

COUNTY OF MIDDLESEX CORE ASSET MANAGEMENT PLAN ‘AT A GLANCE’



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What is Asset Management?

- ▶ “Asset management is an integrated approach to the maintenance, operation and ownership of assets, with an appropriate level of risk, and a commitment to the delivery of services to an established level.”
- ▶ Five key elements:
 - ▶ Defined level of service
 - ▶ Management of demand (growth and/or decline)
 - ▶ Life cycle planning
 - ▶ Minimizing risk
 - ▶ Funding of long term capital plans

Middlesex County Core Assets

▶ Roads

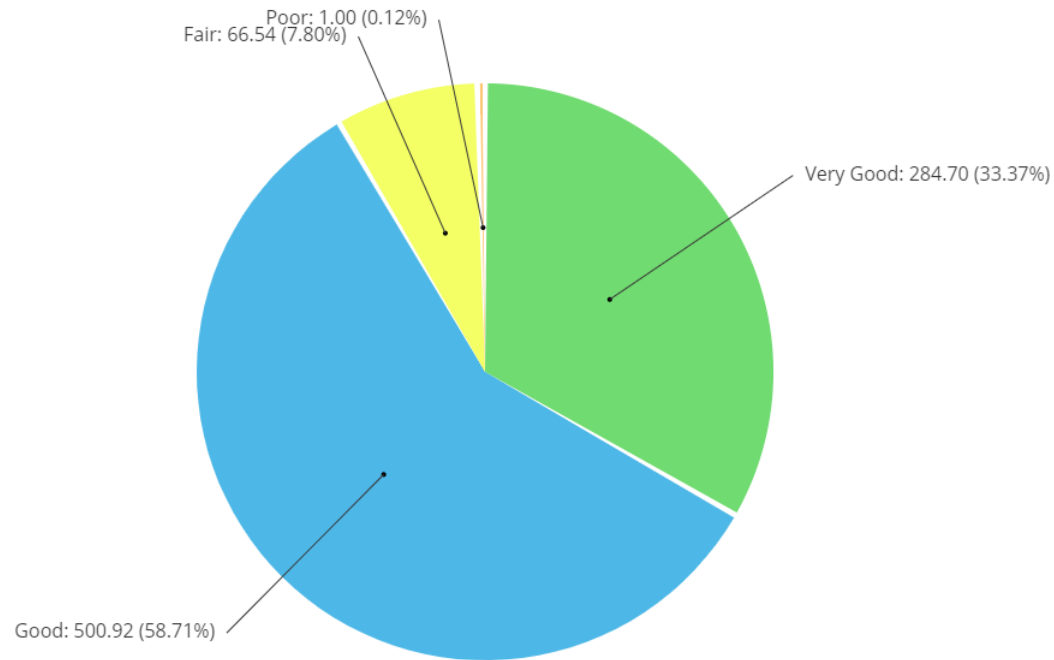
- ▶ Over 1,700 lane km of paved roads
- ▶ Mainly rural mix of class 2 and class 3 arterial roads

▶ Bridges

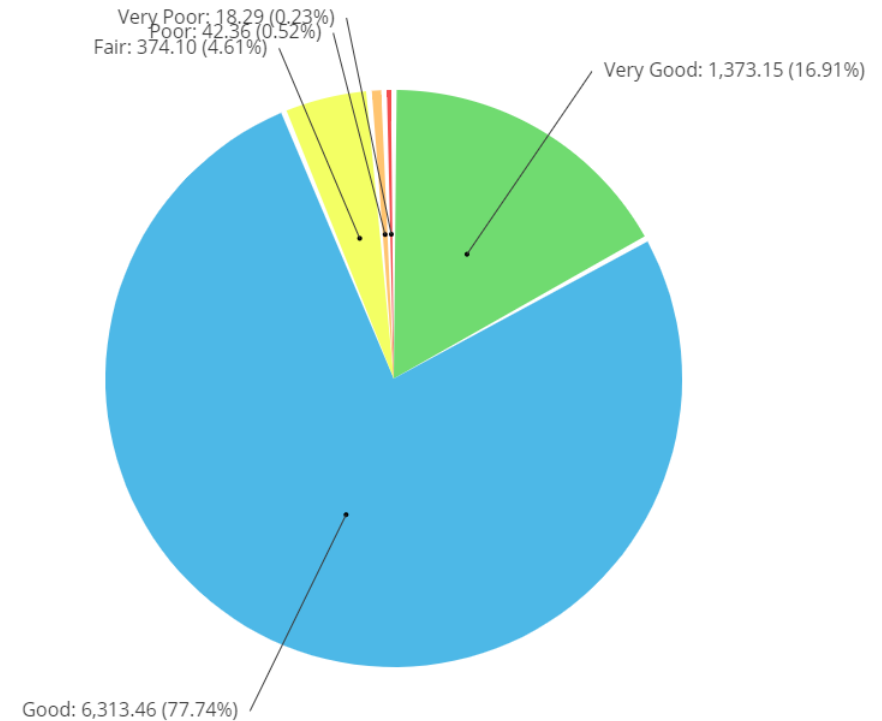
- ▶ 250 total structures
 - ▶ 122 bridges
 - ▶ 127 large culverts
 - ▶ 1 earth dam

