



ENGINEERING SERVICES

GOVERNANCE AND PRIORITIES COMMITTEE

OCTOBER 15, 2024

OUTLINE

Core Service Areas

Overview of Programs within Engineering Services

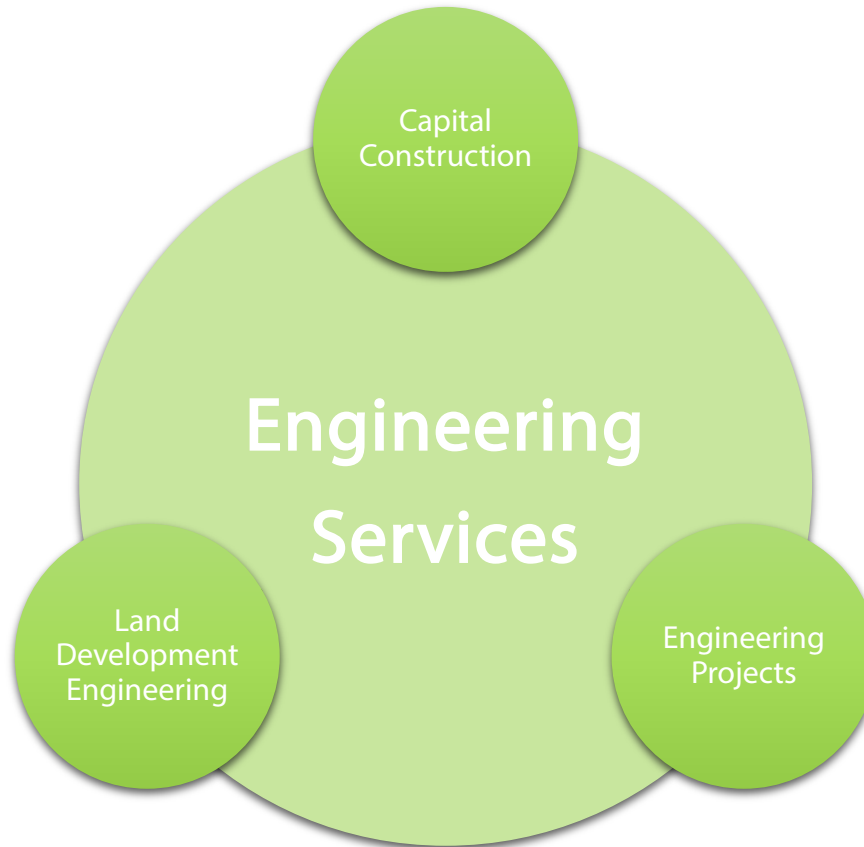
- 2024 Key Projects
- 2024 Key Activities

