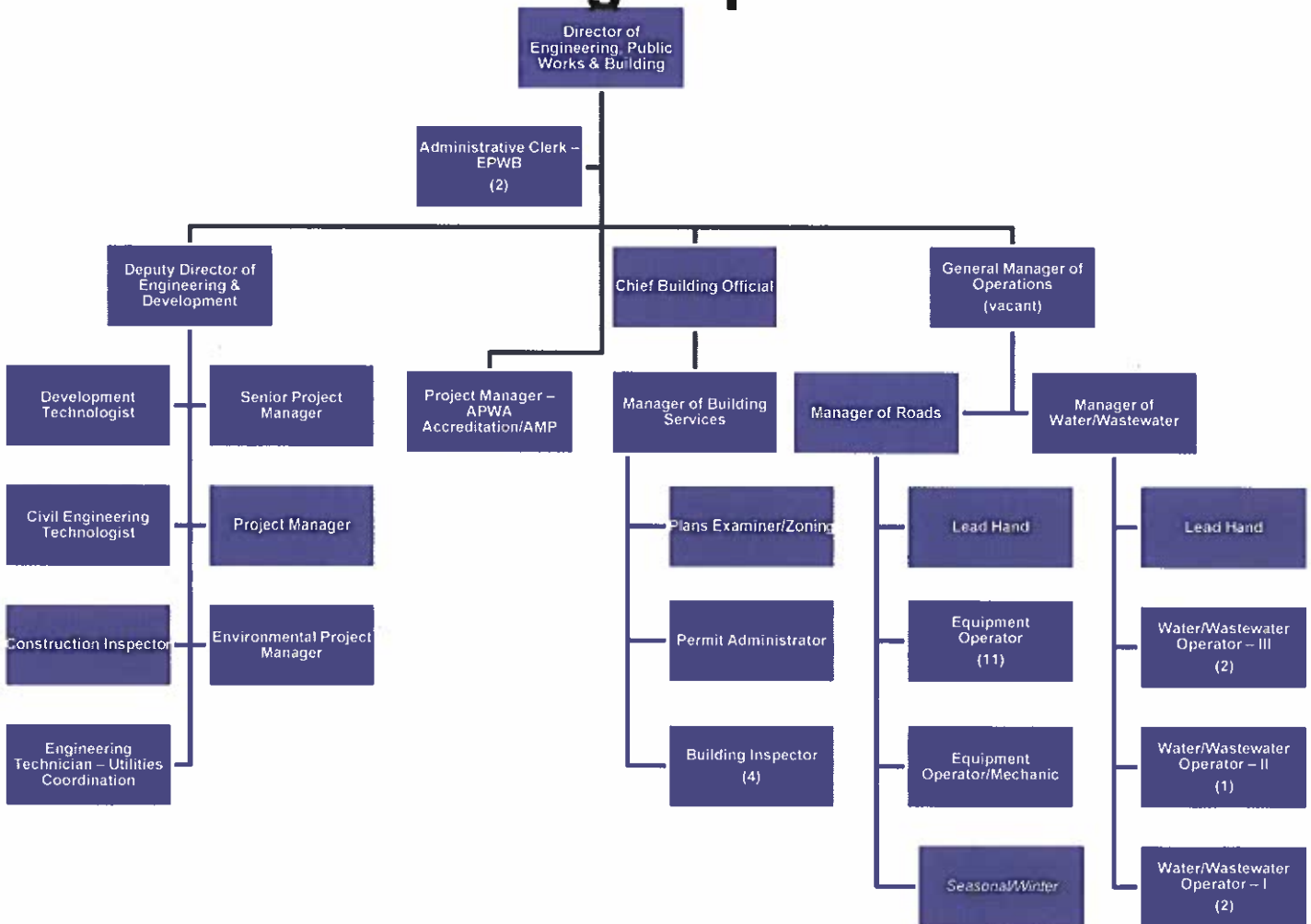


Engineering, Public Works & Building Department





Engineering, Public Works & Building Department 2019-2022 Business Plan

Department's Roles & Responsibilities:

