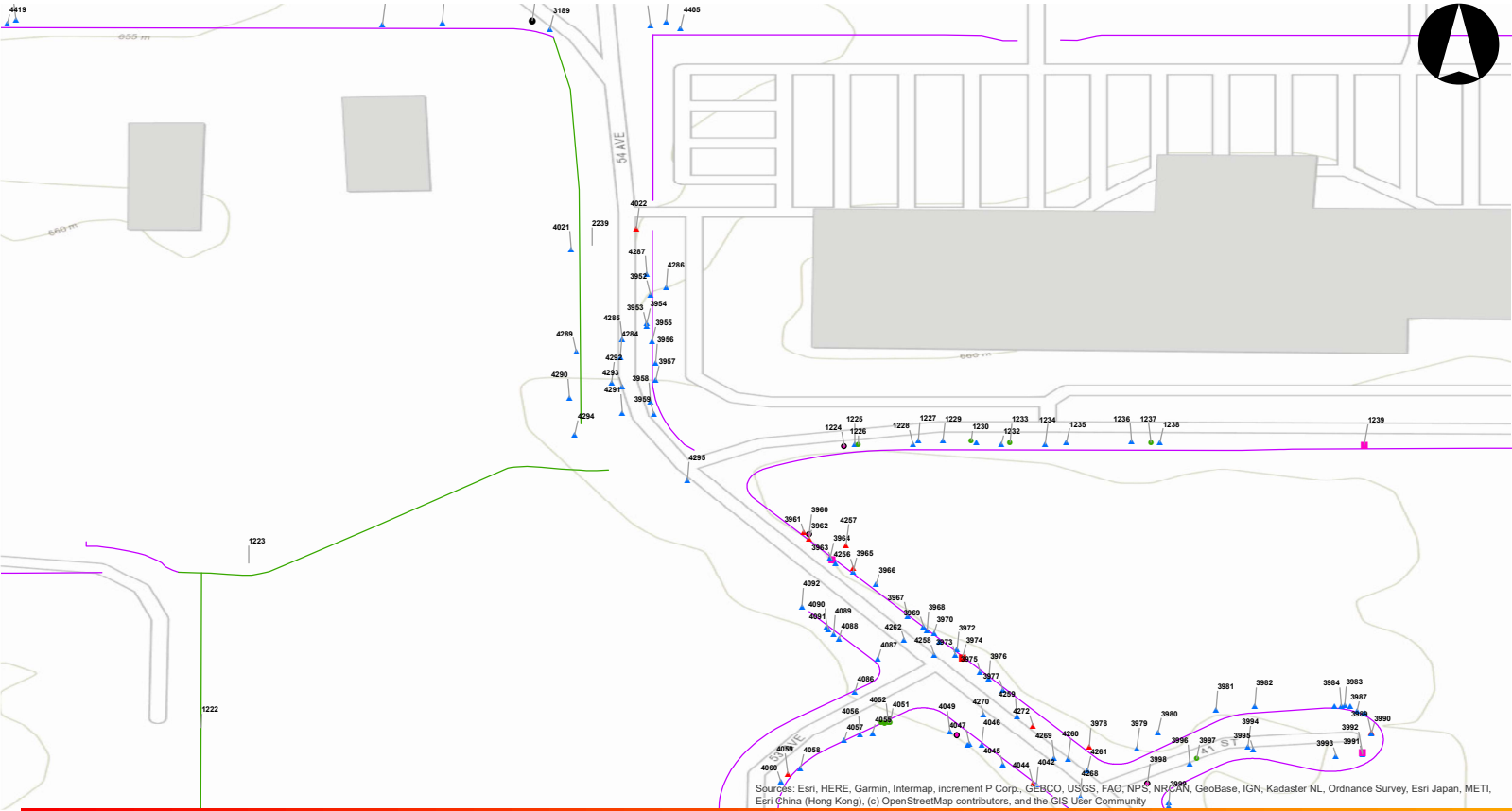
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Legend

Distress	<ul style="list-style-type: none"> Asphalt Patch Broken Panel Catch Basins Chipped Panel Concrete Patch Cracking Distortion Excessive Grade Faulting Gap Grinding Heave Manhole Obstruction Obstruction Temp Surface Roughness Trip Hazard Utility Box
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0 40 80 160 Meters

Client/Project
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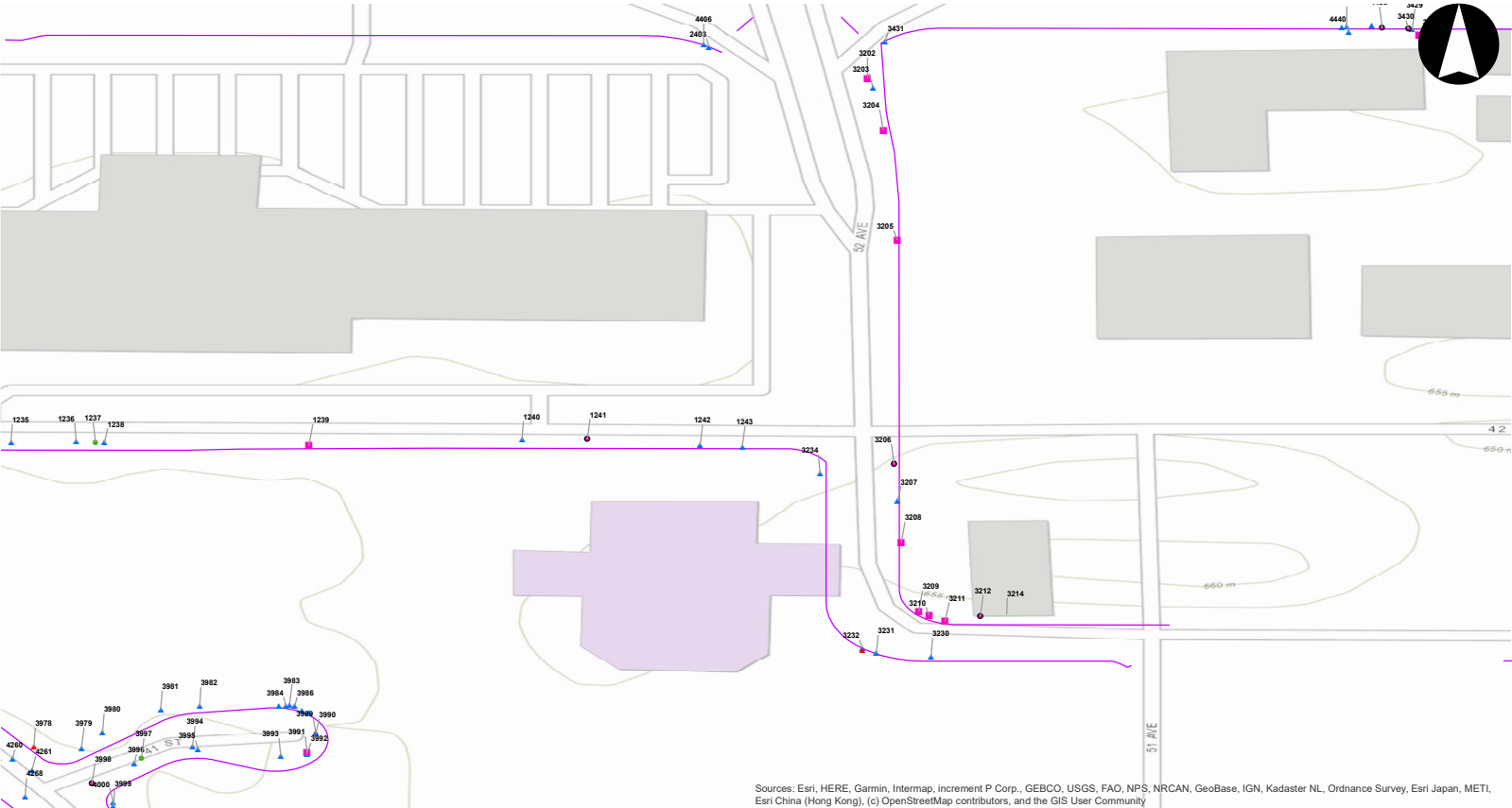
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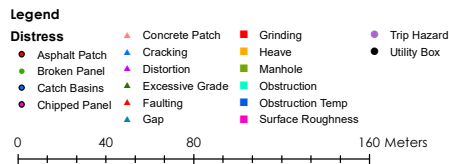
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Asphalt Patch	Cracking	Heave	Utility Box
Broken Panel	Distortion	Manhole	
Catch Basins	Excessive Grade	Obstruction	
Chipped Panel	Faulting	Obstruction Temp	
	Gap	Surface Roughness	

0 40 80 160 Meters

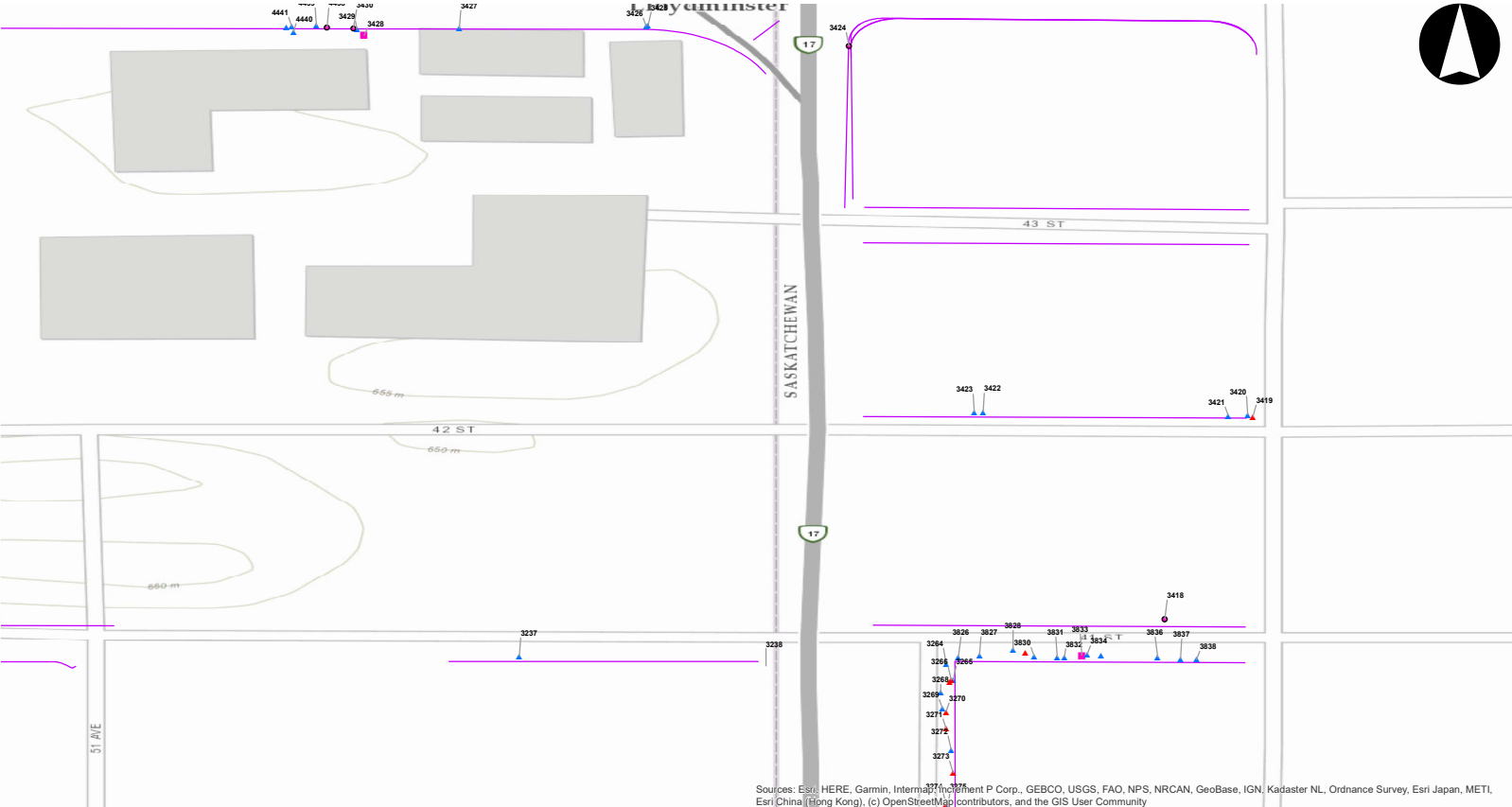
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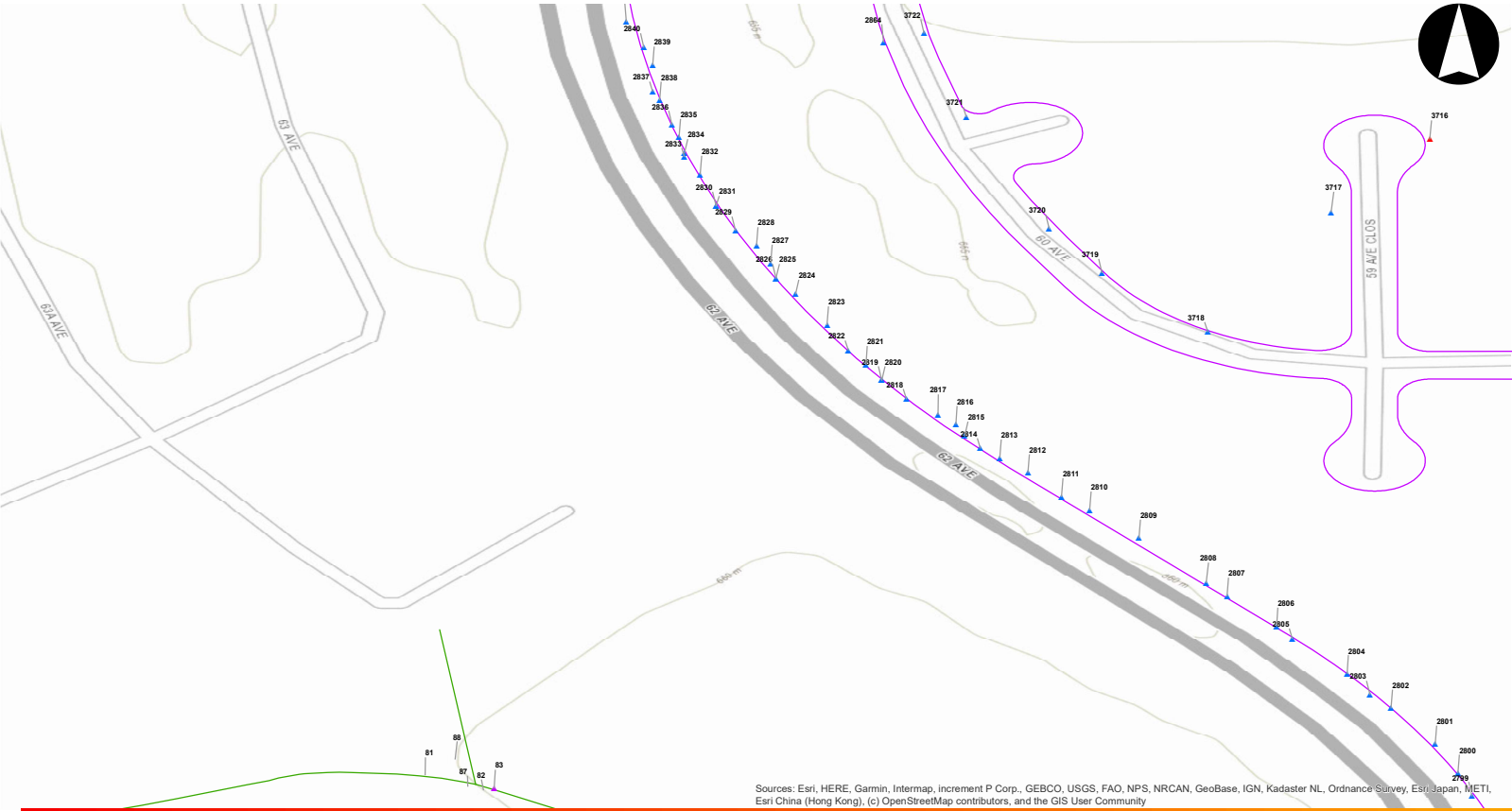
Legend

Distress	Concrete Patch	Grinding	Trip Hazard
Asphalt Patch	Cracking	Heave	Utility Box
Broken Panel	Distortion	Manhole	
Catch Basins	Excessive Grade	Obstruction	
Chipped Panel	Faulting	Obstruction Temp	
	Gap	Surface Roughness	

0 40 80 160 Meters

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- Legend**
- | | | | |
|-----------------|-----------------|-------------------|-------------|
| Distress | Concrete Patch | Grinding | Trip Hazard |
| Asphalt Patch | Cracking | Heave | Utility Box |
| Broken Panel | Distortion | Manhole | |
| Catch Basins | Excessive Grade | Obstruction | |
| Chipped Panel | Faulting | Obstruction Temp | |
| | Gap | Surface Roughness | |
- 0 40 80 160 Meters

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Legend

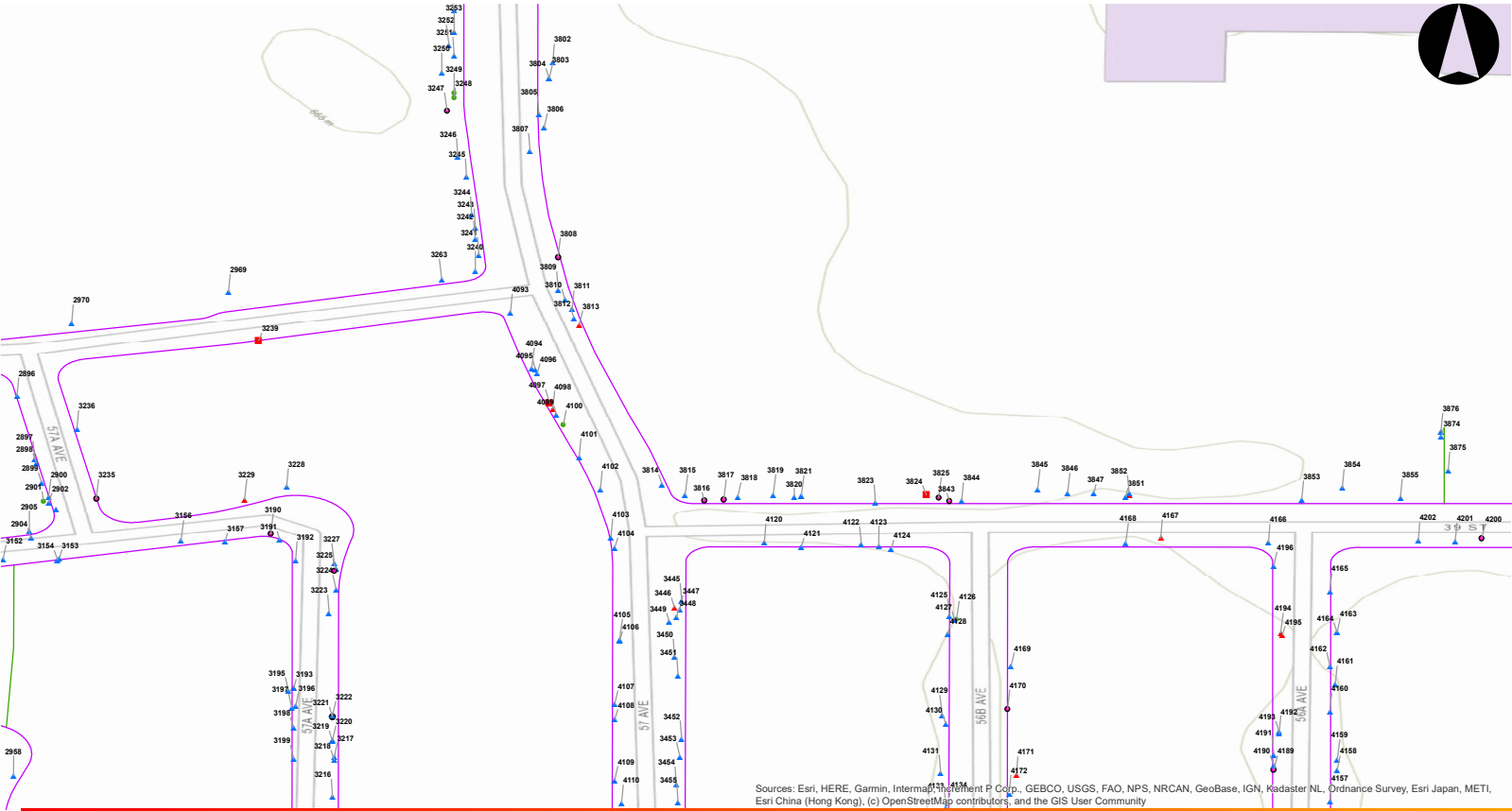
Distress

- Distress**
- Asphalt Patch
 - Broken Panel
 - Catch Basins
 - Chipped Panel
 - Concrete Patch
 - Cracking
 - Distortion
 - Excessive Grade
 - Faulting
 - Gap
 - Grinding
 - Heave
 - Manhole
 - Obstruction
 - Obstruction Temp
 - Surface Roughness
 - Trip Hazard
 - Utility Box



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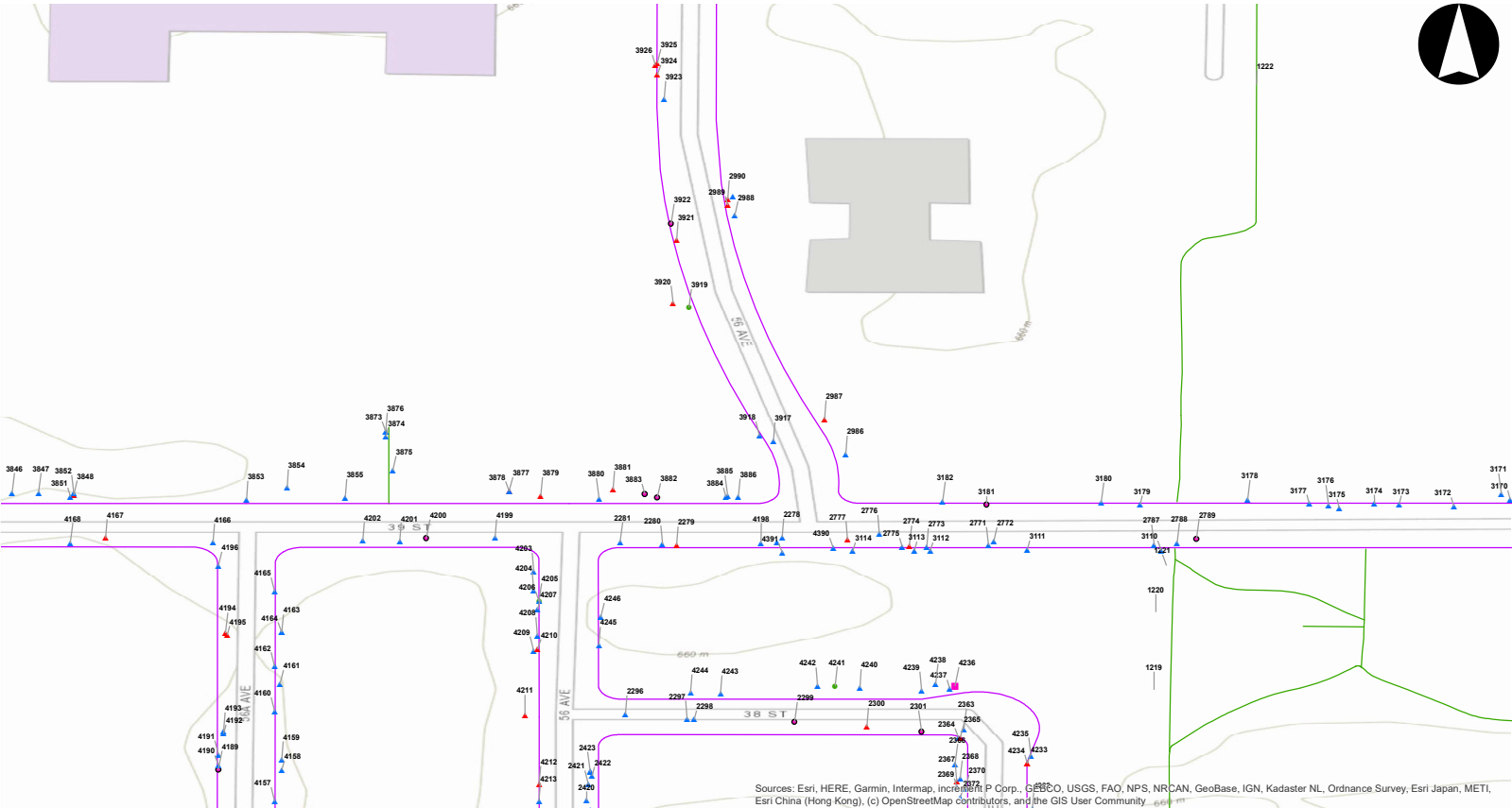
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Legend

Distress	<ul style="list-style-type: none"> Asphalt Patch Broken Panel Catch Basins Chipped Panel Concrete Patch Cracking Distortion Excessive Grade Faulting Gap Grinding Heave Manhole Obstruction Obstruction Temp Surface Roughness Trip Hazard Utility Box
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0 40 80 160 Meters

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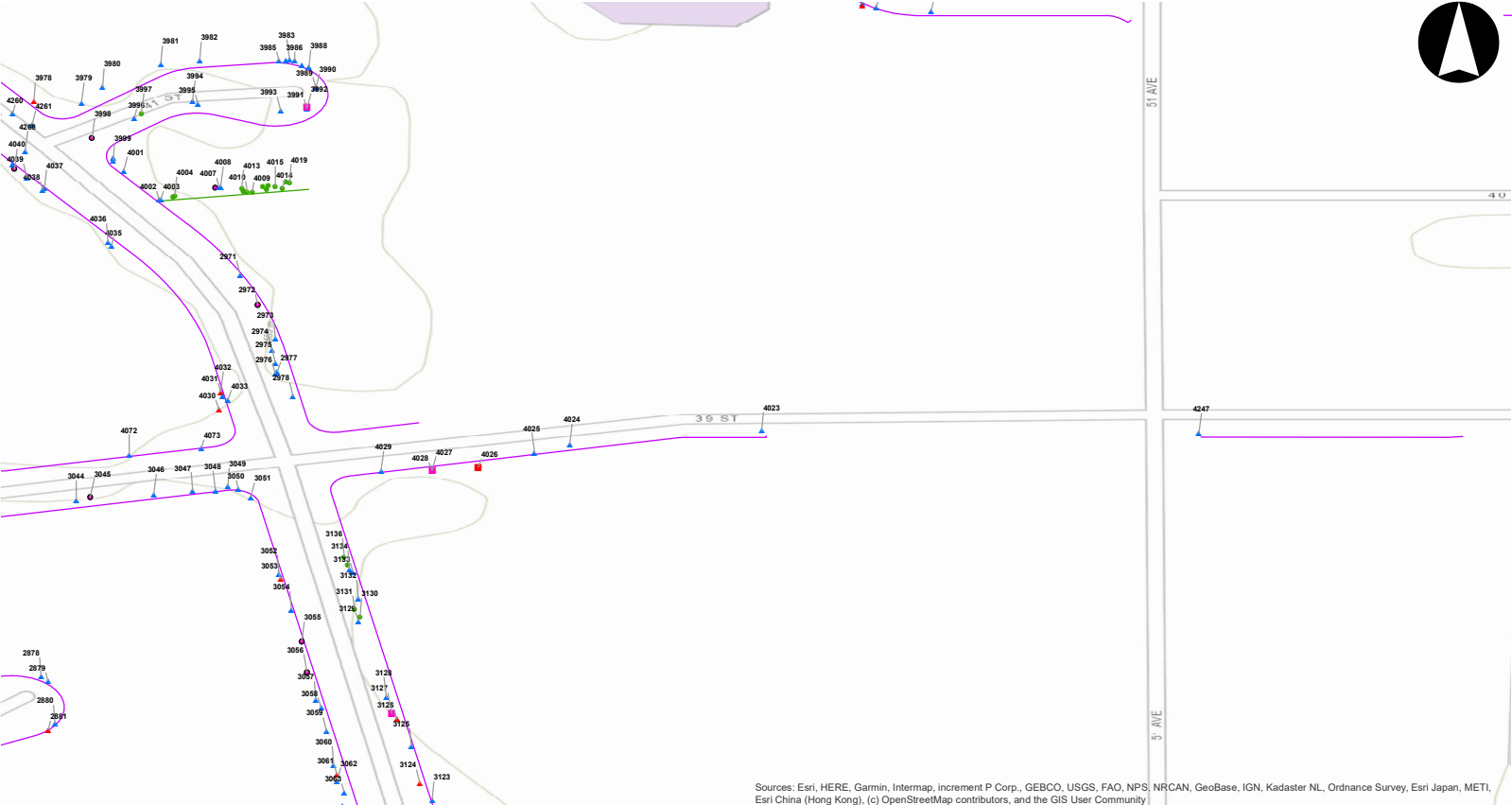
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Legend

Distress	<ul style="list-style-type: none"> Asphalt Patch Broken Panel Catch Basins Chipped Panel Concrete Patch Cracking Distortion Excessive Grade Faulting Gap Grinding Heave Manhole Obstruction Obstruction Temp Surface Roughness Trip Hazard Utility Box
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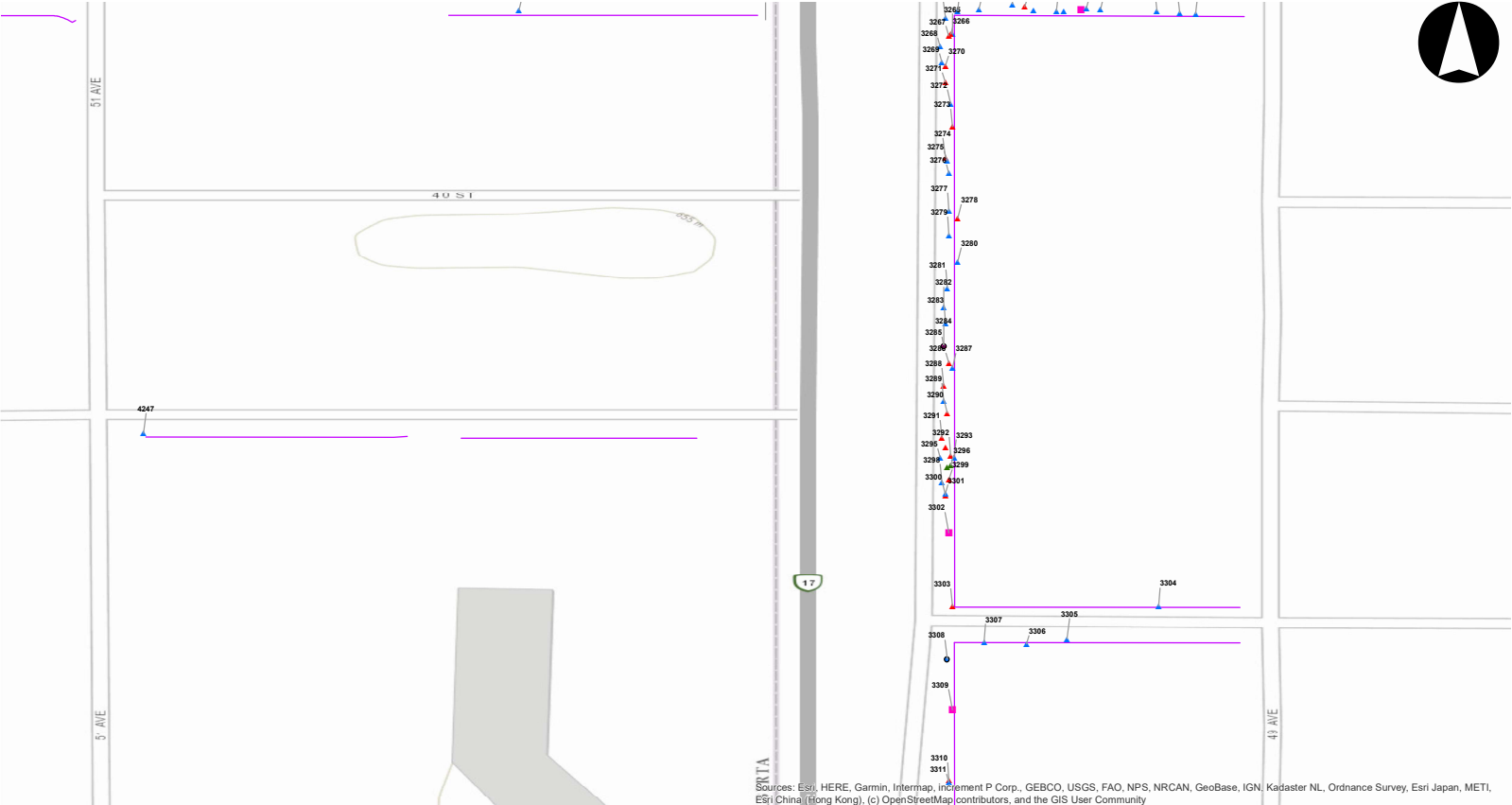
Legend

Distress	Concrete Patch	Grinding	Trip Hazard
Asphalt Patch	Cracking	Heave	Utility Box
Broken Panel	Distortion	Manhole	
Catch Basins	Excessive Grade	Obstruction	
Chipped Panel	Faulting	Obstruction Temp	
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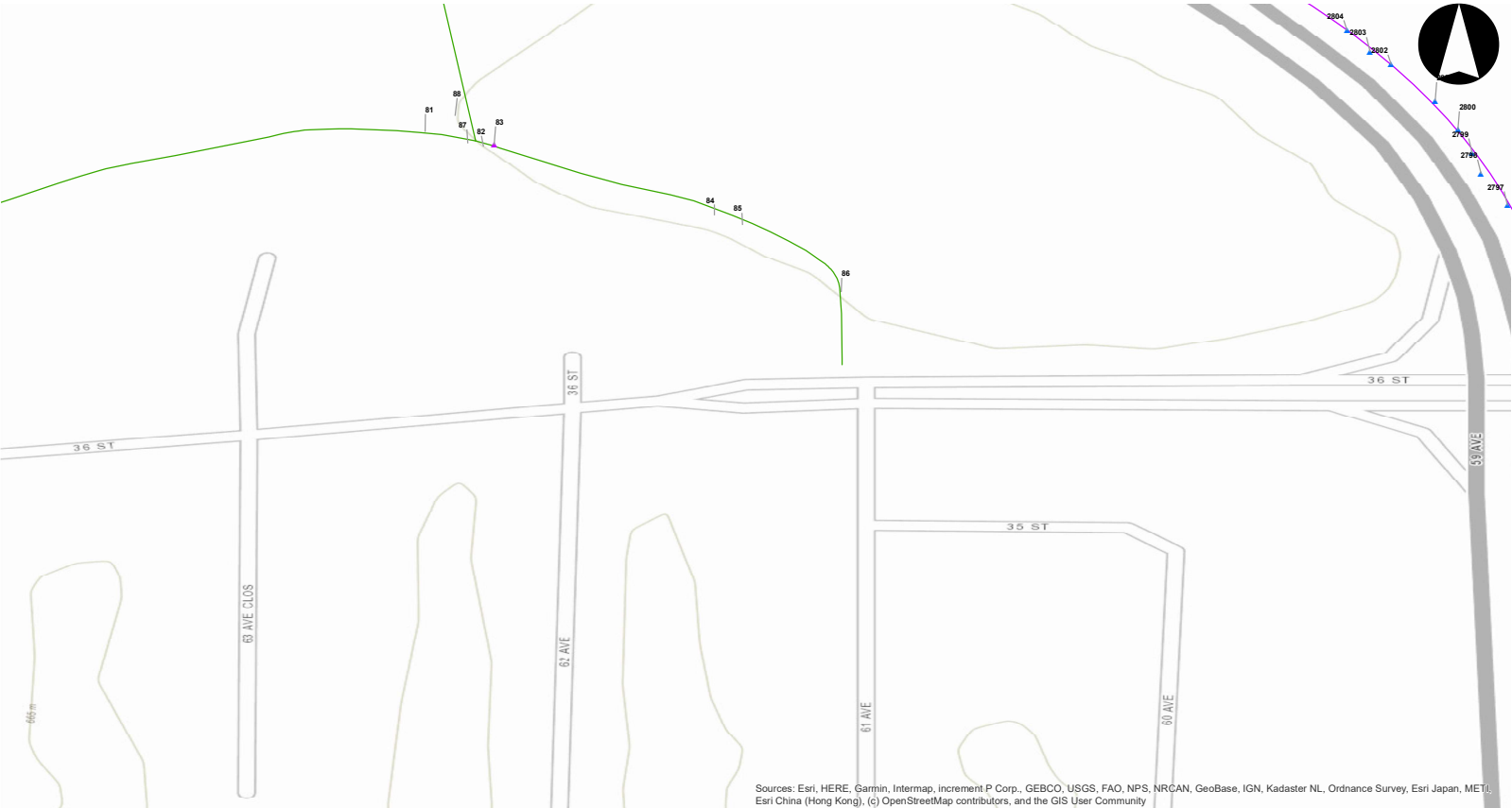
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Distress	Concrete Patch	Grinding	Trip Hazard
Asphalt Patch	Cracking	Heave	Utility Box
Broken Panel	Distortion	Manhole	
Catch Basins	Excessive Grade	Obstruction	
Chipped Panel	Faulting	Obstruction Temp	
	Gap	Surface Roughness	

0 40 80 160 Meters

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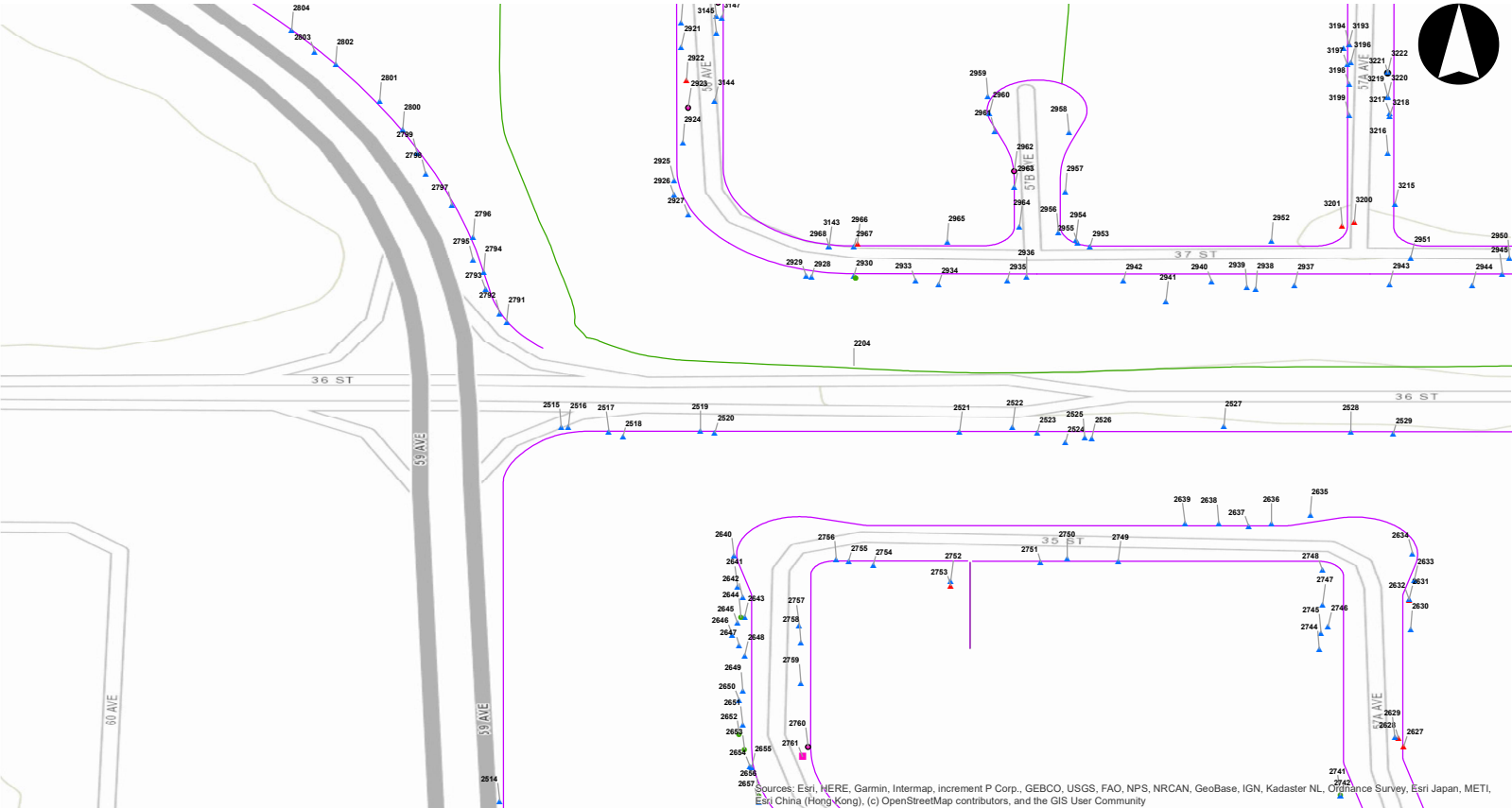
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Distress	<ul style="list-style-type: none"> Asphalt Patch Broken Panel Catch Basins Chipped Panel Concrete Patch Cracking Distortion Excessive Grade Faulting Gap Grinding Heave Manhole Obstruction Obstruction Temp Surface Roughness Trip Hazard Utility Box
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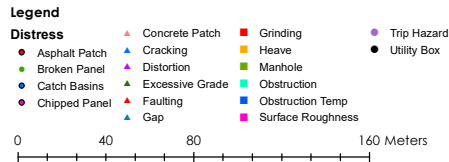
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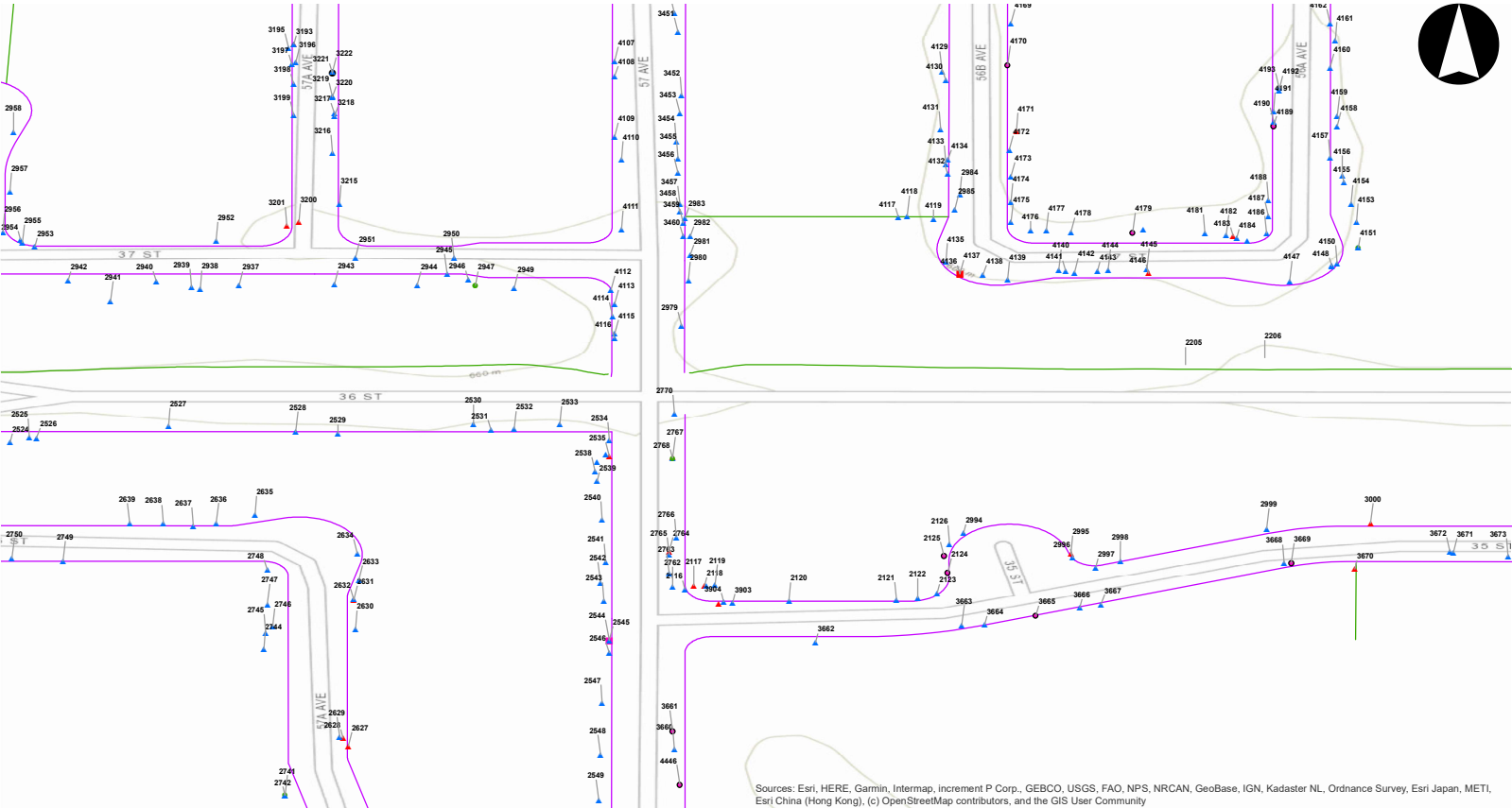
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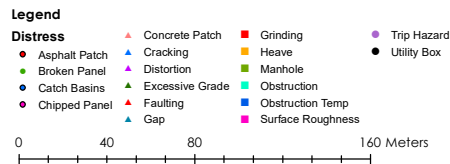


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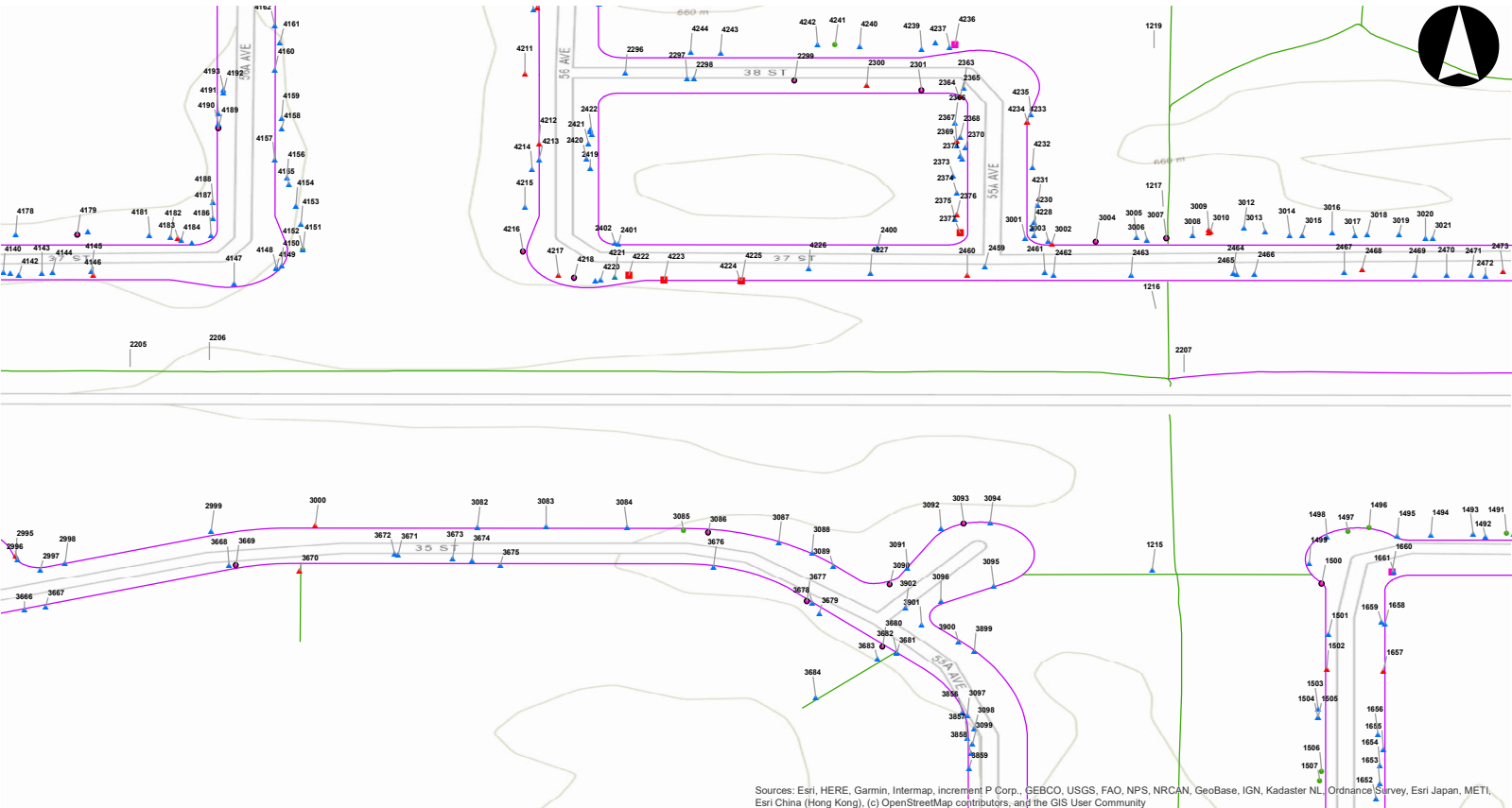
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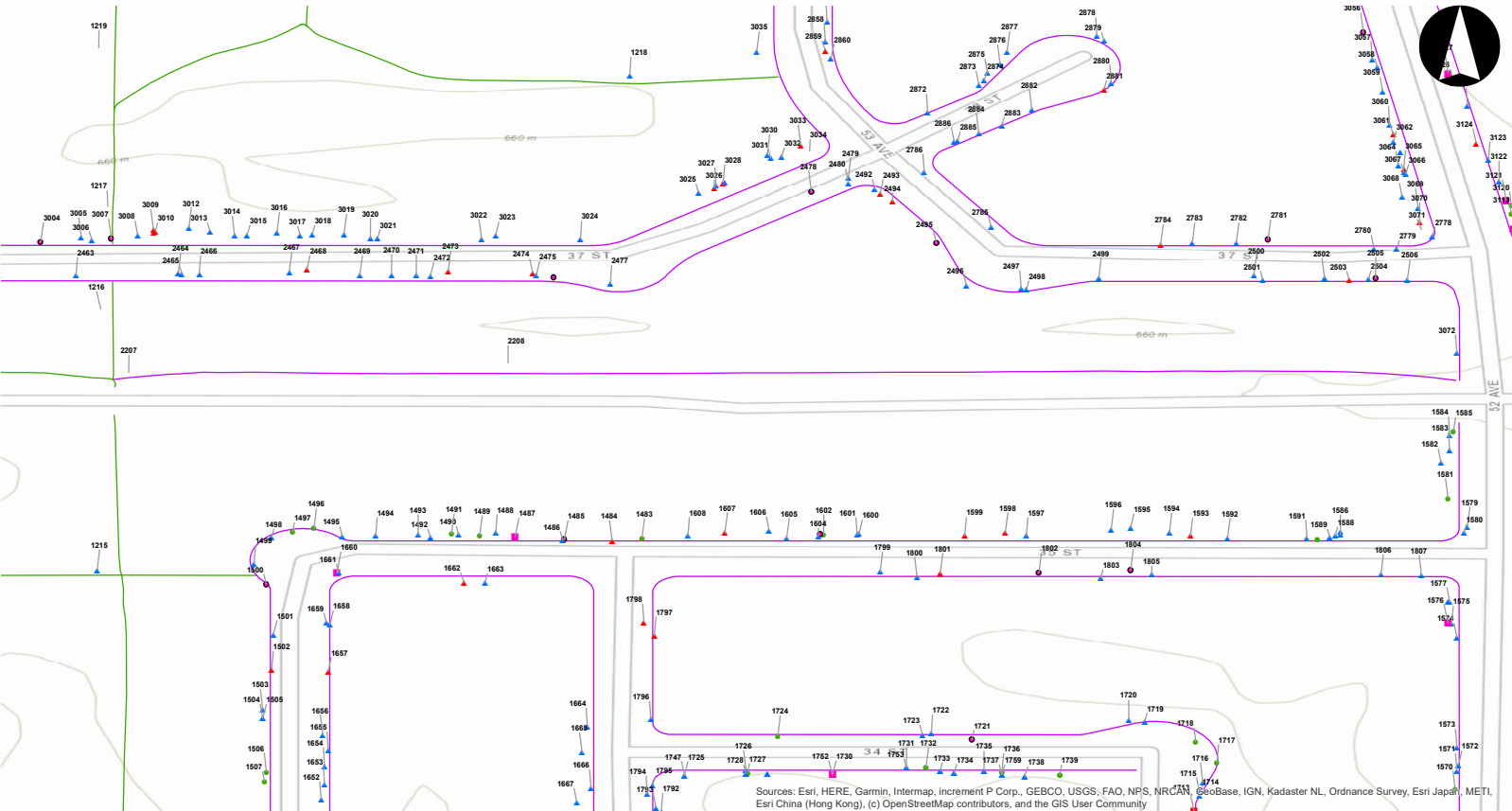
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Legend

Distress	<ul style="list-style-type: none"> Asphalt Patch Broken Panel Catch Basins Chipped Panel Concrete Patch Cracking Distortion Excessive Grade Faulting Gap Grinding Heave Manhole Obstruction Obstruction Temp Surface Roughness 	<ul style="list-style-type: none"> Trip Hazard Utility Box
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0 40 80 160 Meters

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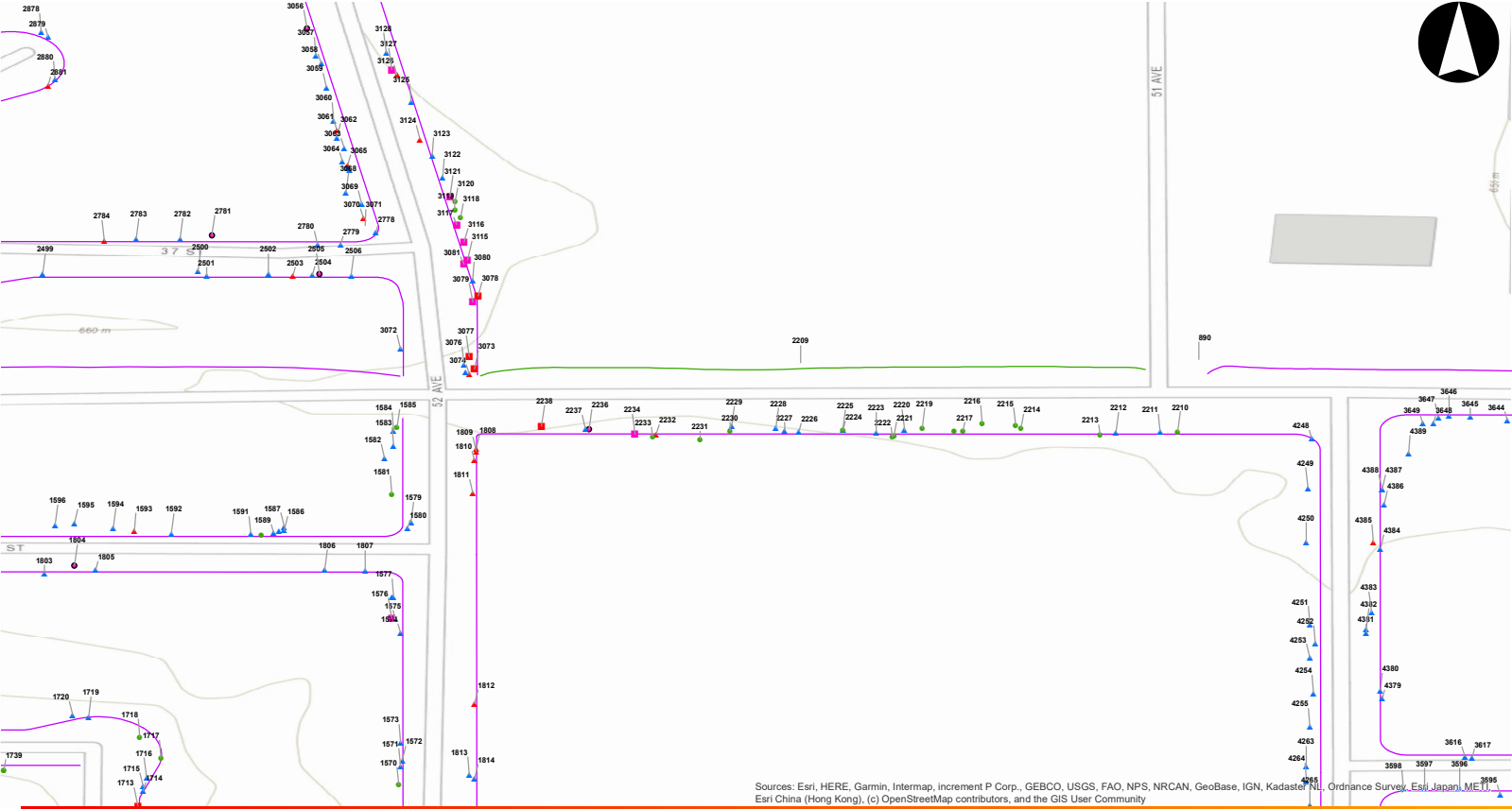
Distress

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|-----------------|-------------------|---------------------|---------------|
| ● Asphalt Patch | ▲ Concrete Patch | ■ Grinding | ● Trip Hazard |
| ● Broken Panel | ▲ Cracking | ■ Heave | ● Utility Box |
| ● Catch Basins | ▲ Distortion | ■ Manhole | |
| ● Chipped Panel | ▲ Excessive Grade | ■ Obstruction | |
| | ▲ Faulting | ■ Obstruction Temp | |
| | ▲ Gap | ■ Surface Roughness | |

0 40 80 160 Meters

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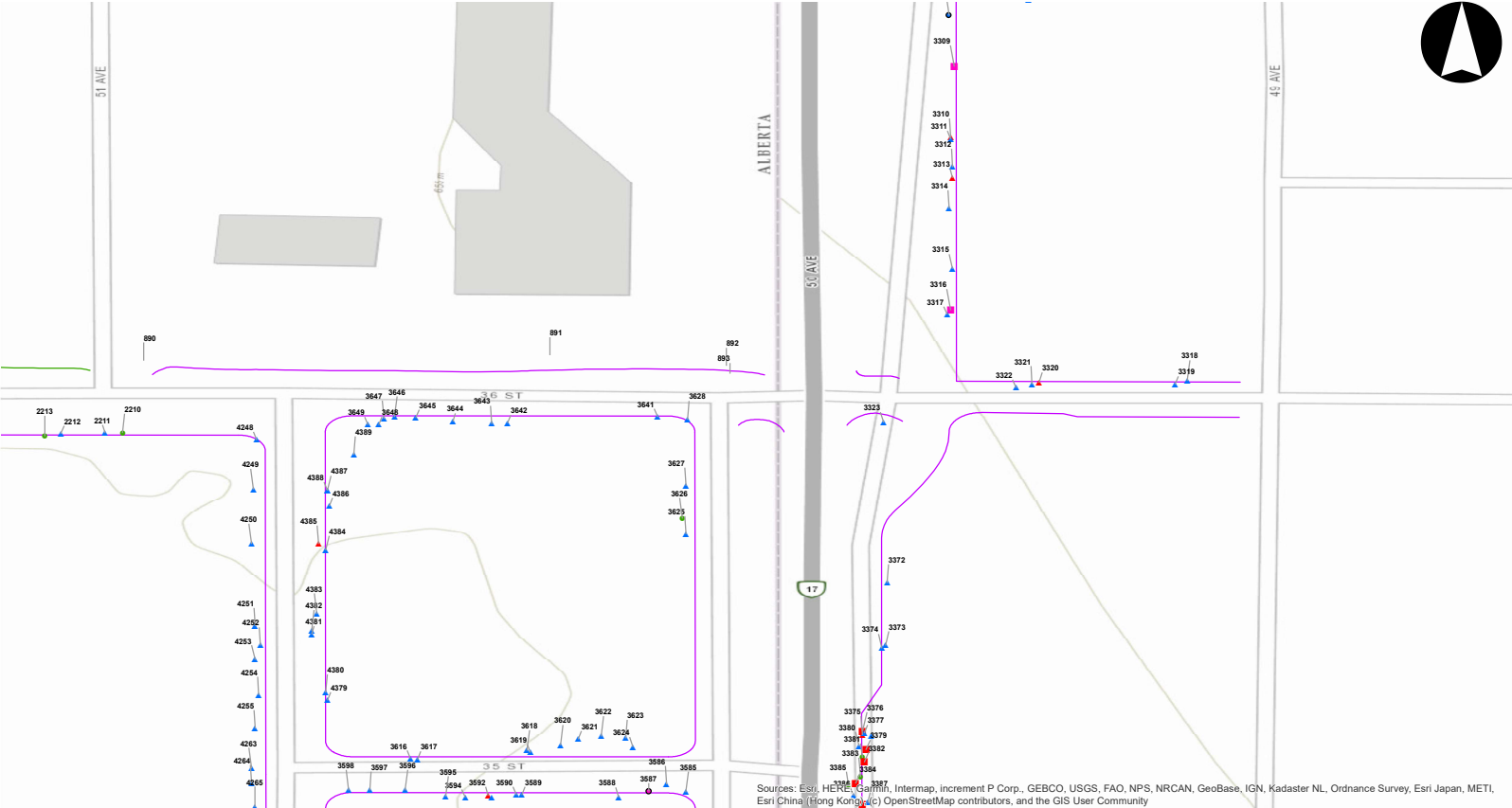
Legend

Distress	<ul style="list-style-type: none"> Asphalt Patch Broken Panel Catch Basins Chipped Panel Concrete Patch Cracking Distortion Excessive Grade Faulting Gap Grinding Heave Manhole Obstruction Obstruction Temp Surface Roughness Trip Hazard Utility Box
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0 40 80 160 Meters

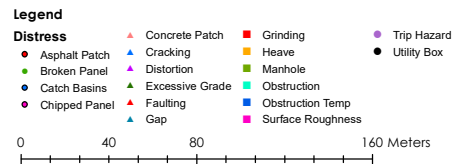
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 High Distress Locations
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Legend

Distress	<ul style="list-style-type: none"> Asphalt Patch Broken Panel Catch Basins Chipped Panel Concrete Patch Cracking Distortion Excessive Grade Faulting Gap Grinding Heave Manhole Obstruction Obstruction Temp Surface Roughness Trip Hazard Utility Box
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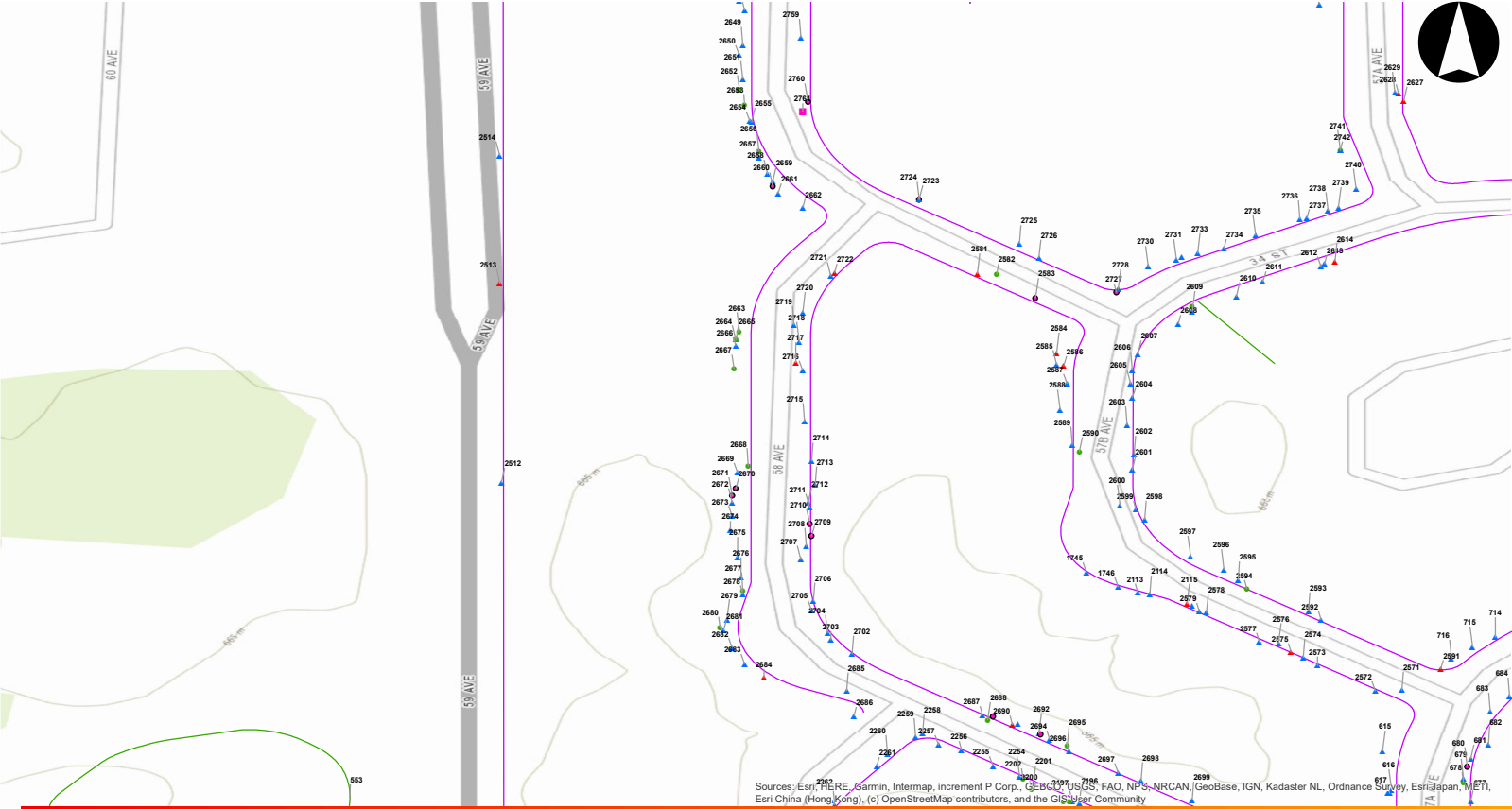
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Distress	Concrete Patch	Grinding	Trip Hazard
Asphalt Patch	Cracking	Heave	Utility Box
Broken Panel	Distortion	Manhole	
Catch Basins	Excessive Grade	Obstruction	
Chipped Panel	Faulting	Obstruction Temp	
	Gap	Surface Roughness	

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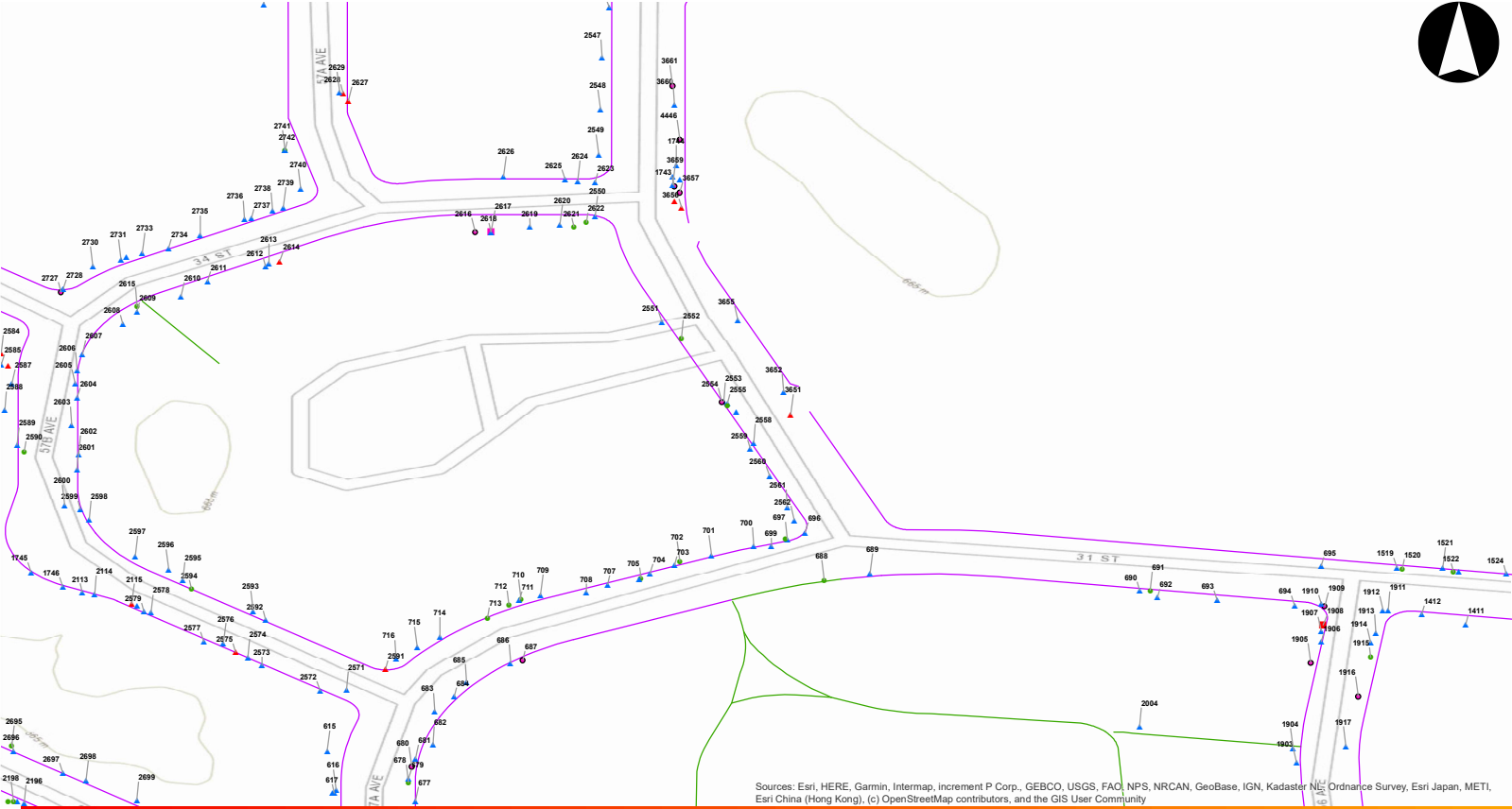
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Legend

● Asphalt Patch	▲ Concrete Patch	■ Grinding	● Trip Hazard
● Broken Panel	▲ Cracking	■ Heave	● Utility Box
● Catch Basins	▲ Distortion	■ Manhole	
● Chipped Panel	▲ Excessive Grade	■ Obstruction	
	▲ Faulting	■ Obstruction Temp	
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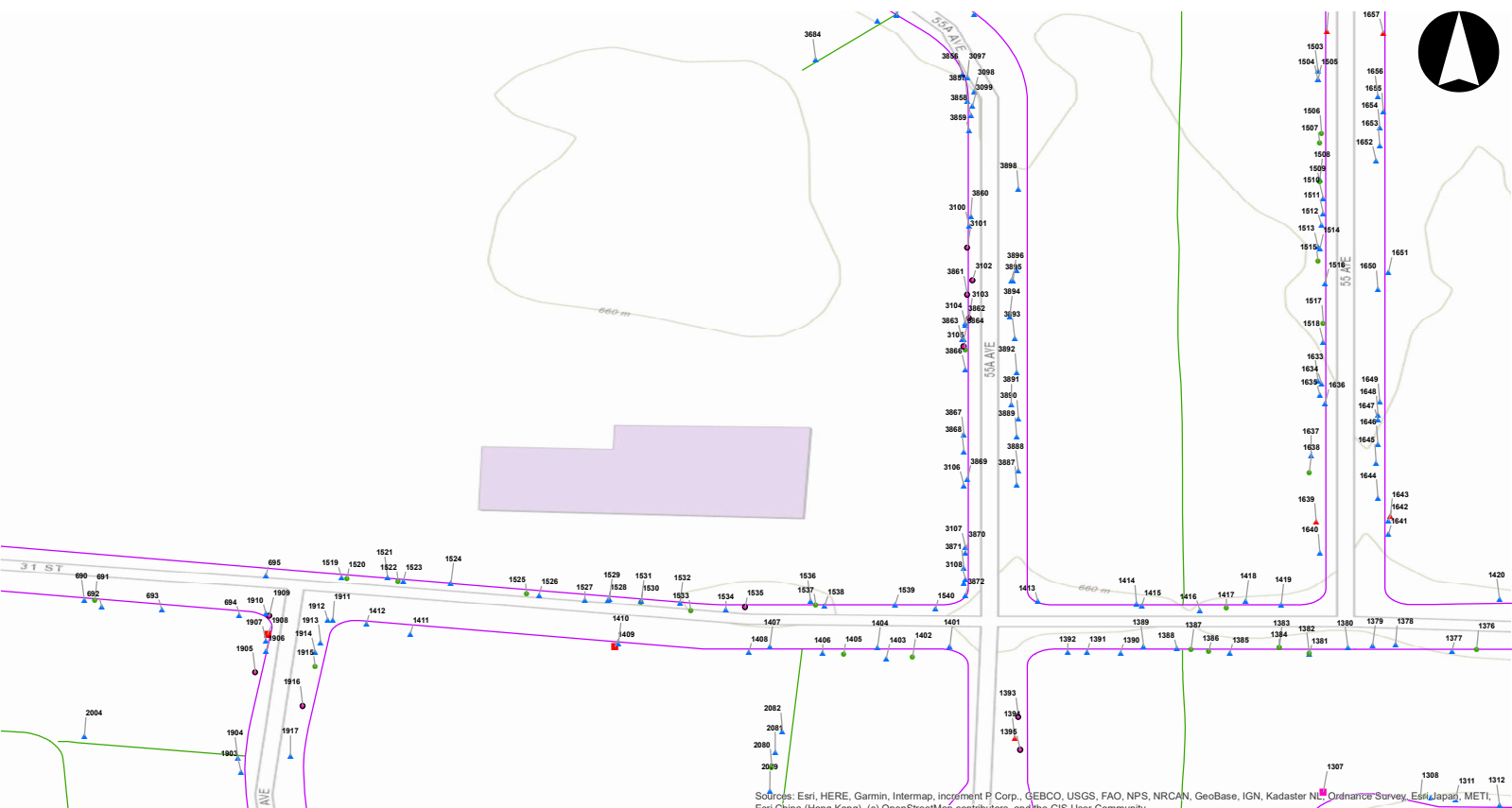
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Asphalt Patch	Cracking	Heave	Utility Box
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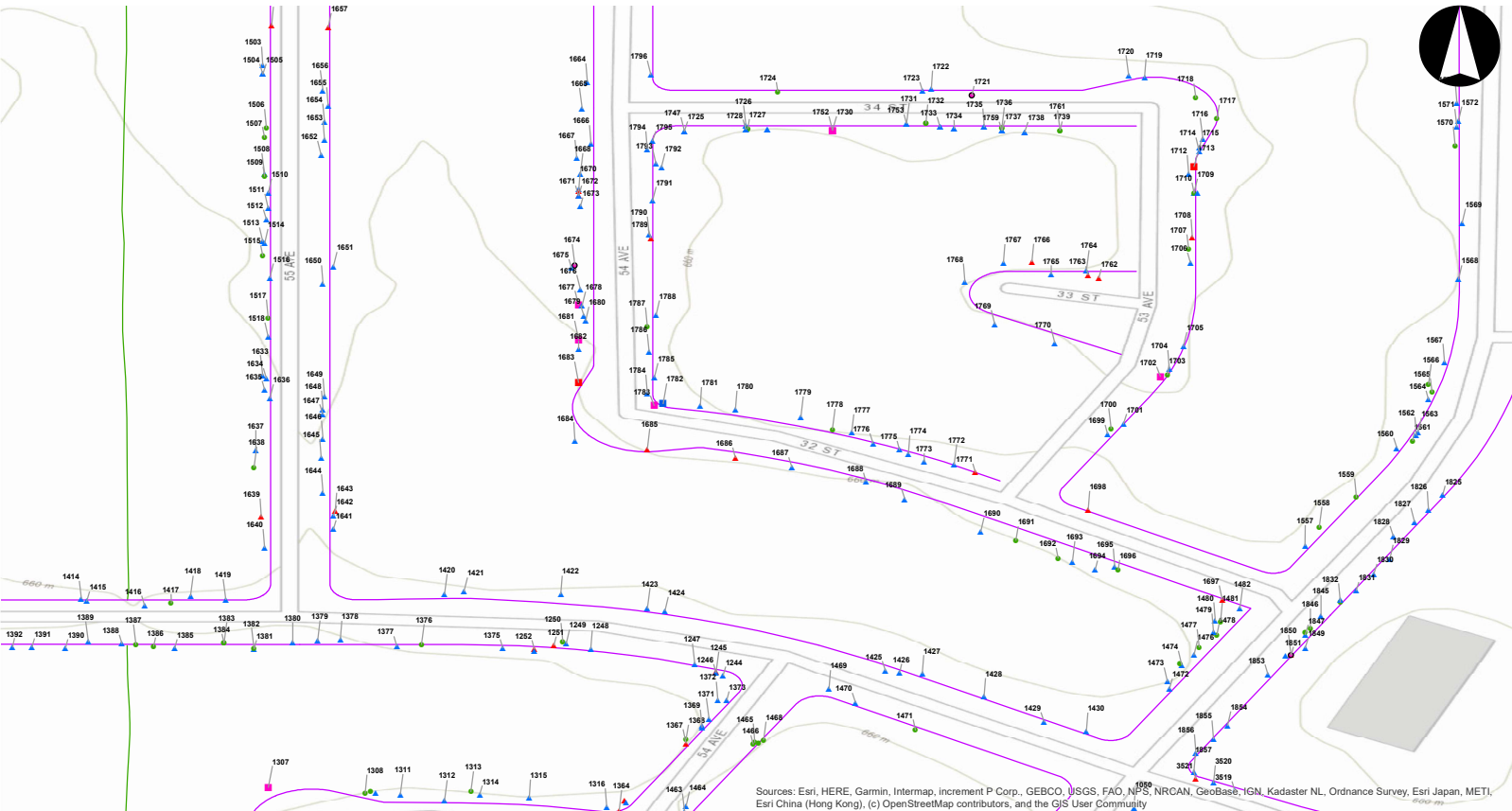
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Distress	<ul style="list-style-type: none"> Asphalt Patch Broken Panel Catch Basins Chipped Panel Concrete Patch Cracking Distortion Excessive Grade Faulting Gap Grinding Heave Manhole Obstruction Obstruction Temp Surface Roughness Trip Hazard Utility Box
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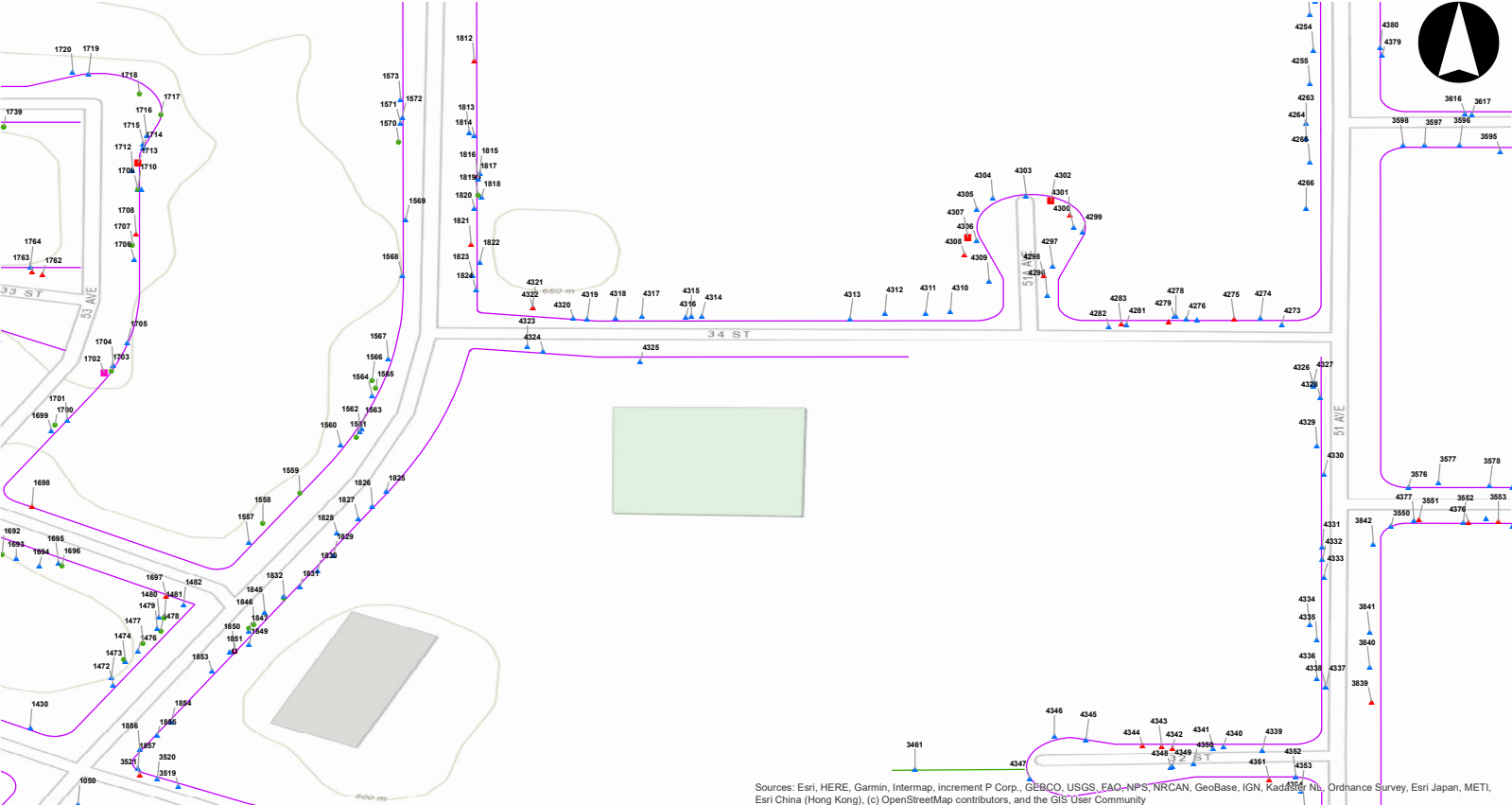
Legend

Distress	Concrete Patch	Grinding	Trip Hazard
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Broken Panel	Distortion	Manhole	
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	Gap	Surface Roughness	

0 40 80 160 Meters

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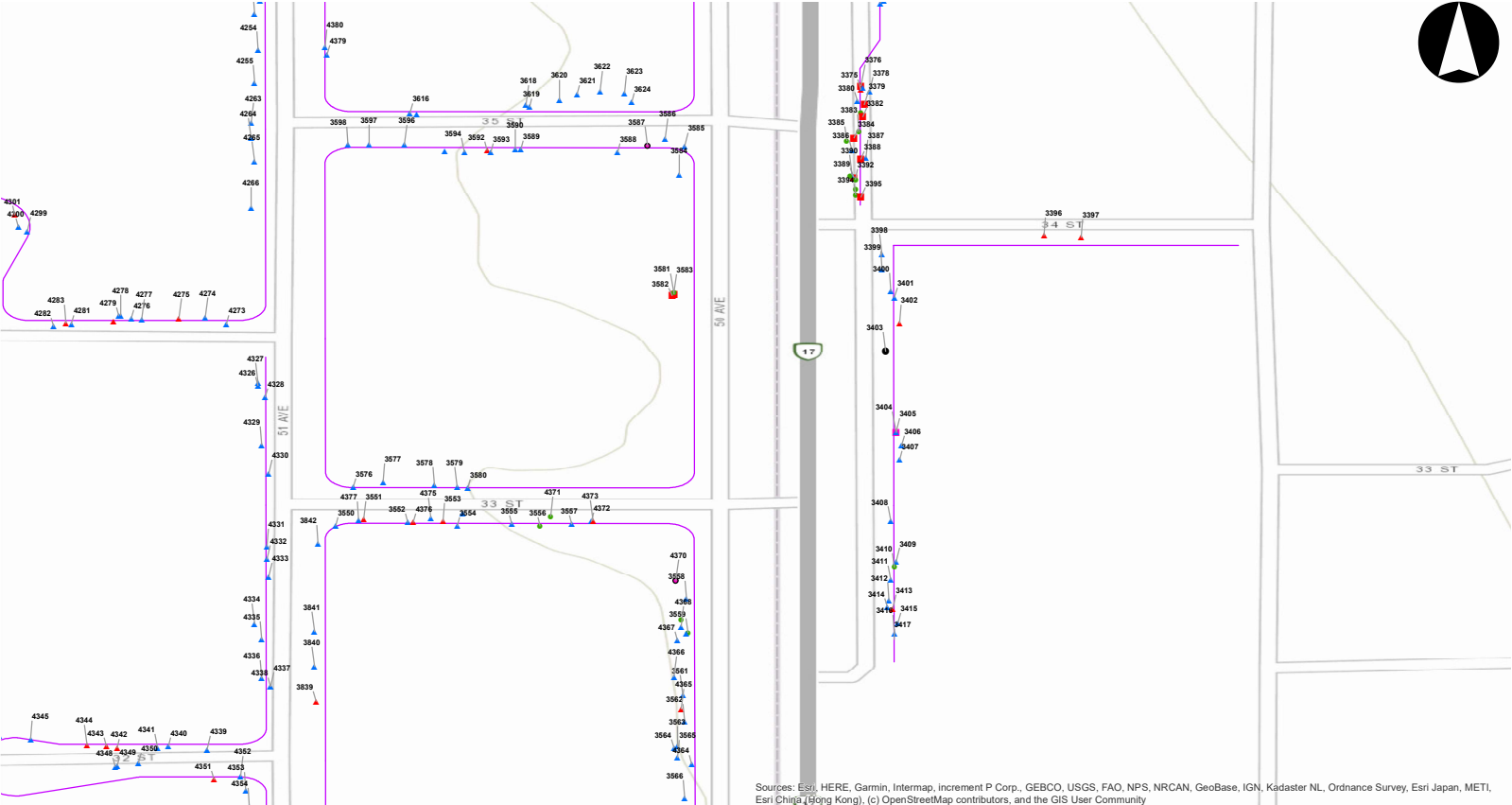
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Distress	Concrete Patch	Grinding	Trip Hazard
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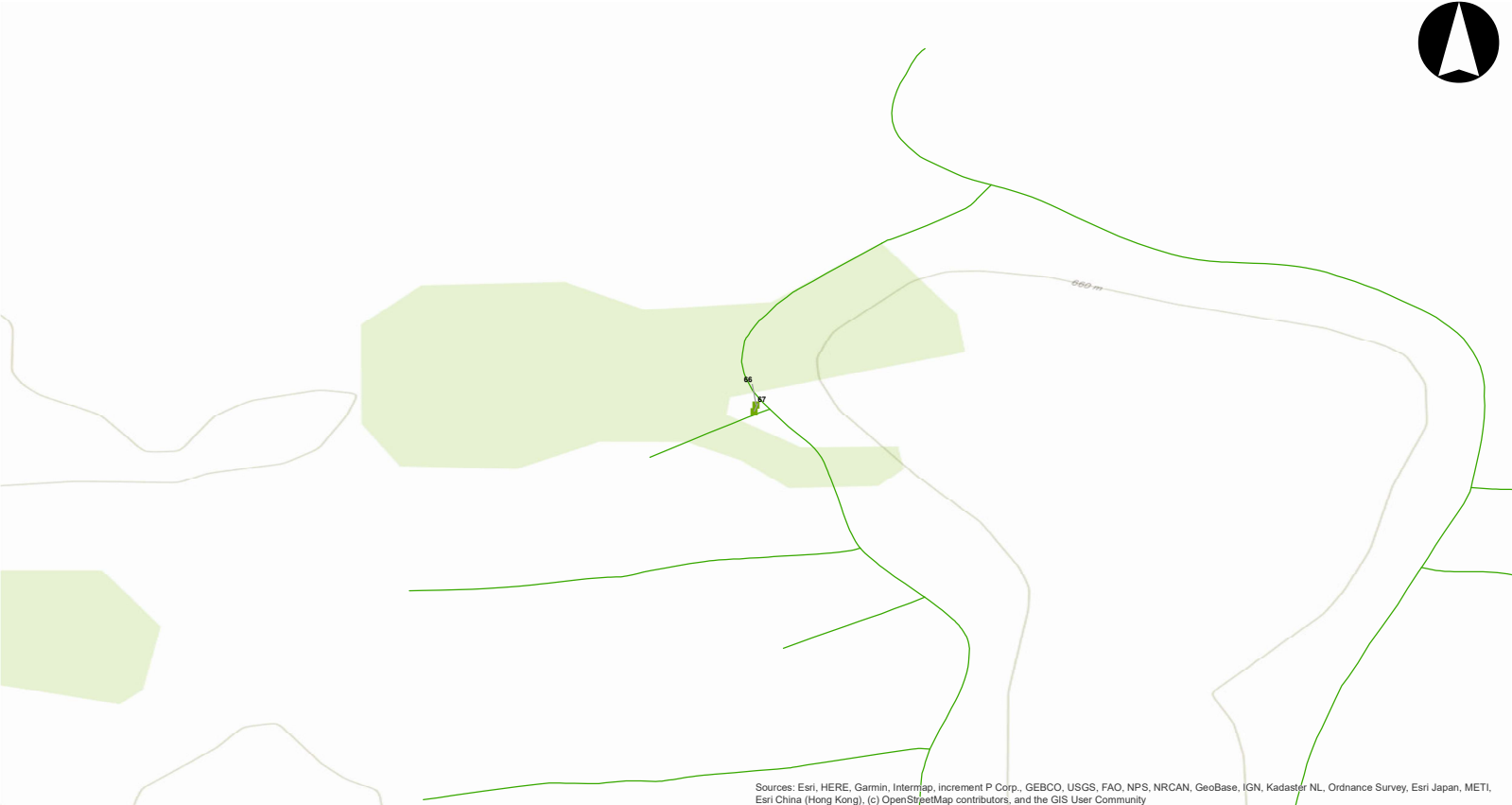
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Legend