Condition ratings 'at a glance'

Roads (by km)

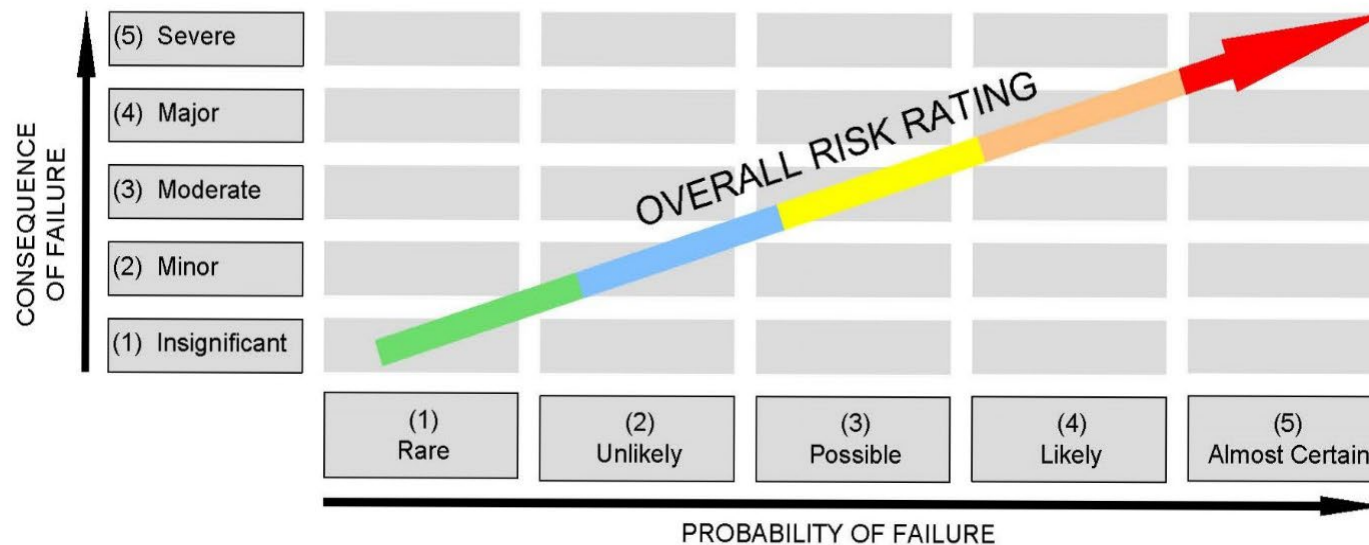


Bridges (by deck area)



Risk

- ▶ Risk is assessed as a function of consequence and probability of failure of an asset
 - ▶ Consequences include impacts on health & safety, financial, environment
 - ▶ Probability generally based on asset use and condition

