

Infrastructure Services – County Construction

Service Description

The County Construction Program, consisting of the Capacity Expansion, Rehabilitation, Municipal Drainage, Planning/Engineering, CWATS as well as the Administration programs, provides for major improvements to the roads, bridges, railway crossings, active transportation and drainage infrastructure that make up the Essex County Highway Network.

The increasing number of capacity improvement demands and related projects has subjected the Department to large and very complex engineering programs/projects with multimillion-dollar values. The CWATS program introduces additional levels of complexity in the co-ordination with multiple partners and constructability issues. This is challenging the group to maintain appropriate focus on day-to-day operational tasks.

The Transportation Planning and Development Division provides the services required to manage the delivery of the CWATS program, property acquisitions in support of expansion projects, Environmental Assessments and Departmental environmental issues. Roadside development approvals for subdivisions, severance, access and setback permits, and utility and sewer installations involve various staff members. Further responsibilities are related to corridor management, policy review and development and engineering consultant management.

The Design and Construction Division provides the services required for the construction and rehabilitation of the County Road system, including preparation of plans, tenders and specifications, studies, reports, project surveys, inspection and contract administration. Consultants provide engineering services as required, supplementing in-house staff. Management of the Municipal Drain program, constructability reviews, external project liaison and Asset Management development are additional responsibilities of this Division.

The Technical Services / Facility Management Division leads the deployment of technology and supports the operations of the other divisions and manages the Department's involvement in Corporate initiatives. Areas of responsibility include, Health and Safety, Risk Management, Emergency Planning, Asset and Records Management and Departmental Analytics. Quality Assurance programs and Performance Management are also a significant focus of this division. The responsibility for Facility Operations are also managed through this Division. These activities include the day to day management of the Civic Centre, Roads Maintenance Depots and the provision of technical support for facilities management at Sun Parlor Home and Emergency Medical Services.

The 2019 Budget, with its increased level of expenditure in the Planning/Engineering Program, Rehabilitation Program, Engineering Projects, CWATS Program and Capacity Improvement initiatives, is an aggressive undertaking that matches the maximum amount of project management the current staffing levels can provide. The expenditure level of these programs combined is approximately \$41.0M.

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Staffing Chart

Staffing	2016	2017	2018	2019	2016 Actual (\$000)	2017 Actual (\$000)	2018 Budget (\$000)	2018 Actual (\$000)	2019 Budget (\$000)
Full-Time	12	14	16	16	846	1,071	1,242	1,114	1,327
Part-Time	2	2	2	2	17	25	25	38	26
Total	14	16	18	18	863	1,096	1,267	1,152	1,353

Prior Year Performance

The net 2018 Construction Program is projected to be under budget by \$267,040. A significant over expenditure resulted from the undertaking of an emergency culvert replacement on CR 23. Several planned over expenditures addressed longstanding mill and pave projects and took advantage of the extended paving / construction season to schedule the completion of these works. Pavement preservation projects were undertaken on CR 9, CR 22, CR 42 and CR 50. In addition, numerous guiderail safety projects were undertaken to address deteriorated and nonstandard installations.

Several bridge projects came in under budget due to positive tender results and minor scope changes with some experiencing over expenditures due to scope revisions. The road rehabilitation projects were over budget due to higher than anticipated asphalt pricing and Asphalt Price Index impacts and scope changes. Some initiatives and design projects were also not fully completed in 2018. These projects and initiatives (along with their funding from the Capital Reserve) have been carried forward into 2019 for completion. Co-ordination with the local municipalities and other agencies, weather considerations and approval process delays have necessitated the schedule adjustments.

The early approval of the 2018 Rehabilitation Program provided positive tendering results as well as allowing for completion of work in advance of the onset of poor weather. In addition, it provided an opportunity to organize the work and schedule the contractors more efficiently. This allowed for a more sequential and timely completion of the multi-contract projects. This protocol will be followed again in adopting the 2019 Rehabilitation Program.

The 2018 Rehabilitation Program consisted of 33 projects including 6 bridge projects, 18 road projects, 5 culvert projects and 4 preservation projects. The 2018 CWATS program delivered numerous projects and initiatives in partnership with the local municipalities and various agencies.

Proposed Budget – Current Year

Proposed for 2019 is a construction program totalling \$40,786,020, an increase of \$4,992,930 from prior year budget.

The existing inventory of roads, bridges and culverts is aging rapidly and the rate of deterioration continues to outpace the rate at which rehabilitation is being undertaken. Concerted efforts to bridge this gap in funding has been a priority for the County, unfortunately

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some infrastructure rehabilitation is still being deferred to a point in time when rehabilitation is no longer an option and more expensive full replacement is required. Current funding levels are considered the very minimum necessary to address the current deficiencies. Additional base funding is gradually being introduced to the annual budgets, in a measured way, to improve the overall condition of the inventory.