Distress	Concrete Patch	Grinding	Trip Hazard
Asphalt Patch	Cracking	Heave	Utility Box
Broken Panel	Distortion	Manhole	
Catch Basins	Excessive Grade	Obstruction	
Chipped Panel	Faulting	Obstruction Temp	
	Gap	Surface Roughness	

0 40 80 160 Meters

Client/Project
City of Lloydminster
2021 Sidewalk Survey
Title
High Distress Locations
MapBook



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

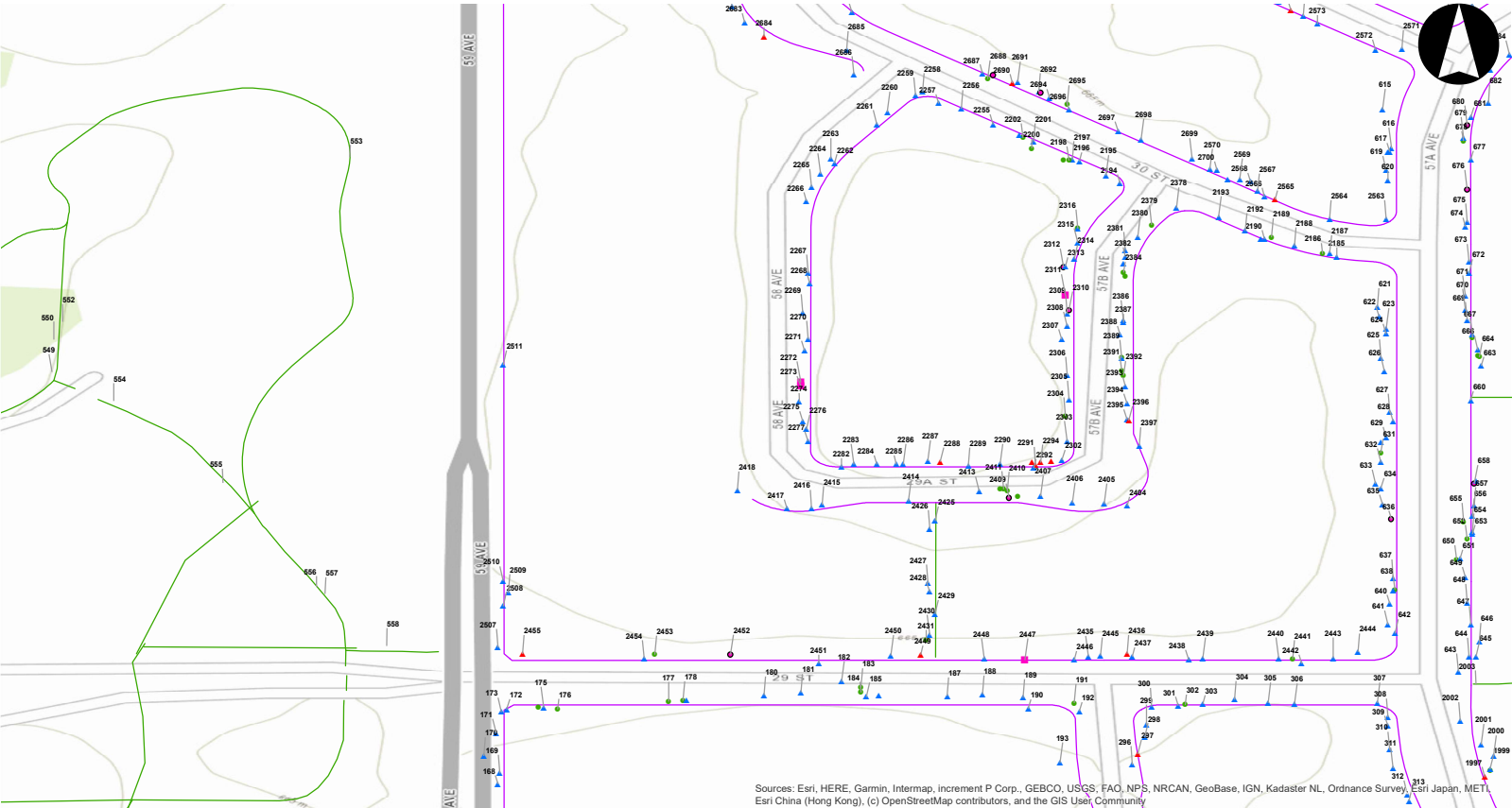
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Client/Project
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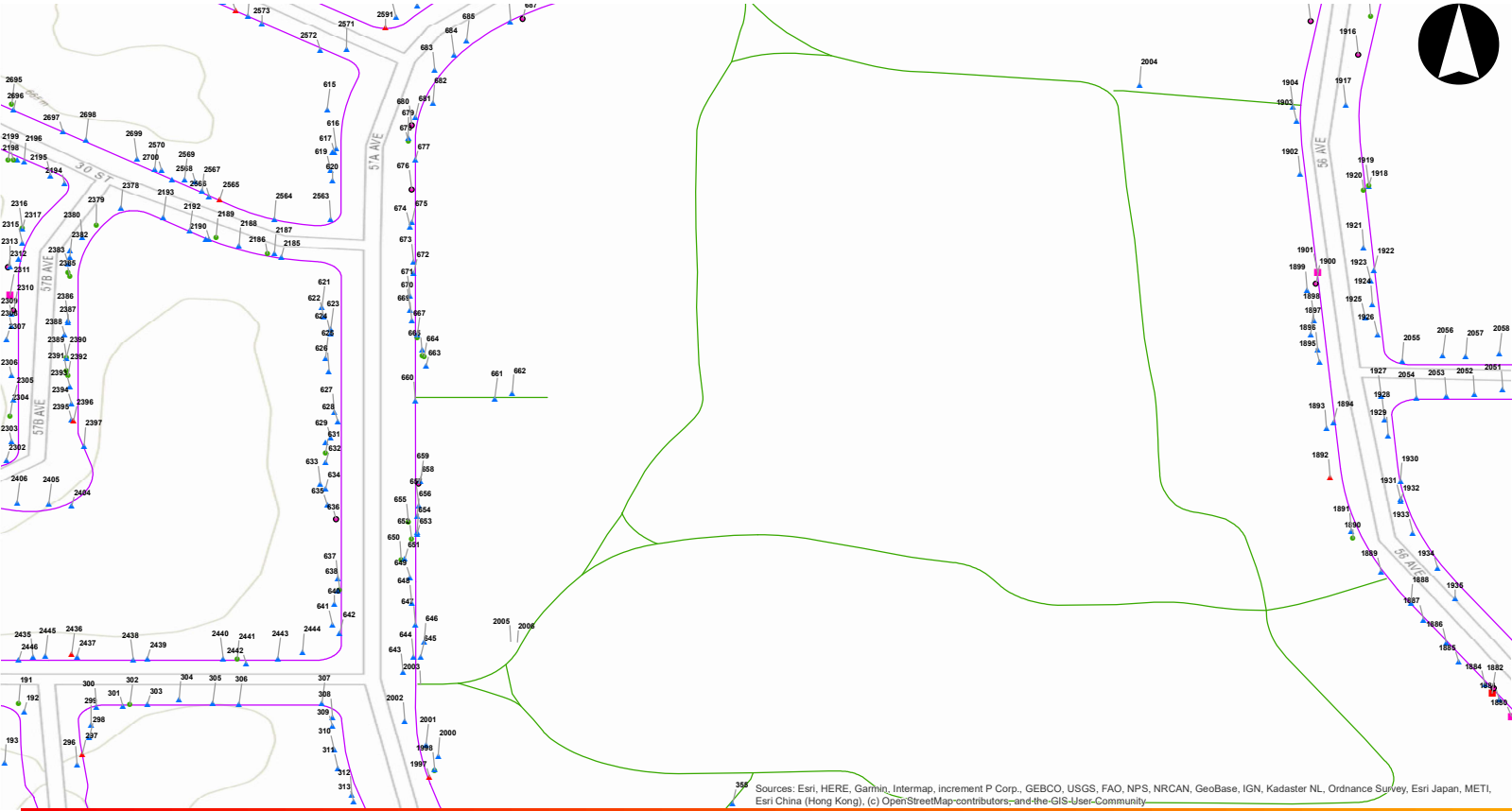
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Legend

● Asphalt Patch	▲ Concrete Patch	■ Grinding	● Trip Hazard
● Broken Panel	▲ Cracking	■ Heave	● Utility Box
● Catch Basins	▲ Distortion	■ Manhole	
● Chipped Panel	▲ Excessive Grade	■ Obstruction	
	▲ Faulting	■ Obstruction Temp	
	▲ Gap	■ Surface Roughness	

0 40 80 160 Meters

Client/Project
City of Lloydminster
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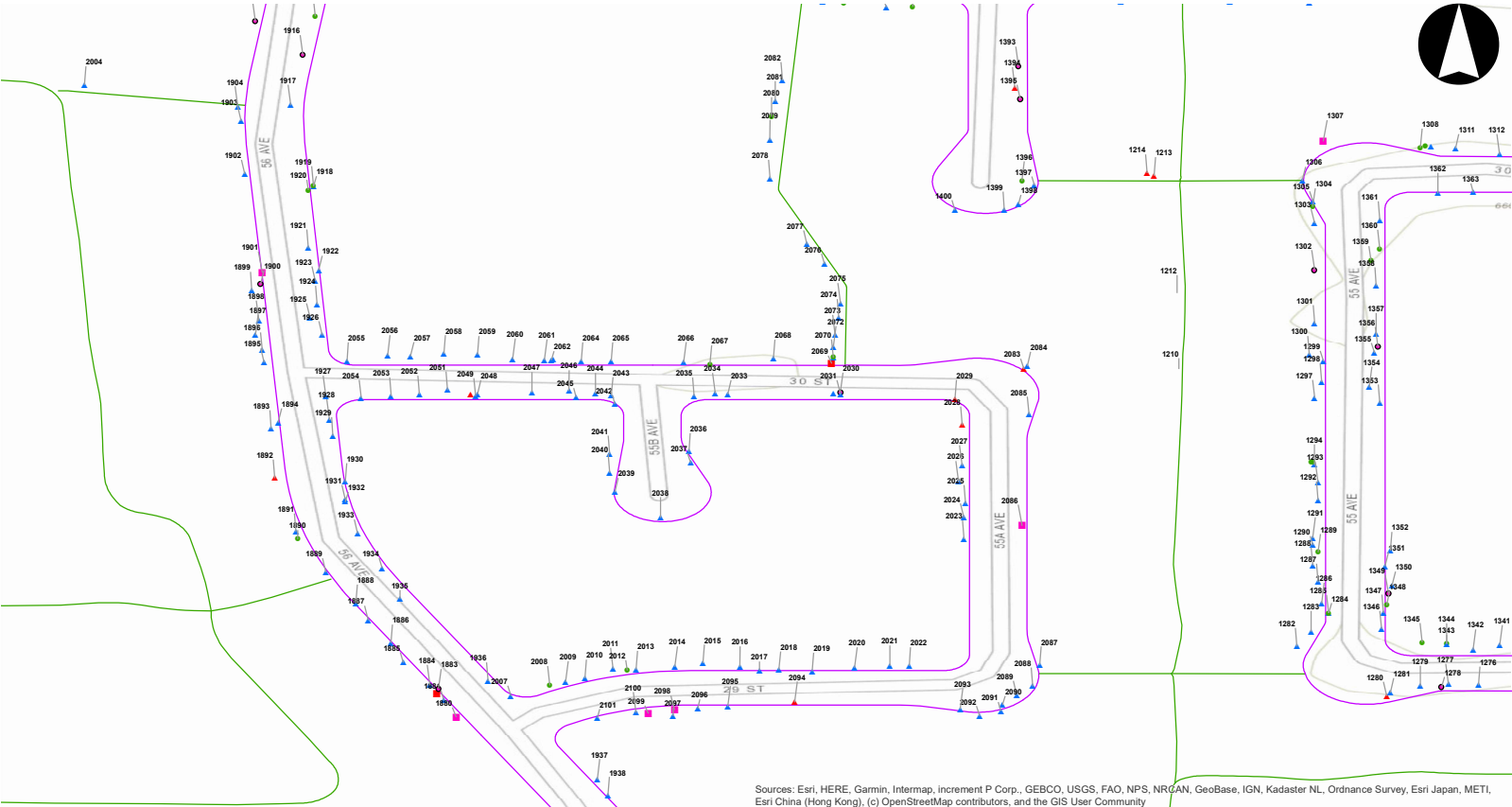


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- Legend**
- | | | | |
|-----------------|-----------------|-------------------|-------------|
| Distress | Concrete Patch | Grinding | Trip Hazard |
| Asphalt Patch | Cracking | Heave | Utility Box |
| Broken Panel | Distortion | Manhole | |
| Catch Basins | Excessive Grade | Obstruction | |
| Chipped Panel | Faulting | Obstruction Temp | |
| | Gap | Surface Roughness | |
- 0 40 80 160 Meters

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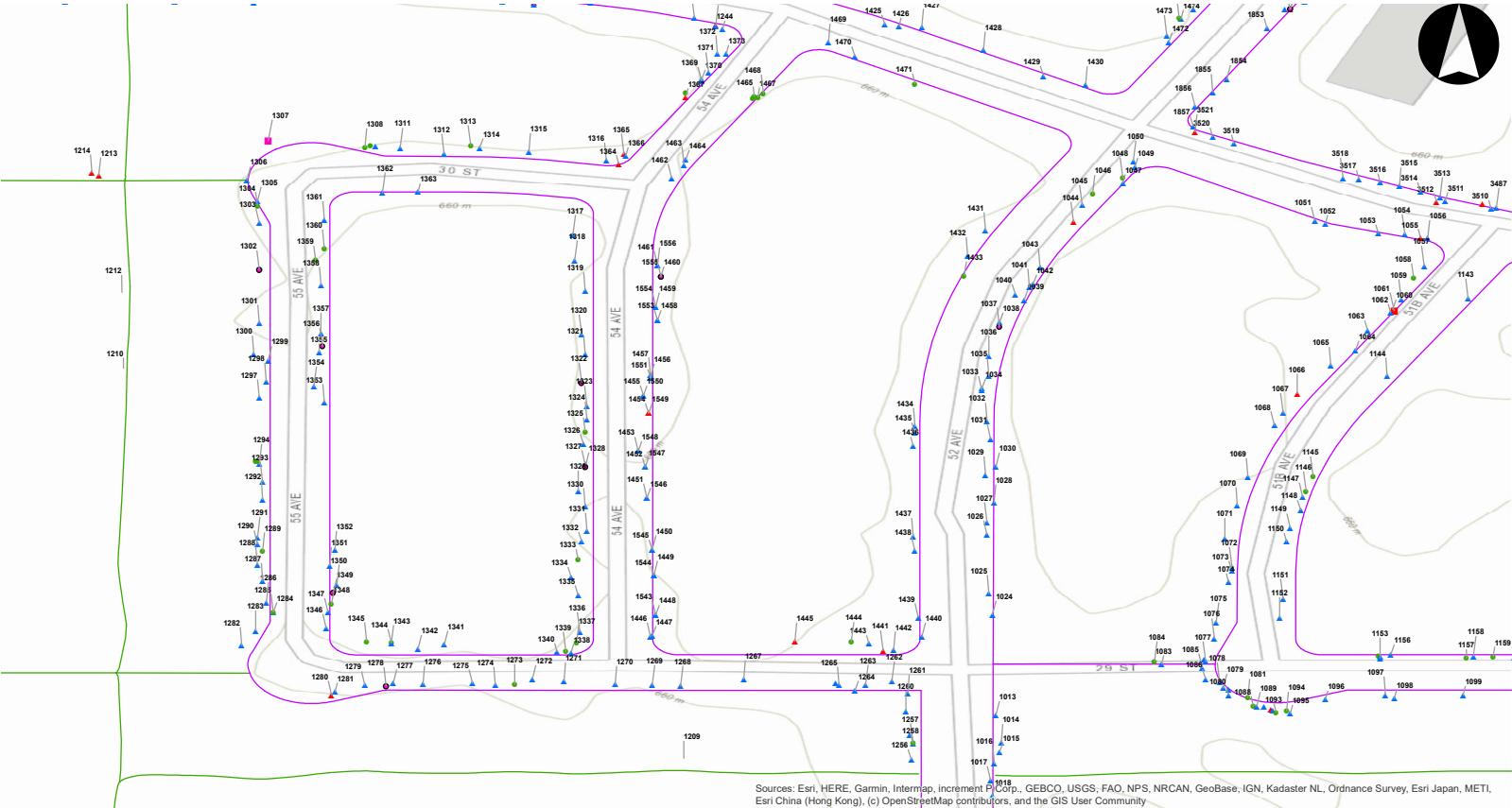
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	Gap	Surface Roughness	

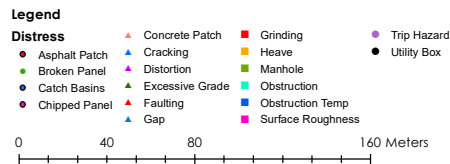
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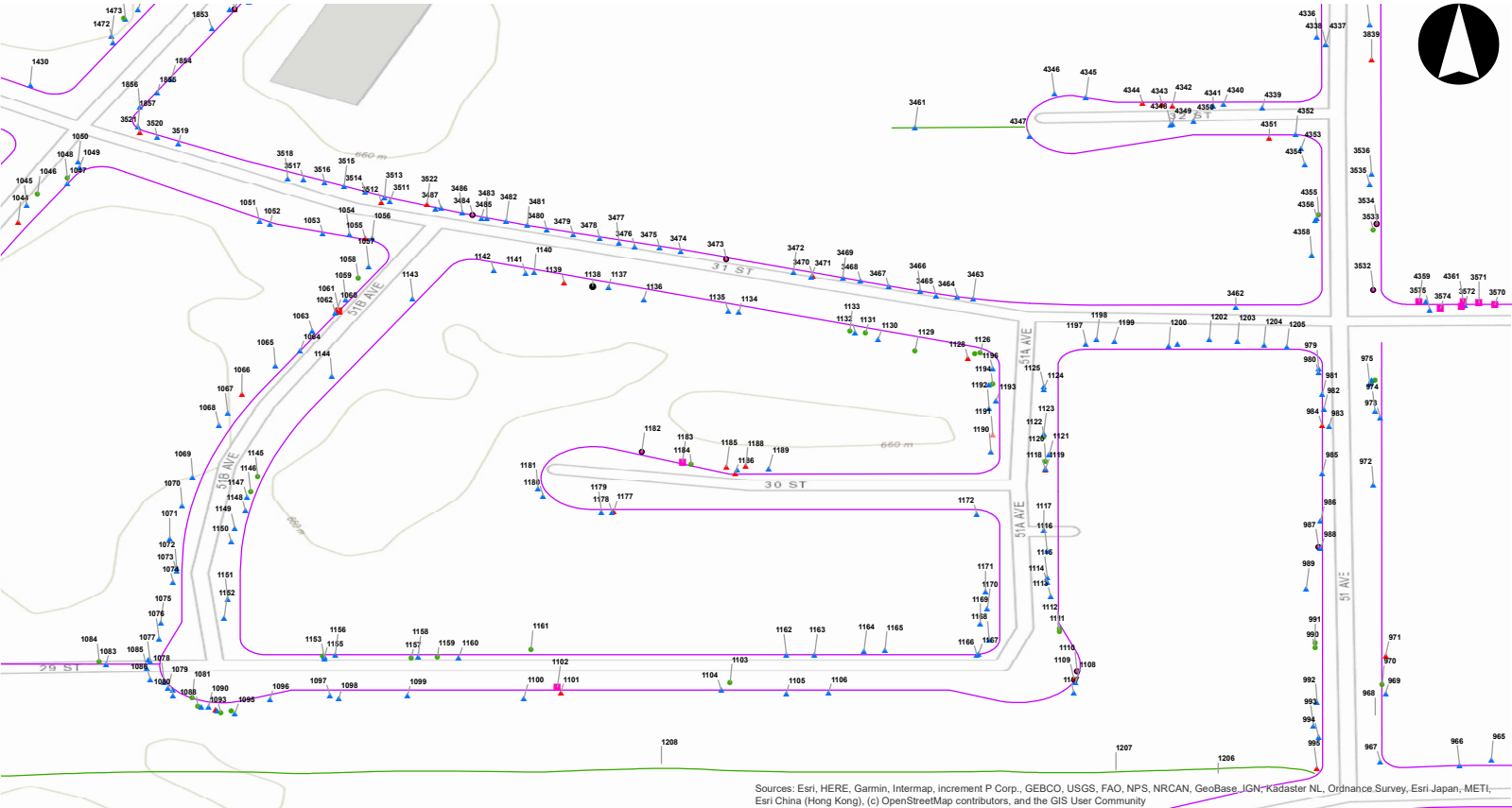


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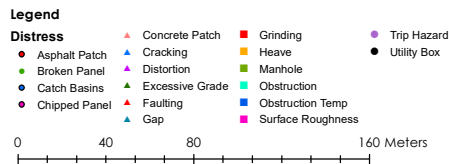
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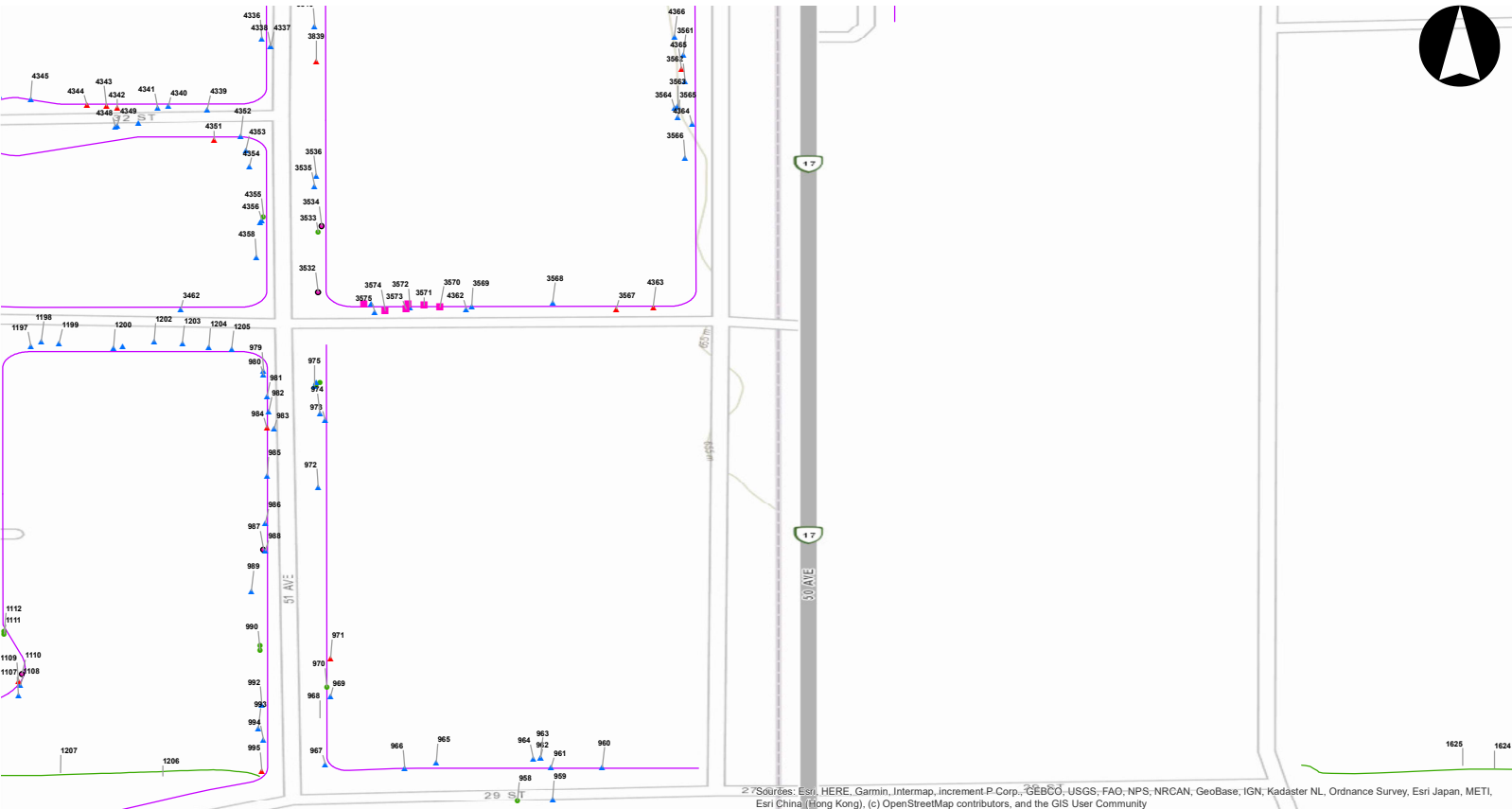
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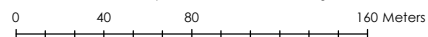


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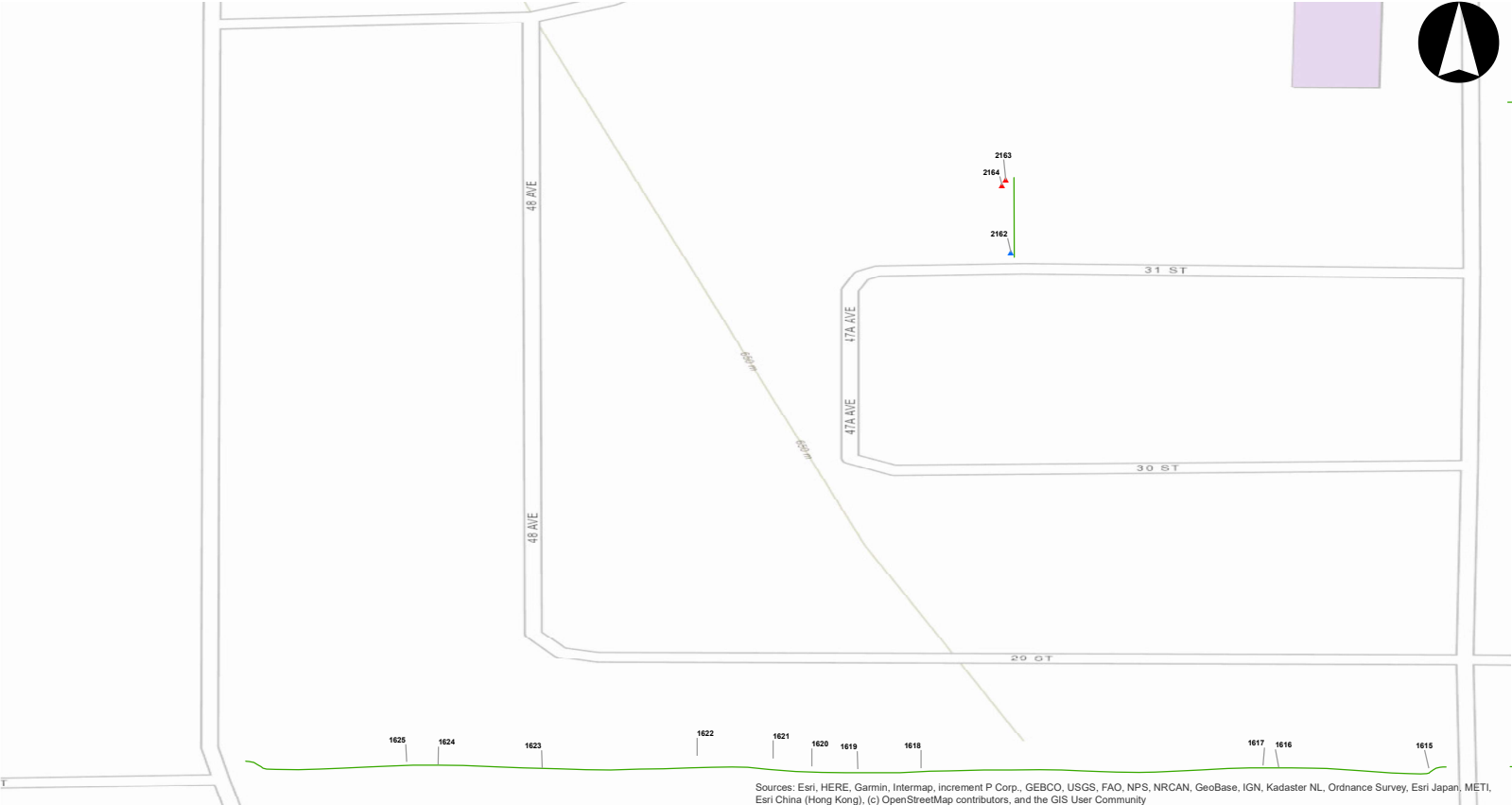


Distress

- Asphalt Patch
- Broken Panel
- Catch Basins
- Chipped Panel
- Concrete Patch
- Cracking
- Distortion
- Excessive Grade
- Faulting
- Gap
- Grinding
- Heave
- Manhole
- Obstruction
- Obstruction Temp
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- Trip Hazard
- Utility Box



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0 40 80 160 Meters

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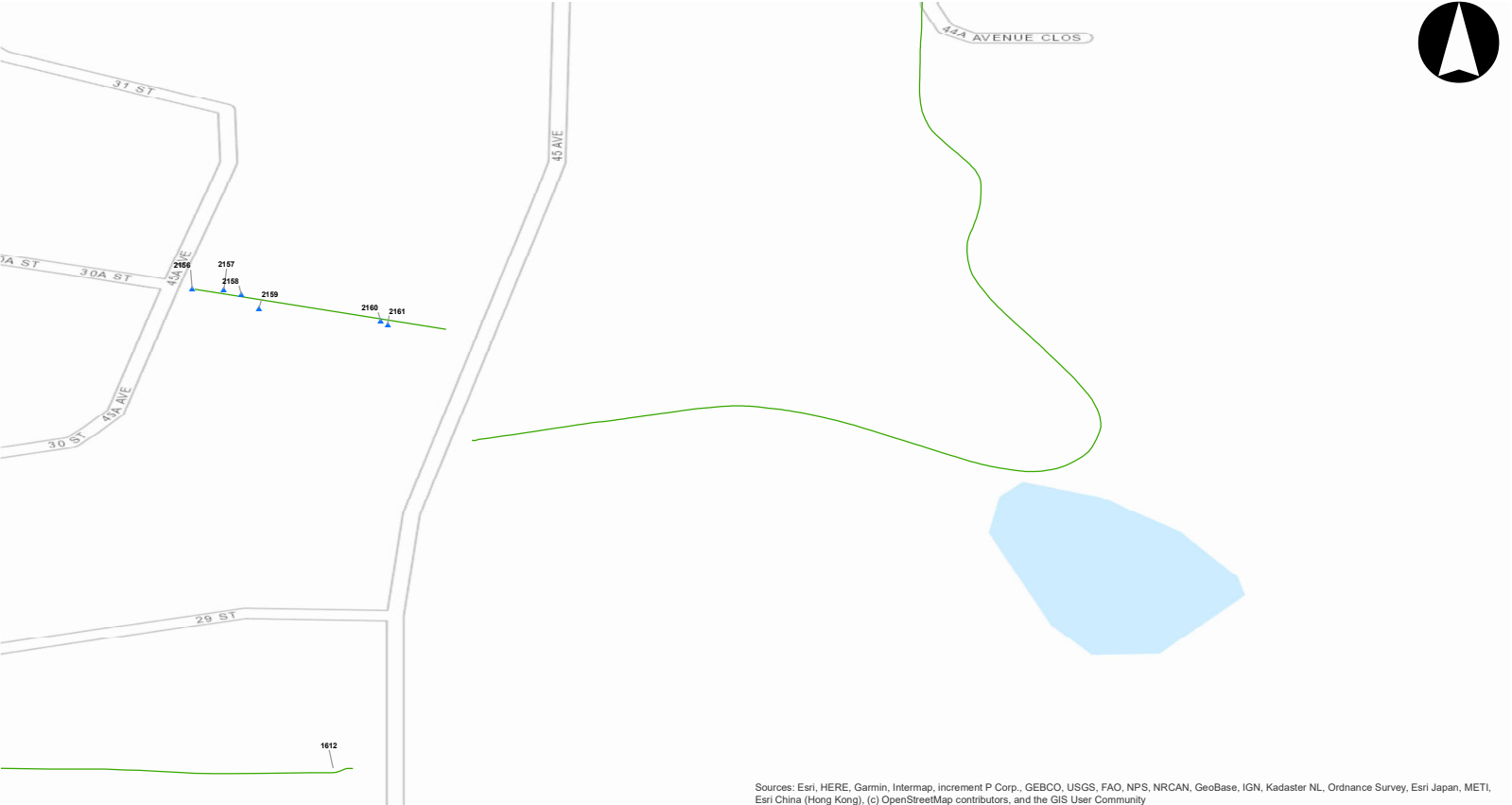
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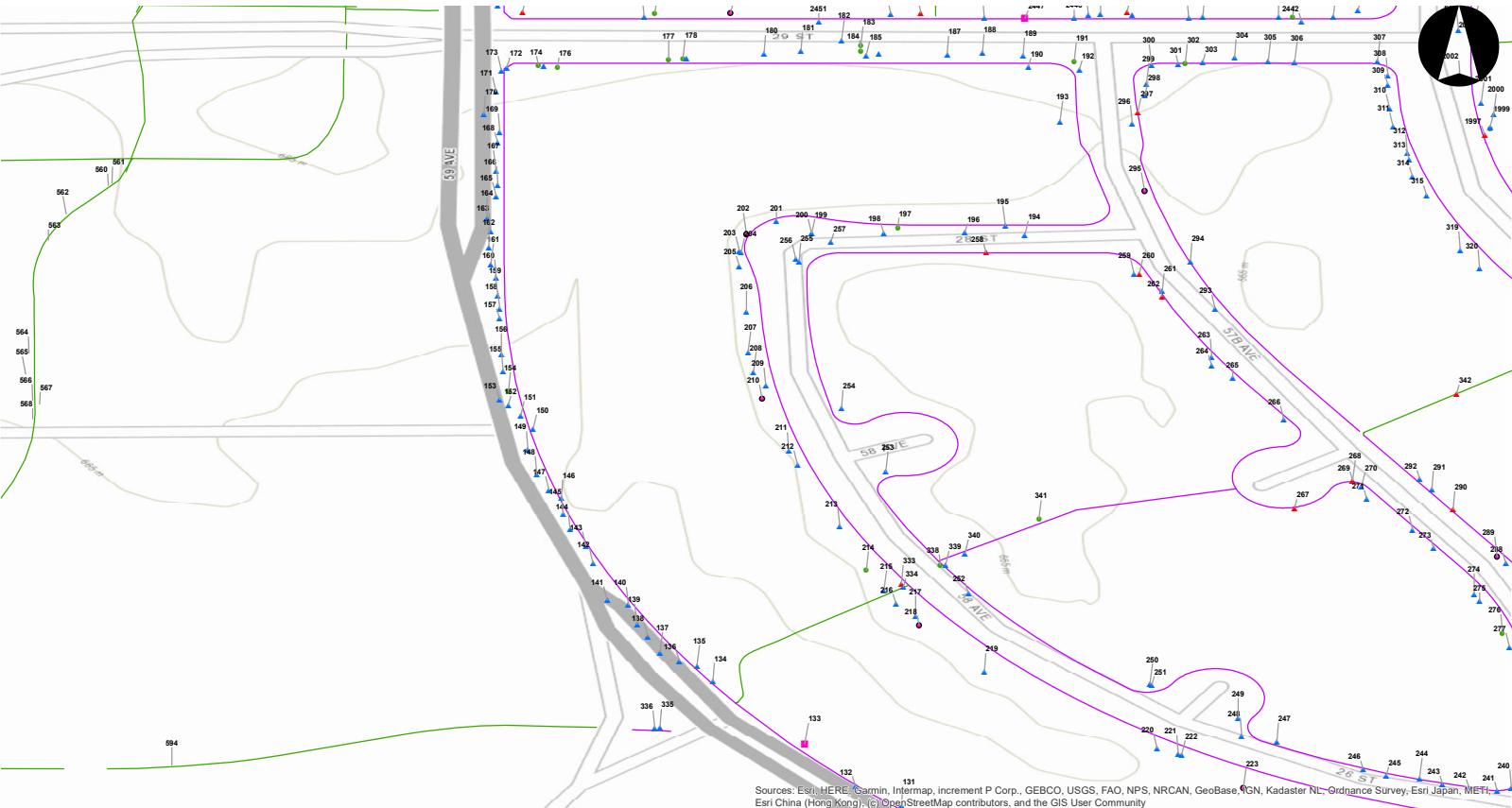
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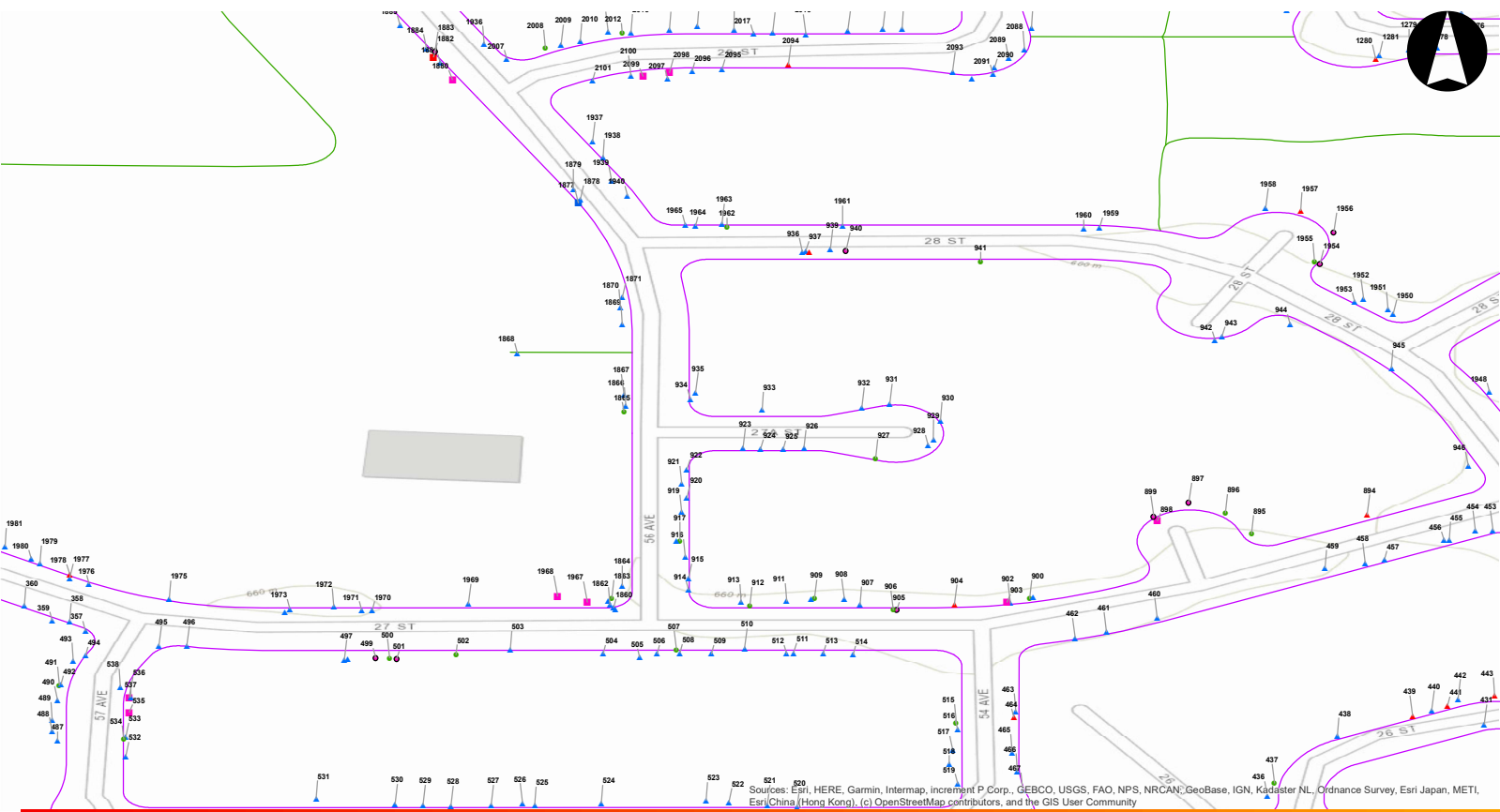
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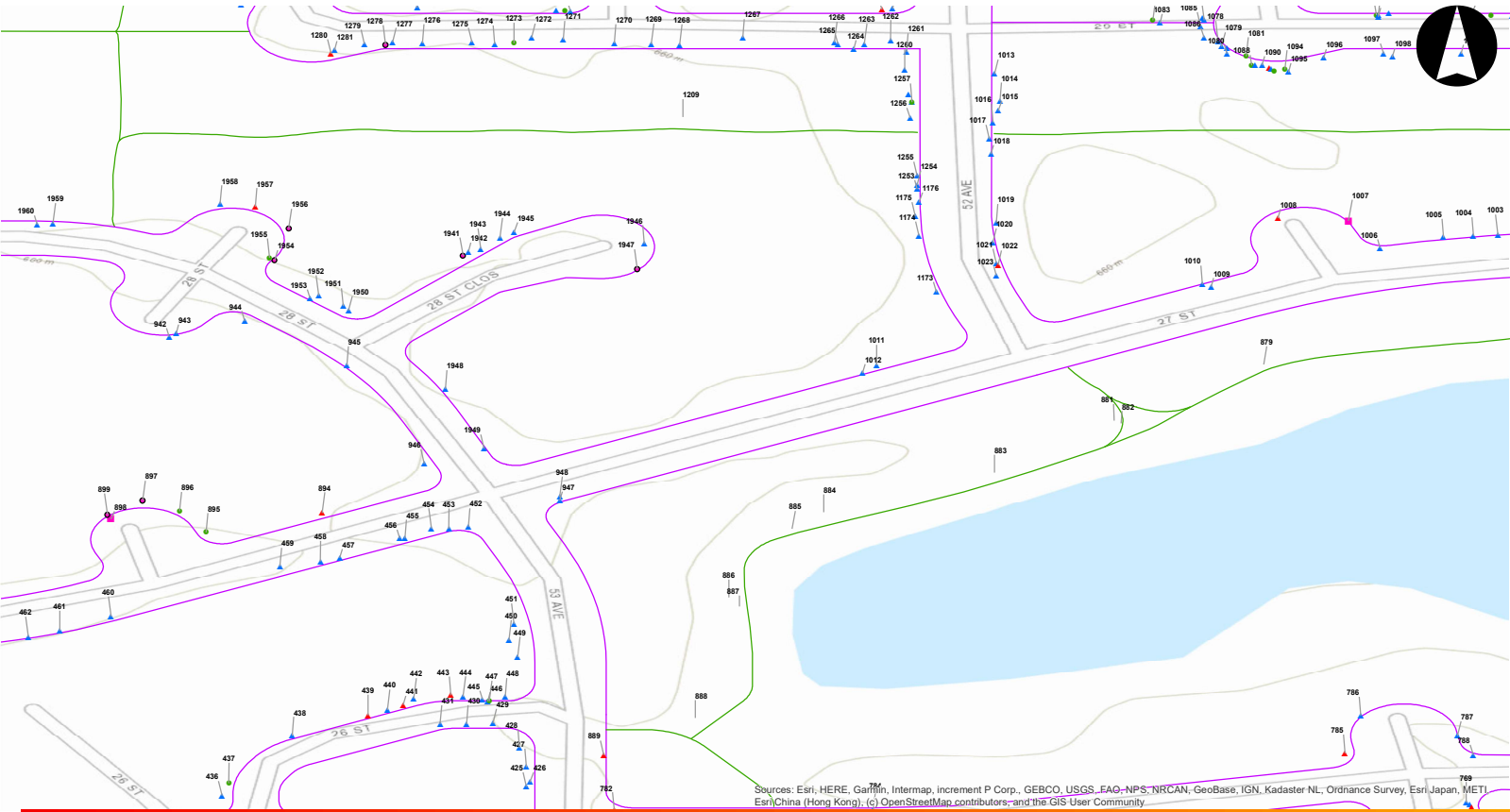
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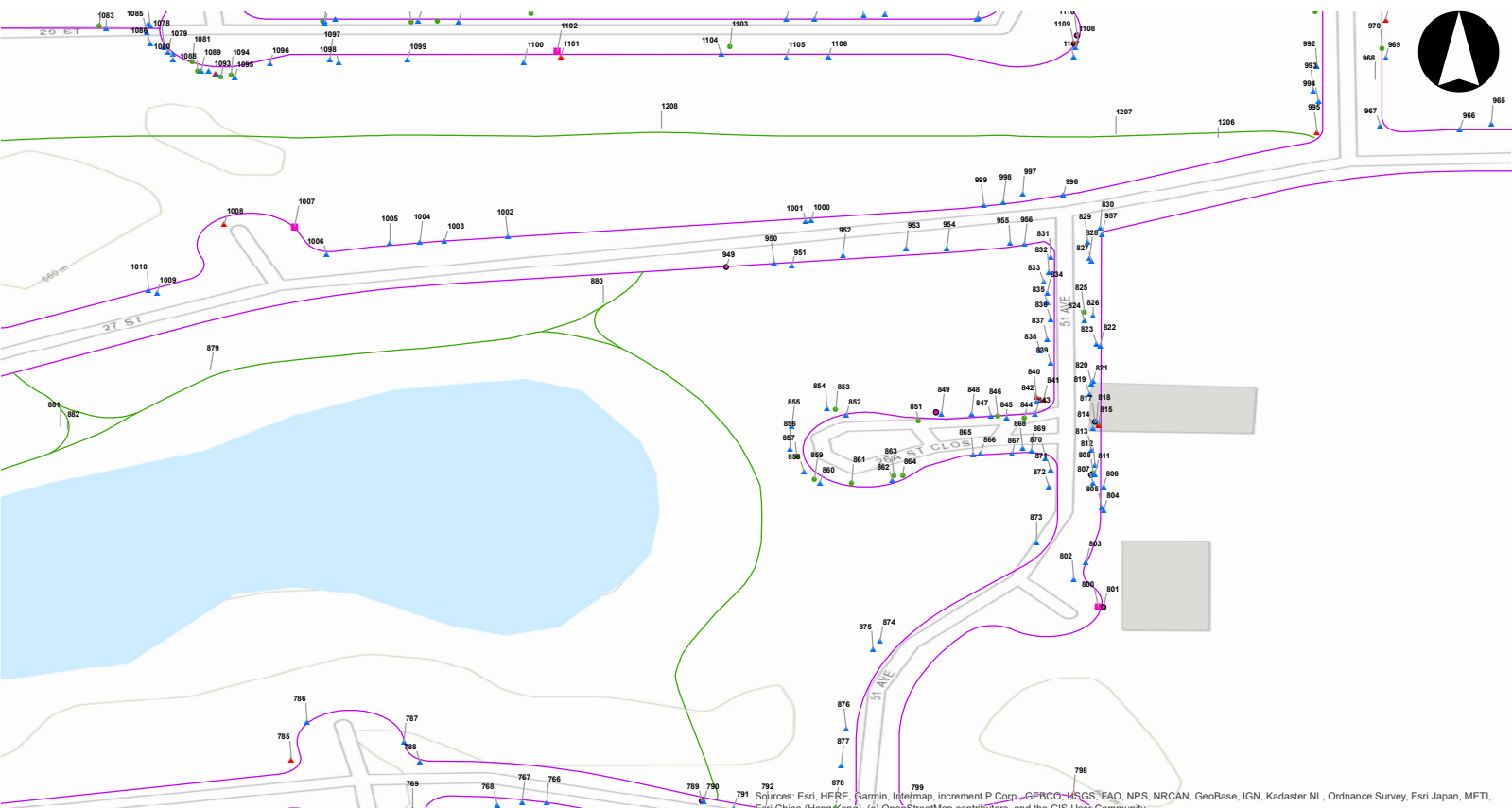
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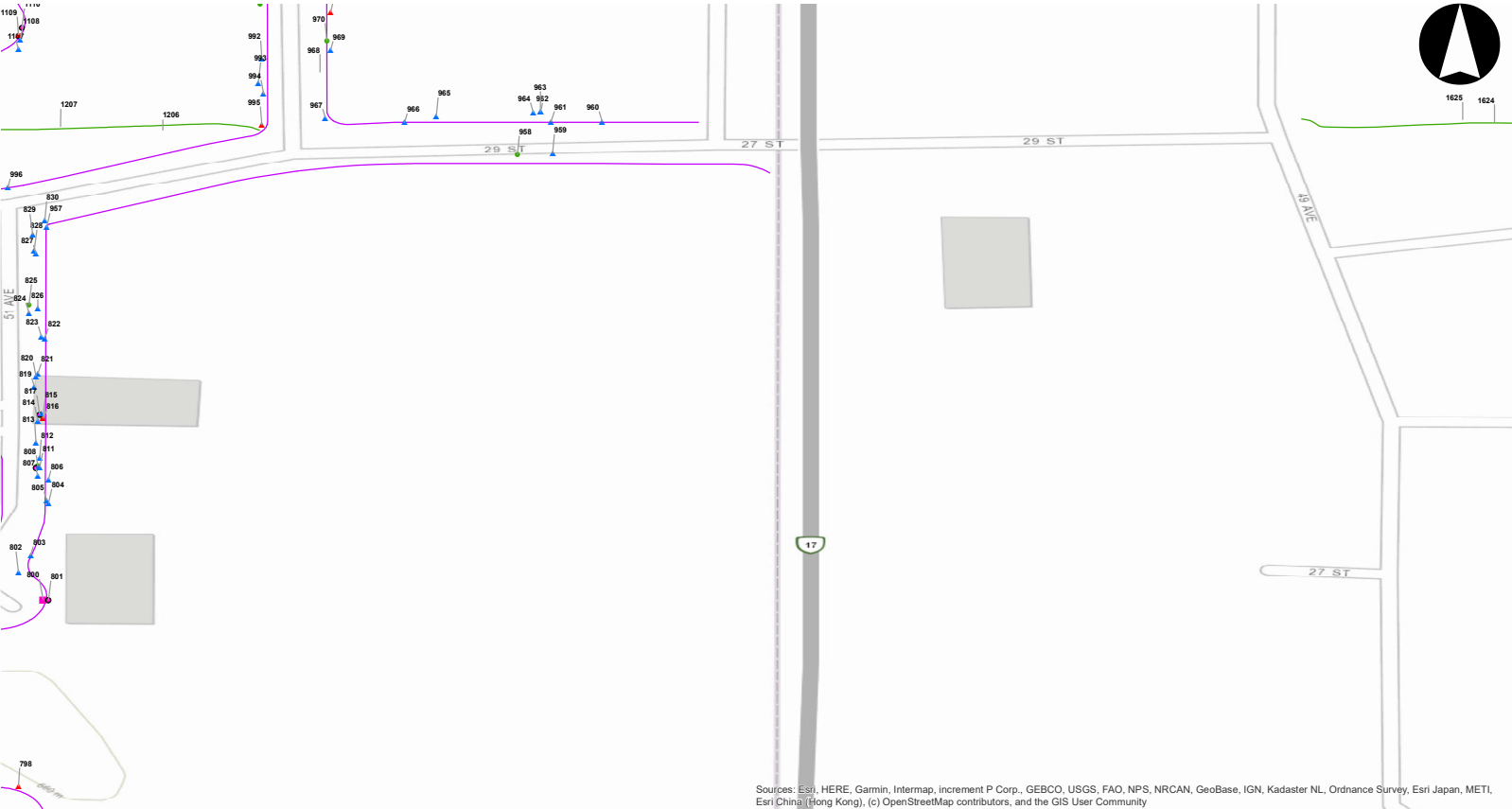
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Legend

● Asphalt Patch	▲ Concrete Patch	■ Grinding	● Trip Hazard
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● Chipped Panel	▲ Excessive Grade	■ Obstruction	
	▲ Faulting	■ Obstruction Temp	
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Legend

Distress	<ul style="list-style-type: none"> Asphalt Patch Broken Panel Catch Basins Chipped Panel Concrete Patch Cracking Distortion Excessive Grade Faulting Gap Grinding Heave Manhole Obstruction Obstruction Temp Surface Roughness Trip Hazard Utility Box
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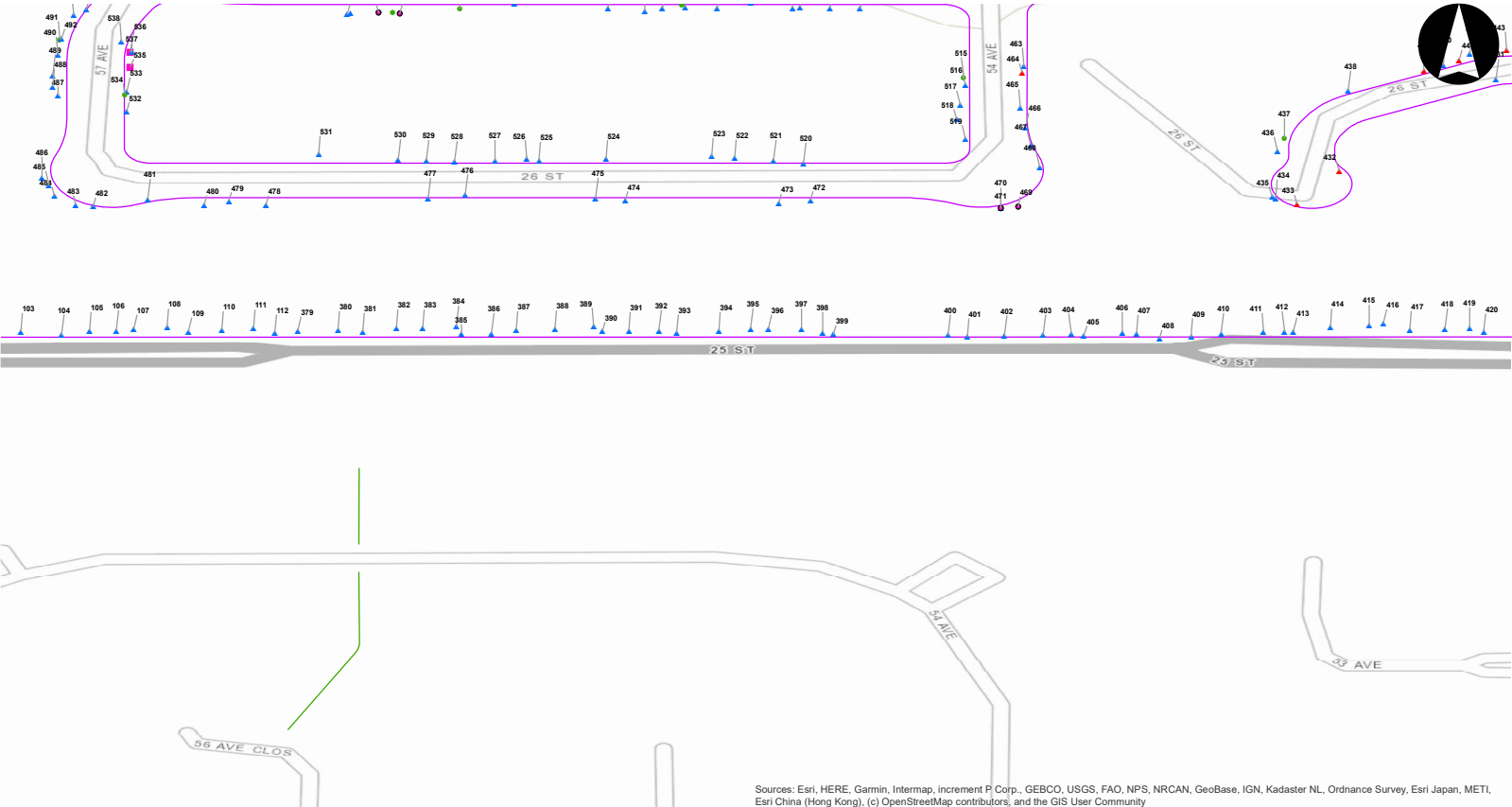
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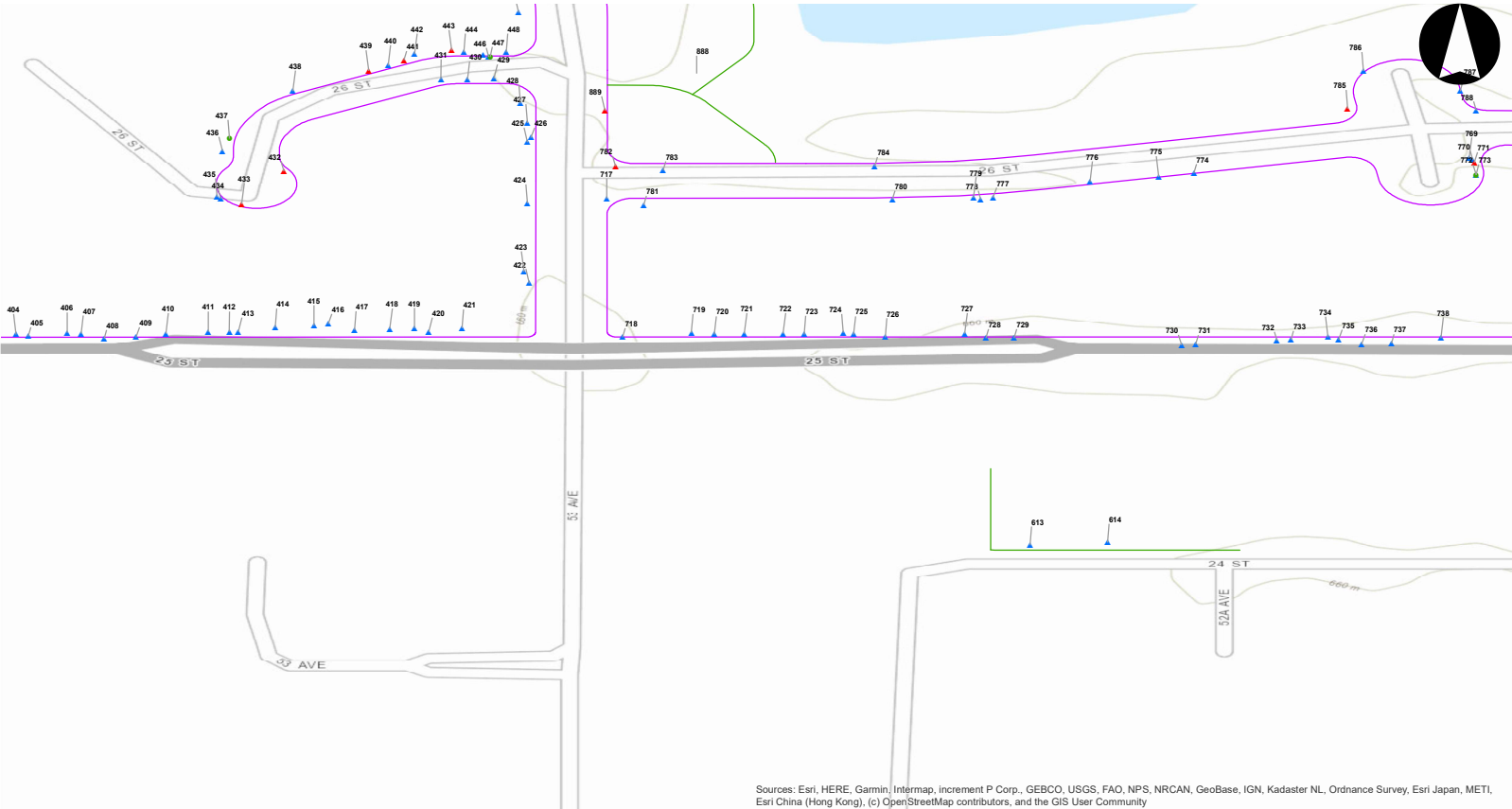
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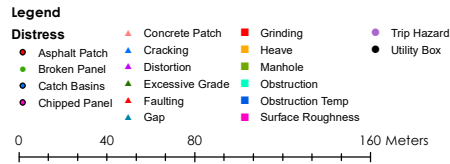
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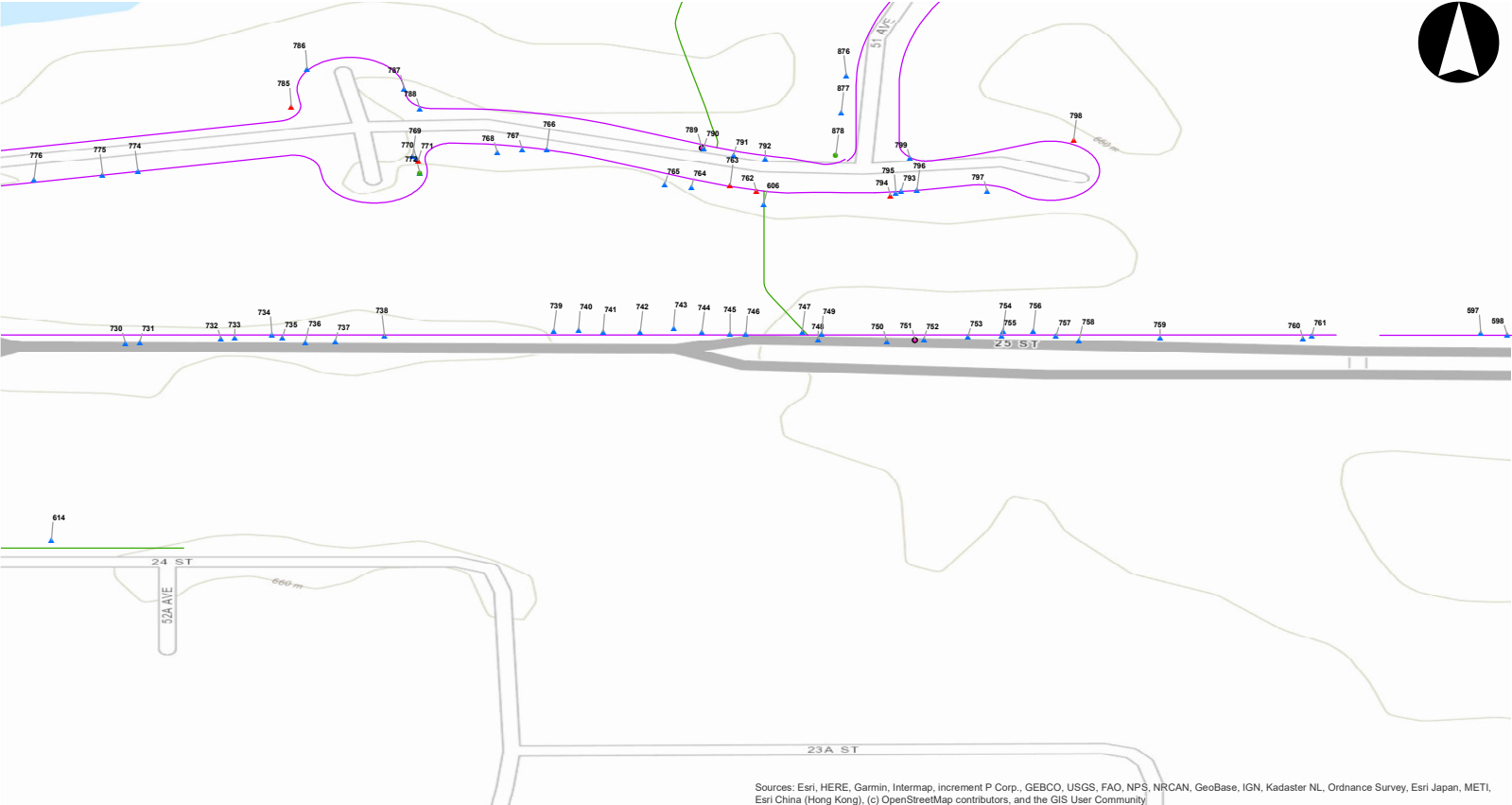


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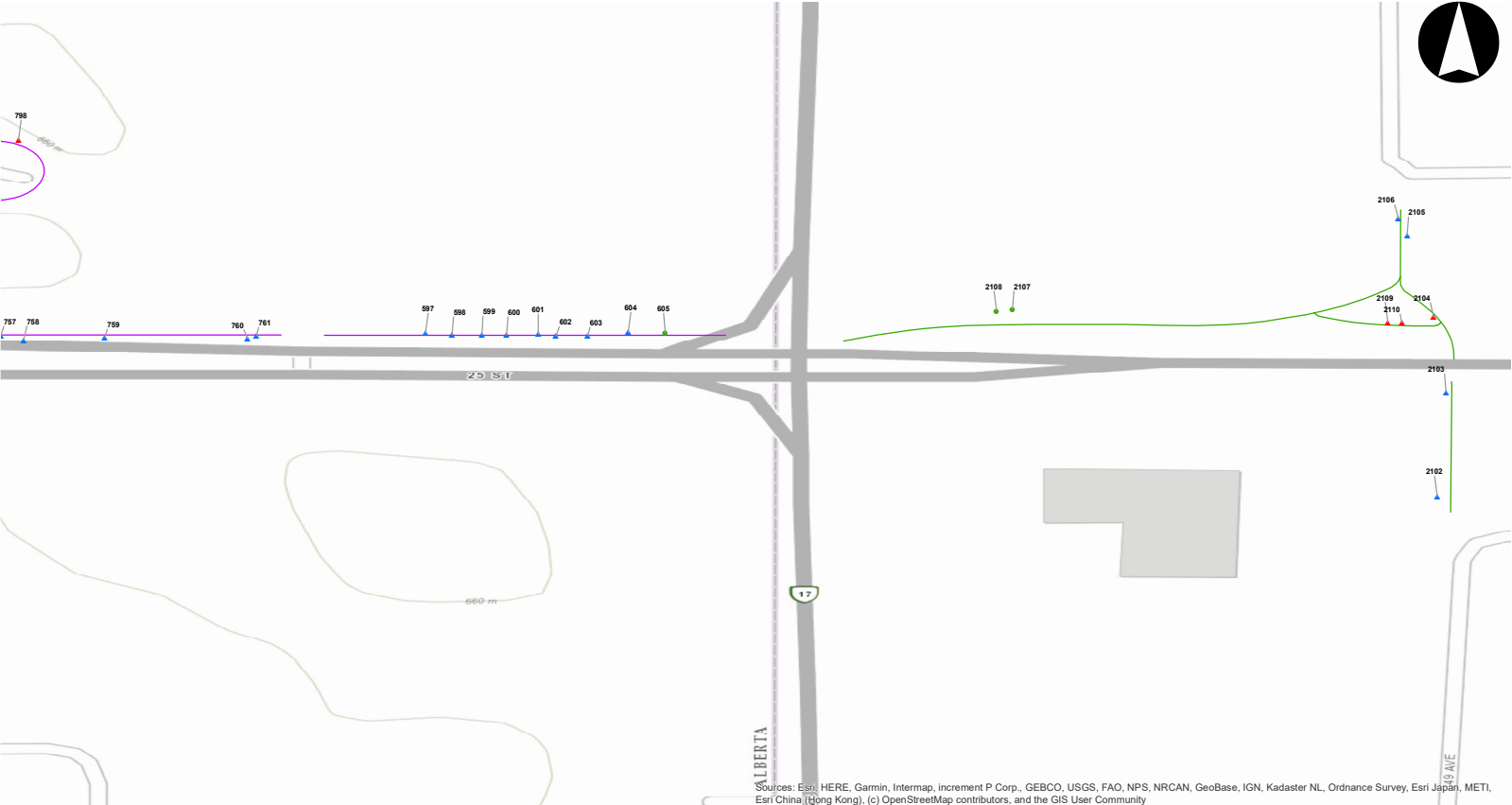
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Legend

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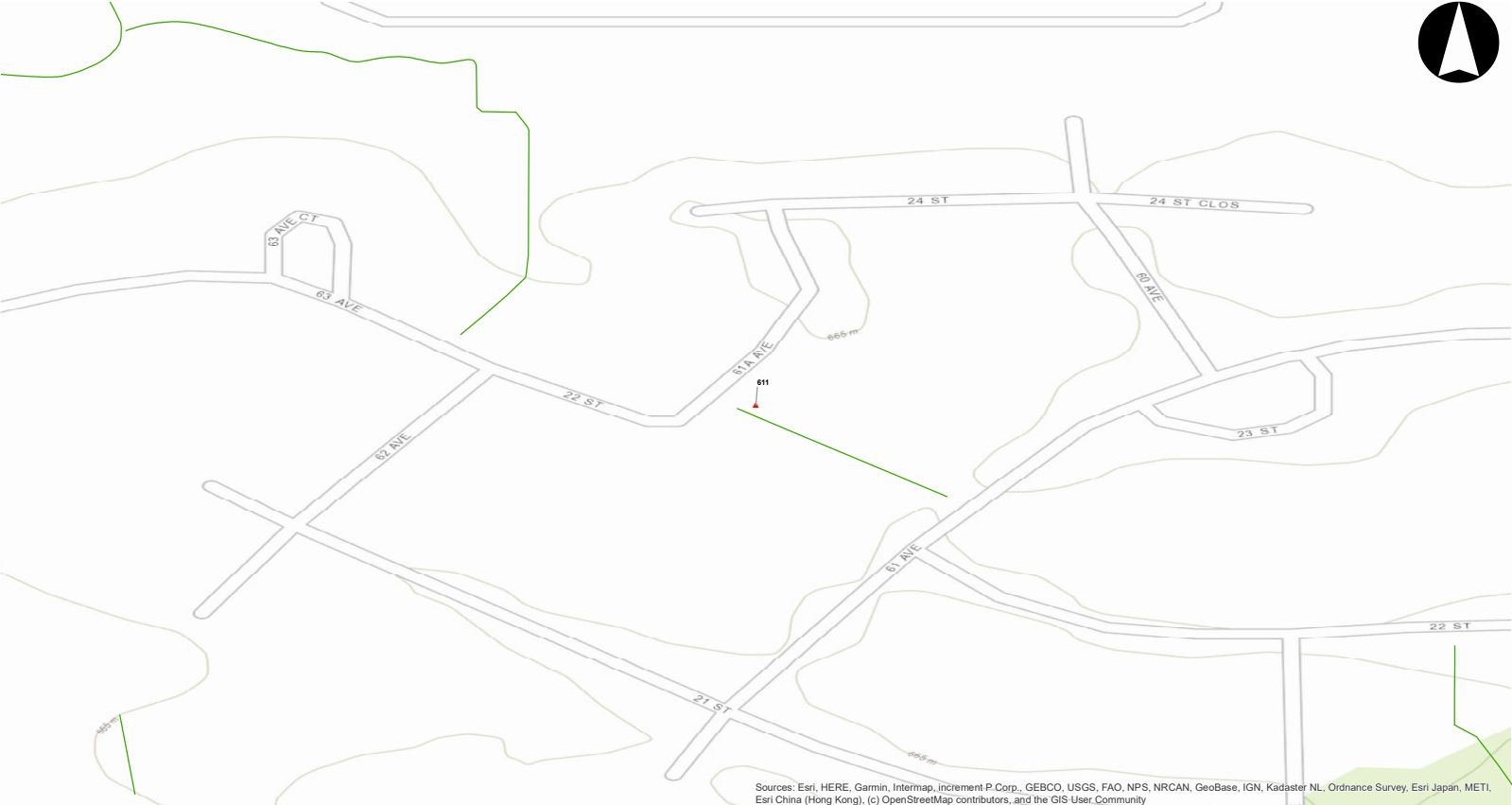
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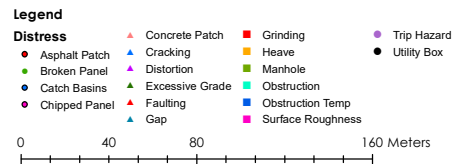
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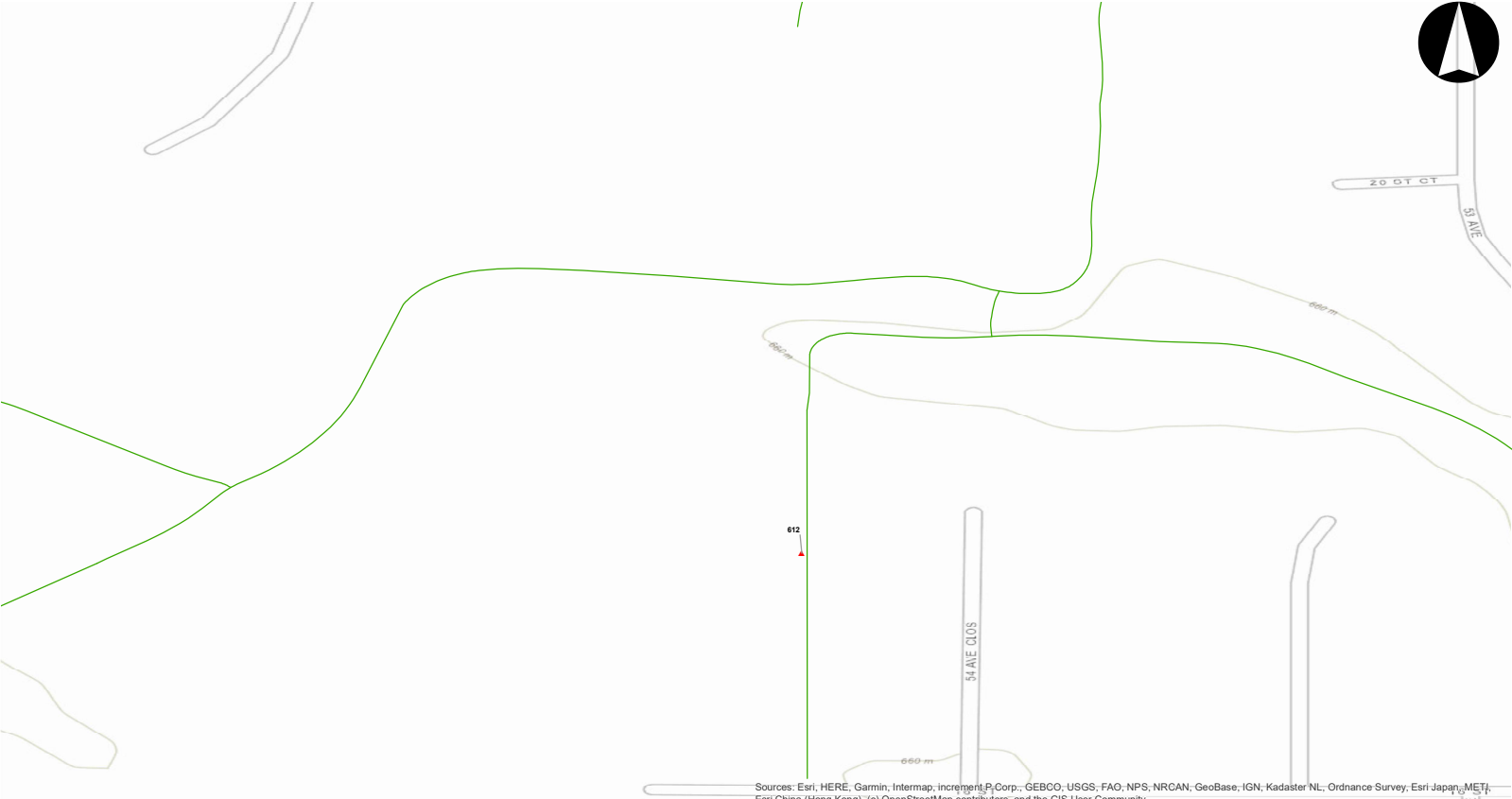
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Sources: Esri; HERE; Garmin; Intermap; increment P Corp.; GEBCO; USGS; FAO; NPS; NRCAN; GeoBase; IGN; Kadaster NL; Ordnance Survey; Esri Japan; METI; Esri China (Hong Kong); (c) OpenStreetMap contributors; and the GIS User Community

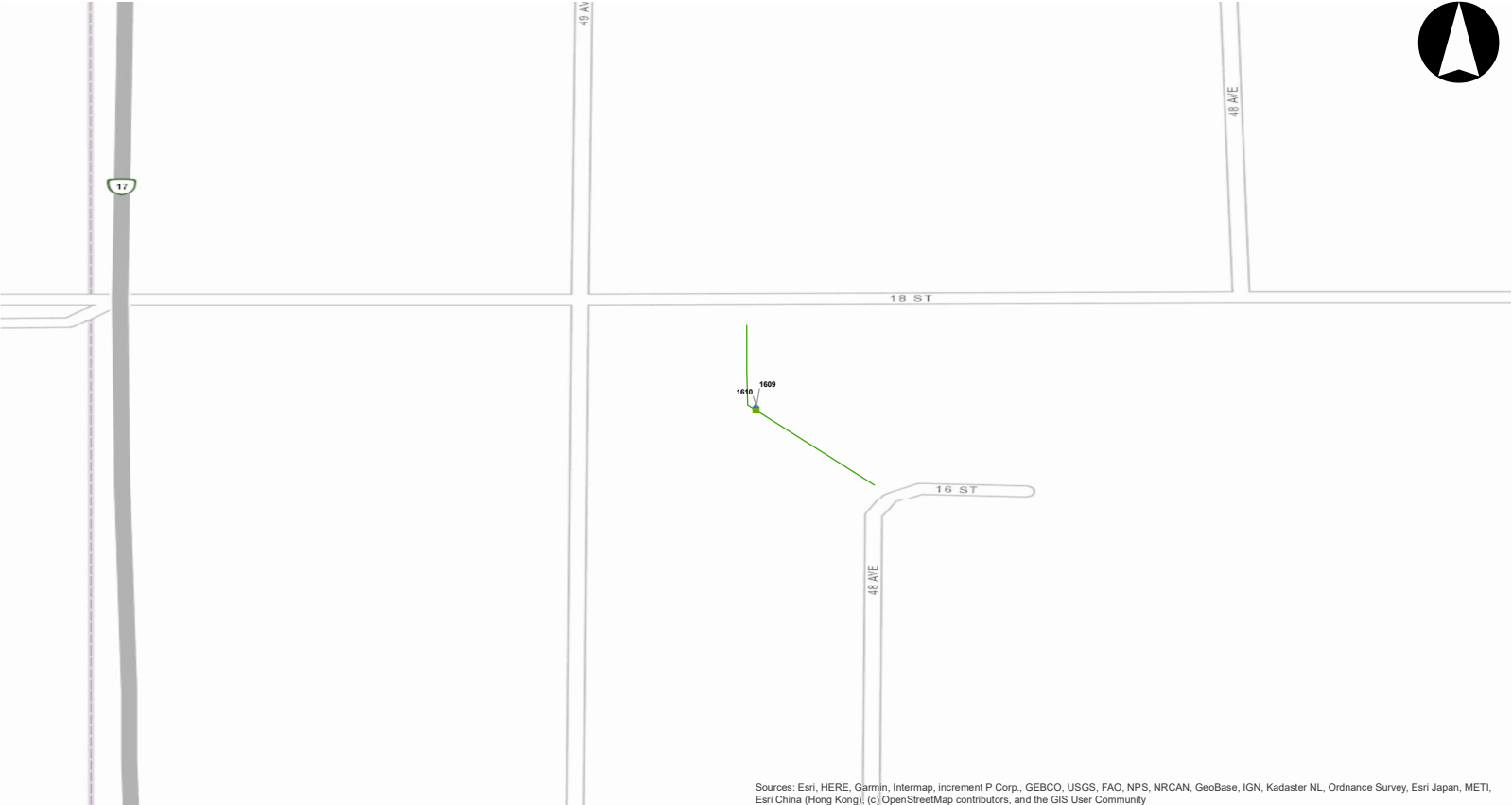
Stantec
200 - 325 25th Street S.E.
Calgary, AB, Canada
T2A 7H8
Tel. 403-716-8000
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Legend

Distress	Concrete Patch	Grinding	Trip Hazard
Asphalt Patch	Cracking	Heave	Utility Box
Broken Panel	Distortion	Manhole	
Catch Basins	Excessive Grade	Obstruction	
Chipped Panel	Faulting	Obstruction Temp	
	Gap	Surface Roughness	

0 40 80 160 Meters

Client/Project
City of Lloydminster
2021 Sidewalk Survey
Title
High Distress Locations
MapBook



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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0 40 80 160 Meters

Client/Project
City of Lloydminster
2021 Sidewalk Survey
Title
High Distress Locations
MapBook

Sheet 67 of 68



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



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	Gap	Surface Roughness	

0 40 80 160 Meters

Client/Project
City of Lloydminster
2021 Sidewalk Survey
Title
High Distress Locations
MapBook

Sheet 68 of 68

APPENDIX C

Condition Assessment Distress Types and Severity



Appendix C CONDITION ASSESSMENT DISTRESS TYPES AND SEVERITY

Faulting

Faulting is the difference in elevation across a joint. Some of the common causes of faulting are:

- Settlement due to weak subgrades.
- Pumping or loss of material from underneath the slab.
- Tree roots lifting slabs

Severity levels are defined by the difference in elevation across the joint. If there are varying elevations across a slab, the highest difference in elevation will be considered for rating.

Faulting, Low Severity

Difference in elevation of joint or crack is less than 5mm.



Faulting, Medium Severity

Difference in elevation of joint or crack is between 5 mm and 10 mm.



Appendix C Condition Assessment Distress Types and Severity

Faulting, High Severity

Difference in elevation of joint or crack is 10 mm or above.



Cracking

Cracking consists of longitudinal, transverse, diagonal, and corner cracks. These cracks, which divide the slab into two (2) or three (3) pieces, are typically caused by a combination of:

- Deficient jointing (pattern or construction)
- Thermal gradient curling.
- Repeated freeze thaw cycles.

If there are varying crack widths across the slab, the crack width most representative of the slab will be used to identify the severity.

Cracking, Low Severity

Non-filled cracks less than 5 mm in width, without crack-sealing and no faulting exists within cracks.



Cracking, Medium Severity

One of the following conditions exists:

- Non-filled crack with a width between 5 mm and 10 mm.



Cracking, High Severity

One of the following conditions exists:

- Non-filled crack with a width greater than 10 mm.



Broken Panel

Slabs are divided by cracks into multiple pieces due to overloading and/or inadequate support.

Broken Panel, Low Severity



Broken Panel, Medium Severity

Slab contains two (2) to five (5) cracks.



Broken Panel, High Severity

Slab contains more than five (5) cracks.



Broken/Chipped Panel

A Broken/ Chipped Panel is the breakdown (chipping or fraying) of the slab within 0.6 m of the corner.

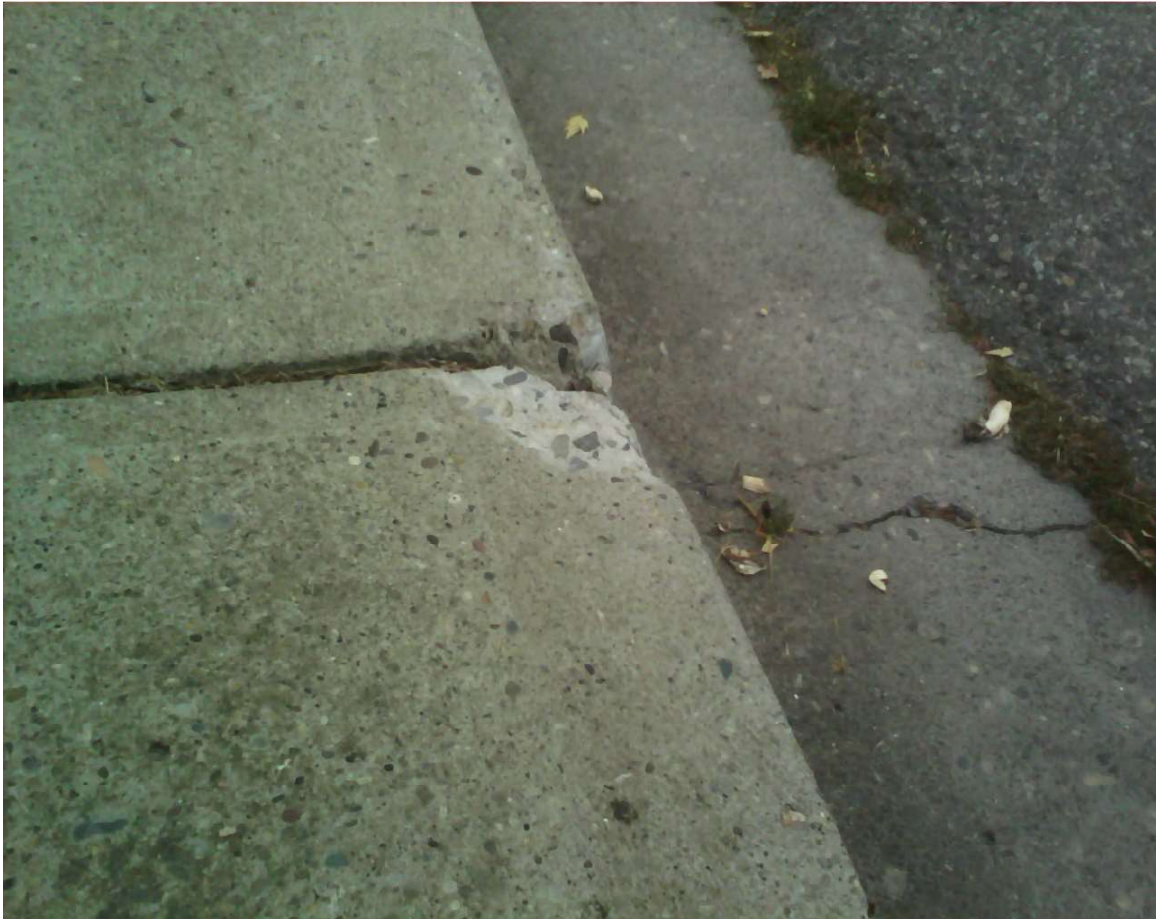
Broken/Chipped Panel, Low Severity

Spalling pieces are tight and cannot easily be removed. Width and length of affected area is less than 100 mm.



Broken/Chipped Panel, Medium Severity

Spalled pieces are loose and some can be removed. Removed pieces are less than 100 mm in width.



Broken/Chipped Panel, High Severity

Most spalled pieces are missing and have a width of 100 mm or greater.



Surface Roughness

Surface roughness is the loss of surface material and is typically caused by freeze thaw attack on insufficiently air entrained mixtures, and salt attack caused by deicing salts. Surface roughness can also be caused by poor construction practices, including inadequate curing or over finishing of the surface. Surface roughness is characterized by flaking or peeling of the finished concrete surface.

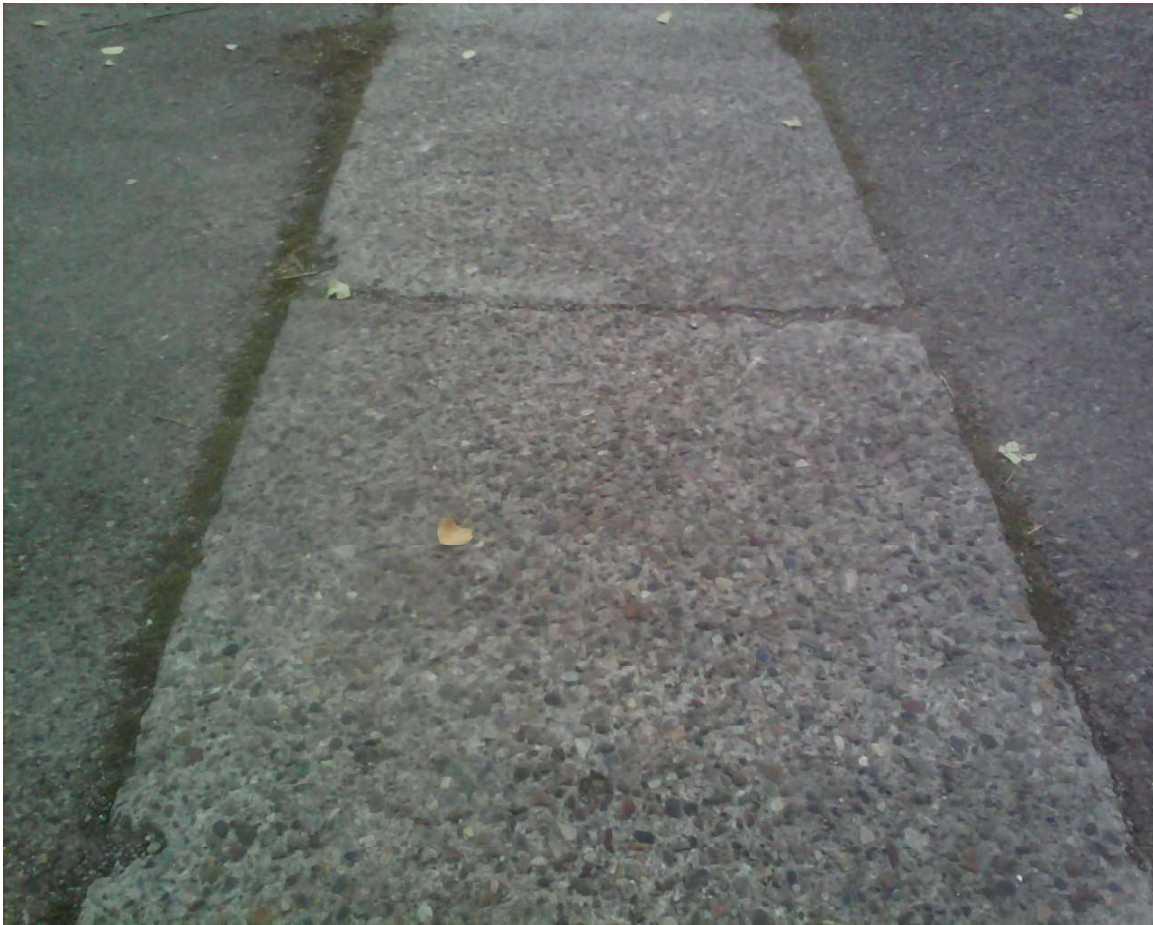
Surface Roughness, Low Severity

Noticeable loss of material, with minor loss of surface fines. Vertical faces of the aggregate cannot be observed. Material loss is less than 5 mm.