Project Communication Updates

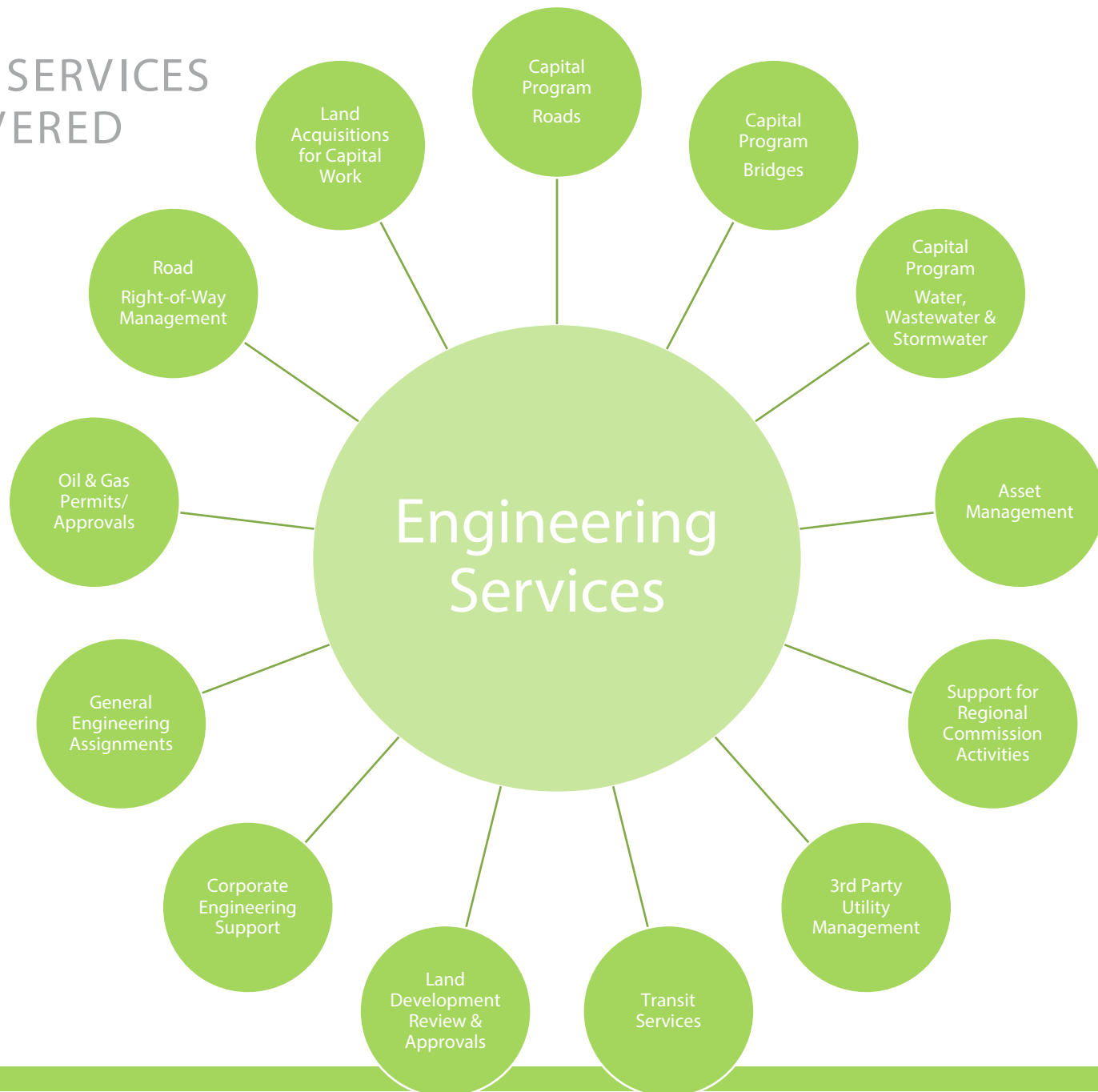
What's Next

CORE SERVICES – BUSINESS UNITS WITHIN ENGINEERING

Three Business Units within Engineering Services



CORE SERVICES DELIVERED



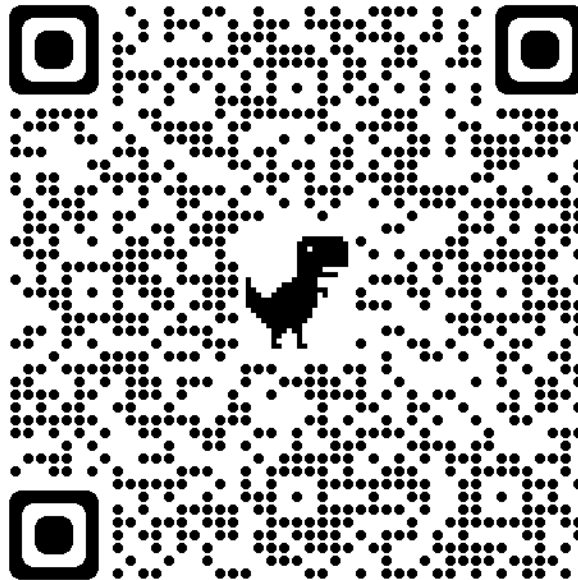
KEY PROJECTS IN 2024

- Capital Program Allocated to Engineering in 2024 (\$34.9 M)
 - Increase of ~\$7M from 2023
- 2024 Program Highlights
 - Road Program
 - Bridge Program
 - Water/ Wastewater Program
 - Stormwater Program
 - Emerging Capital Initiatives
 - Wabamun Wastewater System Improvements
 - Acheson Intersection Improvements

KEY PROJECTS IN 2024

2024-2027 Infrastructure Program available at:

- <https://www.parklandcounty.com/en/roads-and-transportation/current-capital-infrastructure-program.aspx? mid =72781>
- <https://www.parklandcounty.com/en/roads-and-transportation/resources/Documents/2024-2027-Cap-Prog-Complete-Booklet.pdf>



PARKLAND COUNTY'S 2024 ROAD PROGRAM

- **ACP Surfacing Program (~\$1,700,000)**

- Rge Rd 14, Hwy 16 to Twp Rd 534
 - ↳ ACP overlay on approximately 3.2 km of rural grid road
 - ↳ Project Completed in September 2024
 - ↳ Ongoing work with guardrails and pavement markings in October 2024
- Rge Rd 32 (Duffield Rd), Duffield to Twp Rd 530
 - ↳ ACP overlay on approximately 600m of rural grid road
 - ↳ Project deferred due to contract pricing vs budget
 - ↳ Project will be completed in 2025 and will extend from Duffield to Highway 16 (approximately 2.2 km). To be completed as one larger initiative.