The comprehensive update of the Asset Management Plan confirmed the magnitude of the funding gap. In an effort to move towards eliminating this funding gap the 2019 Rehabilitation Program budget was increased by \$448,850. The 2019 Rehabilitation Program totals \$11,770,250, in part through the use of \$2,202,770 in Federal Gas Tax Program Funding, Ontario Community Infrastructure Fund of \$815,640 and the \$226,430 incremental increase required to advance the program towards its target funding level.

A rehabilitation program valued at \$11,770,250 is proposed for 2019 and will be presented for Council's consideration in December 2019. Challenges are continuing to be presented related to the purchasing power of the program as the unit rates for rehabilitation work continue to escalate. As a result, the target level of expenditure will require monitoring and continued upward adjustments will be required in order to keep pace with the cost of rehabilitation and rate of deterioration experienced across the network.

County Council adopted the CWATS Master Plan in the fall of 2012 which included a strategic implementation plan. Current estimates suggest that the County portion of the CWATS initiative amounts to approximately \$45 million of the total \$85 million full build out. The 2019 CWATS expenditure level is proposed at \$6,137,020 with transfer from reserves of \$2,800,000. It is fully anticipated that the expenditure levels within the CWATS program will increase significantly upon the presentation of the candidate projects to be submitted in partnership with the local municipalities through the CWATS Steering Committee.

Included within the 2019 CWATS program is a base funding amount of \$1,800,000, which includes a \$100,000 increase to the initial annual allocation to continue funding this program over an estimated 20 year period. It is proposed that in 2019 to continue an initiative to provide paved shoulders on road segments on the CWATS network when the opportunity to align these works with the Rehabilitation Program is presented. Funds for these projects beyond 2019 are proposed to be provided from the Capacity Expansion Reserve with an estimated annual requirement of \$2.8M. This funding level will be reviewed for future budgets upon the development and approval of a detailed implementation plan. In order to continue both the build of the core CWATS projects and the Rehab Alignment projects as well as future regular maintenance demands, additional annual funding is required.

The 2019 Budget includes a series of Roadway Expansion projects supporting the network capacity improvements identified in the Essex Windsor Regional Transportation Master Plan and the County's Capacity Expansion Program.

These projects include the design of the improvements on CR 22 and CR 42, land acquisitions in support of future expansions and several additional design assignments. Detailed designs will be continued for improvements at the intersection of CR 19 / CR 22, CR 42 corridor and the design of a Roundabout at CR 11 / South Talbot will also be conducted. Design work continues for the proposed realignment/reconstruction of CR 23 in Essex/Kingsville. Environmental Assessment and Preliminary Design will be finalized for CR 20 in Kingsville/Leamington with new initiatives commencing on CR 3 and CR 7. Funds have been provided to support two large County Connecting Link projects in LaSalle on CR 20 for

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\$1,125,000, and two projects on CR 22 in Lakeshore for \$1,153,500. The 2019 Budget provides funding for large Municipal Drain projects proposed to be undertaken by the local municipalities. County assessments for the drains are provided within the Maintenance Program for smaller routine works and the large projects are budgeted as standalone projects funded from reserves. Work will also continue on the Rural Intersection Illumination programs.

A Road Rationalization Study for the County Road Network will continue to review the role and function of existing County Roads and a series of candidate local roads. The study will determine the criteria for classification of roads as County Roads and develop a preferred County Road Network along with an implementation plan should revisions be identified.

The Countywide Active Transportation System Master Plan will undergo its first full update since its adoption in 2012. The review and update will consider the recommendations of the original study, implementations to date and changes to the active transportation environment as well as pertinent legislative changes.

A series of Engineering assignments and studies are included in the 2019 Budget. A study will be undertaken in Lakeshore along the CR 22 corridor to evaluate the impacts of current and future growth on the operation of the roadway and identify opportunities to mitigate the impacts.

The Essex Windsor Regional Transportation Master Plan (EWRTMP) requires its first update since being adopted in 2005 based on the updated County Official Plan and those of the local municipalities. The updated EWRTMP is anticipated to commence in 2019 and carry into 2020. The road rationalization initiative will lead the update of the transportation master plan to establish a baseline network prior to conducting the full update. Several other assignments related to traffic counting, speed studies, Salt Management Plan update, data management and various site specific issues will be undertaken.

Equipment and software purchases include replacement of 2 computers and workstations. The current AutoCAD suite of software and Microsoft Office are also proposed to be updated this year, as well as the purchase of a software package to assist in Transportation Modelling and Forecasting. Maintenance costs for existing software packages are also included in the estimates.