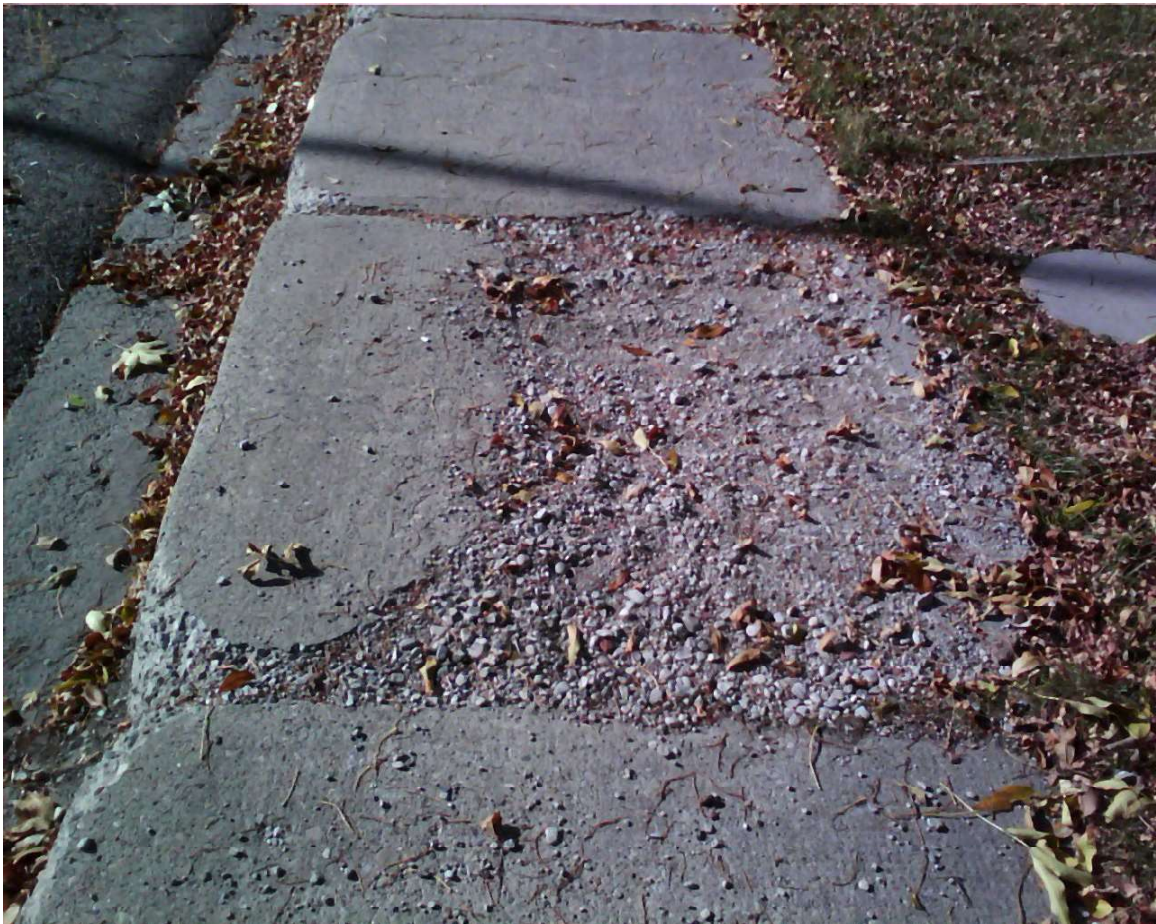
Surface Roughness, Medium Severity

Shallow disintegration of the surface with no loss of concrete thickness. The vertical faces of the coarse aggregate are exposed up to half of the aggregate size with limited pop-outs of the individual aggregate. Material loss is between 5 mm and 10 mm.



Surface Roughness, High Severity

Noticeable deterioration of the concrete thickness due to loss of fines. Material loss is greater than 10 mm.



Asphalt Patching

A patch is an area where the original material has been removed and replaced by a filler material or additional material applied to the surface after original construction.

Asphalt Patching, Low Severity

Patch has low severity distress of any type and no measurable faulting or settlement.



Asphalt Patching, Medium Severity

Patch is moderately deteriorated. Patch material can be dislodged with considerable effort.



Asphalt Patching, High Severity

Patch is badly deteriorated. Original distress is evident.



Concrete Patching

A patch is an area where the original material has been removed and replaced by a filler material or additional material applied to the surface after original construction.

A low, medium and high severity of concrete patching would be any distress that is $< 0.5 \text{ m}^2$ (~20% of Slab), $0.5\text{-}1.0 \text{ m}^2$ (~40% of Slab), and $> 1.0 \text{ m}^2$ ($> \sim 40\%$ of Slab) respectively.

Concrete Patching, High Severity



Excessive Grade

An area of sidewalk that has an abrupt change in longitudinal grade of more than 13% over a short distance that can compromise the ground clearance of footrests or antitipping devices of wheelchairs or mobility devices. This hazard rating can only be categorized as a high severity, when the excessive grade is ≥ 80 mm (13%) over a 600 mm length.

Excessive Grade, High Severity



Gap

Linear opening within a sidewalk at a joint or within a grate. It does not include control joints or other surface scoring constructed according to design standards or grates that are not intended for pedestrian use. A low severity is when the maximum width of the gap is measured at less than 5mm, medium severity when it is between 5 to 10 mm, and high severity when the distress is greater than 10 mm.

Gap, High Severity



Grinding

An area where a grinding or horizontal sawcut repair has been applied to a sidewalk surface. A low severity is when the change in height between concrete slabs is measured at less than 5mm, medium severity when it is between 5 to 10 mm, and high severity when the distress is greater than 10 mm.

Grinding, High Severity



Heave

Location of abrupt change in elevation across a joint, crack or other protruding object that poses a potential tripping hazard. A low severity is when the maximum change in elevation is measured at less than 5mm, medium severity when it is between 5 to 10 mm, and high severity when the distress is greater than 10 mm.

Heave, High Severity



Manhole

A gap or vertical change in elevation of a manhole within a sidewalk surface. A low severity is when the difference in height is measured at less than 5mm, medium severity when it is between 5 to 10 mm, and high severity when the distress is greater than 10 mm.

Manhole, High Severity



Missing Panel

An area of sidewalk that has a hole resulting from a missing concrete panel or portion of the panel.

Missing Panel, High Severity



Obstruction

An object is blocking or reducing the available width of sidewalk for pedestrians that is a permanent installation such as a pole, guidewire, post or utility cabinet. A low severity is when the minimum clear width between an obstruction and the edge of sidewalk is measured to be greater than 1200 mm, medium severity when it is between 900 to 1200 mm, and high severity when the distress is less than 900 mm.

Obstruction, Medium Severity



Obstruction - Temporary

An object is blocking or reducing the available width of sidewalk for pedestrians that is a temporary installation. A low severity is when the minimum clear width between an obstruction and the edge of sidewalk is measured to be greater than 1200 mm, medium severity when it is between 900 to 1200 mm, and high severity when the distress is less than 900 mm.

Obstruction – Temporary, High Severity



Reverse Crossfall

Area where the sidewalk surface is not graded towards the roadway or drainage feature and therefore is a potential location for ponding. Does not apply to crowned sidewalks. A low severity is when the distress is measured to be less than 0 %, medium severity when it is between 0 to 10 %, and high severity when the distress is greater than 10 %.

Reverse Crossfall, High Severity



Utility Box or Valve

A gap or vertical change in elevation of a utility box or valve within a sidewalk surface. A low severity is when the width of gap or difference in height between the sidewalk and utility box is measured at less than 5mm, medium severity when it is between 5 to 10 mm, and high severity when the distress is greater than 10 mm.

Utility Box or Valve, High Severity



Vegetation Encroachment

Vegetation (such as a tree, shrub or bush) that is impeding the available width and/or height clearance within the sidewalk area.

Vegetation Encroachment, High Severity



Curb and Gutter

Guideline for Describing Severity and Extent of Curb and Gutter Deterioration

SEVERITY DESCRIPTION CODE	EXTENT DESCRIPTION CODE	DESCRIPTION	CONDITION
Portland Cement Concrete (PCC)			
0	1	New or repaired curb, slightly spalled, Cracked or distorted	Good
1	1	Cracking, spalling, settling around catch Basins, needs minor repair	Fair
2	1	Badly cracked, spalled, settled, or Disintegrated Pavement level almost at top of curb	Poor
2	5	No curbs are present	No curbs



APPENDIX D

2021 Condition Assessment Tables



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix D 2021 Condition Assessment Tables

Table D.1: Concrete Sidewalk Section Performance

Sidewalk Id	Street	From	To	Section Length (m)	SCI	No. of Distressed Slabs
1003SW				44.5	48	18
1004E1SW	26 Street	END	51 Avenue	130.4	63	17
1005N1SW	26 Street	51 Avenue	53 Avenue	57.5	34	18
1006N1SW	26 Street	51 Avenue	53 Avenue	281.1	61	48
1010N1SW	27A Street	END	56 Avenue	45.2	26	30
1011E1SW	57 Avenue	26 Street	27 Street	1	46	1
1012SW				36.6	28	15
1013E1SW	57A Avenue Close	57A Avenue	57A Avenue	169.5	47	37
1014N1SW	57A Avenue Close	57A Avenue	57A Avenue	49	63	7
1015W1SW	56 Avenue	30 Street	31 Street	123.5	28	57
1016SW				25.5	38	8
1017E1SW	57B Avenue	28 Street	29 Street	30.7	49	12
1018W1SW	57B Avenue	26 Street	28 Street	126.4	45	44
1019SW				73.2	61	15
1020E1SW	57 Avenue	26 Street	27 Street	180.3	42	59
1022W1SW	57A Avenue	57A Avenue Close	57A Avenue Close	50.8	21	30
1023N1SW	58 Avenue	26 Street	28 Street	226.5	46	51
1024W1SW	57A Avenue	57A Avenue Close	57A Avenue Close	31.8	51	17
1025E1SW	57A Avenue	57A Avenue Close	29 Street	37.8	2	25
1026W1SW	57A Avenue	57A Avenue Close	29 Street	74.7	21	44
1027S1SW	29 Street	57A Avenue	57B Avenue	73	6	58
1028E1SW	56 Avenue	27A Street	28 Street	62.4	27	42
1029W1SW	56 Avenue	27A Street	28 Street	45.1	35	15
1030S1SW	28 Street	53 Avenue	56 Avenue	236.2	53	67
1031W1SW				72.1	74	6
1032E1SW	59 Avenue	25 Street	29 Street	312.8	6	193
1033W1SW	58 Avenue	26 Street	28 Street	215.5	47	54
1034SW				64.5	11	39
1035W1SW	57A Avenue	25 Street	26 Street	60.8	22	28
1036S1SW	29A Street	57B Avenue	58 Avenue	48	0	41
1037S1SW	29A Street	57B Avenue	58 Avenue	45.1	7	46
1038E1SW	58 Avenue	29A Street	30 Street	145.2	12	103
1039S1SW	35 Street	57A Avenue	58 Avenue	95.6	42	27
1040N1SW	29 Street	57B Avenue	59 Avenue	161.9	21	116
1041N1SW	35 Street	57A Avenue	58 Avenue	178.9	47	49
1042S1SW	35 Street	57A Avenue	58 Avenue	34.8	16	22
1043E1SW	57A Avenue	34 Street	35 Street	138	38	59
1044W1SW	57A Avenue	34 Street	35 Street	125.1	31	59
1045W1SW	57B Avenue	29A Street	30 Street	127.6	14	74
1046N1SW	29A Street	57B Avenue	58 Avenue	62.7	0	48
1047E1SW	57B Avenue	29A Street	30 Street	136.4	9	88
1048W1SW	57A Avenue	29 Street	30 Street	178.5	16	127
1050W1SW	31 Street	57A Avenue	57B Avenue	25.9	0	23
1051E1SW	57B Avenue	31 Street	34 Street	66.7	11	39
1052S1SW	29 Street	52 Avenue	54 Avenue	76.2	14	53
1054SW				28.7	70	5
1055SW				28.3	68	2
1056W1SW	55 Avenue	29 Street	30 Street	229.6	16	131
1057SW				25.6	64	5



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Appendix D 2021 Condition Assessment Tables

Table D.1: Concrete Sidewalk Section Performance

Sidewalk Id	Street	From	To	Section Length (m)	SCI	No. of Distressed Slabs
1058SW				31	100	0
1059N1SW	55 Avenue	29 Street	30 Street	7.5	64	2
1060S1SW	31 Street	55A Avenue	56 Avenue	36.2	9	25
1061SW				170.9	29	69
1062S1SW	31 Street	55A Avenue	56 Avenue	124.6	42	44
1063W1SW	55A Avenue	31 Street	35 Street	279.7	41	76
1064S1SW	29 Street	57A Avenue	57B Avenue	62.7	16	40
1065W1SW	55B Avenue	END	30 Street	121.9	24	68
1066S1SW	30 Street	55B Avenue	56 Avenue	70	5	47
1067N1SW	30 Street	55A Avenue	55B Avenue	45.6	30	28
1068N1SW	30 Street	55A Avenue	55B Avenue	42.7	41	29
1069E2SW	57 Avenue	31 Street	34 Street	2.4	0	5
1070SW				26.8	55	5
1071S1SW	35 Street	55A Avenue	57 Avenue	177.5	36	51
1072SW				28.1	29	11
1072W1SW				28.1	95	74
1073E1SW	57 Avenue	31 Street	34 Street	66.6	49	17
1074N1SW	35 Street	55A Avenue	57 Avenue	473.7	32	177
1075SW				34.6	48	10
1076SW				29	70	2
1078W1SW	55 Avenue	31 Street	35 Street	311.4	21	171
1079W1SW	52 Avenue	35 Street	36 Street	45.3	13	28
1080N1SW	29 Street	54 Avenue	55 Avenue	63.1	6	49
1081W1SW	52 Avenue	29 Street	31 Street	134.8	39	55
1082S1SW	32 Street	53 Avenue	54 Avenue	117.3	38	50
1083S1SW	34 Street	53 Avenue	54 Avenue	128.1	17	65
1084W1SW	33 Street	53 Avenue	W of 53 Avenue	98.7	45	31
1085S1SW	31 Street	54 Avenue	55 Avenue	120.4	10	77
1086E1SW	54 Avenue	30 Street	31 Street	71.6	14	47
1087N1SW	31 Street	54 Avenue	55 Avenue	132.3	40	49
1088N1SW	34 Street	53 Avenue	54 Avenue	148.9	29	83
1089E1SW	55A Avenue	29 Street	30 Street	138.3	37	97
1099S1SW	36 Street	57 Avenue	59 Avenue	315.8	27	150
1100E1SW	57 Avenue	35 Street	36 Street	78	26	35
1101S1SW	35 Street	55A Avenue	57 Avenue	187.5	45	43
1102W1SW	57 Avenue	34 Street	35 Street	87.4	33	32
1103S1SW	34 Street	57 Avenue	57A Avenue	61.5	30	28
1104E1SW	57 Avenue	34 Street	35 Street	87.3	63	9
1104E2SW	57 Avenue	34 Street	35 Street	87.3	60	13
1105E1SW	57 Avenue	31 Street	34 Street	51.4	56	9
1106W1SW	57 Avenue	31 Street	34 Street	152.5	22	73
1107S1SW	31 Street	56 Avenue	57 Avenue	119	50	43
1108E1SW	56 Avenue	30 Street	31 Street	179.3	30	114
1109W1SW	56 Avenue	30 Street	31 Street	57.6	40	18
1110W1SW	31 Street	56 Avenue	57 Avenue	128	76	12
1111E1SW	55A Avenue	31 Street	35 Street	333.5	33	113
1112N1SW	31 Street	55A Avenue	56 Avenue	178.3	16	101
1113W1SW	55A Avenue	END	31 Street	127.5	36	57
1114E1SW	55A Avenue	END	31 Street	76.5	39	38



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix D 2021 Condition Assessment Tables

Table D.1: Concrete Sidewalk Section Performance

Sidewalk Id	Street	From	To	Section Length (m)	SCI	No. of Distressed Slabs
1115S1SW	31 Street	55 Avenue	55A Avenue	82.9	10	45
1116N1SW	31 Street	55 Avenue	55A Avenue	73	16	43
1117E1SW	55 Avenue	31 Street	35 Street	308.2	28	146
1118S1SW	31 Street	52 Avenue	54 Avenue	77.3	32	42
1119S1SW	31 Street	51B Avenue	52 Avenue	85.1	35	31
1120E1SW	52 Avenue	31 Street	32 Street	75.3	15	42
1121N1SW	31 Street	52 Avenue	54 Avenue	87.9	25	44
1122E1SW	52 Avenue	29 Street	31 Street	240.5	18	135
1123W1SW	51 Avenue	33 Street	34 Street	61.2	32	21
1124N1SW	50 Avenue SR W	31 Street	33 Street	396.7	55	67
1124S1SW	50 Avenue SR W	31 Street	33 Street	396.7	44	88
1125E1SW	51 Avenue	35 Street	36 Street	157.4	43	32
1126W1SW	51 Avenue	32 Street	33 Street	102.7	38	27
1127E1SW	51 Avenue	34 Street	35 Street	80.4	49	10
1128E1SW	51 Avenue	35 Street	36 Street	144.5	28	52
1129N1SW	27 Street	51 Avenue	51 Avenue	95.9	41	35
1131W1SW	51B Avenue	29 Street	31 Street	204.7	23	103
1132E1SW	51B Avenue	29 Street	31 Street	194.7	39	62
1133N1SW	31 Street	51B Avenue	52 Avenue	95.5	18	45
1134N1SW	31 Street	51A Avenue	51B Avenue	159.2	0	113
1135S1SW	31 Street	51A Avenue	51B Avenue	150.3	20	78
1136W1SW	32 Street	51 Avenue	END	174.9	34	57
1137W1SW	51 Avenue	31 Street	32 Street	68.8	19	29
1138W1SW	51 Avenue	32 Street	33 Street	103.4	35	41
1139E1SW	51 Avenue	26 Street	26A Street	216.2	34	64
1141E1SW	51A Avenue	30 Street	31 Street	57	15	27
1142N1SW	31 Street	51 Avenue	51A Avenue	72.8	60	20
1143S1SW	31 Street	51 Avenue	51A Avenue	62.3	11	42
1144E1SW	51 Avenue	31 Street	32 Street	78.2	32	40
1145W1SW	51 Avenue	29 Street	31 Street	194.4	29	93
1146E1SW	51 Avenue	29 Street	31 Street	193.6	45	57
1147S1SW	27 Street	51 Avenue	51 Avenue	127.8	60	48
1148N1SW	27 Street	51 Avenue	51 Avenue	63.7	63	12
1149S1SW	27 Street	51 Avenue	51 Avenue	65.8	55	20
1150W1SW	51 Avenue	26A Street	27 Street	71.8	16	40
1151W1SW	52 Avenue	27 Street	29 Street	133.5	22	61
1152N1SW	27 Street	51 Avenue	52 Avenue	344.9	46	81
1153S1SW	27 Street	51 Avenue	52 Avenue	196.7	100	1
1154S1SW	27 Street	52 Avenue	53 Avenue	146.3	64	39
1155N1SW	27 Street	52 Avenue	53 Avenue	136.4	48	38
1156N1SW	27 Street	53 Avenue	54 Avenue	180.5	49	46
1157W1SW	26A Street	51 Avenue	END	155	16	71
1158W1SW	51 Avenue	26 Street	26A Street	57.3	66	7
1159W1SW	57B Avenue	28 Street	29 Street	64.9	44	32
1160E1SW	57B Avenue	28 Street	29 Street	33.8	22	17
1161S1SW	29 Street	57B Avenue	59 Avenue	151.6	22	93
1162N1SW	28 Street	57B Avenue	58 Avenue	92.1	34	35
1163E1SW	57B Avenue	26 Street	28 Street	97.2	63	17
1164S1SW	28 Street	57B Avenue	58 Avenue	81.4	61	15



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix D 2021 Condition Assessment Tables

Table D.1: Concrete Sidewalk Section Performance

Sidewalk Id	Street	From	To	Section Length (m)	SCI	No. of Distressed Slabs
1165W1SW	58 Avenue	26 Street	28 Street	173.5	44	50
1166E1SW	58 Avenue	26 Street	28 Street	189.1	64	29
1167E1SW	57A Avenue	26 Street LN	27 Street	117	35	46
1168N1SW	25 Street	53 Avenue	57A Avenue	505.3	10	307
1169E1SW	57A Avenue	25 Street	26 Street	70.1	32	38
1170W1SW	57A Avenue	26 Street LN	27 Street	118.3	31	57
1171N1SW	26 Street	57A Avenue	57B Avenue	65.7	41	20
1172E1SW	57B Avenue	26 Street	28 Street	195.5	44	58
1173S1SW	26 Street	57A Avenue	57B Avenue	74	56	15
1174W1SW	58 Avenue	34 Street	35 Street	158.4	8	115
1175E1SW	59 Avenue	29 Street	36 Street	719.3	49	273
1176E1SW	58 Avenue	34 Street	35 Street	131.4	38	64
1177E1SW	58 Avenue	30 Street	34 Street	185.3	29	74
1178W1SW	53 Avenue	26 Street	26 Street	33.2	7	23
1179E1SW	53 Avenue	26 Street	26 Street	33.1	83	1
1180E1SW	51 Avenue	26A Street	27 Street	86.3	20	45
1181W1SW	53 Avenue	25 Street	26 Street	64.4	51	18
1182N1SW	25 Street	50 Avenue	53 Avenue	352.5	12	172
1183E1SW	51A Avenue	29 Street	30 Street	88.2	15	47
1184W1SW	51A Avenue	30 Street	31 Street	46.3	15	28
1185S1SW	30 Street	51A Avenue	END	158.3	46	66
1186S1SW	29 Street	51A Avenue	51B Avenue	249.1	34	97
1187W1SW	51A Avenue	29 Street	30 Street	56.7	17	31
1188S1SW	51B Avenue	29 Street	31 Street	6.4	0	10
1189N1SW	29 Street	51A Avenue	51B Avenue	206.3	30	94
1190E1SW	51 Avenue	33 Street	34 Street	60.1	60	10
1191N1SW				356.7	51	75
1192E1SW	51 Avenue	34 Street	35 Street	80.4	33	24
1193S1SW				105.3	27	42
1194N1SW	51A Avenue	34 Street	END	128.2	31	47
1195N1SW	34 Street	51 Avenue	51A Avenue	62.6	26	22
1196W1SW	52 Avenue	34 Street	35 Street	179.2	32	72
1197S1SW	34 Street	51A Avenue	52 Avenue	116.6	55	14
1198N1SW	34 Street	51A Avenue	52 Avenue	141.1	25	53
1199S1SW	35 Street	52 Avenue	54 Avenue	220.2	47	65
1200E1SW	52 Avenue	34 Street	35 Street	182.3	37	61
1201N1SW	35 Street	52 Avenue	54 Avenue	230.1	42	67
1202N1SW	35 Street	54 Avenue	55 Avenue	100.2	14	51
1203W1SW	54 Avenue	34 Street	35 Street	73	46	25
1204E1SW	54 Avenue	34 Street	35 Street	63.3	54	18
1205W1SW	55 Avenue	31 Street	35 Street	5.5	23	4
1206S1SW	35 Street	54 Avenue	55 Avenue	63.1	51	21
1207W1SW	54 Avenue	32 Street	34 Street	149.6	22	72
1208E1SW	54 Avenue	32 Street	34 Street	122.6	18	76
1209E1SW	53 Avenue	32 Street	33 Street	83	21	45
1210E1SW	53 Avenue	33 Street	34 Street	105.5	27	44
1211N1SW	32 Street	52 Avenue	53 Avenue	63.6	54	23
1212N1SW	32 Street	53 Avenue	54 Avenue	96.3	16	52
1213W1SW	32 Street	52 Avenue	53 Avenue	75.3	29	37



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Appendix D 2021 Condition Assessment Tables

Table D.1: Concrete Sidewalk Section Performance

Sidewalk Id	Street	From	To	Section Length (m)	SCI	No. of Distressed Slabs
1214W1SW	52 Avenue	32 Street	34 Street	120.3	32	52
1215W1SW	52 Avenue	31 Street	32 Street	64.6	11	43
1216E1SW	52 Avenue	32 Street	34 Street	75.7	24	41
1217W1SW	52 Avenue	29 Street	31 Street	100.6	24	51
1218E1SW	52 Avenue	27 Street	29 Street	133.5	23	76
1219N1SW	29 Street	52 Avenue	54 Avenue	64.4	47	12
1220S1SW	29 Street	54 Avenue	55 Avenue	96.1	15	52
1221S1SW	29 Street	54 Avenue	55 Avenue	0.1	100	0
1222E1SW	29 Street	54 Avenue	55 Avenue	0.1	0	113
1223N1SW	30 Street	54 Avenue	55 Avenue	91.6	17	45
1224S1SW	30 Street	54 Avenue	55 Avenue	63.9	35	32
1225W1SW	54 Avenue	30 Street	31 Street	63.1	14	39
1226W1SW	54 Avenue	29 Street	30 Street	206	17	127
1227E1SW	54 Avenue	29 Street	30 Street	210.4	27	107
1231S1SW	36 Street	49 Avenue	50 Avenue SR E	72	68	9
1232E1SW	50 Avenue SR E	34 Street	36 Street	167.9	34	53
1233E1SW	50 Avenue SR E	34 Street	36 Street	26.2	0	26
1237S1SW	34 Street	49 Avenue	50 Avenue SR E	89.6	83	2
1238E1SW	50 Avenue SR W	31 Street	33 Street	115.2	41	33
1239E1SW	50 Avenue SR W	31 Street	33 Street	65.2	37	17
1251SW				148.2	43	38
1271W1SW	58 Avenue	30 Street	34 Street	210	24	112
1272N1SW	30 Street	57B Avenue	58 Avenue	32.5	20	24
1273N1SW	30 Street	57B Avenue	58 Avenue	83.2	10	61
1274E1SW	58 Avenue	29A Street	30 Street	21.8	0	22
1275S1SW	58 Avenue	30 Street	34 Street	33.3	18	25
1276W1SW	34 Street	57A Avenue	57B Avenue	38.2	0	29
1277E1SW	34 Street	57A Avenue	57B Avenue	82.5	22	38
1278N1SW	34 Street	57 Avenue	57A Avenue	54.5	21	28
1279S1SW	34 Street	57B Avenue	58 Avenue	61.6	44	21
1280E1SW	57B Avenue	31 Street	34 Street	13.1	11	9
1281N1SW	34 Street	57B Avenue	58 Avenue	68.9	39	28
1282W1SW	57B Avenue	31 Street	34 Street	102.8	35	46
1283E1SW	31 Street	57A Avenue	57B Avenue	99.5	21	61
1284N1SW	31 Street	57 Avenue	57A Avenue	128.4	10	86
1285E1SW	31 Street	57 Avenue	57A Avenue	39.8	53	24
1286W1SW	31 Street	57A Avenue	57B Avenue	77.7	8	55
1287S1SW	30 Street	57B Avenue	58 Avenue	62.6	0	51
1288S1SW	30 Street	57A Avenue	57B Avenue	56.3	6	39
1289N1SW	30 Street	57A Avenue	57B Avenue	55.8	14	39
1290W1SW	57A Avenue	30 Street	31 Street	64.4	19	42
1291E1SW	57A Avenue	30 Street	31 Street	72.4	26	36
1292S1SW	26 Street	54 Avenue	57 Avenue	271.7	41	107
1293E1SW	57 Avenue	26 Street	27 Street	58.8	27	25
1294N1SW	28 Street	53 Avenue	56 Avenue	251.7	38	102
1295N1SW	29 Street	55A Avenue	56 Avenue	120.6	2	108
1296E1SW	56 Avenue	28 Street	29 Street	59.2	18	38
1297W1SW	56 Avenue	28 Street	29 Street	69.2	42	25
1298W1SW	56 Avenue	29 Street	30 Street	70.5	2	72



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Table D.1: Concrete Sidewalk Section Performance

Sidewalk Id	Street	From	To	Section Length (m)	SCI	No. of Distressed Slabs
1299E1SW	56 Avenue	29 Street	30 Street	144.4	27	67
1300N1SW	30 Street	55B Avenue	56 Avenue	81.7	6	82
1301S1SW	30 Street	55A Avenue	55B Avenue	70	27	39
1302W1SW	55A Avenue	29 Street	30 Street	117.1	27	101
1303S1SW	29 Street	55A Avenue	56 Avenue	131	15	103
1304W1SW	26 Street Close	53 Avenue	END	255.2	41	80
1305W1SW	53 Avenue	26 Street	27 Street	72.7	45	16
1306E1SW	53 Avenue	26 Street	27 Street	91.4	68	29
1307W1SW	28 Street Close	END	53 Avenue	196.4	44	72
1308E1SW	53 Avenue	27 Street	28 Street Close	53.2	43	16
1309W1SW	53 Avenue	27 Street	28 Street Close	57.4	49	17
1310E1SW	53 Avenue	25 Street	26 Street	54.1	74	3
1331SW				21.9	17	13
1355SW				28.2	43	10
1357SW				28.8	15	25
1360SW				73.5	34	33
1369SW				25.9	23	10
1404SW				108.8	44	38
1432SW				29.2	76	2
1460SW				64.9	23	31
1469SW				77.6	0	53
1492S1SW				28.2	66	6
1503S1SW				28.2	63	8
1507E1SW				66.8	76	13
1511E1SW				27	72	2
1518NOSW				0.1	100	0
1533W1SW				66.8	83	4
1579SW				158.8	51	54
1580SW				34	48	12
1589N1SW	36 Street	49 Avenue	50 Avenue SR E	71.7	31	24
1597SW				69.8	2	53
1617SW				67.2	66	14
1645E1SW	62 Avenue	36 Street	43 Street	642.9	13	297
1646SW				80	59	16
1647E1SW	62 Avenue	36 Street	43 Street	76	2	46
1649SW				26.2	79	2
1780E1SW	60 Avenue	40 Street	41 Street	272.6	72	26
1838E2SW	57 Avenue	43 Street	44 Street	81.4	43	38
1943S2SW	44 Street	50 Avenue	52 Avenue	271.3	45	99
1944N1SW	44 Street	57 Avenue	59 Avenue	641.8	42	190
1944N2SW	44 Street	57 Avenue	59 Avenue	641.8	50	166
1951W1SW				30.9	51	28
1973SW				36.2	79	3
1977N2SW	44 Street	50 Avenue	52 Avenue	112.5	55	22
1978N2SW	44 Street	50 Avenue	52 Avenue	126.5	34	38
1980N2SW	44 Street	52 Avenue	54 Avenue	316.5	63	102
1982N2SW	44 Street	55 Avenue	56 Avenue	93.5	28	58
1983N2SW	44 Street	54 Avenue	55 Avenue	120.4	49	35
1988S1SW				27.4	76	3



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Table D.1: Concrete Sidewalk Section Performance

Sidewalk Id	Street	From	To	Section Length (m)	SCI	No. of Distressed Slabs
1990SW				23.3	63	13
1991SW				64.7	74	11
2000SW				26.6	74	9
2003N1SW	57A Avenue	57A Avenue Close	29 Street	29.8	0	26
2004N1SW	57A Avenue	57A Avenue Close	29 Street	12.2	8	11
2005N1SW	57A Avenue	57A Avenue Close	29 Street	0.1	0	1
2006SW	57A Avenue	57A Avenue Close	29 Street	28.3	44	17
2007E1SW	57A Avenue	29 Street	30 Street	40.1	9	27
2008E1SW	57A Avenue	29 Street	30 Street	78.7	24	41
2009E1SW	57A Avenue	29 Street	30 Street	63.7	12	40
2010SW	57A Avenue	29 Street	30 Street	28	40	9
2011N1SW	25 Street	50 Avenue	53 Avenue	105.9	15	55
2012N1SW	25 Street	50 Avenue	53 Avenue	142.7	16	83
2014S1SW				66	57	19
2015S1SW				65.6	44	28
2016SW				76.8	66	16
2018S2SW	44 Street	52 Avenue	54 Avenue	95.6	74	3
2019S2SW	44 Street	52 Avenue	54 Avenue	199.1	46	30
2020E1SW	56 Avenue	43 Street	44 Street	94.3	49	15
2022SW				167.4	83	5
2026S2SW	44 Street	54 Avenue	55 Avenue	244.8	59	50
2037S1SW				28.6	76	3
2045S1SW				30.5	87	1
2046E1SW				49.9	83	2
2057SW				95.8	72	10
2058SW				27.3	0	19
2059SW				28.2	66	4
2087S1SW				1.8	100	0
208S1SW				52.1	68	13
2092W1SW				27	87	1
2103SW				21.7	46	1
2104SW				0.1	46	1
2108S1SW				101.1	87	2
2109W1SW				191.5	100	0
210SW	24 Street	52A Avenue Close	52B Avenue	29	83	2
2110E1SW				79.1	76	2
211W1SW				27.2	22	21
212SW				30.2	87	1
213SW	24 Street	54 Avenue	57A Avenue	26.3	46	9
2148W1SW				176.8	100	0
2162E1SW				48.9	50	6
2163E1SW				40.8	87	1
2164SW				66.8	100	0
2165SW				114.5	83	7
2166SW				18.3	72	2
2167SW				86	70	11
2168SW				32.3	79	4
2169SW				167.3	72	29
2170SW				181.6	23	78



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Table D.1: Concrete Sidewalk Section Performance

Sidewalk Id	Street	From	To	Section Length (m)	SCI	No. of Distressed Slabs
2171SW				31.4	63	5
2183SW				1.6	51	2
2193SW	58 Avenue	26 Street	28 Street	84	42	21
2194N1SW	40 Street	57A Avenue	58 Avenue Close	52.8	76	3
2195N1SW	40 Street	57 Avenue	57A Avenue	45.2	44	14
2196S1SW	39 Street	53 Avenue	56 Avenue	26.3	100	0
2199W1SW	56 Avenue	29 Street	30 Street	31.9	38	15
2200S1SW	27 Street	51 Avenue	52 Avenue	101.2	39	48
2201W1SW	51 Avenue	26 Street	26A Street	29.6	5	26
2202W1SW	51 Avenue	26 Street	26A Street	78.1	45	20
2221E1SW	57A Avenue	57A Avenue Close	29 Street	28.8	3	24
2226S1SW				27.4	100	0
2228S1SW				28.3	100	0
2234E1SW				150.6	50	30
2235N1SW				87.2	38	25
2244S1SW				0.1	100	0
2245S1SW				0.1	100	0
2246N1SW				0.1	42	3
2247N1SW				0.1	100	0
2248S1SW				9.4	46	1
2250S1SW				6.8	64	1
2268E1SW				23	49	10
2271E1SW	62 Avenue	44 Street SR N	47 Street	245.5	79	32
2293S1SW				129.8	100	0
2346SW				0.1	0	2
2347SW				0.1	100	0
2355SW				28.4	17	16
2386N1SW				1.1	0	3
2386W1SW				1.1	0	4
2389W1SW	34 Street	57A Avenue	57B Avenue	27.7	1	18
2390E1SW	31 Street	57 Avenue	57A Avenue	44.9	18	33
2395SW				62.7	33	26
2396E1SW	52 Avenue	32 Street	34 Street	43.3	9	23
2398N1SW				0.1	0	3
2399E1SW	31 Street	57 Avenue	57A Avenue	1.8	0	1
2412SW				59	74	8
2413S1SW	39 Street	53 Avenue	56 Avenue	95.8	46	24
2415W1SW	56 Avenue	29 Street	30 Street	51.1	60	5
2416N1SW	26 Street	51 Avenue	53 Avenue	45.9	48	12
2438SW				28.7	68	3
2444S1SW	41 Street	57 Avenue	57A Avenue Close	27.5	37	12
2445S1SW	41 Street	57 Avenue	57A Avenue Close	19.6	41	12
2446W1SW	36 Street	57 Avenue	59 Avenue	79.9	17	41
2507N1SW	24 Street	52A Avenue Close	52B Avenue	61.9	54	11
254S1SW	24 Street	54 Avenue	57A Avenue	70.9	87	1
279SW	23 Street	47 Avenue	24 Street	39.5	34	20
282SW	25 Street	47 Avenue	50 Avenue	52.8	22	27
328SW	16 Street	47C Avenue	48 Avenue	81.5	55	27
382SW	24 Street Close	46 Avenue	END	71.6	76	6



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Table D.1: Concrete Sidewalk Section Performance

Sidewalk Id	Street	From	To	Section Length (m)	SCI	No. of Distressed Slabs
427E1SW	50 Avenue SR E	38 Street	41 Street	274.8	27	102
428E1SW	50 Avenue SR E	36 Street	38 Street	173.9	44	49
429N1SW	38 Street	49 Avenue	50 Avenue SR E	72.4	66	10
430S1SW	38 Street	49 Avenue	50 Avenue SR E	72.4	55	14
452S1SW	41 Street	49 Avenue	50 Avenue SR E	73.7	1	53
453N1SW	41 Street	49 Avenue	50 Avenue SR E	97.4	74	6
457N1SW	42 Street	49 Avenue	50 Avenue	100.5	57	15
458N1SW				100.9	74	8
459S1SW				101.2	100	0
543SW	46A Avenue Close	END	39 Street	23.5	68	5
544SW	38 Street Close	46 Avenue	END	31.9	76	3
612E1SW	53 Avenue	39 Street	52 Avenue	230.9	26	84
615N1SW	39 Street	53 Avenue	53 Avenue	39.5	23	16
617W1SW	52 Avenue	39 Street	41 Street	140.3	64	13
621E1SW	41 Street	51 Avenue	52 Avenue	166	27	67
623E1SW	52 Avenue	41 Street	42 Street	55.6	22	24
624W1SW	53 Avenue	39 Street	52 Avenue	296.5	43	82
626W1SW	52 Avenue	41 Street	53 Avenue	55.2	0	38
631E1SW	52 Avenue	53 Avenue	42 Street	97.5	16	56
633S1SW	42 Street	52 Avenue	54 Avenue	321.9	35	108
634W1SW	41 Street	51 Avenue	52 Avenue	166.1	70	18
636W1SW	56 Avenue	39 Street	42 Street	313.4	54	49
637E1SW	56 Avenue	39 Street	42 Street	270.3	60	36
639S1SW	39 Street	56 Avenue	56 Avenue	49.1	40	17
640N1SW	39 Street	56 Avenue	56 Avenue	49	42	13
642W1SW	56 Avenue	38 Street	39 Street	70.4	29	26
644N1SW	38 Street	55A Avenue	56 Avenue	112.5	22	50
755SW				30.5	87	1
773S1SW	41 Street	50 Avenue	51 Avenue	79.2	64	11
774E1SW	54 Avenue	42 Street	44 Street	98.7	23	41
775S1SW	39 Street	50 Avenue	51 Avenue	65.5	72	3
776S2SW	39 Street	50 Avenue	51 Avenue	58.1	70	9
777W1SW	52 Avenue	36 Street	37 Street	45.7	0	30
778E1SW	52 Avenue	39 Street	41 Street	112.1	46	22
779SW				34.1	11	14
780E1SW	52 Avenue	39 Street	41 Street	17.4	0	15
785E1SW	54 Avenue	42 Street	44 Street	69.7	66	7
786W1SW	57 Avenue	39 Street	40 Street	95.5	25	42
789N1SW	41 Street	58 Avenue Close	59 Avenue	41.7	61	5
790N1SW	41 Street	57A Avenue Close	58 Avenue Close	69.6	43	18
791N1SW	41 Street	57 Avenue	57A Avenue Close	120.3	28	41
792E1SW	57 Avenue	40 Street	41 Street	139.8	12	70
793E1SW	57 Avenue	39 Street	40 Street	97.6	57	15
794S2SW	44 Street	56 Avenue	57 Avenue	325.6	47	118
795W2SW	56 Avenue	43 Street	44 Street	85.2	8	50
808E1SW	62 Avenue	43 Street	44 Street SR S	73.2	100	0
809S2SW	44 Street	57 Avenue	59 Avenue	107	53	22
810N1SW	37 Street	52 Avenue	53 Avenue	106.9	42	26
811S2SW	44 Street	57 Avenue	59 Avenue	155.9	66	10



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Table D.1: Concrete Sidewalk Section Performance

Sidewalk Id	Street	From	To	Section Length (m)	SCI	No. of Distressed Slabs
813N1SW	37 Street	56A Avenue	56B Avenue	63.3	15	30
814W1SW	56B Avenue	37 Street	39 Street	139.4	34	47
815SW				66.1	41	17
816E1SW	57 Avenue	37 Street	39 Street	11.2	0	15
817W1SW	52 Avenue	36 Street	37 Street	36.6	43	11
818E1SW	56 Avenue	37 Street	38 Street	60.6	27	23
819S1SW	39 Street	56A Avenue	56B Avenue	63.1	44	16
820SW				29.1	55	7
821W1SW	53 Avenue	38 Street	39 Street	71.3	57	11
822W1SW	43 Street	56 Avenue	56A Avenue	243.9	20	120
823E1SW	43 Street	56A Avenue	57 Avenue	232.2	32	91
824E1SW	57A Avenue	39 Street	40 Street	66.2	48	17
825S1SW	53 Avenue	37 Street	38 Street	53.7	34	18
826W1SW	53 Avenue	38 Street	39 Street	27.1	57	7
827E1SW	38 Street	END	53 Avenue	155.7	28	54
828E1SW	53 Avenue	37 Street	38 Street	39.3	48	6
829W1SW	56B Avenue	37 Street	39 Street	19.6	11	10
830N1SW	39 Street	56A Avenue	56B Avenue	83.1	38	24
831S1SW	39 Street	56B Avenue	57 Avenue	63	30	20
867E1SW	52 Avenue	42 Street	44 Street	178.4	44	73
868W1SW	57 Avenue	36 Street	37 Street	36	7	23
870W1SW	52 Avenue	41 Street	42 Street	26.7	0	22
872E1SW	52 Avenue	41 Street	42 Street	77.6	20	57
873N1SW	39 Street	56 Avenue	56A Avenue	42.1	60	5
874N1SW	37 Street	57 Avenue	57A Avenue	65.7	44	23
875S1SW	37 Street	57 Avenue	57A Avenue	74.4	29	27
877E1SW	57 Avenue	36 Street	37 Street	44	7	32
878E1SW	57A Avenue	37 Street	39 Street	176.5	45	42
880N1SW	37 Street	57A Avenue	57B Avenue Close	68.8	45	20
881N1SW	41 Street	51 Avenue	52 Avenue	65.1	70	4
882E1SW	60 Avenue	40 Street	41 Street	272.6	60	48
884SW				68.3	83	2
885W1SW	57B Avenue Close	37 Street	END	84.8	45	17
886S1SW	39 Street	57A Avenue	58 Avenue	12.9	23	6
887S1SW	37 Street	52 Avenue	53 Avenue	121.3	48	24
888SW				26.7	46	5
889W1SW	52 Avenue	37 Street	39 Street	181.8	22	75
88S1SW	22 Street	59B Avenue	60 Avenue	28.1	79	4
890W1SW	52 Avenue	37 Street	39 Street	197.2	20	93
891S1SW	39 Street	51 Avenue	52 Avenue	118.1	25	64
892N1SW	39 Street	51 Avenue	52 Avenue	19.6	68	2
893N1SW	39 Street	52 Avenue	53 Avenue	62.5	42	20
894S1SW	39 Street	52 Avenue	53 Avenue	73.1	38	25
895S1SW	37 Street	53 Avenue	55A Avenue	277.4	46	54
896S1SW	39 Street	53 Avenue	56 Avenue	140.7	61	13
897S1SW	53 Avenue	38 Street	39 Street	100.9	29	30
898N1SW	39 Street	53 Avenue	56 Avenue	283.4	33	88
899S1SW	39 Street	53 Avenue	53 Avenue	44.6	38	14
900S1SW	39 Street	56 Avenue	56A Avenue	62.9	21	37



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Table D.1: Concrete Sidewalk Section Performance

Sidewalk Id	Street	From	To	Section Length (m)	SCI	No. of Distressed Slabs
901E1SW	56 Avenue	38 Street	39 Street	60.5	45	15
902N1SW	39 Street	57A Avenue	57A Avenue	56.6	47	22
903W1SW	57A Avenue	37 Street	39 Street	157.3	36	55
904S1SW	39 Street	57A Avenue	57A Avenue	46.3	27	27
905N1SW	25 Street	57A Avenue	59 Avenue	351.3	17	187
906S1SW	26 Street	51 Avenue	53 Avenue	22.2	66	3
907SW				62.4	70	10
908E1SW	55A Avenue	29 Street	30 Street	3.8	100	0
909S1SW	26 Street	51 Avenue	53 Avenue	376.3	44	121
90E1SW	61A Avenue	22 Street	24 Street	63.9	87	1
910N1SW	26 Street	54 Avenue	57 Avenue	231	42	67
911E1SW	52 Avenue	29 Street	31 Street	0.1	0	2
912N1SW	27 Street	54 Avenue	56 Avenue	76.2	7	63
913SW				54.1	51	14
914W1SW	54 Avenue	26 Street	27 Street	63.3	17	35
915W1SW	27 Street	53 Avenue	54 Avenue	143.2	32	69
916W1SW	56 Avenue	27 Street	27A Street	73.2	41	18
917E1SW	56 Avenue	27 Street	27A Street	63.1	6	50
918S1SW	27 Street	54 Avenue	56 Avenue	76.1	14	57
919S1SW	27 Street	56 Avenue	57 Avenue	134.3	34	67
920W1SW	54 Avenue	26 Street	27 Street	84.6	32	32
921W1SW	56 Avenue	27A Street	28 Street	29.3	18	17
922S1SW	27A Street	END	56 Avenue	96.9	31	72
924W1SW	57 Avenue	26 Street	27 Street	92	25	51
927N1SW	27 Street	56 Avenue	57 Avenue	123.5	16	97
928N1SW	27 Street	57 Avenue	57A Avenue	85	17	45
929S1SW	27 Street	57 Avenue	57A Avenue	62.9	19	39
930W1SW	57A Avenue	27 Street	57A Avenue Close	84.6	47	34
931E1SW	55A Avenue	37 Street	38 Street	79.2	43	17
932S1SW	38 Street	55A Avenue	56 Avenue	94.1	57	14
933N1SW	37 Street	53 Avenue	55A Avenue	251.9	29	85
934S1SW	37 Street	55A Avenue	56 Avenue	122.4	36	32
935W1SW	55A Avenue	37 Street	38 Street	60.6	13	30
936N1SW	37 Street	55A Avenue	56 Avenue	94.1	63	20
937W1SW	56 Avenue	37 Street	38 Street	89.1	53	22
938S1SW	39 Street	57A Avenue	58 Avenue	88.3	41	31
939N1SW	39 Street	57A Avenue	58 Avenue	118.4	46	24
940E1SW	58 Avenue	37 Street	39 Street	131.7	49	32
941E1SW	58 Avenue	37 Street	39 Street	160.8	32	53
942N1SW	37 Street	57B Avenue Close	58 Avenue	64	47	15
943E1SW	57B Avenue Close	37 Street	END	69.9	36	25
944S1SW	37 Street	57B Avenue Close	58 Avenue	83.1	44	19
945S1SW	40 Street	57A Avenue	58 Avenue Close	93.2	40	46
946S1SW	40 Street	57 Avenue	57A Avenue	120.3	66	19
947N1SW	40 Street	57 Avenue	57A Avenue	71.6	60	8
948S1SW	40 Street	58 Avenue Close	59 Avenue Close	91.1	53	16
949E1SW	58 Avenue Close	40 Street	END	217	55	32
950N1SW	40 Street	57A Avenue	58 Avenue Close	27.9	47	6
951E1SW	59 Avenue Close	40 Street	END	234.2	70	23



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Table D.1: Concrete Sidewalk Section Performance

Sidewalk Id	Street	From	To	Section Length (m)	SCI	No. of Distressed Slabs
952W1SW	40 Street	58 Avenue Close	59 Avenue Close	82.4	68	6
953S1SW	59 Avenue Close	END	40 Street	114.3	79	10
954N1SW	41 Street	59 Avenue	60 Avenue	168.8	68	21
956S1SW	41 Street	59 Avenue	60 Avenue	160.9	74	6
957W1SW	59 Avenue	41 Street	43 Street	25.9	47	7
958S1SW	41 Street	58 Avenue Close	59 Avenue	60.8	51	13
959S1SW	41 Street	57A Avenue Close	58 Avenue Close	87.5	36	24
960S1SW	41 Street	57 Avenue	57A Avenue Close	62.3	11	30
961E1SW	57 Avenue	41 Street	42 Street	40.4	60	4
962E1SW	57 Avenue	40 Street	41 Street	155.1	40	51
963N1SW	42 Street	56A Avenue	57 Avenue	142.9	25	71
964E1SW	57 Avenue	42 Street	43 Street	39.7	38	12
965N1SW	30 Street	51A Avenue	END	102.8	47	27
966W1SW	57 Avenue	37 Street	39 Street	162.8	39	48
967E1SW	56A Avenue	37 Street	39 Street	167.7	22	72
968N1SW	39 Street	56 Avenue	56A Avenue	31.1	47	7
969S1SW	37 Street	56A Avenue	56B Avenue	101.7	18	44
970W1SW	56A Avenue	37 Street	39 Street	150.5	29	54
971E1SW	56B Avenue	37 Street	39 Street	150.4	41	44
972E1SW	57 Avenue	37 Street	39 Street	139.4	16	73
973N1SW	39 Street	56B Avenue	57 Avenue	77.5	47	20
974S1SW	37 Street	57A Avenue	57B Avenue Close	86.2	38	21
975E1SW	57A Avenue	39 Street	40 Street	66.6	34	18
976E1SW	57 Avenue	41 Street	42 Street	41.3	29	16
977W1SW	56A Avenue	42 Street	43 Street	77	4	48
978E1SW	56A Avenue	42 Street	43 Street	76.9	8	53
979S1SW	42 Street	56A Avenue	57 Avenue	152.8	45	52
980E1SW	56 Avenue	39 Street	42 Street	23.9	0	17
981S1SW	42 Street	56 Avenue	56A Avenue	153.8	34	59
982S1SW	42 Street	56 Avenue	56A Avenue	164.1	70	11
988S1SW	36 Street	51 Avenue	52 Avenue	224.2	12	155
992E1SW	52 Avenue	35 Street	36 Street	49.1	39	63
996E1SW	56 Avenue	42 Street	43 Street	95.4	48	21
998W1SW				27.5	57	21



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix D 2021 Condition Assessment Tables

Table D.2: Asphalt Sidewalk Section Performance

Section #	Section Length (m)	PCI
1000SW	286.8	100
1001SW	20.6	100
1002SW	102.6	100
1053SW	52.8	81.5
1077SW	322.1	76.2
1090SW	66.7	75
1091SW	16.3	100
1092SW	255.9	62.8
1093SW	10	100
1094SW	31.4	71.9
1095SW	389.6	71.3
1096SW	44	78.1
1097SW	22	71
1098SW	237.7	65.9
1421SW	451.4	81.1
1449SW	277.7	36.2
1459SW	349.8	73.5
1549SW	63.7	77.1
1550E1SW	169.9	64.2
1551SW	167.6	90.6
1552SW	26.7	75.2
159SW	23.1	100
164SW	37.9	45.9
165SW	65.7	76.4
169SW	18.1	100
1775N1SW	447.4	79.6
1832SW	55.2	91.5
1833SW	64.9	97.8
1834SW	8	100
1842SW	113.9	59.2
1843SW	96.2	64.7
1844SW	203.7	64.2
1845SW	85.1	65.9
1846SW	196.1	38.8
1847SW	274.1	6.7
1849SW	28.1	0
1851SW	90.3	78.6
1852SW	20.3	58.5
1858SW	139	44.4
1859SW	211.4	5.1
1860SW	144.5	23.9



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix D 2021 Condition Assessment Tables

Table D.2: Asphalt Sidewalk Section Performance

Section #	Section Length (m)	PCI
1861N1SW	26.7	73.9
1862SW	337.4	48.8
1863SW	76.7	0
1864SW	7.3	83.2
1866SW	112.8	54
1867SW	88.9	97.1
1868SW	105.2	0
1869SW	6	78.6
1870SW	87.8	70
1871SW	354.6	0
1872SW	26.7	51
1881SW	71.3	32.1
1882SW	141.3	93.8
1883SW	252.1	3.9
1884SW	247.8	0
1886SW	175.7	7
1887SW	11.9	14.6
1889N1SW	47.6	27
1893SW	493.1	0
1894SW	195.8	93.9
1895SW	60.2	88
1896SW	31.9	82.5
1902SW	101.3	72.4
1903SW	97.7	100
1905SW	47.5	92.7
1908SW	53.1	94.9
1909SW	15.2	100
1911SW	80.1	80.7
1915SW	178.8	58.6
1916SW	167.8	0
1917SW	75.1	0
1918SW	12.7	100
1919SW	88.7	98.2
1921SW	152.4	84.3
1922SW	22.8	91.7
1923SW	28.7	96.9
1928SW	165.3	98.4
1932SW	14.1	73.9
1934SW	62.4	83.5
1938SW	221.5	83.4
1939SW	55.5	90.8



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix D 2021 Condition Assessment Tables

Table D.2: Asphalt Sidewalk Section Performance

Section #	Section Length (m)	PCI
1940SW	68.7	69.1
1941SW	108.9	89.4
1948SW	131.1	90.4
1949N1SW	474.9	89.4
194W1SW	29.7	88.4
1950SW	167	93.7
1952SW	85.1	98.3
195SW	20.9	84.3
196W1SW	11.5	100
1972SW	81	87
1985W1SW	899.4	81.9
1986W1SW	519	79.2
1989N1SW	314.2	74.9
1992W1SW	59.3	83
2013SW	11.1	81.3
2023N1SW	230.7	77.3
2040SW	369.4	98.7
2043SW	184.8	95.4
2044SW	60.9	100
2047SW	284.6	94.5
2048E1SW	151.4	97.7
2049SW	95	89.6
2050SW	48.1	83.5
2051SW	161.4	96.8
2055SW	129.1	86.7
2056N1SW	434.9	81.4
2060N1SW	192.7	78.6
207SW	10.4	73.8
209SW	19.7	65.8
2106SW	4.4	100
2111SW	44.7	92.7
2120SW	41.5	80.8
2130SW	69	90.6
2131SW	39.9	92
2132SW	10.9	64.8
2133SW	72.9	89.5
2134SW	30.1	90.3
2135SW	14.4	83.8
2136SW	87.4	89.1
2137N1SW	150.8	97.7
2143SW	122.8	73.1



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix D 2021 Condition Assessment Tables

Table D.2: Asphalt Sidewalk Section Performance

Section #	Section Length (m)	PCI
2144SW	268.6	90.1
2148W1SW	186.8	71.5
2149SW	132.4	87.8
214SW	291.8	82.8
2150SW	78.4	87.6
2151SW	66.5	100
2152SW	128	89.9
2153SW	11.3	81.6
2154SW	90	100
2155SW	127.6	88.5
2156SW	22.1	100
2157SW	149	90.5
2158SW	50.8	100
215W1SW	9.5	86.2
216W1SW	9.8	80.9
2172SW	105.5	83.4
2173SW	14.2	100
2174SW	177.4	75.7
2175SW	97.8	86.7
2176SW	191.7	56.1
2177SW	12.5	73.9
217SW	297.2	49.1
2210SW	244.3	64.2
2211W1SW	68.3	100
2212N1SW	329.7	92
2213SW	84.5	27.1
2214SW	309.3	89.8
2223SW	41.2	89.7
2224SW	80.6	84
2229E1SW	38.6	100
2230SW	59.7	81.3
2232S1SW	114.3	76.7
2249S1SW	13.8	100
2251SW	27.8	84.8
2256SW	182.4	98.3
2269SW	263	92.1
2270SW	305.9	93.4
2272E1SW	117.9	100
2273E1SW	298.1	89.8
2274E1SW	166.2	88.2
2275N1SW	150.4	90.6



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix D 2021 Condition Assessment Tables

Table D.2: Asphalt Sidewalk Section Performance

Section #	Section Length (m)	PCI
2277SW	38.4	87.6
2278E1SW	77.9	92.5
2295SW	82.5	91.5
2345SW	28.1	88.5
2350SW	43.5	89
2351W1SW	138.9	97.6
2352SW	56.1	73.9
2353SW	18.5	100
2354SW	11.8	78.3
2356SW	51.1	100
2357S1SW	80.6	100
2358SW	279.1	100
2359SW	49.3	100
2360SW	176	98.8
2361SW	47.5	100
2362SW	109.3	100
2363SW	41.1	93.9
2364SW	21.5	100
2371SW	220.6	97.6
2372SW	78.9	100
2373SW	11.4	100
2374SW	53.1	100
2375SW	155.9	95.7
2385SW	192.5	79.2
2392SW	47.6	96.4
2393SW	11.9	100
2394SW	55.7	79.1
2397SW	7.8	81.8
2401SW	5	100
2403SW	93.6	47.1
2404SW	48.4	91.3
2405SW	10.1	92.3
2406W1SW	106.8	100
2407N1SW	322.2	92.7
2408N1SW	807.5	75.4
2411SW	96.9	90
2417SW	53.4	100
2418SW	232.3	91.4
2419SW	43.1	90
2420SW	41.7	91.7
2422SW	143.6	40.5



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix D 2021 Condition Assessment Tables

Table D.2: Asphalt Sidewalk Section Performance

Section #	Section Length (m)	PCI
2423SW	46	91.3
2478W1SW	154.9	82
2495SW	37.1	85.9
2517SW	128.9	100
2518SW	225.9	99
2519SW	139.5	90.6
251E1SW	175.6	64.9
2521N1SW	102.4	100
2523SW	138.2	100
404N1SW	327.2	76.6
541N1SW	132.6	79.5
546SW	65.6	78.2
787SW	188.5	95.9
788SW	292.8	100
803S1SW	125.2	74.4
804N1SW	32.7	89.9
805N1SW	140.9	70.6
806E1SW	246.1	87.6
807SW	98	75.8
833N1SW	178	71.9
834SW	46.8	83.9
87SW	229.3	52.2
89SW	146	100
923SW	87.3	75.8
925SW	274.4	68.8
926SW	397.7	70.8
955SW	77.1	76
983SW	135.4	82.3
984SW	105.3	72.7
985SW	57.1	66.5
986SW	17.6	95.8
987SW	64.4	71.7
989SW	156.8	75.7
990SW	264.6	100
991SW	41.1	100
997SW	82	100
999SW	29.5	100



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix D 2021 Condition Assessment Tables

Table D.3: Gravel Trail Section Performance

Section ID	Length (m)	PaCI
1839SW	120	2
1840SW	99.7	3
1841SW	75.3	2
1848SW	137.6	3
1850SW	132.7	3
1853SW	115.3	2
1854SW	29.2	2
1855SW	16	3
1856SW	21	2
1857SW	35.4	2
1865SW	44.8	3
1873SW	81.7	2
1874SW	49.5	2
1875SW	16.1	2
1876SW	15.4	2
1877SW	28.4	2
1879SW	82.2	4
1890SW	61.9	2
1891SW	70	2
1892SW	119.6	2
1897SW	222.6	2
1898SW	194.7	2
1899SW	92.3	3
1900SW	306.5	2
1901SW	104.8	1
1904SW	30.9	2
1906SW	59.5	2
1907SW	80.3	2
1910SW	69.2	2
1912SW	60.3	2
1913SW	28	2
1924SW	481.1	3
1925SW	196.8	2
1926SW	94.7	4
1927SW	21.3	2
1929SW	111.1	2
1930SW	223.6	4
1931SW	104.1	2
1933SW	77.6	3
1935SW	168	3
1936SW	118.2	3
1937SW	154.8	3
2105SW	482.5	4
2521SW	102.4	2
278SW	53.9	1



APPENDIX E

2021 Recommended Work Programs



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix E 2021 Recommended Work Program

Table E.1: Recommended Sidewalk Work Programs

Sidewalk Id	Street	From	To	Treatment	Treatment Cost (\$)	Treatment Slabs
1003SW				Asphalt Patching	97.2	9
1003SW				PCC Grinding	54	9
1004E1SW	26 Street	END	51 Avenue	Asphalt Patching	32.4	3
1004E1SW	26 Street	END	51 Avenue	PCC Grinding	84	14
1005N1SW	26 Street	51 Avenue	53 Avenue	PCC Grinding	96	16
1005N1SW	26 Street	51 Avenue	53 Avenue	Asphalt Patching	21.6	2
1006N1SW	26 Street	51 Avenue	53 Avenue	PCC Grinding	150	25
1006N1SW	26 Street	51 Avenue	53 Avenue	Asphalt Patching	269.4	23
1010N1SW	27A Street	END	56 Avenue	Asphalt Patching	40.2	4
1010N1SW	27A Street	END	56 Avenue	PCC Grinding	89.6	16
1011E1SW	57 Avenue	26 Street	27 Street	Asphalt Patching	10.8	1
1012SW				PCC Grinding	84	15
1013E1SW	57A Avenue Close	57A Avenue	57A Avenue	Asphalt Patching	129	11
1013E1SW	57A Avenue Close	57A Avenue	57A Avenue	PCC Grinding	156	26
1014N1SW	57A Avenue Close	57A Avenue	57A Avenue	PCC Grinding	24	4
1014N1SW	57A Avenue Close	57A Avenue	57A Avenue	Asphalt Patching	32.4	3
1015W1SW	56 Avenue	30 Street	31 Street	Asphalt Patching	162	15
1015W1SW	56 Avenue	30 Street	31 Street	PCC Grinding	132	22
1016SW				Asphalt Patching	43.2	4
1016SW				PCC Grinding	24	4
1017E1SW	57B Avenue	28 Street	29 Street	Asphalt Patching	92.4	10
1017E1SW	57B Avenue	28 Street	29 Street	PCC Grinding	11.2	2
1018W1SW	57B Avenue	26 Street	28 Street	PCC Grinding	112	20
1018W1SW	57B Avenue	26 Street	28 Street	Asphalt Patching	222	24
1019SW				PCC Grinding	42	7
1019SW				Asphalt Patching	82.2	7
1020E1SW	57 Avenue	26 Street	27 Street	Asphalt Patching	147.6	16
1020E1SW	57 Avenue	26 Street	27 Street	Do Nothing	-	1
1020E1SW	57 Avenue	26 Street	27 Street	PCC Grinding	235.2	42
1022W1SW	57A Avenue	57A Avenue Close	57A Avenue Close	PCC Grinding	162.4	29
1022W1SW	57A Avenue	57A Avenue Close	57A Avenue Close	Asphalt Patching	9	1
1023N1SW	58 Avenue	26 Street	28 Street	Do Nothing	-	1
1023N1SW	58 Avenue	26 Street	28 Street	Asphalt Patching	64.8	7
1023N1SW	58 Avenue	26 Street	28 Street	PCC Grinding	240.8	43
1024W1SW	57A Avenue	57A Avenue Close	57A Avenue Close	Asphalt Patching	157.2	17
1025E1SW	57A Avenue	57A Avenue Close	29 Street	PCC Sidewalk Full Reconstruction, W/Curb	1816	25
1026W1SW	57A Avenue	57A Avenue Close	29 Street	PCC Sidewalk Partial Reconstruction, W/Curb	2466	53
1027S1SW	29 Street	57A Avenue	57B Avenue	PCC Sidewalk Full Reconstruction, W/Curb	3504	49
1028E1SW	56 Avenue	27A Street	28 Street	PCC Grinding	106.4	19
1028E1SW	56 Avenue	27A Street	28 Street	Asphalt Patching	60.6	6
1029W1SW	56 Avenue	27A Street	28 Street	PCC Grinding	54	9
1029W1SW	56 Avenue	27A Street	28 Street	Asphalt Patching	64.8	6
1030S1SW	28 Street	53 Avenue	56 Avenue	PCC Grinding	173.6	31
1030S1SW	28 Street	53 Avenue	56 Avenue	Asphalt Patching	211.8	21
1031W1SW				PCC Grinding	11.2	2
1031W1SW				Asphalt Patching	27.6	3
1032E1SW	59 Avenue	25 Street	29 Street	PCC Sidewalk Full Reconstruction, W/Curb	13764	223
1033W1SW	58 Avenue	26 Street	28 Street	Asphalt Patching	120	13
1033W1SW	58 Avenue	26 Street	28 Street	PCC Grinding	207.2	37
1034SW				PCC Sidewalk Full Reconstruction, W/Curb	3356	46
1035W1SW	57A Avenue	25 Street	26 Street	PCC Sidewalk Partial Reconstruction, W/Curb	2007	43
1036S1SW	29A Street	57B Avenue	58 Avenue	PCC Sidewalk Full Reconstruction, W/Curb	2304	32
1037S1SW	29A Street	57B Avenue	58 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	1623	30
1038E1SW	58 Avenue	29A Street	30 Street	PCC Sidewalk Partial Reconstruction, W/Curb	5226	97
1039S1SW	35 Street	57A Avenue	58 Avenue	PCC Grinding	108	18
1039S1SW	35 Street	57A Avenue	58 Avenue	Asphalt Patching	97.2	9
1040N1SW	29 Street	57B Avenue	59 Avenue	Asphalt Patching	367.2	34
1040N1SW	29 Street	57B Avenue	59 Avenue	PCC Grinding	192	32
1041N1SW	35 Street	57A Avenue	58 Avenue	PCC Grinding	138	23
1041N1SW	35 Street	57A Avenue	58 Avenue	Asphalt Patching	216	20
1042S1SW	35 Street	57A Avenue	58 Avenue	Asphalt Patching	64.8	6
1042S1SW	35 Street	57A Avenue	58 Avenue	PCC Grinding	96	16
1043E1SW	57A Avenue	34 Street	35 Street	PCC Grinding	184.8	33
1043E1SW	57A Avenue	34 Street	35 Street	Asphalt Patching	262.2	26
1044W1SW	57A Avenue	34 Street	35 Street	PCC Grinding	180	30



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix E 2021 Recommended Work Program

Table E.1: Recommended Sidewalk Work Programs

Sidewalk Id	Street	From	To	Treatment	Treatment Cost (\$)	Treatment Slabs
1044W1SW	57A Avenue	34 Street	35 Street	Asphalt Patching	259.2	24
1045W1SW	57B Avenue	29A Street	30 Street	PCC Sidewalk Partial Reconstruction, W/Curb	4593	85
1046N1SW	29A Street	57B Avenue	58 Avenue	PCC Sidewalk Full Reconstruction, W/Curb	3008	42
1047E1SW	57B Avenue	29A Street	30 Street	PCC Sidewalk Partial Reconstruction, W/Curb	4911	91
1048W1SW	57A Avenue	29 Street	30 Street	PCC Sidewalk Partial Reconstruction, W/Curb	6426	128
1050W1SW	31 Street	57A Avenue	57B Avenue	PCC Sidewalk Full Reconstruction, W/Curb	1244	17
1051E1SW	57B Avenue	31 Street	34 Street	PCC Sidewalk Full Reconstruction, W/Curb	3200	44
1052S1SW	29 Street	52 Avenue	54 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	2742	51
1054SW				Asphalt Patching	54	5
1055SW				PCC Grinding	6	1
1055SW				Asphalt Patching	10.8	1
1056W1SW	55 Avenue	29 Street	30 Street	PCC Sidewalk Partial Reconstruction, W/Curb	8265	153
1057SW				PCC Grinding	12	2
1057SW				Asphalt Patching	32.4	3
1059N1SW	55 Avenue	29 Street	30 Street	Asphalt Patching	21.6	2
1060S1SW	31 Street	55A Avenue	56 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	1302	24
1061SW				Asphalt Patching	177.6	19
1061SW				PCC Grinding	260	50
1062S1SW	31 Street	55A Avenue	56 Avenue	PCC Grinding	162	27
1062S1SW	31 Street	55A Avenue	56 Avenue	Asphalt Patching	129.6	12
1063W1SW	55A Avenue	31 Street	35 Street	PCC Grinding	360	60
1063W1SW	55A Avenue	31 Street	35 Street	Asphalt Patching	162	15
1063W1SW	55A Avenue	31 Street	35 Street	Do Nothing	-	1
1064S1SW	29 Street	57A Avenue	57B Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	2070	45
1065W1SW	55B Avenue	END	30 Street	PCC Grinding	246	41
1065W1SW	55B Avenue	END	30 Street	Asphalt Patching	152.4	13
1066S1SW	30 Street	55B Avenue	56 Avenue	PCC Sidewalk Full Reconstruction, W/Curb	3360	47
1067N1SW	30 Street	55A Avenue	55B Avenue	Asphalt Patching	75.6	7
1067N1SW	30 Street	55A Avenue	55B Avenue	PCC Grinding	54	9
1068N1SW	30 Street	55A Avenue	55B Avenue	PCC Grinding	60	10
1068N1SW	30 Street	55A Avenue	55B Avenue	Asphalt Patching	118.8	11
1069E2SW	57 Avenue	31 Street	34 Street	PCC Sidewalk Full Reconstruction, W/Curb	116	2
1070SW				PCC Grinding	30	5
1071S1SW	35 Street	55A Avenue	57 Avenue	Asphalt Patching	75.6	7
1071S1SW	35 Street	55A Avenue	57 Avenue	PCC Grinding	264	44
1072SW				PCC Grinding	70.4	11
1072W1SW				Asphalt Patching	237.6	11
1072W1SW				PCC Grinding	756	63
1073E1SW	57 Avenue	31 Street	34 Street	Asphalt Patching	21.6	2
1073E1SW	57 Avenue	31 Street	34 Street	PCC Grinding	90	15
1074N1SW	35 Street	55A Avenue	57 Avenue	Asphalt Patching	345.6	32
1074N1SW	35 Street	55A Avenue	57 Avenue	Do Nothing	-	1
1074N1SW	35 Street	55A Avenue	57 Avenue	PCC Grinding	834	139
1075SW				PCC Grinding	54	9
1075SW				Asphalt Patching	10.8	1
1076SW				Asphalt Patching	21.6	2
1078W1SW	55 Avenue	31 Street	35 Street	PCC Grinding	594	99
1078W1SW	55 Avenue	31 Street	35 Street	Asphalt Patching	777.6	72
1079W1SW	52 Avenue	35 Street	36 Street	PCC Sidewalk Partial Reconstruction, W/Curb	1632	30
1080N1SW	29 Street	54 Avenue	55 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	2271	42
1081W1SW	52 Avenue	29 Street	31 Street	PCC Grinding	252	42
1081W1SW	52 Avenue	29 Street	31 Street	Asphalt Patching	140.4	13
1082S1SW	32 Street	53 Avenue	54 Avenue	PCC Grinding	132	22
1082S1SW	32 Street	53 Avenue	54 Avenue	Asphalt Patching	302.4	28
1083S1SW	34 Street	53 Avenue	54 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	4611	85
1084W1SW	33 Street	53 Avenue	W of 53 Avenue	PCC Grinding	90	15
1084W1SW	33 Street	53 Avenue	W of 53 Avenue	Asphalt Patching	151.2	14
1085S1SW	31 Street	54 Avenue	55 Avenue	PCC Sidewalk Full Reconstruction, W/Curb	5780	80
1086E1SW	54 Avenue	30 Street	31 Street	Asphalt Patching	162	15
1086E1SW	54 Avenue	30 Street	31 Street	PCC Grinding	192	32
1087N1SW	31 Street	54 Avenue	55 Avenue	PCC Grinding	126	21
1087N1SW	31 Street	54 Avenue	55 Avenue	Asphalt Patching	280.8	26
1088N1SW	34 Street	53 Avenue	54 Avenue	Asphalt Patching	334.8	31
1088N1SW	34 Street	53 Avenue	54 Avenue	PCC Grinding	234	39
1089E1SW	55A Avenue	29 Street	30 Street	Asphalt Patching	216	20



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix E 2021 Recommended Work Program

Table E.1: Recommended Sidewalk Work Programs

Sidewalk Id	Street	From	To	Treatment	Treatment Cost (\$)	Treatment Slabs
1089E1SW	55A Avenue	29 Street	30 Street	PCC Grinding	168	28
1099S1SW	36 Street	57 Avenue	59 Avenue	Asphalt Patching	378	35
1099S1SW	36 Street	57 Avenue	59 Avenue	PCC Grinding	690	115
1100E1SW	57 Avenue	35 Street	36 Street	PCC Sidewalk Partial Reconstruction, W/Curb	3042	56
1101S1SW	35 Street	55A Avenue	57 Avenue	Asphalt Patching	21.6	2
1101S1SW	35 Street	55A Avenue	57 Avenue	PCC Grinding	210	35
1102W1SW	57 Avenue	34 Street	35 Street	Asphalt Patching	64.8	6
1102W1SW	57 Avenue	34 Street	35 Street	PCC Grinding	156	26
1103S1SW	34 Street	57 Avenue	57A Avenue	Asphalt Patching	183.6	17
1103S1SW	34 Street	57 Avenue	57A Avenue	PCC Grinding	54	9
1104E1SW	57 Avenue	34 Street	35 Street	Asphalt Patching	21.6	2
1104E1SW	57 Avenue	34 Street	35 Street	PCC Grinding	42	7
1104E2SW	57 Avenue	34 Street	35 Street	Asphalt Patching	10.8	1
1104E2SW	57 Avenue	34 Street	35 Street	PCC Grinding	72	12
1105E1SW	57 Avenue	31 Street	34 Street	PCC Grinding	36	6
1105E1SW	57 Avenue	31 Street	34 Street	Asphalt Patching	32.4	3
1106W1SW	57 Avenue	31 Street	34 Street	Asphalt Patching	162	15
1106W1SW	57 Avenue	31 Street	34 Street	PCC Grinding	336	56
1107S1SW	31 Street	56 Avenue	57 Avenue	PCC Grinding	54	9
1107S1SW	31 Street	56 Avenue	57 Avenue	Asphalt Patching	183.6	17
1108E1SW	56 Avenue	30 Street	31 Street	PCC Grinding	210	35
1108E1SW	56 Avenue	30 Street	31 Street	Asphalt Patching	129.6	12
1109W1SW	56 Avenue	30 Street	31 Street	Asphalt Patching	97.2	9
1109W1SW	56 Avenue	30 Street	31 Street	PCC Grinding	48	8
1110W1SW	31 Street	56 Avenue	57 Avenue	Asphalt Patching	50.4	5
1110W1SW	31 Street	56 Avenue	57 Avenue	PCC Grinding	11.2	2
1111E1SW	55A Avenue	31 Street	35 Street	Asphalt Patching	108	10
1111E1SW	55A Avenue	31 Street	35 Street	PCC Grinding	594	99
1112N1SW	31 Street	55A Avenue	56 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	6420	119
1113W1SW	55A Avenue	END	31 Street	Asphalt Patching	216	20
1113W1SW	55A Avenue	END	31 Street	PCC Grinding	174	29
1114E1SW	55A Avenue	END	31 Street	Asphalt Patching	183.6	17
1114E1SW	55A Avenue	END	31 Street	PCC Grinding	126	21
1115S1SW	31 Street	55 Avenue	55A Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	2985	55
1116N1SW	31 Street	55 Avenue	55A Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	2628	49
1117E1SW	55 Avenue	31 Street	35 Street	Asphalt Patching	540	50
1117E1SW	55 Avenue	31 Street	35 Street	PCC Grinding	576	96
1118S1SW	31 Street	52 Avenue	54 Avenue	PCC Grinding	120	20
1118S1SW	31 Street	52 Avenue	54 Avenue	Asphalt Patching	108	10
1119S1SW	31 Street	51B Avenue	52 Avenue	PCC Grinding	144	24
1119S1SW	31 Street	51B Avenue	52 Avenue	Asphalt Patching	75.6	7
1120E1SW	52 Avenue	31 Street	32 Street	PCC Sidewalk Partial Reconstruction, W/Curb	2712	50
1121N1SW	31 Street	52 Avenue	54 Avenue	Asphalt Patching	129.6	12
1121N1SW	31 Street	52 Avenue	54 Avenue	PCC Grinding	138	23
1122E1SW	52 Avenue	29 Street	31 Street	PCC Sidewalk Partial Reconstruction, W/Curb	8658	160
1123W1SW	51 Avenue	33 Street	34 Street	PCC Grinding	126	21
1124N1SW	50 Avenue SR W	31 Street	33 Street	Asphalt Patching	207.6	24
1124N1SW	50 Avenue SR W	31 Street	33 Street	PCC Grinding	158.4	33
1124S1SW	50 Avenue SR W	31 Street	33 Street	PCC Grinding	282	47
1124S1SW	50 Avenue SR W	31 Street	33 Street	Asphalt Patching	388.8	36
1125E1SW	51 Avenue	35 Street	36 Street	PCC Grinding	192	32
1126W1SW	51 Avenue	32 Street	33 Street	Asphalt Patching	43.2	2
1126W1SW	51 Avenue	32 Street	33 Street	PCC Grinding	120	10
1127E1SW	51 Avenue	34 Street	35 Street	PCC Grinding	120	10
1128E1SW	51 Avenue	35 Street	36 Street	PCC Sidewalk Partial Reconstruction, W/Curb	5202	96
1129N1SW	27 Street	51 Avenue	51 Avenue	Asphalt Patching	171	10
1129N1SW	27 Street	51 Avenue	51 Avenue	PCC Grinding	114	19
1131W1SW	51B Avenue	29 Street	31 Street	Asphalt Patching	324	30
1131W1SW	51B Avenue	29 Street	31 Street	PCC Grinding	438	73
1132E1SW	51B Avenue	29 Street	31 Street	Asphalt Patching	151.2	14
1132E1SW	51B Avenue	29 Street	31 Street	PCC Grinding	270	45
1133N1SW	31 Street	51B Avenue	52 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	3438	64
1134N1SW	31 Street	51A Avenue	51B Avenue	PCC Sidewalk Full Reconstruction, W/Curb	7640	106
1135S1SW	31 Street	51A Avenue	51B Avenue	PCC Grinding	342	57
1135S1SW	31 Street	51A Avenue	51B Avenue	Asphalt Patching	216	20



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Appendix E 2021 Recommended Work Program

Table E.1: Recommended Sidewalk Work Programs

Sidewalk Id	Street	From	To	Treatment	Treatment Cost (\$)	Treatment Slabs
1136W1SW	32 Street	51 Avenue	END	PCC Grinding	282	47
1137W1SW	51 Avenue	31 Street	32 Street	PCC Sidewalk Partial Reconstruction, W/Curb	2478	46
1138W1SW	51 Avenue	32 Street	33 Street	PCC Grinding	164	41
1139E1SW	51 Avenue	26 Street	26A Street	Asphalt Patching	190.2	18
1139E1SW	51 Avenue	26 Street	26A Street	PCC Grinding	294.4	46
1141E1SW	51A Avenue	30 Street	31 Street	PCC Sidewalk Full Reconstruction, W/Curb	2736	38
1142N1SW	31 Street	51 Avenue	51A Avenue	PCC Grinding	30	5
1142N1SW	31 Street	51 Avenue	51A Avenue	Asphalt Patching	54	5
1143S1SW	31 Street	51 Avenue	51A Avenue	PCC Sidewalk Full Reconstruction, W/Curb	2992	42
1144E1SW	51 Avenue	31 Street	32 Street	Asphalt Patching	64.8	6
1144E1SW	51 Avenue	31 Street	32 Street	Do Nothing	-	1
1144E1SW	51 Avenue	31 Street	32 Street	PCC Grinding	138	23
1145W1SW	51 Avenue	29 Street	31 Street	PCC Grinding	358.4	64
1145W1SW	51 Avenue	29 Street	31 Street	Asphalt Patching	191.4	19
1146E1SW	51 Avenue	29 Street	31 Street	Asphalt Patching	272.4	27
1146E1SW	51 Avenue	29 Street	31 Street	PCC Grinding	134.4	24
1147S1SW	27 Street	51 Avenue	51 Avenue	PCC Grinding	24	4
1147S1SW	27 Street	51 Avenue	51 Avenue	Asphalt Patching	43.2	4
1148N1SW	27 Street	51 Avenue	51 Avenue	Asphalt Patching	10.2	1
1148N1SW	27 Street	51 Avenue	51 Avenue	PCC Grinding	50.4	9
1149S1SW	27 Street	51 Avenue	51 Avenue	Asphalt Patching	100.8	10
1149S1SW	27 Street	51 Avenue	51 Avenue	PCC Grinding	56	10
1150W1SW	51 Avenue	26A Street	27 Street	PCC Sidewalk Partial Reconstruction, W/Curb	2586	48
1151W1SW	52 Avenue	27 Street	29 Street	PCC Sidewalk Partial Reconstruction, W/Curb	4806	89
1152N1SW	27 Street	51 Avenue	52 Avenue	Asphalt Patching	226.8	21
1152N1SW	27 Street	51 Avenue	52 Avenue	PCC Grinding	360	60
1153S1SW	27 Street	51 Avenue	52 Avenue	Asphalt Patching	10.2	1
1154S1SW	27 Street	52 Avenue	53 Avenue	PCC Grinding	50.4	9
1154S1SW	27 Street	52 Avenue	53 Avenue	Asphalt Patching	161.4	16
1155N1SW	27 Street	52 Avenue	53 Avenue	PCC Grinding	150	25
1155N1SW	27 Street	52 Avenue	53 Avenue	Asphalt Patching	75.6	7
1156N1SW	27 Street	53 Avenue	54 Avenue	Asphalt Patching	201.6	20
1156N1SW	27 Street	53 Avenue	54 Avenue	PCC Grinding	84	15
1157W1SW	26A Street	51 Avenue	END	PCC Sidewalk Partial Reconstruction, W/Curb	5580	103
1158W1SW	51 Avenue	26 Street	26A Street	PCC Grinding	42	7
1159W1SW	57B Avenue	28 Street	29 Street	PCC Grinding	39.2	7
1159W1SW	57B Avenue	28 Street	29 Street	Asphalt Patching	109.2	10
1160E1SW	57B Avenue	28 Street	29 Street	PCC Sidewalk Partial Reconstruction, W/Curb	1116	24
1161S1SW	29 Street	57B Avenue	59 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	6366	108
1162N1SW	28 Street	57B Avenue	58 Avenue	PCC Grinding	140	25
1162N1SW	28 Street	57B Avenue	58 Avenue	Asphalt Patching	64.8	7
1163E1SW	57B Avenue	26 Street	28 Street	Asphalt Patching	73.8	8
1163E1SW	57B Avenue	26 Street	28 Street	PCC Grinding	44.8	8
1164S1SW	28 Street	57B Avenue	58 Avenue	PCC Grinding	56	10
1164S1SW	28 Street	57B Avenue	58 Avenue	Asphalt Patching	46.2	5
1165W1SW	58 Avenue	26 Street	28 Street	PCC Grinding	173.6	31
1165W1SW	58 Avenue	26 Street	28 Street	Do Nothing	-	2
1165W1SW	58 Avenue	26 Street	28 Street	Asphalt Patching	157.2	17
1166E1SW	58 Avenue	26 Street	28 Street	Asphalt Patching	138.6	15
1166E1SW	58 Avenue	26 Street	28 Street	PCC Grinding	72.8	13
1166E1SW	58 Avenue	26 Street	28 Street	Do Nothing	-	1
1167E1SW	57A Avenue	26 Street LN	27 Street	Do Nothing	-	1
1167E1SW	57A Avenue	26 Street LN	27 Street	PCC Grinding	173.6	31
1167E1SW	57A Avenue	26 Street LN	27 Street	Asphalt Patching	141	14
1168N1SW	25 Street	53 Avenue	57A Avenue	PCC Sidewalk Full Reconstruction, W/Curb	32340	361
1169E1SW	57A Avenue	25 Street	26 Street	PCC Grinding	95.2	17
1169E1SW	57A Avenue	25 Street	26 Street	Asphalt Patching	151.2	15
1170W1SW	57A Avenue	26 Street LN	27 Street	Asphalt Patching	184.8	20
1170W1SW	57A Avenue	26 Street LN	27 Street	Do Nothing	-	1
1170W1SW	57A Avenue	26 Street LN	27 Street	PCC Grinding	201.6	36
1171N1SW	26 Street	57A Avenue	57B Avenue	Asphalt Patching	37.2	4
1171N1SW	26 Street	57A Avenue	57B Avenue	PCC Grinding	89.6	16
1172E1SW	57B Avenue	26 Street	28 Street	PCC Grinding	207.2	37
1172E1SW	57B Avenue	26 Street	28 Street	Asphalt Patching	184.8	20
1173S1SW	26 Street	57A Avenue	57B Avenue	Asphalt Patching	18.6	2



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Appendix E 2021 Recommended Work Program

Table E.1: Recommended Sidewalk Work Programs

Sidewalk Id	Street	From	To	Treatment	Treatment Cost (\$)	Treatment Slabs
1173S1SW	26 Street	57A Avenue	57B Avenue	PCC Grinding	72.8	13
1174W1SW	58 Avenue	34 Street	35 Street	PCC Sidewalk Full Reconstruction, W/Curb	7604	106
1175E1SW	59 Avenue	29 Street	36 Street	PCC Grinding	354	59
1175E1SW	59 Avenue	29 Street	36 Street	Asphalt Patching	291.6	27
1176E1SW	58 Avenue	34 Street	35 Street	Asphalt Patching	312	25
1176E1SW	58 Avenue	34 Street	35 Street	PCC Grinding	108.8	17
1177E1SW	58 Avenue	30 Street	34 Street	Asphalt Patching	237.6	22
1177E1SW	58 Avenue	30 Street	34 Street	PCC Grinding	312	52
1178W1SW	53 Avenue	26 Street	26 Street	PCC Sidewalk Full Reconstruction, W/Curb	1592	22
1179E1SW	53 Avenue	26 Street	26 Street	PCC Grinding	6	1
1180E1SW	51 Avenue	26A Street	27 Street	PCC Sidewalk Partial Reconstruction, W/Curb	3108	62
1181W1SW	53 Avenue	25 Street	26 Street	PCC Grinding	54	9
1181W1SW	53 Avenue	25 Street	26 Street	Asphalt Patching	105.6	9
1182N1SW	25 Street	50 Avenue	53 Avenue	PCC Sidewalk Full Reconstruction, W/Curb	28200	207
1183E1SW	51A Avenue	29 Street	30 Street	PCC Sidewalk Partial Reconstruction, W/Curb	3174	59
1184W1SW	51A Avenue	30 Street	31 Street	PCC Sidewalk Partial Reconstruction, W/Curb	1668	31
1185S1SW	30 Street	51A Avenue	END	Asphalt Patching	388.8	36
1185S1SW	30 Street	51A Avenue	END	PCC Grinding	162	27
1186S1SW	29 Street	51A Avenue	51B Avenue	Asphalt Patching	302.4	28
1186S1SW	29 Street	51A Avenue	51B Avenue	PCC Grinding	414	69
1187W1SW	51A Avenue	29 Street	30 Street	PCC Sidewalk Partial Reconstruction, W/Curb	2040	38
1188S1SW	51B Avenue	29 Street	31 Street	PCC Sidewalk Full Reconstruction, W/Curb	308	4
1189N1SW	29 Street	51A Avenue	51B Avenue	Asphalt Patching	237.6	22
1189N1SW	29 Street	51A Avenue	51B Avenue	PCC Grinding	324	54
1190E1SW	51 Avenue	33 Street	34 Street	PCC Grinding	30	5
1191N1SW				PCC Grinding	264	66
1191N1SW				Asphalt Patching	7.2	1
1192E1SW	51 Avenue	34 Street	35 Street	PCC Grinding	144	24
1193S1SW				PCC Grinding	222	37
1194N1SW	51A Avenue	34 Street	END	PCC Sidewalk Partial Reconstruction, W/Curb	4614	107
1195N1SW	34 Street	51 Avenue	51A Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	2253	42
1196W1SW	52 Avenue	34 Street	35 Street	Asphalt Patching	237.6	22
1196W1SW	52 Avenue	34 Street	35 Street	PCC Grinding	270	45
1197S1SW	34 Street	51A Avenue	52 Avenue	PCC Grinding	72	12
1197S1SW	34 Street	51A Avenue	52 Avenue	Asphalt Patching	21.6	2
1198N1SW	34 Street	51A Avenue	52 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	5079	94
1199S1SW	35 Street	52 Avenue	54 Avenue	Asphalt Patching	248.4	23
1199S1SW	35 Street	52 Avenue	54 Avenue	PCC Grinding	252	42
1200E1SW	52 Avenue	34 Street	35 Street	Asphalt Patching	138.6	11
1200E1SW	52 Avenue	34 Street	35 Street	PCC Grinding	240	40
1201N1SW	35 Street	52 Avenue	54 Avenue	PCC Grinding	246	41
1201N1SW	35 Street	52 Avenue	54 Avenue	Asphalt Patching	280.8	26
1202N1SW	35 Street	54 Avenue	55 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	3606	67
1203W1SW	54 Avenue	34 Street	35 Street	PCC Grinding	84	14
1203W1SW	54 Avenue	34 Street	35 Street	Asphalt Patching	54	5
1204E1SW	54 Avenue	34 Street	35 Street	Asphalt Patching	32.4	3
1204E1SW	54 Avenue	34 Street	35 Street	PCC Grinding	66	11
1205W1SW	55 Avenue	31 Street	35 Street	PCC Grinding	18	3
1205W1SW	55 Avenue	31 Street	35 Street	Asphalt Patching	10.8	1
1206S1SW	35 Street	54 Avenue	55 Avenue	Asphalt Patching	32.4	3
1206S1SW	35 Street	54 Avenue	55 Avenue	PCC Grinding	72	12
1207W1SW	54 Avenue	32 Street	34 Street	PCC Sidewalk Partial Reconstruction, W/Curb	5385	100
1208E1SW	54 Avenue	32 Street	34 Street	Asphalt Patching	194.4	18
1208E1SW	54 Avenue	32 Street	34 Street	PCC Grinding	300	50
1209E1SW	53 Avenue	32 Street	33 Street	PCC Grinding	174	29
1209E1SW	53 Avenue	32 Street	33 Street	Asphalt Patching	172.8	16
1210E1SW	53 Avenue	33 Street	34 Street	PCC Grinding	132	22
1210E1SW	53 Avenue	33 Street	34 Street	Asphalt Patching	237.6	22
1211N1SW	32 Street	52 Avenue	53 Avenue	Asphalt Patching	97.2	9
1211N1SW	32 Street	52 Avenue	53 Avenue	PCC Grinding	30	5
1212N1SW	32 Street	53 Avenue	54 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	3468	64
1213W1SW	32 Street	52 Avenue	53 Avenue	Asphalt Patching	151.2	14
1213W1SW	32 Street	52 Avenue	53 Avenue	PCC Grinding	78	13
1214W1SW	52 Avenue	32 Street	34 Street	Asphalt Patching	280.8	26
1214W1SW	52 Avenue	32 Street	34 Street	PCC Grinding	156	26



