

Public Works Roads & Drainage Improvement Program & Strategy

State of Current Infrastructure

- The County is currently exhibiting a significant amount of infrastructure failures and unless some strategic approaches are sought-out at these locations, these failures will continue to occur
- The scale of failures contain a significant budgetary impact, Lamont County is currently witnessing a fair amount of constraints at this time
- Roads are deteriorating and loss of structural capability is occurring
- Culvert performance is non-desirable
- Non-focused drainage configurations are causing nuisances
- Infrastructure is succumbing to inclement weather conditions as opposed to performing to a set standard of inclement weather
- Infrastructure should be planned and maintained to perform up to a set standard of weather events and/or natural disaster

Causes of Compromised Infrastructure

- Infrastructure built to the standard of the day and no longer sufficient
- Changing topography and landscape over the life-cycle of surrounding infrastructure
- Incorrect application of life-cycle preventative maintenance strategy
- Possible lack of correct execution during installations could be factor for some subject locations
- Non compliance to set directives or initiated capital and operations plans
- Operational deviation day to day
- Lack of project management

General consequences of Deteriorating Infrastructure

- Organizational disfunction
- Public health and safety concerns, not meeting municipal servicing requirements
- Agency non-compliance
- Very low servicing standard/level
- Unsatisfied stakeholders/rate-payers
- Investment reluctance
- Reputation
- Re-occurring problems not solved
- Can further deteriorate connected infrastructure and areas
- Most likely higher expenditures over time
- Not consistent with organizational objectives
- Infrastructure to exhibit eventual point of decimation beyond repair/re-habilitation & maintenance

Focus

- What we are experiencing at Lamont County is not an isolated incident and we are facing a similar situation than other municipalities however, the chosen course of action and decision making of this time period will heavily impact the forward or alternate direction of Lamont County's infrastructure
- To tailor capital and operations planning consistent with a technical and functional based infrastructure approach, representative of the initiatives, cost-estimates, priorities, focus and the execution of requirements to ensure the manipulation and improvement of identified infrastructure in order to achieve future desired service levels, plans and viable maintenance procedures

Solutions

- Commit to a plan wholly consistent and collective of an organizational buy-in tailored for the systematic operation of a day to day function right down to the ground employee holding the shovel and rake
- Choosing the correct standards to implement and perform through-out the desired life cycle of the select infrastructure and ensuring execution with quality control and assurance mechanisms
- Allowing for the appropriate project management life cycle to take place
- Ensure the participation and input of all appropriate applicable stakeholders to ensure the plan remains consistent (or possibly sets out) with desired Lamont County objectives and vision. Ensure the plan is tailored to future considerations
- Utilize the legislative tools available within our toolbox to control and direct the plan to the desired destination (local improvements, levies, servicing agreements, grants, servicing requirements, water act etc..)

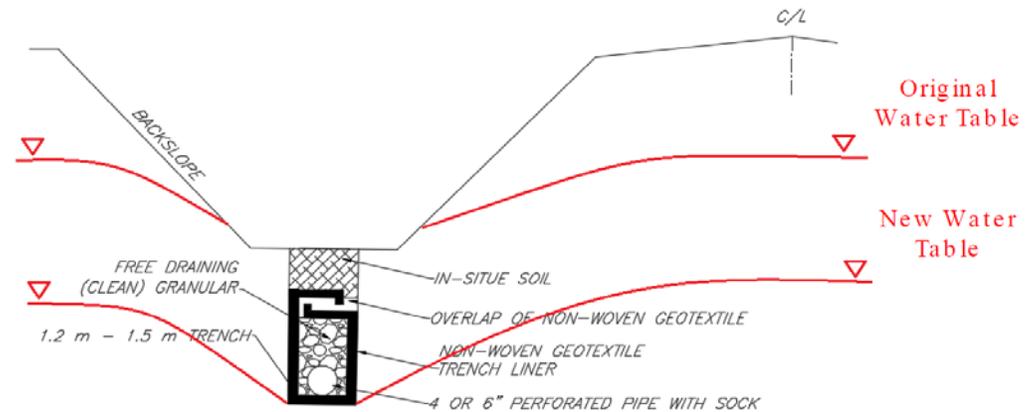
Table 1-4. Project Management Process Group and Knowledge Area Mapping

Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
4. Project Integration Management	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project Work 4.4 Manage Project Knowledge	4.5 Monitor and Control Project Work 4.6 Perform Integrated Change Control	4.7 Close Project or Phase
5. Project Scope Management		5.1 Plan Scope Management 5.2 Collect Requirements 5.3 Define Scope 5.4 Create WBS		5.5 Validate Scope 5.6 Control Scope	
6. Project Schedule Management		6.1 Plan Schedule Management 6.2 Define Activities 6.3 Sequence Activities 6.4 Estimate Activity Durations 6.5 Develop Schedule		6.6 Control Schedule	
7. Project Cost Management		7.1 Plan Cost Management 7.2 Estimate Costs 7.3 Determine Budget		7.4 Control Costs	
8. Project Quality Management		8.1 Plan Quality Management	8.2 Manage Quality	8.3 Control Quality	
9. Project Resource Management		9.1 Plan Resource Management 9.2 Estimate Activity Resources	9.3 Acquire Resources 9.4 Develop Team 9.5 Manage Team	9.6 Control Resources	
10. Project Communications Management		10.1 Plan Communications Management	10.2 Manage Communications	10.3 Monitor Communications	
11. Project Risk Management		11.1 Plan Risk Management 11.2 Identify Risks 11.3 Perform Qualitative Risk Analysis 11.4 Perform Quantitative Risk Analysis 11.5 Plan Risk Responses	11.6 Implement Risk Responses	11.7 Monitor Risks	
12. Project Procurement Management		12.1 Plan Procurement Management	12.2 Conduct Procurements	12.3 Control Procurements	
13. Project Stakeholder Management	13.1 Identify Stakeholders	13.2 Plan Stakeholder Engagement	13.3 Manage Stakeholder Engagement	13.4 Monitor Stakeholder Engagement	

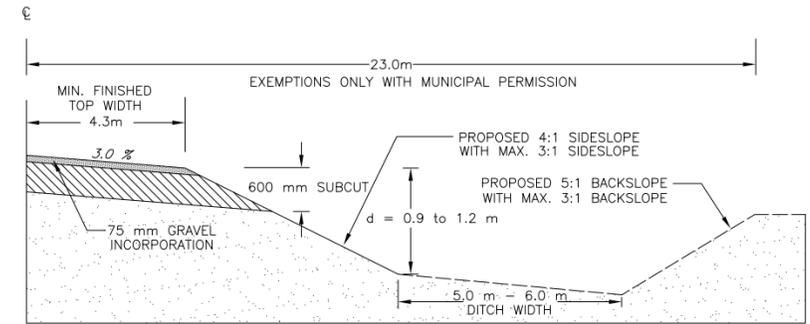
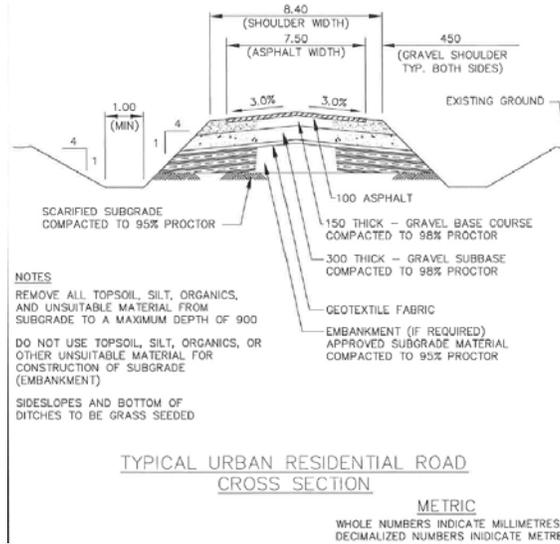
Project Management Fundamentals/ Integrated Change Control

Technical Considerations

- Identify locations and segments of interest. Priority segments or nodes
- Cohesive roads, drainage and utilities strategy (maintenance standards, procedures, future planning)
- Assess requirements of identified locations and segments to unique characteristics
- Use of innovations, industry standards, common practices, common sense and correct specified materials
- Training and education requirements, briefing, on-boarding
- Required Resources (tools, equipment, staff, budgets etc..)