The Engineering, Public Works & Building Department is comprised of four Divisions with overlapping and complimentary roles and responsibilities with respect to the provision and maintenance of municipal infrastructure and development approvals. The four divisions are:

- Building Division
- Engineering Division
- Public Works – Roads & Right-of-Ways
- Public Works – Water & Wastewater Operations; Landfill Operations

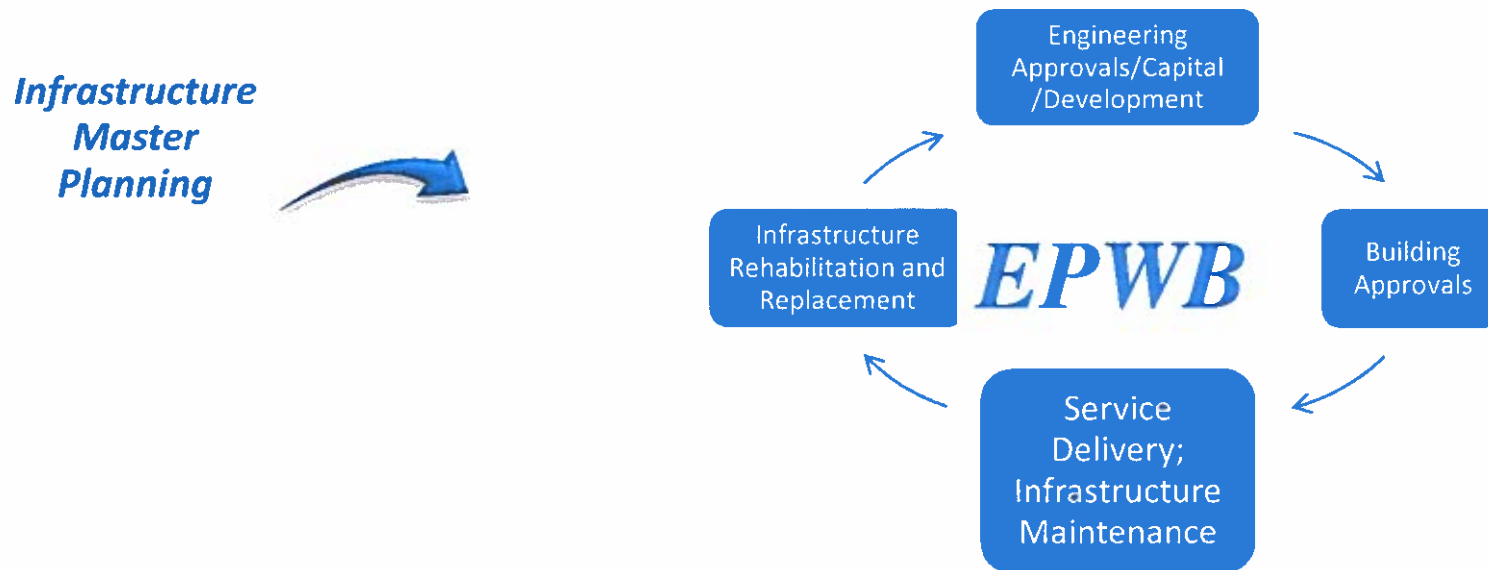
A Business Plan for of each major division has been prepared and provided below. Each of the Divisions is inter-linked with staff routinely performing duties in many areas. Coordination of the roles and responsibilities is managed by the Director. There are several objectives and initiatives that are common to all of the divisions.

Growth is creating increased demands not only through increased quantity but with new residents with higher expectations. With limited resources it necessitates improved efficiencies in operations. These efficiencies can be achieved through some of the Township's core values.