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Appendix E 2021 Recommended Work Program

Table E.1: Recommended Sidewalk Work Programs

Sidewalk Id	Street	From	To	Treatment	Treatment Cost (\$)	Treatment Slabs
1215W1SW	52 Avenue	31 Street	32 Street	PCC Sidewalk Partial Reconstruction, W/Curb	2325	43
1216E1SW	52 Avenue	32 Street	34 Street	PCC Grinding	156	26
1216E1SW	52 Avenue	32 Street	34 Street	Asphalt Patching	162	15
1217W1SW	52 Avenue	29 Street	31 Street	PCC Grinding	210	35
1217W1SW	52 Avenue	29 Street	31 Street	Asphalt Patching	172.8	16
1218E1SW	52 Avenue	27 Street	29 Street	Asphalt Patching	183.6	17
1218E1SW	52 Avenue	27 Street	29 Street	PCC Grinding	276	46
1219N1SW	29 Street	52 Avenue	54 Avenue	PCC Grinding	54	9
1219N1SW	29 Street	52 Avenue	54 Avenue	Asphalt Patching	32.4	3
1220S1SW	29 Street	54 Avenue	55 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	3459	64
1222E1SW	29 Street	54 Avenue	55 Avenue	PCC Sidewalk Full Reconstruction, W/Curb	4	1
1223N1SW	30 Street	54 Avenue	55 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	3297	61
1224S1SW	30 Street	54 Avenue	55 Avenue	PCC Grinding	54	9
1224S1SW	30 Street	54 Avenue	55 Avenue	Asphalt Patching	248.4	23
1225W1SW	54 Avenue	30 Street	31 Street	PCC Sidewalk Partial Reconstruction, W/Curb	2271	42
1226W1SW	54 Avenue	29 Street	30 Street	PCC Sidewalk Partial Reconstruction, W/Curb	7416	137
1227E1SW	54 Avenue	29 Street	30 Street	Asphalt Patching	280.8	26
1227E1SW	54 Avenue	29 Street	30 Street	PCC Grinding	486	81
1231S1SW	36 Street	49 Avenue	50 Avenue SR E	PCC Grinding	16.8	3
1231S1SW	36 Street	49 Avenue	50 Avenue SR E	Asphalt Patching	10.2	1
1232E1SW	50 Avenue SR E	34 Street	36 Street	Asphalt Patching	97.2	9
1232E1SW	50 Avenue SR E	34 Street	36 Street	PCC Grinding	264	44
1233E1SW	50 Avenue SR E	34 Street	36 Street	PCC Sidewalk Full Reconstruction, W/Curb	1256	17
1237S1SW	34 Street	49 Avenue	50 Avenue SR E	PCC Grinding	12	2
1238E1SW	50 Avenue SR W	31 Street	33 Street	Asphalt Patching	54	5
1238E1SW	50 Avenue SR W	31 Street	33 Street	PCC Grinding	126	21
1238E1SW	50 Avenue SR W	31 Street	33 Street	Do Nothing	-	3
1239E1SW	50 Avenue SR W	31 Street	33 Street	Do Nothing	-	1
1239E1SW	50 Avenue SR W	31 Street	33 Street	PCC Grinding	78	13
1239E1SW	50 Avenue SR W	31 Street	33 Street	Asphalt Patching	21.6	2
1251SW				PCC Grinding	150	25
1251SW				Asphalt Patching	140.4	13
1271W1SW	58 Avenue	30 Street	34 Street	PCC Grinding	354	59
1271W1SW	58 Avenue	30 Street	34 Street	Asphalt Patching	378	35
1272N1SW	30 Street	57B Avenue	58 Avenue	PCC Grinding	78	13
1272N1SW	30 Street	57B Avenue	58 Avenue	Asphalt Patching	64.8	6
1273N1SW	30 Street	57B Avenue	58 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	2994	55
1274E1SW	58 Avenue	29A Street	30 Street	PCC Sidewalk Partial Reconstruction, W/Curb	786	15
1275S1SW	58 Avenue	30 Street	34 Street	Asphalt Patching	140.4	13
1275S1SW	58 Avenue	30 Street	34 Street	PCC Grinding	66	11
1276W1SW	34 Street	57A Avenue	57B Avenue	PCC Sidewalk Full Reconstruction, W/Curb	1988	24
1277E1SW	34 Street	57A Avenue	57B Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	2970	55
1278N1SW	34 Street	57 Avenue	57A Avenue	Asphalt Patching	21.6	2
1278N1SW	34 Street	57 Avenue	57A Avenue	PCC Grinding	156	26
1279S1SW	34 Street	57B Avenue	58 Avenue	PCC Grinding	42	7
1279S1SW	34 Street	57B Avenue	58 Avenue	Asphalt Patching	151.2	14
1280E1SW	57B Avenue	31 Street	34 Street	PCC Sidewalk Full Reconstruction, W/Curb	628	11
1281N1SW	34 Street	57B Avenue	58 Avenue	PCC Grinding	90	15
1281N1SW	34 Street	57B Avenue	58 Avenue	Asphalt Patching	75.6	7
1282W1SW	57B Avenue	31 Street	34 Street	Asphalt Patching	240	22
1282W1SW	57B Avenue	31 Street	34 Street	PCC Grinding	134.4	24
1283E1SW	31 Street	57A Avenue	57B Avenue	PCC Grinding	228	38
1283E1SW	31 Street	57A Avenue	57B Avenue	Asphalt Patching	248.4	23
1284N1SW	31 Street	57 Avenue	57A Avenue	PCC Sidewalk Full Reconstruction, W/Curb	6164	92
1285E1SW	31 Street	57 Avenue	57A Avenue	PCC Grinding	39.2	7
1286W1SW	31 Street	57A Avenue	57B Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	2796	52
1287S1SW	30 Street	57B Avenue	58 Avenue	PCC Sidewalk Full Reconstruction, W/Curb	3004	42
1288S1SW	30 Street	57A Avenue	57B Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	2028	38
1289N1SW	30 Street	57A Avenue	57B Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	2010	37
1290W1SW	57A Avenue	30 Street	31 Street	Asphalt Patching	100.8	10
1290W1SW	57A Avenue	30 Street	31 Street	PCC Grinding	134.4	24
1291E1SW	57A Avenue	30 Street	31 Street	PCC Sidewalk Partial Reconstruction, W/Curb	2607	52
1292S1SW	26 Street	54 Avenue	57 Avenue	PCC Grinding	300	50
1292S1SW	26 Street	54 Avenue	57 Avenue	Asphalt Patching	162	15
1293E1SW	57 Avenue	26 Street	27 Street	Asphalt Patching	75.6	7



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Appendix E 2021 Recommended Work Program

Table E.1: Recommended Sidewalk Work Programs

Sidewalk Id	Street	From	To	Treatment	Treatment Cost (\$)	Treatment Slabs
1293E1SW	57 Avenue	26 Street	27 Street	PCC Grinding	108	18
1294N1SW	28 Street	53 Avenue	56 Avenue	Asphalt Patching	356.4	33
1294N1SW	28 Street	53 Avenue	56 Avenue	PCC Grinding	276	46
1295N1SW	29 Street	55A Avenue	56 Avenue	PCC Sidewalk Full Reconstruction, W/Curb	6272	75
1296E1SW	56 Avenue	28 Street	29 Street	Asphalt Patching	118.8	11
1296E1SW	56 Avenue	28 Street	29 Street	PCC Grinding	90	15
1297W1SW	56 Avenue	28 Street	29 Street	PCC Grinding	72	12
1297W1SW	56 Avenue	28 Street	29 Street	Asphalt Patching	43.2	4
1298W1SW	56 Avenue	29 Street	30 Street	PCC Sidewalk Partial Reconstruction, W/Curb	2538	47
1299E1SW	56 Avenue	29 Street	30 Street	PCC Grinding	300	50
1299E1SW	56 Avenue	29 Street	30 Street	Asphalt Patching	183.6	17
1300N1SW	30 Street	55B Avenue	56 Avenue	PCC Sidewalk Full Reconstruction, W/Curb	4248	58
1301S1SW	30 Street	55A Avenue	55B Avenue	Asphalt Patching	108	10
1301S1SW	30 Street	55A Avenue	55B Avenue	PCC Grinding	144	24
1302W1SW	55A Avenue	29 Street	30 Street	PCC Grinding	182	35
1302W1SW	55A Avenue	29 Street	30 Street	Asphalt Patching	299.4	32
1303S1SW	29 Street	55A Avenue	56 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	4716	87
1304W1SW	26 Street Close	53 Avenue	END	Asphalt Patching	151.2	14
1304W1SW	26 Street Close	53 Avenue	END	PCC Grinding	330	55
1305W1SW	53 Avenue	26 Street	27 Street	PCC Grinding	78	13
1305W1SW	53 Avenue	26 Street	27 Street	Asphalt Patching	32.4	3
1306E1SW	53 Avenue	26 Street	27 Street	Asphalt Patching	86.4	8
1306E1SW	53 Avenue	26 Street	27 Street	PCC Grinding	12	2
1307W1SW	28 Street Close	END	53 Avenue	Asphalt Patching	226.8	21
1307W1SW	28 Street Close	END	53 Avenue	PCC Grinding	180	30
1308E1SW	53 Avenue	27 Street	28 Street Close	PCC Grinding	90	15
1308E1SW	53 Avenue	27 Street	28 Street Close	Asphalt Patching	10.8	1
1309W1SW	53 Avenue	27 Street	28 Street Close	Asphalt Patching	50.4	5
1309W1SW	53 Avenue	27 Street	28 Street Close	PCC Grinding	61.6	11
1310E1SW	53 Avenue	25 Street	26 Street	Asphalt Patching	10.8	1
1310E1SW	53 Avenue	25 Street	26 Street	PCC Grinding	12	2
1331SW				PCC Sidewalk Partial Reconstruction, W/Curb	921	16
1355SW				PCC Grinding	51.2	8
1355SW				Asphalt Patching	22.8	2
1357SW				PCC Grinding	130	25
1360SW				Asphalt Patching	98.4	9
1360SW				PCC Grinding	117.6	21
1369SW				Asphalt Patching	54	5
1369SW				PCC Grinding	30	5
1404SW				Asphalt Patching	187.2	16
1404SW				PCC Grinding	132	22
1432SW				PCC Grinding	12	2
1460SW				PCC Sidewalk Partial Reconstruction, W/Curb	2532	46
1469SW				PCC Sidewalk Full Reconstruction, W/Curb	4036	49
1492S1SW				Asphalt Patching	54	4
1492S1SW				PCC Grinding	6.4	1
1503S1SW				Asphalt Patching	23.4	2
1503S1SW				PCC Grinding	5.6	1
1507E1SW				Asphalt Patching	13.8	1
1507E1SW				PCC Grinding	6	1
1533W1SW				Asphalt Patching	27	2
1579SW				Asphalt Patching	138.6	11
1579SW				PCC Grinding	102	17
1580SW				Asphalt Patching	64.8	4
1580SW				PCC Grinding	48	8
1589N1SW	36 Street	49 Avenue	50 Avenue SR E	PCC Grinding	144	24
1597SW				PCC Sidewalk Full Reconstruction, W/Curb	3908	44
1617SW				PCC Grinding	24	4
1617SW				Asphalt Patching	108	8
1645E1SW	62 Avenue	36 Street	43 Street	PCC Sidewalk Full Reconstruction, W/Curb	41144	402
1646SW				Asphalt Patching	148.8	11
1646SW				PCC Grinding	30	5
1647E1SW	62 Avenue	36 Street	43 Street	PCC Sidewalk Full Reconstruction, W/Curb	4864	48
1649SW				Asphalt Patching	13.8	1
1649SW				PCC Grinding	6	1



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix E 2021 Recommended Work Program

Table E.1: Recommended Sidewalk Work Programs

Sidewalk Id	Street	From	To	Treatment	Treatment Cost (\$)	Treatment Slabs
1780E1SW	60 Avenue	40 Street	41 Street	Asphalt Patching	90.6	9
1780E1SW	60 Avenue	40 Street	41 Street	PCC Grinding	67.2	12
1838E2SW	57 Avenue	43 Street	44 Street	PCC Grinding	102	17
1838E2SW	57 Avenue	43 Street	44 Street	Asphalt Patching	10.8	1
1943S2SW	44 Street	50 Avenue	52 Avenue	PCC Grinding	180	30
1943S2SW	44 Street	50 Avenue	52 Avenue	Asphalt Patching	86.4	8
1944N1SW	44 Street	57 Avenue	59 Avenue	PCC Grinding	516	86
1944N1SW	44 Street	57 Avenue	59 Avenue	Asphalt Patching	529.2	49
1944N2SW	44 Street	57 Avenue	59 Avenue	Asphalt Patching	464.4	43
1944N2SW	44 Street	57 Avenue	59 Avenue	PCC Grinding	444	74
1951W1SW				Asphalt Patching	40.8	3
1951W1SW				PCC Grinding	6	1
1951W1SW				Do Nothing	-	3
1973SW				Asphalt Patching	37.8	3
1977N2SW	44 Street	50 Avenue	52 Avenue	PCC Grinding	114	19
1977N2SW	44 Street	50 Avenue	52 Avenue	Asphalt Patching	32.4	3
1978N2SW	44 Street	50 Avenue	52 Avenue	PCC Grinding	198	33
1978N2SW	44 Street	50 Avenue	52 Avenue	Asphalt Patching	54	5
1980N2SW	44 Street	52 Avenue	54 Avenue	PCC Grinding	90	15
1980N2SW	44 Street	52 Avenue	54 Avenue	Asphalt Patching	151.2	14
1982N2SW	44 Street	55 Avenue	56 Avenue	Asphalt Patching	140.4	13
1982N2SW	44 Street	55 Avenue	56 Avenue	PCC Grinding	144	24
1983N2SW	44 Street	54 Avenue	55 Avenue	PCC Grinding	162	27
1983N2SW	44 Street	54 Avenue	55 Avenue	Asphalt Patching	86.4	8
1988S1SW				PCC Grinding	6	1
1991SW				Asphalt Patching	67.8	5
1991SW				PCC Grinding	6	1
2003N1SW	57A Avenue	57A Avenue Close	29 Street	PCC Sidewalk Full Reconstruction, W/Curb	1432	21
2004N1SW	57A Avenue	57A Avenue Close	29 Street	PCC Sidewalk Partial Reconstruction, W/Curb	438	9
2005N1SW	57A Avenue	57A Avenue Close	29 Street	PCC Sidewalk Full Reconstruction, W/Curb	4	1
2006SW	57A Avenue	57A Avenue Close	29 Street	Asphalt Patching	121.2	12
2006SW	57A Avenue	57A Avenue Close	29 Street	PCC Grinding	28	5
2007E1SW	57A Avenue	29 Street	30 Street	PCC Sidewalk Full Reconstruction, W/Curb	1924	29
2008E1SW	57A Avenue	29 Street	30 Street	Asphalt Patching	161.4	16
2008E1SW	57A Avenue	29 Street	30 Street	PCC Grinding	112	20
2009E1SW	57A Avenue	29 Street	30 Street	PCC Sidewalk Full Reconstruction, W/Curb	3056	46
2010SW	57A Avenue	29 Street	30 Street	Asphalt Patching	10.2	1
2010SW	57A Avenue	29 Street	30 Street	PCC Grinding	41.6	8
2011N1SW	25 Street	50 Avenue	53 Avenue	PCC Sidewalk Full Reconstruction, W/Curb	6776	71
2012N1SW	25 Street	50 Avenue	53 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	6849	95
2014S1SW				PCC Grinding	6	1
2015S1SW				Asphalt Patching	27	2
2016SW				Asphalt Patching	94.8	7
2018S2SW	44 Street	52 Avenue	54 Avenue	PCC Grinding	18	3
2019S2SW	44 Street	52 Avenue	54 Avenue	Asphalt Patching	64.8	3
2019S2SW	44 Street	52 Avenue	54 Avenue	PCC Grinding	264	22
2020E1SW	56 Avenue	43 Street	44 Street	PCC Grinding	84	14
2022SW				Asphalt Patching	43.2	4
2022SW				PCC Grinding	6	1
2026S2SW	44 Street	54 Avenue	55 Avenue	Asphalt Patching	21.6	2
2026S2SW	44 Street	54 Avenue	55 Avenue	PCC Grinding	90	15
2037S1SW				Asphalt Patching	27	2
2037S1SW				PCC Grinding	6	1
2045S1SW				PCC Grinding	6	1
2046E1SW				PCC Grinding	6	1
2057SW				Asphalt Patching	63	5
2057SW				PCC Grinding	12	2
2058SW				Asphalt Patching	199.8	16
2058SW				PCC Grinding	19.2	3
2059SW				PCC Grinding	14.4	3
2059SW				Asphalt Patching	8.4	1
208S1SW				PCC Grinding	6	1
2092W1SW				Asphalt Patching	13.8	1
2103SW				Asphalt Patching	883.2	1
2104SW				Asphalt Patching	13.8	1



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix E 2021 Recommended Work Program

Table E.1: Recommended Sidewalk Work Programs

Sidewalk Id	Street	From	To	Treatment	Treatment Cost (\$)	Treatment Slabs
210SW	24 Street	52A Avenue Close	52B Avenue	Asphalt Patching	25.2	2
2110E1SW				Asphalt Patching	27	2
212SW				Asphalt Patching	13.8	1
213SW	24 Street	54 Avenue	57A Avenue	Asphalt Patching	243	9
2162E1SW				Asphalt Patching	75.6	6
2163E1SW				Asphalt Patching	13.8	1
2165SW				PCC Grinding	12	2
2165SW				Asphalt Patching	54	2
2166SW				PCC Grinding	12	2
2167SW				PCC Grinding	12	2
2167SW				Asphalt Patching	113.4	9
2168SW				Asphalt Patching	54	2
2169SW				Asphalt Patching	202.8	15
2169SW				PCC Grinding	12	2
2170SW				PCC Sidewalk Partial Reconstruction, W/Curb	7626	121
2171SW				PCC Grinding	18	3
2171SW				Asphalt Patching	27	2
2193SW	58 Avenue	26 Street	28 Street	Asphalt Patching	87.6	8
2193SW	58 Avenue	26 Street	28 Street	PCC Grinding	72.8	13
2194N1SW	40 Street	57A Avenue	58 Avenue Close	PCC Grinding	18	3
2195N1SW	40 Street	57 Avenue	57A Avenue	Asphalt Patching	50.4	5
2195N1SW	40 Street	57 Avenue	57A Avenue	PCC Grinding	50.4	9
2199W1SW	56 Avenue	29 Street	30 Street	PCC Grinding	42	7
2200S1SW	27 Street	51 Avenue	52 Avenue	Asphalt Patching	161.4	16
2200S1SW	27 Street	51 Avenue	52 Avenue	PCC Grinding	106.4	19
2201W1SW	51 Avenue	26 Street	26A Street	PCC Sidewalk Full Reconstruction, W/Curb	1420	20
2202W1SW	51 Avenue	26 Street	26A Street	Asphalt Patching	54	5
2202W1SW	51 Avenue	26 Street	26A Street	PCC Grinding	90	15
2221E1SW	57A Avenue	57A Avenue Close	29 Street	PCC Sidewalk Partial Reconstruction, W/Curb	1038	19
2234E1SW				PCC Grinding	132	22
2234E1SW				Asphalt Patching	32.4	3
2235N1SW				PCC Grinding	120	20
2248S1SW				PCC Grinding	10	1
2250S1SW				PCC Grinding	6	1
2268E1SW				PCC Grinding	11.2	2
2268E1SW				Asphalt Patching	30	3
2271E1SW	62 Avenue	44 Street SR N	47 Street	Asphalt Patching	154.8	8
2271E1SW	62 Avenue	44 Street SR N	47 Street	PCC Grinding	5.6	1
2346SW				PCC Grinding	12	2
2355SW				PCC Sidewalk Partial Reconstruction, W/Curb	1023	20
2386N1SW				Asphalt Patching	40.8	3
2386W1SW				PCC Sidewalk Full Reconstruction, W/Curb	48	1
2389W1SW	34 Street	57A Avenue	57B Avenue	PCC Sidewalk Full Reconstruction, W/Curb	1328	18
2390E1SW	31 Street	57 Avenue	57A Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	1617	32
2395SW				PCC Grinding	42	7
2395SW				Asphalt Patching	216	16
2396E1SW	52 Avenue	32 Street	34 Street	PCC Sidewalk Full Reconstruction, W/Curb	2080	29
2398N1SW				PCC Sidewalk Full Reconstruction, W/Curb	8	1
2399E1SW	31 Street	57 Avenue	57A Avenue	PCC Sidewalk Full Reconstruction, W/Curb	88	1
2412SW				Asphalt Patching	40.8	3
2412SW				PCC Grinding	18	3
2413S1SW	39 Street	53 Avenue	56 Avenue	PCC Grinding	96	16
2413S1SW	39 Street	53 Avenue	56 Avenue	Asphalt Patching	75.6	7
2415W1SW	56 Avenue	29 Street	30 Street	PCC Grinding	24	4
2415W1SW	56 Avenue	29 Street	30 Street	Asphalt Patching	10.8	1
2416N1SW	26 Street	51 Avenue	53 Avenue	Asphalt Patching	33	3
2416N1SW	26 Street	51 Avenue	53 Avenue	PCC Grinding	50.4	9
2438SW				Asphalt Patching	10.8	1
2438SW				PCC Grinding	10.4	2
2444S1SW	41 Street	57 Avenue	57A Avenue Close	Asphalt Patching	10.8	1
2444S1SW	41 Street	57 Avenue	57A Avenue Close	PCC Grinding	6	1
2445S1SW	41 Street	57 Avenue	57A Avenue Close	PCC Grinding	12	2
2446W1SW	36 Street	57 Avenue	59 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	2877	53
2507N1SW	24 Street	52A Avenue Close	52B Avenue	PCC Grinding	48	8
2507N1SW	24 Street	52A Avenue Close	52B Avenue	Asphalt Patching	32.4	3



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Appendix E 2021 Recommended Work Program

Table E.1: Recommended Sidewalk Work Programs

Sidewalk Id	Street	From	To	Treatment	Treatment Cost (\$)	Treatment Slabs
254S1SW	24 Street	54 Avenue	57A Avenue	PCC Grinding	12	1
279SW	23 Street	47 Avenue	24 Street	Asphalt Patching	137.4	11
279SW	23 Street	47 Avenue	24 Street	PCC Grinding	57.6	9
282SW	25 Street	47 Avenue	50 Avenue	PCC Grinding	151.2	18
282SW	25 Street	47 Avenue	50 Avenue	Asphalt Patching	147.6	9
328SW	16 Street	47C Avenue	48 Avenue	PCC Grinding	19.2	3
328SW	16 Street	47C Avenue	48 Avenue	Asphalt Patching	13.2	1
382SW	24 Street Close	46 Avenue	END	Asphalt Patching	50.4	4
382SW	24 Street Close	46 Avenue	END	PCC Grinding	12	2
427E1SW	50 Avenue SR E	38 Street	41 Street	PCC Sidewalk Partial Reconstruction, W/Curb	9894	183
428E1SW	50 Avenue SR E	36 Street	38 Street	PCC Grinding	192	32
428E1SW	50 Avenue SR E	36 Street	38 Street	Asphalt Patching	140.4	13
428E1SW	50 Avenue SR E	36 Street	38 Street	Do Nothing	-	1
429N1SW	38 Street	49 Avenue	50 Avenue SR E	Asphalt Patching	10.8	1
429N1SW	38 Street	49 Avenue	50 Avenue SR E	PCC Grinding	24	4
430S1SW	38 Street	49 Avenue	50 Avenue SR E	PCC Grinding	54	9
452S1SW	41 Street	49 Avenue	50 Avenue SR E	PCC Sidewalk Full Reconstruction, W/Curb	3536	49
453N1SW	41 Street	49 Avenue	50 Avenue SR E	PCC Grinding	30	5
453N1SW	41 Street	49 Avenue	50 Avenue SR E	Asphalt Patching	10.8	1
457N1SW	42 Street	49 Avenue	50 Avenue	PCC Grinding	66	11
458N1SW				Asphalt Patching	32.4	3
458N1SW				PCC Grinding	30	5
543SW	46A Avenue Close	END	39 Street	Asphalt Patching	54	5
544SW	38 Street Close	46 Avenue	END	Asphalt Patching	23.4	2
544SW	38 Street Close	46 Avenue	END	PCC Grinding	6	1
612E1SW	53 Avenue	39 Street	52 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	8313	154
615N1SW	39 Street	53 Avenue	53 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	1422	26
617W1SW	52 Avenue	39 Street	41 Street	Asphalt Patching	21.6	2
617W1SW	52 Avenue	39 Street	41 Street	PCC Grinding	60	10
621E1SW	41 Street	51 Avenue	52 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	5976	119
623E1SW	52 Avenue	41 Street	42 Street	PCC Sidewalk Partial Reconstruction, W/Curb	2001	37
624W1SW	53 Avenue	39 Street	52 Avenue	PCC Grinding	336	56
624W1SW	53 Avenue	39 Street	52 Avenue	Asphalt Patching	194.4	18
626W1SW	52 Avenue	41 Street	53 Avenue	PCC Sidewalk Full Reconstruction, W/Curb	2648	37
631E1SW	52 Avenue	53 Avenue	42 Street	PCC Sidewalk Partial Reconstruction, W/Curb	3510	65
633S1SW	42 Street	52 Avenue	54 Avenue	PCC Grinding	390	65
633S1SW	42 Street	52 Avenue	54 Avenue	Do Nothing	-	1
633S1SW	42 Street	52 Avenue	54 Avenue	Asphalt Patching	302.4	28
634W1SW	41 Street	51 Avenue	52 Avenue	Asphalt Patching	43.2	4
634W1SW	41 Street	51 Avenue	52 Avenue	PCC Grinding	54	9
636W1SW	56 Avenue	39 Street	42 Street	PCC Grinding	240.8	43
636W1SW	56 Avenue	39 Street	42 Street	Asphalt Patching	50.4	5
637E1SW	56 Avenue	39 Street	42 Street	Asphalt Patching	10.8	1
637E1SW	56 Avenue	39 Street	42 Street	PCC Grinding	150	25
639S1SW	39 Street	56 Avenue	56 Avenue	PCC Grinding	84	14
640N1SW	39 Street	56 Avenue	56 Avenue	PCC Grinding	66	11
640N1SW	39 Street	56 Avenue	56 Avenue	Asphalt Patching	21.6	2
642W1SW	56 Avenue	38 Street	39 Street	PCC Grinding	150	25
642W1SW	56 Avenue	38 Street	39 Street	Asphalt Patching	10.8	1
644N1SW	38 Street	55A Avenue	56 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	4050	75
773S1SW	41 Street	50 Avenue	51 Avenue	PCC Grinding	30	5
774E1SW	54 Avenue	42 Street	44 Street	PCC Sidewalk Partial Reconstruction, W/Curb	3849	66
775S1SW	39 Street	50 Avenue	51 Avenue	PCC Grinding	19.2	3
776S2SW	39 Street	50 Avenue	51 Avenue	Asphalt Patching	21.6	1
777W1SW	52 Avenue	36 Street	37 Street	PCC Sidewalk Full Reconstruction, W/Curb	2192	30
778E1SW	52 Avenue	39 Street	41 Street	PCC Grinding	120	20
778E1SW	52 Avenue	39 Street	41 Street	Asphalt Patching	21.6	2
779SW				PCC Sidewalk Partial Reconstruction, W/Curb	1227	23
780E1SW	52 Avenue	39 Street	41 Street	PCC Sidewalk Full Reconstruction, W/Curb	836	12
785E1SW	54 Avenue	42 Street	44 Street	PCC Grinding	36	6
785E1SW	54 Avenue	42 Street	44 Street	Asphalt Patching	10.8	1
786W1SW	57 Avenue	39 Street	40 Street	PCC Grinding	228	38
786W1SW	57 Avenue	39 Street	40 Street	Asphalt Patching	10.8	1
789N1SW	41 Street	58 Avenue Close	59 Avenue	Asphalt Patching	32.4	3
789N1SW	41 Street	58 Avenue Close	59 Avenue	PCC Grinding	12	2



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Appendix E 2021 Recommended Work Program

Table E.1: Recommended Sidewalk Work Programs

Sidewalk Id	Street	From	To	Treatment	Treatment Cost (\$)	Treatment Slabs
790N1SW	41 Street	57A Avenue Close	58 Avenue Close	Asphalt Patching	28.2	3
790N1SW	41 Street	57A Avenue Close	58 Avenue Close	PCC Grinding	78	15
791N1SW	41 Street	57 Avenue	57A Avenue Close	PCC Sidewalk Partial Reconstruction, W/Curb	4332	80
792E1SW	57 Avenue	40 Street	41 Street	PCC Sidewalk Full Reconstruction, W/Curb	6712	93
793E1SW	57 Avenue	39 Street	40 Street	PCC Grinding	90	15
794S2SW	44 Street	56 Avenue	57 Avenue	PCC Grinding	72	12
794S2SW	44 Street	56 Avenue	57 Avenue	Asphalt Patching	151.2	14
795W2SW	56 Avenue	43 Street	44 Street	PCC Sidewalk Full Reconstruction, W/Curb	4772	57
809S2SW	44 Street	57 Avenue	59 Avenue	PCC Grinding	42	7
809S2SW	44 Street	57 Avenue	59 Avenue	Asphalt Patching	108	10
810N1SW	37 Street	52 Avenue	53 Avenue	PCC Grinding	132	22
810N1SW	37 Street	52 Avenue	53 Avenue	Asphalt Patching	43.2	4
811S2SW	44 Street	57 Avenue	59 Avenue	PCC Grinding	42	7
811S2SW	44 Street	57 Avenue	59 Avenue	Asphalt Patching	32.4	3
813N1SW	37 Street	56A Avenue	56B Avenue	PCC Sidewalk Full Reconstruction, W/Curb	3040	42
814W1SW	56B Avenue	37 Street	39 Street	PCC Grinding	234	39
814W1SW	56B Avenue	37 Street	39 Street	Asphalt Patching	86.4	8
815SW				Asphalt Patching	32.4	3
815SW				PCC Grinding	84	14
816E1SW	57 Avenue	37 Street	39 Street	PCC Sidewalk Full Reconstruction, W/Curb	536	7
817W1SW	52 Avenue	36 Street	37 Street	Asphalt Patching	32.4	3
817W1SW	52 Avenue	36 Street	37 Street	PCC Grinding	30	5
818E1SW	56 Avenue	37 Street	38 Street	PCC Sidewalk Partial Reconstruction, W/Curb	2181	40
819S1SW	39 Street	56A Avenue	56B Avenue	PCC Grinding	96	16
820SW				PCC Grinding	28	5
820SW				Asphalt Patching	21.6	2
821W1SW	53 Avenue	38 Street	39 Street	PCC Grinding	60	10
821W1SW	53 Avenue	38 Street	39 Street	Asphalt Patching	10.8	1
822W1SW	43 Street	56 Avenue	56A Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	9513	163
823E1SW	43 Street	56A Avenue	57 Avenue	PCC Grinding	384	64
823E1SW	43 Street	56A Avenue	57 Avenue	Asphalt Patching	35.4	3
824E1SW	57A Avenue	39 Street	40 Street	Asphalt Patching	30	3
824E1SW	57A Avenue	39 Street	40 Street	PCC Grinding	33.6	6
825S1SW	53 Avenue	37 Street	38 Street	PCC Grinding	102	17
825S1SW	53 Avenue	37 Street	38 Street	Asphalt Patching	10.8	1
826W1SW	53 Avenue	38 Street	39 Street	PCC Grinding	24	4
826W1SW	53 Avenue	38 Street	39 Street	Asphalt Patching	32.4	3
827E1SW	38 Street	END	53 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	5604	104
828E1SW	53 Avenue	37 Street	38 Street	PCC Grinding	36	6
829W1SW	56B Avenue	37 Street	39 Street	PCC Sidewalk Full Reconstruction, W/Curb	940	13
830N1SW	39 Street	56A Avenue	56B Avenue	Asphalt Patching	20.4	2
830N1SW	39 Street	56A Avenue	56B Avenue	PCC Grinding	123.2	22
831S1SW	39 Street	56B Avenue	57 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	2268	42
867E1SW	52 Avenue	42 Street	44 Street	Asphalt Patching	118.8	11
867E1SW	52 Avenue	42 Street	44 Street	PCC Grinding	36	6
868W1SW	57 Avenue	36 Street	37 Street	PCC Sidewalk Full Reconstruction, W/Curb	1728	24
870W1SW	52 Avenue	41 Street	42 Street	PCC Sidewalk Full Reconstruction, W/Curb	1280	18
872E1SW	52 Avenue	41 Street	42 Street	Asphalt Patching	183.6	17
872E1SW	52 Avenue	41 Street	42 Street	PCC Grinding	12	2
873N1SW	39 Street	56 Avenue	56A Avenue	PCC Grinding	30	5
874N1SW	37 Street	57 Avenue	57A Avenue	PCC Grinding	123.2	22
875S1SW	37 Street	57 Avenue	57A Avenue	Asphalt Patching	20.4	2
875S1SW	37 Street	57 Avenue	57A Avenue	PCC Grinding	140	25
877E1SW	57 Avenue	36 Street	37 Street	PCC Sidewalk Full Reconstruction, W/Curb	2112	29
878E1SW	57A Avenue	37 Street	39 Street	PCC Grinding	184.8	33
878E1SW	57A Avenue	37 Street	39 Street	Asphalt Patching	60.6	6
880N1SW	37 Street	57A Avenue	57B Avenue Close	PCC Grinding	95.2	17
881N1SW	41 Street	51 Avenue	52 Avenue	Asphalt Patching	16.2	1
881N1SW	41 Street	51 Avenue	52 Avenue	PCC Grinding	22.8	3
882E1SW	60 Avenue	40 Street	41 Street	Asphalt Patching	54	5
882E1SW	60 Avenue	40 Street	41 Street	PCC Grinding	180	30
884SW				Asphalt Patching	10.8	1
884SW				PCC Grinding	6	1
885W1SW	57B Avenue Close	37 Street	END	PCC Grinding	89.6	16
885W1SW	57B Avenue Close	37 Street	END	Asphalt Patching	10.2	1



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Appendix E 2021 Recommended Work Program

Table E.1: Recommended Sidewalk Work Programs

Sidewalk Id	Street	From	To	Treatment	Treatment Cost (\$)	Treatment Slabs
886S1SW	39 Street	57A Avenue	58 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	465	9
887S1SW	37 Street	52 Avenue	53 Avenue	PCC Grinding	126	21
887S1SW	37 Street	52 Avenue	53 Avenue	Asphalt Patching	32.4	3
888SW				PCC Grinding	25.6	4
888SW				Asphalt Patching	11.4	1
889W1SW	52 Avenue	37 Street	39 Street	PCC Sidewalk Partial Reconstruction, W/Curb	6546	121
88S1SW	22 Street	59B Avenue	60 Avenue	Asphalt Patching	13.8	1
890W1SW	52 Avenue	37 Street	39 Street	PCC Sidewalk Partial Reconstruction, W/Curb	7098	131
891S1SW	39 Street	51 Avenue	52 Avenue	PCC Grinding	114	19
892N1SW	39 Street	51 Avenue	52 Avenue	Asphalt Patching	21.6	2
893N1SW	39 Street	52 Avenue	53 Avenue	PCC Grinding	90	15
893N1SW	39 Street	52 Avenue	53 Avenue	Asphalt Patching	21.6	2
894S1SW	39 Street	52 Avenue	53 Avenue	PCC Grinding	72	12
894S1SW	39 Street	52 Avenue	53 Avenue	Asphalt Patching	32.4	3
895S1SW	37 Street	53 Avenue	55A Avenue	Asphalt Patching	64.8	6
895S1SW	37 Street	53 Avenue	55A Avenue	PCC Grinding	288	48
896S1SW	39 Street	53 Avenue	56 Avenue	PCC Grinding	54	9
896S1SW	39 Street	53 Avenue	56 Avenue	Asphalt Patching	43.2	4
897S1SW	53 Avenue	38 Street	39 Street	Asphalt Patching	21.6	2
897S1SW	53 Avenue	38 Street	39 Street	PCC Grinding	144	24
898N1SW	39 Street	53 Avenue	56 Avenue	PCC Grinding	474	79
898N1SW	39 Street	53 Avenue	56 Avenue	Asphalt Patching	54	5
899S1SW	39 Street	53 Avenue	53 Avenue	Asphalt Patching	21.6	2
899S1SW	39 Street	53 Avenue	53 Avenue	PCC Grinding	42	7
900S1SW	39 Street	56 Avenue	56A Avenue	PCC Grinding	132	22
900S1SW	39 Street	56 Avenue	56A Avenue	Asphalt Patching	54	5
901E1SW	56 Avenue	38 Street	39 Street	PCC Grinding	66	11
902N1SW	39 Street	57A Avenue	57A Avenue	Asphalt Patching	60.6	6
902N1SW	39 Street	57A Avenue	57A Avenue	PCC Grinding	61.6	11
903W1SW	57A Avenue	37 Street	39 Street	PCC Grinding	276	46
903W1SW	57A Avenue	37 Street	39 Street	Asphalt Patching	64.8	6
904S1SW	39 Street	57A Avenue	57A Avenue	PCC Grinding	123.2	22
905N1SW	25 Street	57A Avenue	59 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	16863	234
906S1SW	26 Street	51 Avenue	53 Avenue	PCC Grinding	16.8	3
907SW				PCC Grinding	10.4	2
907SW				Asphalt Patching	58.8	5
909S1SW	26 Street	51 Avenue	53 Avenue	PCC Grinding	425.6	76
909S1SW	26 Street	51 Avenue	53 Avenue	Asphalt Patching	283.8	26
90E1SW	61A Avenue	22 Street	24 Street	PCC Grinding	6	1
910N1SW	26 Street	54 Avenue	57 Avenue	PCC Grinding	264	44
910N1SW	26 Street	54 Avenue	57 Avenue	Asphalt Patching	151.2	14
911E1SW	52 Avenue	29 Street	31 Street	Asphalt Patching	21.6	2
912N1SW	27 Street	54 Avenue	56 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	2742	54
913SW				PCC Grinding	41.6	8
913SW				Asphalt Patching	56.4	6
914W1SW	54 Avenue	26 Street	27 Street	PCC Sidewalk Partial Reconstruction, W/Curb	2280	42
915W1SW	27 Street	53 Avenue	54 Avenue	Asphalt Patching	172.8	16
915W1SW	27 Street	53 Avenue	54 Avenue	PCC Grinding	210	35
916W1SW	56 Avenue	27 Street	27A Street	Asphalt Patching	10.8	1
916W1SW	56 Avenue	27 Street	27A Street	PCC Grinding	96	16
917E1SW	56 Avenue	27 Street	27A Street	PCC Sidewalk Full Reconstruction, W/Curb	3028	45
918S1SW	27 Street	54 Avenue	56 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	2739	51
919S1SW	27 Street	56 Avenue	57 Avenue	Asphalt Patching	151.2	14
919S1SW	27 Street	56 Avenue	57 Avenue	PCC Grinding	180	30
920W1SW	54 Avenue	26 Street	27 Street	PCC Grinding	126	21
920W1SW	54 Avenue	26 Street	27 Street	Asphalt Patching	97.2	9
921W1SW	56 Avenue	27A Street	28 Street	Asphalt Patching	86.4	8
921W1SW	56 Avenue	27A Street	28 Street	PCC Grinding	42	7
922S1SW	27A Street	END	56 Avenue	PCC Grinding	145.6	26
922S1SW	27A Street	END	56 Avenue	Asphalt Patching	130.8	13
924W1SW	57 Avenue	26 Street	27 Street	PCC Sidewalk Partial Reconstruction, W/Curb	3312	61
927N1SW	27 Street	56 Avenue	57 Avenue	Asphalt Patching	222.6	19
927N1SW	27 Street	56 Avenue	57 Avenue	PCC Grinding	234	39
928N1SW	27 Street	57 Avenue	57A Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	5610	57
929S1SW	27 Street	57 Avenue	57A Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	2265	45



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix E 2021 Recommended Work Program

Table E.1: Recommended Sidewalk Work Programs

Sidewalk Id	Street	From	To	Treatment	Treatment Cost (\$)	Treatment Slabs
930W1SW	57A Avenue	27 Street	57A Avenue Close	Asphalt Patching	129.6	14
930W1SW	57A Avenue	27 Street	57A Avenue Close	Do Nothing	-	1
930W1SW	57A Avenue	27 Street	57A Avenue Close	PCC Grinding	95.2	17
931E1SW	55A Avenue	37 Street	38 Street	PCC Grinding	102	17
932S1SW	38 Street	55A Avenue	56 Avenue	Asphalt Patching	21.6	2
932S1SW	38 Street	55A Avenue	56 Avenue	PCC Grinding	72	12
933N1SW	37 Street	53 Avenue	55A Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	9069	168
934S1SW	37 Street	55A Avenue	56 Avenue	Asphalt Patching	10.8	1
934S1SW	37 Street	55A Avenue	56 Avenue	PCC Grinding	180	30
935W1SW	55A Avenue	37 Street	38 Street	PCC Sidewalk Full Reconstruction, W/Curb	2908	40
936N1SW	37 Street	55A Avenue	56 Avenue	Asphalt Patching	21.6	2
936N1SW	37 Street	55A Avenue	56 Avenue	PCC Grinding	36	6
937W1SW	56 Avenue	37 Street	38 Street	PCC Grinding	60	10
937W1SW	56 Avenue	37 Street	38 Street	Asphalt Patching	54	5
938S1SW	39 Street	57A Avenue	58 Avenue	PCC Grinding	173.6	31
939N1SW	39 Street	57A Avenue	58 Avenue	PCC Grinding	112	20
939N1SW	39 Street	57A Avenue	58 Avenue	Asphalt Patching	20.4	2
940E1SW	58 Avenue	37 Street	39 Street	Asphalt Patching	30	3
940E1SW	58 Avenue	37 Street	39 Street	PCC Grinding	162.4	29
941E1SW	58 Avenue	37 Street	39 Street	PCC Sidewalk Partial Reconstruction, W/Curb	5790	115
942N1SW	37 Street	57B Avenue Close	58 Avenue	PCC Grinding	84	15
943E1SW	57B Avenue Close	37 Street	END	Asphalt Patching	40.2	4
943E1SW	57B Avenue Close	37 Street	END	PCC Grinding	117.6	21
944S1SW	37 Street	57B Avenue Close	58 Avenue	Asphalt Patching	20.4	2
944S1SW	37 Street	57B Avenue Close	58 Avenue	PCC Grinding	95.2	17
945S1SW	40 Street	57A Avenue	58 Avenue Close	PCC Grinding	84	15
945S1SW	40 Street	57A Avenue	58 Avenue Close	Asphalt Patching	80.4	8
946S1SW	40 Street	57 Avenue	57A Avenue	Asphalt Patching	30	3
946S1SW	40 Street	57 Avenue	57A Avenue	PCC Grinding	28	5
947N1SW	40 Street	57 Avenue	57A Avenue	PCC Grinding	44.8	8
948S1SW	40 Street	58 Avenue Close	59 Avenue Close	Asphalt Patching	60.6	6
948S1SW	40 Street	58 Avenue Close	59 Avenue Close	PCC Grinding	56	10
949E1SW	58 Avenue Close	40 Street	END	Asphalt Patching	32.4	3
949E1SW	58 Avenue Close	40 Street	END	PCC Grinding	150	25
950N1SW	40 Street	57A Avenue	58 Avenue Close	PCC Grinding	24	4
951E1SW	59 Avenue Close	40 Street	END	PCC Grinding	114	19
951E1SW	59 Avenue Close	40 Street	END	Asphalt Patching	43.2	4
952W1SW	40 Street	58 Avenue Close	59 Avenue Close	PCC Grinding	36	6
953S1SW	59 Avenue Close	END	40 Street	PCC Grinding	11.2	2
953S1SW	59 Avenue Close	END	40 Street	Asphalt Patching	30	3
954N1SW	41 Street	59 Avenue	60 Avenue	PCC Grinding	24	4
954N1SW	41 Street	59 Avenue	60 Avenue	Asphalt Patching	183.6	17
956S1SW	41 Street	59 Avenue	60 Avenue	PCC Grinding	24	4
956S1SW	41 Street	59 Avenue	60 Avenue	Asphalt Patching	21.6	2
957W1SW	59 Avenue	41 Street	43 Street	Asphalt Patching	64.8	6
957W1SW	59 Avenue	41 Street	43 Street	PCC Grinding	6	1
958S1SW	41 Street	58 Avenue Close	59 Avenue	PCC Grinding	36	6
958S1SW	41 Street	58 Avenue Close	59 Avenue	Asphalt Patching	12	1
959S1SW	41 Street	57A Avenue Close	58 Avenue Close	PCC Grinding	138	23
960S1SW	41 Street	57 Avenue	57A Avenue Close	PCC Sidewalk Full Reconstruction, W/Curb	2992	42
961E1SW	57 Avenue	41 Street	42 Street	PCC Grinding	24	4
962E1SW	57 Avenue	40 Street	41 Street	PCC Grinding	258	43
962E1SW	57 Avenue	40 Street	41 Street	Asphalt Patching	32.4	3
963N1SW	42 Street	56A Avenue	57 Avenue	PCC Sidewalk Partial Reconstruction, W/Curb	5574	95
964E1SW	57 Avenue	42 Street	43 Street	PCC Grinding	30	5
964E1SW	57 Avenue	42 Street	43 Street	Asphalt Patching	12	1
965N1SW	30 Street	51A Avenue	END	PCC Grinding	66	11
965N1SW	30 Street	51A Avenue	END	Asphalt Patching	129.6	12
966W1SW	57 Avenue	37 Street	39 Street	PCC Grinding	270	45
966W1SW	57 Avenue	37 Street	39 Street	Asphalt Patching	32.4	3
967E1SW	56A Avenue	37 Street	39 Street	PCC Sidewalk Partial Reconstruction, W/Curb	6036	112
968N1SW	39 Street	56 Avenue	56A Avenue	PCC Grinding	36	6
969S1SW	37 Street	56A Avenue	56B Avenue	PCC Sidewalk Full Reconstruction, W/Curb	4880	68
970W1SW	56A Avenue	37 Street	39 Street	PCC Grinding	300	50
970W1SW	56A Avenue	37 Street	39 Street	Asphalt Patching	43.2	4



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix E 2021 Recommended Work Program

Table E.1: Recommended Sidewalk Work Programs

Sidewalk Id	Street	From	To	Treatment	Treatment Cost (\$)	Treatment Slabs
971E1SW	56B Avenue	37 Street	39 Street	PCC Grinding	228	38
971E1SW	56B Avenue	37 Street	39 Street	Asphalt Patching	64.8	6
972E1SW	57 Avenue	37 Street	39 Street	PCC Sidewalk Partial Reconstruction, W/Curb	5019	93
973N1SW	39 Street	56B Avenue	57 Avenue	PCC Grinding	72	15
973N1SW	39 Street	56B Avenue	57 Avenue	Asphalt Patching	43.2	5
974S1SW	37 Street	57A Avenue	57B Avenue Close	PCC Grinding	117.6	21
975E1SW	57A Avenue	39 Street	40 Street	PCC Grinding	95.2	17
975E1SW	57A Avenue	39 Street	40 Street	Asphalt Patching	10.2	1
976E1SW	57 Avenue	41 Street	42 Street	PCC Grinding	96	16
977W1SW	56A Avenue	42 Street	43 Street	PCC Sidewalk Full Reconstruction, W/Curb	4004	51
978E1SW	56A Avenue	42 Street	43 Street	PCC Sidewalk Full Reconstruction, W/Curb	3692	51
979S1SW	42 Street	56A Avenue	57 Avenue	PCC Grinding	282	47
979S1SW	42 Street	56A Avenue	57 Avenue	Asphalt Patching	58.8	5
980E1SW	56 Avenue	39 Street	42 Street	PCC Sidewalk Full Reconstruction, W/Curb	1148	16
981S1SW	42 Street	56 Avenue	56A Avenue	Asphalt Patching	10.8	1
981S1SW	42 Street	56 Avenue	56A Avenue	PCC Grinding	246	41
982S1SW	42 Street	56 Avenue	56A Avenue	PCC Grinding	60	10
982S1SW	42 Street	56 Avenue	56A Avenue	Asphalt Patching	12	1
988S1SW	36 Street	51 Avenue	52 Avenue	Asphalt Patching	798.6	64
988S1SW	36 Street	51 Avenue	52 Avenue	PCC Grinding	256	40
992E1SW	52 Avenue	35 Street	36 Street	Asphalt Patching	108	10
992E1SW	52 Avenue	35 Street	36 Street	PCC Grinding	48	8
996E1SW	56 Avenue	42 Street	43 Street	PCC Grinding	72	12
996E1SW	56 Avenue	42 Street	43 Street	Asphalt Patching	54	5
998W1SW				Asphalt Patching	12	1



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix E 2021 Recommended Work Program

Table E.2: Recommended Gravel Trail Work Programs

Section #	Treatment	Treatment Cost (\$)	Length (m)
1839SW	RECON	39936	120
1840SW	Do Nothing	-	99.7
1841SW	RECON	24927	75.3
1848SW	Do Nothing	-	137.6
1850SW	Do Nothing	-	132.7
1853SW	RECON	37587	115.3
1854SW	RECON	9527	29.2
1855SW	Do Nothing	-	16
1856SW	RECON	6787	21
1857SW	RECON	11354	35.4
1865SW	Do Nothing	-	44.8
1873SW	RECON	25971	81.7
1874SW	RECON	15661	49.5
1875SW	RECON	5090	16.1
1876SW	RECON	4829	15.4
1877SW	RECON	8875	28.4
1879SW	Do Nothing	-	82.2
1890SW	RECON	19185	61.9
1891SW	RECON	21665	70
1892SW	RECON	36804	119.6
1897SW	RECON	68257	222.6
1898SW	RECON	59513	194.7
1899SW	Do Nothing	-	92.3
1900SW	RECON	92793	306.5
1901SW	RECON	31583	104.8
1904SW	RECON	9266	30.9
1906SW	RECON	17749	59.5
1907SW	RECON	23883	80.3
1910SW	RECON	20490	69.2
1912SW	RECON	17749	60.3
1913SW	RECON	8222	28
1924SW	Do Nothing	-	481.1
1925SW	RECON	57294	196.8
1926SW	Do Nothing	-	94.7
1927SW	RECON	6134	21.3
1929SW	RECON	31844	111.1
1930SW	Do Nothing	-	223.6
1931SW	RECON	29626	104.1
1933SW	Do Nothing	-	77.6
1935SW	Do Nothing	-	168
1936SW	Do Nothing	-	118.2
1937SW	Do Nothing	-	154.8



Appendix E 2021 Recommended Work Program

Table E.2: Recommended Gravel Trail Work Programs

Section #	Treatment	Treatment Cost (\$)	Length (m)
2105SW	Do Nothing	-	482.5
2521SW	RECON	28321	102.4
278SW	RECON	14878	53.9



APPENDIX F

SCI Criteria



Appendix F SCI CRITERIA

Table F.1: SCI Criteria

Normalized Overall Score		Sidewalk Condition Index (SCI)
Lower Score (>)	Upper Score (<)	
0.98891	1.01	0
0.96693	0.9889	1
0.94522	0.96692	2
0.92378	0.94521	3
0.90261	0.92377	4
0.88171	0.9026	5
0.86108	0.8817	6
0.84072	0.86107	7
0.82063	0.84071	8
0.8008	0.82062	9
0.7812	0.80079	10
0.7619	0.78124	11
0.74293	0.76194	12
0.72416	0.74292	13
0.70566	0.72415	14
0.68743	0.70565	15
0.6694	0.68742	16
0.65174	0.66944	17
0.63429	0.65173	18
0.6171	0.63428	19
0.60017	0.61709	20
0.5835	0.60016	21
0.56709	0.58349	22
0.55093	0.56708	23
0.53504	0.55092	24
0.51939	0.53503	25
0.504	0.51938	26
0.48887	0.50399	27
0.47399	0.48886	28
0.45937	0.47398	29
0.44499	0.45936	30
0.43087	0.44498	31
0.417	0.43086	32
0.40337	0.41699	33
0.39	0.40336	34
0.37687	0.38999	35



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix F SCI Criteria

Normalized Overall Score		Sidewalk Condition Index (SCI)
Lower Score (>)	Upper Score (<)	
0.36399	0.37686	36
0.35136	0.36398	37
0.33897	0.35135	38
0.32683	0.33896	39
0.31493	0.32682	40
0.30327	0.31492	41
0.2918	0.30326	42
0.28068	0.29184	43
0.26974	0.28067	44
0.25904	0.26973	45
0.24859	0.25903	46
0.23836	0.24858	47
0.22838	0.23835	48
0.21863	0.22837	49
0.20911	0.21862	50
0.19982	0.2091	51
0.19077	0.19981	52
0.1819	0.19076	53
0.17336	0.18194	54
0.16499	0.17335	55
0.15685	0.16498	56
0.14894	0.15684	57
0.14126	0.14893	58
0.13379	0.14125	59
0.1265	0.13378	60
0.11953	0.12654	61
0.11273	0.11952	62
0.1061	0.11272	63
0.09979	0.10614	64
0.09364	0.09978	65
0.08771	0.09363	66
0.08199	0.0877	67
0.07648	0.08198	68
0.07118	0.07647	69
0.06609	0.07117	70
0.06121	0.06608	71
0.05653	0.0612	72
0.05206	0.05652	73
0.04779	0.05205	74



CITY OF LLOYDMINSTER 2019-2021 TRAIL AND SIDEWALK ASSESSMENT – FINAL REPORT

Appendix F SCI Criteria

Normalized Overall Score		Sidewalk Condition Index (SCI)
Lower Score (>)	Upper Score (<)	
0.04372	0.04778	75
0.0398	0.04371	76
0.03617	0.03984	77
0.03269	0.03616	78
0.02941	0.03268	79
0.02631	0.0294	80
0.0234	0.0263	81
0.02068	0.02339	82
0.01814	0.02067	83
0.01579	0.01813	84
0.01361	0.01578	85
0.01161	0.0136	86
0.00978	0.0116	87
0.00813	0.00977	88
0.00664	0.00812	89
0.00531	0.00663	90
0.0041	0.0053	91
0.00314	0.00414	92
0.00229	0.00313	93
0.00158	0.00228	94
0.00101	0.00157	95
0.00058	0.001	96
0.00028	0.00057	97
0.0002	0.0003	98
0.0001	0.0002	99
0	0.0001	100





City of Lloydminster

Final Report

Trails and Sidewalk Masterplan

March 2022

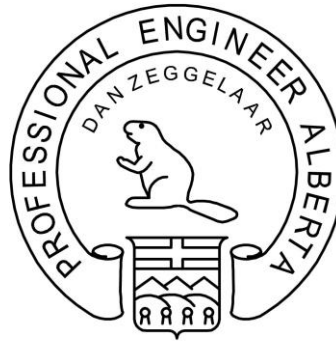




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Corporate Authorization

This document entitled “Trails and Sidewalk Masterplan” has been prepared by ISL Engineering and Land Services Ltd. (ISL) for the use of the City of Lloydminster. The information and data provided herein represent ISL’s professional judgment at the time of preparation. ISL denies any liability whatsoever to any other parties who may obtain this report and use it, or any of its contents, without prior written consent from ISL.



Daniel Zeggelaar, P.Eng., PTOE
Transportation Project Manager

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1.0 Introduction

The City of Lloydminster thrives as the largest economic hub between the City of Saskatoon and the City of Edmonton, establishing itself as a regional centre providing recreational and cultural opportunities for a regional trading area of approximately 150,000 people. The City offers Bud Miller All-Season Park, Servus Sports Centre, Exhibition Grounds, Lakeland College, several schools, local parks, golf courses, and the downtown that highlight recreational and cultural activities and attract many regional visitors while servicing residents. Lloydminster is a northern Canadian City, and through its Municipal Development Plan (MDP) recognizes itself as a Winter City that allows residents to enjoy the City all year. This translates to treating trails and sidewalk connections as “all-season” transportation infrastructure providing good connections to various destinations for all types of trips, including commuting between areas and for recreational purposes.

In the region, the City and the County of Vermillion River, through the Intermunicipal Development Plan (IDP) recognize the opportunities for collaborating for trail development to leverage abundant quantities of open space in the County of Vermillion River region and potentially connecting to major destinations in the City. Existing collaboration between the City, RM of Britannia, and RM of Wilton, through the Lloydminster Planning District Commission (LPDC), provides the platform for identifying and implementing regional sidewalk and trail networks in the LPDC subject areas. Potential opportunities include connections from the future City development areas through the LPDC area and the Neale Lake area, which is considered a gem of a recreational facility in the region.

1.1 Project Objectives

Past efforts for planning a comprehensive trail and sidewalk network include components within the MDP, LPDC, IDP and the City's Transportation Master Plan; however, a single focused study is the first for the City and the region. Understanding the needs and benefits of conducting this study helps for generating stakeholder, public, and administrative feedback for building the study outcomes, but educating these groups is an important early step to garner their understanding.

Key benefits for completing the study and allowing these group to understand the context are as follows:

- Engaging with internal and external stakeholders and the public to understand their needs for improving the existing trails and sidewalk network.
- Identifying gaps and opportunities for the existing trail and sidewalk network.
- Understanding conditions of existing networks, including surface, widths.
- Confirming local and regional aspirations for improving and/or expanding the local, and regional networks.
- Identifying potential alignments for local and regional networks for future planning.
- Providing direction for future land use planning studies for incorporating networks into their plans.
- Reviewing existing crosswalk safety and identifying prioritized needs for safety improvements.
- Establishing budgetary requirements for implementing changes to the network and crosswalk improvements for annual budgeting purposes.



1.2 Study Outline

The City's Trail and Sidewalks Master Plan was completed in four (4) phases, as follows:

- **Phase 1 Baseline, Internal Stakeholder Engagement, and Public Engagement Round One:** Review of existing plans and policies that affect the plan development review current practices for maintaining and expanding the network, and review similar studies conducted by other municipalities through the best practices review. The baseline also includes engaging with internal stakeholders and the public to develop a draft project vision.
- **Phase 2 Inventory and Analysis, Pedestrian Crossing Safety Assessment:** Data collection and mapping of all components of the existing network and conducting a preliminary gaps analysis to identify missing connections in the network. This phase also includes a separate study to develop and apply a pedestrian crossing safety assessment for all missing crossings identified in the preliminary gaps analysis.
- **Phase 3a External Stakeholder Engagement Round One, Plan Refinement:** Presentation of draft project vision and preliminary gaps analysis to external stakeholders for initial feedback and plan refinement.
- **Phase 3b External Stakeholder Round Two, Public Engagement Round Two:** Presentation of the refined plan, including the project vision, gaps analysis, and proposed short-term, medium-term and long-term prioritization plans to external stakeholders and the public for feedback.
- **Phase 4 Final Plan Creation:** Final short-term, medium-term and long-term prioritization plan for improving the network aligned with the final project vision including cost implications. Identification of areas for further study, where needed to address concerns from stakeholders and the public identified as outside of the master plan scope or those which may not align with the project vision.

■ 2.0 Phase 1 (Baseline)

The purpose of the baseline phase is to garner a comprehensive understanding of the project from the City's perspective, understanding current practices, reviewing best practices from other municipalities, and confirming the project vision through collaboration with the City's administration. The baseline includes developing and confirming the engagement plan and includes the first of two public engagement sessions. The baseline phase includes the following components:

- **Section 2.1 – Best Practices Review:** Includes a review of other municipalities that have a similar type of project.
- **Section 2.2 – Current Policy Review:** Includes confirming our understanding of the City's current policies impacting trail and sidewalk planning.
- **Section 2.3 – Current Practices Review:** Includes confirming the City's current practices for identifying, implementing, planning, and prioritizing expansions to the trail and sidewalk network.
- **Section 2.4 – Public Engagement:** Conduct the first round of public engagement to introduce the project to the public, garner initial feedback from the public on existing conditions, issues, concerns and priorities.
- **Section 2.5 – Internal Stakeholder Engagement:** Consolidated effort compiling best practices review, current practices review, and engagement in a workshop with internal stakeholders to develop and the draft project vision that will direct the focus of subsequent project phases.

2.1 Best Practices Review

A desktop review of third-party documents was conducted to understand the current best practices relating to policy, strategy, and planning for open spaces and trails. Municipal planning documents were selected based on:

- their relevancy to the scope of work of this project;
- municipality characteristics; and
- municipality location.

Preference was given to planning documents from Alberta and Saskatchewan. The best practices review includes the following documents:

- City of Beaumont, Alberta – Population: 17,396: Open Spaces and Trails Master Plan
- City of St. Albert, Alberta – Population: 65,589: Active Transportation Plan Development Strategy and Gaps Assessment
- City of Saskatoon, Saskatchewan – Population: 273,010: Active Transportation Plan
- Town of Hinton, AB – Population: 9,882: Parks and Open Space Master Plan
- District of Summerland, BC – Population: 11,615: Sidewalk Master Plan and Trails Master Plan

An overview of each document is provided in the following sub-sections.



2.1.1 Open Space and Trails Master Plan – City of Beaumont, Alberta

Document Objective

The intent of the Open Space and Trails Master plan is to support the development of future open space and trail components in the City of Beaumont. This document includes an assessment of sportsfields and open spaces; however, only sections relating to trails are discussed.

Policy Context

The City of Beaumont's Open Space and Trails Master Plan was created to address two outcomes defined in the City's strategic plan and is influenced by three previous studies. The Community Services Needs Assessment conducted in 2010 includes general open space planning recommendations including the development of an open space classification system and the development of a Trails Master Plan. This led to the development of the Park Design Standards in 2012, which formalized an open spaces classification system and the Open Space Framework Plan in 2013, which expanded on the open space categories and trail classification system to be verified as part of the Open Spaces and Trails Master Plan.

Engagement Plan

Engagement sessions and programs were held with the public, as well as discussions with private developers, sports organizations, and Beaumont and the District Agricultural Society to understand the current views on open spaces and trails. From the consultation, it was determined that the trail system is highly valued and used with continued development desired.

Vision Statement

The trail system vision is as follows:

"The vision is an interconnected system of trails of various levels to provide residents a safe and enjoyable means of recreation and transport in close proximity to their residence."

Key Points

The insight gained from the consultation phase was used to understand facility usage, public perception, and general views on the City's current open spaces and trails to provide context for the study. An update to the 2010 needs assessment was also performed. A map of the existing trail system is provided. A review of the trail development standards and community input revealed that there are inconsistencies in the trail systems.

A trail system hierarchy was developed to identify the appropriate tread surfaces and widths for various trails within the City. Trail types and their uses are defined in detail. Several general trail system considerations are listed, including intended use, frequency of use, user needs, environmental protection, level of accessibility, diversity of experience, safety, and trail networks. To this end, trail network principles are provided with a list of actions to support the principles.

The implementation section provides recommendations for the trails system, as well as the financially responsible party, and the opinion of probable cost. The strategy recommendations include the creation of an inner and outer ring-road style bike route, as well as regional trail linkages. The recommendations were developed based on the consultation process throughout the project and the gaps assessment.

2.1.2 Active Transportation Plan Development Strategy and Gaps Assessment – City of St. Albert, Alberta

Document Objective

The City of St. Albert's Active Transportation Plan (ATP) Development Strategy and Gaps Assessment was developed to support the creation of an Active Transportation Plan. This document develops a framework and strategies for creating an effective ATP. Overall, the document is focused on planning; however, the gaps assessment portion of the document is focused on assessing the existing sidewalks and trails.

Policy Context

This document is related to several City plans and guidelines, including the municipal development plan, transportation master plan, transportation safety plan, and complete street guidelines. Active transportation has been incorporated as a section of the TMP in the past; however, a need for strengthened support of active transportation planning work was identified.

Engagement Plan

As this is a planning document for the development of an ATP, no engagement was performed; however, the need for transparent active transportation engagement in the future has been highlighted several times.

Vision Statement

The document includes a proposed vision statement for active transportation in St. Albert, which reads:

"St. Albert's active transportation system is planned and designed to create a safe, connected, inclusive, accessible, and affordable network for walking and bicycling by people of all ages and abilities."

Key Points

The document opens with a review of best practices and lessons learned from other municipalities, providing an overview of successful plans. Several case studies from around the world are reviewed, resulting in identifying key focus areas for an ATP, which include establishing a need for walking and cycling, developing high-quality networks, fostering the culture and appeal of active transportation, and outlining clear steps for implementation. The document provides a list of strategies for the ATP, including:

- Developing the ATP Foundation
- Planning the Active Transportation Network
- Designing Active Transportation Infrastructure
- Operating the Active Transportation System
- Creating a Culture of Support for Active Transportation
- Implementing & Maintaining the Active Transportation System



These strategies are then explored in greater detail with the actions provided for each strategy. The actions are then assigned a priority level, task, cost, department, and supporting departments.

The gaps assessment portion of the document lists the gaps in St. Albert's existing active transportation network, presents strategies for improvements, and recommends implementation priorities. A safety and comfort analysis was conducted, including assessing the Level of Traffic Stress used for a bicycle network assessment. The traffic level of stress is a four-point scale based on the "Four Types of Bicyclists" developed by Roger Geller of the Portland Department of transportation and validated at Portland State University. The levels range from Level 1, tolerable for users from eight to 80, to Level 4, tolerable for the adult population comfortable in shared traffic with no separation ("strong and fearless").

A map detailing the neighborhood's level of connectivity via low-stress roadways was then created. The presence of sidewalks along existing roadways was measured and mapped, along with existing and proposed transit stops and their distance to a sidewalk or trail. Data on the City's barriers to walking and biking was collected and mapped, with the most common barrier noted as no marked crosswalks and sightlines respectively. Travel pattern surveys were used to create a heat map of the destination within St. Albert, which supported the creation of active mode focus areas.

A proposed active mode network was then created, along with a prioritization strategy for improvements. Recommended improvements were prioritized based on the following (there is no weighting):

- Intersection safety, prioritizing intersections along St. Albert Trail, the main arterial, and those along spine and rib route crossings.
 - Spine routes are defined as paths or trails that are largely uninterrupted routes across large sections of a community.
 - Rib routes are defined as connections to major destinations, often on-street facilities connecting to a trail-based spine.
- Safe journeys to school, focusing on areas near or within Safe Journeys to School projects.
- Safe journey to transit, with a focus on expanding bicycling and walking facilities to expand the "catchment area" for transit services.
- Overlapping projects, emphasizing the need for adopted and proposed project charters factor active transportation gaps into the planning.
- Equity, stating that locations with relatively high concentrations of zero-car households should be prioritized.

Cost estimates for improvements are provided at the end of the document.

2.1.3 Active Transportation Plan – Saskatoon, Saskatchewan

Document Objective

The Saskatoon Active Transportation Plan (ATP) was written to support increasing transportation options by improving the accessibility, comfort, convenience, and safety of active transportation. The document establishes a vision, goals, targets and corresponding directions, and actions in support of active transportation in Saskatoon over the next 30 to 40 years.

Policy Context

The ATP is closely linked to and informed by several key policy and planning documents and serves as a component of Saskatoon's growth plan, *Growth Plan to Half a Million*. Other key documents that influenced the development of the plan include, but are not limited to, the 2013 – 2023 Strategic Plan, Parks and Recreation Master Plan (2015), Meewasin Trail Study (2014), and Traffic Control at Pedestrian Crossings Policy (2004).

Engagement Plan

An engagement plan was developed to provide an inclusive, accessible approach to building awareness of the plan and seeking input. It is noted that representative participation from community stakeholders and residents was integral to the creative process of the ATP. Three rounds of engagement were conducted, using a multitude of engagement techniques.

Vision Statement

The City of Saskatoon's ATP vision statement is as follows:

"In 2045, Saskatoon is a leading city for active transportation, where walking and cycling are convenient, comfortable, attractive, fun and normal ways of moving around the city year-round for residents and visitors of all ages and abilities. Saskatoon has developed an active transportation network, policies and programs through supportive partnerships that provide transportation choices and contribute to the City's robust economy, cultural and recreational experiences, environmental health, safety, physical beauty and neighbourhood connectivity."

Key points

The Active Transportation Plan has a detailed background/existing assessment, including examining active transportation in a land use context, as well as conducting demand, the potential to increase the active transportation mode share, and equity analysis. The document's goal is "to double walking and cycling trips to 24% of all daily trips and 15% of all commute trips by 2045." The document's key themes are connectivity, safety and security, convenience, land use and growth, maintenance and accessibility, and education and awareness. A set of directions and actions are provided to support each theme. An implementation plan with prioritized projects is provided, including cost estimates and timelines.

A set of variables were created to support project prioritization. Projects would be evaluated based on these variables, assigning a maximum of five points in each category. The points were then combined to develop a prioritized list of improvements. The prioritization variables include the following:

- **Network connectivity** – Degree to which the proposed network improvement addresses a gap (how the improvement connects to the existing network).
- **Generators** – Number of pedestrians in proximity to the proposed facility.
- **Access to Transit** – The majority of transit trips start and end with walking or cycling. Improvements closer to transit stops receive higher scores.
- **Potential** – The potential to increase the walking mode share based on land use patterns, population density, and transportation infrastructure.
- **Equity** – Assesses the greatest potential to improve access to traditionally underserved populations. Improvements with the greatest equity potential receive the highest score.

- **Safety** – The relative safety benefits of the proposed improvement based on collision data (vehicles, pedestrians, cyclists) over a 5-year period. Exposure of active transportation users to adjacent vehicle traffic was not considered but was recommended to be integrated into the analysis. Proposed improvements located on routes with the highest number of incidents receive the highest score.
- **Network Spokes** – Network spokes are defined as high-quality connections to the downtown. Improvements on routes designated as network spokes receive higher scores than routes that are part of the local network.

A crossing assessment was conducted to determine whether crossings within the City required upgrading; however, no details on how the crossing assessment was done is documented. A monitoring strategy with measures of success is also provided.

2.1.4 Parks, Open Space and Trails (POST) Master Plan – Town of Hinton, Alberta

Document Objective

The objective of this document was to analyze, catalogue, and evaluate existing POST infrastructure and make recommendations for provision and maintenance over a 15-year period. An extensive engagement took place to ensure the public was in the know and understood the initiative being undertaken. Policies, procedures, construction guidelines and development decision-making guidelines were all included within the document to ensure responsible and sustainable development of the POST network in Hinton.

Policy Context

The POST master plan was developed in conjunction with several other policy documents, such as various outline plans, infrastructure plans, land development guidelines, established area guidelines and area structure plans. All respond to, connect to, and are influenced by the Municipal Development Plan (2017). Detailed analysis of policy documents was undertaken to ensure consistencies are apparent between the documents. The Community Sustainability Plan (2011) provided a guideline for developing recommendations and POST experience. The POST Master Plan also made evident, which policy documents were needed to be developed moving forward to ensure policy documents and master plans are implemented appropriately.

Engagement Plan

Community engagement took place through all phases of the project over 4 separate sessions. Community and stakeholder engagement sessions were conducted by the study team to obtain input and guidance throughout the process. Engagement methods included on-site attendance at community events, surveys, online interaction, and a series of public and stakeholder open houses. At the latter stages of the process, a final open house was facilitated to present and gather feedback on draft recommendations. All engagement activities were conducted using the International Association of Public Participation (IAP2) processes and protocols by certified study team members.

Vision Statement

The vision statement for the Hinton Parks, Open Space, and Trails (POST) Master Plan is below:

Welcome to YOUR Hinton! The Parks, Open Space and Trails (POST) Master Plan will guide future development of natural spaces and infrastructure in Hinton. Building upon the family-oriented spirit of Hinton, the POST network will be inclusive, accessible, engaging and immersive. The POST network will connect all of Hinton so you, your family and your neighbours can use the rich, natural context of our home. Parks, open space and trails in Hinton are abundant, well administered and improve the wellbeing of our citizens. So, get out and explore YOUR Hinton!

Key Points

The largest issue for Hinton was that there is a vast amount of POST infrastructure per resident. More specifically, Hinton has 9,882 residents and 370ha of parks and open space which equates to 37.44ha per 1,000 residents. In a municipal comparative analysis conducted, this is 20.29ha per 1,000 residents more than the next closest comparable municipality. These large provision quantities mean maintenance and operations have significant implications. These implications needed to be addressed within the Master Plan to ensure new development and provision of POST was sustainable and eased the pressure of maintenance and operations. This data was uncovered during phase 1, which conducted a thorough background analysis, comparative analysis and policy document analysis.

Eight vision goals were established early in the scope of work:

1. Access and Connectivity: POST is an inclusive network that has been developed to allow for access, usage and connectivity for all residents of and visitors to Hinton. Creating connections, trails, and pathways to link everyone to this vibrant network is imperative to its success.
2. Nature: Hinton has rich natural space that is highly used and cherished. Facilitating access and interpretation of these natural areas (forested areas, wetlands, and rivers) will help residents and visitors connect with nature.
3. Facilities: Ensuring the development of high-quality facilities to ultimately meet the diverse, recreational needs of residents and visitors who use the POST network is important to garnering as much benefit as possible from public investment.
4. Amenities: Development and maintenance of amenities will ensure the needs of users are met and will encourage prolonged visits to POST locations.
5. Public Safety: Enhancements to infrastructure and the creation of an exciting public realm through logical, thought-out design will develop safe environments for users to use POST facilities. Use of Crime Prevention Through Environmental Design (CPTED) principles throughout infrastructure development is one way to do this.
6. Management: Sustaining a high level of community involvement from individuals and community groups by implementing formalized management procedures and agreements.
7. Programming: Hinton, in partnership with community groups and organizations, facilitates and supports structured recreational activities, sports leagues, and outdoor programs to meet the needs of the community.
8. Community: Engaging the community and creating benefits for volunteers to enhance the POST experience and build a sense of ownership within Hinton.



Ultimately, these goals were developed to ensure the best possible POST experience for users. Parks, open spaces, and trails are cherished amenities in Hinton and are essential contributors to the quality of life and wellbeing of Hinton residents. Hinton acknowledges the need to provide, maintain and operate POST in a manner that allows users to connect with nature and participate in recreational and educational activities. The following vision has been developed to further articulate the Town's intentions related to POST; it is based on feedback from the community, research, and other strategic documents and initiatives of the Town. All goals and objectives directly tie back to the Community Sustainability Plan (2011) and attempt to satisfy the overarching goals and objectives set out within it.

2.1.5 Sidewalk Master Plan/Trails Master Plan – District of Summerland, British Columbia

Document Objective

Both documents have similar objectives, including documenting existing infrastructure and the potential to expand the sidewalk/trail network, ensuring the trails and sidewalks meet the needs of the community, and identifying policies and procedures to ensure maintenance, safety, promotion of the networks, and minimizing environmental impacts.

Policy Context

The Sidewalk Master Plan, Trails Master Plan, and Cycling Master Plan were developed concurrently and collectively influence active transportation in the District of Summerland. Both documents are influenced by the 2015 District of Summerland Official Community Plan, which focuses on the need for walking infrastructure in the Downtown and supports the development of the trail network, as well as the 2008 Transportation Master Plan. The Sidewalk Master Plan is also linked to the Subdivision and Development Servicing Bylaw (99-004) and the Snow, Ice, and Rubbish Bylaw (93-065), while the Trails Master Plan is linked to the 2018 Parks and Recreation Master Plan and the 2018 Giant's Head Mountain Trails Re-Development Plan.

Engagement Plan

Community engagement was conducted during the second and third phases of the project, to collect information on existing trails and sidewalk conditions in the second phase and present the primary themes and actions to be included in the Master Plans as well as the long-term sidewalk and trails networks.

Vision Statement

The vision statement for the trails, sidewalk, and cycling master plans is provided below:

“Summerland is a community where active and healthy living is encouraged and walking, cycling and other forms of active transportation are safe and comfortable for people of all ages and abilities, year-round, and for all trip purposes, including recreation and commuting.”

Key Points

Both Master Plans included the same three themes, which include network, safety and accessibility, and infrastructure. A review of the community context, including the demographics, land use, and relevant policies and guidelines is provided. Barriers to the trails and sidewalk networks were noted as the distance between neighbourhoods, as well as a highway that divides the district. The documents also include an existing conditions assessment for the sidewalks and trails in Summerland. An online survey was conducted to determine the key issues and opportunities for sidewalks and trails. Gaps in the network are the primary issue noted for both surveys. The three themes, network, safety and accessibility, and infrastructure, are expanded upon, with several actions provided for each theme. Examples of network actions within the Master Plan are developing a complete sidewalk network, integrating the trail network with the sidewalk and cycling networks, and identifying trail design standards based on uses.

Implementation strategies are provided in both Master Plans. The implementation Strategy includes the cost of improvement, timeframe (5 years, 5 – 15 years, 15 + years), method of implementation, and responsibility. Prioritization was based on increasing sidewalk coverage on major roads, streets that provide access to schools, and within the downtown and urban growth areas, as well as stakeholder and resident feedback.

2.1.6 Best Practices Review Discussion

The following are insights into the components of a successful trails and sidewalk master plan based on the best practices review:

- **Influencing and Driving Documents:** Most of the documents reviewed were primarily policy-driven, with actions to support the core themes. Each document was linked to and influenced by existing policy documents, falling into the category of a driving document that recommends the creation of the plan or an influencing document impacts the development of the plan, with policy level directions.
 - Example driving documents (recommending the master plan) include strategic plan, open space framework plan, transportation master plan.
 - Influencing documents include community plans, transportation master plans, parks and recreation master plan, growth plans, accessibility action plan, and park design standards.
- **Vision Statements:** All projects included a vision statement, although the focus of the vision statement varied. Example terms used in other vision statements include interconnected trails, safety, defined goals to increase active transportation mode share (target mode share percentage), inclusivity and equity, increase the attractiveness of active transportation, supporting recreation and commuting trips.
- **Public Engagement:** Transparent engagement with the public and stakeholders is critical for a successful plan. Residents were often aware of gaps in the trails and sidewalk systems and expressed a desire for these gaps to be resolved.
- **Gaps Assessment:** A review of existing infrastructure supports gaps assessment, which is a valuable tool and method to include collecting public feedback or desktop level review. The gaps assessment in St. Albert's Active Transportation Plan considered connectivity via low-stress connections, defined as those tolerable for all users from eight to 80 years of age.
- **Capital Planning:** All documents reviewed provided a timeline for future projects or actions in support of improving the trails and sidewalk network and usage.

- **Prioritizing Projects:** Saskatoon's Active Transportation Plan is the only document that provides a refined, weighting system for prioritizing projects. Other prioritization methods are qualitative and varied with common factors to determining a project's priority including the potential to close network gaps, location of the trail/sidewalks to key destinations or corridors, proximity to transit, equity and safety for all users, connectivity to specific land uses (schools/retail) and others.
- **Pedestrian Crossing Safety:** While crossing safety and reviews were conducted in some of the documents, there does not appear to be a defined method for conducting the assessments, with several assessments appearing to be observation/feedback based.
- **Trail Experience:** Defining trail experience pertains not only to trail materials and decisions around where to put certain trails, but also to the connections and destinations these trails lead to. Trail experience intends to high the amenities and/or environmental features along a trail route or interactions at trail intersections. Examples for enhancing trail user experience included adding art, interpretive displays, urban forest, social gathering amenities (benches, gazebos), fitness amenities (gym equipment), and wayfinding signage. Some facilities could be developed in existing parks adjacent to trails or even within intersections.

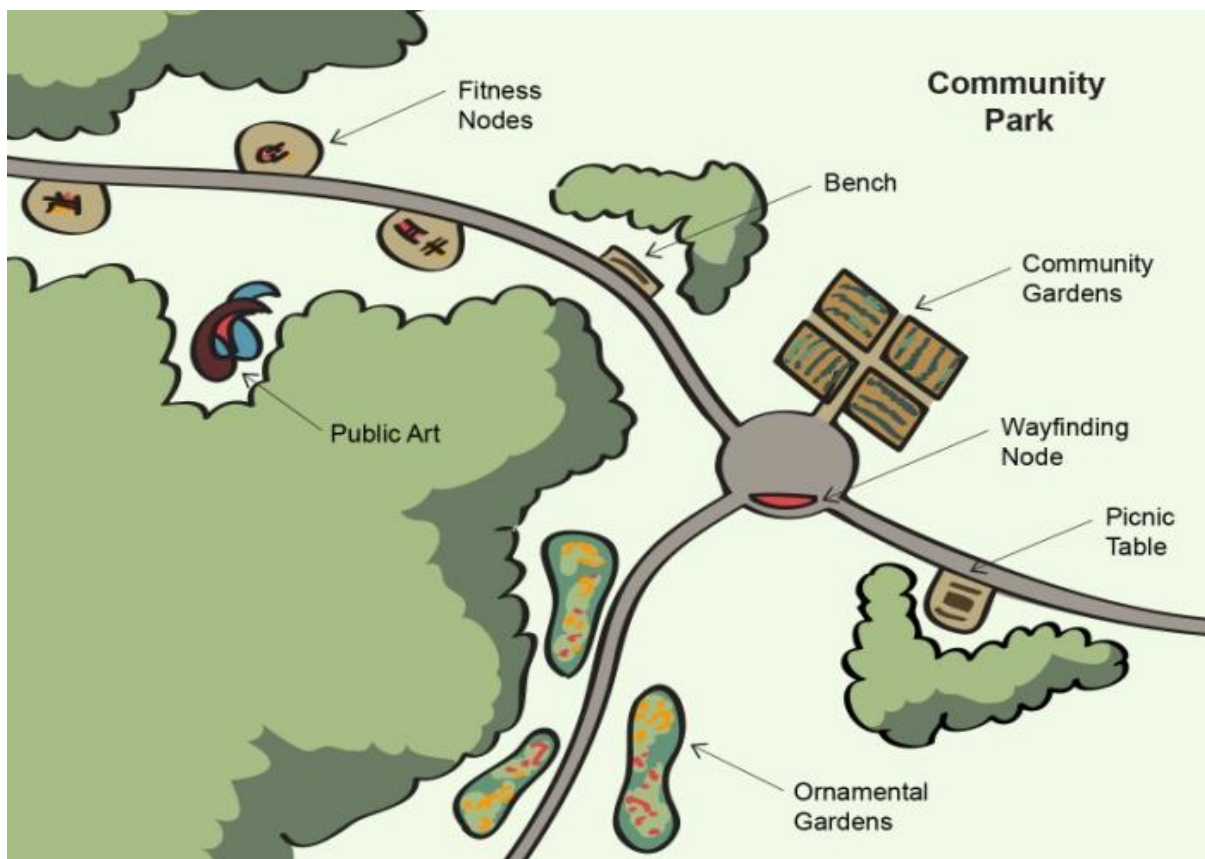


Figure 2.1: Trail Experience Sample Diagram

- **Trail Hierarchy:** The Beaumont Open Space and Trails Master Plan provides a trail hierarchy that indicates the type of trail or sidewalk, width, surface type. A trail system hierarchy was developed to identify the appropriate tread surfaces and widths for various trails within the City. Trail types and their uses are defined in detail. Several general trail system considerations are listed, including intended use, frequency of use, user needs, environmental protection, level of accessibility, diversity of experience, safety, and trail networks.

Implications of Best Practices Review

Initiating this study was driven by the City Council, rather than a specific higher-level planning document as found in other municipalities. Influencing documents include statutory and non-statutory plans and these are reviewed in the next section, under current plans and practices review.

Developing a vision statement is recommended in this study as an overarching directive for developing the plan, influencing decision making, evaluating options, and finalizing recommendations.

Confirming the focus for potentially enhancing trail user experience with art, interpretive displays, benches, gazebos, and other amenities are recommended through developing the project vision and defining how projects are prioritized. The project vision needs to confirm the level of focus for enhancing trail user experience and how much priority should be given over expanding the recreation of the commuter trail system. Vision statement items are dependent on the needs of the City but example vision terms from others could be used to seed discussion. Example terms used in other vision statements include interconnected trails, safety, defined goals to increase active transportation mode share (target mode share percentage), inclusivity and equity, increase the attractiveness of active transportation, and supporting recreation and commuting trips.

Four of five documents reviewed use a qualitative prioritization system, and this is recommended for the City of Lloydminster. Developing a detailed prioritization system, like the complex weighted scoring used in Saskatoon's Active Transportation Plan is not warranted due to the smaller size of the City of Lloydminster. Alternatively, a qualitative prioritization system reflecting the project vision and defining prioritization elements is recommended. Suggested items for prioritizing projects include potential to close network gaps, location of the trail/sidewalks to key destinations or corridors, proximity to transit, expanding recreational trails, equity and safety for all users, connectivity to specific land uses (schools/retail) and others as needed.

Other items including gaps assessment, public and stakeholder engagement, and capital planning are in line with other studies reviewed and included with this study. Conducting the gaps assessment through desktop-level analysis and public input is included in this study and consistent with other plans reviewed.

Developing and applying techniques for evaluating pedestrian crossing safety was not found in other documents reviewed but is included in this study making it unique.



2.2 Current Plans and Practices Review

Similar to the documents in the best practices review, the Trail and Sidewalk Master Plan is closely linked to and informed by the City's existing policies and plans. These are categorized into the following main categories:

- **Statutory Plans/Bylaws:** Municipal Development Plan (MDP), Intermunicipal Development Plan (City and County of Vermillion River), Lloydminster District Planning Commission (LDPC), Land Use Bylaw (LUB).
- **Non-statutory Plans:** Transportation Master Plan (TMP), Growth Strategy and Assessment.
- **Current Practices:** Summary of day-to-day decision-making practices.

The following is an overview of these as they are related to the Trails and Sidewalk Master Plan.

2.2.1 Statutory Plans

Municipal Development Plan (MDP)

The MDP is a statutory document intended to guide the growth and development of the City of Lloydminster. The document provides a 20-year planning time frame from 2013 to 2032 in which the population is anticipated to grow to approximately 50,000 people.

The City's MDP contains policies indicating the need for promoting active transportation in the City.

Implications of MDP: Completing this study aligns with the policies outlined within the MDP for promoting active transportation. Improving the connectivity of sidewalks and trails through the completion of this project will promote active transportation and make it a more attractive option.

Intermunicipal Development (IDP)

The IDP provides a framework for collaboration between the City and County of Vermillion River and confirms the need for providing a regional trail system designed to take advantage of open spaces and linear right of ways as an option for providing off-road alternatives for cycling, cross-country skiing and walking. Opportunities for regional trails include potential connections between the City and the employment areas located along Highway 16, west of the City boundary and possibly taking ownership of the abandoned rail right of way located in the City's northwest.

Implications of the IDP: Completing this study aligns with the overall philosophy outlined within the IDP to develop linear infrastructure, including regional trails.

Lloydminster District Planning Commission (LDPC)

The LDPC acts as more of a bylaw for controlling land use development with the assigned LDPC area. Provisions, guidance and requirements for including active transportation plans are missing from the LDPC, although there are incredible offerings for parks and open spaces within the area, including Neale Lake. As the City expands to the east, collaboration opportunities between the RMs of Wilton and Britannia and the City are especially significant where there is a need.

Implications of LDPC: Future updates of the LDPC may reflect the outcomes of this study, including provisions, guidance and requirements for including active transportation plans in applicable areas within the LDPC area. This is subject to discussions between the City and external stakeholders as well as the Rural Municipalities of Wilton and Britannia.