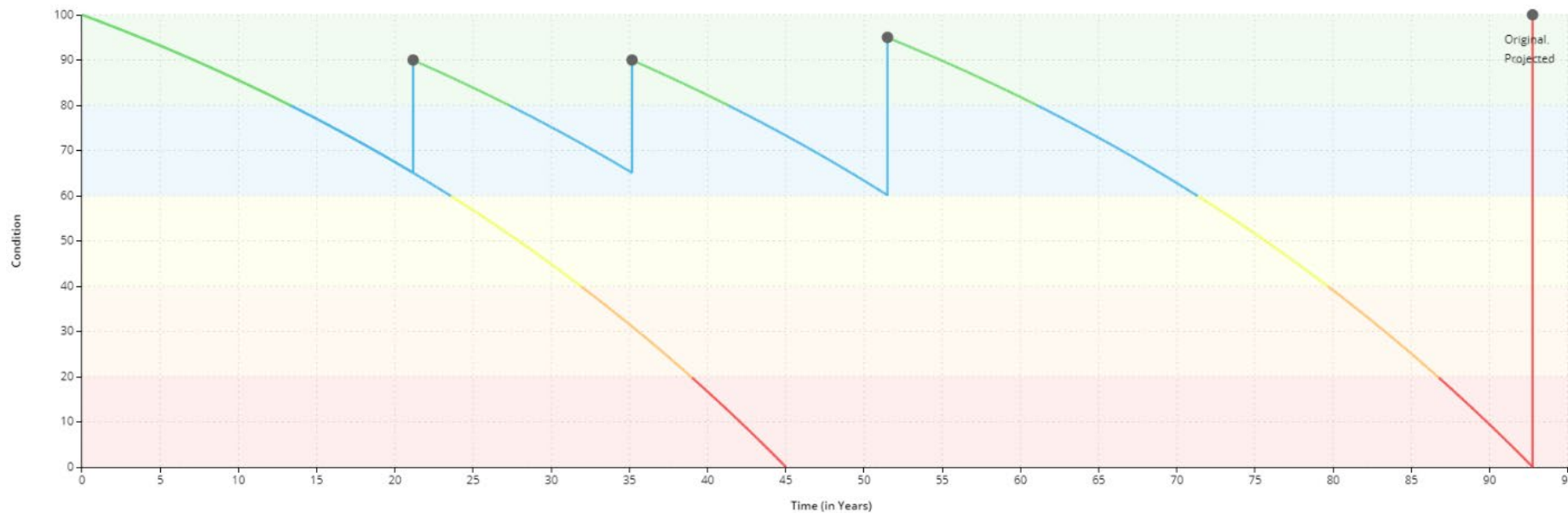


Asset Risk 'At a Glance'

Consequence	5	1 Asset 1,313.00 m \$6,180,000.00	11 Assets 1,416.91 m \$67,376,000.00	1 Asset 89.56 m \$6,193,000.00	0 Assets - \$0.00	0 Assets - \$0.00
	4	4 Assets 47.90 m \$4,268,000.00	200 Assets 4,869.30 m \$259,295,000.00	17 Assets 233.34 m \$12,788,000.00	2 Assets 42.36 m \$954,000.00	1 Asset 18.29 m \$413,000.00
	3	11 Assets 7.30 km, unit(s) \$1,823,943.55	18 Assets 107.60 km, m \$5,192,000.00	1 Asset 1.00 unit(s) \$296,883.42	0 Assets - \$0.00	0 Assets - \$0.00
	2	17 Assets 17.30 km, unit(s) \$3,914,720.89	3 Assets 2.40 km, unit(s) \$526,802.85	1 Asset 1.00 unit(s) \$210,158.08	0 Assets - \$0.00	0 Assets - \$0.00
	1	128 Assets 587.10 km, unit(s) \$116,569,717.55	38 Assets 218.76 km, unit(s) \$44,293,867.28	5 Assets 13.40 km, unit(s) \$2,249,194.61	4 Assets 4.00 unit(s) \$245,954.78	21 Assets 21.00 unit(s) \$1,001,000.00
		1	2	3	4	5
		Probability				