- Improved communications
 - Reducing demands on front line staff by reducing the need for enquiries
- Improved customer service
 - Improve effectiveness of CRM system
 - Streamline responsiveness
 - Continue to implement Land Manager Solution throughout department
 - Streamline processes

The Engineering, Public Works & Building Department needs to continually improve and prepare during this time of growth and change. The increasing occurrences of storms and potential climate change will necessitate a review of the Departments emergency recovery response, but with our knowledgeable and experienced staff we will be able to achieve these objectives.

The Engineering, Public Works and Building Department has received accreditation with the American Public Works Association (APWA).



Building Division

Division's Roles & Responsibilities:

The Building Division is responsible for the Administration of the Ontario Building Code, a regulation made under the Building Code Act 1992. The Code is essentially a set of minimum provisions respecting the safety of buildings with reference to public health, fire protection and structural sufficiency. This is accomplished through the processing of all building permits, the review of applications for compliance with the Ontario Building Code, and the site inspection of all construction projects.

Staff within the Building Department work closely with staff in the Engineering Division, Public Works Division and the Planning Department to ensure that all aspects of Development Agreements are complied with and adhered to during the construction phase

Division's Objectives:

- Continue to provide high quality and timely customer service related to zoning, Building permit inquiries, and inspection requests.
- Administer and enforce the Ontario Building Code and other Municipal By-laws relating to Building Code issues in a professional, ethical and timely manner.
- Issue Building permits and completion of a requested inspection at the Service level time frames mandated in the Building Code Act (Bill 124). The Building Department approximately over 780 permits annually.
- Calculate, collect and track appropriate Permit Fees, Development Charges and other fees related to the issuance of Building Permits.
- Coordinate building and Construction activities following after development approvals.
- Provide Public Awareness and information sharing.
- Continue to work with various departments and to provide input, support and assistance with various projects.
- Look at strategic planning and large project assignments.
- Continue to review policy and procedures to improve efficiencies and customer service within the Service King initiative.

Major Initiatives:

- Continued use of Building Division Township vehicles for building inspections, creating more of a presence in the community with a professional transparent appearance with Municipal marked vehicles.
- Provided strategic leadership, detailed inspection and innovative approvals to help facilitate occupancy of Seneca College Magna Hall, King Campus.
- Continue to implement and advance the "Building Division after hours open house's and information sessions"
- Continue to improve our 24/7 Building inspection hotline and email request, working towards on-line booking program.
- Continue Implementation of Development Approvals and Permit tracking software. Currently implementing all Municipal Engineering permits and interaction with the CRM system.
- Plan and participate in the preparation of the overhaul of Web Site content as well as new material preparation for hand-outs.

- Continue to develop and deliver the Mandatory Sewage System Maintenance & Inspection Program as identified in Source Water Protection Plans prepared under the Clean Water Act.
- Ongoing Sewage System Maintenance & Inspection Program administration and preparation for 2019 implementation for inspection of properties as defined by the Lake Simcoe Protection Plan.

Engineering Division

Division's Roles & Responsibilities:

The Engineering Division is responsible for the provision of new municipal infrastructure (roads, bridges water systems, sanitary sewers, storm sewers, sidewalks, street lights etc.) in the Township. This function includes engineering review and approval of infrastructure provided within subdivisions and through site plan approvals. The Engineering, Public Works & Building Department works closely with the Planning Department during the planning process by providing technical input and comments related to municipal servicing for Official Plans, Master Servicing Studies, Draft Plan of Subdivision and Site Plans. The Engineering, Public Works & Building Department is responsible for the preparation and administration of all Subdivision Agreements, and the administration of Site Plan Agreements (Construction phase only for Site Plans).

The Engineering, Public Works & Building Department also provides considerable input into the planning required to calculate Development Charges based on the external servicing needs and operational requirements of municipal infrastructure.

The Engineering Division is also responsible for the planning, design, approval and execution of Township initiated capital projects related to municipal Infrastructure. Township initiated capital projects may include provision of new services such as sanitary sewer servicing, or may be required for the replacement of existing infrastructure such as bridge or road reconstruction. The Engineering Division also provides technical input on Region of York and Provincial construction projects within the Township. The Engineering Division provides customer service and assistance related to development projects and capital works projects to affected residents.