- **Graded Aggregate Seal Coat Surfacing (~\$700,000)**

- 4 locations; along Twp Rds and Rge Rds
- Both washed and unwashed chip, fog sealing
- Total of 12.8 km to be surfaced in 2024
 - ↳ Project completed in August 2024

ACP SURFACING: RGE RD 14, HWY 16 TO TWP RD 534



Grinding off the surface layer of existing Range Rd 14



First pass complete. Repeat until the whole surface has been removed. Placement of ACP (new asphalt) goes on top of this surface to maintain width and strength of road

ACP SURFACING: RGE RD 14, HWY 16 TO TWP RD 534



Grading deeper depth in areas where we have transverse cracking on the roadway



Area cut out will be filled with asphalt prior to paving the length of the roadway

PARKLAND COUNTY'S 2024 ROAD PROGRAM (CONT)

- **Surfaced Road Rehabilitation Program (SRRP) (~\$815,000)**
 - New TRIAL program in Parkland County
 - Includes digging out small sections of soft or failing road segments, strengthening subsurface soil conditions and replacing the roadway
 - This would be considered partial reconstruction and is a lower cost alternative to Full Depth Reclamation over entire length
 - Focus in 2024 is on Twp Rd 512 (Holburn Rd), Rge Rd 275 to Rge Rd 280
 - ↳ Project Completed in September 2024

TWP RD 512 (HOLBURN RD), RGE RD 275 TO RGE RD 280

- Reclamation of existing road surface in failed road sections
- Compaction and Grading would occur after this stage followed by new pavement surface on reconstructed road base



Water Truck and Roadway Reclaimer pulverizing the existing road surface.

PARKLAND COUNTY'S 2024 ROAD PROGRAM (CONT)

- **Roadway Reconstruction/ Replacement**

- **Mink Lake Road, Hwy 770 to Rge Rd 25 (~1,000,000 remaining)**

- ↳ Majority of work activities completed in 2023

- ↳ Remaining work include second lift of asphalt, landscaping and intersection paving

- Project is fully complete.

- **Prospector's Point Road, Twp Rd 511 (Graminia Rd) to Parking lot (\$150,000 design)**

- ↳ Multiple improvements including Full Depth Reconstruction in some segments, spot repairs and strategic improvements, drainage repairs, asphalt surfacing and gravel surface restoration

- ↳ Length of project is 1.6 km

- Design activity to be complete by end of November 2024, including report to Council
 - Construction planned for summer 2025

- **Sundance Road, West of TransAlta Sundance Plant (\$150,000 design)**

- ↳ Surface improvements needed to remove differential settlements along roadway

- ↳ Length of project is about 600 m

- Design activity planned for Fall 2024 with construction planned for summer 2026

PARKLAND COUNTY'S 2024 ROAD PROGRAM (CONT)

- **Other notable activities in 2024 include:**

- **Transportation Impact Assessment Update for Acheson / Big Lake (\$75,000)**

- ↳ Previous version completed in 2018
 - ↳ Analysis was complete prior to major development initiatives being completed, namely Champion Pet Foods, Amazon, and others
 - ↳ Will ensure current and accurate information for development-based decisions
 - Planned activity for late 2024. Currently at risk for start-up in 2024. Will seek carry-forward approval to complete in 2025.