Land Use Bylaw (LUB)

The LUB (2016) does delineate circulation requirements for development permit approval in the form of sidewalks, trails, and necessary connections. Further to this, trail and sidewalk development recommendations for specific conditions and pedestrian safety considerations are provided. Terms like “safe crossing” are used for conditions to be achieved but not defined in a quantitative way. Specific recommendations pertaining to development standards and types of trails to be provisioned are not provided; however, the City does have guidelines in place for new development to ensure new trails and sidewalks are built in appropriate locations.

Implications of LUB: A future addendum to the LUB may include provisions for development to connect existing trails and sidewalks to the trail and sidewalk network formalized in this study.

2.2.2 Non-Statutory Plans

Transportation Master Plan

The Lloydminster Transportation Master Plan identifies the City’s long-range and shorter-term transportation requirements and capital plans. The document includes an active transportation gap assessment and priority recommendations, review and development of the pedestrian and cyclist circulation system, traffic signals review, and a trails and sidewalks review that may be reviewed for this Master Plan. Improvements to trail and sidewalk connectivity are listed in the short-, medium-, and long-term capital plans.

Implications of the Transportation Master Plan: Completing this Master Plan supports the planning and capital planning of improvements.

Growth Strategy and Service Assessment

Completed in 2013, the Growth Strategy and Service Assessment formed two parts of the City of Lloydminster Comprehensive Growth Strategy to determine growth directions over the next thirty (30) years. The Servicing Assessment identifies long-term infrastructure requirements for the Growth Study. The findings of the Comprehensive Growth Strategy will inform the possible expansion of the City’s boundaries to ensure there are adequate lands for the next thirty (30) years of development.

Implication of the Growth Strategy and Service Assessment: While the Growth Strategy does not address active transportation, the information on the City’s population and demographics may be used as inputs for assessing the City’s active transportation needs. The Servicing Assessment is not anticipated to influence the Trails and Sidewalks Master Plan, except for potentially providing insight into the most likely areas for the City to expand.

2.2.3 Current Practices

Current practices are those that include the day-to-day decision-making related to the City’s sidewalks, trails and crosswalks network. Understanding the City’s current practices is excellent input for developing the project, carrying forward practices that currently work well, expanding on current practices where relevant and eliminating and/or replacing practices not meeting the City’s goals. To understand the City’s current practices, a series of questions were submitted to the City and discussed at the start of the project.

1. How do you currently make decisions as follows:

a. Location of trails

- i. Through a review of subdivision design approvals and reviews, the engineering team uses best judgment and sound reasoning to determine if there is an opportunity to implement or relocate trails.
- ii. By review of public requests/concerns, the City uses best judgment and sound reasoning to determine need and viability of new trail (e.g. 52 Street between 50 Avenue and 62 Avenue, opted to get a design made due to demand and concerns to improve connectivity)
- iii. Via internal request, the City uses best judgment and sound reasoning to determine the need and viability of new the trail.
- iv. Note that factors like link completion, connectivity improvement, demand (frequency of request/concern).
- v. In summary, up to this point, the City has not had a defined decision matrix and/or road map for determining where trails will be put and what connectivity links are completed. A lot of the trail locations are more reactive than they are proactive.

b. Types of trails (or are they all standard asphalt)

- i. Newly built trails are all asphalt.
- ii. Shale - these trails are being upgraded to the asphalt on an annual basis. The City has been opting to upgrade all trails to an asphalt concrete pavement and move away from "eco" trails that consist of shale, mulch, etc. as the City has found the maintenance of these trails to be burdensome. In the original Bud Miller All Seasons Park, mulch and shale trails would have fit in good however we do not have areas within the City where an "eco" trail would be well accepted by the public.

c. Crosswalk improvements (any internal guidelines?)

- i. Currently using the Transportation Association of Canada (TAC), Pedestrian Crossing Control Guide. Some examples of this include the implementation of several rectangular rapid flashing beacons (RRFB) at select locations.

d. Trails for new development

- i. As mentioned above, use the best judgment if there's an opportunity to implement; the City's development coordinator is key in the process and works closely with developers to seek more information regarding trail placement and location.

2. How important is trail experience to the City?

- a. Standard drawings for construction exist but the City will veer from standards in rehab situations as needed
- b. Trail system is a growing priority and the City is looking for:
 - i. A more objective means of determining the need or warranting for trail construction
 - ii. A more objective means of determining the location of the trail
 - iii. Determining if there is an opportunity to consider several different types of trails.
- c. A good example is the trail that was added to 62 Avenue, receiving positive feedback from the public, and seeded discussion for new trails.
- d. A more challenging example is a proposed trail on the north property of Bud Miller Park, which received negative feedback from the public. Trail planned behind residential lots, abutting the east/west fence line (shown in the aerial below).



Figure 2.2: Previously Proposed Trail

3. **Do you have any existing minimum standards for trails/sidewalks within the construction standards, including width/material and landscape design? (other than from the road standards).**
 - a. Municipal development standards only.
4. **How is trail/sidewalk maintenance performed?**
 - a. As needed based on visual inspection and request by parks.
 - b. Any trail that is not currently asphalt needs to be upgraded to asphalt as budget allows.
 - c. Snow clearing as needed

2.3 Public Engagement Round 1

In June 2020, online engagement was launched on May 28, 2020, until June 18 to gather feedback from residents and the public to understand the following to inform the development of a project vision:

- What does the public value about trails and sidewalks?
- How does the public currently use the trail and sidewalk network and how you would like to use it in the future?
- What elements of trails and sidewalks are most important to the public?
- What current issues exist?
- What ideas and opportunities do people see for the future?

The online engagement was conducted on the City's webpage: <https://yourvoicelloyd.ca/trails> and included the following opportunities:

- Online survey
- Mapping Tool
- Q & A Tool

2.3.1 Public Engagement Results

There were 316 participants in the online survey. The type of users that completed the survey are illustrated in the following chart.

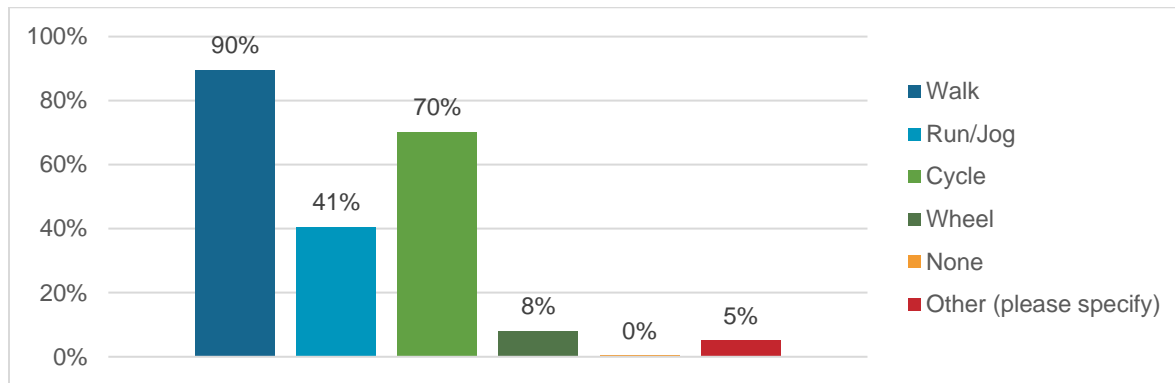


Figure 2.3: Online Survey (User)

Overall key themes are summarized in the subsequent sections. Details of key themes we heard in response to each question are included in a summary of feedback received from the online survey and mapping tool in **Appendix A**.

Ranking Based on Importance

The public was asked to rank the level of importance within the following seven themes:

1. **Safety:** Safety for users of trails, sidewalks and at intersections.
2. **Connectivity:** Network connectivity of trails and sidewalks as an option for getting to key destinations.
3. **Accessibility:** Accessibility for all types of users, ages and abilities (Examples: wheelchair, walker, stroller accessibility, etc.)
4. **Protecting Environment:** Protecting the natural environment and maintaining greenspace.
5. **New Expansion:** Expanded trail system providing more areas for recreation purposes.
6. **Wayfinding:** Wayfinding Signage (Examples: network maps, directional signage, trail names or colours, etc.)
7. **User Experience:** User experience enhancements through trail amenities (Examples: benches, gazebos, public art, educational plaques, etc.)

The results based on importance is provided in the following table.

Table 2.1: Public Engagement Results (Ranked by Theme)

Rank	Theme	Results of Survey				
		Unimportant	Somewhat Important	Neutral	Somewhat Important	Important
1	Safety	0%	2%	4%	9%	85%
2	Connectivity	1%	1%	4%	15%	79%
3	Accessibility	0%	1%	5%	17%	77%
4	Protecting Environment	0%	2%	12%	26%	60%
5	New Expansion	2%	2%	14%	26%	55%
6	Wayfinding	4%	8%	26%	31%	30%
7	User Experience	12%	13%	27%	29%	20%

As shown in Table 2.1, safety, connectivity, and accessibility stand out as the top three priorities for the trails and sidewalk network based on public input. Some key comments and items of importance received are as follows (taken from the **Appendix A** report):

- **Safety:** Safety is especially important at intersections, relating to crossing control safety including the crossing controls in place (visibility, lighting, timing, maintenance and user behavior)
 - Feeling safe on the trail and sidewalk system affects people's decisions to use trails. Relating to the need for improved lighting on trails, continual maintenance throughout all seasons. physically separating the network from vehicle traffic and providing safe crossings.
- **Connectivity:** Increasing connectivity would make using the trail and sidewalk network a more viable alternative mode of transportation, reduce confusion for users (where there are missing connections) and provide more variety of trail connection options with more uninterrupted lengths for users.
- **Accessibility:** All trails and sidewalks should be accessible to residents, with a focus on ensuring proper transitions between surfaces, proper hard surfacing, widths, grading, continual maintenance and proper intersection crossing timings support accessibility for all users.
- **Natural Environment:** Greenspaces add a lot of natural beauty and are important for a healthy environment and users enjoy many benefits including, increasing enjoyment, improving mental health and improving physical health. Greenspaces need to prevent negative impacts on the environment.
- **New Expansion:** Expansion of the network would provide new places to be explored, where there is additional greenspace available; however, the current trails system should be better connected.
- **Wayfinding:** Wayfinding signage and marking would increase awareness of connectivity; however, there are some concerns about costs, maintenance and potential vandalism. There are opportunities for improving the current online maps as are considered confusing and somewhat inadequate.
- **Experience:** Improving user experience would increase the enjoyment of the network and encourage more people to use the network and opportunities include providing public art, public education displays (plaques), benches/seating, shelters, garbage cans, washrooms, water fountains, and others. Opposing concerns about costs, maintenance, vandalism and overall improving experience is less a priority compared to improving connectivity.

Ranking Based on Prioritization

The public was asked to rank the level of prioritization needed within the following subject areas:

- **Connectivity:** Adding connections to important destinations (Examples: schools, downtown, shopping areas, etc.)
- **User Experience:** Adding user experience enhancements (Examples: benches, gazebos, public art, educational plaques, etc.)
- **Expansion of Existing:** Expanding the network and improving connectivity.

The results are provided in Table 2.2.

Table 2.2: Public Engagement Results (Ranked by Prioritization)

Rank	Theme	Results of Survey~			
		Not a Priority	Low Priority	Mid Priority	High Priority
1	Expansion of Existing	3%	23%	23%	71%
2	Connectivity	4%	10%	35%	49%
3	User Experience	15%	36%	36%	12%

As shown in Table 2.2, expanding the recreation trail network is the highest priority, and this is interpreted similarly to closing gaps in the existing network and improving connectivity. It is also interpreted as different than expanding the existing network to create more opportunities for recreational purposes as this was given a lower ranking of importance.

Use of the Current and Future Network

The public was asked to identify their current and future use of the network and this is illustrated in the following figures.

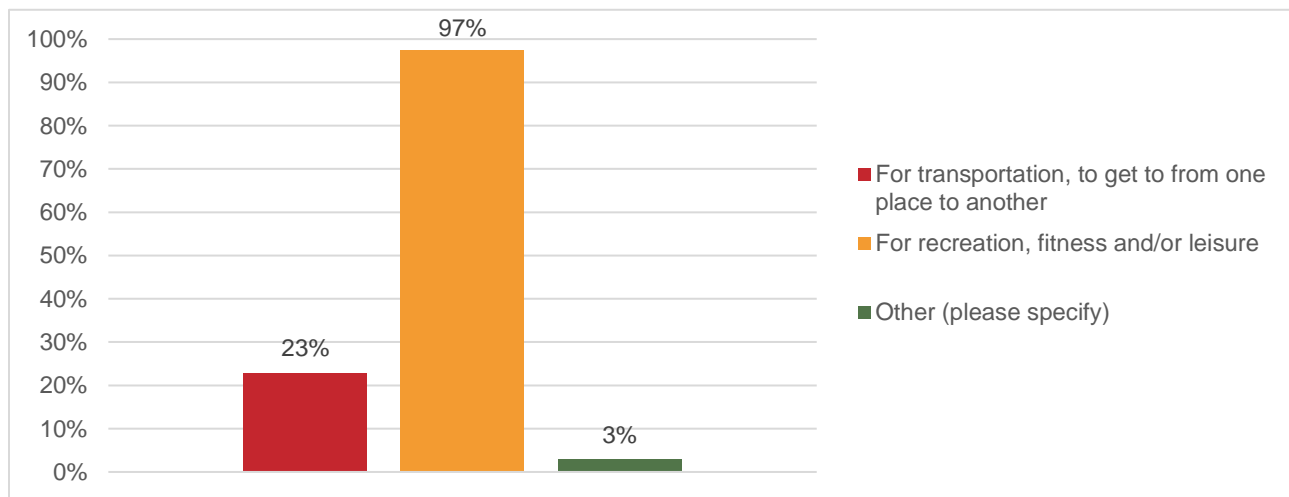


Figure 2.4: Current Use

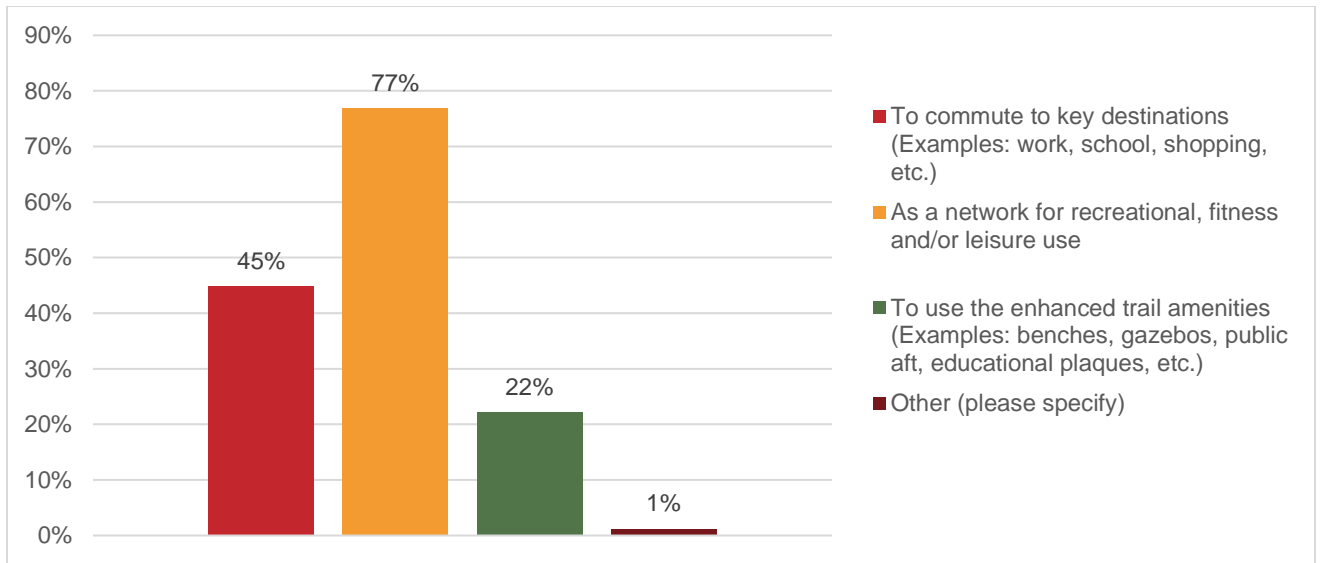


Figure 2.5: Future Use



■ 3.0 Phase 2 (Inventory and Analysis)

3.1 Project Visioning

On Wednesday, May 20, 2020, an internal visioning workshop was held virtually via Microsoft Teams from 3:00 p.m. to 4:00 p.m. The event took place in Phase 1 of the Trails and Sidewalk Master Plan project. The purpose of the event was to develop an understanding of important elements and priorities for internal City departments to inform the project Vision. The workshop was held virtually via Microsoft Teams. ISL's project manager narrated a PowerPoint presentation to provide project information to the participants while ISL's communications team facilitated roundtable conversations to gather feedback on specific questions throughout the presentation. A detailed record of the workshop is provided in **Appendix B**.

The following is a summary of key messages received as a result of the internal visioning workshop.

- Short-term priorities for the Trails and Sidewalks Master Plan should focus on closing network gaps in the existing network, rather than expanding the network. Attention needs to focus on ensuring the existing system is functional prior to planning expansions to the network.
- Projects should be prioritized, considering the need to close network gaps, maintenance requirements, and consider public requests.
- Improvements need to consider maintenance requirements as a high priority.
- Trail experience is not the highest priority; however, the City currently only offers minimal amenities along trails and should focus on providing entry-level amenities (benches, trail mapping and signage) at a minimum.
- Long term priorities could focus on expanding the trail and sidewalk network.
- A pedestrian crossing control evaluation is needed to objectively determine whether an existing location requires a crosswalk or expanded safety measures. and whether a crosswalk is needed in a future developed area.

Implications of the project visions session on the project area are as follows:

- Gaps assessment phase to focus on network improvements to close existing gaps and opportunities for installing entry-level amenities to improve user experience.
- Project priority should be based on closing network gaps and reducing maintenance requirements, which may involve paving existing shale trails.
- Long-term priorities for expanding the trail and sidewalk network should build on the requirements for accommodating future growth, but also focus on expanding the short-term network as determined by the gaps assessment.
- Minimizing maintenance requirements may mean improving the existing shale trail network.

Draft Project Vision

A major outcome of the session was the draft project vision, and this is as follows:

■ The Trails and Sidewalk Master Plan improves the existing network as follows:

- Improving access and ease of use through increasing connectivity through the existing network.
- Creating a safe and welcoming space for users of all ages and abilities to enjoy the natural environment.
- Encouraging active modes of transportation, physical activity, and outdoor recreation.

3.2 Data Collection

Data Collection Methodology

ISL performed data collection for all roadways and trails within the City of Lloydminster during the spring of 2020. The scope of this work included taking 360-degree photos of these roadways and trails using whatever means was ideal and most efficient. It was determined that there would be two methods of obtaining this data that would work best for this project, as follows:

- **Vehicle Mounted 360-Degree Camera:** The first method would include mounting this 360-degree camera to the top of one of the ISL's Ford F-150 using a device developed by our project engineer. This device was essentially a set of industrial glass movers with large suction cups that could hold tightly to the top of the ISL truck to prevent slippage, with a large screw attached in the middle of this apparatus to allow the camera to be fastened tightly to it and ensuring that it was secure during travel. When driving, the vehicle would travel at around 30 km/h maximum in order to obtain enough photos of the roadway as the camera would take an image approximately every 8 seconds. Slow travel was required to ensure that every road was covered, and no areas were missed due to driving too quickly. This method was used to obtain imagery of the roadways throughout the City of Lloydminster.
- **Backpack Mounted 360-Degree Camera:** The second method involved mounting the 360-degree camera to a large pole that could fit inside of a backpack and allow the user to carry this device on their backs. The pole, which the camera was mounted to, would stand approximately 2-3 feet above the user's head allowing optimal viewing of any trails that were travelled on. This method was used for capturing imagery of local trails throughout the City. Alternatively, if the user decided that the trail which was being travelled was too long for walking, a bicycle was used, and the backpack was worn while biking in order to optimize the efficiency and energy of the user.

Using either of these two methods would also require the use of survey equipment to provide coordinates for where each photo was taken as the 360-degree camera would not provide this information automatically. It was through a combination of all the equipment described that ISL was able to obtain photos of the roadways and trails within the City.

3.3 Existing Network

The existing network is mapped based on the data collection as follows:

- Exhibit 3.1: Existing Facilities (Sidewalks, multiuse paths, trails and natural paths)
- Exhibit 3.2: Existing Surface condition
- Exhibit 3.3: Existing Crosswalks

Detailed descriptions of each type of facility are provided in the following sub headers.

3.3.1 Existing Facilities (Sidewalks, Multiuse Paths, Trails, and Natural Paths)

Existing facilities are illustrated in Exhibit 3.1 and a detailed description of the facilities is shown as follows.

Sidewalks

A sidewalk is defined as a paved, often of concrete, path along the side of a roadway. Sidewalks are designed for pedestrians and not intended to accommodate cyclists. This type of pedestrian facility may be mono-walks, in which the sidewalks are connected to the curb or separated. Examples of sidewalks within the City are provided below.



Examples of Sidewalks within the City of Lloydminster (mono-walk (Left), separated (Right))

Multi-Use Path

A multi-use path is defined as a wide, paved path, often asphalt, that is designated for pedestrian and cyclist use. For the purpose of this master plan, multi-use paths are on one side of a roadway, with a sidewalk on the other side. Multi-use paths are a part of a city's bike network, providing users with the option to bike on the multi-use path or walk on the sidewalk without encountering cyclists. Examples of a multi-use path within the City are provided below.



Examples of Multi-Use Paths in the City of Lloydminster

Trail

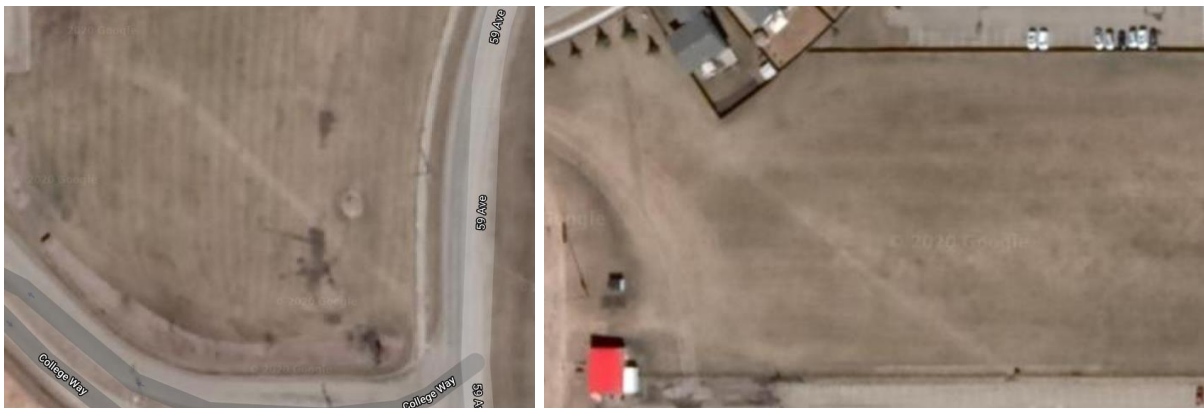
Trails are a type of path that is not along a roadway and is often associated with parks and open greenspace. Trails may be paved or unpaved and vary in width. Trails are intended to encourage recreation and connect communities. Examples of trails within the City are provided below.



Examples of Trails in the City of Lloydminster

Natural Path

Natural paths are informal paths created by repeated pedestrian activity in a greenspace. They represent desire lines, paths in which there is no formal trail or sidewalk but is frequently traversed by pedestrians. Repeated pedestrian activity often damages or kills grass along the path, exposing the dirt underneath. Natural paths may indicate gaps in the trail and sidewalk network and are best seen from aerial images or in the winter when the snow becomes compacted. Examples of natural paths within the City are provided below.



Examples Natural Paths in the City (Source: Google Maps)

3.3.2 Existing Surface Condition

Existing surface conditions are illustrated in Exhibit 3.3 and a detailed description is as follows:

- **Concrete:** A cast in place mixture of cement and aggregate, typically a light grey colour. Control joints are added to the surface of the concrete to account for a freeze thaw cycles and reduces the likelihood of random cracking elsewhere. Concrete surfaces are often associated with sidewalks, curbs, curb ramps, and gutters.
- **Gravel:** Aggregate that is compacted to make a surface. Gravel surfaces include loose material that may result in loss of traction while biking or running. Susceptible to damage from water and requires regular maintenance. This type of surface is often associated with trails.
- **Asphalt:** A mixture of aggregate and bitumen that is compacted to make a surface. It is black in colour when initially installed but greys with age. Asphalt surfaces are often associated with multi-use paths and roadways.
- **Natural:** Associated with natural paths, this surface is created when repeated pedestrian or cyclist activity damages or removes grass along a line from a green space.

3.3.3 Existing Crosswalks

Existing crosswalks are mapped on Exhibit 3.3 and illustrations depicting crosswalk types are depicted on Exhibit 3.4.

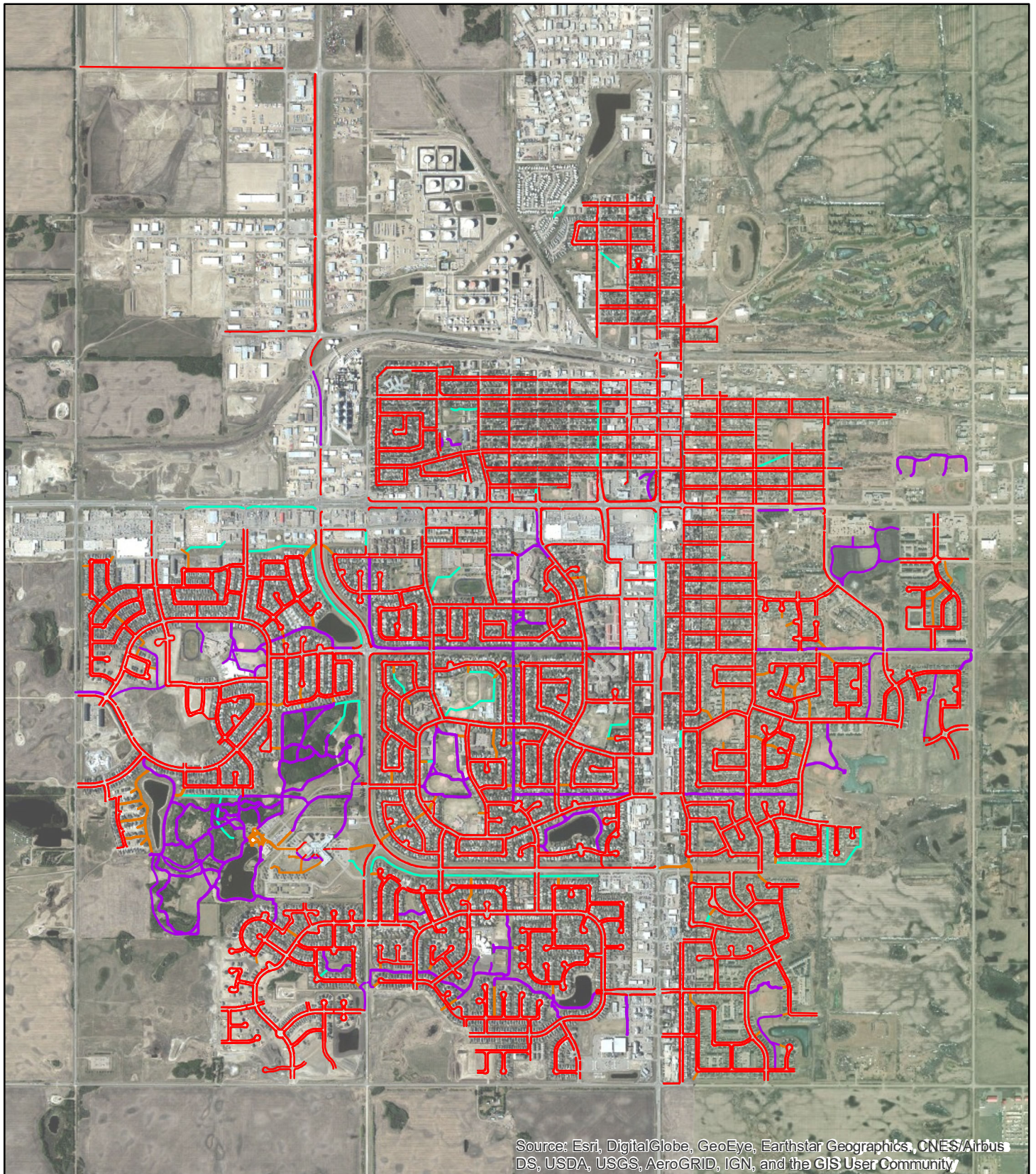
3.4 Preliminary Gaps Analysis

The gaps assessment defines missing connections as the following:

- Natural paths depicting the public's desired connection.
- Missing sidewalks, trails or multiuse paths that, without their connection, create dysconnectivity within the network and between major destinations, including recreational areas, shopping areas and institutional areas.
- Missing sidewalks, trails or multiuse paths, where there is no current connection along a roadway or where there could be a second connection.
- Any missing crosswalk, that connects between sidewalks, trails or multi-use paths.

The preliminary gaps analysis is provided in **Appendix E** as it was the subject of the first round of stakeholder engagement and is documented in Section 5.0 of this report.

Exhibit 3.1: Existing Facility Type
 Exhibit 3.2: Existing Surface Condition
 Exhibit 3.3: Existing Crosswalks
 Exhibit 3.4: Crosswalk Types



1:30,000

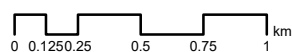


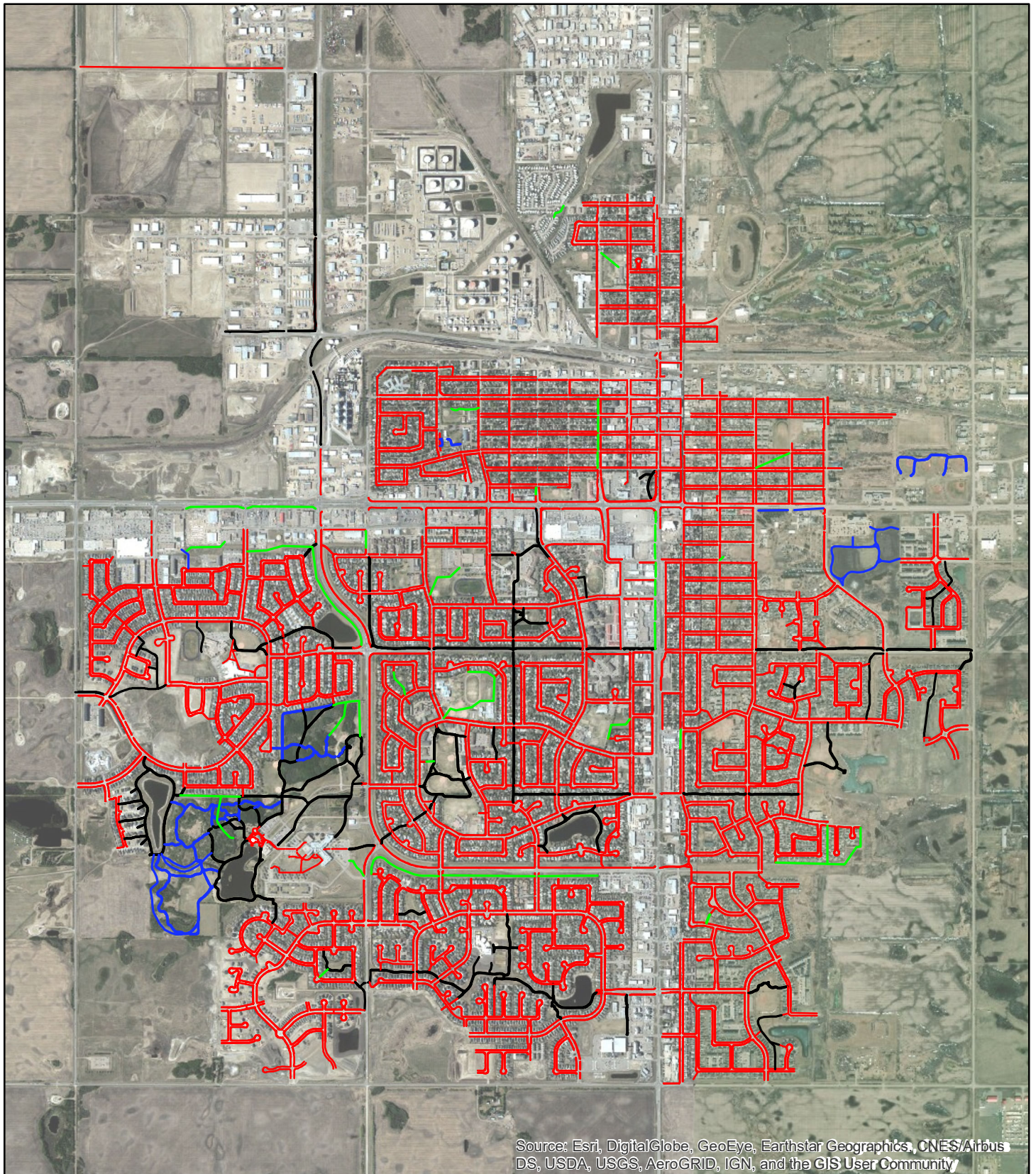
- Sidewalk
- Multiuse Path
- Natural Path
- Trail



TRAILS AND SIDEWALKS MASTER PLAN

EXHIBIT 3.1: EXISTING
FACILITY TYPE





1:30,000

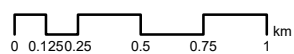


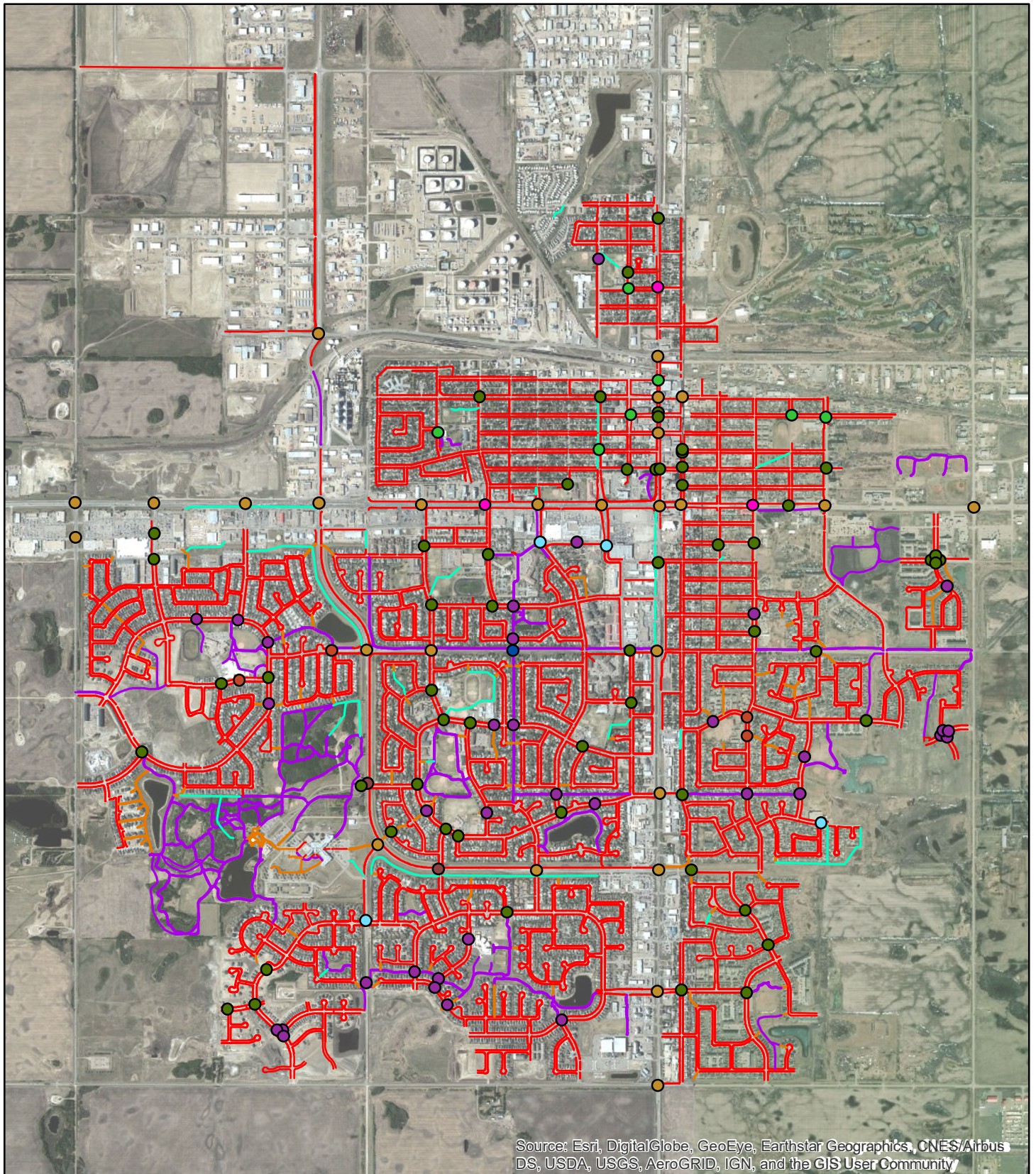
- Concrete
- Gravel
- Asphalt
- Grass



TRAILS AND SIDEWALKS MASTER PLAN

EXHIBIT 3.2: EXISTING
SURFACE CONDITION





1:30,000

Crosswalk Type		Sidewalk Type
● GM (P)	● OF (P)	— Sidewalk
● GM (Z)	● OF (Z)	— Multiuse Path
● RRFB (P)	● PTS	— Natural Path
● RRFB (Z)	● TS	— Trail
	● PL	

TRAILS AND SIDEWALKS MASTER PLAN

EXHIBIT 3.3: EXISTING CROSSWALKS

Integrated Expertise. Locally Delivered.

303

GROUND MOUNTED (GM):

Traditional ground mounted crosswalk signage mounted back to back on both sides of the road with road markings.

**RECTANGULAR RAPID FLASHING BEACON (RRFB):**

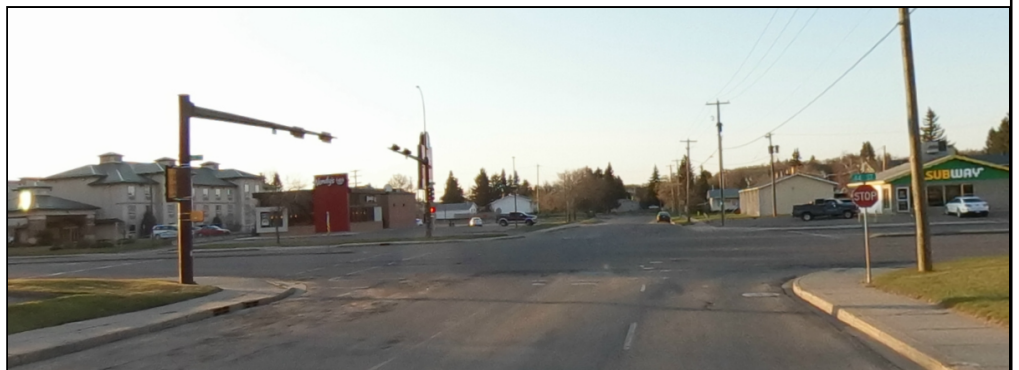
Ground mounted signage flashing light system with push button control.

**OVERHEAD FLASHING LIGHT (OF):**

Overhead flashing light system with push button control.

**PEDESTRIAN TRAFFIC SIGNAL (PTS):**

Traditional half traffic signal with push button control. Indicates stop signal for cross street traffic.



Others (no example shown)

Parallel (P): Parallel crosswalk markings are installed. (Eg. GM (P) = Ground Mounted with parallel crosswalk markings)

Zebra (Z): Zebra crosswalks markings are installed. (Eg. RRFB (Z) = Rectangular Rapid Flashing Beacons with zebra markings)

Traffic Signal (TS): Traditional full traffic signal. Parallel lines are used at traffic signals.

Parallel Lines (PL): Parallel crosswalk markings only. No crosswalk signage installed.



■ 4.0 Phase 2 (Pedestrian Crossing Safety Assessment)

Pedestrian crossings are critical for supporting the trail and sidewalk network. Pedestrian crossings can significantly improve the attractiveness of the trail and sidewalk network for the user by providing a safe way to cross roadways where it was not previously available but may not provide any value if they are perceived as unsafe due to not providing enough protection for users. A key input to the Trails and Sidewalk Master Plan is creating and applying a procedure for assessing the safety and effectiveness of pedestrian crossings that produces consistent recommendations, supports the overall goals of the project, and provides direction for assessing priority locations for improvements and capital planning.

In Phase one (Section 2.2), the City indicated that their current practices for assessing the safety and effectiveness of pedestrian crossings are by applying the Transportation Association of Canada's (TAC) Pedestrian Crossing Control Guide (PCCG). The TAC PCCG guide is an excellent tool as a starting point for creating a procedure associated with assessing the safety and effectiveness of pedestrian crossings and, with additional provisions to align with the goals of this project and local practices, will become a critical tool for this project and a future resource for the City.

4.1 TAC PCCG Summary and Applicability

The following reviews the TAC PCCG and its applicability in the City with the purpose to inform the development of the proposed pedestrian crossing safety assessment for the City, provided in Section 4.2.

The guide is a decision-making tool to help practitioners and municipalities with two (2) main goals, as follows:

- **Goal One:** Establishing the need for controlling the traffic to allow pedestrians to safely cross, and
- **Goal Two:** Identifying the type of traffic control device suitable for a location based on the site conditions.

The TAC PCCG relies on the use of an assessment procedure to justify pedestrian crossing implementation decisions. The assessment procedure outlined in the TAC PCCG intends to achieve the following four (4) objectives:

1. **Objective One:** Create a rational and defensible basis for decisions to be made.
2. **Objective Two:** Support decisions with numerical criteria and data.
3. **Objective Three:** Promote consistency in design and implementation.
4. **Objective Four:** Establish minimum thresholds or general guidelines with qualitative criteria.

The TAC PCCG assessment procedure factors in the application of engineering judgement as there is some degree of interpretation in the application and results of the procedure. The TAC PCCG also warns against installing unwarranted pedestrian crossing control devices as they may detrimentally affect road safety. The assessment procedure relies on a holistic approach to assessing pedestrian crossings involving aspects from transportation, land use planning, and urban design. Each discipline has a direct relationship with the road users and the way they utilize the road system.

The PCCG follows a simple six-step process to approaching the implementation of a pedestrian crossing control.

- **Initiation Event (Task One):** The initial event in which a request from the public is made for installing a new crosswalk or reviewing an existing crosswalk for possible improvements. The City may conduct an initial review of the location against any background data available to determine their priority for conducting a formal review. The City may review crosswalks regularly as part of their ongoing monitor and/or may initiate a review as part of a construction project.
- **Preliminary Assessment, Treatment Selection, Potential Impacts (Task Two to Four):** Includes the assessment of the crosswalk location to confirm the need for a crosswalk and the type of crosswalk treatment required. This is discussed in detail in the following section.
- **Treatment Installation, Monitoring and Evaluation (Task Five and Six):** Construction of the selected improvement, monitoring and evaluation to determine the effectiveness of the improvement compared to the expected outcomes.

4.1.1 Preliminary Assessment (Task Two)

The following is a summary and discussion of the TAC PCCG step 2, preliminary assessment, including a step, by step flow of the process. The purpose of providing the summary is to provide a discussion of challenges that are common when applying the guidelines to refine the process. The practitioner follows the step-by-step flow as outlined below to determine whether a crossing is needed.

- **Step 1 – Are traffic signals warranted (based on the TAC Traffic Control Warrant Procedure)?**
 - Yes, consider installing traffic signals.
 - No, move to step 2.
- **Step 2 – Are daily traffic volumes >1,500 with >15 Equivalent Adult Units (EAU).**
 - Yes, move to step 3.
 - No, move to step 4.
- **Step 3 – Is location a minimum of distance ‘d’ from an existing crosswalk.**
 - Yes, crosswalk warranted.
 - No move to step 5.
- **Step 4 – Is location a minimum of distance ‘d’ from an existing crosswalk.**
 - Yes, move to step 6.
 - No, crosswalk not warranted.
- **Step 5 – Is location on a pedestrian desire line**
 - Yes – Crosswalk warranted.
 - No – Crosswalk not warranted.
- **Step 6 – Is there latent pedestrian crossing demand >15 (EAUs) or is there a requirement for network connectivity?**
 - Yes, crosswalk is warrant.
 - No – crosswalk not warrant.

From the assessment procedure, the following is observed.

- **Traffic Signals:** If signals are warranted, the need for signals governs.
- **Pedestrian Volumes (EAUs) Threshold:** The volume threshold of 15 is challenging to measure at subject locations that do not currently have a crosswalk. The EAU factors pedestrian volumes based on their age/ability and requires a certain level of judgement. Notably, pedestrian crossing volumes are only needed to confirm the need for a crosswalk located on a desire line that is within distance “d” to another crossing location.
- **Traffic Volume Threshold:** The minimum daily volume threshold of 1,500 vehicles is based on the minimum practical traffic volume at which the installation of a pedestrian crossing control device should be considered. The guide indicates this value is based on available research but does not indicate whether higher or lower values are worth considering based on municipality size.
- **Crosswalk Needed (Network Connectivity Met):** If traffic- and pedestrian-volume minimums are not met, crosswalks can still be needed if it is required for network connectivity. The term network connectivity may be defined by the individual municipalities.
- **Crosswalk Warranted (Volumes Met, Desire Lines Met, Within Distance ‘d’):** If traffic volumes and pedestrian volumes are met, but the crosswalk is too close to another crosswalk, defined by distance ‘d’ a crosswalk can still be warranted if along a pedestrian desire line. Desire line requirements are loosely defined in the guide, requiring a certain degree of engineering judgement, but could be further defined by individual municipalities.
- **Crosswalk Not Warranted (Volumes Not Met, Network Connectivity Not Met):** Crosswalks are not warranted where volume minimums and network connectivity requirements are not met.
- **Crosswalk Not Warranted (Volumes Met, No Desire Line):** Crosswalks are not warranted where volume minimums are met, but the location is not on a pedestrian desire line.
- **Minimum Distance ‘d’:** Minimum distance ‘d’ is suggested to range from 100 – 200 m in the TAC guide but can be defined by the individual municipality. Distance ‘d’ could be defined based on balancing the need for prioritizing pedestrians with protecting the functional roadway classification. Lower values are appropriate on local and collector roadways and higher values are appropriate on arterials.
- **Latent Pedestrian Demand:** Estimating pedestrian demand includes conducting a trip generation analysis for each land use within a five to 10-minute walk of the crosswalk. Overall, the process is cumbersome and relies on multiple points of inputs applying engineering judgement, with no specific pedestrian demand data available and examples of utilizing the process are not known. In addition, the assessment excludes reviewing the crossing location as part of a larger network, which may be utilized by those outside of the 10-minute walking area. A simpler measure is whether the crosswalk is needed for network connectivity and latent pedestrian demand estimating is only needed in special cases for locations that do not provide network connectivity.
- **Collision History:** The assessment tool does not consider collision history, however the City may use collision history in the future (to confirm need and prioritize).

If the subject locations meet the requirement as outlined in step 2, the following step (treatment selection) applies.

4.1.2 Treatment Selection (Task 3)

If the preliminary assessment results in the need for a crosswalk, the TAC PCCG outlines a process for selecting an appropriate crosswalk type, based on daily traffic volume, speed limits and the total number of lanes (driving and parking lanes). The selection tool indicates which crosswalk type is recommended and the types of crosswalks available are outlined as follows, from the lowest level of pedestrian protection to the highest level.

- **Ground Mounted (GM1):** Traditional crosswalks signage mounted back to back on both sides of the undivided roadway or one on the right side and one in the median of a divided roadway. Twin parallel line marking is used to indicate the crosswalk. Zebra markings are used in school zones. Advanced warning signage installed, where visibility is limited. Stopping prohibition for a minimum of 15 m on each approach. Passing and lane change restrictions on multiple-lane approaches using a solid white line.
- **Ground Mounted + (GM+):** Similar to GM1, with some advanced features, including overhead signage as shown in the example.
- **Rapid Rectangular Flashing Beacon (RRFB):** Ground-mounted flashing light system with pushbuttons.
- **Overhead Flashers (OF):** Same line marking and regulatory signage as GM, except with overhead illuminated pedestrian crosswalk signage, with alternating amber flashing beacons, down lighting and pushbuttons.
- **Pedestrian Traffic Signal (PTS):** Twin parallel crosswalk markings, stop lines for vehicles, primary and secondary signal indicators (as needed), push-button, stop sign on cross street (as needed).

For each of the crosswalks available, the TAC PCCG outlines recommended and desirable crosswalk components. The recommended components are summarized in the above descriptions and illustrated in the following figure, sourced from the TAC PCCG.

Ground Mounted System (GM)



Enhanced Ground Mounted System (GM+)

Note: example illustrates overhead mounted signs and a curb extension. Other available enhancements are not illustrated in the picture.



Rectangular Rapid Flashing Beacon System (RRFB)



Overhead Flashing Beacon System (OF) or Special Crosswalk



Pedestrian Signal (PTS)



Figure 4.1: Typical Crosswalk Types Recommended by the Guide (Source: TAC PCCG, 2019)

These components are those in addition to the recommended components and may be selected/used based on local needs. There is no direction available in the guide indicating when and how these desirable components should be used. Desirable crosswalk components are outlined in the following examples.



Raised refuge – continuous centre median



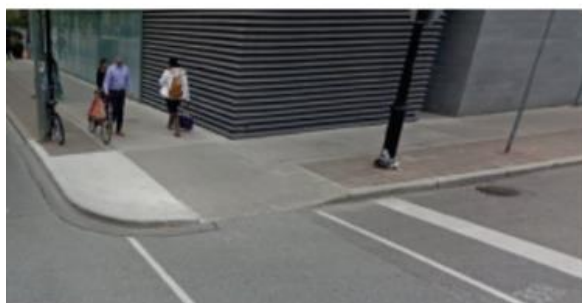
Raised refuge – pedestrian crossing island



Offset crosswalk



Curb extension



Curb corner radius reduction



Raised crosswalk

Figure 4.2: Desirable Crosswalk Components

From the treatment selection, the following is observed.

- **Illumination:** Downlighting (illumination at the crosswalk), is only required for OF crosswalks. There is no requirement for downlighting at other crosswalks. Consideration for installing downlighting at all crosswalks should be given based on the shorter daylight periods in Northern Alberta.
- **Sight Distance:** The guide explicitly recommends the need to ensure there is adequate sight distance at crosswalks and requires that sightlines meet the requirements outlined in the TAC Geometric Design Guide and recommends applying various tools to address sightlines. Sightline improvements are not included within the recommended component; therefore, it is implied that the designer will review sightlines and recommend sightline improvements necessary. To expand on the guide, sightline improvements should be outlined in the recommended components for each crosswalk type. This is recommended as parking is allowed up to 5 m from the crosswalk and vehicles parked in this area are known sightline obstructions. To improve sightlines due to parked vehicles a no parking zone greater than 5 m is required and this should be assessed for each site.
- **Overhead Pedestrian Crossing Sign:** In previous versions of the pedestrian crossing guide, overhead crossing signs were an acceptable solution, but appear to be removed from the guide in the 2019 version. Any use of overhead crossing signs should be reviewed.

4.2 Proposed Lloydminster Pedestrian Crossing Safety Assessment

Adoption of the TAC Pedestrian Control Manual is proposed, with several additional measures of refinement, applicable to the City of Lloydminster.

Initial Event (Task One)

The decision to assess the need for a crosswalk or improvement to an existing crosswalk may be made proactively or reactively and both responses are acceptable based on the TAC PCCG.

Example situations which could initiate a review include the following events:

- Request from the public.
- Internal decision based on internal monitoring.
- As part of an existing operations study (similar to this one), identifying, assessing and prioritizing the need for improvements.
- As an input to a construction project, presenting an opportunity for installing improvements.
- At a planning level, as part of a future development transportation planning study.

Preliminary Assessment (Task Two)

The primary test to determine whether a subject location may be a candidate for a crosswalk is the daily traffic volumes and number of traffic lanes.

- **Initial Screen line:** The TAC PCCG minimum daily traffic volume threshold is 1,500 vehicles per day and 15 EAU's per hour. The City should consider applying a 20% reduction factor to the daily traffic volume threshold, reducing it to 1,200 vehicles per day. This is suggested as a means of respecting the relatively smaller size of the City and is based on experience from ISL, where there is often higher levels of traffic congestion accepted by residents in larger Cities.

- **Secondary Assessment:** Where the daily volumes are met, the following procedure provides the methodology for conducting crossing assessments.
 - Step 1 – Are traffic signals warranted?
 - Yes, consider installing traffic signals.
 - No, move to step 2.
 - Step 2 – Is the location distance 'd' from an existing crossing?
 - Yes, move to step 3.
 - No, move to step 4.
 - Step 3 – Is the location needed for network connectivity?
 - Yes, consider installing a crosswalk.
 - No, move to step 4.
 - Step 4 – is the location on a pedestrian desire line?
 - Yes, move to step 5.
 - No, a crosswalk is not required.
 - Step 5 – Are traffic volumes >1,200 vehicles per day
 - Yes, move to step 6.
 - No, a crosswalk is not required.
 - Step 6 – Are pedestrian volumes >12 per hour
 - Yes, consider installing a crosswalk.
 - No, crosswalk not required.
 - If pedestrian volumes are unknown move to step 7.
 - Step 7 – Conduct a pedestrian generation study to confirm that pedestrian demand is >12 per hour
 - Yes, a crosswalk is required.
 - No, a crosswalk is not required.

Distance D

- The spacing between crosswalks that applies varies as a balance between protecting roadway function and providing a high-quality network. For lower classification of roadways, shorter spacing is acceptable and for higher classification of roadways, longer spacing is acceptable. In a depending on roadway functional classification.
 - Local/Collector = 150 m
 - Arterial = At public intersections or mid-block @ 200 – 250 m spacing

Network Connectivity

- Define network connectivity as providing connectivity for a trail system or sidewalk system within a higher pedestrian utilized area (downtown and around schools) located on collector and local roads. Define network connectivity as providing connectivity for a trail system crossing an arterial roadway.

Desire Lines

For the trails and sidewalk master plan, the following recommendations are proposed.

- Adapt the TAC assessment procedure with the following additional provisions.
- Define desire lines as those providing a direct connection between specific destinations in Lloydminster where there is a need to prioritize pedestrian movement. The TAC guide provides some examples of desire lines in areas around schools, community centres, hospitals, parks and seniors homes, but requires the evaluator to apply engineering judgement.
- Specific areas in the City to focus on providing crossing treatments include the followings:
 - School zones
 - Playground zones
 - Downtown (include area boundary)

Treatment Selection (Task Three)

Utilize the crosswalk types as recommended by the guide, with the following exceptions:

- Zebra markings are used at mid-block crossings.
- Pedestrian downlighting is installed for all crosswalk types.
- Stopping sight distance requirements are assessed for all crosswalk types and provisions for improving sightlines are installed. Suggested measures include increased no parking areas and installing curb extensions.

4.3 Pedestrian Crossing Assessment

The proposed crossing safety assessment is applied to the missing crosswalks identified in the preliminary gaps analysis (section 3.3) of this report.

4.3.1 Missing Crosswalks (Arterials)

Missing crosswalks at arterial roadways are assessed applying the recommendation crossing safety assessment. Detailed assessment sheets and notes are provided in **Appendix D**. Detailed traffic volumes are provided in **Appendix C**.

1. **44 Street and 59 Avenue:** Needed for connectivity because it is the end of the sidewalk on both sides of 44 Street, connecting neighbourhoods north/south of 44 Street to land retail and other land uses. Discussed with stakeholders as a highly used crossing location.
2. **62 Avenue (south of 43 Street):** Needed for network connectivity because it would provide a key connection for the neighbourhoods and trails. Could be placed at 43 Street as a half signal to provide connectivity across 43 Street for more users (combined users on the trail and 43 Street).
3. **50 Avenue and 35 Street:** Needed for connectivity due to lack of east/west connections crossing 50 Avenue between 36 Street and 27 Street.
4. **50 Avenue and 15 Street:** Needed for connectivity providing access between residential and commercial areas east/west of 50 Avenue as well as the recreation centre to the west.
5. **59 Avenue and College Access:** Connects to the natural trail leading to college.
6. **36 Street and 43 Avenue:** Marked as a missing crosswalk in the preliminary gaps analysis but upon further review is an all-way stop.
7. **44 Street and 48 Avenue:** Needed for network connectivity to connect sidewalks on 44 Street. Upon further review noted to likely have very low pedestrian demand as this does not connect to any significant destinations. No crosswalk is recommended.

Table 4.1: Missing Crosswalks Arterials

Location	Number of Crossing Lanes	Crossing Daily Traffic Volumes	Proximity to Alternative	Recommended Treatment
44 Street/59 Avenue	Six	22,500	250 m (east) 300 m (west)	Pedestrian Half Signal
62 Avenue (south of 43 Street)	Four	12,500	200 m (north) 700 m (south)	RRFB
50 Avenue/35 Street	Two	4,000	220 m (north) 570 m (south)	Ground Mounted (P)
50 Avenue/15 Street	Two	17,000	220 m (north) 280 m (south)	RRFB
59 Avenue/College Access	Two	6,000	205 m (north) 230 m (south)	GM (Z) or RRFB

4.3.2 Missing Crosswalks (Collectors)

Missing crosswalks on collector roadways noted in the preliminary gaps analysis will be reviewed in the future by the City through additional data collection (new traffic volumes) and detailed sightline analysis. To assist the City in determining which crosswalks should be given higher priority review, network connectivity was reviewed to understand the probable demand for the crosswalk based on its location within the larger sidewalk and trails network. For example, a missing crosswalk located along a continuous network corridor is assumed to have a higher level of demand, compared to a crosswalk located in a more isolated area.

This was supplemented by reviewing publicly available information from a popular smartphone-based application for tracking a wide range of outdoor recreational and fitness activities, in which walking, cycling and running are typically the most popular types of use in cities. Public data used is updated monthly, represents data collected over the previous two years and illustrates user collected information into heat maps showing areas that have relatively higher use. The use of this data was suggested by one of the stakeholders and their heat maps became available to the public in September 2020, purposefully as a tool for active transportation network planning purposes. The data represents the best possible data in lieu of collecting new information and is acceptable for understanding relative demand.



The anticipated demand based on network connectivity and Strava heat maps is illustrated in the following table. The Strava heat maps are provided in **Appendix G**. Relative demand is illustrated using several pedestrian symbols, e.g.  to .

Table 4.2: Missing Crosswalks (Collectors), Review Priorities

Location	Relative Demand	Connectivity	Review Priority
52 Avenue/18 Street		Multi-Use Path	1
51 Avenue/27 Street		Sidewalk/Trail	2
47 Avenue (Mid-block) – south of 19 Street		Sidewalk/Trail	3
21 Street/61 Avenue		Sidewalk	4
53 Avenue/23 Street		Sidewalk	5
72 Avenue (Mid-block) – west of 70 Avenue		Multi-Use Path	6
28 Street (Mid-block) – east of 56 Avenue		Multi-Use Path	7
56 Avenue (mid-block) – south of 30 Street		Multi-Use Path	8
16 Street (Mid-block), west of 54 Avenue		Trail	9
22 Street/61 Avenue		Trail	10
14 Street and 47a Avenue		Sidewalk/Trail	11
27 Street/53 Avenue		Sidewalk	12
66 Avenue/42 Street		Sidewalk	13
13 Street and 47a Avenue		Sidewalk	14
45 Avenue and 32 Street		Sidewalk/Trail	15
29 Street/67 Avenue		Sidewalk	16
29 Street/66 Avenue		Sidewalk	17
52 Avenue/34 Street		Sidewalk	18
52 Avenue/23 Street		Sidewalk	19
52 Avenue/20 Street		Sidewalk	20
15 Street/55 Avenue		Sidewalk	21
22 Street and 47 Avenue		Sidewalk	22
43 Street and 57 Avenue		Sidewalk	23
43 Street and 56 Avenue		Sidewalk	24
54 Street and 49 Avenue		Sidewalk	25
47 Avenue (Mid-block), south of Barr Crescent		Sidewalk/Trail	26
51 Avenue/31 Street		Sidewalk	27
24 Street and 47 Avenue		Sidewalk	28

4.3.3 Missing Pedestrian Ramps

Missing pedestrian ramps are a barrier to people travelling in wheelchairs or motorized scooters and users pushing strollers and other wheel transportation needs. Disoriented non-standard pedestrian ramps are those with missing, or improperly oriented tooled grooves indicating the direction of travel for visually impaired users of the sidewalk and trails network. Improving the trails and sidewalk network and making it accessible for all users includes installing missing pedestrian ramps or replacing disoriented, non-standard pedestrian ramps. For reference, the City's standard drawing 2-200 is provided in the following figure, illustrating the general layout and tooled grooves.

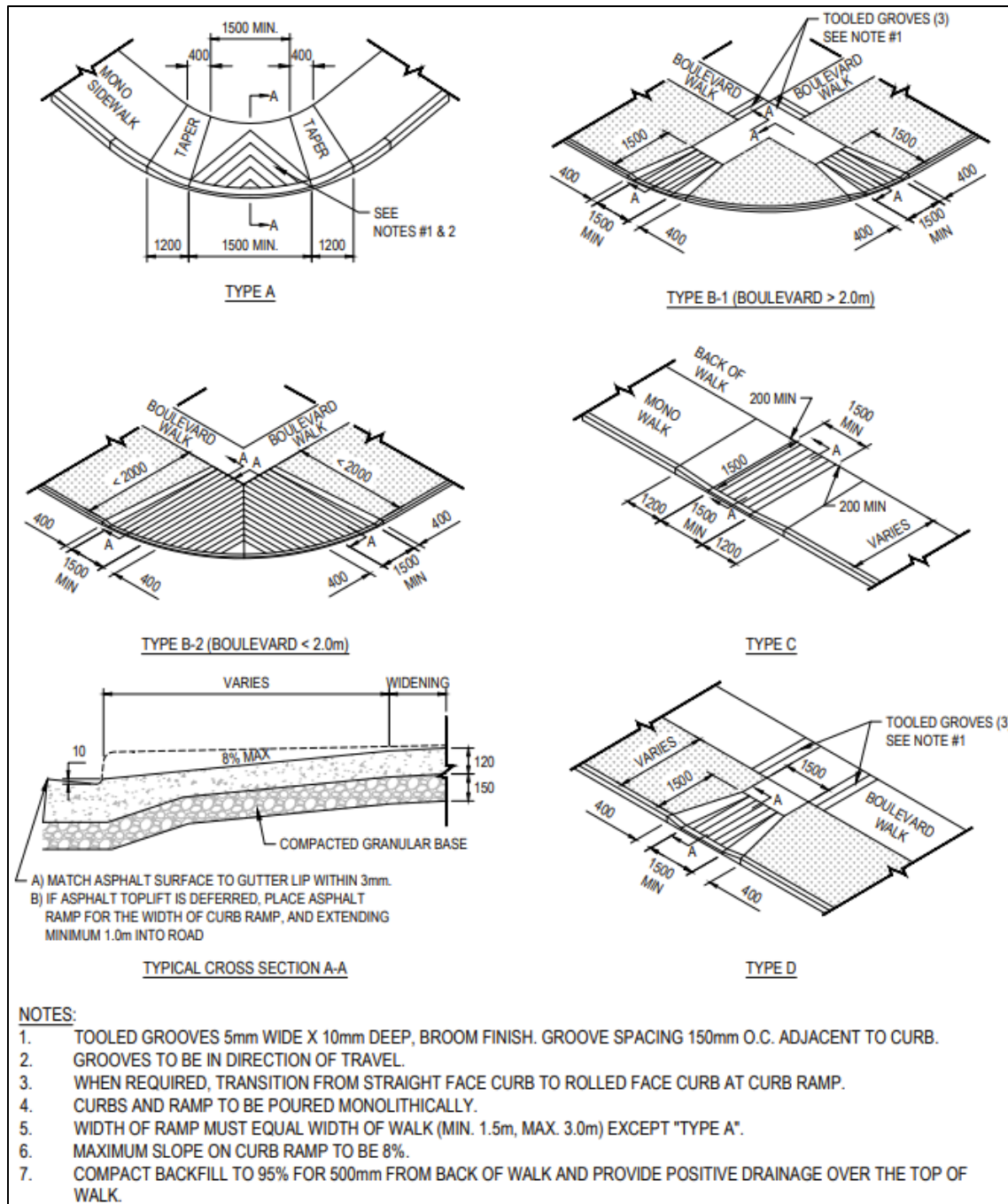
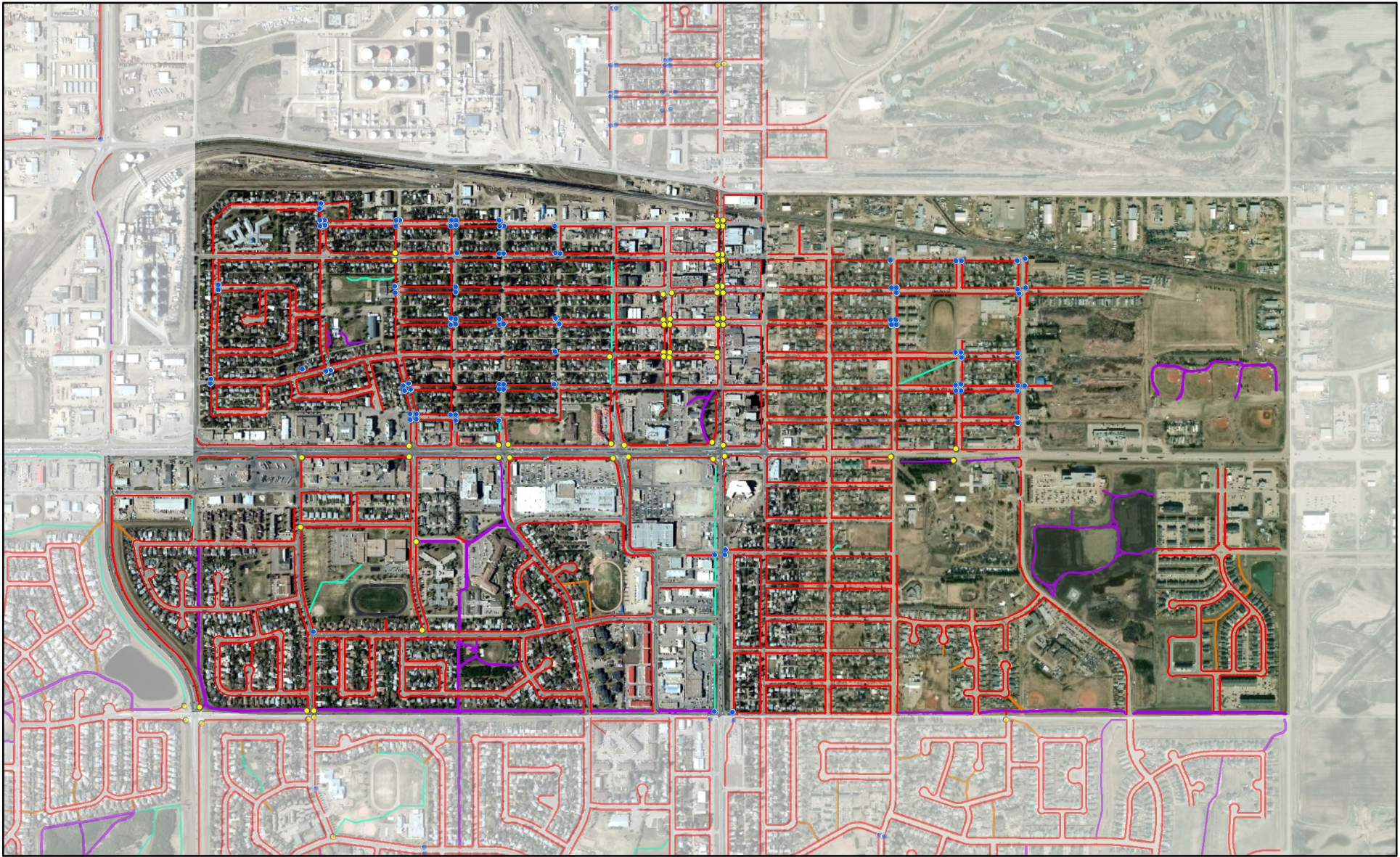


Figure 4.3: Pedestrian Curb Ramp (Standard Drawing 2-200)

Overall, there are many areas of the City that have applied the pedestrian ramp standard shown, except for some areas the central core, where it appears to have been developed prior to the pedestrian ramp standard being adopted. Exhibits 4.1 to 4.4 illustrate locations where there are missing pedestrian ramps or non-standard, disoriented pedestrian ramps, which should be replaced.



1:17,000

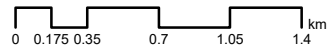
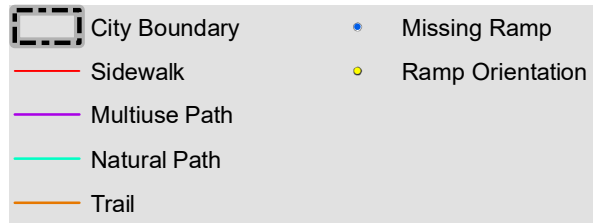
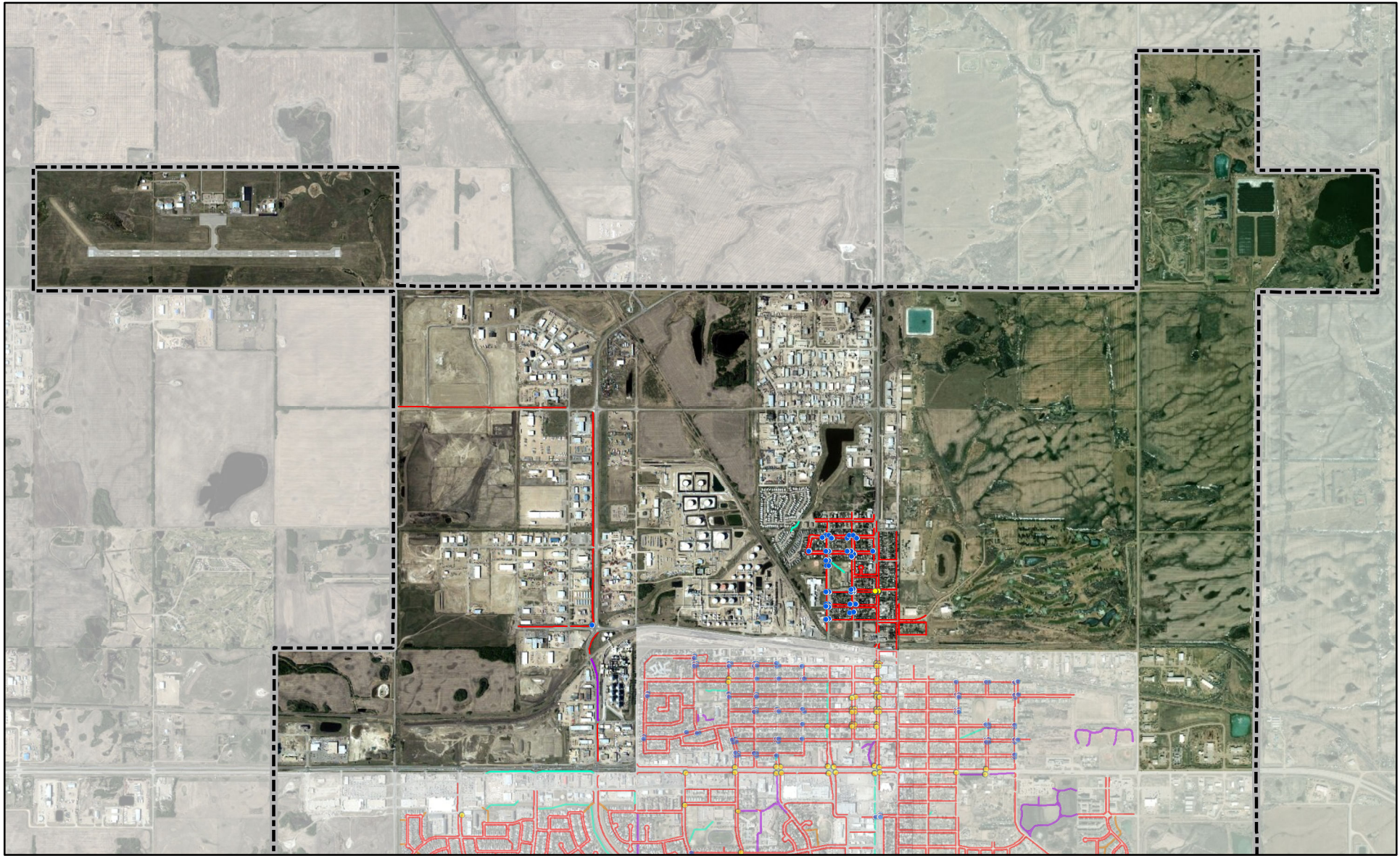


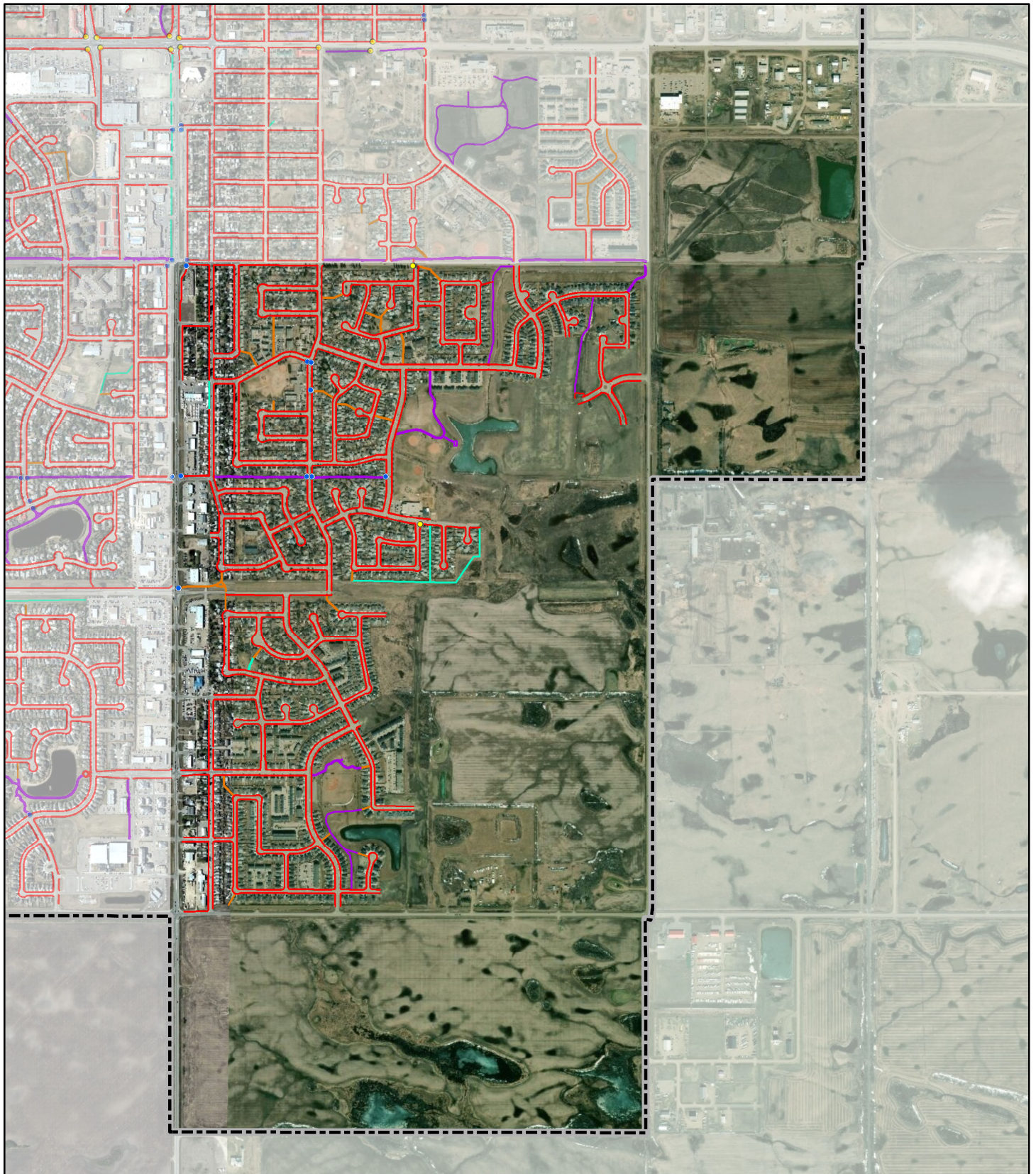
- City Boundary
- Sidewalk
- Multiuse Path
- Natural Path
- Trail
- Missing Ramp
- Ramp Orientation

0 0.075 0.15 0.3 0.45 0.6 km

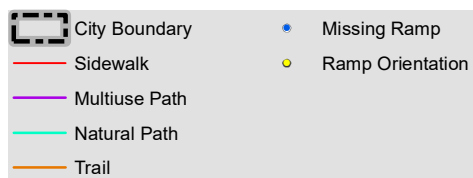


**TRAILS AND SIDEWALKS
MASTER PLAN**
EXHIBIT 4.1: PEDESTRIAN
ACCESSIBILITY REVIEW
CENTRAL





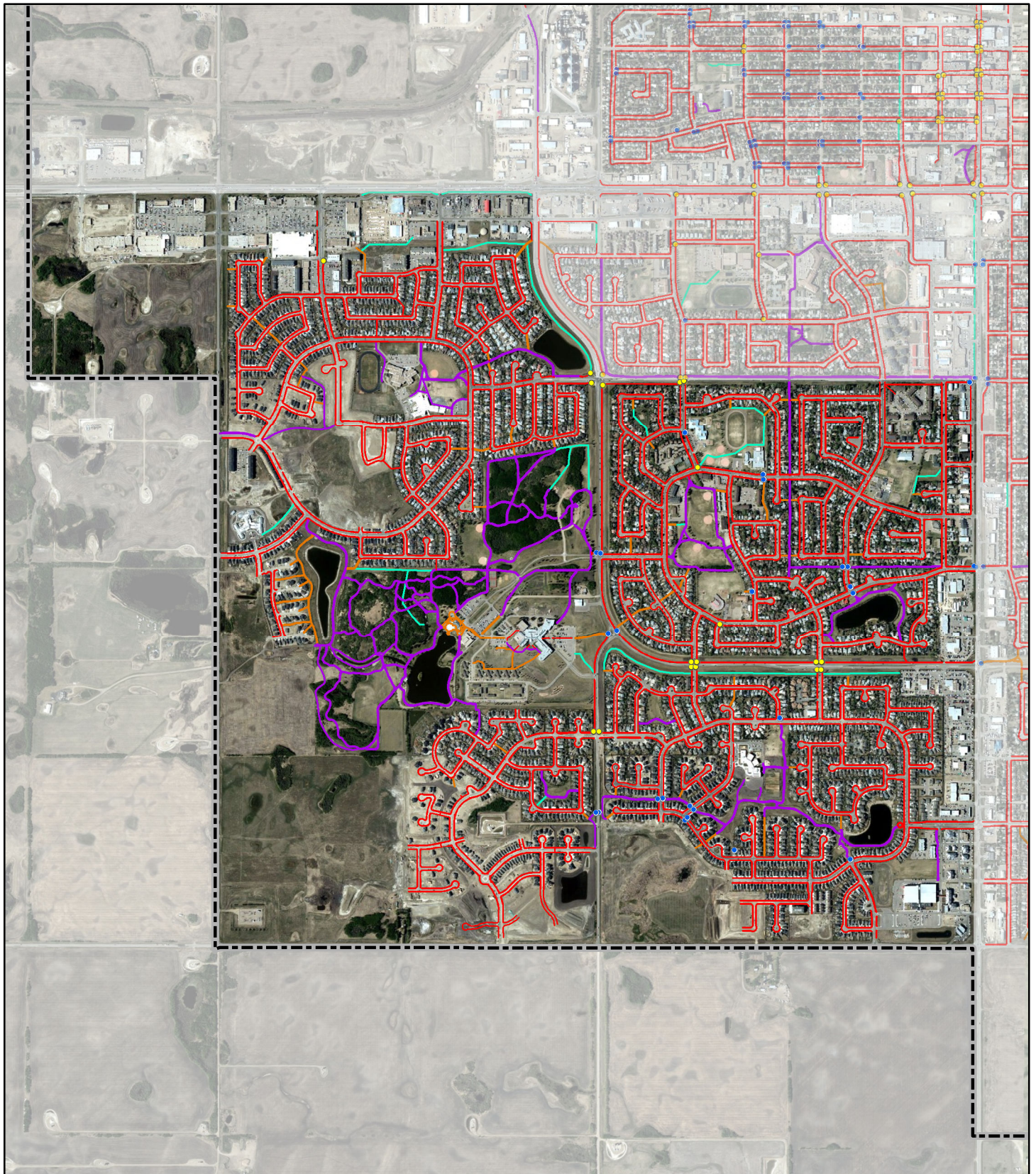
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TRAILS AND SIDEWALKS MASTER PLAN

EXHIBIT 4.3: PEDESTRIAN
ACCESSIBILITY REVIEW
SOUTHEAST





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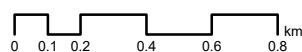


- | | |
|---------------|------------------|
| City Boundary | Missing Ramp |
| Sidewalk | Ramp Orientation |
| Multiuse Path | |
| Natural Path | |
| Trail | |



TRAILS AND SIDEWALKS MASTER PLAN

EXHIBIT 4.4: PEDESTRIAN
ACCESSIBILITY REVIEW
SOUTHWEST



■ 5.0 Phase 3a (Stakeholder Engagement Round 1)

5.1 Stakeholder Engagement Round 1 Feedback

On August 26, 2020, the City of Lloydminster Administration hosted a virtual stakeholder workshop regarding the Trails and Sidewalk Master Plan. During this workshop, the project team shared with participants project information and gathered feedback to confirm and refine the Project Vision and identified connection issues and opportunities in the current network.

The virtual workshop consisted of both group discussion and small break-out rooms where participants could discuss ask questions and provide feedback directly to the project team. Seven total participants joined the project team, with five participants attending the 12 to 1:15 p.m. workshop and two participants joined during the 6 to 7:15 p.m. workshop.

Feedback gathered from these workshops will help refine and finalize the project vision, identify gaps, and provide further local knowledge in the current network assessment.

5.2 Draft Project Vision Feedback

The draft project vision was presented as follows:

- The Trails and Sidewalk Master Plan improves the existing network as follows:
 - Improving access and ease of use by increasing connectivity through the existing network.
 - Creating a safe and welcoming space for users of all ages and abilities to enjoy the natural environment.
 - Encouraging active modes of transportation, physical activity and outdoor recreation.

Much of the project vision was were received, except that stakeholders felt the need to expand the vision in certain areas.

Likes:

- Considers safety, increasing connectivity, welcoming, and inclusive for all ages and abilities.

Dislikes:

- Integrating new technologies to improve user experience and wayfinding.
- Consider greater connectivity needs, outside of the City, expanding into future development.
- Consider the high level of importance to maintaining the network and environment (trees).
- Could include improving lighting to make people feel safer

5.3 Preliminary Gaps Analysis Feedback

Overall, stakeholders received the preliminary gaps analysis positively, with some comments provided that are worth noting as follows:

North

- Request for flashing crosswalk at 50 Street near the Pioneer Lodge (58 Avenue).
- Concerns with the large radius at the northeast corner of 50 Street and 57 Avenue
- Plan needs to consider connecting with North East ASP and Neale Lake area

Central

- 41 Street @ 50 Avenue is lacking lighting, with lighting on the non-sidewalk side, there is a desire for lighting on the sidewalk side as well.
 - Concerns were also noted regarding a possible short pedestrian crossing interval at the signal.
 - Desire to reduce pedestrian crossing width.
- Desire to have seen an improved sidewalk on the east side of 47 Avenue, from 36 Street to 44 Street.
- Missing connections between Jaycee Park and trail along the south side of 44 Street.
- Overall missing trail system in the central area of the City.
- Downtown is not considered pedestrian-friendly and is highly underutilized. New developments should consider pedestrians and multi-use access.

South East

- Opportunity for an expanded trail network, connecting 40 Avenue and 12 Street.

South West

- Need for better connections between Bud Miller Park and Kinsman Park, including expanded or wider sidewalks and trails.
- Signage and wayfinding needed for connecting to Bud Miller Park.
- Long traffic signal cycle length at 36 Street and 59 Avenue results in long wait times for pedestrians to cross.
- 12 Street is missing a sidewalk and is too narrow for walking.
- Expansion of Bud Miller Park trails is requested to give people different areas to use, reducing congestion throughout the park. A second access point to Bud Miller Park is also requested.
- Sidewalk along the College Drive could be improved to a trail with the type of users.
- Issues with drainage in Bud Miller Park, with some trails unusable during spring.

General comments

- Trails and sidewalks to school need to be maintained.
- Maintenance is an important issue to address, including upkeep to trees and snow clearing.
- Where the quality of the sidewalk is poor, or it is narrow, people may choose to use the road.
- Potential interest for the City to host events such as marathons, but infrastructure needs to support the length of segments needed for events.
- Desire for wayfinding.

Detailed stakeholder feedback is provided in **Appendix E**.

6.0 Phase 3a (Analysis)

The following section assesses the feedback received to date to generate project prioritization principals. Prioritization includes identifying improvements for the trails and sidewalk network for the short, medium and long terms. Improvements in the short term are those suggested for the City to prioritize in the one to five-year horizons, while those in the medium and long terms are those the 5 to 20-year horizons and depend on funding availability.

6.1 Sidewalk and Trails Network

The valuable insight gained from round one of stakeholder and public engagement providing levels of importance for improving the sidewalk and trail network directs the generation of the prioritization plan. Input from the public and stakeholders is provided in Section 2.3 and feedback received outlining the levels of importance for improving the network are re-iterated for reference as follows:

Public and Stakeholder Feedback (levels of importance):

1. **Safety:** Safety for users of trails, sidewalks and at intersections.
2. **Connectivity:** Network connectivity of trails and sidewalks as an option for getting to key destinations.
3. **Accessibility:** Accessibility for all types of users, ages and abilities (Examples: wheelchair, walker, stroller accessibility, etc.)
4. **Protecting Environment:** Protecting the natural environment and maintaining greenspace.
5. **New Expansion:** Expanded trail system providing more areas for recreation purposes.
6. **Wayfinding:** Wayfinding signage (Examples: network maps, directional signage, trail names or colours, etc.)
7. **User Experience:** User experience enhancements through trail amenities (Examples: benches, gazebos, public art, educational plaques, etc.)

Interpreting the input from public and stakeholders and generating principals for identifying short, medium- and long-term priority is outlined as follows:

Short-Term Priority (minimum grid on arterials and between destinations)

- Improving safety, connectivity and accessibility by providing a minimum grid of sidewalks and trails along busy arterial roadways, where there is no available sidewalk or trail and between important destinations where there is a higher number of users expected, including to/from Bud Miller Park and between the network and important destinations (schools, employment and shopping areas).
- Improving safety, accessibility at crosswalks by assessing existing and/or missing crossing points and installing appropriate safety improvements where the trail and sidewalk network cross busy arterial roadways.
- Improve accessibility by installing curb ramps along the network on arterials and along the trail network.

Medium-Term Priority (minimum grid enhanced, collectors and locals, within parks)

- Improving safety, connectivity and accessibility by enhancing the grid of sidewalks and trails along local and collector roadways, where there is no sidewalk or trail, within the recreation trail/sidewalk network, including hard surfacing connections that provide a circuitous route and/or along direct desire lines and where there is a clear natural worn-in path.
- Further enhancing the grid by prioritizing secondary connections along arterial roadways.
- Improve accessibility by installing curb ramps along the network on collectors and local and along the trail network.

Long-Term (expanded grid)

- Additional expansion to the network, improving areas not included in the short-term and medium-term plans.

The prioritization plan is provided in **Appendix F** as these were the subject of the next round of stakeholder and public engagement.

6.2 Crosswalks

6.2.1 Arterials

Prioritization for crosswalks is based on the following criteria.





















1. **Safety:** Protecting for vulnerable road users includes prioritizing crosswalks at locations with a higher number of lanes and a higher volume of daily traffic.
2. **Proximity to Alternative (connectivity and accessibility):** A larger distance to an alternative crossing location increases the extra distance for active modes of transportation to travel. Crosswalks that are further from alternatives are given higher priority. This also improves network connectivity and accessibility.
3. **Crossing Demand:** Prioritizing crossing where there is a high crossing demand aligns with the prioritization principles for improving the network connectivity and accessibility. Collecting crossing volumes at non-crossing locations is not practical, therefore crossing demand is reviewed qualitatively based on adjacent land uses and connectivity within the network and illustrated using several pedestrian symbols, e.g.  to     .