The Engineering Division is responsible for development, maintenance and enforcement of Township Engineering Design Criteria and Standards and any applicable other regulations. Township standards are approved by Council and periodically updated. Adherence to these Design Criteria and Standards ensures that the Township's municipal infrastructure meets the current and future needs of the Township and is constructed from approved materials and using construction methods that will provide a durable and cost efficient infrastructure. In order to achieve these goals the Department relies on a combination of in-house staff and engineering consultants.

Under the provincial Municipal Drinking Water Licencing (MDWL) and Drinking Water Works Permit (DWWP) program the Township is responsible for approvals of all new water distribution system construction and replacement in the Township. Previously this responsibility lay with the Ministry of the Environment Conservation and Parks (MECP) through the Environmental Compliance Approval

(ECA) process. The Township through the Engineering, Public Works & Building Department has implemented a Drinking Water Quality Management System (DWQMS) that will ensure the requirements of the approval process are achieved and adhered to.

The Engineering Division is responsible for maintaining an accurate and up-to-date inventory of Tangible Capital Assets for all municipal infrastructure. These inventories include detailed databases used by the Finance Department for financial reporting, along with system maps and as-built drawings that are used with the Engineering Division and the Public Works Division. The Engineering Division is also responsible for maintaining an accurate assessment and record of the asset condition and life cycle (replacement and rehabilitation) status. These inventories, databases, documents and records are critical to the asset management program for the municipal infrastructure and for future capital works planning. The Engineering Division provides engineering analysis and undertakes studies related to the provision of new infrastructure or the replacement/upgrading of municipal infrastructure including the completion of necessary Environmental Assessments.

The Engineering Division is responsible for managing Public Works service contracts; materials supply contracts and purchases of major fleet equipment. In particular, the division is responsible for the mosquito control (larvicide pellets) contract; streetlight maintenance; and inter-municipal road maintenance agreements.

The Engineering Division is responsible for undertaking and the review of the necessary engineering analysis to determine appropriate speed limits, traffic controls (Regulatory and Warning signs), and traffic/transportation studies including traffic calming on Township roads.

The Engineering Division provides Municipal Consent for road and right-of-way occupancy and for installation of private utilities (electrical systems, telecommunication, pipelines etc.) within the municipal right-of-way.

The Department is responsible for waste management. This includes procuring and managing the waste collection and 3-Stream recycling material collection contract; extensive interaction with Township residents; procurement of waste bins and blue boxes; coordination of the payment for tag program for extra pick-ups; preparation of the annual waste calendar.

Division's Objectives:

- Provide municipal infrastructure that meets the current and future needs of the Township and its residents.
- Ensure that infrastructure meets or exceeds the Township's and/or Provincial standards, and that the infrastructure is managed in a sustainable manner by maximizing the useful life of the asset.
- Completing the engineering review portion of the Development Application process through our checking consultants (RJ Burnside & Ainley) in a timely and cost efficient manner ensuring that all engineering reports and design submissions are processed while at the same time ensuring the Township's design standards are being met or exceeded.

- Overseeing the construction of new municipal servicing infrastructure in new developments through our development consultants (RJ Burnside & Ainley) and through capital works contracts to ensure that the Township's specification and standards are being met or exceeded.
- Managing and controlling the construction process of new developments and capital works contracts through liaison with the developer design consultant and the Contract Administrator, to minimize the disruption to existing residents.
- Provide solid waste and recycling collection services in a cost effective and environmentally sustainable manner in partnership with the Northern Six municipalities and the Regional Municipality of York. The Region is responsible for final material disposal and diversion of recyclable materials.
- Assisting Public Works with the operation and maintenance of municipal infrastructure by procuring and managing service and material supply contracts in a cost effective manner.
- Ensure public safety through geometric design of roads and recommendation of appropriate speed limits, traffic controls and traffic calming.
- Responding to inquiries from residents and the general public; and investigating and resolving customer service requests related municipal infrastructure.