- **Street Light Installations in Acheson (~\$200,000)**

- ↳ Project identified to fill in “black-out” areas on major road networks in Acheson
 - ↳ Priority location is identified between Highway 60 and Acheson Fire Hall
 - ↳ Majority of work activity to be completed by FORTIS
 - Fortis has been provided direction to start. Timing based on their crew availabilities. Anticipate work to occur in October/November 2024 with completion by end of 2024.
 - Specific area for new streetlights is on 114 Avenue, between the Acheson Fire Hall and Highway 60

PARKLAND COUNTY'S 2024 **BRIDGE** PROGRAM

- **Bridge Replacement at 2 locations (\$2,020,000)**

- Bridge File 70230 - (Twp Rd 510, 1.2 Km east of Rge Rd 50)
 - ↳ Project is estimated to be over budget based on final design cost estimate
 - ↳ **Was planned for Summer 2024. Now deferred to Summer 2025 based on budget shortfall**
 - ↳ **Priority project for 2025 based on condition rating.**
- Bridge File 73894 - (Twp Rd 531A, 800 m west of Seba Beach)
 - ↳ Design was completed in 2023. Project is ready to advance subject to final land negotiations
 - ↳ **Project completed in September 2024 with seasonal deficiencies and landscaping.**

- **Bridge Assessments – Level I and Level II (\$50,000)**

- Inspection of bridges based on type and age, as well as previous inspections.
- Follows the Provincial BIM rating system and ensures quality long-term infrastructure
 - ↳ **Work is complete for Level 1 assessments.**
 - ↳ **Work is assigned and being completed for Level II inspections in October/November 2024.**

- **Bridge Design work for 2024 Construction (\$220,000)**

- Two bridge project to be issued for design consulting services
- Anticipate these will become 2025 Construction projects
 - ↳ **Designs planned in 2024 are complete.**
 - ↳ **One additional design for BF 00110 approved by Council in September 2024 is ongoing with anticipation that the construction on this bridge will occur in 2025.**

PARKLAND COUNTY'S 2024 WATER/WASTEWATER PROGRAM

- **Acheson Zone 5 Wastewater Trunk Upgrade (\$2,650,000)**

- This is a capacity upgrade for Acheson Zone 5 wastewater system
- Additional work being completed to support ongoing development
 - ↳ Project had a late summer start and is nearly complete. Full project completion anticipated by November 2024.
 - ↳ Minor activities may carry forward – landscaping and seasonal deficiencies.

- **Entwistle Water Line Crossings of Hwy 16 (\$50,000)**

- Part of the Water rehabilitation programs and funded through Utility Rates
- Addresses aging infrastructure and provide a looping option for optimal service continuation in the event of a failure or line break
 - ↳ Activity is yet to be assigned. Opportunity for late 2024 activity to occur.

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PARKLAND COUNTY'S 2024 **WATER/WASTEWATER** PROGRAM (CONT)

- **Entwistle Water Treatment Plant/ Reservoir (\$9,000,000)**

- Design completed in 2023 with planned construction in 2024-2025
- Prequalified contractor list is in place
- Final procurement process ongoing
 - ↳ Project awarded and advancing forward as per contractor's submitted schedule. Base and walls of reservoir are currently under construction.
 - ↳ Project is on-schedule for completion in Fall 2025.
 - ↳ Timing was delayed to accommodate timelines for a grant application under the Alberta Municipal Water/Wastewater Partnership (AMWWP).
 - Project was not provided grant funding approval upon 2nd request.

PARKLAND COUNTY'S 2024 **WATER/WASTEWATER** PROGRAM (CONT)

- **Other notable activities in 2024 include:**

- **Wet Weather Flow Monitoring (\$30,000)**

- ↳ New Program for 2024

- ↳ Flow monitoring equipment will be installed to collect data on the inflow/infiltration occurring within the existing wastewater systems

- ↳ Provides information on where there are issues, proves out capacity constraints or opportunities and helps direct investments in the system for maximum efficiency

- Planned activities for 2024 are complete

- **Annual CCTV Program (\$65,000)**

- ↳ Ongoing Annual Program

- ↳ Includes video analysis of underground infrastructure and provides important information on the condition of existing infrastructure. This is critical to plan for future improvements, replacements and upgrades prior to failure of systems.

- Planned activities for 2024 are ongoing. All work expected to be completed in 2024

PARKLAND COUNTY'S 2024 **STORM WATER** PROGRAM

- **Stormwater Rehabilitation in Acheson Zone 3 (\$2,645,000)**

- Design completed in 2023 with planned construction in 2024
- Work activity includes reconstruction of an underground storm system between two storm ponds in Acheson Zone 3
- Project is intended to improve overland flooding and historical drainage challenges in the area
- Project will also address local encroachment challenges with existing development and environmental contamination concerns
 - ↳ Project was tendered in February 2024 and closed well above allocated budget
 - ↳ Engineering Services recommended the appropriate path forward would be to complete a value engineering exercise on the completed design and determine if there were any measurable cost savings in the project
 - ↳ Value Engineering and rescope of design is complete. Updated design should bring project costs down and we look forward to advancing forward with updated plan and schedule in 2025