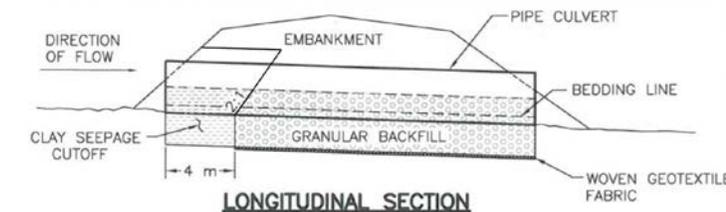
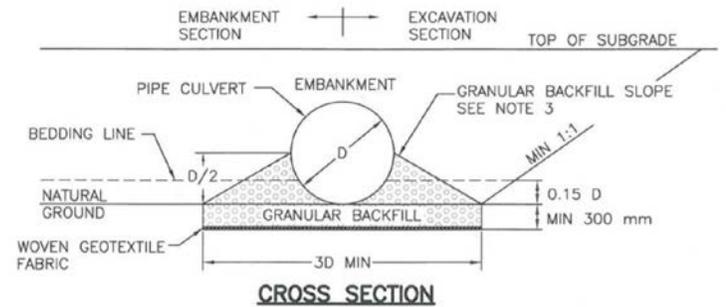


Technical Considerations Continued Standards



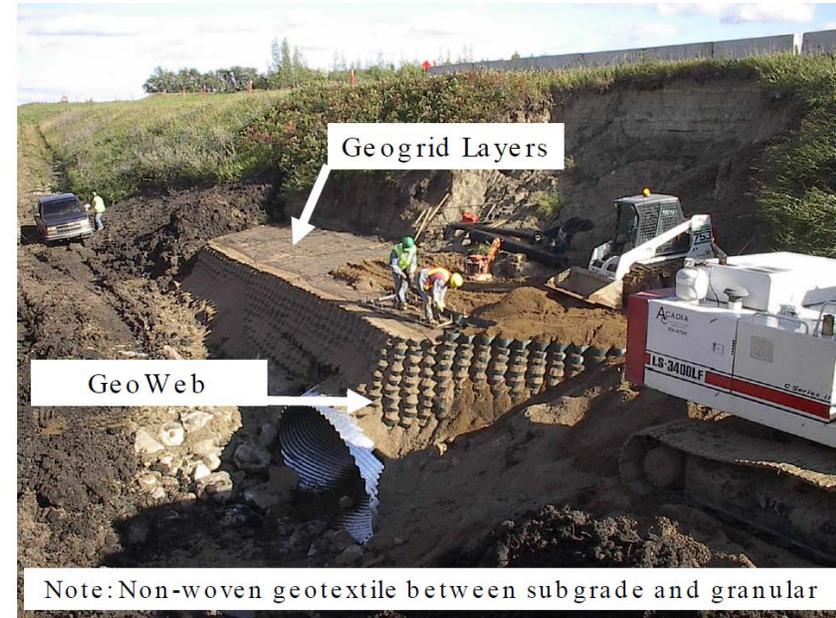
Rural Municipality of
Corman Park

PUBLIC WORKS
PRIMARY GRID - TYPICAL CROSS SECTION
SUBGRADE



Technical Considerations Continued Alternatives

- Geotextiles – made from polymers, woven and non-woven
- Geo-Grids
- Geo-Membranes
- Geo-Pipes
- Stabilizers
- Erosion mattings
- Neo/Geo-web



- Promotes separation, reinforcement, filtration, drainage, erosion control and others

Asset Management

- Asset Management fundamentals need to be executed and a viable composition of the strategy/plan throughout
- The use and commitment to an accurate data-base is required given the large boundary of the county
- Attribute data and appropriate tracking is required to ensure further statistics can be pulled from the data base as a knowledge repository to provide an accurate representation of the actual infrastructure and value statistics for budgeting requirements
- We have to isolate and expose opportunities within assets and isolate and remediate/remove or transfer the risk of liabilities

Conclusion

- If the buy-in of this plan is not chosen, than what are the alternative options/avenues? How will we ensure adequate service levels and desired preventative maintenance strategies in the future?
- In order for the plan/strategy to function, it must be committed to and allowed to be carried-out from initiation to completion. Day to day deviance of the plan is a deterrent and creates scope creep.
- The plan/strategy must be aligned with the derived business case to ensure success and a benefits management plan should be derived to ensure the correct management and maximization of the resulting benefits
- The commitment to such a plan is in the interest of the entire County as a collective. It is in my opinion that no consultant, consulting firm or external party can achieve this in whole on behalf of the County. The County, in order to ensure this vision can only achieve it itself.