Table 6.1: Crosswalk Prioritization

Horizon	Location	Traffic Lanes	Traffic Volumes	Proximity to Alternative	Demand	Priority
Short Term	44 Street/59 Avenue	Six	22,500	250 m (east) 300 m (west)	   	1
	50 Avenue/15 Street	Two	17,000	220 m (north) 280 m (south)	   	2
	62 Avenue (south of 43 Street)	Four	12,500	200 m (north) 700 m (south)	  	3
	59 Avenue/College Access	Two	6,000	205 m (north) 230 m (south)	 	4
	50 Avenue/35 Street	Two	4,000	220 m (north) 570 m (south)		5

7.0 Phase 3b (Stakeholder and Public Engagement Round 2)

In October and November 2020, a digital engagement campaign was open from October 26 until November 16, 2020, to gather feedback from stakeholders and the public to inform the development of the Trails and Sidewalk Master Plan. The following was asked:

- Level of support for the Project Vision.
- Missing Gaps.
- Level of support for the Areas of Prioritization.

The online engagement was conducted on the City's webpage: yourvoicelloyd.ca/trails and included the following opportunities:

- Online survey.
- Stakeholder Workshop.

7.1 Public Engagement Round 2

There were 42 total participants in the online survey. The overall key themes were developed with respect to both the diversity and frequency of comments heard. The summary of comments is provided as follows and the detailed report is provided in **Appendix F**.

Project Vision Feedback

Survey participants were asked about their level of support for the project vision and the results are shown in the following figure.

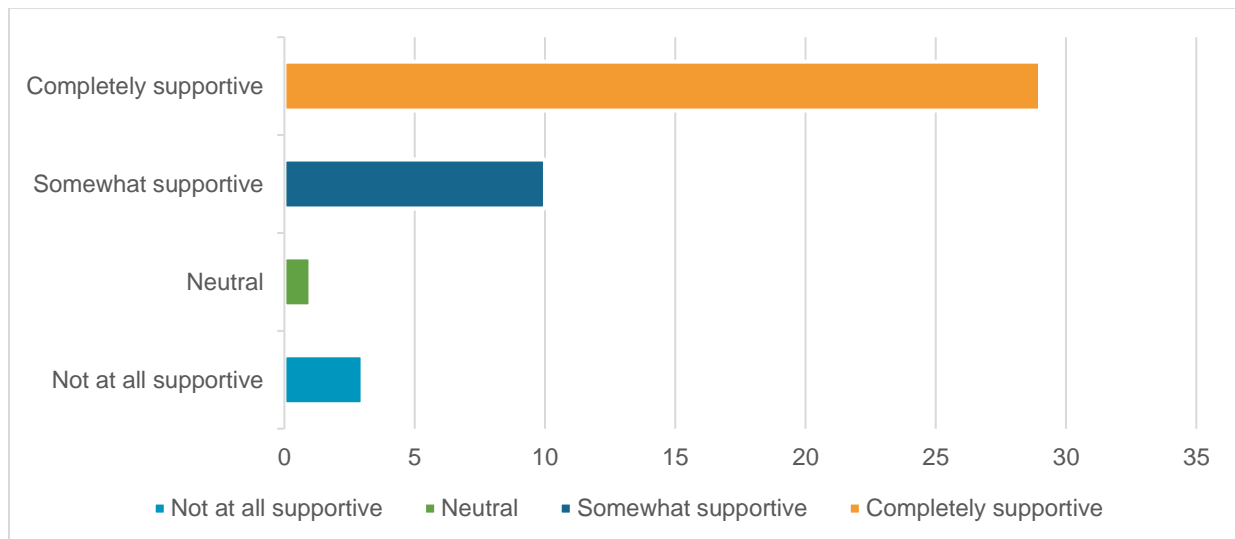


Figure 7.1: Project Vision Responses (Public Survey)

As a percentage, the responses from the public regarding the project vision are as follows.

- 91% supportive (67% completely supportive - 23% somewhat supportive).
- 7% not supportive at all.
- 2% Neutral.

The results indicate a very high level of support for the vision.

Project Priorities Feedback

Survey participants were asked about their level of support for the priorities shown on each of the plans and the results were overall positive as shown in the following figure.

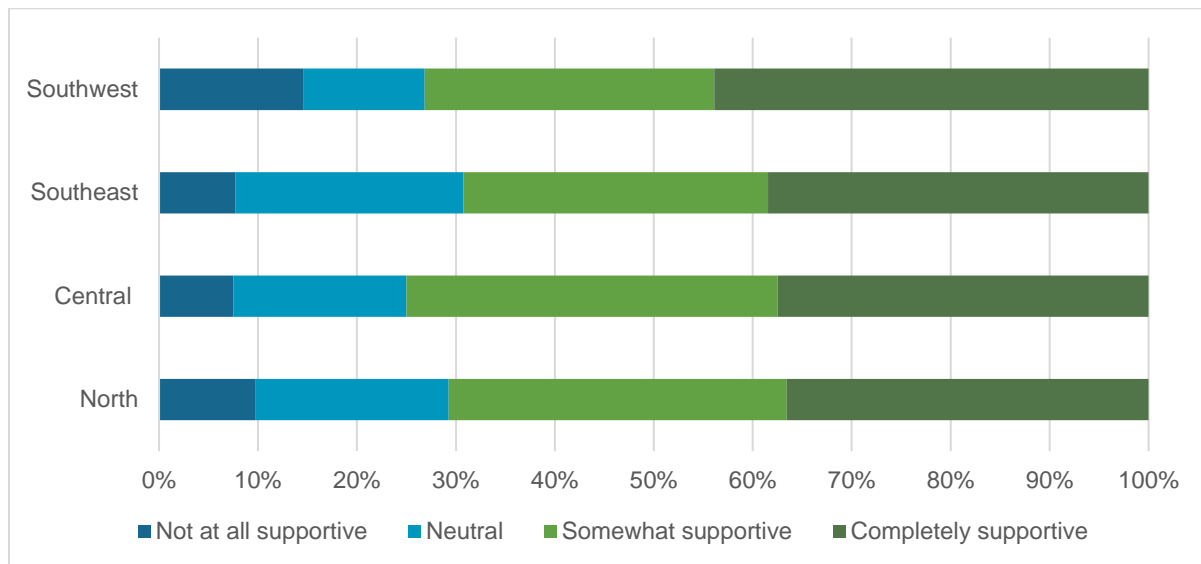


Figure 7.2: Project Priorities Responses (Public Survey).

As a percentage, the responses from the public regarding the project priorities are as follows:

- 69 to 75% supportive (37 to 44% completely supportive – 29 to 38% somewhat supportive).
- 8% to 15% not supportive at all (highest not support in the southwest).
- 12 to 23% Neutral.

The results indicate good general support (~2/3 support) for the project priorities. The specific responses receive inform site-specific areas where additional consideration is needed and is provided as follows.

- North Project Priorities
- Consider connections for the future NE redevelopment.
- Add trail along 54 Street near the cemetery.
- Add connections in the industrial area.
- Add crossings across the rail tracks and on 59 Street at 52 Avenue.
- Add a multiuse trail from 62 Street and 62 Avenue to 67 Street and Highway 17.
- Lower priority of 52 Street.

Central Project Priorities

- Add a multi-use path from 36 Street and 50 Avenue to 36 Street and 47 Avenue.
- Add crossing across Highway 17 at 44 Street.
- Add trail on the east side of Highway 17 between Highway 16 and 36 Street.

South East Project Priorities

- Add connections throughout residential neighbourhoods to create a continuous multi-use system for both people who walk and cycle.
- Add path from 45 Avenue and 29 Street East to 40 Avenue.
- Add connections between a baseball diamond and Winston Churchill School and link to the bike path in Jaycee Park.
- Add connectivity to Jaycee Park, such as from 18 Street.

South West Project Priorities

- Add connections between Lakeside and College Park and Bud Miller Park.
- Add connection between trail at 65 Avenue and 35 Street to 75 Avenue.
- Add crossing at 43 Street and 62 Avenue, and suggestion of an overpass.
- Add path further south along the east side of 59 Avenue between 25 Street and 23 Street to join up to College Park School.
- Lower priority for trails connecting Bud Miller Park around 67 Avenue.
- Keep natural trail south of 28 Street as is.
- Add a widened sidewalk east-west along 29 Street to better connect Bud Miller with Kinsman Park.

General comments:

- Keep natural paths as natural, not paved.
- Ensure maintenance of sidewalks and trails.
- Lower priority for trails along highways and major roads.
- Lower priority of sidewalks and trails along 75 Avenue, Highway 17, and 12 Street.
- Increase maintenance of existing trails and sidewalks and consider winter weather maintenance requirements, such as clearing overgrown foliage and snow.
- Include considerations for placemaking.
- A desire for site-specific engagement on individual paths, particularly regarding additional access into Bud Miller Park.
- Questions about construction timelines.
- Add path on 12 Street following the ring road to connect to 75 Avenue.

7.2 Stakeholder Engagement Round 2

There were six participants in the virtual workshops. The overall key themes were developed with respect to both the diversity and frequency of comments heard. Specific responses are provided as follows:

North Project Priorities

- 52 Street is a busy arterial and it will connect busy areas together (residential and industrial) but, it should be prioritized later in the short-term category.
- 52 Street and Highway 16 trails are needed.
- Lloydminster Village access points on 57 Street for buses and sidewalks for patrons.
- Concern about the use and benefit of prioritizing paths from residential areas to industrial areas.

Central Project Priorities

- Adding a crossing at 44 Street and 48 Avenue.
- Add enhanced crossing (flasher) along Highway 17, specifically at 42 Street (connection to Superstore) as a priority.

South East Project Priorities

- Add paths around the pond in Jaycee Park to create additional park options in the City.
- Make sure there is an opportunity for trail users to move north and south in this section to service existing and future communities.
- Add connections between 44 Street and 32 Street.
- Look for other opportunities in the future to add trails where natural paths are starting.
- Concerned about the pace of development of the areas south of Jaycee Park and making sure the sidewalks and trails are developed along with the communities.
- Concern about the Saskatchewan side being overlooked in the development of communities and amenities.

South West Project Priorities

- The sidewalk along 50 Avenue is a high-priority in the area, as it connects communities to service areas and business/places of work.
- Adding a path from the College south along 59 Avenue.
- Lower the priority of 75 Avenue.
- The connection along 59 Avenue (between Bud Miller Park and 36 Street) should be an “early” medium-term priority.
- Concerned about the area connecting 59 Avenue to Bud Miller Park, but desire to improve the entrance and traffic flow to Bud Miller Park.

General Comments

- Cyclists and runners would like to see a ring-trail around the City in the future.
- Routes/connections surrounding the schoolyards should be given higher priority.
- Add wayfinding signage for the trails system within Kinsmen Park and the transition out of the park and add signage to short-term priority.
- Consider collaborative opportunities to create safe bike lockups with the communities (City, residents, businesses, non-profits).

■ 8.0 Conclusions And Recommendations

8.1 Conclusions

The Trails and Sidewalk Master Plan was developed through several phases including best practices review, current Practices, internal and external engagement, inventory and analysis, preliminary prioritization to guide the City with future infrastructure planning and decision making. The following conclusions are made based on this study.

8.1.1 Baseline (Section 2.0)

Establishing a baseline understanding for conducting the project included a review of existing plans and policies that affect the plan development, a review of current practices for maintaining and expanding the network, and a review of similar studies conducted by other municipalities through the best practices review. The baseline also included engaging with internal stakeholders and conducting a public survey to understand existing needs and to develop a draft project vision.

A summary of conclusions is provided based on each area of review.

Best Practices Review

Five similar studies were reviewed for mostly similar sized municipalities.

- Initiating this study was driven by City Council, rather than a specific higher-level planning document as found in other municipalities.
- Developing a vision statement in this study is important as an overarching directive for developing the plan, influencing decision making, evaluating options and finalizing recommendations.
- Four of five documents reviewed use a qualitative prioritization system and this is recommended for the City of Lloydminster. Developing a detailed prioritization system, like the complex weighted scoring used in Saskatoon's Active Transportation Plan is not recommended.
- Other items in this report, including gaps assessment, public and stakeholder engagement and capital planning are inconsistent with other studies reviewed.
- Developing and applying techniques for evaluating pedestrian crossing safety was not found in other documents reviewed but is included in this study making it unique.

Current Practices Review

This project is closely linked to and informed by the City's existing policies and plans. Documents and practices reviewed to understand implications for completing this project are as follows:

- **Statutory Plans/Bylaws:** Municipal Development Plan (MDP), Intermunicipal Development Plan (City and County of Vermillion River), Lloydminster District Planning Commission (LDPC), Land Use Bylaw (LUB).
- **Non-statutory Plans:** Transportation Master Plan (TMP), Growth Strategy and Assessment, Integrated Sustainability Plan
- **Current Practices:** Summary of day-to-day decision-making practices.

The following conclusions are provided based on the review of the current practices:

- Conducting this study aligns with the policies and plans within the MDP and IDP.
- Future updates of the LDPC may reflect the outcomes of this study, including provisions, guidance and requirements for including active transportation plans in applicable areas within the LDPC area. This is subject to discussions between the City and external stakeholders as well as the Rural Municipalities of Wilton and Britannia.
- A future addendum to the LUB may include provisions for development to connect existing trails and sidewalks to the trail and sidewalk network formalized in this study.
- Completing this Master Plan supports the planning and capital planning of improvements with the TMP.
- While the Growth Strategy does not address active transportation, the information on the City's population and demographics may be used as inputs for additionally assessing the future City's active transportation needs.
- Currently, the City does not have a detailed process or tool for determining where trails should be located and/or which connectivity links need to be completed. Current practices for planning the trails and sidewalk network is through best judgment and sound reasoning, through subdivision reviews, public/citizen request and internal requests.

Internal Stakeholder Engagement and Public Survey

Online engagement was launched on May 28, 2020, until June 18 to gather feedback from residents and the public. Key feedback is as follows:

Table 8.1: Public Engagement Results (Ranked by Theme)

Rank	Theme	Results of Survey				
		Unimportant	Somewhat Important	Neutral	Somewhat Important	Important
1	Safety	0%	2%	4%	9%	85%
2	Connectivity	1%	1%	4%	15%	79%
3	Accessibility	0%	1%	5%	17%	77%
4	Protecting Environment	0%	2%	12%	26%	60%
5	New Expansion	2%	2%	14%	26%	55%
6	Wayfinding	4%	8%	26%	31%	30%
7	User Experience	12%	13%	27%	29%	20%

As shown safety, connectivity and accessibility are the highest priorities based on public feedback.

On Wednesday, May 20, 2020, an internal visioning workshop was held virtually to develop the project vision as follows:

The Trails and Sidewalk Master Plan improves the existing network as follows:

- Improving access and ease of use by increasing connectivity through the existing network.
- Creating a safe and welcoming space for users of all ages and abilities to enjoy the natural environment.
- Encouraging active modes of transportation, physical activity and outdoor recreation.

8.1.2 Inventory and Analysis (Section 3.0)

ISL Engineering and Land Services performed data collection for all roadways and trails within the City of Lloydminster during the spring of 2020. The scope of this work included taking 360-degree photos of these roadways and trails using vehicle-mounted and backpack-mounted cameras to map out the existing trails and sidewalks, including types, surface condition and crosswalks. These are shown in Exhibits 3.1 to 3.3.

A preliminary gaps analysis of the network was conducted, and this was presented to external stakeholders on August 26, 2020. During this workshop, the project team shared with participants project information and gathered feedback to confirm and refine the Project Vision and identified connection issues and opportunities in the current network. The details are provided in **Appendix E**.

8.1.3 Pedestrian Crossing Safety Assessment (Section 4.0)

A key input to the project is creating and applying a procedure for assessing the safety and effectiveness of pedestrian crossings that produces consistent recommendations, supports the overall goals of the project, and provides direction for assessing priority locations for improvements and capital planning. The pedestrian crossing safety assessment was created for application in this project based on the Transportation Association of Canada's Pedestrian Crossing Control Guide. The proposed pedestrian crossing safety assessment is described in Section 4.2 and the missing crosswalks depicted in the preliminary gaps analysis were assessed in Section 4.3

8.1.4 Stakeholder Engagement Round 1 (Section 5.0)

On August 26, 2020, the City of Lloydminster Administration hosted a virtual stakeholder workshop where the project team shared with participants project information and gathered feedback to confirm and refine the Project Vision and preliminary gaps analysis. Feedback gathered from these workshops was used to help refine and finalize the project vision, to identify gaps and provide further local knowledge in the current network assessment. Detailed materials and feedback are provided in **Appendix E**.

8.1.5 Preliminary Prioritization (Section 6.0)

Prioritization includes identifying improvements for the trails and sidewalk network for the short, medium and long terms. Improvements in the short term are those suggested for the City to prioritize in the one to five-year horizons, while those in the medium and long terms are those the 5 to 20-year horizons and depend on funding availability. Valuable insight gained from previous public and stakeholder engagement regarding levels of importance for improving the sidewalk and trail network was used to create the preliminary prioritization principles for improving the trails and sidewalk network in the short, medium and long terms. Details may be found in Section 6.0, as this was preliminary and refined through subsequent engagement.

8.1.6 Stakeholder Engagement Round 2, Public Engagement Round 2 (Section 7.0)

In October and November 2020, a digital engagement campaign was open from October 26 until November 16, 2020, to gather feedback from stakeholders and the public to inform the development of the Trails and Sidewalk Master Plan. The following was asked:

- Level of support for the Project Vision.
- Missing Gaps.
- Level of support for the preliminary prioritization.

The final round of stakeholder and public engagement is considered the “litmus test” for understanding the level of support for the efforts completed to date. Feedback on the project vision is as follows based on the public survey is as follows.

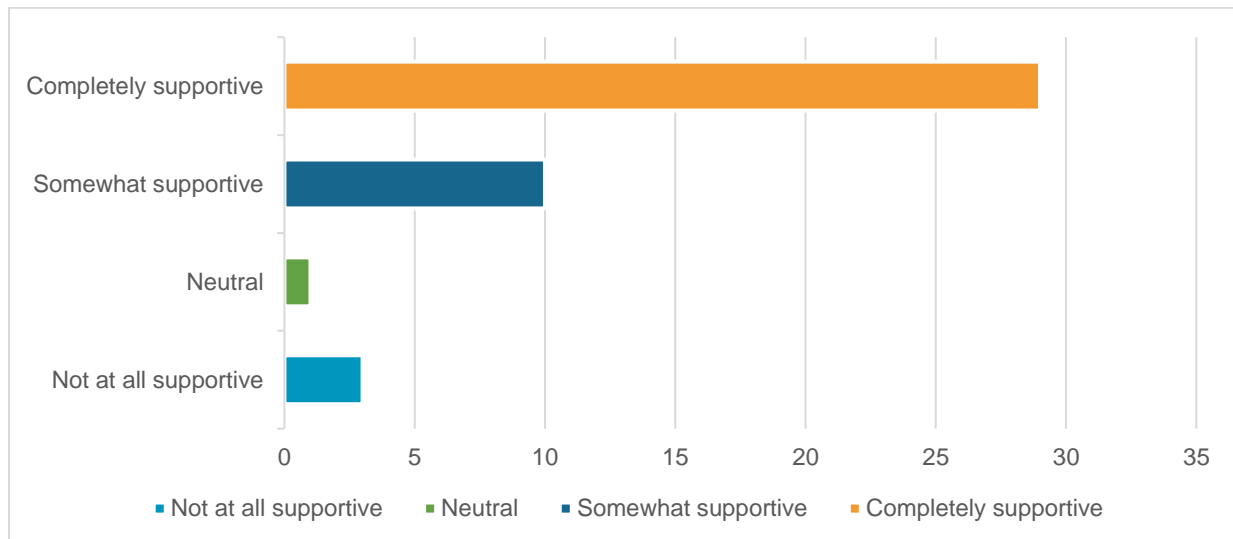


Figure 8.1: Project Vision Responses (Public Survey)

As a percentage, the responses from the public regarding the project vision are as follows.

- 91% supportive (67% completely supportive - 23% somewhat supportive).
- 7% not supportive at all.
- 2% Neutral.

The results indicate a very high level of support for the vision.

Survey participants were about their level of support for the priorities shown on each of the plans and the results were overall positive as shown in the following figure.

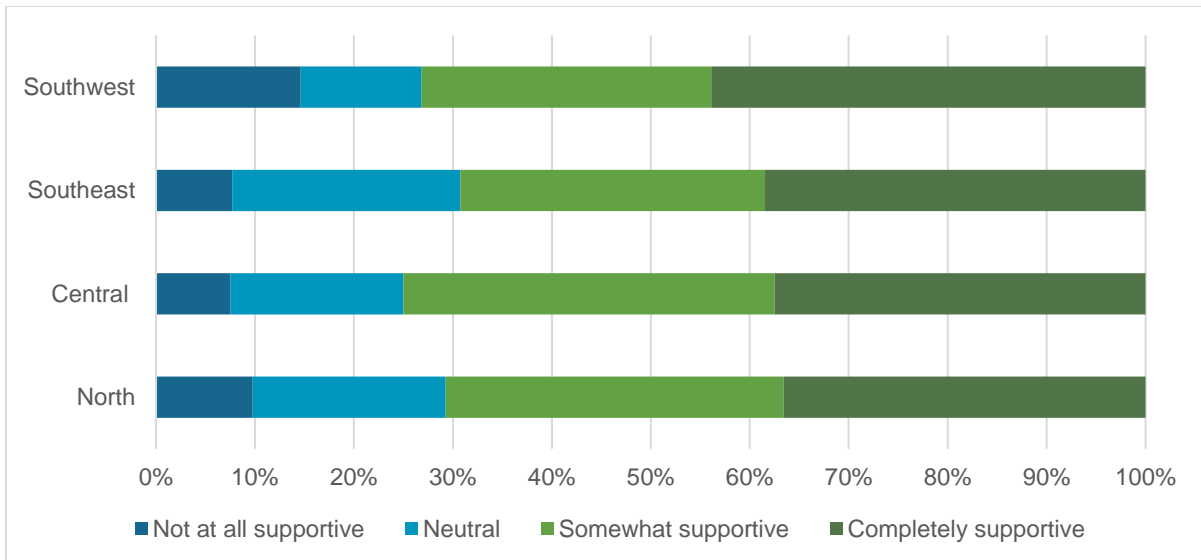


Figure 8.2: Project Priorities Responses (Public Survey).

As a percentage, the responses from the public regarding the project priorities are as follows:

- 69 to 75% supportive (37 to 44% completely supportive – 29 to 38% somewhat supportive)
- 8% to 15% not supportive at all (highest not support in the southwest)
- 12 to 23% Neutral

The results indicate good general support (~2/3 support) for the project priorities. Site-specific feedback collected regarding the project prioritization plan and projects included in the plan were incorporated into the final recommendations. The details of feedback used to create the final plan are provided in Section 7.0 and outlined in the following sections and exhibits.

8.2 Recommendations

8.2.1 Recommended Project Prioritization Principals

Prioritization includes identifying improvements for the trails and sidewalk network for the short, medium and long terms. Improvements in the short term are those suggested for the City to prioritize in the one to five-year horizons, while those in the medium and long terms are in the 5 to 20-year horizons and depend on funding availability.

Short Term Priority (0 – 5 years)

- **Busy Arterial Roadways (Sidewalks, trails):** Improving safety, connectivity and accessibility by providing a minimum grid of sidewalks and trails along busier arterial roadways as follows:
 - where there is no available sidewalk or trail, and,
 - between important destinations where there is a higher number of users expected, including to/from Bud Miller Park and between the network and important destinations (schools, employment and shopping areas).
- **Local and Collector Roads (Sidewalks, trails):** Enhancing connectivity of the network by replacing existing sidewalks with a multiuse path or trail to create a continuous route or to connect major recreational destinations.
- **Busy Arterials (Crosswalks):** Improving safety, accessibility at crosswalks by assessing existing and/or missing crossing points and installing appropriate safety improvements where the trail and sidewalk network cross busy arterial roadways.
- **Pedestrian Ramps:** Improving accessibility by constructing missing ramps.

Medium-Term Priority (5 – 10 years)

- **Busy Arterial Roadways (Sidewalks, trails):** Further enhancing the grid by adding a secondary connection along busier arterial roadways, on the opposite side of the road.
- **Other Arterials (Sidewalks, trails):** Extending the network and providing sidewalks and trails along less busy arterials roads where there is no available sidewalk or trail and relatively less adjacent development.
- **Local and Collectors (Sidewalks, trails):** Improving safety, connectivity and accessibility by expanding the grid of sidewalks and trails along local and collector roadways, where there is no sidewalk or trail.
- **Recreational Areas and Desire Lines:** Improving connections within the recreation trail/sidewalk network, including hard surfacing connections that provide a circuitous route and/or along direct desire lines and where there is a clear natural worn-in path.
- **Pedestrian Ramps:** Improving accessibility by reconstructing misoriented pedestrian ramps.

Long-Term Priority (10 – 20 years)

- **Arterial (Sidewalks, Trails):** Extending the network further into relatively less developed areas, which have less busy arterials.
- **Local and Collectors (Sidewalks, Trails):** Further enhancing the existing grid by adding a second sidewalk on the opposite side of the road. Extending the network of sidewalks and trails on locals and collectors, concurrent with the extension of sidewalks and trails on arterials.

8.2.2 Other Potential Priorities

- **Circuit Route:** Stakeholder feedback indicated a desire for creating a circuit route of trails along 12 Street, 75 Avenue, 40 Avenue, 67 Street and other existing arterials that would support a longer and uninterrupted route for runners, cyclists, other fitness/recreation purposes and/or supporting the planning of larger events, including races and marathons. If there is a desire for creating a circuit route, it is recommended to be completed as a separate budgetary item in addition to the project priorities as these are recommended based on the project vision. Costs for the circuit routes are provided in the following section, generally for information/reference and discussion purposes.
- **Future Expansion:** Extension of the network into future development areas is expected to be completed as development occurs. Specific projects which may be planned and implemented through development, based on this study, public and stakeholder feedback are as follows:
 - **Southeast:** Future connectivity through undeveloped areas in the southeast, between 12 Street and 44 Street, through Jaycee Park, Winston Churchill School and connecting to Legion Park. Thoughtful design/planning of the neighbourhoods should be considered for providing trails and multi-use paths in these areas.
 - **Northeast:** Future connectivity through undeveloped areas in the northeast, including a connection from 50 Avenue to the Northeast Area Structure Plan, passing by the Lloydminster Golf and Curling Centre.
 - **Southwest:** Through future development, providing a secondary connection, from the southwest into Bud Miller Park. New connections could be added between existing trails and sidewalks in the Lakeside Area Structure Plan, Bud Miller Park and 12 Street.

8.2.3 Recommended Projects (Short, Medium and Long Term)

The recommended projects for the short, medium and long term, based on the prioritization principles are provided in Exhibits 8.1 to 8.4. The type of improvement (sidewalk, trail, multiuse path, pedestrian crosswalk) is discussed depicted in the cost estimates and detailed in **Appendix H**.

8.3 Costs

8.3.1 Costs (Trails, Sidewalks, Multiuse Paths and Crosswalks)

The cost for completing projects in the short, medium and long term is provided in the following table. The detailed costs for each project are provided in **Appendix H**. Suggested locations for the improvements shown in Appendix H are more relevant where there are existing connections. However, these locations are subject to change with further study and review as these projects become funded, particularly on segments with no current sidewalk or trail as the new connection may be placed on either side of the road.

All costs are based on 2020 dollars.



Table 8.2: Capital Costs (North)

Segment		From	To	Type	Term	Costs
17	62 Avenue	62 Street	67 Street/50 Avenue	Sidewalk	Long	\$543,400
18	North Industrial			Sidewalk	Long	\$503,800
19	50 Avenue	57 Street	67 Street	Sidewalk	Long	\$343,200
16	62 Avenue	44 Street	62 Street	Multiuse Path	Long	\$308,000
8	62 Avenue	44 Street	52 Street	Sidewalk	Long	\$259,200
12	52 Avenue	52 Street	57 Street	Sidewalk	Long	\$216,000
11	59 Avenue	44 Street	50 Street	Sidewalk	Long	\$148,500
9	52 Street	67 Avenue	62 Avenue	Sidewalk	Long	\$128,250
14	49 Avenue	52 Street	57 Street	Sidewalk	Long	\$16,200
15	62 Street	63 Avenue	50 Avenue	Sidewalk	Medium	\$567,000
2	52 Street	49 Avenue	40 Avenue	Sidewalk	Medium	\$432,000
7	59 Avenue	52 Street	62 Street	Sidewalk	Medium	\$391,500
4	63 Avenue	62 Street	56 Street	Sidewalk	Medium	\$249,750
10	59 Avenue	44 Street	50 Street	Sidewalk	Medium	\$148,500
3	56 Street	67 Avenue	62 Avenue	Sidewalk	Medium	\$141,750
5	63 Avenue	56 Street	52 Street	Sidewalk	Medium	\$141,750
6	67 Avenue	56 Street	52 Street	Sidewalk	Medium	\$141,750
1	52 Street	62 Avenue	50 Avenue	Sidewalk	Short	\$513,000
13	52 Avenue	54 Street	52 Street	Sidewalk	Short	\$27,000

Table 8.3: Capital Costs (Central)

Segment		From	To	Type	Term	Costs
20	43 Avenue	36 Street	44 Street	Sidewalk	Long	\$248,400
9	51 Street	54 Avenue	50 Avenue	Sidewalk	Long	\$175,500
4	55 Avenue	Alley	51 Street	Sidewalk	Long	\$172,800
6	54 Avenue	45 Street	52 Street	Sidewalk	Long	\$159,300
10	53 Avenue	45 Street	51 Street	Sidewalk	Long	\$156,600
23	48 Avenue	39 Street	44 Street	Sidewalk	Long	\$126,900
29	51 Avenue	36 Street	41 Street	Sidewalk	Long	\$126,900
16	45 Avenue	44 Street	Alley	Sidewalk	Long	\$118,800
30	42 Street	54 Avenue	52 Avenue	Sidewalk	Long	\$91,800
22	47 Street	41 Street	44 Street	Sidewalk	Long	\$81,000
24	49 Avenue	41 Street	44 Street	Sidewalk	Long	\$78,300
32	43 Street	59 Avenue	57 Avenue	Sidewalk	Long	\$78,300
34	59 Avenue	41 Street	44 Street	Sidewalk	Long	\$59,400
27	41 Street	51 Avenue	50 Avenue	Sidewalk	Long	\$54,000
14	47 Avenue	47 Street	49 Street	Sidewalk	Long	\$48,600
21	School	36 Street	School	Trail	Long	\$48,600
3	57 Avenue	48 Street	50 Street	Sidewalk	Long	\$47,250
25	50 Avenue	41 Street	43 Street	Sidewalk	Long	\$40,500
13	48 Avenue	Alley	46 Street	Sidewalk	Long	\$37,800
31	57 Avenue	42 Street	44 Street	Sidewalk	Long	\$37,800
40	50 Street	50 Avenue	49 Avenue	Sidewalk	Long	\$35,100
8	45 Street	54 Avenue	Existing sidewalk	Sidewalk	Long	\$27,000
12	51 Avenue	48 Street	49 Street	Sidewalk	Long	\$21,600
15	46 Avenue	46 Street	47 Street	Sidewalk	Long	\$21,600
7	Alley	55 Avenue	Centre of block	Sidewalk	Long	\$17,550
2	57 Avenue	47 Street	Alley	Sidewalk	Long	\$9,450
18	40 Avenue	44 Street	36 Street	Multiuse Path	Medium	\$167,200
5	54 Avenue	45 Street	52 Street	Sidewalk	Medium	\$159,300
17	40 Avenue	44 Street	52 Street	Multiuse Path	Medium	\$149,600
39	36 Street	50 Avenue	47 Avenue	Multiuse Path	Medium	\$114,400
11	53 Avenue	46 Street	50 Street	Sidewalk	Medium	\$102,600
33	43 Street	59 Avenue	57 Avenue	Sidewalk	Medium	\$78,300
35	59 Avenue	41 Street	43 Street	Sidewalk	Medium	\$24,300
26	50 Avenue	36 Street	44 Street	Sidewalk	Short	\$205,200
19	44 Street	43 Avenue	40 Avenue	Multiuse Path	Short	\$173,800
38	44 Street/59 Avenue			Pedestrian Signal	Short	\$150,000
37	44 Street	62 Avenue	59 Street	Sidewalk	Short	\$62,100
28	41 Street	51 Avenue	West of 50 Avenue	Sidewalk	Short	\$24,300
36	59 Avenue	43 Street	44 Street	Sidewalk	Short	\$21,600
41	50 Avenue/41 Street			RRFB	Short	\$15,000



Table 8.4: Capital Costs (Southwest)

Segment	From		To	Type	Term	Costs
30	75 Avenue to 12 Street Circuit (multiuse path)				Long	\$990,000
2	75 Avenue	43 Street	44 Street	Sidewalk	Long	\$59,400
13	31 Street	51 Avenue	50 Avenue	Sidewalk	Long	\$27,000
22	52B Avenue	12 Street	13 Street	Sidewalk	Long	\$13,500
14	25 Street	59 Avenue	50 Avenue	Multiuse Path	Medium	\$343,200
28	75 Avenue to	Trail	29 Street	Multiuse Path	Medium	\$242,000
11	36 Street	57 Avenue	52 Avenue	Sidewalk	Medium	\$224,100
7	62 Avenue	36 Street	44 Street	Multiuse Path	Medium	\$218,700
23	Bud Miller Park	-	-	Multiuse Path	Medium	\$180,400
20	15 Street/ Field	50 Avenue	Field	Sidewalk	Medium	\$129,600
10	Bud Miller Park	2nd parking lot	SW Project #8	Trail	Medium	\$97,200
17	59 Avenue	23 Street	25 Avenue	Multiuse Path	Medium	\$92,400
18	59 Avenue	North of 18 Street	23 Street	Sidewalk	Medium	\$86,400
26	Bud Miller Park			Multiuse Path	Medium	\$85,800
24	Bud Miller Park			Multiuse Path	Medium	\$79,200
4	70 Avenue	Access	44 Street	Sidewalk	Medium	\$75,600
29	29 Street	59 Avenue	57a Avenue	Multiuse Path	Medium	\$71,550
25	Bud Miller Park			Multiuse Path	Medium	\$63,800
5	43 Street	66 Avenue	62 Avenue	Sidewalk	Medium	\$54,000
12	St Joseph, between 28/27A Street		29 Street	Multiuse Path	Medium	\$26,400
1	44 Street	76 Avenue	62 Avenue	Sidewalk	Short	\$480,600
27	75 Avenue	44 Street	Trail Connection	Multiuse Path	Short	\$112,200
8	59 Avenue	North of 29 Street	36 Street	Multiuse Path	Short	\$99,000
21	12 Street	50 Avenue	52B Avenue	Multiuse Path	Short	\$92,400
15	College Way	59 Avenue	Existing Sidewalk	Sidewalk	Short	\$64,800
19	59 Avenue	North of 18 Street	23 Street	Multiuse Path	Short	\$55,000
9	33 Street	33 Street	59 Avenue	Trail	Short	\$37,400
6	62 Street, Midblock, south of 36 Street			RRFB	Short	\$15,000
16	59 Avenue/College Way			RRFB	Short	\$15,000
3	70 Avenue	Access	44 Street	Multiuse Path	Short	\$12,100

Table 8.5: Capital Costs (Southeast)

	Segment	From	To	Type	Term	Costs
16	40 Avenue to 12 Street Circuit (multiuse path)				Long	\$686,400
12	36 Street	47 Avenue	West of 43 Avenue	Sidewalk	Long	\$178,200
13	36 Street	43 Avenue	40 Avenue	Sidewalk	Long	\$124,200
9	Colonial park			Trail	Long	\$74,800
15	40 Avenue	41 Street	44 Street	Sidewalk	Long	\$70,200
6	25 Street	50 Avenue	West of 47 Avenue	Sidewalk	Long	\$43,200
8	27 Street	50 Avenue	49 Avenue	Sidewalk	Long	\$29,700
11	35 Street	50 Avenue	49 Avenue	Sidewalk	Long	\$29,700
3	50 Avenue	12 Street		36 Street	Sidewalk	Medium
7	25 Street and around neighbourhood	East of 50 Avenue	27 Street	Trail	Medium	\$299,200
14	40 Avenue	31 Street	36 Street	Sidewalk	Medium	\$97,200
2	50 Avenue	12 Street	36 Street	Sidewalk	Short	\$421,200
1	12 Street	49 Avenue	47a Avenue	Sidewalk	Short	\$121,500
5	21 Street	50 Avenue	49 Avenue	Sidewalk	Short	\$29,700
10	50 Avenue/33 Street			GM*	Short	\$1,000

*Ground mounted crosswalk

A summary of costs is provided in the following table.

Table 8.6: Capital Costs (2020 Dollars) Summary (Trails, Sidewalks, Paths)

	Short	Medium	Long
North	\$540,000	\$2,214,000	\$2,466,550
Central	\$652,000	\$795,700	\$2,085,750
Southwest	\$983,500	\$2,070,350	\$1,089,900
Southeast	\$573,400	\$817,600	\$1,236,400
Total	\$2,748,900	\$5,897,650	\$6,878,600



8.3.2 Costs (Pedestrian Ramps)

Constructing new pedestrian ramps where they are missing are included in the short-term capital plans and rebuilding misoriented ramps are included in the medium term capital plans and summarized in the following table.

Table 8.7: Capital Costs (2020 Dollars) Summary (Pedestrian Ramps)

Ramps	Missing	Short	Misoriented	Medium
North	93	\$232,500	42	\$105,000
Central	37	\$92,500	2	\$5,000
Southwest	21	\$52,500	21	\$52,500
Southeast	11	\$27,500	0	\$0
Total	162	\$405,000	65	162,500

8.4 Areas of Additional Study

The following areas of additional study are provided based on items not included in the scope of this project and areas of focus learned through public and stakeholder engagement.

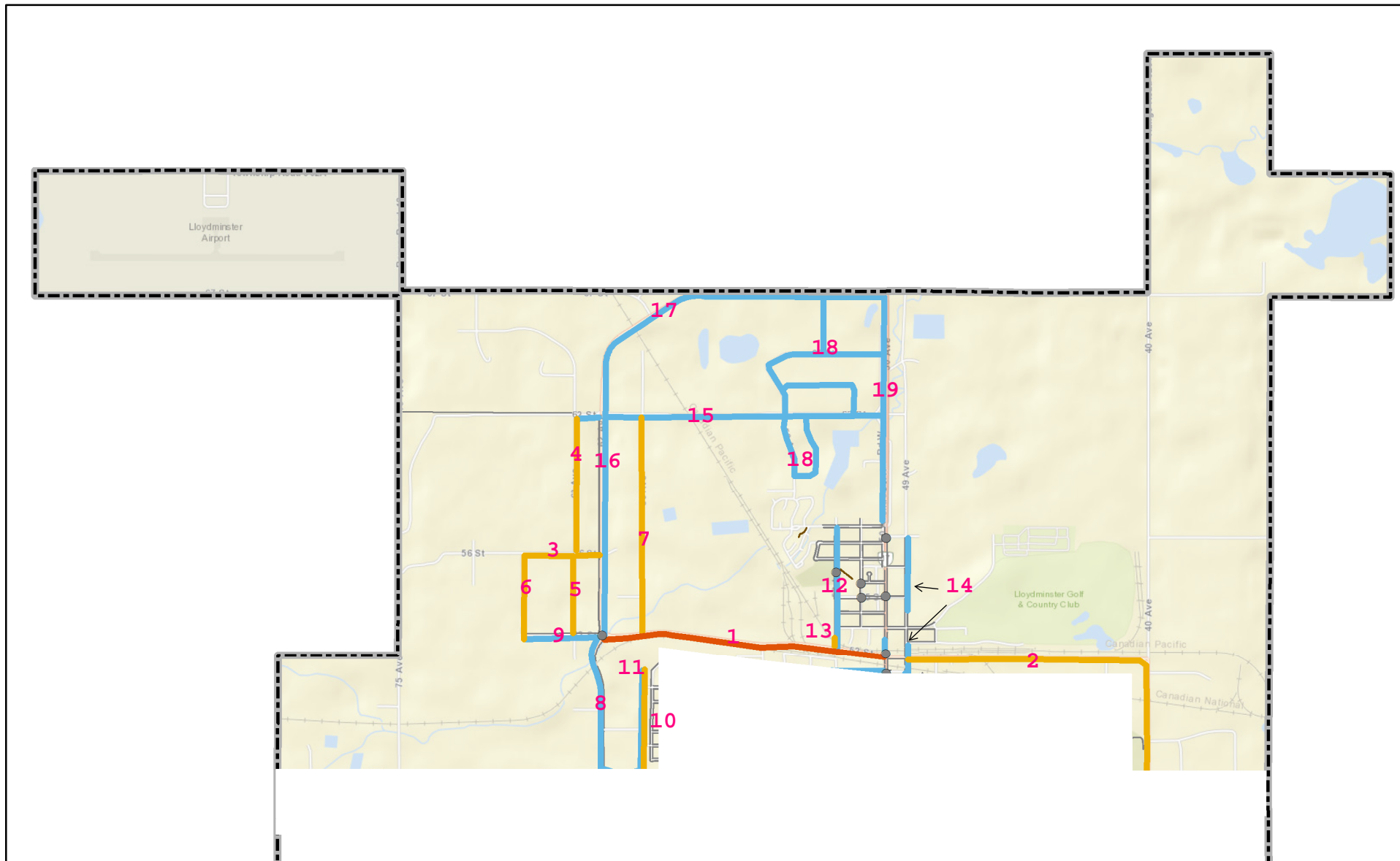
- **Collector Crosswalks:** Collect traffic volume data and conduct sightline assessments for the missing crosswalks identified on collector roads to confirm the need and determine the appropriate type of crosswalk.
- **Pedestrian Intersection Safety Improvements:** Enhance pedestrian safety assessments at signalized intersections including reviewing pedestrian crossing clearance intervals (based on appropriate demographics), crossing infrastructure (line-markings, push-button, signage, pedestrians' signals), accessibility to pushbuttons, assessment of pedestrian refuge areas and visibility.
- **Detailed Accessibility Assessment:** Curb ramp assessment, including review of transitions between surfaces with different elevations focusing on the need to improve smoothness and minimize grade changes (maximum 8% grade as per design manual)
- **Lighting Assessments:** Trail lighting assessments, including an inventory of existing trail illumination, gaps assessment and prioritization review.
- **Updated Maps:** Updating the existing trail and sidewalk system maps using the updated information provided as a result of this study, showing existing trails, sidewalks, surface types and crossing locations.
- **Wayfinding:** Conduct a wayfinding project to assess opportunities and design/install wayfinding at key locations throughout the City.
- **Expansion:** Collaborate with RM of Britannia for potential expansion of trails and sidewalk network from the City to Neale Lake. As the City expands to the east, collaboration opportunities between the RMs of Wilton and Britannia and the City are especially significant where there is a need.
- **User Experience:** As network connectivity improvements and the trails and sidewalk network is used by more people, the need for additional enhancement improving the experience for users of the network should be considered, including the need for additional amenities including bathrooms, benches, gazeboes, performer spaces, landscaping features and others.
- **Supporting Policies:** The City should consider creating policies through the Municipal Development Plan and/or Transportation Master Plan and/or Land Use Bylaw which direct the need for enhancing connectivity in future development areas and/or expanding the existing network.

8.5 Other Discussion

- **Downtown Area Revitalization Plan (DARP):** Areas within the downtown area may be further studied as the City implements the DARP, which will improve the overall public realm, including the trails and sidewalk network.
- **Future Development Areas:** Some projects may be located within future development areas (ie. Project 7, Southeast) and these can be established as part of the normal development process.

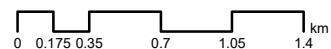


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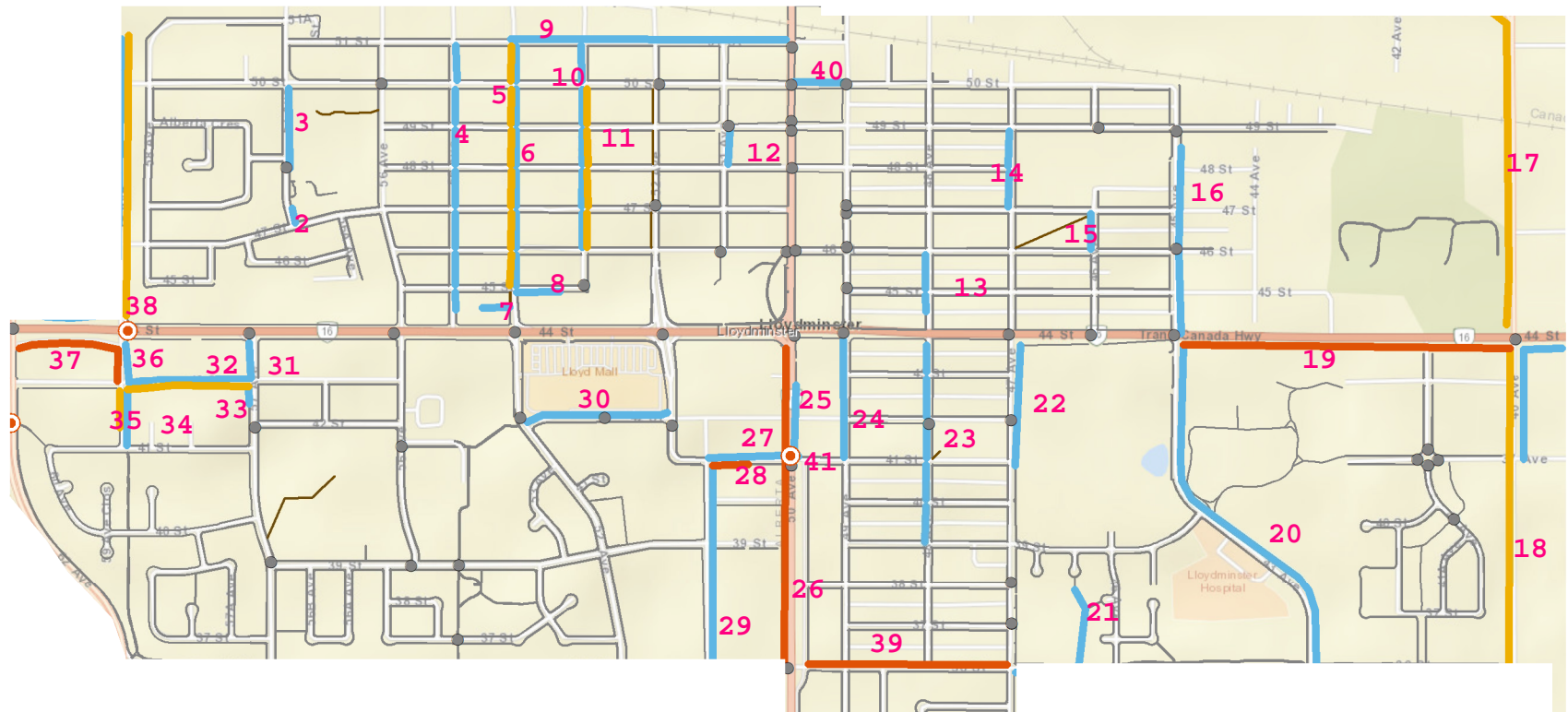


- City Boundary
- Sidewalk/Multiuse Path/Trail
- Natural Path
- Existing Crosswalks

- Prioritization**
- Short Term
 - Medium Term
 - Long Term
 - Short Term (Crosswalks)



**TRAILS AND SIDEWALKS
MASTER PLAN**
EXHIBIT 8.1: RECOMMENDED
PROJECT PRIORITIES
NORTH



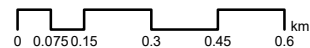
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- City Boundary
- Sidewalk/Multiuse Path/Trail
- Natural Path
- Existing Crosswalks

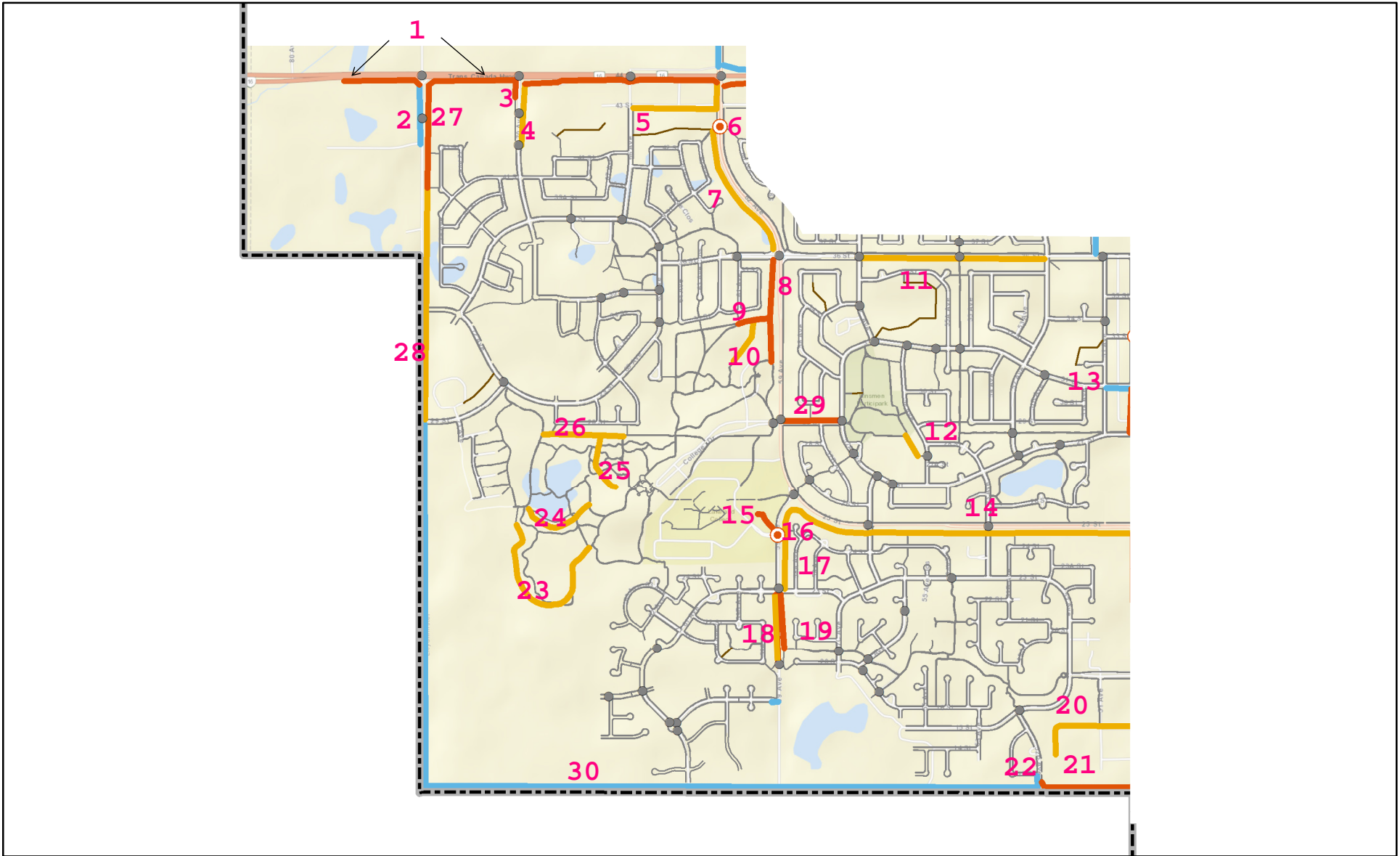
Prioritization

- Short Term
- Medium Term
- Long Term
- Short Term (Crosswalks)



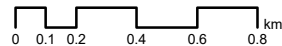
TRAILS AND SIDEWALKS MASTER PLAN

EXHIBIT 8.2: RECOMMENDED
PROJECT PRIORITIES
CENTRAL

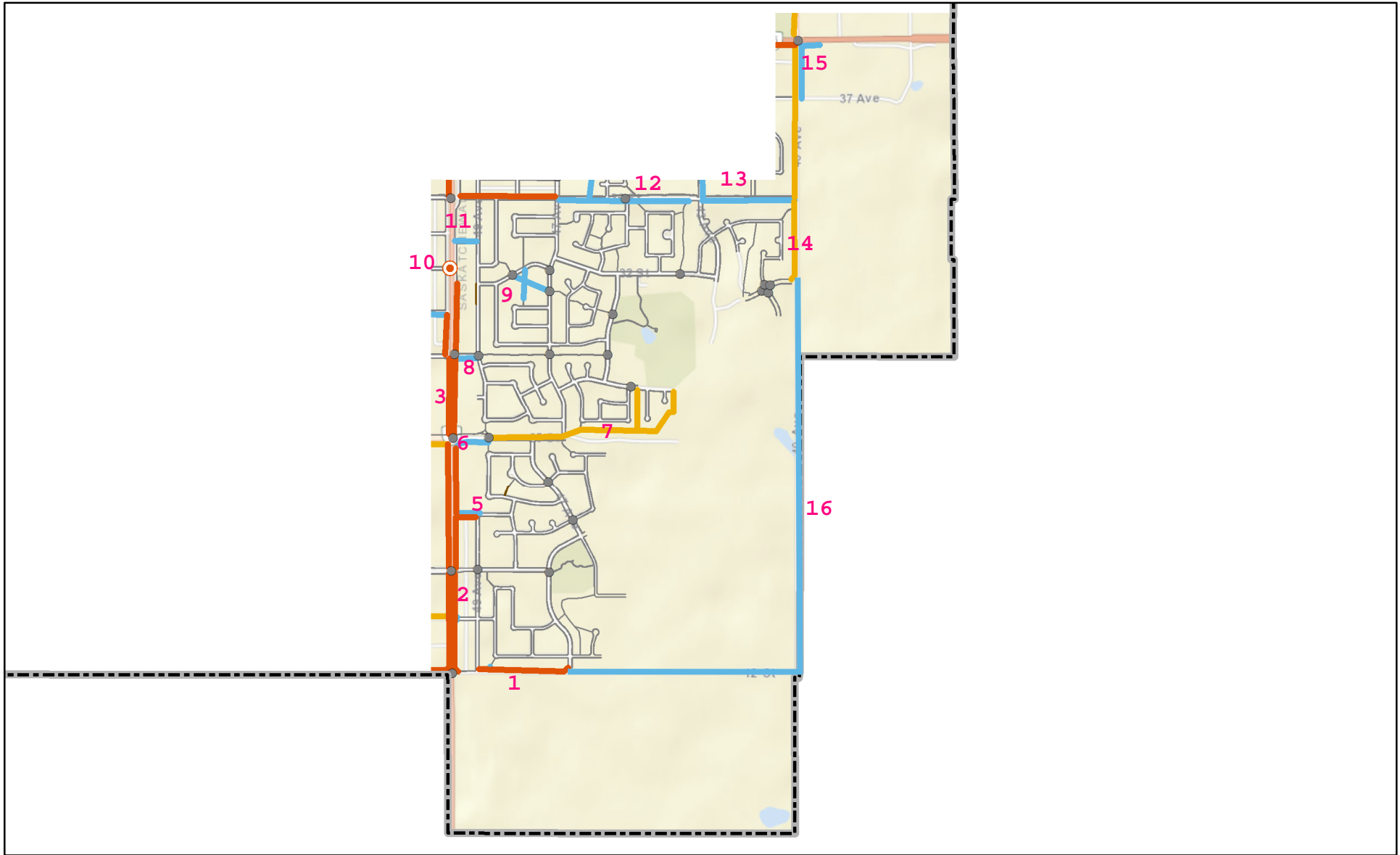


- City Boundary
- Sidewalk/Multiuse Path/Trail
- Natural Path
- Existing Crosswalks

- Prioritization**
- Short Term
 - Medium Term
 - Long Term
 - Short Term (Crosswalks)

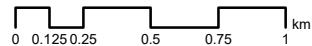


**TRAILS AND SIDEWALKS
MASTER PLAN**
EXHIBIT 8.3: RECOMMENDED
PROJECT PRIORITIES
SOUTHWEST



- City Boundary
- Sidewalk/Multiuse Path/Trail
- Natural Path
- Existing Crosswalks

- Prioritization**
- Short Term
 - Medium Term
 - Long Term
 - Short Term (Crosswalks)



**TRAILS AND SIDEWALKS
MASTER PLAN**
EXHIBIT 8.4: RECOMMENDED
PROJECT PRIORITIES
SOUTHEAST

APPENDIX A

Public Engagement Round 1 Feedback



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TRAILS AND SIDEWALK MASTER PLAN

Phase 1 What We Heard Report

July 2020

ISL Engineering and Land Services

ABOUT THE PROJECT

In early 2020, the City of Lloydminster launched the Trails and Sidewalk Master Plan project. A Trails and Sidewalk Master Plan will provide the City with a direction for improving the existing trail and sidewalk network; and, guides the growth and potential expansion of future trails and sidewalk routes, infrastructure, amenities and policy direction.

In Phase 1 of the project, the City set out to co-create a Project Vision with the public. A Project Vision is a shared statement between the City, the community and the project team that describes what is important and valued to achieve for a successful plan.

Due to the global COVID-19 pandemic, Phase 1 of the project required that all engagement activities be conducted virtually to ensure safety and recommended social and physical distancing recommendations were followed, while also recognizing that citizens have a voice and say in the project during this difficult time.

PROJECT TIMELINE

We are currently in Phase 1 of the project.

Phase 1: Vision, Issues and Ideas (Spring – Summer 2020)	Phase 2: Inventory Analysis (Summer)	Phase 3: Options Development and Refinement (Fall 2020)
Create a Project Vision that reflects community values	Complete technical work to confirm the project direction and inform the option development	Confirm and refine the options for the Master Plan
Online public engagement May - June 2020	<i>No public engagement during this phase</i>	Stakeholder workshops – TBD In-person and online public engagement – TBD

PUBLIC ENGAGEMENT OVERVIEW

In June 2020, online engagement was launched on May 28, 2020 until June 18 to gather feedback from residents and the public to understand the following to inform the development of a Project Vision:

- What does the public value about trails and sidewalks?
- How does the public currently use the trail and sidewalk network and how you would like to use it in the future?
- What elements of trails and sidewalks are most important to the public?
- What current issues exist?
- What ideas and opportunities do people see for the future?

The online engagement was conducted on the City's webpage: <https://yourvoicelloyd.ca/trails> and included the following opportunities:

- Online survey
- Mapping Tool
- Q & A Tool

A summary of feedback received from the online survey and mapping tool is included in this report.

ONLINE SURVEY – WHAT WE HEARD

There was a total of 316 total participants in the online survey. Overall key themes are summarized below. Key themes are developed with both diversity and frequency of comments heard. Details of key themes we heard in response to each individual question is included in the following pages.

What do you value most about the existing trail and sidewalk network? 305 respondents

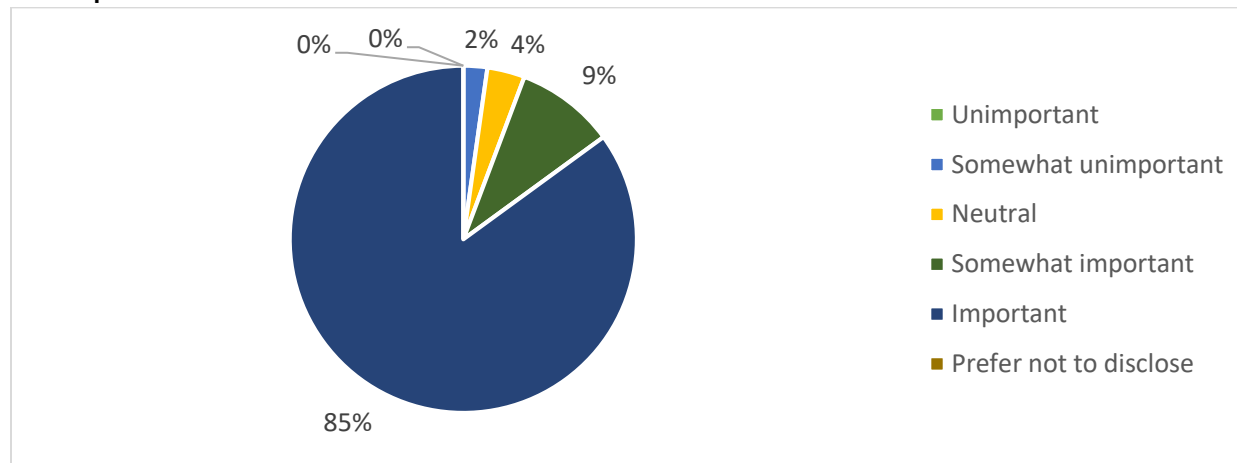
- Ease of use and access to the trail and sidewalk network
- Accessibility for those with mobility issues, mobility aides or parents with strollers
- A connection with nature, wildlife and the outdoors; being in a green and beautiful space
- Access to an outdoors activity and exercise
- Having the option for an alternate mode of transportation, particularly for those without access to a vehicle and when there is no public transit option
- Connection to key destinations and recreation hubs, such as Bud Miller Park
- Minimal need for crossing the street, particularly at busy intersections
- A safe option for pedestrians and cyclists through a physical separation from vehicle traffic, particularly for those traveling with small children
- A family-oriented space
- Having a variety of routes to access different areas of the city
- Having a well-maintained amenity that can be access by all residents throughout all seasons



Please rank how important the following elements are to you

Safety for users of trails, sidewalks and at intersections

314 respondents



Please Explain

233 respondents

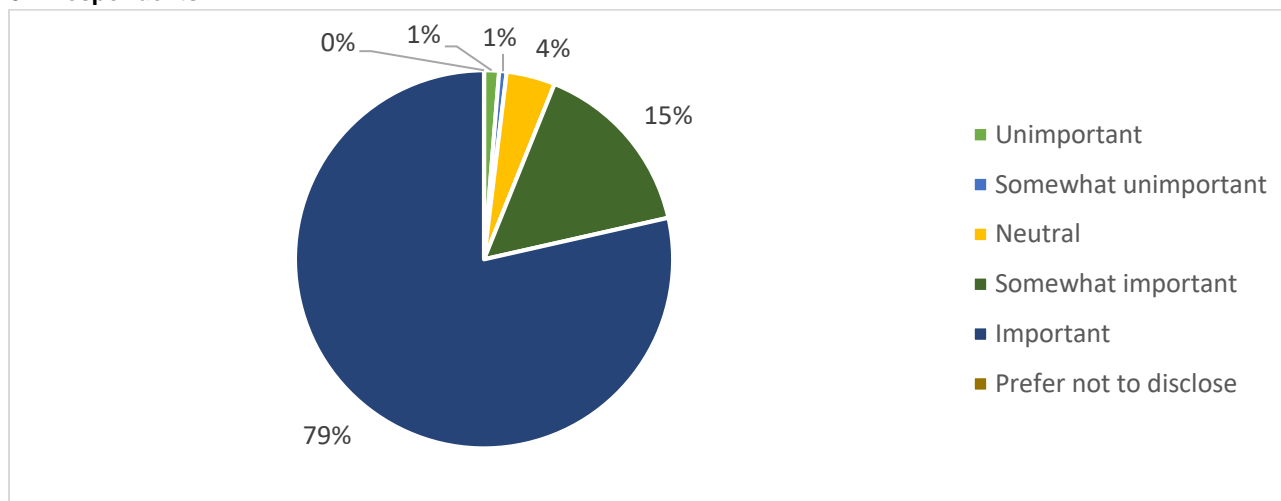
UNIMPORTANT 0% | SOMEWHAT UNIMPORTANT 2% | NEUTRAL 4% | SOMEWHAT IMPORTANT 9% | IMPORTANT 85%

- Accessibility needs to be improved for seniors and people with mobility issues, particularly with path width, crossing timing, and grading of curbs and ramps
- Safety is very important for people with children, particularly at intersection crossings
- Feeling safe is an important factor in people's decision to use the trails or not
- Safety could be improved at intersection crossings with regards to crosswalk markings, visibility, pedestrian timing, maintenance to ensure a clear path, and both drivers, cyclists and pedestrians following the rules of the road
- Lighting needs to be improved on the trails
- Trails and sidewalks need to be maintained in all seasons to ensure there are no hazards for users
- A physical separation from vehicle traffic increases users' sense of safety for both cyclists and pedestrians



Network connectivity of trails and sidewalks as an option for getting to key destinations

312 respondents



Please Explain

288 respondents

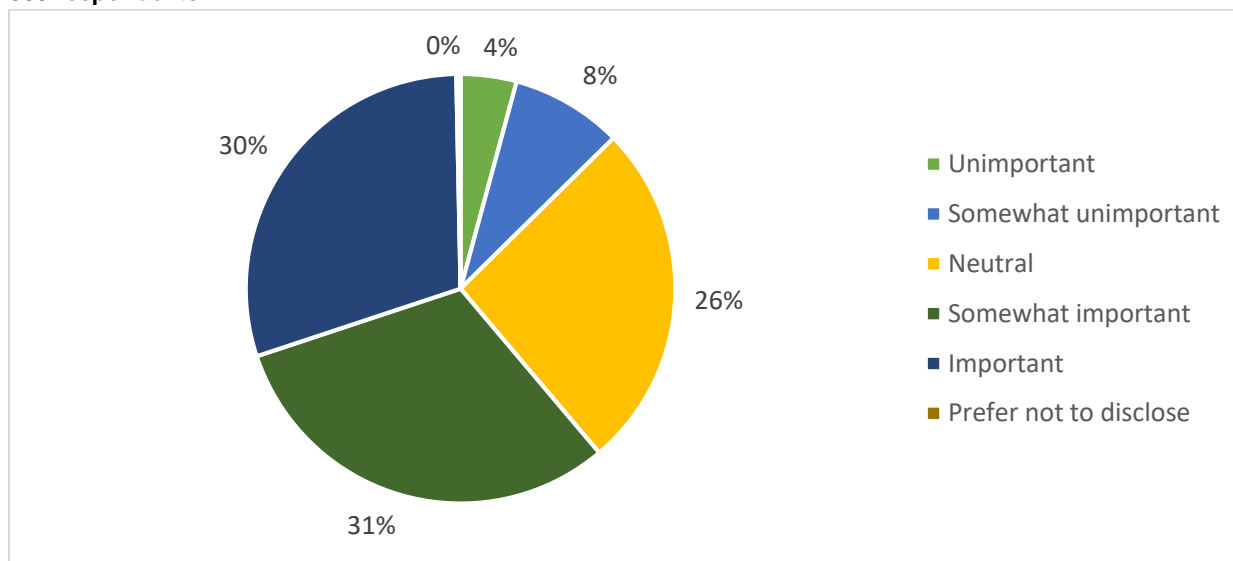
UNIMPORTANT 1% | SOMEWHAT UNIMPORTANT 1% | NEUTRAL 4% | SOMEWHAT IMPORTANT 15% | IMPORTANT 79%

- Ease of use and access are important to providing a realistic alternate mode of transportation for residents
- Increased connectivity would be a motivator for people to use the network as an alternative mode of transportation
- There are a lot of missing links in neighbourhoods and confusion with wayfinding for network connections in residential neighbourhoods and act as a barrier to people using the current network
- Having a safer option that is physically distanced from vehicle traffic is a motivator for people to use the trail network if there was also increased connectivity
- Increased connectivity would result in a more variety of trail options, but also more uninterrupted length for those who wish to travel further



Wayfinding Signage (Examples: network maps, directional signage, trail names or colours, etc.)

309 respondents



Please Explain

198 respondents

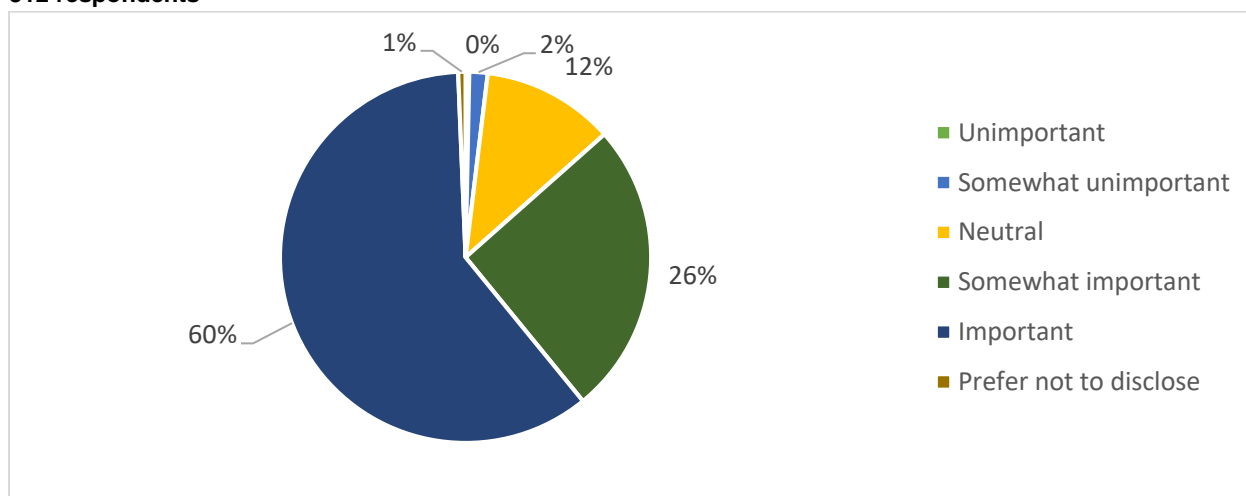
UNIMPORTANT 4% | SOMEWHAT UNIMPORTANT 8% | NEUTRAL 26% | SOMEWHAT IMPORTANT 31% | IMPORTANT 30%

- The current online trail maps are confusing or not updated; some find them adequate resources
- There is an opportunity for the City to develop an online system or maps available for resident use
- Wayfinding signage or online resources would help to avoid confusion and getting lost, particularly for youth, newcomers or tourists, however long-time residents would not all need to use them
- Concern about the costs, maintenance and potential for vandalism
- Maps and markers are helpful to find where you are and to discover new routes therefore increasing enjoyment and user experience
- Wayfinding signage and markers would increase connectivity at trail entrances and breaks, particularly in residential neighbourhoods where connections to other parts of the network is not always clear



Protecting the natural environment and maintaining greenspace

312 respondents



Please Explain

187 respondents

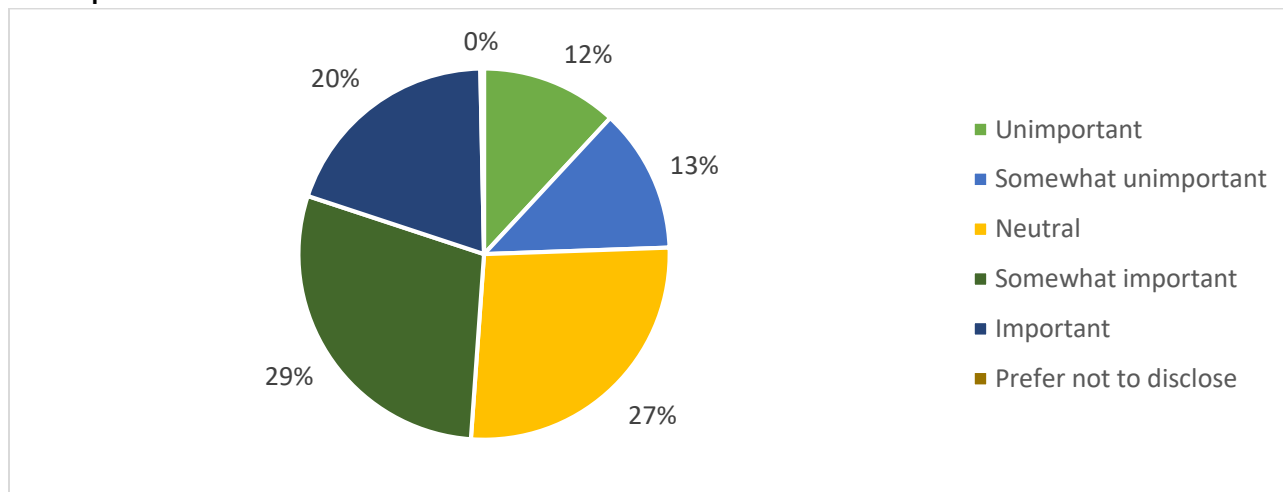
UNIMPORTANT 0% | SOMEWHAT UNIMPORTANT 2% | NEUTRAL 12% | SOMEWHAT IMPORTANT 26% | IMPORTANT 60%

- A trail system ensures safe access to nature, wildlife and the outdoors while preventing damage to the surrounding environment
- Nature and greenspaces add a lot of natural beauty to a space which increases enjoyment and improves the mental and physical health of users
- Greenspace is important for a healthy environment and it is important to protect the environment and maintain greenspaces for people to enjoy
- It is important that greenspaces are maintained free of garbage and paths are cleaned of debris



User experience enhancements through trail amenities (Examples: benches, gazebos, public art, educational plaques, etc.)

311 respondents



Please Explain

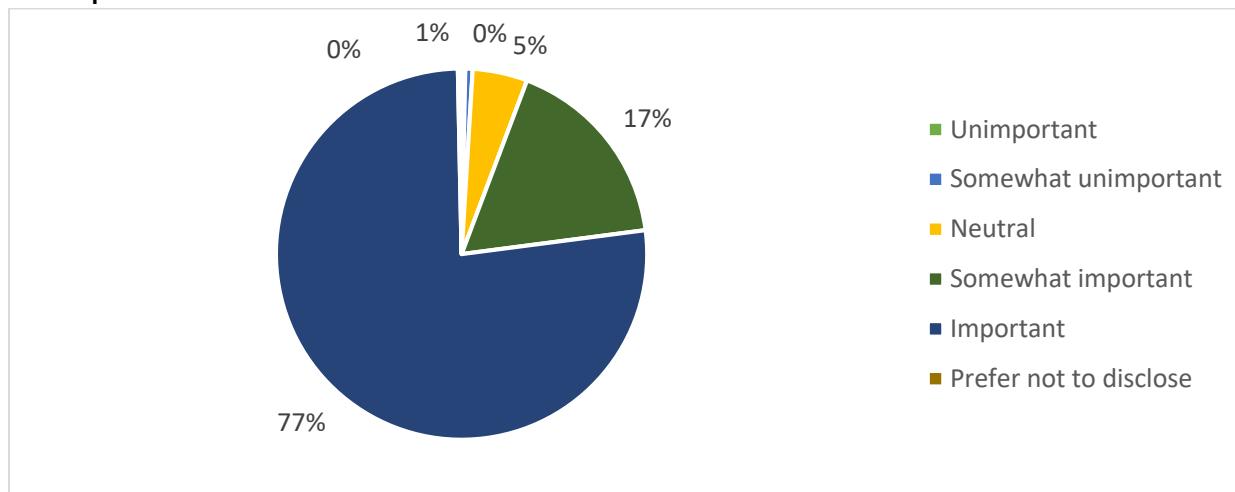
207 respondents

UNIMPORTANT 12% | SOMEWHAT UNIMPORTANT 13% | NEUTRAL 27% | SOMEWHAT IMPORTANT 29% | IMPORTANT 20%

- Increased beautification through local public art would increase enjoyment of the network and encourage people to use the network
- Plaques could be an opportunity for tourists and students to learn about different topics on the history of Lloydminster or different ecological features
- There is concern about the costs, maintenance and potential for vandalism and loitering
- Seating should be provided at strategic locations on the trail to provide for a resting space for those who may need it; however, the current locations of benches with advertisements are not seen as frequently used and could be placed in better locations
- Shelters could be used as protection from the elements if needed
- Enhancements are not a priority for some over increasing connectivity, expanding the trail system, and maintaining and upgrading the current trails
- Garbage cans, washrooms and water fountains were suggestions for additional enhancements

Accessibility for all types of users, ages and abilities (Examples: wheelchair, walker, stroller accessibility, etc.)

314 respondents



Please Explain

192 respondents

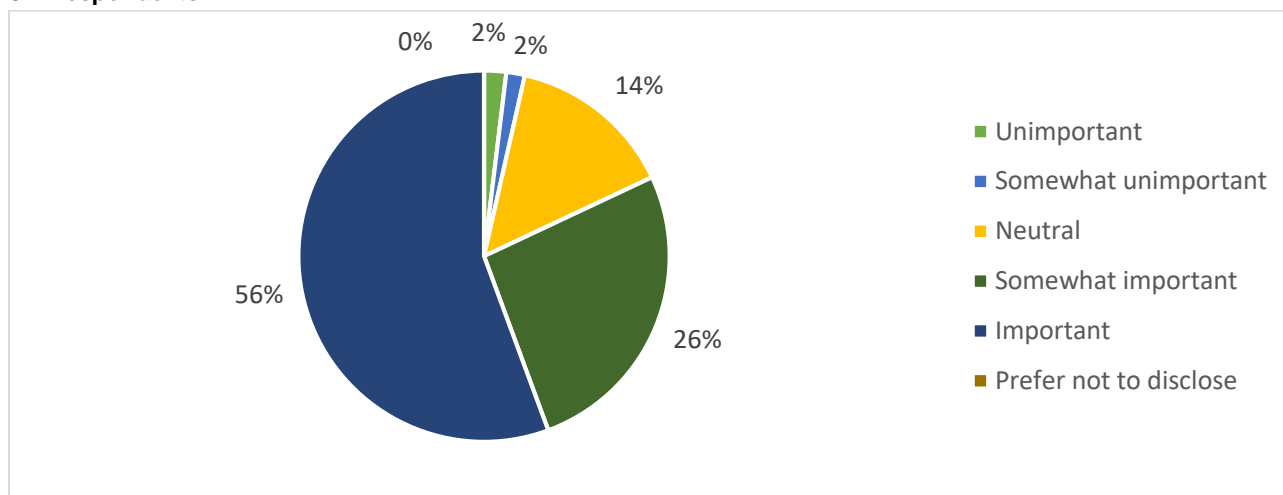
UNIMPORTANT 0% | SOMEWHAT UNIMPORTANT 1% | NEUTRAL 5% | SOMEWHAT IMPORTANT 17% | IMPORTANT 77%

- All trails and sidewalks should be accessible to all residents
- Curbs and ramps in transitioning from sidewalk to road or trail, surface material, lane width, maintenance and debris (such as snow and ice clearing and standing water) and intersection crossing timing are all barriers to accessibility for people with reduced mobility and parents with strollers
- There could be bicycle only paths or hikes with higher degree of difficulty or unpaved, however clear signage would be required to avoid confusion



Expanded trail system providing more areas for recreation purposes

311 respondents



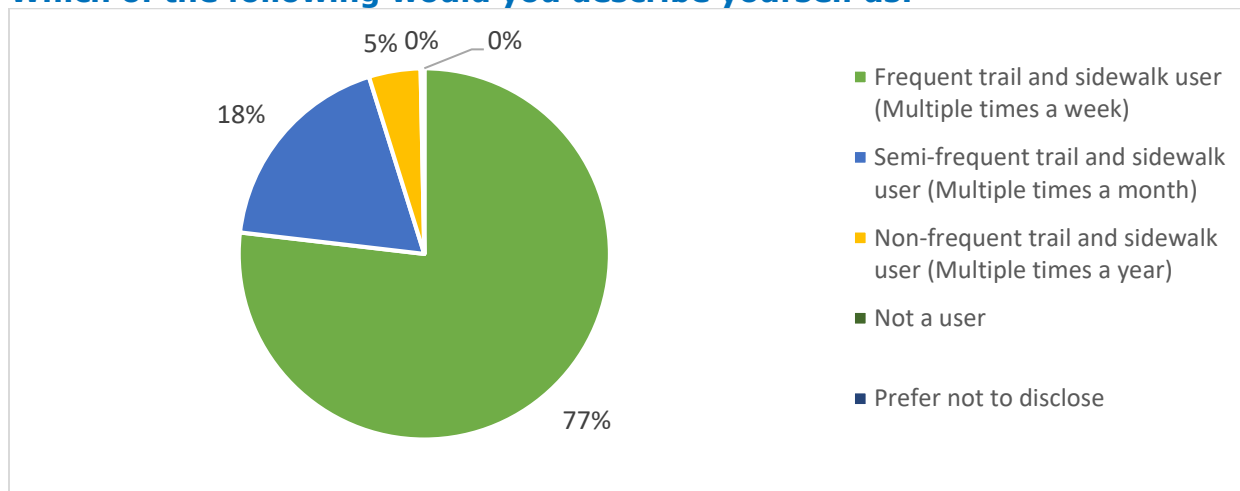
Please Explain

164 respondents

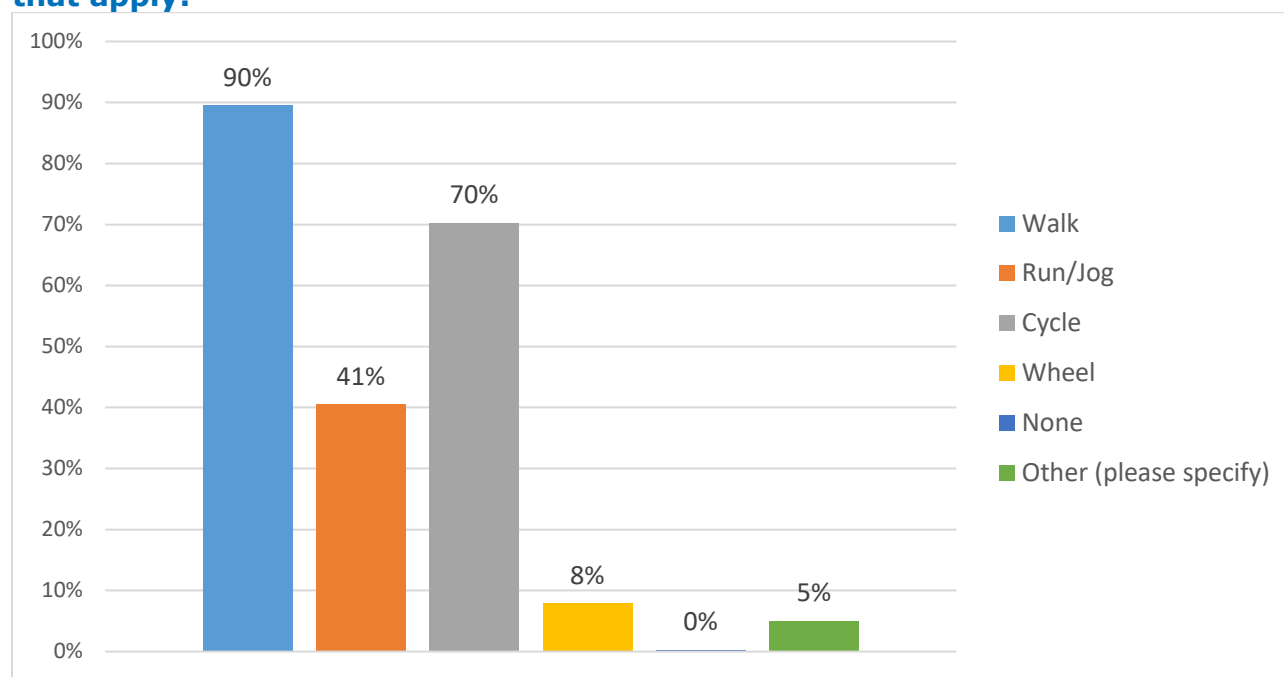
UNIMPORTANT 2% | SOMEWHAT UNIMPORTANT 2% | NEUTRAL 14% | SOMEWHAT IMPORTANT 26% | IMPORTANT 55%

- Expansion would allow for new places to be explored, particularly if there is additional greenspace
- The current trail system is enough but needs to be better connected
- More trails are needed to provide an alternate mode of transportation to get around the city
- Currently there are spots of the city that could have more trails added and missing sidewalk links added to provide increased network connectivity and safer travel that is separated from vehicle traffic
- Increased trails will promote health and recreation

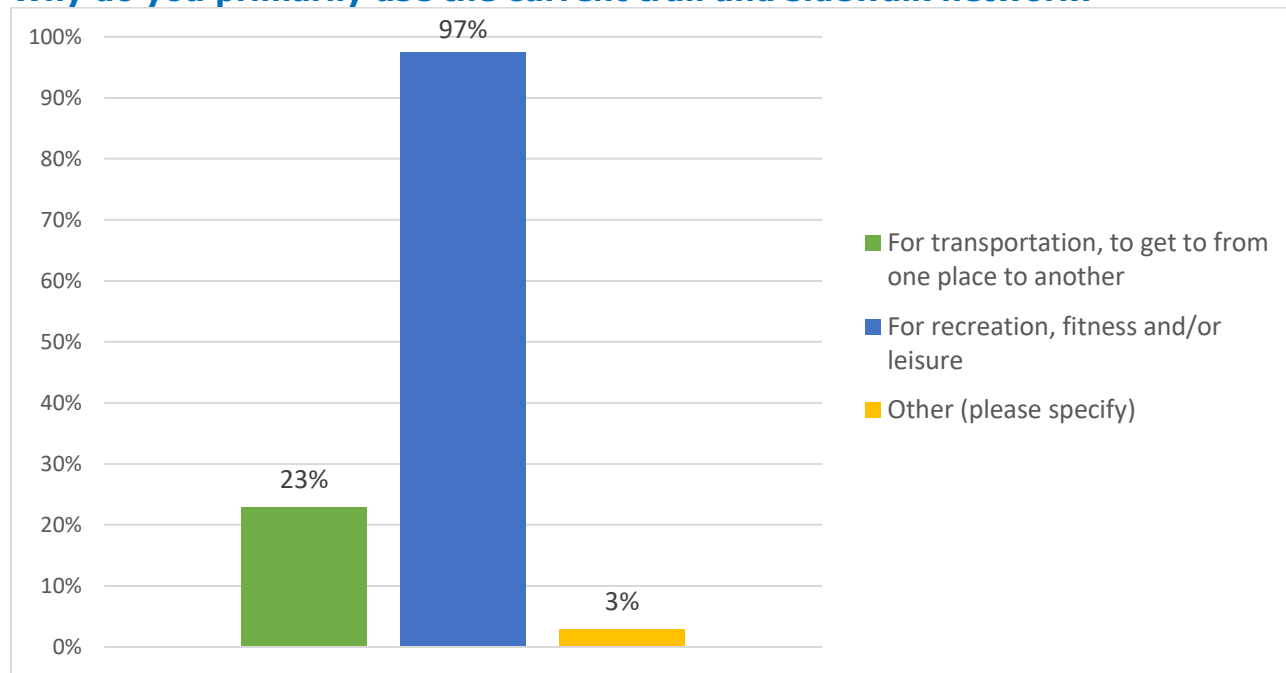
Which of the following would you describe yourself as:



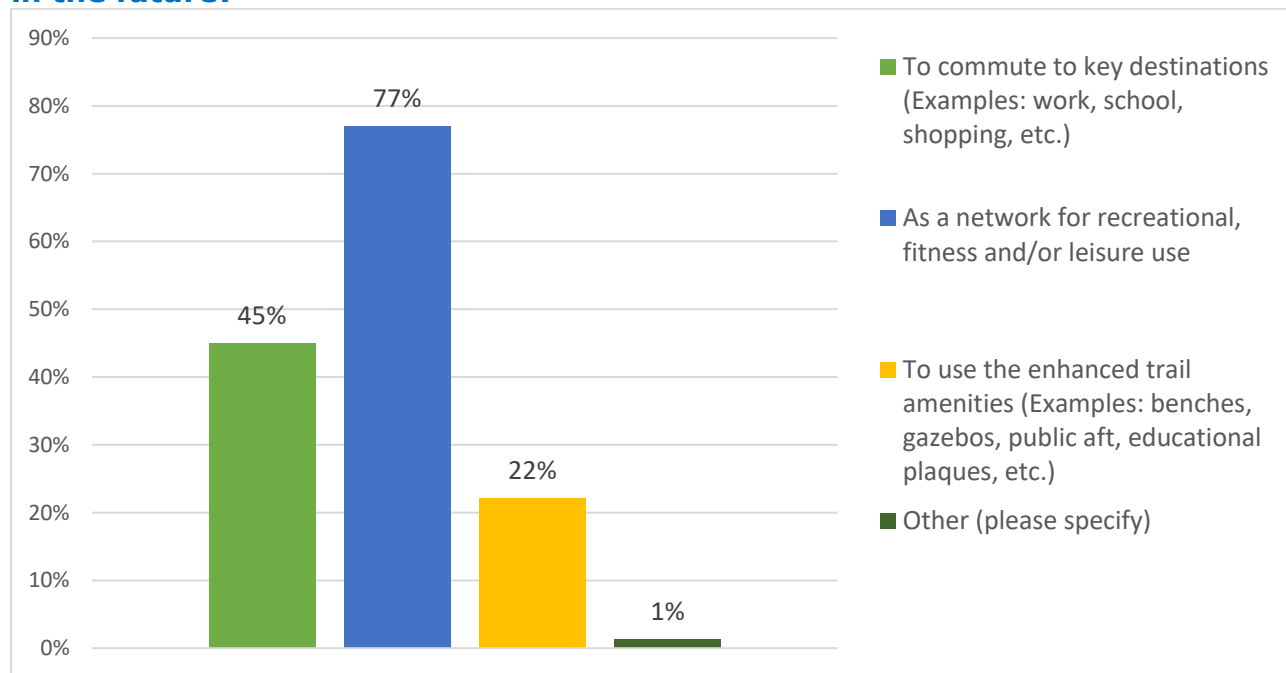
How do you use the current trail and sidewalk network? Please select all that apply:



Why do you primarily use the current trail and sidewalk network?



Which of the following ways would you use the trail and sidewalk network in the future?



What challenges do you currently face using the existing trails and sidewalks?

243 respondents

- Accessibility challenges for people with reduced mobility or parents with strollers
- Unsafe intersection crossings that are not clearly marked or with insufficient controls, are not visible, have not enough time to cross, or there are not enough crossings for major roads
- Crowds and insufficient network capacity for popular areas such as Bud Miller Park, particularly with COVID-19 and physical distancing
- Insufficient lighting on some trails causing reduced sense of safety
- Trail maintenance of existing trails, including deteriorating trails, debris and garbage, and seasonal clearing
- Missing links and lack of overall network connectivity, particularly with north south connections (Highway 17) and on the Saskatchewan side
- There is no easy or limited access in some parts of the city to the trail network
- There is a lack of clear wayfinding signage and resources to find new or nearest trails and connections
- There is a lack of clear connectivity between trail sections
- Garbage cans are needed for responsible dog walkers and to reduce garbage

What is currently missing with the existing trail, sidewalk and crosswalk networks?