PARKLAND COUNTY'S 2024 **STORM WATER** PROGRAM (CONT)

- **Stormwater Master Plan Implementation – Phase II (\$75,000)**

- Ongoing review of the Recommended Strategic Action Items from the Stormwater Master Plan is occurring. Engineering Services intends work with Drainage Services to review areas that would benefit most from smaller scale, focused action items.
 - ↳ Area of focus has been determined to be within the Rolling Hills subdivision area. Consultant will be assigned a responsibility to complete a full review and analysis including direct assignment of tasks to improve drainage in the area. Early action items will be completed as identified and as budget/resources allow

- **Acheson /Big Lake Fenceline Approval Update (\$30,000)**

- 5-year update on the Fenceline Approval, which is granted by Alberta Environment and Parks (AEP)
- This provides limited authority under the Provincial Water Act for Parkland County to make quick and efficient decisions on development
 - ↳ This activity is planned for Q3/Q4 2024. Project to be started in October 2024

PARKLAND COUNTY'S 2024 EMERGING CAPITAL PROGRAM

• Wabamun Initiatives (\$5,000,000)

- Engineering's participation includes the proposed Wastewater System Improvements
- Work activities include the replacement and upgrade of aged infrastructure, lift station renewal, force main replacement/upgrade lagoon restoration, etc.
 - ↳ Work activities to be divided into multiple individual assignments:
 - Osprey Subdivision Wastewater Line Replacement
 - Wabamun (less Osprey) Wastewater Line Rehabilitation – CIPP lining
 - Lagoon Rehabilitation – Dredging
 - Lagoon Rehabilitation – Landscaping, Berm Stabilization, Inlet/Outlet Replacement
 - Lift Station and Pumping Capacity Review
- Project Status is as follows:
 - ↳ Consultant to oversee all activities in place as of September 2023
 - ↳ Osprey line replacement is 80% complete as of Q3 2024
 - ↳ CIPP Lining is 80% complete as of Q3 2024
 - ↳ Lagoon Dredging is 100% complete as of Q3 2024
 - ↳ Lagoon Rehabilitation has been awarded and work ongoing into Q4 2024
 - ↳ Majority of the project is on-track for completion by March 2025. Minor activities with the lagoon rehabilitation may carry into Q2 2025.

WABAMUN WASTEWATER IMPROVEMENTS



View of the bottom of a trench within Osprey Subdivision. New Sanitary pipe on sand/aggregate bedding



Osprey post sanitary line repairs

WABAMUN WASTEWATER IMPROVEMENTS



Wabamun Lagoon – Desludging Project



Wabamun – Desludging project

PARKLAND COUNTY'S 2024 EMERGING CAPITAL PROGRAM (CONT)

- **Acheson Initiatives (\$18,500,000)**

- Engineering is moving forward with this initiative and making good progress. The project includes the following activities:
 - ↳ Reconstruction of Hwy 16A and Spruce Valley Road Intersection (\$7.75M)
 - ↳ Reconstruction of Hwy 16A and Pinchbeck/Bevington Road Intersection (\$10.75M)
- At both intersection locations:
 - ↳ Improve channelization, add turn bays and tapers, add signal lights and streetlighting, connect north/south roadways into intersection
 - ↳ Pinchbeck/Bevington Road Intersection includes a new water and wastewater line crossing
- Project Status is as follows:
 - ↳ Design is at 100% completion
 - ↳ Construction Contract is about 50% complete at end of Q3
 - ↳ Significant volume of work ongoing through October 2024 with project completion targeted for mid-November 2024
 - ↳ There is risk of weather creeping into project and impacting schedule. Project team are doing all they can to reach the completion in 2024.