Lifecycle Asset Events

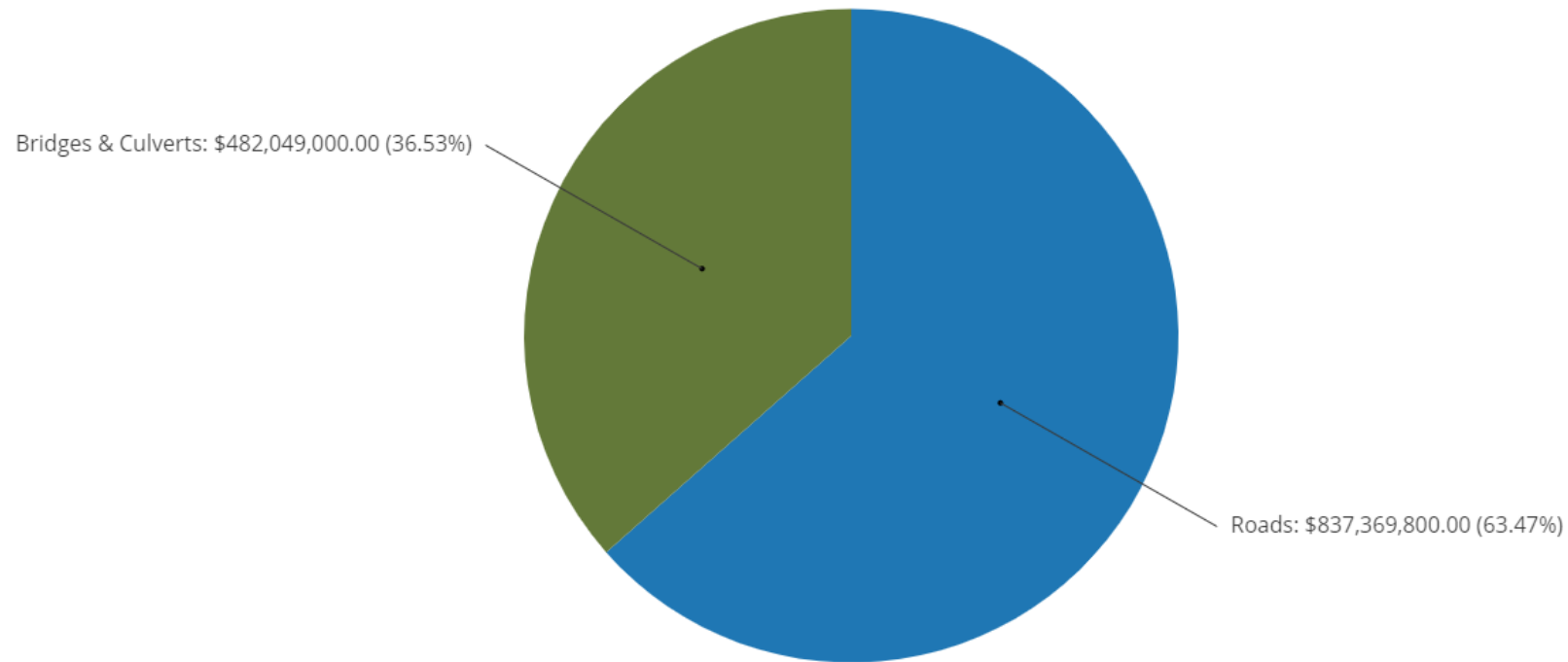
- Renewal and rehabilitation events planned at regular intervals extend the 'useful life' of an asset



Lifecycle Asset Events

- ▶ Examples of lifecycle events
- ▶ Roads
 - ▶ Microsurfacing
 - ▶ Mill and pave
 - ▶ Asphalt overlay
 - ▶ Asphalt recycling
 - ▶ Reconstruction
- ▶ Bridges
 - ▶ Minor repairs
 - ▶ Major rehabilitations
 - ▶ Replacement