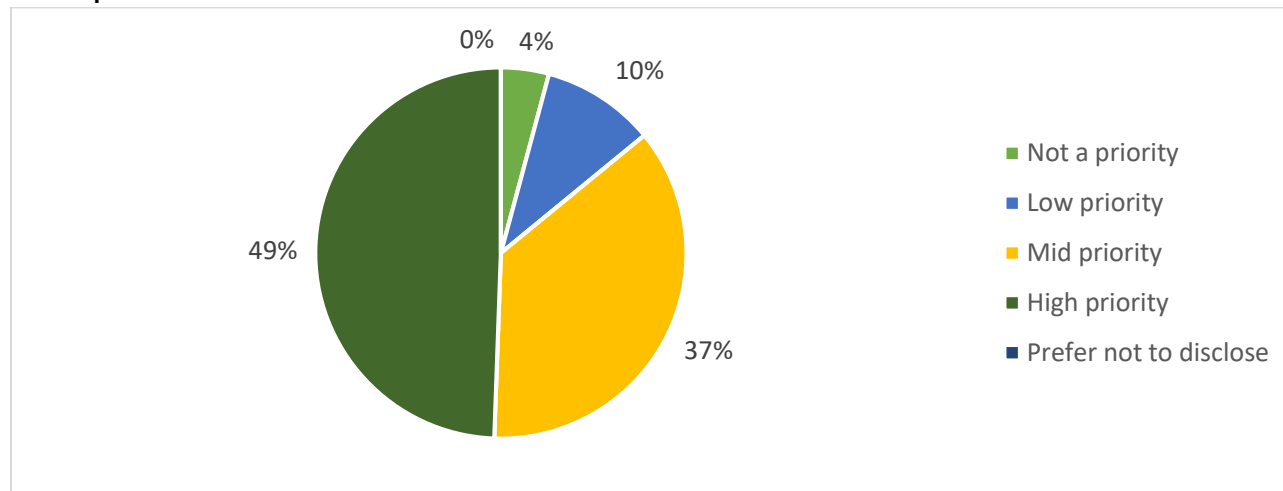
218 respondents

- A continuous and unbroken network that reaches all areas of the city
- Access to key destinations through the trail network
- Trail beautification and art
- Intersection crossing improvements through lights, signage, and timing
- Cyclist infrastructure
- Long distances without having to cross traffic at intersections
- Long trail loops and cycles other than at Bud Miller Park for exercise

How would you prioritize the following ideas?

Adding connections to important destinations (Examples: schools, downtown, shopping areas, etc.)

263 respondents



Please Explain:

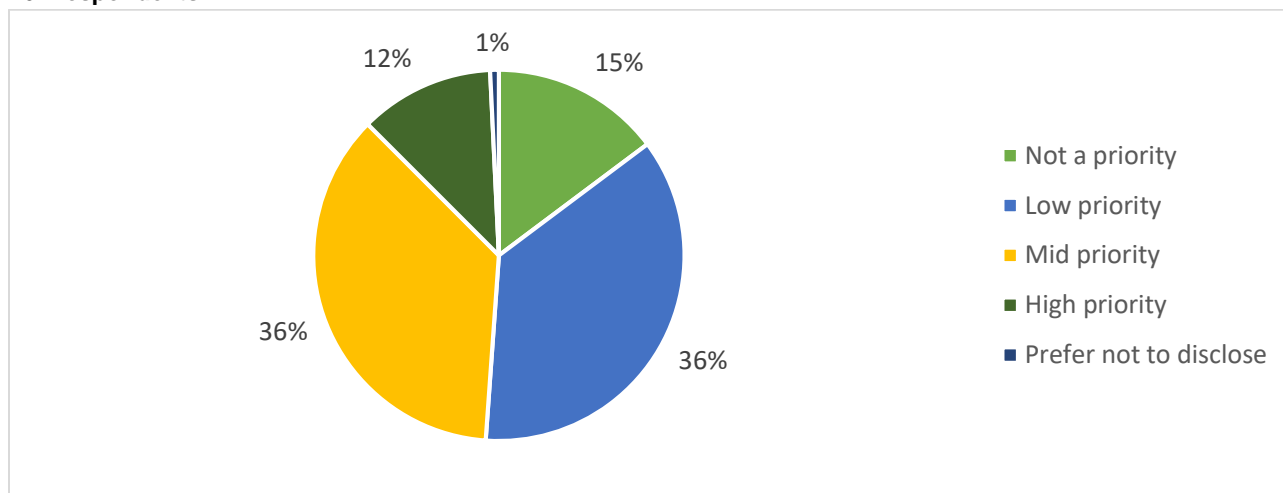
129 respondents

NOT A PRIORITY 4% | LOW PRIORITY 10% | MID PRIORITY 35% | HIGH PRIORITY 49%

- Adding connections to key destinations would improve access to the city for those without access to a vehicle, particularly as there is no transit options
- This is not a high priority for those who have vehicle access
- Would increase trail use as an alternate mode of transportation if more destinations were made available, and would promote a healthier lifestyle
- Would allow for safer travel with a greater degree of separation from vehicle traffic. This is important for student and people traveling with small children
- Connection to destinations are not a priority for some as their use of the trail system is primarily for exercise and leisure
- Easy access, accessibility and feeling safe is important for this to be successful

Adding user experience enhancements (Examples: benches, gazebos, public art, educational plaques, etc.)

264 respondents



Please Explain:

264 respondents

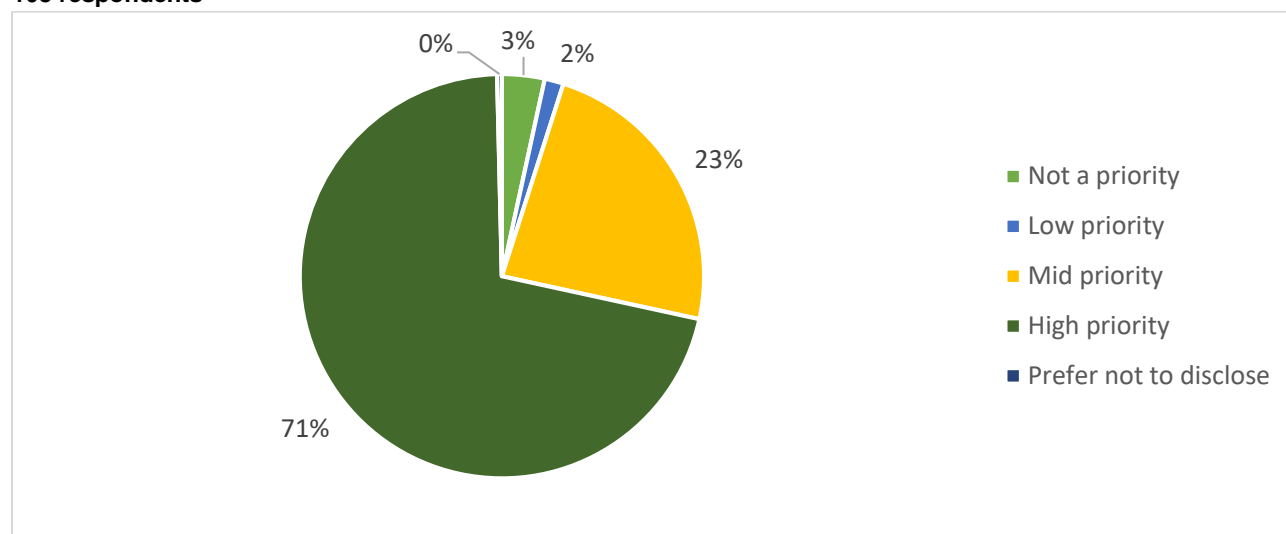
NOT A PRIORITY 15% | LOW PRIORITY 36% | MID PRIORITY 36% | HIGH PRIORITY 12%

- Benches are a valuable spot for enjoyment and resting for those who need it; however, the placement needs to be in areas where people would use them on the trails
- Concern about vandalism and loitering
- Not a priority at this time, not worth the cost or maintenance and concern that they won't be used
- Enhancements and beautification would bring enjoyment and learning opportunities to some users



Expanding the recreational trail network

108 respondents



Please Explain:

99 respondents

NOT A PRIORITY 3% | LOW PRIORITY 23% | MID PRIORITY 23% | HIGH PRIORITY 71%

- Allows for an alternate mode of travel
- Creates a greater sense of community through network connections
- There is a need for a greater amount of circuits in the trail and sidewalk network
- Concern about costs
- It is important to increase ease of access to parts of the City that currently experience difficulties due to lack of safe crossings, missing links, or not many trails/sidewalks in the area such as the Saskatchewan side of the City and crossing highway 17 and highway 16
- More people would be encouraged to use the trail system and increased use would improve the physical and mental health of residents
- Increasing connections to the existing network is a higher priority for some

Do you have any additional comments or questions?

99 respondents

- Connectivity and missing links need to be addressed to ensure better enjoyment and practical use of the existing trail system
- Appreciation of the opportunity to provide feedback and suggestions for user groups for further engagement
- Concern about costs to expand, and questions about expansion timeline
- Need for improved cycling infrastructure
- Need for improved maintenance for many of the existing trails and sidewalks
- Need for wayfinding measures through publicly available and updated maps
- Transportation for those without vehicle access can be expensive especially without public transit
- Safety and lighting need to be improved and maintained for better use and enjoyment of the network
- Support for greenspace, expansion of trails, and increasing connectivity

MAPPING TOOL – WHAT WE HEARD

A virtual mapping tool was used from (DATES OPEN & CLOSED), where the public could place pins to provide their feedback on topics including accessibility issues, ideas, missing connections, safety issues, and trail expansion. A total of 43 submissions, at 41 locations were identified using the virtual mapping tool.



Online virtual map hot spots

The key themes from the virtual mapping tool are as follows:

- Safer crossing at key intersections for people walking and biking
- Widening trails and sidewalks to accommodate both people walking and biking
- Adding trails to connect to destinations such as retail centres, restaurants and the industrial park
- Adding trails or sidewalks to existing roadways, such as 75 Avenue, where there are no safe options for people biking
- Developing trails within new neighbourhoods and ensure they connect to the existing trail system
- Connecting trails between communities and between communities and park destinations

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APPENDIX B

Internal Stakeholder Engagement Guide and Meeting Record



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Trail and Sidewalk Master Plan



Visioning Visioning

■ 1.0 Introduction

The City is completing a Trails and Sidewalk Master Plan to direct ongoing and future efforts for maintaining and expanding the network.

What is a trail and sidewalk master plan?

A Trails and Sidewalk Master Plan is a guiding document that helps:

- the improvement of the existing trail and sidewalk network.
- the future growth and expansion of trail and sidewalk routes, infrastructure, amenities and policy direction.

Where are we now?

- This project is in phase one, consisting of reviewing best practices from other municipalities and reviewing the City's current plans and practices locally.
- We have also have an online public engagement portal opening up soon.

What is the project workshop?

- The project workshop involves key internal City stakeholders to discuss our phase one report.
 - The following is a summary of the phase one report as a reference for your contribution on the project at the project visioning workshop.
- Phase two of the project consists of assessing the trail, sidewalks and crosswalk network and reporting the results back to stakeholders based on feedback received at the workshop.
- A larger (more detailed) phase one report is available, if requested.

What do we want to get from the workshop?

- Specific feedback based on the phase one report, including lessons learned from other municipality, implications of existing plans on developing this project and current practices, influencing day-to-day decision making.

2.0 Phase One Summary

The following is a summary of best practices from similar projects in five other municipalities, summary of local plans and studies influencing this project, and a summary of current practices that influence day-to-day decision making related to the delivery and maintenance of the City of Lloydminster's active transportation network.

2.1 Best Practices (from other municipalities)

The following is a summary of best practices from other municipalities. Five municipalities' similar projects were reviewed, including:

- City of Beaumont, Alberta – Population: 17,396: Open Spaces and Trails Master Plan
 - City of St. Albert, Alberta – Population: 65,589: Active Transportation Plan Development Strategy and Gaps Assessment
 - City of Saskatoon, Saskatchewan – Population: 273,010: Active Transportation Plan
 - District of Summerland, BC – Population: 11,615: Sidewalk Master Plan and Trails Master Plan
 - Town of Hinton, Alberta – Population, 9,882: Parks and Open Space Master Plan
-
- **Higher Level Documents:** All of the plans reviewed from other municipalities referenced high level planning documents that directed the need for a trails and sidewalk master plan. Examples of these higher level planning documents include Open Space Framework Plan, Community Services Needs Assessment, and Transportation Master Plan. There is no specific City of Lloydminster planning document with direction for creating this plan, rather the initiation of the trails and sidewalk master plan has been driven by City Council. The City has several documents having implications for developing the trails and sidewalk master plan, but no specific direction for this plan.
 - **Vision Statement:** All plans reviewed have a vision statement, which is recommended in this study. The project vision needs to confirm the level of focus for enhancing trail user experience and the how much priority should be given over expanding the recreation of commuter trail system. Vision statement items are dependent on the needs of the City, but example vision terms include interconnected trails, safety, defined goals to increase active transportation mode share (target mode share percentage), inclusivity and equity, increase attractiveness of active transportation, and supporting recreation and commuting trips.
 - **Prioritizing Projects:** Four of five documents use a qualitative prioritization system and this is recommended for the City of Lloydminster. Developing a complex weighted scoring prioritization system is not recommended due to the smaller size of the City of Lloydminster. Alternatively, a qualitative prioritization system reflecting the project vision and defining prioritization elements is recommended. Suggested items for prioritizing projects include: potential to close network gaps, location of the trail/sidewalks to key destinations or corridors, proximity to transit, expanding recreational trails, equity and safety for all users, connectivity to specific land uses (schools/retail)
 - **Other:** Other items including gaps assessment, public and stakeholder engagement and capital planning are in line with other studies reviewed and included with this study. Conducting the gaps assessment through desktop level analysis and public input is included in this study and consistent with other plans reviewed. Developing and applying techniques for evaluating pedestrian crossing safety was not found in other documents reviewed, but is included in this study making it unique.

2.2 Current Plans

The following is a summary of current City planning documents related to the trails and sidewalk network.

- **Municipal Development Plan (MDP):** The MDP is a statutory document intended to guide the growth and development of the City of Lloydminster. The document provides a 20-year planning time frame from 2013 to 2032 in which the population is anticipated to grow to approximately 50,000 people. The City's MDP contains policies indicating the need for promoting active transportation in the City.
- **Intermunicipal Development (IDP):** The IDP provides a framework for collaboration between the City and the County of Vermillion River and confirms the need for providing a regional trail system designed to take advantage of open spaces and linear right-of-ways as an option for providing off-road alternatives for cycling, cross-country skiing and walking. Opportunities for regional trails include potential connections between the City and the employment areas located along Highway 16, west of the City boundary and possibly taking ownership of the abandoned rail right-of-way located in the City's northwest.
- **Lloydminster District Planning Commission (LDPC):** The LDPC acts as more of a bylaw for controlling land use development with the assigned LDPC area. Provisions, guidance and requirements for including active transportation plans are missing from the LDPC, although there is incredible offerings for parks and open spaces within the area, including Neale Lake. As the City expands to the east, joint collaboration opportunities among the RMs of Wilton and Britannia and the City are especially significant where there is a need.
- **Land Use Bylaw (LUB):** The Lloydminster LUB (2016) does delineate circulation requirements for development permit approval in the form of sidewalks, trails and necessary connections. Further to this, trail and sidewalks development recommendations for specific conditions and pedestrian safety considerations are provided. Terms like "safe crossing" are used for conditions to be achieved but not defined in a quantitative way. Specific recommendations pertaining to development standards and types of trails to be provisioned are not provided; however, Lloydminster does have guidelines in place for new development to ensure trail and sidewalks are built in appropriate locations.
- **Transportation Master Plan:** The Lloydminster Transportation Master Plan identifies the City's long range and shorter-term transportation requirements and capital plans. The document includes an active transportation gap assessment and priority recommendations, review and development of the pedestrian and cyclist circulation system, traffic signals review, and a trails and sidewalks review that may be reviewed for this Master Plan. Improvements to sidewalk and trail connectivity are listed in the short-, medium-, and long-term capital plans.
- **Growth Strategy and Service Assessment:** Completed in 2013, the Growth Strategy and Service Assessment are two parts of the City of Lloydminster Comprehensive growth Strategy to determine growth directions over the next 30 years. The Servicing Assessment identifies long-term infrastructure requirements for the Growth Study. The findings of the Comprehensive Growth Strategy will inform the possible expansion of the City's boundaries to ensure there are adequate lands for the next 30 years of development.

2.2.1 Current Practices

Understanding the City's current practices is an excellent input for developing the project, carrying forward practices that currently work well, expanding on current practices where relevant, and eliminating and/or replacing practices not meeting the City's goals. To understand the current practices, a series of questions were submitted to the City and discussed at the start of the project.

1. How do you currently make decisions as follows:

a. Location of trails

- i. Through review of subdivision design approvals and reviews, the engineering team uses best judgment and sound reasoning to determine if there is opportunity to implement or relocate trails.
- ii. By review of public requests/concerns, the City uses best judgment and sound reasoning to determine need and viability of new trail (e.g. 52 Street between 50 Avenue and 62 Avenue, opted to get design made due to demand and concerns to improve connectivity).
- iii. Via internal request, the City uses best judgment and sound reasoning to determine need and viability of new trail.
- iv. Note factors like link completion, connectivity improvement, demand (frequency of request/concern).
- v. In summary, up to this point, the City has not had a defined decision matrix and/or road map for determining where trails will be put and what connectivity links are completed. A lot of the trail locations are more reactive than they are proactive.

b. Types of trails (or are they all standard asphalt)

- i. Newly built trails are all asphalt.
 - ii. Shale – These trails are being upgraded to asphalt on an annual basis. The City has been opting to upgrade all trails to an asphalt concrete pavement and move away from “eco” trails that consist of shale, mulch, etc. as the City has found the maintenance of these trails to be burdensome. In the original Bud Miller All Seasons Park, mulch and shale trails would have fit in well; however, we do not have areas within the City where an “eco” trail would be well accepted by the public.
- c. Crosswalk improvements (any internal guidelines?)
- i. Currently using the Transportation Association of Canada (TAC), Pedestrian Crossing Control Guide. Some examples of this include the implementation of several rectangular rapid flashing beacons (RRFB) at select locations.
- d. Trails for new development
- i. As mentioned above, use best judgment if there's an opportunity to implement; the City's development coordinator is key in the process and works closely with developers to seek more information regarding trail placement and location.

2. How important is trail experience to the City?

- i. Standard drawings for construction exist but the City will veer from standards in rehab situations as needed.
- ii. Trail system is a growing priority and the City is looking for:
 - a more objective means of determining the need or warranting for trail construction;
 - a more objective means of determining the location of the trail; and
 - determining if there is opportunity to consider several different types of trails.

- iii. A good example is the trail that was added to 62 Avenue, receiving positive feedback from the public, and seeded discussion for new trails.
- iv. A more challenging example is a proposed trail on the north property of Bud Miller Park, which received negative feedback from the public. Trail planned behind residential lots, abutting the east/west fence line (shown in the aerial below).

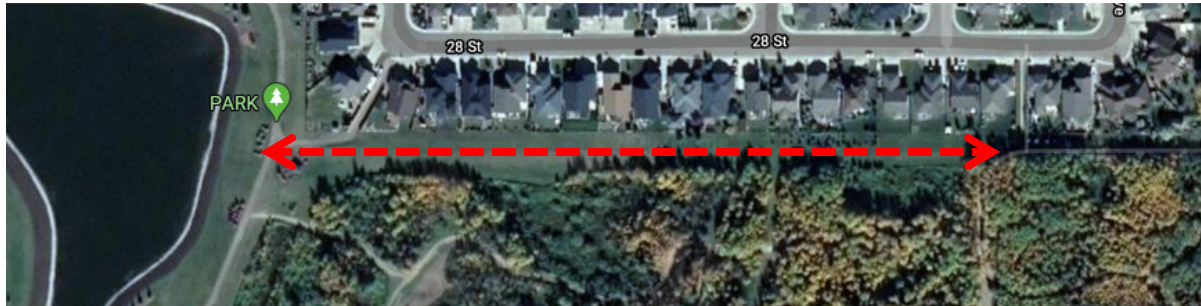


Figure 2: Previously Proposed Trail

3. Do you have any existing minimum standards for trails/sidewalks within the constructions standards, including width/material and landscape design? (Other than from the road standards).

- a. Municipal development standards only.

4. How is trail/sidewalk maintenance performed?

- a. As needed based on visual inspection and request by parks.
- b. Any trail that is not currently asphalt needs to be upgraded to asphalt as budget allows.
- c. Snow clearing as needed.

2.2.2 Background Information on Pedestrian Crossings Guide (Answer 1.c)

The City is currently using the TAC Pedestrian Crossing Control as a guide, and the following is a summary of the guide.

- Application of the Guide: Crossing warranted based on number of lanes, daily volumes, pedestrian volumes and/or desire lines. Must be a specific distance from another crossing location, 100 – 200 m (varies).
- Results of the Guide
 - Not warranted.
 - If warranted, recommended type, including (from lowest to highest protection):
 - ground mounted signage;
 - rectangular rapid flashing beacon;
 - overhead flashing lights; or
 - half signals.
 - Recommended installation requirements: Line marking type (zebra, parallel), installation requirements prohibited stopping area, passing restrictions, land change prohibition, and advance warning.
 - Desirable installation components: Refuge islands, curb extensions, countdown timers, reduced radius, crossing guards, larger no stopping zones, and larger no passing zones.

2.2.3 Questions for Stakeholders

Question #1: Are there any missing driving and/or influencing documents?

Question #2: How is the future trail and sidewalk network envisioned? Some example areas include:

- providing a high level of connectivity across the City;
- providing more or expanding recreational trail networks; and
- enhancing trail user experience by providing additional park/trail amenities.

Question #3: How should future projects for the trail and sidewalk network be prioritized? What areas are important?

Question #4: What current practices should continue, which should be expanded on, and/or which should be stopped/revised?

Question #5: Are the recommended requirements of the pedestrian crossing guide sufficient?

- Are there any types of crosswalks not desirable?
- Are there any new types aspired to?
- Are there desirable components that should be mandatory and where?



7909 51 Avenue NW, Edmonton AB T6E 5L9, T: 780.438.9000 F: 780.438.3700

Project: **Trails and Sidewalk Master Plan** Project No.: **15662**
 Client: **City of Lloydminster** Meeting Date: **May 20, 2020**
 Location: **Teleconference (Microsoft Teams)** Meeting Time: **3:00 PM**
 Purpose: **Visioning Workshop** Meeting No.: **1 of 1**
 In Attendance: **Warren Aguinaldo (City), Blake Nielsen (City), Charles McDonald (City), James Rogers (City), Jessica Latchuk (City), Jim Ambros (City), Natasha Pidkova (City), Terry Burton (City), Dan Zeggelaar (ISL), Shane Budish (ISL), Alexandra Morrison (ISL), Jackie Prior (ISL)** Written By: **Jackie Prior**
 Distribution: **All attended, Randy Heaps (ISL), Jen Esler (ISL), Cam Matwie (ISL)**

The subjects discussed and decisions reached are summarized in the following record. Please notify the author of any errors or omissions. If no comments are received within 7 days this record is considered correct.

Item No.	Description	Action By
1.0	1. Introductions <ol style="list-style-type: none"> Dan – Project Manager, (ISL) Warren – Project Manager, Traffic Branch (City) Terry – Director of Planning (City) Jessica – Community Engagement (City) Jim – Supervisor, Roadway (City) James – Senior Manager, Capital Infrastructure (City) Charles – Supervisor, Roadway (City) Natasha – Manager, Planning (City) Blake – Manager, Parks and Green Spaces, (City) Alex – Engagement Coordinator (ISL) Shane – Landscape Architecture (ISL) Jackie – Transportation E.I.T (ISL) 	INFO
2.0	2. Open Discussion <ol style="list-style-type: none"> What everyone would like to see from this Plan? Is there anything people would like to discuss or note? <ul style="list-style-type: none"> Create justification for new trails, create a process for prioritizing projects easier Look at current network for gaps, put some principles into place for what is needed in the future, survey data with conditions and how that ties into this project, generally how to maintain and predict capital programs for sidewalks and trails. Have heard a lot about trails and sidewalks from the community, particularly from the vocal biking community, who has provided with maps drawn with what they want to see. Identifying how to link areas new and old. Framework for pedestrian crossings, with a clear process to determine that is warranted to provide explanations to the residents. Outline maintenance best practices. Maintenance and snow removal considerations. Ensuring trails are connected, reduce trails that go to nowhere. Replacement plan, trail amenities such as benches and signage, continued improvement on trails apart from installation. It was 	INFO

Item No.	Description	Action By
	<p>noted that the City currently has minimal trail amenities when compared to other municipalities.</p> <ul style="list-style-type: none"> Cover the spectrum of needs. Provisions of trail amenities and trail facilities that creates a good experience as well as rational implementation and maintenance. Build, maintain, and utilize sidewalks and trails to their maximum potential. 	
3.0	3. Project Overview a. Phase 1 and the data collection for Phase 2 complete.	INFO
4.0	4. Meeting Purpose a. High level discussion on what the team would like to see in the Master Plan to support the development of the vision statement and future options development.	INFO
5.0	5. Presentation of Phase 1 a. Best practices review <ul style="list-style-type: none"> Vision Statement – what terms should be included in the City's Vision Statement? <ul style="list-style-type: none"> Interconnected trails, inclusivity, safety, supporting recreation. Safety, inclusivity, mode share target. Concerns for increasing attractiveness for active transportation in terms of balancing with maintenance. Ease of maintenance, safety such as warranting for crossings. Supporting recreation. Increasing active transportation opportunities. Interconnected trails and sidewalks, safety, supporting commuter trips, maintenance, usability is a good term. Ensuring existing and future infrastructure facilitates growth and expansion. Prioritization system – how should future trails and sidewalk project be prioritized? <ul style="list-style-type: none"> Conceder future maintenance. Attention to closing gaps and usability on existing network. Close network gaps as a top priority. Improve crossing safety, connecting key destinations, proximity to future transit a touchy subject, expanding recreational trails, equity for all users. Prioritize existing sidewalk and trails network and closing gaps rather than expanding the network in the short term (next five years). Close network gaps. Consideration of public requests. High level plans <ul style="list-style-type: none"> City has consultant that does structural integrity assessments of trails and sidewalks that guide the projects. This study seen as broader study to get things rolling. Need to focus on policy synchronization in plans, to make sure policy documents tie together. b. Existing Plans/Documents <ul style="list-style-type: none"> Reviewed in the meeting, nothing to note. c. Current Practices	INFO

Item No.	Description	Action By
	<ul style="list-style-type: none"> Trails currently installed based on apparent need at the time. Trail experience a factor, however not the highest priority. A lot of feedback about lack of benches, trail mapping, and signage. <p>d. Crossings – how the City currently views the pedestrian crossing system, what should the Master Plan's crossing matrix include?</p> <ul style="list-style-type: none"> Scramble crosswalk type not desirable. Shared streets not desirable. Ground mounted and pedestrian actuated crossings most common. The City receives requests for more crosswalks, however there is no system in place to objectively determine if the crossing is needed. Developers evaluate what type of pedestrian crossing should be in place as part of their plan. Desirable components for Crosswalks: <ul style="list-style-type: none"> Determine what is best suited for the situation in a case by case basis Curb extensions an inconvenience for maintenance but manageable. <p>e. Other – Trail surfaces</p> <ul style="list-style-type: none"> Question: Safety concerns for trails, asphalt vs shale? <ul style="list-style-type: none"> More a concern for maintenance, a lot of trails lacking lighting. City's MDS requires hard surfaces and asphalts, although developers proposing shale and red clay trails. Growing inquiry if City will accept other trail surfaces. It was noted by ISL that other surfaces could be used in less formal trails and may not cause a maintenance issue. Surroundings, location, and planning are more key factors than materiality. Ties into experience and maintenance. Availability and cost of shale becoming prohibitive. 	
6.0	<p>6. Next Steps</p> <p>a. Finalize phase 1 summary to support options development</p>	ISL and CITY

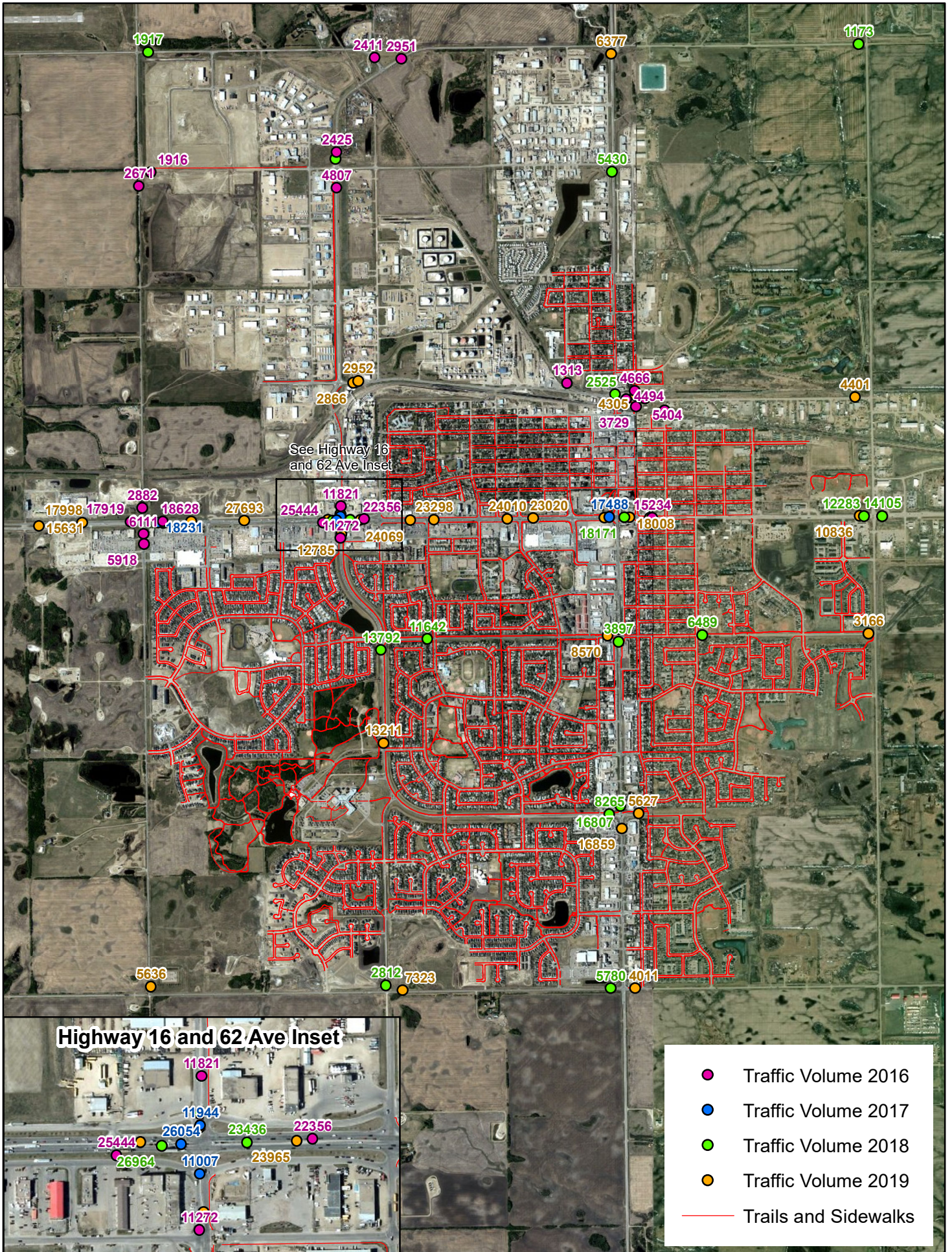


APPENDIX C

Traffic Volumes



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APPENDIX D

Detailed Pedestrian Crossing Assessments



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#	Where is the crossing? (Add)	What are the intersection classifications? (select)	Traffic Signal Warrant assessment needed? (automatic, do not edit)	Traffic Singals Warranted? (select Y/N/NA)	Crossing Roadway Classification? (select)	Distance from existing crosswalk on crossing roadway (select)	Needed for network connectivity? (select Y/N)	On a pedestrian desire line/ access to public land use? (Y/N)	Daily Traffic Volume Needed (automatic, do not edit)	Traffic Volumes (select)	Pedestrian Volumes Needed (automatic, do not edit)	Peak Hour Pedestrian Volumes (input)	Recommendation (automatic, do not edit)	Required Crosswalk Type
1	44 Street and 59 Avenue	Arterial/Collector	Recommended	N	Arterial	>250 m	Y						Consider adding a crosswalk	OF
2	62 Avenue	Midblock	Not Recommended	NA	Arterial	>250 m	Y						Consider adding a crosswalk	RRFB
3	50 Avenue and 33 Street	Arterial/Collector	Recommended	N	Arterial	>250 m	Y						Consider adding a crosswalk	GM
4	50 Avenue and 15 Street	Arterial/Collector	Recommended	N	Arterial	>250 m	Y						Consider adding a crosswalk	RRFB
5	59 Avenue and College Way	Commercial Access	Engineering Judgement	N	Arterial	150 m - 250 m	N	Y	Y	> 1200	Y	> 12	Consider adding a crosswalk	GM
7	44 Street and 48 Avenue	Arterial/Collector	Recommended	N	Arterial	150 m - 250 m	Y	Y	Y	> 1200	Y	< 12	No crosswalk required	N/A

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APPENDIX E

Phase 3a External Stakeholder Round 1 Material and Feedback



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TRAILS AND SIDEWALK MASTER PLAN

Phase 3a Engagement Summary

September 2020

Communications and Engineering Departments

INTRODUCTION

On August 26, 2020 the City of Lloydminster Administration hosted a virtual stakeholder workshop regarding the Trails and Sidewalk Master Plan. During this workshop, the project team shared with participants project information and gathered feedback to confirm and refine the Project Vision and identified connection issues and opportunities in the current network.

The virtual workshop consisted of both group discussion and small break out rooms where participants could discuss ask questions and provide feedback directly to the project team. Seven total participants joined the project team, with five participants attending the 12 to 1:15 p.m. workshop and two participants joined during the 6 to 7:15 p.m. workshop

Feedback gathered from these workshops will help refine and finalize the project vision, to identify gaps and provide further local knowledge in the current network assessment. The feedback received is summarized below.

PROJECT VISION

We asked participants to take a moment to read the draft Project Vision. We then asked participants to let us know what they liked about the draft Project Vision, what they would change, and what they didn't like.

Draft Project Vision

The Trails and Sidewalk Master Plan improves the existing network by:

- improving access and ease of use though increasing connectivity through the existing network
- creating a safe and welcoming space for users of all ages and abilities to enjoy the natural environment
- encouraging active modes of transportation, physical activity and outdoor recreation

What We Heard:

Likes:

- Includes considerations for safety, increasing connectivity, welcoming and inclusive for all ages and abilities
- Safety could include improving lighting to make people feel safer while utilizing the network, particularly in older neighbourhoods with poor lighting, and is a component of user experience
- Includes active transportation
- Connection and wayfinding are very important to improve with the existing network

Changes:

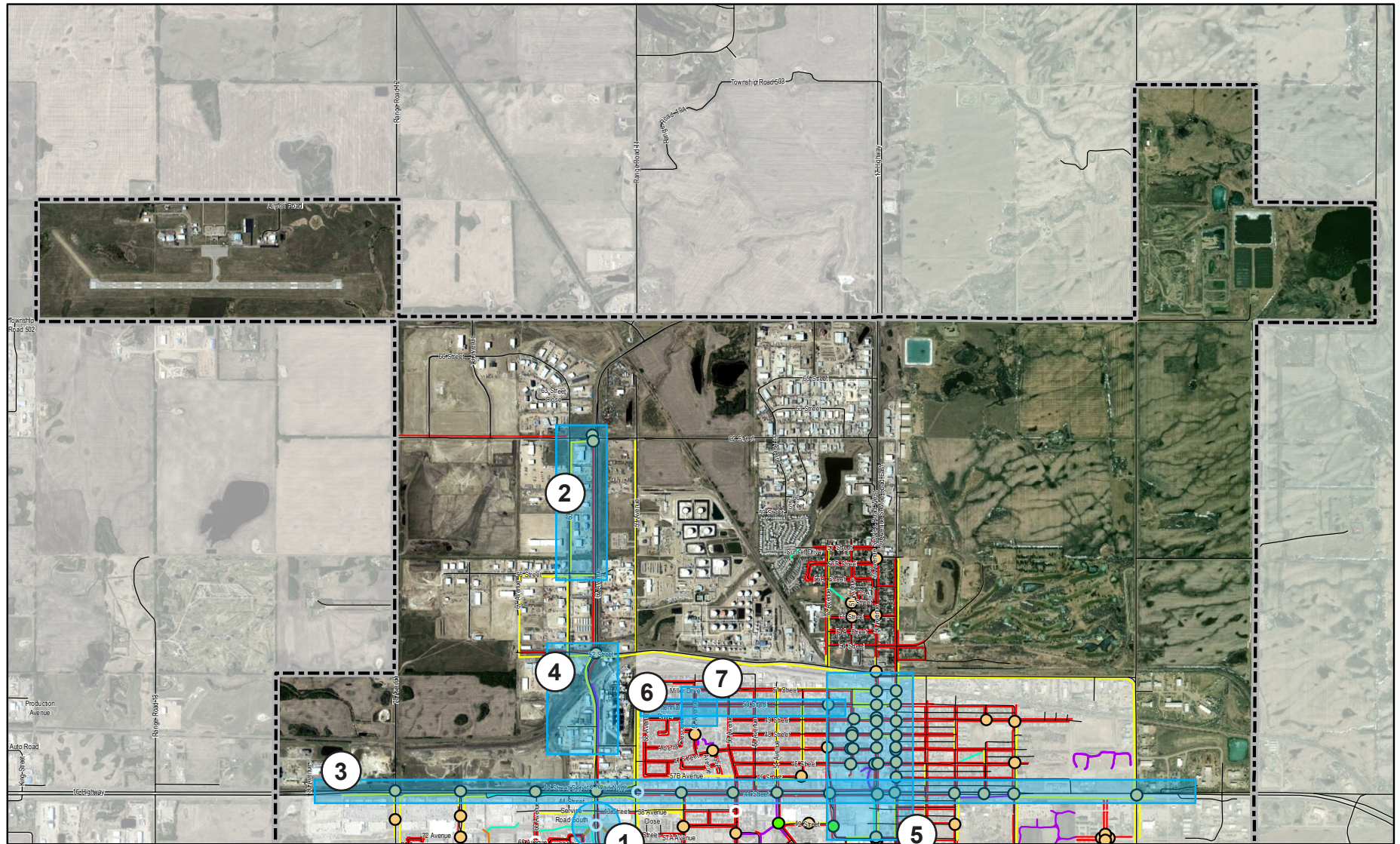
- Consideration for integrating new technologies and existing applications to improve the user experience and wayfinding
- Needs to consider greater connectivity to the surrounding network outside of the City, and all areas of the City need to benefit
- Needs to be forward thinking, not just about improving the existing network, but how to expand in future development
- Maintenance of the path and the surroundings (trees) is important to consider

Dislikes:

- If changes are made, there are no large dislikes

Gaps Assessment

We categorized the city into four distinct quadrants; North, Central, South East, and South West. From there, participants were asked participants to provide input on what gaps, ideas and opportunities we may have missed in our initial assessment of the network.



1:37,000



- | | | |
|---------------|-----------------|--------------------|
| City Boundary | Gaps Assessment | RRFB Crosswalks |
| Sidewalk | Roads | Other Crosswalks |
| Multiuse Path | | Missing Crosswalks |
| Natural Path | | |
| Trail | | |



**TRAILS AND SIDEWALKS
MASTER PLAN**
MAP X: GAPS ASSESSMENT
NORTH

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North

Map Comments

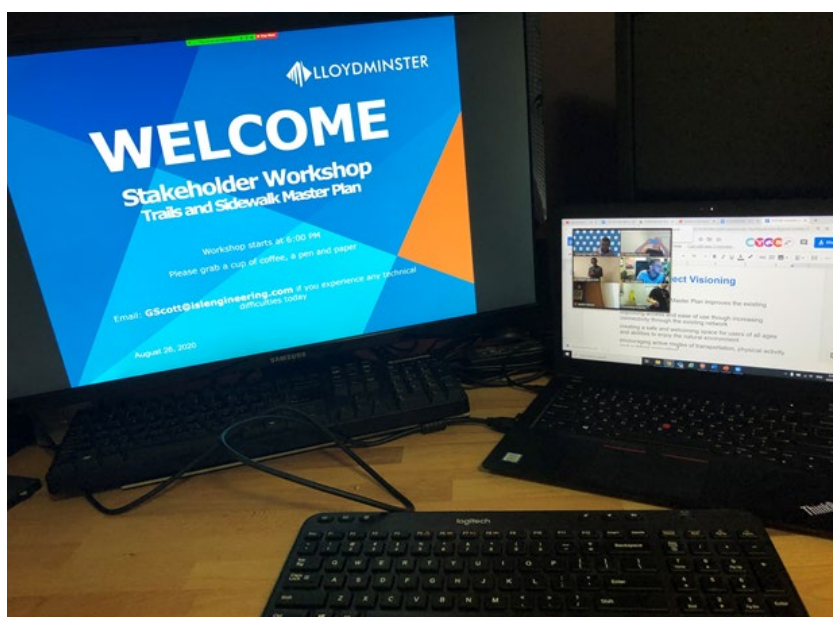
1. Identified missing crosswalk as shown on gaps map
2. The trails here are currently well used by runners as it is cleared of snow regularly, and this provides an opportunity for a potential continuing exercise loop
3. Cyclists do not like to cross Highway 16 as there are few safe crossing areas
4. Some cyclists off-road in this area around the railroad track through the long grass
5. Missing curb ramps and 52 Avenue needs more access for pedestrians, with parking on both sides it can hinder visibility and ease of use
6. Traffic on 50 Street is very fast as the Street is quite wide, there is an opportunity for a flasher light to increase safety. Suggestion for a flashing pedestrian light by the pioneer lodge or outdoor pool as they are well used and will continue to grow in use
7. Long curb radius at 57 Avenue and 50 Street

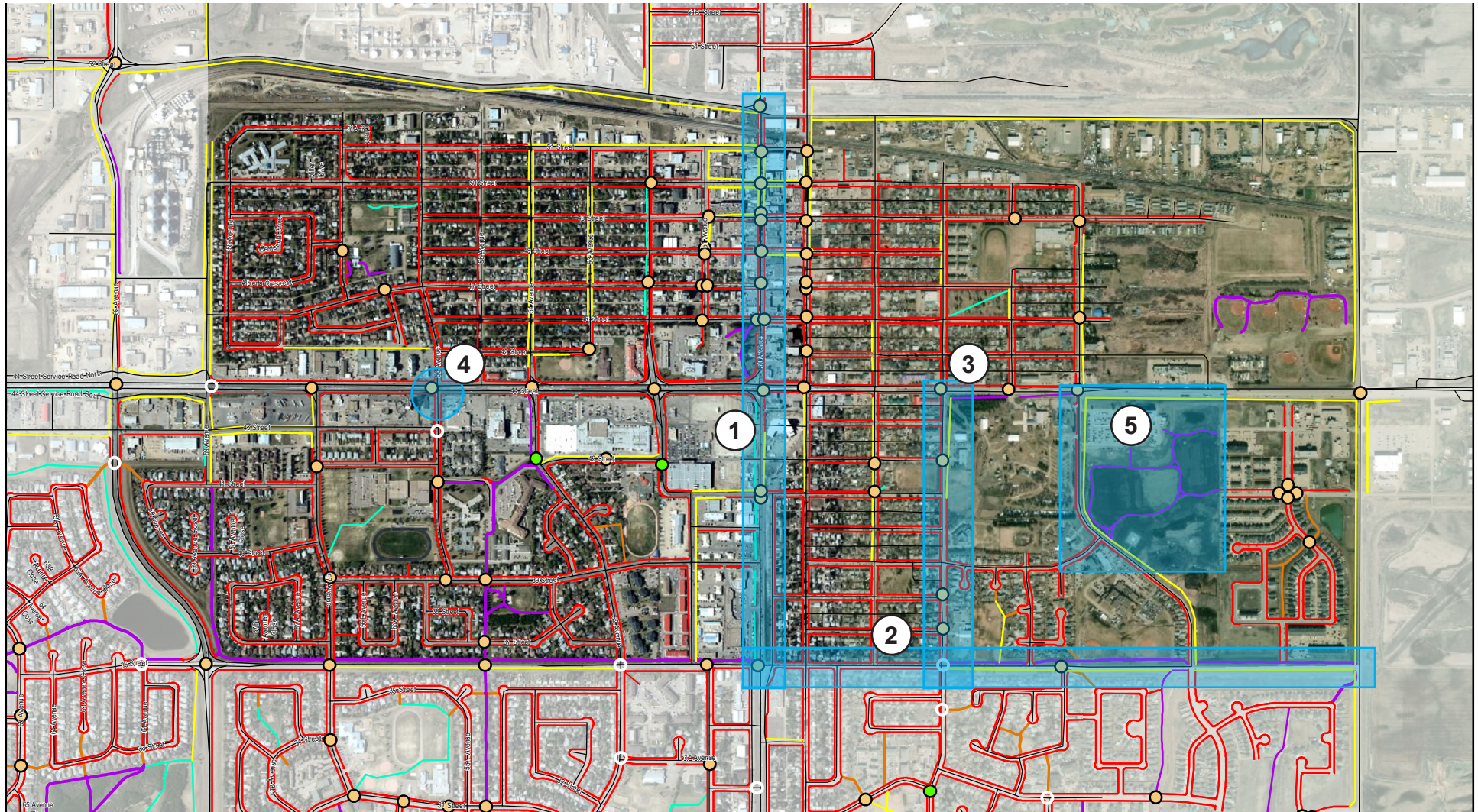
General Comments:

- Trails and sidewalk routes to the schools need to be a safe and well maintained
- Condition and future design of the sidewalks needs to be at the highest possible standard
- There needs to be better access and awareness of access to the northern industrial park for non-vehicle traffic, particularly as residents try to get to 59 Avenue from Highway 16, there is an increase of commuter traffic along this route
- Creating shorter crossing distances for pedestrians throughout is important

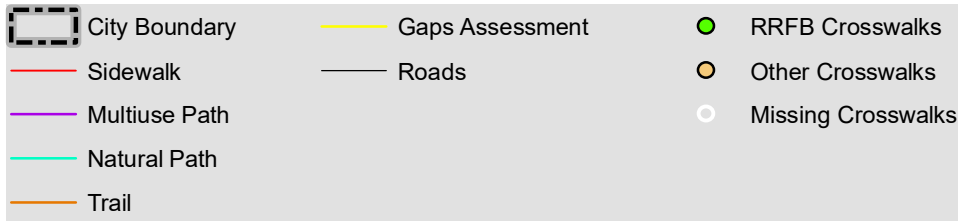
Additional Comments:

- Need to consider trails within the North East ASP
- Need to connect to Neale Lake on the north east

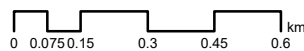




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TRAILS AND SIDEWALKS MASTER PLAN

MAP X: GAPS ASSESSMENT
CENTRAL

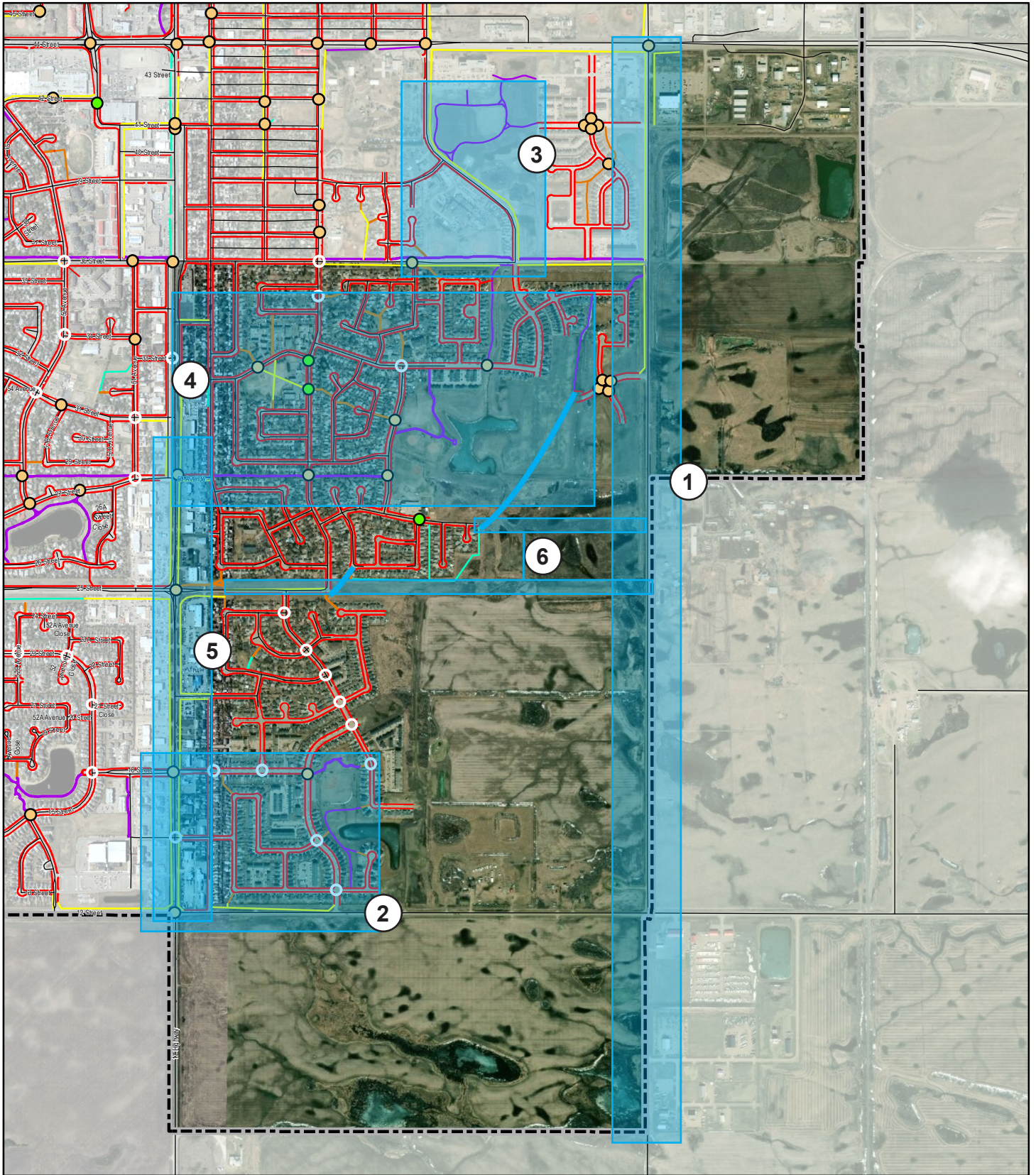
Central

Map Comments

1. High amount of foot traffic, particularly around 36 Street. The Crosswalk at 41 Street is lacking lighting and is one of the only spots to cross Highway 17. More pedestrian consideration to cross Highway 17 is desired
2. This road is currently very narrow for cyclists and runners with poor visibility, there is an opportunity for a trail (3m). Intersection at Highway 17 and 36 Street is used frequently by people going to the co-op and the crossing time is too fast. Desire for more traffic calming and pedestrian friendly changes, like curb extensions
3. Potential for a trail connection on the east side of 47 Avenue to the Dog Park and Cultural and Science Centre, not just sidewalk. There is a lot to see along 47 Avenue
4. Traffic light at 56 Avenue (Weirs Veterinarian Clinic) pedestrian light/signal is appreciated and is perceived as the safest crossing on the highway
5. Opportunity to connect Jaycee park to south Highway 16 trail

General Comments:

- The current connections from central to south are good, but maintenance is important for future use. Upkeep and maintenance of trees need to be a priority to keep the trails and sidewalks clear for users and maintain safe visibility. Maintenance and quality of the sidewalks on the Saskatchewan side is poor
- The quality of sidewalk is poor or too narrow, so runners and cyclists are forced to use the road
- Highway 16 is not overly used by runners due to the high traffic volumes, quantity of traffic lights, and requirement to cross
- There is a lack of a connected trail system in the central area as compared to the south
- Downtown is not very pedestrian/multiuse friendly; downtown is heavily under utilized due to lack of infrastructure; new developments on the major corridors should consider pedestrians and multi-use access and ease of use
- Safety means wider trails and sidewalks for runners, cyclists and pedestrians, crossings that prioritize pedestrians, and uninterrupted loops for training purposes. Preference for more shared-use or multi-use paths
- Opportunity for innovative designed crossing to increase safety called a *cyclops junction*



1:20,000



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- City Boundary
- Sidewalk
- Multiuse Path
- Natural Path
- Trail
- Gaps Assessment
- Roads
- RRFB Crosswalks
- Other Crosswalks
- Missing Crosswalks



TRAILS AND SIDEWALKS MASTER PLAN

MAP X: GAPS ASSESSMENT
SOUTHEAST

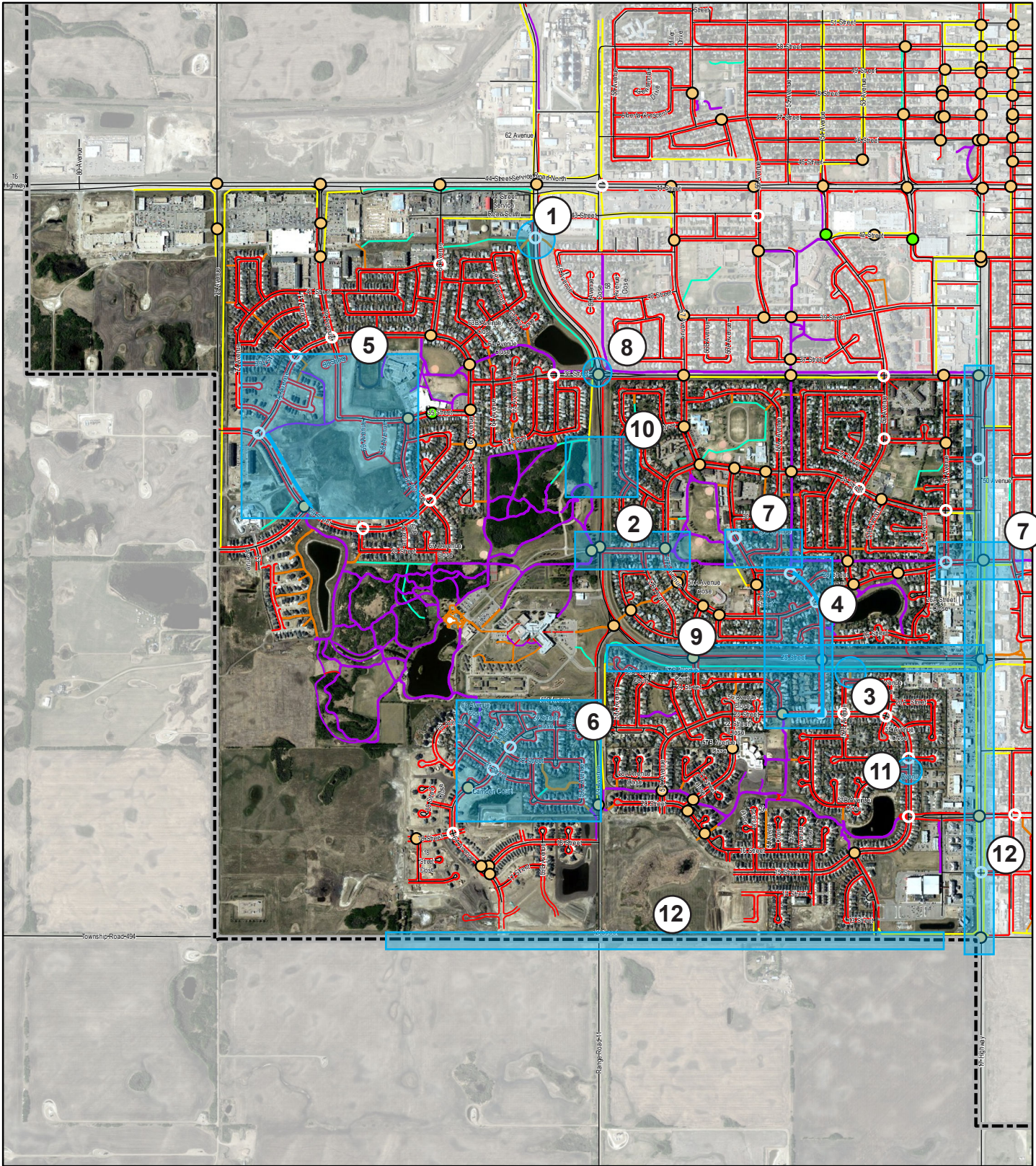
South East

Map Comments

1. Opportunity on 40 Avenue as the east side of the city is developed to expand the trail system to be more connected and integrated with the residential area, as well with Jaycee park, down to the trails north of 12 Street
2. There needs to be more ways for non-car users to access the Servus Sports Centre
3. Opportunity to connect the trail systems in JC park to the existing east west trail on 25 Street
4. Running group crosses at 25 Street, and there needs to be a connection to 25 Street to the rest of the system in the neighbourhood, with connections needed throughout. Suggestion for one as indicated
5. It is very car focused around the car dealership and fast food area. There are many students who are employed who may not have access to a vehicle and rely on active mode infrastructure in the absence of a transit system
6. Opportunity to connect east / west

General Comments:

- Desire to expand and connect trail systems to create a longer uninterrupted network of connected systems
- There is a potential and interest for the City to host events such as a marathon, as there is a strong community of active people, but the infrastructure needs to support it and be better connected to allow for uninterrupted routes
- Idea for decorative stamps to aid in wayfinding, as signage often gets vandalized so decorative stamps would be a solution that can combat vandalism
- Desire to see the future active transportation plans for the entire network



1:23,000



- | | |
|---------------|--------------------|
| City Boundary | Gaps Assessment |
| Sidewalk | Roads |
| Multiuse Path | RRFB Crosswalks |
| Natural Path | Other Crosswalks |
| Trail | Missing Crosswalks |

Integrated Expertise. Locally Delivered.



**TRAILS AND SIDEWALKS
MASTER PLAN**

MAP X: GAPS ASSESSMENT
SOUTHWEST

South West

Map Comments

1. Intersection has high traffic and high traffic speeds
2. Need to expand or widen the sidewalk on 29 Avenue between Bud Miller All Seasons Park and Kinsman Participark. Entrance to Kinsman Participark does not align with the curb ramp
3. Dead end sidewalk
4. Opportunity for connection
5. Opportunity for added connections
6. Signage or wayfinding is needed to connect Bud Miller All Seasons Park with Lakeside and College Park
7. Missing multi-use trail
8. Long cycle length and intersection on 36 Street and 59 Avenue
9. 25 Street berm: do not see many walkers, though there is a natural trail in the grass
10. Missing trail on north east of bud miller, natural trail goes from north to north east which accesses east side
11. South crosswalk very heavily used as opposed to the crosswalk north of that at 52 Avenue close
12. 50 Avenue has hardly any crosswalks/sidewalks for the heavy use of the area. North of 25 Avenue is a heavily used bike shop within the area with the recreation programs
13. 12 Street road is too narrow with no trail/sidewalk

General Comments:

- Bud Miller All Seasons Park -usage is going up, with paths congested and overused at all times of a day and safety/ accidents increasing around corners and narrow paths due to poor sight lines. Expanding the network to give people a different area may address the congestion issues
- With only one access point, it can be difficult to find or access Bud Miller All Seasons Park, suggestions for a northern access point such as 75 avenue and the gated Parkview community. The only access on the north side is a hole in the fence
- Sidewalk along College Drive could be upgraded to wider trail; also allows for another venue to travel and for pass-ability of different modes
- Some trails at Bud Miller All Seasons Park can be under water during the thaw season
- Opportunity for a mountain bike trail added to Bud Miller All Seasons Park
- 36 Street crossing is a good connection with an automatic signal
- Confirmation that a sidewalk is needed on south side of 36 street
- A trail should be added behind the berm on College Drive to provide separation from traffic and increase ease of use of the area, as well as the benefit of a reduction of noise, increased safety, and being a visually nicer route

Next Steps

In Fall 2020, the project team will be completing a final phase of engagement to further refine and finalize the options. Engagement will consist of stakeholder meetings and public-facing questionnaires. Visit: yourvoicelloyd.ca/trails to learn more.

APPENDIX F

Phase 3b External Stakeholder Round 2 Public Feedback and Round 2 Material and Feedback



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TRAILS AND SIDEWALK MASTER PLAN

Phase 3 What We Heard Report

December 2020

Communications and Engineering Departments

ABOUT THE PROJECT

In 2020, the City of Lloydminster launched the Trails and Sidewalk Master Plan project. A Trails and Sidewalk Master Plan will provide the City with a direction for improving the existing trail and sidewalk network; and guides the growth and potential expansion of future trails and sidewalk routes, infrastructure, amenities and policy direction.

In Phase 3 of the project, the City set out to finalize the project vision and gaps assessment with the public and gather input on prioritization areas. A project vision is a shared statement between the community, the City and the project team describing what is important and valued to achieve success. The gaps assessment identified connection issues and opportunities within the current network. The areas of prioritization were determined using public feedback and technical analysis.

The project team used technical analysis and public and stakeholder feedback to create three prioritized categories/areas:

- Short-term priorities (1 to 5 years)
- Medium-term priorities (5 to 20 years)
- Long-term priorities (20+ years)

Due to the COVID-19 pandemic, Phase 3 of the project required all engagement activities be conducted virtually to ensure safety and follow the recommended social and physical distancing recommendations, while also recognizing citizens have a voice and say in the project during this difficult time.

PROJECT TIMELINE

We are currently in Phase 3 of the project.

Phase 1: Vision, Issues and Ideas (Spring – Summer 2020)	Phase 2: Inventory Analysis (Summer 2020)	Phase 3: Options Development and Refinement (Fall – Winter 2020)
Create a Project Vision that reflects community values	Complete technical work to confirm the project direction and inform the option development	Confirm and refine the options for the Master Plan
Online public engagement May-June 2020	<i>No public engagement</i>	Stakeholder virtual workshops October-November 2020 Online public engagement October-November 2020

PUBLIC ENGAGEMENT OVERVIEW

In October and November 2020, a digital engagement campaign was hosted between October 26 until November 16, 2020, to gather feedback from stakeholders and the public to inform the Trails and Sidewalk Master Plan development. The following was asked:

- Level of support for the project vision
- Missing gaps
- Level of support for the areas of prioritization

The online engagement was conducted on the City's webpage: yourvoicelloyd.ca/trails and included the following opportunities:

- Online survey
- Stakeholder workshop

This report includes a summary of feedback received from the online survey and stakeholder mapping.

COMMUNICATION AND ADVERTISING

To market the engagement opportunities and gain awareness of the Trails and Sidewalk Master Plan, the following marketing and communication tactics were implemented:

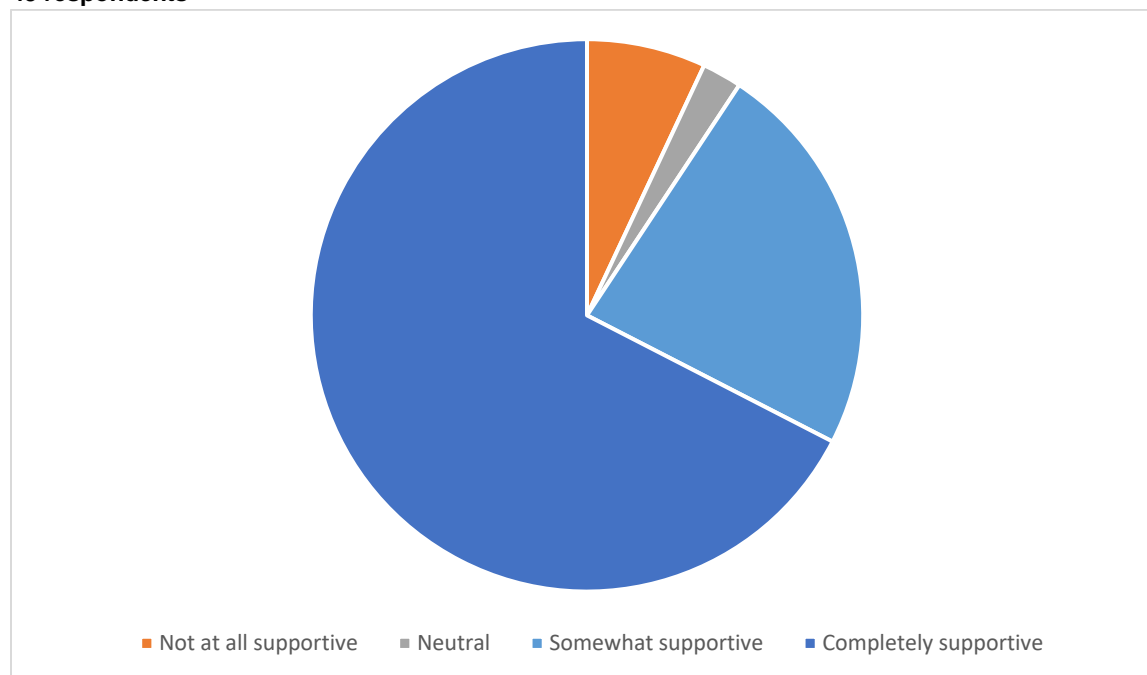
- Social Media
 - LinkedIn
 - Twitter
 - Facebook
 - Instagram
- Media Release
 - The Goat
 - Stingray (Prime Time, 101 Boom, 95.9 Real Country)
 - Meridian Source
 - Kurt Price
 - Lloyd Connect
- Website
 - Yourvoicelloyd.ca/trails
 - Lloydminster.ca
- Radio
 - Real Country
- Newspaper
 - Meridian Source
 - The Bean
 - Morning News
- Newsletter
 - FCSS Lloydminster Newsletter
 - City of Lloydminster Community Engagement Newsletter

ONLINE SURVEY – WHAT WE HEARD

There was a total of 42 total participants in the online survey. The overall key themes were developed with respect to both the diversity and frequency of comments heard. Details of recurring themes in response to each question are included in the following pages.

What is your level of support for the project vision?

43 respondents



91% supportive (67% completely supportive - 23% somewhat supportive)

7% not at all supportive

2% Neutral

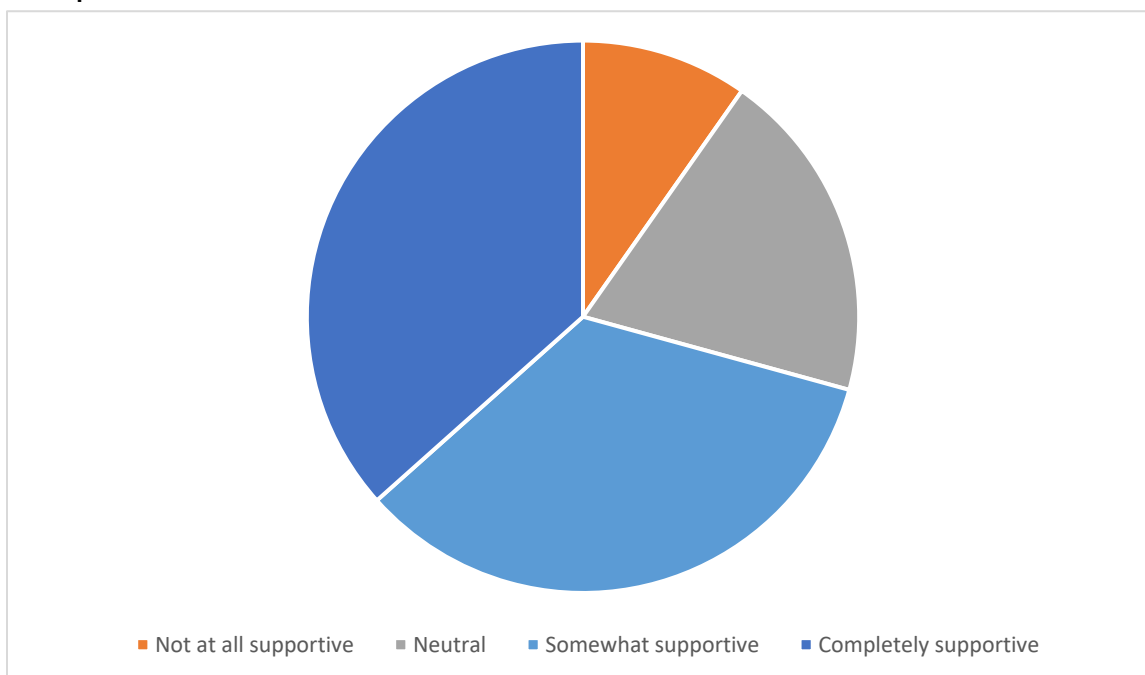
What aspects do you agree, or not agree, within the vision statement?

29 responses

- General support for the vision statement
- Support for increased connectivity, safety, welcoming space, inclusivity for all ages and abilities and encouraging active modes
- Project team needs to consider winter weather conditions, maintenance (snow plowing and landscaping maintenance), placemaking and directly impacted and adjacent landowners

To what extent do you support the identified priorities for the north quadrant of Lloydminster?

41 responses

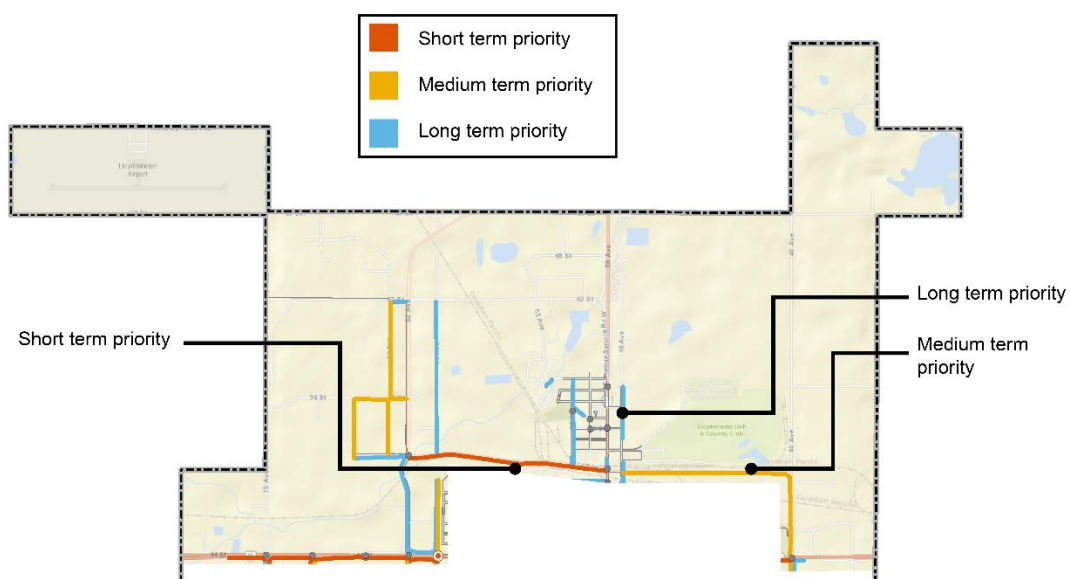


71% supportive (37% completely supportive - 34% somewhat supportive)

10% not at all supportive

19% neutral

Map of North Quadrant



Are there any missing gaps in the north quadrant map that should be considered by the project team? If yes, please explain.

5 responses

- Consider connections for the future north east area redevelopment
- Add trail along 54 Street near the cemetery
- Add connections in the industrial area
- Add crossings across the rail tracks and on 59 Street at 52 Avenue
- Add a multi-use trail from 62 Street and 62 Avenue to 67 Street and Highway 17

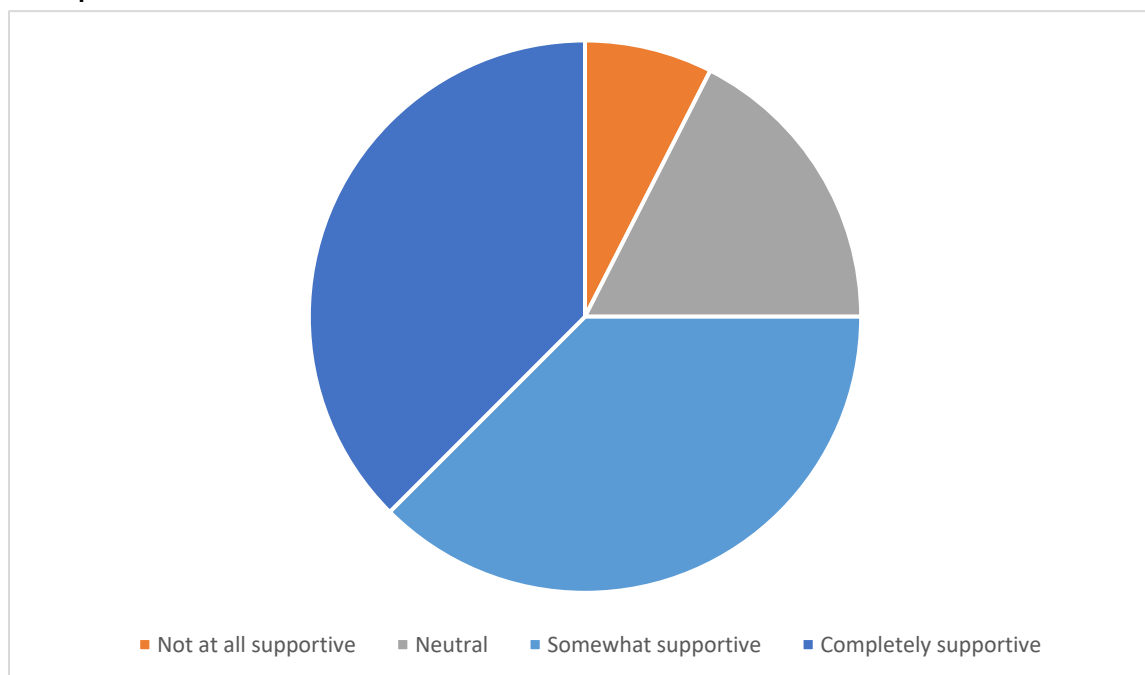
Are there any identified area(s) in the north quadrant where the priority level should be changed and why?

6 responses

- General support for the proposed levels of priority
- Suggestions:
 - Add crossing at Highway 16 and 59 Ave
 - Add crossing at Highway 16 and 44 Street
 - Add trail at 52 Street between 52 Ave to 62 Ave
 - Lower priority at 52 Street

To what extent do you support the identified priorities for the central quadrant of Lloydminster?

40 responses

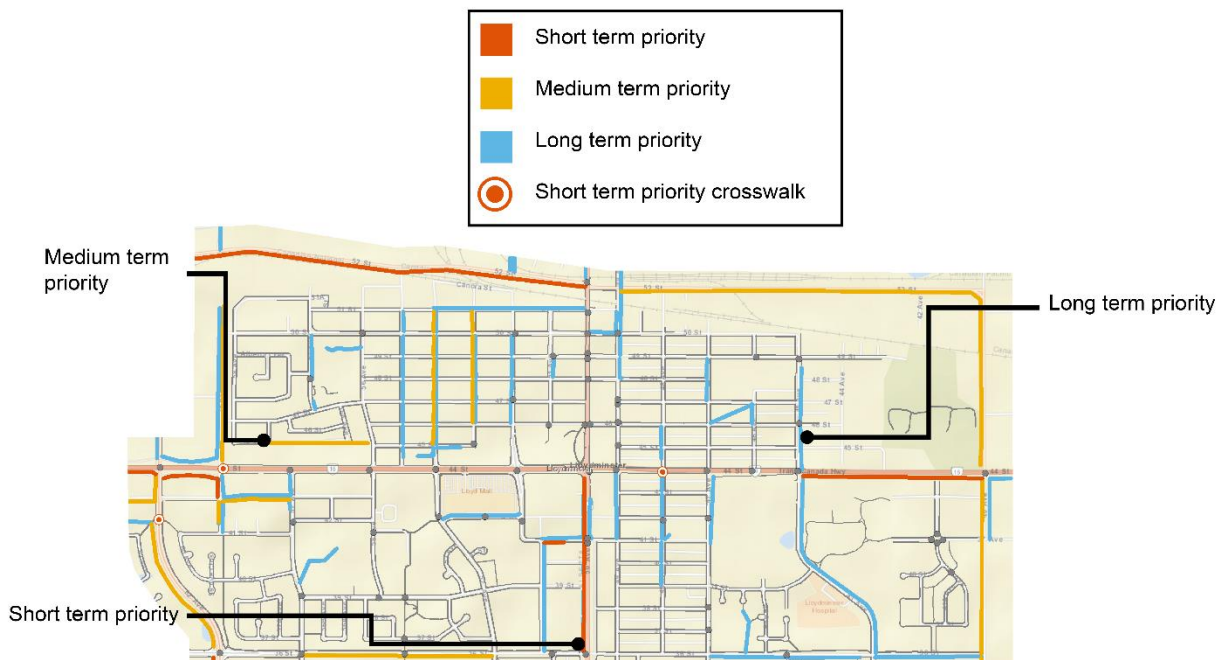


76% supportive (38% completely supportive - 38% somewhat supportive)

8% not at all supportive

18% neutral

Map of Central Quadrant



Are there any missing gaps in the central quadrant map that should be considered by the project team? If yes, please explain.

7 responses

- Add connections throughout residential neighbourhoods to create a continuous multi-use system for walking and cycling
- Add a multi-use path from 36 Street and 50 Avenue to 36 Street and 47 Avenue
- Ensure maintenance of sidewalks and trails
- Keep natural paths as natural, not paved

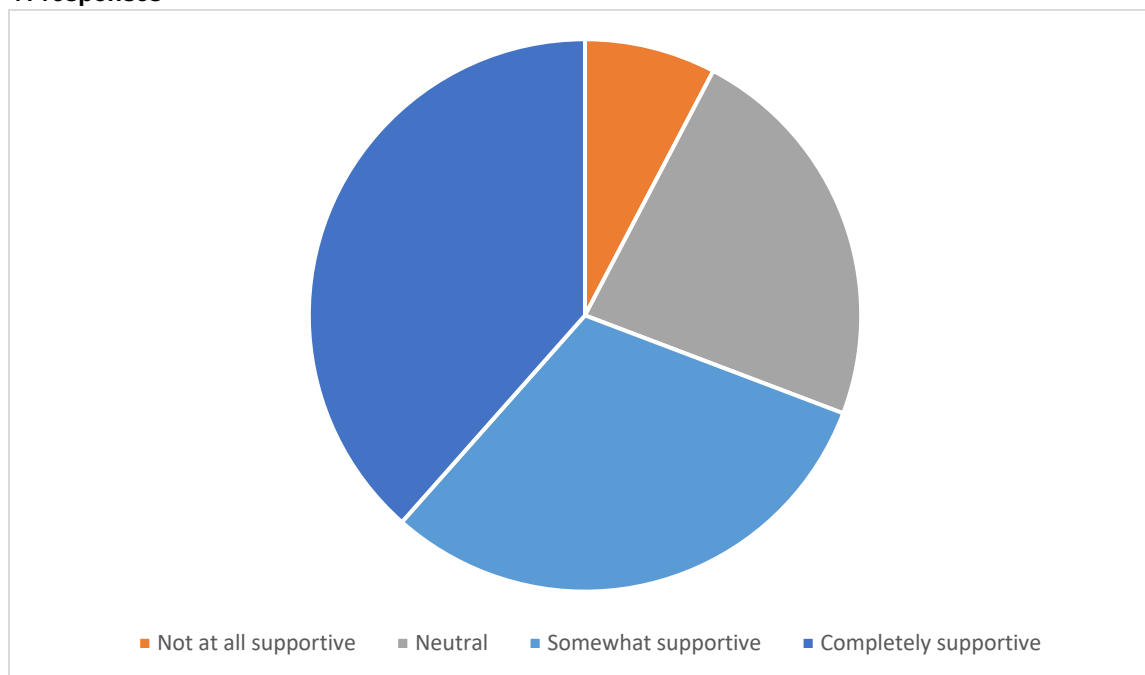
Are there any identified area(s) in the central quadrant where the priority level should be changed and why?

8 responses

- General support for the proposed levels of priority
- Suggestions:
 - Add crossing across Highway 17 at 44 Street
 - Add crossing at 43 Street and 62 Avenue, and suggestion of an overpass
 - Add trail on the east side of Highway 17 between Highway 16 and 36 Street

To what extent do you support the identified priorities for the southeast quadrant of Lloydminster?

41 responses

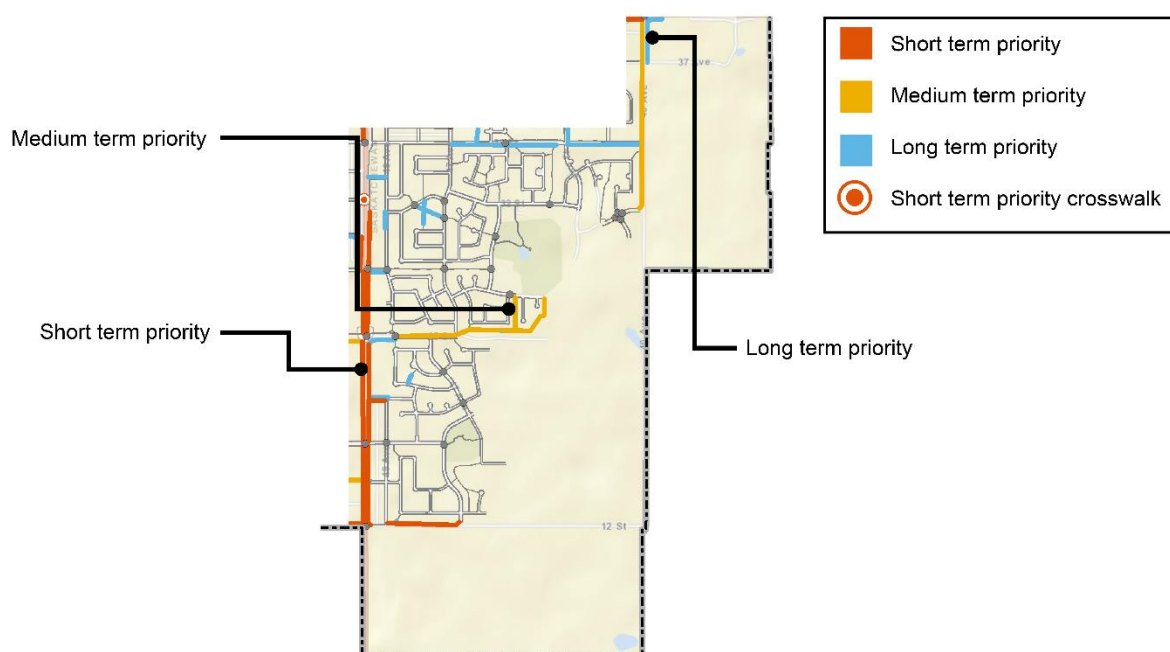


70% supportive (39% completely supportive - 31% somewhat supportive)

8% not at all supportive

23% neutral

Map of Southeast Quadrant



Are there any missing gaps in the southeast quadrant map that should be considered by the project team? If yes, please explain.

7 responses

- Add connections throughout residential neighbourhoods to create a continuous multi-use system for both people who walk and cycle
- Add path from 45 Avenue and 29 Street East to 40 Avenue
- Add connections between the baseball diamond and Winston Churchill School and link to the bike path in Jaycee Park
- Add connection between Highway 17 and Servus Sports Centre
- Lower priority of sidewalks and trails along 75 Avenue, Highway 17 and 12 Street

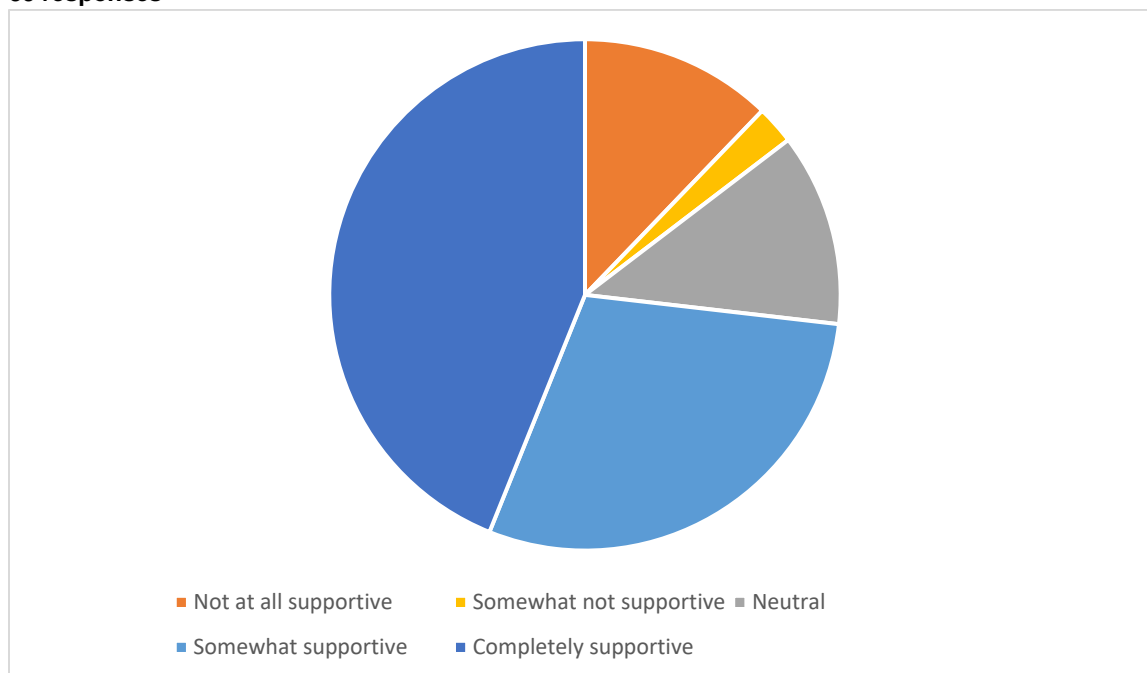
Are there any identified area(s) in the southeast quadrant where the priority level should be changed and why?

6 responses

- Suggestions:
 - Add connections to the southwest corner of Lakeside
 - Add path further south along the east side of 59 Avenue between 25 Street and 23 Street to join College Park School
 - Add a widened sidewalk east-west along 29 Street to better connect Bud Miller All Seasons Park with Kinsman Park
 - Add connections between Servus Sports Centre and College Park along 18 Street
- Lower priority
 - Trails connecting Bud Miller All Seasons Park around 67 Avenue
 - Keep natural trail south of 28 Street as is
 - Trails and sidewalks near the highways or busy roadways

To what extent do you support the identified priorities for the southwest quadrant of Lloydminster?

39 responses

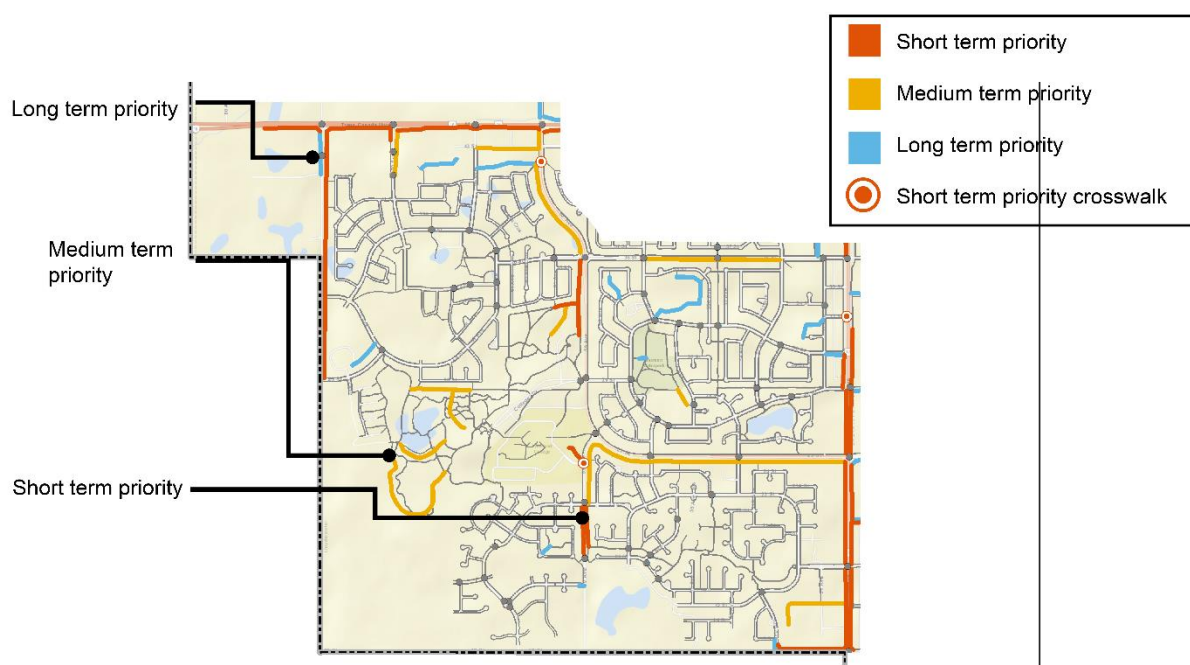


73% supportive (44% completely supportive - 29% somewhat supportive)

14% not supportive (12% not at all supportive - 2% somewhat not supportive)

12% neutral

Map of Southwest Quadrant



Are there any missing gaps in the southwest quadrant map that should be considered by the project team? If yes, please explain.