PROJECT COMMUNICATION IMPROVEMENTS

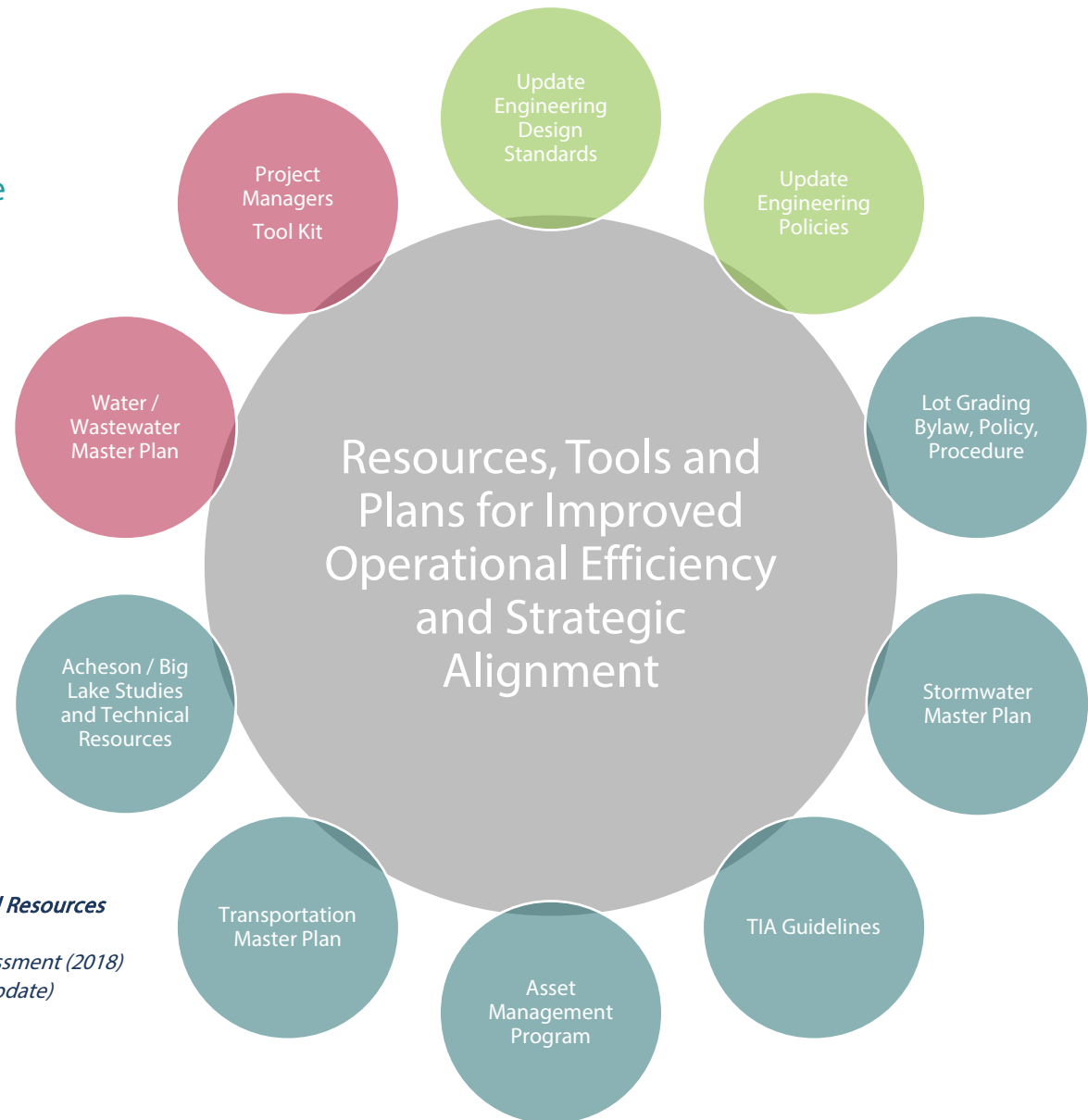
- **Information on major projects has been posted on YourParkland.ca**
 - Engineering provided project specific details on major projects
 - Information was available to the public to a greater extent than prior years
 - Pertinent project details shared include:
 - ↳ Project Description and Scope of Work
 - ↳ Project Schedule with key dates and timelines
 - ↳ Contact information for on-site inquiries (Contractor and Consultant)
 - ↳ Contact information for Parkland County Representatives
 - ↳ Project Updates and Key Milestones as they are achieved
 - ↳ Site Photos
 - Residents have been able to subscribe to the page and follow along with updates as work activity progresses

WHAT'S NEXT

Light Green – in progress

Dark Green – complete and in use

Red – future initiative



Acheson / Big Lake Technical Studies and Technical Resources include (not limited to):

- *Acheson ASP level Transportation Impact Assessment (2018)*
- *Acheson Big Lake Area Structure Plan (active update)*
- *Water Servicing Plan (2022)*
- *Wastewater Servicing Plan (2022)*
- *Storm Water Servicing Plan (2020)*
- *Acheson Fenceline Approval (2022)*

QUESTIONS?