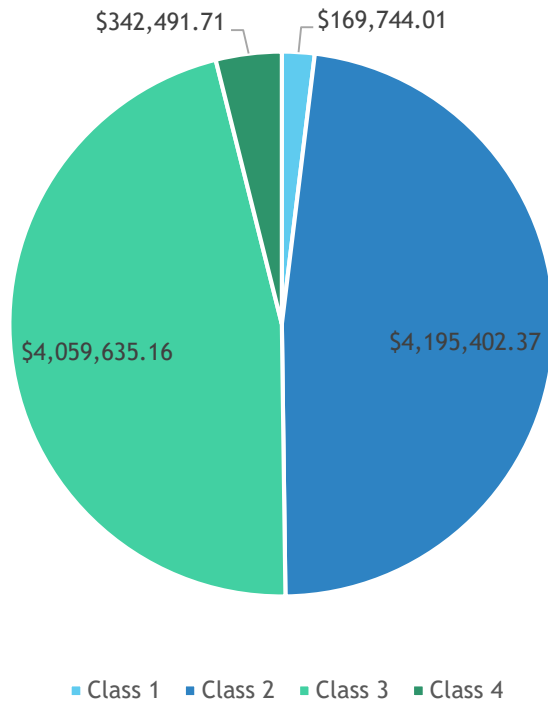
Lifecycle Event Costs 'at a glance'



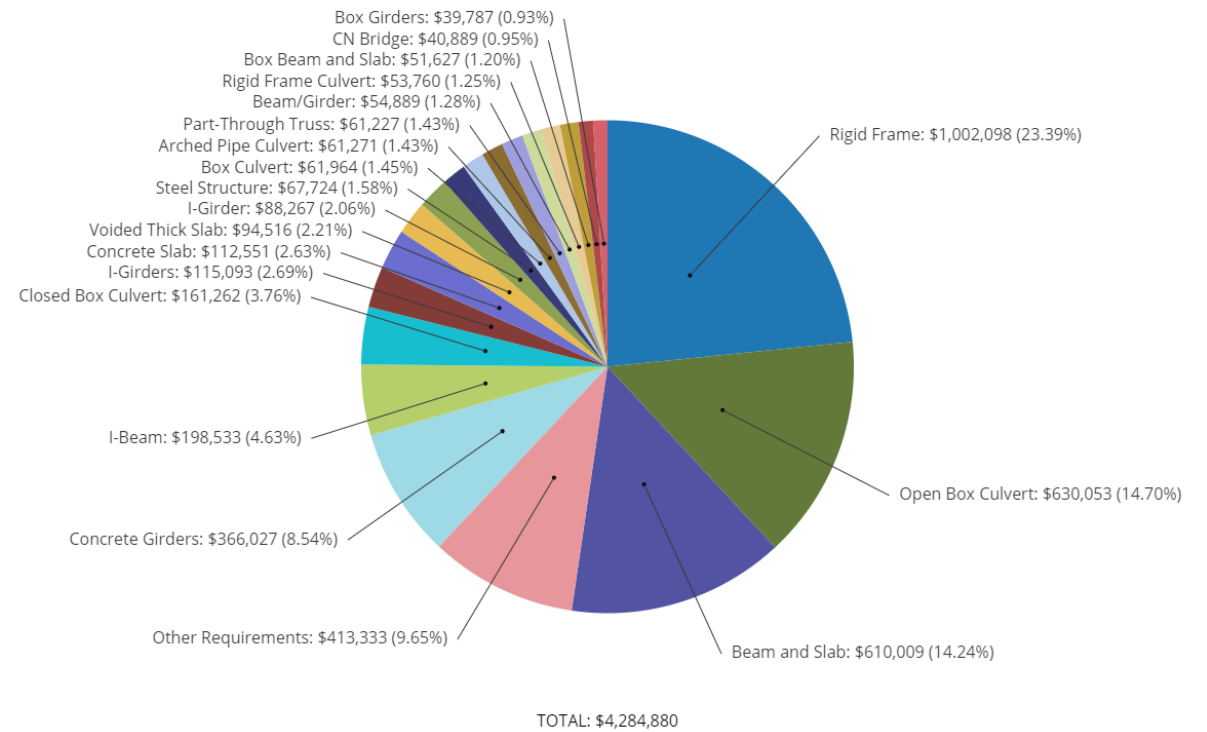
TOTAL: \$1,319,418,800.00

Annual Capital Expenditures 'at a glance'

Roads (by class)



Bridges (by structure type)



What's Next?

- ▶ Asset management plans are not 'static' documents
- ▶ Continued refinement of the core asset management plan
- ▶ Integration with County GIS mapping to provide a geographical context to asset management
- ▶ Expansion of the plan to include all County of Middlesex infrastructure assets including facilities and equipment by mid 2024