10 responses

- General support for the proposed levels of priority
- Add connections between Lakeside and College Park and Bud Miller All Seasons Park
 - Connect along 59 Avenue
- Add a multi-use trail between 12 Street and 75 Street
- Add connection between existing trails at 18 Street to 59 Avenue
- Add connection between trail at 65 Avenue and 35 Street to 75 Avenue
- Add path on 12 Street following the ring road to connect to 75 Avenue
- Add crossing on Highway 16 and 66 Avenue

Are there any identified area(s) in the southwest quadrant where the priority level should be changed and why?

9 responses

- Suggestion
 - Consider future development, such as along Highway 17
 - Add connectivity to Jaycee Park, such as from 18 Street
 - Add path from Highway 16 to 12 Street
- Lower priority
 - Trails along highways and major roads
 - Crossings at Highway 17 and 29 Street and 36 Street

Do you have any additional comments about the Trails and Sidewalk Master Plan you would like to share with the project team?

22 responses

- General support of the plan
- Increase maintenance of existing trails and sidewalks and consider winter weather maintenance requirements, such as clearing overgrown foliage and snow
- Include considerations for placemaking
- A desire for site-specific engagement on individual paths, particularly regarding additional access into Bud Miller All Seasons Park
- Add connections from the southwest corner of Lakeside to College Park
- Improve crossing at 47 Avenue and across the railway tracks at 52 Avenue
- Questions about construction timelines

STAKEHOLDER WORKSHOP – WHAT WE HEARD

There were six participants in the virtual workshops. Two virtual workshops were scheduled for November 3 from 12 p.m. to 1:30 p.m. and November 4 from 6 p.m. to 7:30 p.m. Details of feedback received in response to the stakeholder workshop are included in the following pages. One email was received by a participant after the workshop.

North Priorities

What do you like?

- 52 Street is a busy arterial, and it will connect busy areas (residential and industrial) but, it should be prioritised closer later in the short-term category
- 52 Street and Highway 16 trails are needed
- Future for sidewalk/crosswalks within the Queen Elisabeth school area

Should there be any changes?

- Lloydminster Village access points on 57 Street for buses and sidewalks for patrons

What do you not like?

- *No comments*

Additional Comment

- Concern about the use and benefit of prioritizing paths from residential areas to industrial areas
- Cyclists and runners would like to see a ring-trail around the city in the future

Central Priorities

What do you like?

- Adding a crossing at 44 Street and 48 Avenue

Should there be any changes?

- Routes/connections surrounding the schoolyards should be given higher priority
- Add enhanced crossing (flasher) along Highway 17, specifically at 42 Street (connection to Superstore), as a priority

What do you not like?

- *No comments*

Southwest Priorities

What do you like?

- The sidewalk along 50 Avenue is a high priority in the area, as it connects communities to service areas and business/places of work
- Adding a path from Lakeland College south along 59 Avenue

Should there be any changes?

- Lower the priority of 75 Avenue
- The connection along 59 Avenue (between Bud Miller All Seasons Park and 36 Street) should be an “early” medium-term priority
- Add wayfinding signage for the trails system within Kinsmen Park and the transition out of the park and add signage to short-term priority

What do you not like?

- *No comments*

Additional Comment

- Concerned about the area connecting 59 Avenue to Bud Miller All Seasons Park, but desire to improve the entrance and traffic flow to Bud Miller All Seasons Park

Southeast Priorities

What do you like?

- *No comments*

Should there be any changes?

- Add paths around the pond in Jaycee Park to create additional park options in the City
- Make sure there is an opportunity for trail users to move north and south in this section to service existing and future communities
- Add connections between 44 Street and 32 Street
- Look for other opportunities in the future to add trails where natural paths are starting

What do you not like?

- *No comments*

Additional comments

- Concerned about the pace of development of the areas south of Jaycee Park and making sure the sidewalks and trails are developed along with the communities
- Concern about the Saskatchewan side being overlooked in the development of communities and amenities
- Consider collaborative opportunities to create safe bike lockups with the communities (City, residents, businesses, non-profits)

NEXT STEPS

This phase of engagement will help inform the develop the Trails and Sidewalk Master Plan. Visit: yourvoicelloyd.ca/trails to find out more about the project and view project updates.

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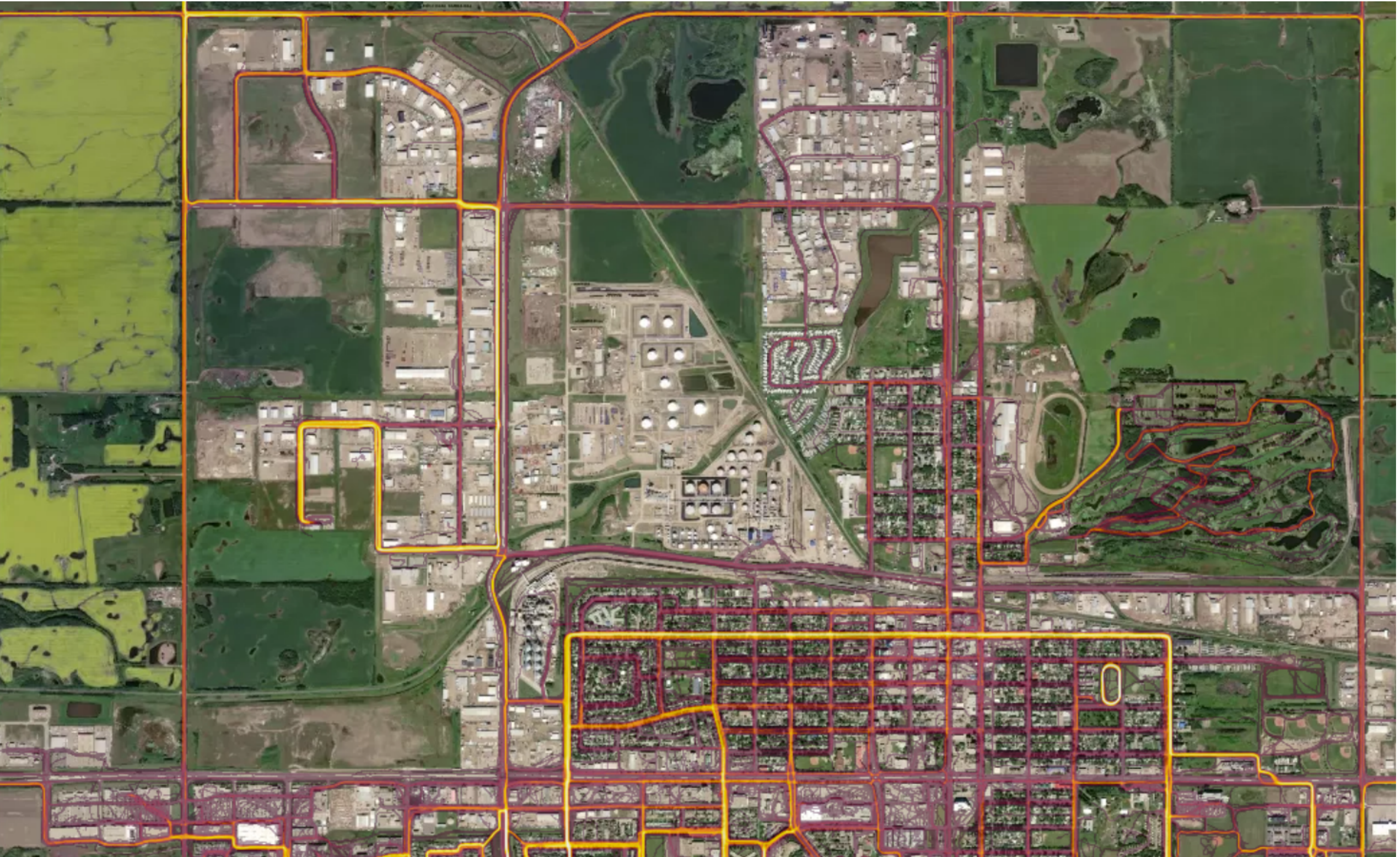
APPENDIX G

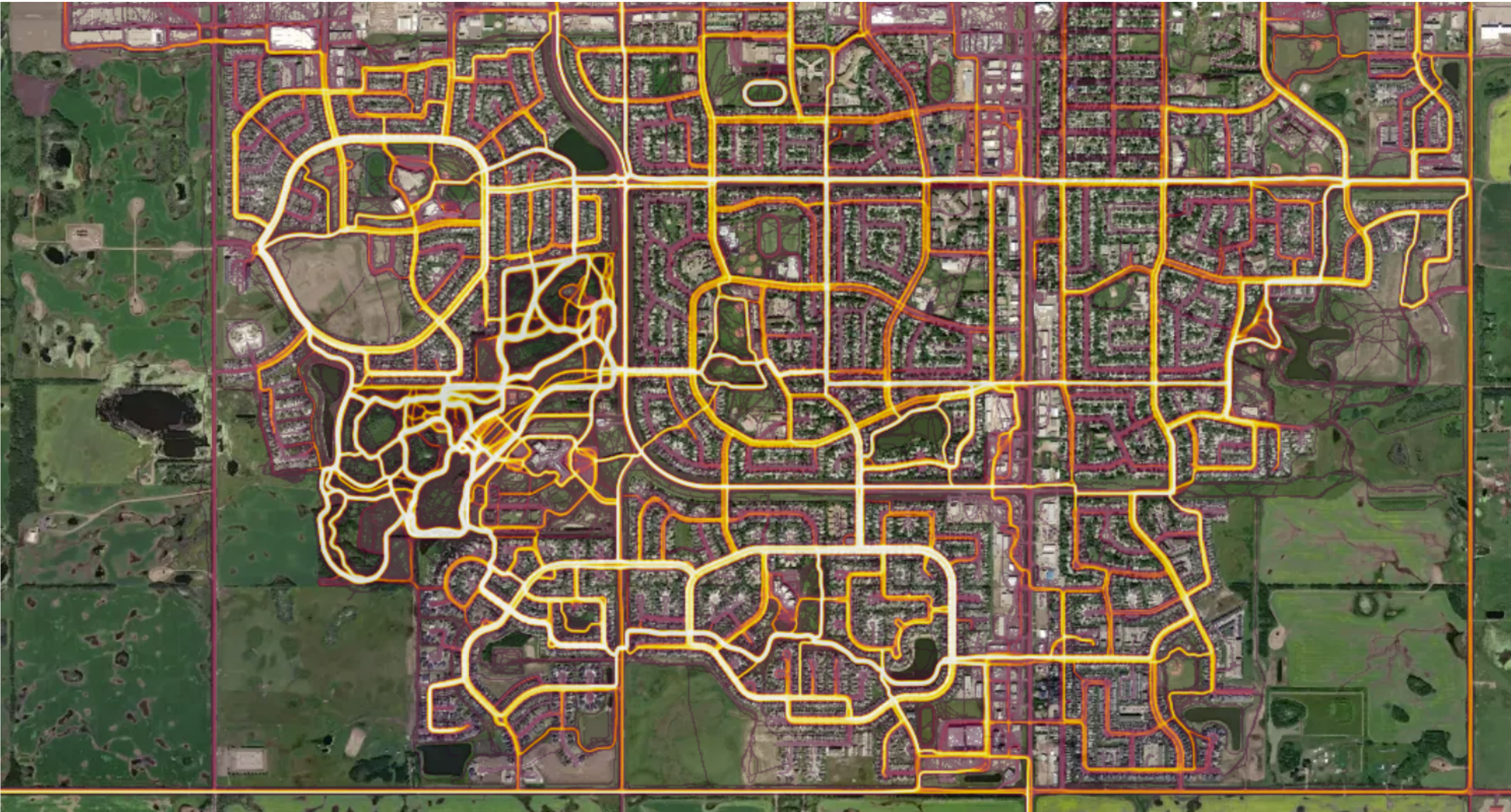
Fitness Tracker Heat Maps



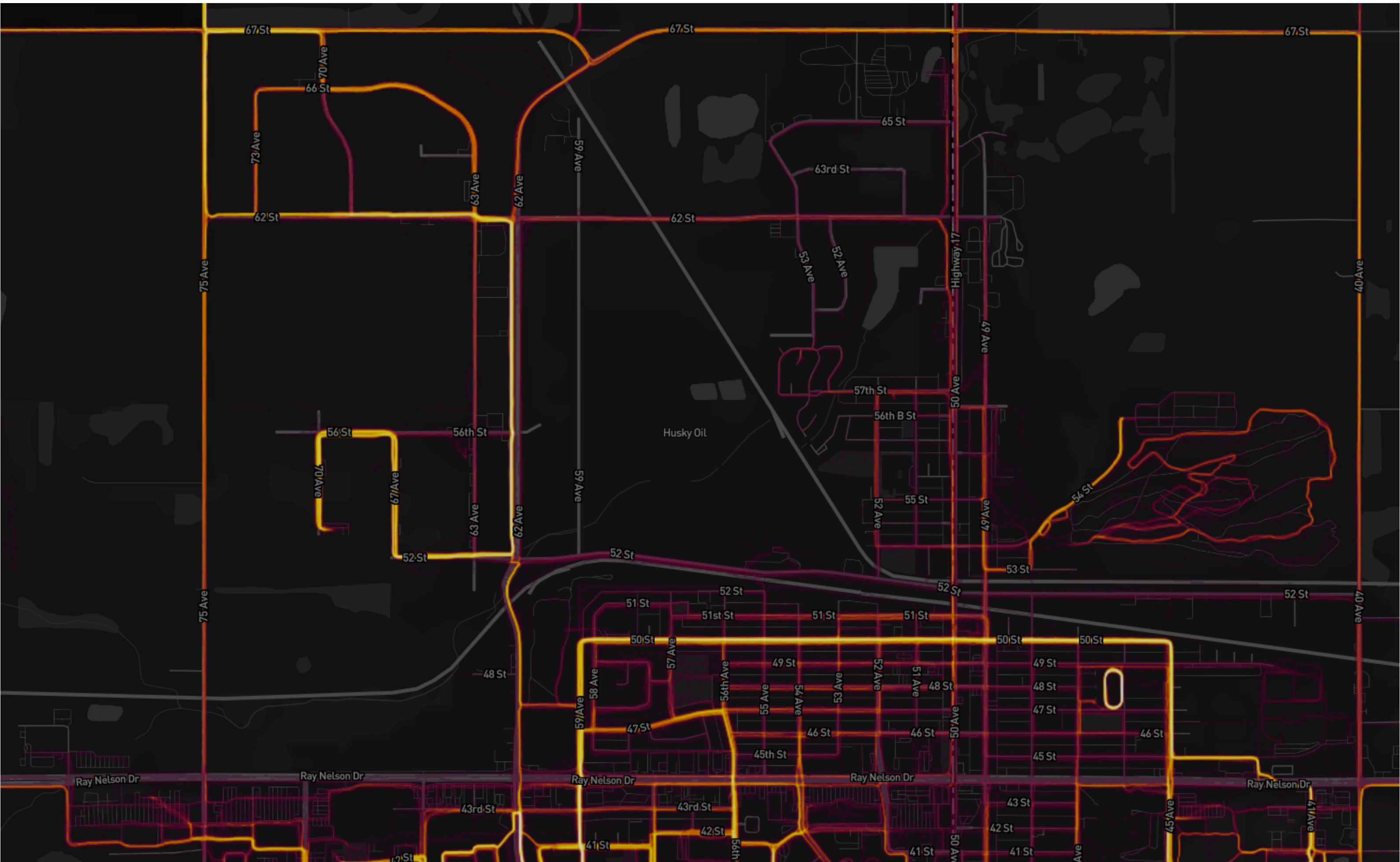
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North and Central
- Brighter Colours Indicate Higher Number of Records





Southwest and Southeast
- Brighter Colours Indicate Higher Number of Records







APPENDIX H

Cost Estimates



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Trail and Sidewalk Master Plan
Concept Level Costs
City of Lloydminster

30-Nov-20

Cost assumptions and description for developing capital plan costs, which include total costs for construction, engineering and contingency.			
Item	Cost		Description
Pedestrian Ramp	\$2,500	each	Lloydminster provided costs of 2,700 per location. Assumed 2,500 as a average costs per location.
New Sidewalk or Trail	\$270	per meter	Cost for sidewalks range from \$190 to \$340 per meter, with the highest costs for monowalk. Separate sidewalks are expected for most areas as this does not require and work on the curb. \$270 per meter is assumed, but will vary depending on site specific constraints and width.
New Multiuse Path	\$220	per meter	
New Multiuse Path (with removal of existing sidewalk)	\$270	per meter	
Ground Mounted Crosswalk (P or Z)	\$1,000	per location (installed by the City)	City provided costs for \$550 per location, but increase this to \$1000 for contingency purposes.
RRFB (P or Z)	\$15,000	per location (installed by the City)	City provided costs of \$9,000 per location (for RRFB hardware), increased to \$15,000 for contingency.
Pedestrian Half Signal	\$150,000	per location	Assumed costs based on 50% of \$300,000 (for a full traffic signal), which is assumed to also cover engineering and contingency.

North									
Reference Number	Segment	From	To	Location	Type	Length	Term	Costs	Other
	1 52 Street	62 Avenue	50 Avenue	TBD	Sidewalk	1900	Short	\$513,000	Rail crossings (x2)
	2 52 Street	49 Avenue	40 Avenue	TBD	Sidewalk	1600	Medium	\$432,000	Extend to 52 Street sidewalk, with rail crossing.
	3 56 Street	67 Avenue	62 Avenue	TBD	Sidewalk	525	Medium	\$141,750	
	4 63 Avenue	62 Street	56 Street	TBD	Sidewalk	925	Medium	\$249,750	
	5 63 Avenue	56 Street	52 Street	TBD	Sidewalk	525	Medium	\$141,750	
	6 67 Avenue	56 Street	52 Street	TBD	Sidewalk	525	Medium	\$141,750	
	7 59 Avenue	52 Street	62 Street	TBD	Sidewalk	1450	Medium	\$391,500	
	8 62 Avenue	44 Street	52 Street	West Side	Sidewalk	960	Long	\$259,200	
	9 52 Street	67 Avenue	62 Avenue	South side	Sidewalk	475	Long	\$128,250	
	10 59 Avenue	44 Street	50 Street	TBD	Sidewalk	550	Medium	\$148,500	
	11 59 Avenue	44 Street	50 Street	TBD	Sidewalk	550	Long	\$148,500	
	12 52 Avenue	52 Street	57 Street	East Side	Sidewalk	800	Long	\$216,000	
	13 52 Avenue	54 Street	52 Street	West Side	Sidewalk	100	Short	\$27,000	
	14 49 Avenue	52 Street	57 Street	East Side	Sidewalk	60	Long	\$16,200	
	15 62 Street	63 Avenue	50 Avenue	South	Sidewalk	2100	Medium	\$567,000	
	16 62 Avenue	44 Street	62 Street	East Side	Multiuse Path	1400	Long	\$308,000	
	17 62 Avenue	62 Street	67 Street/50 Avenue	TBD	Sidewalk	2470	Long	\$543,400	
	18 North Industrial			TBD	Sidewalk	2290	Long	\$503,800	
	19 50 Avenue	57 Street	67 Street	TBD	Sidewalk	1560	Long	\$343,200	

Central									
deleted	Segment	From	To	Location	Type	Length	Term	Costs	Other
								\$0	
	2 57 Avenue	47 Street	Alley	East Side	Sidewalk	35	Long	\$9,450	
	3 57 Avenue	48 Street	50 Street	East Side	Sidewalk	175	Long	\$47,250	
	4 55 Avenue	Alley north of 44 Street	51 Street	East Side	Sidewalk	640	Long	\$172,800	
	5 54 Avenue	45 Street	52 Street	TBD	Sidewalk	590	Medium	\$159,300	
	6 54 Avenue	45 Street	52 Street	TBD	Sidewalk	590	Long	\$159,300	
	7 Alley north of 44 Street	55 Avenue	Centre of block	TBD	Sidewalk	65	Long	\$17,550	
	8 45 Street	54 Avenue	Existing sidewalk	South Side	Sidewalk	100	long	\$27,000	
	9 51 Street	54 Avenue	50 Avenue	North Side	Sidewalk	650	Long	\$175,500	
	10 53 Avenue	45 Street	51 Street	West Side	Sidewalk	580	Long	\$156,600	
	11 53 Avenue	46 Street	50 Street	East Side	Sidewalk	380	Medium	\$102,600	
	12 51 Avenue	48 Street	49 Street	East Side	Sidewalk	80	Long	\$21,600	
	13 48 Avenue	Alley north of 44 Street	46 Street	West Side	Sidewalk	140	Long	\$37,800	
	14 47 Avenue	47 Street	49 Street	West Side	Sidewalk	180	Long	\$48,600	
	15 46 Avenue	46 Street	47 Street	West Side	Sidewalk	80	Long	\$21,600	
	16 45 Avenue	44 Street	Alley south of 49 Street	East Side	Sidewalk	440	Long	\$118,800	
	17 40 Avenue	44 Street	52 Street	West Side	Multiuse Path	680	Medium	\$149,600	
	18 40 Avenue	44 Street	36 Street	West Side	Multiuse Path	760	Medium	\$167,200	
	19 44 Street	43 Avenue	40 Avenue	West Side	Multiuse Path	790	Short	\$173,800	
	20 43 Avenue	36 Street	44 Street	East Side	Sidewalk	920	Long	\$248,400	
	21 Jack Kemp School	36 Street	North School Boundary	-	Trail	180	Long	\$48,600	
	22 47 Street	41 Street	44 Street	East Side	Sidewalk	300	Long	\$81,000	
	23 48 Avenue	39 Street	44 Street	West Side	Sidewalk	470	Long	\$126,900	
	24 49 Avenue	41 Street	44 Street	West Side	Sidewalk	290	Long	\$78,300	
	25 50 Avenue	41 Street	43 Street	East Side	Sidewalk	150	Long	\$40,500	
	26 50 Avenue	36 Street	44 Street	West Side	Sidewalk	760	Short	\$205,200	
	27 41 Street	51 Avenue	50 Avenue	North Side	Sidewalk	200	Long	\$54,000	
	28 41 Street	51 Avenue	West of 50 Avenue	South Side	Sidewalk	90	Short	\$24,300	
	29 51 Avenue	36 Street	41 Street	East Side	Sidewalk	470	Long	\$126,900	
	30 42 Street	54 Avenue	52 Avenue	North Side	Sidewalk	340	Long	\$91,800	
	31 57 Avenue	North of 42 Street	44 Street	West Side	Sidewalk	140	Long	\$37,800	
	32 43 Street	59 Avenue	57 Avenue	TBD	Sidewalk	290	Long	\$78,300	
	33 43 Street	59 Avenue	57 Avenue	TBD	Sidewalk	290	Medium	\$78,300	
	34 59 Avenue	41 Street	44 Street	East Side	Sidewalk	220	Long	\$59,400	
	35 59 Avenue	North of 41 Street	43 Street	West Side	Sidewalk	90	Medium	\$24,300	
	36 59 Avenue	43 Street	44 Street	West Side	Sidewalk	80	Short	\$21,600	
	37 44 Street	62 Avenue	59 Street	TBD	Sidewalk	230	Short	\$62,100	
	38 44 Street	59 Avenue	N/S	Ped Signal	-		Short	\$150,000	
	39 36 Street	50 Avenue	47 Avenue	TBD	Multiuse Path	520	Medium	\$114,400	
	40 50 Street	50 Avenue	49 Avenue	South Side	Sidewalk	130		\$35,100	
	41 50 Avenue	41 Street	E/W	RRFB	-		Short	\$15,000	

Southwest									
	Segment	From	To	Location	Type	Length	Term	Costs	Other
	1 44 Street	76 Avenue	62 Avenue	South Side	Sidewalk	1780	Short	\$480,600	
	2 75 Avenue	43 Street	44 Street	West Side	Sidewalk	220	Long	\$59,400	
	3 70 Avenue	North Canadian Tire Access	44 Street	West Side	Multiuse Path	55	Short	\$12,100	
	4 70 Avenue	South Walmart Access	44 Street	East Side	Sidewalk	280	Medium	\$75,600	
	5 43 Street	66 Avenue	62 Avenue	South Side	Sidewalk	200	Medium	\$54,000	
	6 62 Street	Midblock, south of 36 Street	E/W	RRFB	-		Short	\$15,000	
	7 62 Avenue	36 Street	44 Street	West Side	Multiuse Path	810	Medium	\$218,700	
	8 59 Avenue	North of 29 Street	36 Street	West Side	Multiuse Path	450	Short	\$99,000	
	9 South of 33 Street	33 Street Cutthrough	59 Avenue	-	Trail	170	Short	\$37,400	
	10 Bud Miller Park	2nd most northern parking lot	SW Project #8	-	Trail	360	Medium	\$97,200	
	11 36 Street	57 Avenue	52 Avenue	South Side	Sidewalk	830	Medium	\$224,100	
	12 St Joseph Elementary	Between 28 abd 27a Street	29 Street	-	Multiuse Path	120	Medium	\$26,400	
	13 31 Street	51 Avenue	50 Avenue	South Side	Sidewalk	100	Long	\$27,000	
	14 25 Street	59 Avenue	50 Avenue	South Side	Multiuse Path	1560	Medium	\$343,200	
	15 College Way	59 Avenue	Existing Sidewalk	North Side	Sidewalk	240	Short	\$64,800	
	16 59 Avenue	College Way	E/W	RRFB	-		Short	\$15,000	
	17 59 Avenue	23 Street	25 Avenue	East Side	Multiuse Path	420	Medium	\$92,400	
	18 59 Avenue	North of 18 Street	23 Street	West Side	Sidewalk	320	Medium	\$86,400	
	19 59 Avenue	North of 18 Street	23 Street	East Side	Multiuse Path	250	Short	\$55,000	
	20 15 Street/ Field	50 Avenue	Field	TBD	Sidewalk	480	Medium	\$129,600	
	21 12 Street	50 Avenue	52B Savenue	North Side	Multiuse Path	420	Short	\$92,400	
	22 52B Avenue	12 Street	13 Street	West Side	Sidewalk	50	Long	\$13,500	
	23 Bud Miller Park	-	-	-	Multiuse Path	820	Medium	\$180,400	
	24 Bud Miller Park	-	-	-	Multiuse Path	360	Medium	\$79,200	
	25 Bud Miller Park	-	-	-	Multiuse Path	290	Medium	\$63,800	
	26 Bud Miller Park	-	-	-	Multiuse Path	390	Medium	\$85,800	
	27 75 Avenue	44 Street	Trail Connection		Multiuse Path	510	Short	\$112,200	
	28 Avenue to 12 Street circuit	Trail	29 Street		Multiuse Path	1100	Medium	\$242,000	
	29 29 Street	59 Avenue	57a Avenue	TBD	Multiuse Path	265	Medium	\$71,550	
	30	75 Avenue to 12 Street circuit				4500	Long	\$990,000	

Southeast									
	Segment	From	To	Location	Type	Length	Term	Costs	Other
	1 12 Street	49 Avenue	47a Avenue	North Side	Sidewalk	450	Short	\$121,500	
	2 50 Avenue	12 Street	36 Street	East Side	Sidewalk	1560	Short	\$421,200	
	3 50 Avenue	12 Street	36 Street	West Side	Sidewalk	1560	Medium	\$421,200	
	5 21 Street	50 Avenue	49 Avenue	North Side	Sidewalk	110	Short	\$29,700	
	6 25 Street	50 Avenue	West of 47 Avenue	South Side	Sidewalk	160	Long	\$43,200	
	7 25 Street and around	East of 50 Avenue	27 Street	North Side	Trail	1360	Medium	\$299,200	
	8 27 Street	50 Avenue	49 Avenue	South Side	Sidewalk	110	Long	\$29,700	
	9 Colonial park				Trail	340	Long	\$74,800	
	10 50 Avenue	33 Street	E/W	GM	-		Short	\$1,000	
	11 35 Street	50 Avenue	49 Avenue	TBD	Sidewalk	110	Long	\$29,700	
	12 36 Street	47 Avenue	West of 43 Avenue	South Side	Sidewalk	660	Long	\$178,200	
	13 36 Street	43 Avenue	40 Avenue	South Side	Sidewalk	460	Long	\$124,200	
	14 40 Avenue	31 Street	36 Street	West Side	Sidewalk	360	Medium	\$97,200	
	15 40 Avenue	41 Street	44 Street	East Side	Sidewalk	260	Long	\$70,200	
	16	40 Avenue to 12 Street Circuit				3120	Long	\$686,400	

Ramps	Missing	Short	Misoriented	Medium
North	93	232500	42	105000
Central	37	92500	2	5000
Southwest	21	52500	21	52500
Southeast	11	27500	0	0
Total	162	405000	65	162500

Cost Summary						
Item	Unit	Construction Unit Cost	Engineering (15%)	Contingency (30%)	Total Unit Cost	
Install New Pedestrian Ramp	each	\$ 1,533.89	\$ 230.08	\$ 460.17	\$ 2,230.00	
Remove and Replace Pedestrian Ramp	each	\$ 1,641.60	\$ 246.24	\$ 492.48	\$ 2,390.00	
New Sidewalk - 1.25m width	m	\$ 128.20	\$ 19.23	\$ 38.46	\$ 190.00	
New Sidewalk - 1.50m width	m	\$ 153.84	\$ 23.08	\$ 46.15	\$ 230.00	
New Sidewalk - 1.80m width	m	\$ 184.61	\$ 27.69	\$ 55.38	\$ 270.00	
New Sidewalk - 2.00m width	m	\$ 205.12	\$ 30.77	\$ 61.54	\$ 300.00	
Remove Curb and Install New Monowalk - 1.50m width	m	\$ 228.34	\$ 34.25	\$ 68.50	\$ 340.00	
New Shared Use Path - 3.0m width	m	\$ 147.90	\$ 22.19	\$ 44.37	\$ 220.00	
Remove Gravel Trail and Replace with New Shared Use Path - 3.0m w	m	\$ 147.90	\$ 22.19	\$ 44.37	\$ 220.00	
Remove Concrete Walk and Replace with New Shared Use Path - 3.0m	m	\$ 183.90	\$ 27.59	\$ 55.17	\$ 270.00	

Detailed Cost Breakdown					
	Item	Quantity	Unit	Estimate Unit Cost	Subtotal
New Pedestrian Ramp	Remove Curb and Gutter	4.9	m	\$ 24.00	\$ 117.60
	Waste Excavation	1.296	m3	\$ 28.00	\$ 36.29
	Install Curb and Gutter	4.9	m	\$ 120.00	\$ 588.00
	Curb Ramp	4.8	m2	\$ 165.00	\$ 792.00
					\$ 1,533.89 each
Replace Pedestrian Ramp	Remove Curb and Gutter	4.9	m	\$ 24.00	\$ 117.60
	Remove Concrete Walk	4.8	m	\$ 30.00	\$ 144.00
	Install Curb and Gutter	4.9	m	\$ 120.00	\$ 588.00
	Curb Ramp	4.8	m2	\$ 165.00	\$ 792.00
					\$ 1,641.60 each
Sidewalk - greenfield	Waste Excavation - 270mm depth	1	m2	\$ 7.56	\$ 7.56
	Concrete Walk	1	m2	\$ 95.00	\$ 95.00
					\$ 102.56 \$/m2
				1.25m - Sidewalk	\$ 128.20 \$/m
				1.50m - Sidewalk	\$ 153.84 \$/m
				1.80m - Sidewalk	\$ 184.61 \$/m
MonoWalk				2.00m - Sidewalk	\$ 205.12 \$/m
	Remove Curb and Gutter	1	m	\$ 22.00	\$ 22.00
	Waste Excavation - 270mm depth	1	m	\$ 11.34	\$ 11.34
	Install 1.5m Monowalk	1	m	\$ 195.00	\$ 195.00
					\$ 228.34 \$/m
SUP - 3.0m width - green field	Waste Excavation - 225mm depth	1	m2	\$ 6.30	\$ 6.30
	75mm ACO	1	m2	\$ 20.00	\$ 20.00
	150mm GBC	1	m2	\$ 15.00	\$ 15.00
	150mm Subgrade Prep	1	m2	\$ 8.00	\$ 8.00
					\$ 49.30 \$/m2
					\$ 147.90 \$/m
SUP - 3.0m width - replace gravel trail	Waste Excavation - 225mm depth	1	m2	\$ 6.30	\$ 6.30
	75mm ACO	1	m2	\$ 20.00	\$ 20.00
	150mm GBC	1	m2	\$ 15.00	\$ 15.00
	150mm Subgrade Prep	1	m2	\$ 8.00	\$ 8.00
					\$ 49.30 \$/m2
					\$ 147.90 \$/m
SUP - 3.0m width - remove concrete walk	Waste Excavation - 225mm depth	1	m2	\$ 6.30	\$ 6.30
	75mm ACO	1	m2	\$ 20.00	\$ 20.00
	150mm GBC	1	m2	\$ 15.00	\$ 15.00
	150mm Subgrade Prep	1	m2	\$ 8.00	\$ 8.00
					\$ 49.30 \$/m2
					\$ 147.90 \$/m
	Remove 1.5m Concrete Walk	1	m2	\$ 36.00	\$ 36.00
					\$ 183.90 \$/m

	<p align="center">City of Lloydminster Information Report (IR)</p>
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Subject Matter: Public Safety Canada Grant
Department: Office of the City Clerk
Presented By: Doug Rodwell
GPC Meeting Date: June 13, 2022

Topic: Grant funds provided to the City of Lloydminster by Public Safety Canada.

Background: Public Safety Canada has provided the City of Lloydminster a grant valued at \$931,000 to identify and fund opportunities to reduce incidents of gun and gang violence. These funds do not require any matching monies from the City.

Objective: The funds provided are to be administered by the City over the next four (4) years. The City will seek input from a Consultant to establish what programs, educational opportunities, or non-profits the funds should be distributed to over the next 4 years to ensure that the best possible impacts and inroads are realized.

Once the Consultant is identified, the decision on awarding will be brought back to Council, as this item is not included in the 2022 budget.

Options:

1. That the Committee accept this report as information.
2. That the Committee request more information and that the item be brought forward to a future Regular Council meeting for decision.
3. That the Committee request more information and that the item be brought forward to a future Governance & Priorities Committee meeting.

Alignment with Strategic Plan: This item is in alignment with the following strategic area: Providing a Safe Community. Additional grant funding will assist the City to identify and reduce incidents of violence.

Governance Implications: N/A

Budget/Financial Implications: N/A

Environmental Implications: N/A

	<p align="center">City of Lloydminster Information Report (IR)</p>
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Report Approval Details

Document Title:	Public Safety Canada Grant.docx
Attachments:	
Final Approval Date:	Jun 6, 2022

This report and all of its attachments were approved and signed as outlined below:

Doug Rodwell

Dion Pollard

	<p align="center">City of Lloydminster Information Report (IR)</p>
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Subject Matter: Community Safety and Well Being Plan Grant
Department: Office of the City Clerk
Presented By: Doug Rodwell
GPC Meeting Date: June 13, 2022

Topic: Community Safety and Wellbeing Plan Government of Saskatchewan Grant.

Background: In April 2022, the City Manager was approached by the Government of Saskatchewan and asked if the City would be willing to put in an application to receive grant monies associated with the City of Lloydminster creation of a Community Safety and Well Being Plan (CSWBP).

Objective: The goal of the CSWBP is to create and build bridges of trust, build relationships, and create “off ramp” opportunities that will create opportunities for marginalized populations to break traditional cycles of real and perceived bias.

The CSWBP will focus on:

- Strengthening and building partnerships, by promoting community-based responses and seeking solutions using non-traditional policing methods.
- Meaningful and inclusive community involvement that allows differing perspectives focusing on the communities most vulnerable populations
- Creating a comprehensive understanding of vulnerable populations
- Creating community-based solutions and strategies that supports fact-based and realistic responses with key metrics and measurable goals
- Researching an alternative approach to policing non-emergent situations.

The Saskatchewan Government has provided the City with \$43,000 to retain a consultant that will create a Lloydminster CSWBP. Once the Plan is received, the City will work with the Province of Saskatchewan to secure grant funding to enact the recommendations of the Plan.

Options:

1. That the Committee accept this report as information.
2. That the Committee request more information and that the item be brought forward to a future Regular Council meeting for decision.
3. That the Committee request more information and that the item be brought forward to a future Governance & Priorities Committee meeting.

Alignment with Strategic Plan: This item is in alignment with the following strategic area: Providing a Safe Community. The development of a CSWBP will provide the City with recommendations to create opportunities for additional supports within the Community.

	<p align="center">City of Lloydminster Information Report (IR)</p>
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Governance Implications: N/A

Budget/Financial Implications: N/A

Environmental Implications: N/A

Report Approval Details

Document Title:	Community Safety and Well Being Plan.docx
Attachments:	
Final Approval Date:	Jun 6, 2022

This report and all of its attachments were approved and signed as outlined below:

Doug Rodwell

Dion Pollard

	<p align="center">City of Lloydminster Information Report (IR)</p>
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Subject Matter: Draft Records Management Bylaw
Department: Office of the City Clerk
Presented By: Chelsie Green
GPC Meeting Date: June 13, 2022

Topic: Draft Records Management Bylaw

Background: The current Records Management Policy is scheduled for review and update in Q4 of 2022. As the City has recently entered into an agreement with DocuSign for the utilization of software for electronic and digital signatures, and the Governance Documents Policy was due for review in Q2, Administration moved up the review of the Records Management Policy in an effort to find efficiencies in the consolidation of the documents. Administration has combined the Records Management Policy and Governance Documents Policy into the one Bylaw. This will streamline processes and ensure that all information pertaining to managing documents is centralized in one governing document.

The Draft Records Management Bylaw includes the records retention schedule, outlines the guidelines for electronic and digital signatures, and includes the review schedule for all governance documents.

The following amendments were made to the retention schedule during the development of this Bylaw:

- Appeals was amended to have decisions retained with Land Interest Administration, which is permanent. Appeal decisions shall be kept with the land for future reference on justification for certain developments
- Leases were moved from Land Interest Administration to Contract and Agreement Administration. This ensures that all expired or terminated lease agreements are retained for 10 years after expiration or termination. However, doesn't require all historical leases to be retained permanently
- Archive Documents was added to include the Lloydminster Archives. The retention of archive materials is at the discretion of the Manager of Lloydminster Museum and Archives (LMA)
- Collective Bargaining was amended to include International Association of Fire Fighters (IAFF).

Objective: To provide the Committee with a Draft Records Management Bylaw for review and comment.

Options:

1. That the Committee accept this report as information and that the item be brought forward to a future Regular Council meeting for decision.

2. That the Committee request more information and that the item be brought forward to a future Regular Council meeting for decision.
3. That the Committee request more information and that the item be brought forward to a future Governance & Priorities Committee meeting.

Alignment with Strategic Plan: This item is in alignment with the following strategic area: Delivering Good Governance. Consolidation of all document management governance documents into one provides consistency and easy access to information for members of Administration as well as the public.

Governance Implications: Upon passing of this new Bylaw, Administration will repeal the existing Records Management Policy and Governance Documents Policy. Section 156 of *The Lloydminster Charter* requires the retention of records and documents to be passed by Bylaw.

Budget/Financial Implications: N/A

Environmental Implications: N/A

Report Approval Details

Document Title:	Draft Records Management Bylaw.docx
Attachments:	- Draft Records Management Bylaw.pdf
Final Approval Date:	May 30, 2022

This report and all of its attachments were approved and signed as outlined below:

Doug Rodwell

Dion Pollard

BYLAW NO. XX-2022

A BYLAW OF THE CITY OF LLOYDMINSTER IN THE PROVINCES OF ALBERTA AND SASKATCHEWAN TO PROVIDE FOR THE MANAGEMENT, RETENTION AND DISPOSITION OF RECORDS.

WHEREAS the Council of the City of Lloydminster deems it necessary to establish a Bylaw to deal with the peace, order and good government of the City.

AND WHEREAS the *Lloydminster Charter* provides authority to City Council to pass bylaws for municipal purposes;

AND WHEREAS the *Lloydminster Charter* provides authority to the City to pass bylaws respecting the enforcement of bylaws.

NOW THEREFORE the Council of the City of Lloydminster deems it necessary to establish a Bylaw to manage, retain and dispose of records; and

NOW THEREFORE, the Council of the City of Lloydminster, pursuant to the authority granted in Section 15 of the *Lloydminster Charter*, enacts as follows:

1. SHORT TITLE

1.1. This Bylaw shall be cited as the Records Management Bylaw.

2. DEFINITIONS

2.1. The definitions listed in Schedule "A" attached to this Bylaw shall apply, unless context otherwise requires.

3. APPOINTMENT, AUTHORITY AND DUTIES OF THE CITY MANAGER

3.1. Except where specific authority is reserved to Council, in the Bylaw the administration and enforcement of this Bylaw is hereby delegated to the City Manager.

3.2. Without restricting any other power, duty or function granted by this Bylaw, the City Manager may carry out anything required for the administration of this Bylaw, including but not limited to the following:

3.2.1. delegate any powers, duties or functions under this Bylaw to an employee of the City;

3.2.2. carry out any inspections that are reasonably required to determine compliance with this Bylaw;

3.2.3. establish any forms required for the administration of this Bylaw.

4. RECORDS RETENTION

4.1. All employees shall maintain Records that adequately document Business Transactions and ensure these Records are retained and disposed of in accordance with the Records Retention Schedule established under this Bylaw.

BYLAW NO. XX-2022

- 4.2. Records shall only be kept longer than their scheduled disposition at the discretion of the City Manager or designate.
- 4.3. Records containing personal information shall be maintained in such a manner to protect the privacy of the individual(s) and to provide access to information as provided for under *The Local Authority Freedom of Information and Protection of Privacy Act* (Saskatchewan).
- 4.4. The City Clerk shall approve the disposition of all Records which have reached the end of their retention period, through approval of a Destruction Certificate.
- 4.5. The destruction of Records shall be in the presence of at least two (2) members of Administration who shall ensure the destruction is carried out in accordance with the Destruction Certificate.
- 4.6. If the City uses Personal Information to make a decision that directly affects an individual, the City must retain the Personal Information in accordance with the Retention Schedule, which in any event, shall not be less than one year.
- 4.7. Where there is a conflict between this Bylaw and provincial or federal legislation, the provincial or federal legislation shall apply and shall supersede this Bylaw and Retention Schedule.

5. GOVERNANCE DOCUMENTS

- 5.1. Administration shall ensure that all Governance Documents are reviewed as per the below review schedule, to ensure procedural, legislative and format compliance.
 - 5.1.1. Bylaws: four (4) years
 - 5.1.2. Policies: three (3) years
 - 5.1.3. Directives: four (4) years
- 5.2. Each quarter, Administration shall compile and provide a report to a Council or Committee Meeting on the review of Governance Documents.
- 5.3. Administration shall have the authority to correct spelling, grammatical errors or formatting errors found in any Governance Document without requiring Council approval, if such corrections do not change the intent of the document.

6. ELECTRONIC DOCUMENTS

- 6.1. The City may authorize the destruction of paper originals if the originals have been stored electronically in a system that enables copies of the originals to be made.
- 6.2. Documents fully executed by Electronic and Digital Signatures shall be considered the original document for the purpose of complying with the requirements under the Retention Schedule.
- 6.3. The use of Electronic and Digital Signatures is permitted and shall have the same force and effect as the use of Wet Signatures if the following criteria are met:
 - 6.3.1. The signature has been generated using an acceptable form of technology

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- 6.3.2. The signature is capable of verification
- 6.3.3. The signature is under the sole control of the person using it
- 6.3.4. All documents submitted for Electronic and Digital Signatures shall be in PDF format to ensure that the data has not been altered after the signature has been applied.
- 6.4. The use of Electronic and Digital Signatures shall not be permitted for the following documents:
 - 6.4.1. Bylaws
 - 6.4.2. Council and Committee Minutes
 - 6.4.3. Land Titles Documents
 - 6.4.4. Affidavits or documents requiring a Commissioner for Oaths

This Bylaw shall come into force and effect upon the final passing thereof.

INTRODUCED AND READ a first time this ___ day of ____, 2022, A.D.

READ a second time this ___ day of ____, 2022, A.D.

READ a third time this ___ day of ____, 2022, A.D.

Date Signed

MAYOR

Date Signed

CITY CLERK

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SCHEDULE "A"

Definitions

Business Transaction	Any action which creates or requires the creation of a Record that identifies a transaction of a financial, operational, capital or other similar municipal activity.
Charter	Refers to the <i>Lloydminster Charter</i>
City	The City of Lloydminster and the area contained within the corporate boundaries of the City
City Manager	The Commissioner of the City of Lloydminster as appointed by Council or designate
Council	The Municipal Council of the City of Lloydminster
Destruction Certificate	A document that provides a detailed list of Records to be destroyed, who authorizes the destruction, when they were destroyed, and the names and signatures of Administration who witnessed the destruction.
Digital and Electronic Signatures	An electronic or digital form of signature that a person creates or adopts in order to sign a record.
Governance Document	A document that is used to regulate, govern and prescribe principles and government matters. This may include a bylaw, policy or directive.
Person	Any individual, a group of individuals, a corporation, firm, partnership, proprietorship, association, society or co-operative organization
Personal Information	Recorded information about an identifiable individual.
Record(s)	Information in any form, including information that is written, photographed, recorded or stored in any manner, but does not include computer programs or other mechanisms that produce Records
Retention Schedule	A timetable based on legal, fiscal, operational or historical requirements that specifies the length of time a Record must be kept before its final disposition
Wet Signature	A signature signed by a physical person with an ink pen.

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SCHEDULE "B"

Retention Schedule

DRAFT

RECORDS RETENTION SCHEDULE

Dept.	Business Activity / Scope Note	Responsible Work Group	Total Retention	Comments
	Accounts Payable	Finance	C+7	
FI	Includes records that are evidence of paying or reconciling monies owed by the City of Lloydminster. Also includes coding invoices to correct JAO accounts, keying details into accounting system, generating cheques or transferring fund electronically to vendors, paying p-card charges, p-card applications, filing invoices and payment of contractors and fuel invoices <u>Records may include:</u> invoices, cheque requisitions and approvals			
	Accounts Receivable	Finance / Assessment & Taxation / Operations	C+7	
FI / AT / OP	Includes records that are evidence of receiving, invoicing, processing and balancing monies owed to the City of Lloydminster by residents, customers for goods sold, or services provided/performed such as collection of payment for the rental of facilities, program registration, permit and application fees. Also includes the collection of taxes and utilities paid. <u>Records may include:</u> daily cash receipts, invoices, credit card receipts, account reconciliations, void cheques and automatic withdrawal authorization forms, tax notices, notices to Utility account holders.			
	Activity Tracking	Originating	C+3	
ALL	Includes records that are evidence of daily departmental activities, including departmental planning, tracking of department activities, reporting and meetings. <u>Records may include:</u> progress reports, daily logs, activity reports, OH&S statistical reporting and departmental meeting minutes. Also includes general day files / correspondence logs not specific to an activity			
	Agenda Reports / Briefing Reports	Originating	C+3	
ALL	Includes all original paper information reports and request for decision reports that are placed on a Governance & Priorities Committee Meeting Agenda or a Council Meeting Agenda. Also includes all briefing notes that are prepped for executive or Council information purposes <u>Records may include:</u> information reports, request for decisions			
	Airport Administration	Operations	C+10	
OP	Includes records which support the administration and coordination of the airport operations as well as the planning and development of airport properties <u>Records may include:</u> long range planning reports, airport events, maps, photos, training records			

Dept.	Business Activity / Scope Note	Responsible Work Group	Total Retention	Comments
ALL	Airport Plans and Reports Includes records that are pertinent to the safety and proper management of the airport and future planning for the airport <u>Records may include:</u> Transport Canada Safety Manuals, Airport Operations Manual, Safety Management Manual, Aviation Security Program, Airport Wildlife Management Plan, Emergency Response Plan, Long Range Planning Reports	Originating	UOS+10	This retention pertains to paper copies. Electronic copies to be retained permanently
ALL	Appeals Includes records that are evidence of an appeal made to the City of Lloydminster for subdivision and development appeals, assessment review board appeals, or appeal of an Order issued under the Lloydminster Charter <u>Records may include:</u> notices, orders, agendas, appeal board packages, meeting arrangement/preparation, minutes, final decisions <u>Excludes:</u> appeal decisions - see Land Administration	Originating	E+7	E = date of final decision rendered
CD	Archive Documents Includes records that are stored and maintained by the Lloydminster Museum and Archives <u>Records may include:</u> artifacts, historical archived documents	Community Development Services	P	At the discretion of the Manager of LMA
CD	Artifact Donation Agreements Includes records that support the negotiation, preparation, monitoring and administration of artifact donation contracts or agreements between the City of Lloydminster and the party donating the artifact <u>Records may include:</u> artifact donation agreements and contracts	Community Development Services	P	
ALL	Association Participation Includes records that are evidence of City employees' participation in professional association societies and other organizations such as outside committees and boards, attendance at conferences, seminars, trade shows and professional development sessions. <u>Records may include:</u> meeting materials, conference material, newsletters, bulletins, professional licensing requirements, professional dues and memberships of staff. <u>Excludes:</u> participation in external agency/board/committees - see External Boards and Committees	Originating	C+2	
FI	Audited Financial Statements Includes internal and external audit reports, background documentation, recommendations resulting from audits <u>Records may include:</u> yearly audited financial statements, copies of financial auditing procedures and responsibilities	Finance	P	
ALL	Auditing Includes records which support the planning, preparation, execution and reporting of internal and external financial and operational audits, including WCB audit reports, safety codes audits, environmental audits, permitting audits <u>Records may include:</u> audit reports, audit recommendations, audit action plans, interview schedules, tour schedules	Originating	E+10	E = period covered by two most recent complete audits
ALL	Awards and Recognition Includes records that are evidence of recognizing community members for achievements such as milestone birthdays and wedding anniversaries and lending a helping hand to others. <u>Records may include:</u> certificates for anniversary or birthdays, long service awards for staff, volunteer recognition	Originating	C+2	

Dept.	Business Activity / Scope Note	Responsible Work Group	Total Retention	Comments
FI	Banking Includes records that are evidence of banking activities such as receipt and deposit of incoming funds, bank account and statement reconciliations <u>Records may include:</u> bank reconciliation, bank statements, deposit slips, cancelled cheques	Finance	C+7	
ER	Benefits Programming Includes records that are evidence of planning, design, implementation and delivery of the City of Lloydminster's employees benefit program including savings plans, benefit sponsorship, health and dental coverage and pension plans <u>Records may include:</u> benefit presentation and brochures, rates, explanatory documents regarding benefits, group insurance, dental plans, employee support groups, etc. <i>Excludes: Contracts and Agreements with Benefit Providers - see Contract and Agreement Administration</i>	Employee Relations	UOS+2	
ALL	Budgeting Includes records that are evidence of the preparation and maintenance of operating and capital budgets. <u>Records may include:</u> operating budget summary, detailed budget reports, actual vs. budget, variance reports, monthly budget reports, annual departmental budgets, approved yearly budgets (operating and capital)	Finance	C+10	
FI	Business Licencing Includes records which support the registration and licencing of businesses within the City of Lloydminster <u>Records may include:</u> business licence application or renewal forms, copy of business licence	Finance	C+7	
PS	Bylaw Enforcement Includes records which support responding to concerns relating to the City of Lloydminster's bylaws, such as animal control bylaw, unsightly properties, noise control, etc. <u>Records may include:</u> the original complaint, the evidence gathered (forms, reports, photos), warning letters or violation tickets issued	Public Safety	C+5	
OP / FI	Cemetery Administration Includes records that are evidence of the control and maintenance of cemetery records of burial, cremations and internments <u>Records may include:</u> burial permits, cemetery register, burial plots and ownership records	Operations / Finance	P	
LS	Census Coordination Includes records that are evidence of the coordination, development and delivery of a municipal census to ensure full benefit of grants and available funding as well as the planning and development of City services <u>Records may include:</u> final census report, oath of office and working documents	Legislative Services	C+10	
CD	Childcare Includes records specific to childcare services provided at City facilities <u>Records may include:</u> client records, registrations, licensing	Community Development Services	C+7	

Dept.	Business Activity / Scope Note	Responsible Work Group	Total Retention	Comments
ER	Collective Bargaining Includes records that are evidence of proposals, negotiations and agreements with CUPE and IAFF for the Collective Bargaining Agreement <u>Records may include:</u> proposals, correspondence from negotiations, agreement handbook, notifications	Employee Relations	UOS+7	
FI	Community Investment Includes records that are evidence of building community relationships through receiving, reviewing, approving and processing funding requests through grant programs (third party asks), FCSS grant applications, Sask Lotteries grant applications, Tobacco Reduction Grant. <u>Records may include:</u> copies of receipts, applications, project themes, letters of approval, letter of commitment, grant applications, evaluations, and letter of confirmations	Finance	E+7	E = funding / commitment complete
ER	Compensation Planning Includes records that are evidence of compensation planning and development activities such as analysis of comparable industry specific job descriptions and salary reviews and reporting on findings <u>Records may include:</u> compensation review files, pay grids and scales	Employee Relations	UOS+2	
LS	Contract and Agreement Administration Includes records which support the negotiation, preparation, monitoring and administration of contracts or agreements between the City of Lloydminster and service providers, municipalities, landowners, businesses, etc. <u>Records may include:</u> any contract or agreement where a City representative has signed their agreement to conditions, including but not limited to conditions regarding paper shredding, garbage/recycling, mutual aid, brokerage agreements, purchase agreements, software/hardware contracts or licenses, data subscriptions, service agreements, lease agreements <i>Excludes: Artifact Donation Agreements - see Artifact Donation Agreements</i>	Legislative Services	E+10	E = termination or expiration of contract or agreement
ALL	Corporate Reporting Includes records that are evidence of the formal internal and external business performance and financial reporting activities, both detailed and consolidated. Also includes regular and/or incident based reporting and submissions to regulatory bodies as mandated by applicable regulations, codes and standards <u>Records may include:</u> annual reports, regulatory deficiency lists and correspondence with regulatory bodies, financial information returns	Originating	E+10	E = submission of report

Dept.	Business Activity / Scope Note	Responsible Work Group	Total Retention	Comments
LS	Council Election Includes records that are evidence of the elections process for City of Lloydminster council including reviewing any legislative changes, hiring of the elections staff, nomination of candidates and the counting of ballots <u>Records may include:</u> nomination list, oath of office of election workers, election results report (unofficial/official), election ballots, appeals, nomination papers. Working papers such as arrangements of voting stations, rental rates, published election notices, notice of nomination day, notice of election day, dates of advance vote, election materials, statement of results and council orientation materials	Legislative Services	E+8	E = election or by-election results official * ballot boxes and voter registration forms retained for 3 months only (as per the Local Authorities Election Act)
LS	Council Governance Includes records that are evidence of the proceedings, adoptions and resolutions of City of Lloydminster Council's regular, organizational, public hearing and committee meetings and sessions. May also include delegations and review of petitions <u>Records may include:</u> agendas, meeting minutes, resolutions, bylaws, petitions, public hearings	Legislative Services	P	
FI	Debt Structuring Includes records that are evidence of borrowing, financing and monitoring of loans and conditions of debts owed by the City of Lloydminster <u>Records may include:</u> debentures, debt payment schedule, promissory notes, financing and debt summaries, loan documentation, and lending guarantees	Finance	E+7	E = debt paid in full
EC	Economic Development and Tourism Includes records that are evidence of efforts made to promote and encourage tourism within the City of Lloydminster such as partnering with surrounding municipalities on initiatives and the development of marketing tools. Also includes tracking of visitor and inquiries received <u>Records may include:</u> tourism maps, brochures, project files, resource brochures	Economic Developmnet	C+7	
ES	Emergency Response Planning Includes records that are evidence of planning, documentation, maintenance and distribution activities aimed at minimizing potentially serious harm to the safety, health or welfare of people or widespread property damage in the event of an emergency with the City of Lloydminster <u>Records may include:</u> emergency and disaster plans, local state of emergency records, planning, disaster center planning and liaison	Emergency Services	UOS+5	
ER	Employee Administration Includes records that are evidence of the on-going administration of City of Lloydminster employees such as hiring, new employee orientations, enrollment in pension and benefit programs, performance reviews, disciplinary matters, and employee certifications <u>Records may include:</u> personal information form, resume, offer letters, new hire forms, oaths, completed abstract form, work plans and appraisal of job performance, skills, training and education, certifications, investigations, grievances, discipline, complaints, results of health examinations, occupational health considerations, criminal record checks, personal files, LAFOIP authorization forms, medical information, WCB incident/accident investigations, doctors' notes & correspondence, health assessments, audiometric record, interventions, authorizations for return to work, modified work forms, record of employment, and city issued equipment required for work (ex: fire radios/pagers)	Employee Relations	E+10	E = employee no longer works for the City

Dept.	Business Activity / Scope Note	Responsible Work Group	Total Retention	Comments
ER	Employee Administration - Files Held at Chief of Staff Discretion Includes records specific to any individual employee or councillor, full-time, part-time, salaried, hourly or on contract where incidents have occurred that may be of a legal concern, or legal action has been initiated, or where a significant injury has resulted <u>Records may include:</u> employee complaints or threats, legal opinions obtained, court records, incident statements, related correspondence	Employee Relations	E+45	E = employee no longer works for the City
ALL	Employee Events and Celebrations Includes records that are evidence of the planning and implementation of employee celebrations and events such as requirement parties, annual holiday celebrations, and employee recognition social. <u>Records may include:</u> notices, event information, invitations, photos	Originating	C+2	
OP	Environmental Monitoring Includes records that are evidence of on-going environmental monitoring to ensure environmental sustainability and the protection of areas and resources. <u>Records may include:</u> environmental site assessments, erosion reports, algae treatment reports, flood mapping and monitoring	Operations	UOS+5	
ALL	Environmental Reclamation and Remediation Includes records that are evidence of planning and implementation of measures undertaken to return lands back to their natural states <u>Records may include:</u> reclamation activity reports, environmental reports, reclamation certificates, reclamation maps	Originating	E+25	E = reclamation / remediation certificate issued
ALL	External Boards and Committees Includes records that are evidence of Council and Administration's involvement in external board and committees <u>Records may include:</u> correspondence, external board agendas and minutes	Originating	C+3	
ALL	External Communication Includes record that are evidence of communication and maintaining relationships with external groups such as community members, media and partners. Also includes the development and use of social media tools <u>Records may include:</u> newsletters, report to community, media release, letters, photos, presentations, video, scripts, planning/building brochures, publications, website content, social media posts, public open house notifications	Originating	C+10	
ALL	External Memberships and Rentals Includes records that are evidence of facility memberships, personal training information, golf cart rentals, and facility rentals <u>Records may include:</u> applications for facility memberships, personal training requests or files, course or camp registrations, golf cart rentals.	Originating	E+3	
ALL	Facility Maintenance Includes records that are evidence of routine maintenance of City of Lloydminster's buildings, facilities and properties such as cemeteries, parks, community centers, campgrounds, pools, arenas and office buildings. Includes exterior and interior maintenance to buildings, landscaping, grounds keeping and grass cutting <u>Records may include:</u> pool water test log sheets, lab reports, project plans, maintenance logs, ice thickness reports.	Originating	C+7	
CD	Family and Community Support Services (FCSS) Includes records relating to the provision of community and social support services to the City of Lloydminster <u>Records may include:</u> program information, education sessions, client intake and referrals to support agencies, block party booking forms, FCSS committee meeting minutes and agendas. <i>Excludes: FCSS agreements - see Contract and Agreement Administration</i>	Community Development Services	C+7	

Dept.	Business Activity / Scope Note	Responsible Work Group	Total Retention	Comments
FI	Financial Accounting Includes records that are evidence of reviewing and posting activities for corporate transactions into the accounting system such as intercompany transactions, reserve funds, funds held in trust, journal entries, and adjustments <u>Records may include:</u> journal entries and back-up, corrections and back-up, transactions, analysis, cancelled cheques, deposit books, receipts, bank reconciliation statements	Finance	C+7	
ES	Fire General Includes reports which support the routine inspection, maintenance, planning and coordination of Fire Service assets and operations <u>Records may include:</u> apparatus inspection reports, residential home inspection reports, duty scheduling	Emergency Services	C+3	
FI	Fixed Asset Accounting Records which support the coordination, monitoring and tracking activities of fixed assets and tangible capital assets (ex. Machinery and equipment, roads, buildings, land, vehicles, office equipment, etc.) from acquisition to disposition. <u>Records may include:</u> fixed asset ledgers, tangible capital asset ledgers, depreciation schedules, total cost of assets, net book value of assets, original invoices and purchasing documents	Finance	E+7	E - disposition of fixed/tangible capital asset
OP	Fleet and Equipment Coordination Includes records that are evidence of activities related to the administration, maintenance, licensing, inspection and disposition of fleet vehicles and City equipment such as heavy equipment, mobile equipment, protective equipment, computer and office equipment. Also includes regular and scheduled maintenance and vendor/supplier support contacts. Also includes fire fleet <u>Records may include:</u> equipment check list, maintenance check list, commercial vehicle inspections, repair request form, work orders, bill of sale, serial numbers, installation instructions and manuals <i>Excludes: Purchase of Equipment - see Procurement or Contract and Agreement Administration.</i>	Operations	E+7	E = life of equipment /vehicles
FI	General Ledger Control Includes records that are evidence of the compilation, maintenance and control of the City of Lloydminster's general ledger <u>Records may include:</u> general ledger	Finance	P	
FI	Grant Administration Includes records which support researching for grants, applying to provincial, federal, or any other organization for funding, and includes reporting to those organizations on the financials of how the monies were spent <u>Records may include:</u> grant application forms, follow up and reporting forms, compliance reporting, correspondence, disaster recovery assistance programs	Finance	E+10	E = final grant report submitted or project is complete
ER	Incident Responding and Investigating Includes records that pertain to health and safety incident reporting and investigations <u>Records may include:</u> incident reporting forms, letters, photos, forms, fire commissioner reporting, fire investigations	Employee Relations	E+7	E = date of event

Dept.	Business Activity / Scope Note	Responsible Work Group	Total Retention	Comments
LS	Incorporation Includes records that are evidence of the founding and establishment of the City of Lloydminster, related authorities and corporate entities <u>Records may include:</u> certificates of incorporation, corporate seal, certificates of name change, and certificates of dissolution	Legislative Services	P	
FI	Information System Development and Implementation Includes records that are evidence of planning, design and testing and implementation of the City of Lloydminster's information systems which as identification of business needs, research of software and hardware and development of user documentation <u>Records may include:</u> technical documentation, user documentation	Finance	E+2	E = system no longer in use
FI	Information System Maintenance and Support Includes records that are evidence of information system maintenance and support activities including user support such as responding to inquiries and managing information system process including hardware and software installations, repairs, troubleshooting, web server maintenance, system upgrades, server installation, managing permission and archiving of material <u>Records may include:</u> service request logs, troubleshooting tickets <i>Excludes: Contracts and Agreements - see Contract and Agreement Administration</i>	Finance	C+2	
OP	Infrastructure Management Includes records that are evidence of the management, planning for sustainability, maintenance, rehabilitation, and replacement of City of Lloydminster's infrastructure and facilities through capital projects such as urban design plans, waste water and treatment plant upgrades, road and utility upgrades. Also includes the monitoring of third party shallow utility services providers of their maintenance and upgrades activities and railway crossings <u>Records may include:</u> as-built drawings, GIS system, upgrade plans, work permissions, third party utility drawings, notifications of construction completion certification, final acceptance certificates, pre-design submissions, engineered drawings, design standards.	Operations	E+5	E = life of facility / infrastructure
ALL	Inquiries and Request Response Includes records that are evidence of investigating and responding to resident concerns and requests such as noise, unsightly premises, garbage and other general inquiries <u>Records may include:</u> compliant records, correspondence, general resident concern letters, requests to present to Council	Originating	C+5	
LS	Insurance Administration Includes records that are evidence of administering vehicle insurance, property insurance, general liability insurance and other insurance policies for the City <u>Records may include:</u> certificates of insurance, insurance policies and renewals	Legislative Services	E+10	E = expiration of insurance policy
LS	Insurance Claims Includes records that are evidence of insurance claims administration including filing claims, follow up and communication with insurance providers <u>Records may include:</u> insurance claim letters, photos, forms, adjuster reports, repairs, reports, responses from insurer	Legislative Services	E+10	E = settlement of claim

Dept.	Business Activity / Scope Note	Responsible Work Group	Total Retention	Comments
ALL	Internal Communication Includes records that are evidence of measures taken to communicate with City employees such as updating the intranet with general information, distributing hiring announcements. Also includes notifying employees of training sessions. <u>Records may include:</u> copies of newsletters and news releases, intranet content, photos, promotion notifications, announcements, posters	Originating	C+5	
ALL	Inventory Control Includes records that are evidence of the tracking and control of City of Lloydminster's assets and inventory such as road maintenance supplies, stores, salt, sand, concrete, gravel, chemicals, pesticides, etc. <u>Records may include:</u> inventory listings, material transfer ledgers, tickets, stock issue transfers	Originating	C+7	
ALL	Land Interest Administration Includes records that are evidence the monitoring and protection of the City's interests and rights in land holdings such as land leases and agreements, easements, right of ways and encroachments. Also includes the annexing of lands <u>Records may include:</u> development permits, subdivision development agreements, easements, encroachments, right of ways, land titles, heritage site designations, property liens, caveats, legal plans, real property reports, sale agreements, title transfers, instruments registered on title, technical reports related to soil, geotechnical, undermining, traffic, pavement plans, emergency response, storm water, sanitary waste as well as stamped accepted drawings, photos, plans, water distribution and wastewater collection reports, conceptual schemes, distribution lists, notice of decisions, endorsements and information related to endorsements, fire code compliance inspections, subdivision and development appeal board decisions and assessment appeal decisions <u>Excludes: Lease Agreements - see Contract and Agreement Administration.</u>	Originating	P	
ALL	Landfill Administration Includes records that are evidence the monitoring and operation of all landfill property within the City <u>Records may include:</u> permits, drawings, photos, collection reports, approvals, tickets and compliance documents. <u>Excludes: Contracts and Agreements pertaining to landfill - see Contract and Agreement Administration.</u> <u>Excludes: Reclamation and Remediation documents: see Environmental Monitoring and Environmental Reclamation and Remediation</u>	Originating	E+10	E=Life of Facility/Date of Decommissioning
ALL	License and Permit Issuance Includes records that are evidence of receiving, reviewing, processing and issuing permits and licenses for the construction of buildings and subdivisions, inspections and approvals of buildings, and the operations of a business within the City of Lloydminster. This includes commercial and residential developments, pre-consultation on large development applications and ensuring that applications are within scope of regulatory requirement and City bylaws. <u>Records may include:</u> applications, building permit, subdivision permit, electrical permit, gas permit, plumbing permit, occupancy permit, correspondence, working papers, construction drawings, plot plans, inspection reports, animal licenses, event permits, permission to work, excavation permit, fire permit, fireworks permit, road closure permit, banner requests, light turns, LUB and MDP amendment applications <u>Excludes: Contracts and Agreements pertaining to land - see Land Interest Administration or Contract and Agreement Administration</u>	Originating	E+15	E = expiration of permit or licence

Dept.	Business Activity / Scope Note	Responsible Work Group	Total Retention	Comments
LS	Litigation and Dispute Coordination Includes records that are evidence of legal opinions and advice formulated and delivered by the City of Lloydminster and external council on claims, disputes and litigation matters <u>Records may include:</u> statement of claim, loss reports, claim settlements, photos, judgements, court orders, proceedings, briefs, affidavits, litigation binders, court and insurance claims, liens, matter files, advice, correspondence and working papers	Legislative Services	E+10	E = settlement of claim
ALL	Mapping Includes reports that are evidence of the downloading, capturing, integration, control and delivery of City geographical mapping data for all areas and departments <u>Records may include:</u> ortho-photo, mapping and GIS, flood mapping, land map, road maps, as well as information used to support projects/reports/studies/policy	Originating	P	
OP	Metering Quality Assurance Includes records that are evidence of the inspection, repair, verification and calibration of water meters owned by the City of Lloydminster <u>Records may include:</u> meter service work orders, proving records, serial numbers, and tag tracking	Operations	E+7	E = meter taken out of service
OP	Park Maintenance Includes records which support regular maintenance and inspection of the City's parks and campgrounds <u>Records may include:</u> park surveys, playground inspection reports, minor improvement projects, park and campground maintenance records	Operations	C+7	
FI/AT	Payment Agreements Includes records that are evidence of payment installment and pre-authorized debit plans for taxation or utilities <u>Records may include:</u> PAD forms authorizing the automatic debit of payments, void cheque	Finance / Assessment & Taxation	E+2	E = when customer ends their agreement to be on the prepaid plan
ER	Payroll Processing Includes record that are evidence of payment of employees included regular payroll generation, deductions, tax collection and remission, reporting and reconciliation. Also includes summaries of payments to EI, WCB, Manulife and payroll register detailing employee payroll disbursements per pay period <u>Records may include:</u> payroll registers, RRSP forms, year end payroll summaries, T4s, COLA, performance increases, council per diems	Employee Relations	C+7	
PS	Peace Officer Video Recordings Includes records that are evidence of the video recordings of the City Peace Officers. <u>Records may include:</u> body camera videos, ipad videos, videos taken by phone, or in car video. <i>Excludes: video recordings that are part of a prosecution - see Ticketing & Prosecution</i>	PS	C+3	
LS	Petitions Includes records that are evidence of receipt, evaluation, and decision on a petition filed with the City of Lloydminster <u>Records may include:</u> petition, documents providing determination of sufficiency of petition, notice of sufficiency of petition	Legislative Services	C+7	
ALL	Procurement Includes records that are evidence of selection, procurement and purchasing of products, supplies, material and services from external vendors such as identification of potential vendors, preparing and issuing requests (RFx), receiving bids from vendors and evaluations <u>Records may include:</u> RFx documents, vendor bids, responses, evaluations	Originating	C+7	

Dept.	Business Activity / Scope Note	Responsible Work Group	Total Retention	Comments
ALL	Programming & Events Includes records that are evidence of the logistical arrangement activities in supporting meeting and organizing Community, board and Committee and other City events and programs such as scheduling, identifying participants, distribution of invitations, tracking attendance and securing venue and catering selections. Also includes the development of any advertisements of the meeting or event such as design layout, writing, editing, proofing and scripting and printing of tickets <u>Records may include:</u> programs, memberships, personal training, golf tournament bookings, event schedules, brochures, posters, tickets, scripts, venue information, catering menus, participant confirmations, invitations, meeting notices, agendas and meeting minutes, proofs and approvals, advertising and photos <i>Excludes: Contracts and Agreements - see Contract and Agreement Administration</i>	Originating	E+2	E = date of event
AT	Property & Tax Assessment Includes records that are evidence of estimating and valuation of property for the City for municipal taxation purposes including inspecting property and verifying information on the summary report. Also includes statistical analysis and modeling of property sales <u>Records may include:</u> Notice of assessment, school declarations, improvement details, sketches, assessor report, property assessment, market land details, improvement details, market evaluations, statistical analysis, copies of land titles, copies of real property reports, copies of occupancy permits, copies of MLS listing information, request for information forms, property photos, returned mail of tax notices and copies of plot plans. <i>Excludes: Decisions made by Assessment Review Board - see Appeals; Original Land Documents - see Land Interest Administration; and Receiving Property Tax Payments- see Accounts Receivable</i>	Assessment & Taxation	E+7	E = assessment declared
ER	Pension Administration Includes records that are evidence of the monitoring and fulfilling of pension obligations to individuals <u>Records may include:</u> pension status of retired personnel, registration and payment information	Employee Relations	E+7	E = all pension obligations paid out
LS	Records Administration Includes records that are evidence of administrative activities associated with the organization, control, accessibility, and retention of City of Lloydminster's records such as indexing, classification, requests for records and information and inactive records transfers <u>Records may include:</u> file listings, record requests, request for transfer of files	Legislative Services	C+2	
LS	Records Disposition Includes records that are evidence of Certificates confirming records and data destroyed in compliance with the retention schedule <u>Records may include:</u> records destruction certifications, documentation of authorized destruction of hardcopy and electronic data	Legislative Services	P	
ER	Recruiting Includes records that are evidence of recruiting activities for the City of Lloydminster's internal and external job postings, such as request from hiring managers, recruitment advertising, interview, candidate background research and offers. Also includes unsuccessful candidates resumes <u>Records may include:</u> advertising, job postings, job descriptions, resumes, interview questions and interview notes	Employee Relations	E+2	E = position has been filled. Successful candidate information transferred to Employee Administration for retention

Dept.	Business Activity / Scope Note	Responsible Work Group	Total Retention	Comments
	Reference and Research	Originating	UOS	
ALL	Includes records that are evidence of researching and referencing of background information <u>Records may include:</u> reports, studies, statistics, catalogues, photos, surveys, samples, templates, yearly fire statistical reports			
	Request for Information (LAFOIP Requests)	Legislative Services	E+5	E = when request is fulfilled or deemed to be closed
LS	Includes records that are evidence of a formal records request under the <i>Local Authority Freedom of Information and Protection of Privacy Act</i> (LAFOIP) <u>Records may include:</u> requests for review of municipal records by members of the public such as correspondence, review and final decisions related to release of information, LAFOIP requests			
	Operations Maintenance	Operations	C+7	
OP	Includes records that are evidence of maintenance and routine inspecting of roads and signs such as plowing and sanding of roads, snow removal, dust and weed control, cleaning, patching, painting of road markings and ditch and drainage control. Also includes the installations, maintenance and inspecting of traffic signs, signals and concrete program for sidewalks and curbs. Also includes playground inspections <u>Records may include:</u> copies of inspections, work orders, service requests, work plans, land damage repair records			
	Safety Monitoring	Employee Relations	C+5	
ER	Includes records which support proactive monitoring activities and operations to ensure safe procedures are being followed such as inspections and hazard assessments, program reporting, auditing and providing guidance and oversight on safety issues <u>Records may include:</u> workplace inspections, schedules, action items, hazard assessments, fall protection plans, confirmed space permits, toolbox/tailgate meeting minutes, safety meeting minutes, PPE inspections, fire drill reports, fire extinguisher/AED machine, first aid kit inspections, Crane Records, Power Mobile Equipment manufacturer's specification, statistical reports, health and safety memos, safety alerts and communications, MOSH week planning, documentation and schedules			
	Safety Programming	Employee Relations	UOS+2	
ER	Includes records that are evidence of planning, development and implementation of program and initiatives to ensure the safety of the City of Lloydminster's employees and contractors such as maintaining safety manuals, conducting safety orientations and providing oversight and guidance on safety issues that can impact City's employees and operations <u>Records may include:</u> Health and Safety Manual, safe work practices, orientation packages			
	Solid Waste and Recycling Curbside Collection	Operations	C+7	
OP	Includes records that are evidence of the routine operation and administration of the City of Lloydminster's waste collection and recycling program such as regular collection of waste, bio-solid waste by-products, distribution of garbage bins and the transportation of waste and recyclables to different facilities <u>Records may include:</u> requests for bins, monthly reports, work orders <i>Excludes: Curbside Collection Contractor Agreements - see Contract and Agreement Administration</i>			
	Staff Meeting	Originating	C+3	
ALL	Includes records that are evidence of staff meetings, including agendas and minutes <u>Records may include:</u> team announcements/memos, staff/team meeting agendas and minutes			

Dept.	Business Activity / Scope Note	Responsible Work Group	Total Retention	Comments
ER	Staff Scheduling and Tracking Includes records that are evidence of employee scheduling and timesheet processing and allocating time to specific codes <u>Records may include:</u> timesheet, approvals, request for timesheet adjustments <i>Excludes: Flex Work Schedule Agreements - see Employee Administration</i>	Employee Relations	C+5	
ALL	Strategic Planning Includes records that are evidence of the City of Lloydminster's strategic planning and the process of defining its strategy or direction and making decision on how to pursue the strategy <u>Records may include:</u> strategic plans, business plans, master plans (transportation, recreation, etc.), analysis of financial issues, revenue analysis, regional studies, benchmarking, internal and external performance measures	Originating	UOS+5	
AT	Tax Recovery Includes records that pertain to the recovery of tax arrears and auction of property <u>Records may include:</u> notification of tax arrears, copy of tax notification, copy of recommendation to Council setting date of sale, copy of advertisements, proof of registered notice sent to owner and interested parties, results of public auction, copy of Council's approval/refusal/acceptance of bid, copy of offer to purchase, copy of trust receipt and new certificate of title	Assessment & Taxation	E+7	E = tax lien is registered
AT	Tax Roll/Assessment Roll Includes records that are evidence of the annual final listing of taxable properties with the City of Lloydminster and the assessed value with all amendments, appeals and changes incorporated <u>Records may include:</u> assessment roll, tax roll	Assessment & Taxation	P	
CD	Taxi Voucher Program Includes records which support the Taxi Voucher Program <u>Records may include:</u> taxi vouchers	Community Development Services	C+2	
FI	Telecommunications Control Includes records which support the installation, operation and maintenance of communication devices such as telephones and cellular phones <u>Records may include:</u> telecommunication service maintenance records	Finance	C+2	
PS	Ticketing & Prosecution Includes records that are evidence of the investigation and enforcement of provincial laws such as the Traffic Safety Act by City of Lloydminster Peace Officers <u>Records may include:</u> traffic tickets, offense notices, officer notes, video recording, and court disclosure documents	Public Safety	E+7	E = date of ticket
ER	Training Development and Delivery Includes records that are evidence of the design, development, preparing, delivery of training programs for employees, contractors and volunteers <u>Records may include:</u> course handouts, tests, workshop materials, course evaluations, online training course information. <i>Excludes: training records or certifications which are specific to individuals - see Employee Administration</i>	Employee Relations	C+3	
ALL	Transitory Records Includes records which are only required for a limited time to complete a routine action, are used in the preparation of final records, or are retained as information or convenience only <u>Records may include:</u> duplicate copies, preliminary or working drafts of the final record officially stored elsewhere, research notes, thank you notes, etc.	Originating	Discard Routinely When No Longer Needed	

Dept.	Business Activity / Scope Note	Responsible Work Group	Total Retention	Comments
ALL	Travel Arrangements Includes records that are evidence of travel coordination activities for Council members and employees such as arranging airlines, hotel, and car rental for business travel <u>Records may include:</u> reservations, travel plans, confirmations and itineraries	Originating	C+2	
OP	Utilities Maintenance Includes record that are evidence of routine operations, inspection, monitoring, and preventative maintenance on City of Lloydminster's utility infrastructure such as resident water reconnect and disconnects, regular sewer flushing and utilities location <u>Records may include:</u> work site location map, work order, service connection inspection records, project summary report and copies of occupancy inspections	Operations	C+7	
ALL	Waivers Includes records that are evidence of a user acknowledging use of a facility/program and releasing the City of Lloydminster from any claim depends or cause of action resulting from the use of the facility/program <u>Records may include:</u> waivers for gym use, waivers for children camps, waivers for chief for a day program	Originating	E+2	<u>For Adults:</u> E = the date of the event <u>For Children:</u> E = the date the attendee is age of majority
OP	Water and Waste Water Control Includes records that are evidence of monitoring, maintaining and repairing water and waste water management systems such as ensuring water quality meets requirements through testing and sampling, conducting routine and emergency maintenance on the water plant, monitoring waste waters and monitoring volumes of water and waste water <u>Records may include:</u> flow record, daily reading report, daily pumps and generator report, daily water sample records, maintenance log books, water licenses and approvals, water level monitoring, lab reports, tests analysis, evaluations, monitoring results, pre-release testing	Operations	E+25	E - life of facility
OP	Water Supply Monitoring Includes records which support monitoring of water supply provided to residents in order to ensure their safety on a daily basis, such as water treatment plant bacteriological analysis testing <u>Records may include:</u> bacteriological analysis results, flow meter readings, chlorine concentrations, treatment chemical dosages, monthly reports to environment, records of actions taken to correct contraventions of potable water quality and public notifications	Operations	C+5	
ER	Workers Compensation Coordination Includes records which support reporting workers' injuries and submitting employee and employer reports to the Worker's Compensation Board (WCB) for claims and audiometric testing <u>Records may include:</u> WCB Claim reports, subcontractor coverage reports	Employee Relations	E+25	E = after claim is
ER	Workforce Planning Includes records that are evidence of the planning and development activities of the workforce and employment positions at the City of Lloydminster such as succession planning and identifying job requirements and corporate structure. <u>Records may include:</u> proposals, planning reports, job descriptions, organizational charts, organizational surveys, restructuring plans and job market research	Employee Relations	C+2	

	<p align="center">City of Lloydminster Information Report (IR)</p>
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Subject Matter: Draft License of Occupation Policy
Department: Office of the City Clerk
Presented By: Marilyn Lavoie
GPC Meeting Date: June 13, 2022

Topic: Draft License of Occupation Policy.

Background: Administration has identified the need for a Policy to establish standards that will define allowable items within the road right of way. This policy will develop a framework to ensure a fair and consistent use of road right of ways within the City, while aiming to reduce liability and eliminate adverse impacts of use.

The City hosted a Your Voice Night on Thursday, May 12, 2022, where Administration gathered input from attendees on what they felt should be permitted or not permitted to be developed or placed in road right of ways. The following is what we heard:

- Citizens would like to see the following permitted in road right of ways: community postal boxes, waste bins during construction, artwork, and temporary signs in direct relation to construction projects or local community events
- Citizens would not like to see the following approved for placement in road right of ways: fences, permanent structures, parking lots, and business advertisement signs or banners
- Benches are nice to have when out for a walk, but they shouldn't be too close to intersections and not cluttered too close together. Input received was to see more benches in the downtown core and other residential areas where walkers frequent, as opposed to just busy commercial or industrial streets
- Residents did not believe that signs should be permitted in road right of ways unless they were small a-board signs for a short period for a local community event (ex: farmer's market or hockey game). They found the larger signs are distracting for drivers, block sightlines, and are meant to be placed on private property and not right of ways.

Administration has developed the attached Draft License of Occupation Policy based on the feedback received from the Your Voice Night.

There were not many other municipalities with formal policies on development in right of ways, or that permit items within the road right of ways. The following was obtained during research:

- Prince Albert does not permit billboards in road right of way. Benches and bus stops are permitted, and managed by the City, leasing advertisement to a third party
- Moose Jaw does not permit billboards in road right of way. The City owns benches in the right of way, but no advertising on them

- Spruce Grove does not permit billboards in road right of way. The City owns bus stops and has advertising on them, but no other bench signs permitted in right of ways
- Okotoks does not permit billboards at all. Benches in right of ways are owned by the municipality, with content signage on the benches completed by a third part agreement
- Fort Saskatchewan allows billboards in right of way, with Council approval only. No benches permitted
- St Albert prefers that no items be in the road right of way as it can be a safety hazard or block access for municipal or utility services. However, if an item is requested to remain in a right of way, the requirement is to enter into an encroachment agreement for a fee of \$554, plus written consent from utility companies and the resident registering the agreement on land titles
- Some rural municipalities provide license of occupations for use of road right of ways for the purpose of grazing and pasture areas.

Objective: To provide the Committee with a draft License of Occupation Policy for review and comment.

Options:

1. That the Committee accept this report as information and that the item be brought forward to a future Regular Council meeting for decision.
2. That the Committee request more information and that the item be brought forward to a future Regular Council meeting for decision.
3. That the Committee request more information and that the item be brought forward to a future Governance & Priorities Committee meeting.

Alignment with Strategic Plan: This item is in alignment with the following strategic area: Delivering Good Governance. It is important to ensure that there is a consistent manner throughout the City with use of road right of ways.

Governance Implications: This is a new policy.

Budget/Financial Implications: N/A

Environmental Implications: N/A

	<p align="center">City of Lloydminster Information Report (IR)</p>
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Report Approval Details

Document Title:	Draft License of Occupation Policy.docx
Attachments:	- DRAFT License of Occupation Policy Attachment.pdf
Final Approval Date:	Jun 3, 2022

This report and all of its attachments were approved and signed as outlined below:

Doug Rodwell

Dion Pollard

Policy Title:	License of Occupation Policy	Policy Number:	120-08
Date of Adoption:		Motion Number:	
Date of Amendment:		Motion Number:	
Sponsoring Department:	Legislative Services		

1. Purpose:

- 1.1. To establish standards that will define Encroachments that the City may allow within the Road Right of Way.
- 1.2. To develop a framework to ensure a fair and consistent use of Road Right of Ways within the City, while aiming to reduce liability, and eliminating adverse impacts of use.

2. Definitions:

Administration	An employee or contract employee of the City of Lloydminster.
A-Board Sign	A sign that is "A" shaped and is set upon the ground. An A-Board sign has no external supporting structure.
City	The City of Lloydminster and the area contained within the corporate boundaries of the City.
Encroachment	Anything placed, constructed, or erected on or above the ground that extends into or is placed within the Road Right of Way
License of Occupation	An agreement to the temporary use of a specified portion of Road Right of Way for a specified time and for a consideration where the Licensee is given use of the area and assumes responsibilities for activities carried out within the specified Road Right of Way.
Licensee	Any business, organization, or individual that has been granted legal permission by the City for the temporary use of Road Right of Way through a License of Occupation.
Member of Council	An individual elected pursuant to <i>The Local Government Election Act</i> (Saskatchewan) as a Member of Council.
Road Right of Way	That portion of the roadway between property lines that the public is ordinarily entitled or permitted to use for the passage or parking of vehicles, or for pedestrian use, and can include a sidewalk, boulevard, berm, ditch, swale, and landscaping.

3. Scope:

- 3.1. This Policy applies to all Members of Council, Administration, and members of the public.
- 3.2. This Policy applies only to License of Occupation on land that the City holds an interest in. This policy will not affect Encroachments between private landowners.

4. License of Occupation:

- 4.1. If an undeveloped Road Right of Way is not required for the purpose of a road or other municipal purposes, it may be licensed to a third party for use. A License of Occupation is required to use the City's Road Right of Way for purposes other than municipal use. The City retains the authority to approve or not approve any request for License of Occupation.
- 4.2. A License of Occupation may be approved for the following uses:
 - 4.2.1. Community mailbox;
 - 4.2.2. Artwork (only where permitted by the Public Art Advisory Committee);
 - 4.2.3. Waste bin(s) during construction;
 - 4.2.4. Temporary sign in direct relation to a construction project, including advanced warning or information signage as well as temporary traffic control devices;
 - 4.2.5. Benches with or without advertising materials; and
 - 4.2.6. Temporary A-Board sign(s) in direct relation to a local community event.
- 4.3. A License of Occupation shall not be approved for the following uses:
 - 4.3.1. Parking lots;
 - 4.3.2. Signs or banners for business identification or advertisement;
 - 4.3.3. Permanent structures, including, but not limited to; signs, walls or fences; and
 - 4.3.4. Storage of hazardous materials.

5. Approval Requirements:

- 5.1. The following shall be considered when reviewing a License of Occupation application:
 - 5.1.1. Setbacks from the back of curb, edge of sidewalk or walking trail, edge of access or driveway apron, municipal infrastructure or servicing, traffic control devices, and other License of Occupation locations.
 - 5.1.2. Duration of the License of Occupation.

- 5.1.3. Motorist and pedestrian traffic sightlines and stopping sight distances.
 - 5.1.4. Size of the License of Occupation use as defined in 4.2.
 - 5.1.5. Internal referral with City departments such as engineering, planning, roads and parks.
 - 5.1.6. Temporary signs in direct relation to a construction project, in particular, traffic control devices, shall be permitted to be placed in contravention of 5.1.1 if required to in order to adhere to applicable codes and regulations governing traffic control devices.
- 5.2. All approved License of Occupations shall:
- 5.2.1. Maintain insurance for the duration of the License of Occupation and indemnify the City;
 - 5.2.2. Meet the requirements of the Land Use Bylaw, where applicable; and
 - 5.2.3. Meet the requirements of the Municipal Development Standards, where applicable.
- 5.3. The City reserves the right to refuse the issuance of a License of Occupation, or if a License of Occupation is issued, the right to terminate the License of Occupation.
- 5.4. Applications for a License of Occupation shall be accompanied by a fee of two hundred dollars (\$200) prior to consideration of the application for use of the Road Right of Way.
- 5.4.1. For multi-year License of Occupation Agreements, this fee shall be an annual fee.
 - 5.4.2. In the event of multiple items placed within a Road Right of Way, under one License of Occupation Agreement, the fee shall be applied to each individual item placed.
 - 5.4.3. Non-profit organizations are exempt from paying the application fee for A-Board signs. However, a License of Occupation agreement to a maximum term of two (2) years, is still required.
 - 5.4.4. Artwork is exempt from paying the application fee. However, a License of Occupation agreement is still required.

6. Penalty:

- 6.1. Any member of Administration found to be in violation of this Policy may be subjected to a disciplinary action. Such action may be dependent upon the nature of the breach of this Policy; discipline may range from a verbal warning to dismissal with cause.
- 6.2. Any Member of Council found to be in violation of this Policy may be dealt with utilizing the "*Code of Conduct Bylaw*" or provisions of "*The Lloydminster Charter*."

7. Responsibility:

- 7.1. City Council shall review and approve all policies.
- 7.2. Administration shall administer this Policy through the use of a supporting procedure.
- 7.3. Sponsoring Department shall be responsible for creating and amending a supporting procedure.

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