

Infrastructure Master Plan Recommendations

Table 8.1: Transportation Infrastructure Project Costs

Category	Project / Study	High Level Cost (\$M)	Notes
Planning Horizon: Phase 1 (2024)			
Capital Projects			
Studies	Funding Mechanism Study	0.10	See section 8.2.5 (additional studies) for details
	Sturgeon Road Functional Study	0.25	
	Transportation Master Plan	0.30	
	Transit Feasibility Study	0.05	
	Roadway Classification Consolidation Study	0.02	
Total Cost (million)		\$ 0.72	million
Planning Horizon: Phase 2 (2034)			
Capital Projects	Cardiff Road East and Highway 28	0.5 / 2.0	Signal / Roundabout~
	Starkey Road and Highway 37	0.5 / 2.0	Signal / Roundabout~
	A – Sturgeon Road Widening (with Highway 28 intersection improvements) B - 127 Street Extension from AHD to Sturgeon Road (two lanes)	A – 31.0 B – 34.7	A - Geometric improvements and widening / B - Construct 127 Street Extension
Total Cost (million)		\$ 32.0/36.7	million
Planning Horizon: Phase 3 (2044)			
Capital Projects	Range Road 230 and Highway 37	0.0	Monitoring
	Range Road 240 and Highway 28	0.0	Monitoring
Total Cost (million)		\$ 32.7/37.4	million

~The type of intersection required should be discussed with Alberta Transportation.

Table 8.2: Water System Projected Costs

Category	Project / Study	High Level Cost (\$M)	Notes
Planning Horizon: Phase 1 (2024)			
Capital Projects	Morinville Booster Upgrade	0.1	Timing and cost TBD
	SIP Reservoir	1.4	Timing TBD
	AIH Hwy 643 Water Main	6.5	
Studies	Water / Utility Master Plan	0.2	
	Data Collection & Analysis	0.1	Annual cost
Total Cost		\$ 8.3	million
Planning Horizon: Phase 2 (2034)			
Capital Projects	Allin Ridge Reservoir	2.0	
	SIP Reservoir	1.0	
	Cardiff / RQB Booster Upgrade	0.2	Timing and cost TBD
	SV East & CFB Edmonton Main	1.5	New pipe from Allin Ridge Reservoir
Studies	Update Water / Utility Master Plan	0.2	
	Villeneuve Airport Servicing Study	0.1	
	Data Collection & Analysis	0.1	Annual cost
Total Cost		\$ 5.1	million
Planning Horizon: Phase 3 (2044)			
Capital Projects	Allin Ridge Reservoir	6.2	
	Allin Ridge Supply Line	3.2	
	SIP Reservoir	0.8	
	Cardiff Reservoir	0.8	To provide full fire flows
	NL / ProNorth Reservoir	1.0	Timing TBD; to provide fire flows
	Villeneuve Reservoir	10.4	To provide full fire flows
	Riviere Que Barre Reservoir	1.8	Timing TBD
Studies	Update Water / Utility Master Plan	0.2	
	Data Collection & Analysis	0.1	Annual cost
Total Cost		\$ 24.5	million

Notes:

1. Cost estimates exclude local distribution system that would be the responsibility of local developers.
2. Water reservoir costs are based on \$2000 per cubic metre and include pumping costs
3. All residential growth areas are assumed to be upgraded with fire flow storage by the end of Phase 3 (2044)
4. Data collection and analysis includes purchase / upgrading monitoring equipment and staff time to analyze the data. High level costs are in the order of \$0.1M per year.
5. Hwy 643 water main cost from 2019 Heartland Utility Servicing – Update Report.

Table 8.3: Wastewater System Projected Costs

Category	Project / Study	High Level Cost (\$M)	Notes
Planning Horizon: Phase 1 (2024)			
Capital Projects	Villeneuve Lift Station replacement	2.0	Further study needed
	Villeneuve Forcemain	0.5	Further study needed
	Villeneuve Lagoon Rehabilitation / Upgrade	4.0	
Studies	Wastewater / Utility Master Plan	0.2	
	Data Collection & Analysis	0.1	Annual cost
Total Cost		\$ 6.8	million
Planning Horizon: Phase 2 (2034)			
Capital Projects	SV East & CFB Edmonton - Off-site Trunk	2.0	
	SV East & CFB Edmonton - Lift Station to START	4.0	Further study needed
	SW Sturgeon Valley Trunk to START	4.0	
	ProNorth Lift Station	2.0	Further study needed
	Villeneuve Airport Lift Station and Forcemain	3.0	Further study needed
Studies	Update Wastewater / Utility Master Plan	0.2	
	Villeneuve Airport Servicing Study	0.1	
	Data Collection & Analysis	0.1	Annual cost
Total Cost		\$ 15.4	million
Planning Horizon: Phase 3 (2044)			
Capital Projects	SV East & CFB Edmonton - Lift Station and Forcemain	3.0	
	AIH 300mm West Forcemain	4.0	
Studies	Update Wastewater / Utility Master Plan	0.2	
	Data Collection & Analysis	0.1	Annual cost
Total Cost		\$ 7.3	million

Notes:

1. Cost estimates exclude local collection system that would be the responsibility of local developers.
2. Cost estimates for lift stations were based on typical costs for the expected flow rates.
3. Data collection and analysis includes purchase / upgrading monitoring equipment and staff time to analyze the data.
High level costs are in the order of \$0.1M per year.

Table 8.4: Stormwater System Projected Costs

Category	Project / Study	High Level Cost (\$M)	Notes
Planning Horizon: Phase 1 (2024)			
Capital Projects	ProNorth SWMF / Channel Upgrades	1.0	Order of magnitude cost
	SIP Existing Outfall Erosion Protection	5.0	Potential cost; further study needed
	Villeneuve 600mm diameter storm sewer	2.0	
Studies	Update Rural Drainage Master Plan	0.1	
	Update Stormwater Master Plan	0.2	Annual cost
Total Cost		\$ 8.5	million
Planning Horizon: Phase 2 (2034)			
Capital Projects	AIH Existing Line 1 Drainage Channel	1.0	Order of magnitude cost
	ProNorth Drainage Channel	0.5	Order of magnitude cost
	Sturgeon Valley East Proposed 1.5km Trunk	3.0	
	Potential AIH Basin 5 & 6 Outfalls	10.0	Order of magnitude cost
	Villeneuve Airport Off-site Drainage Channel	0.3	
Studies	Update Rural Drainage Master Plan	0.1	
	Update Stormwater Master Plan	0.2	Annual cost
Total Cost		\$ 15.1	million
Planning Horizon: Phase 3 (2044)			
Capital Projects	Potential AIH Basin 5 & 6 Outfalls and Channels	10.0	Order of magnitude cost
	Various Sturgeon Valley Outfall Channels	2.0	Further study needed
	Potential CFB Edmonton Outfall Channel	0.5	Further study needed
Studies	Update Rural Drainage Master Plan	0.1	
	Update Stormwater Master Plan	0.2	Annual cost
Total Cost		\$ 12.8	million

Notes:

1. Cost estimates exclude local drainage system and SWMF that would be the responsibility of local developers.
2. All drainage channel and outfall costs are order of magnitude only and further study is needed to refine costs.