Major Initiatives

- Implementation of solid waste management strategies described in the Region of York Integrated Waste Management Master Plan and the SMA4RT Living program. The Engineering Division is developing a waste master plan specific to the Township of King and in keeping with our sustainability objectives.
- Phase 1 & 2 of the Nobleton Sanitary Sewer Servicing Project has been completed and the preliminary design for the Phase 3 work is nearing completion.
- The Capital works program will proceed in accordance with the Township 10-year Capital Works program for Roads.
- The Department is managing Fifteen (15) major subdivision developments (or phases of subdivision) in active construction and servicing. Eight (8) subdivisions (or phases) are in the maintenance period; and Ten (10) are in the Planning Application.
- The Engineering Division is also responsible for managing the installation of services for numerous Commercial Site Plans and administering Site Alteration Permits (Fill Permits) on an ongoing basis. The administration of Commercial Site Plan Agreements and the inspection of site servicing is a task that Engineering staff will be taking an increasingly active role in conjunction with Building Division staff. At present EPW staff and the engineering review consultants are actively reviewing and inspecting numerous major site plan developments.

- The Engineering Division will continue to have a leading role in reviewing and updating procedures and practices developed during the **APWA self-assessment and accreditation** processes for future reaccreditations.
- Continue to develop and implement our **Asset Management** strategy and program for roads, bridges, water, storm and sanitary sewer infrastructure. This will include working with the Finance Department and the consultant contracted to assist in the implementation of the program on a corporate level. We will also continue to incorporate our assets into our GIS system to assist in field operations.
- The Department is nearing completion of the **master plan for municipal water distribution systems and sanitary sewer systems**. The Department is initiating the development of a **Comprehensive Storm Water Management Master Plan**.
- The Department is responsible to ensure that the Township complies with various new programs and Regulations from the Province including Source Water Protection and the Lake Simcoe Protection Plan. These two programs will require considerable engineering effort. Preparation of the Comprehensive Storm Water Management Master Plan required under the Lake Simcoe Protection Plan is ongoing.
- Implementation of a rigorous filing system to comply with the department and Township requirements for documents and records control continues to be an issue and initiative for the Department.
- Development and implementation of a comprehensive Sanitary Sewer Inspection and Surcharge Mitigation Program.
- The Department is nearing completion of a Water Quality Model for the Schomberg Distribution System and will be developing a similar model for the Nobleton Distribution System in 2019.
- Develop a long term strategy to improve Department in terms of
 - Department structure and level of service
 - Delivery of programs and initiatives
 - Flexibility and responsiveness

Public Works – Roads & Right-of-Ways

Division's Roles & Responsibilities:

The Public Works - Roads & Right-of-Ways Division maintains roads, bridges, drainage systems, sidewalks, road signs, streetlights etc. in a safe and usable condition for the residents of the Township. Key functions of the Road and Right-of-Ways Division include: winter maintenance of roads (snow plowing and sanding/salting); ditch and culvert cleaning; storm water management pond maintenance; roadside grass cutting; gravel road maintenance (grading, gravelling, dust suppressants), asphalt road patching; line painting on roads; street sweeping; catch-basin cleaning; sign replacement; streetlight repairs (by Contractor); sidewalk repairs; and emergency response to Right of Way issues (except tree related matters). Public Works staff provides 24-hour, 365 days per year operation and response to

public safety issues through on-call staff. During the winter maintenance season Public Works provides routine patrolling of roads 7-days per week in order to respond to changing weather and road conditions and to dispatch appropriate personnel and equipment as required.

The Division is also responsible for winter maintenance of sidewalks (snow plowing and sanding/salting). Currently is provided jointly by a Contractor (Trisan) to ensure public safety and adherence to Minimum Maintenance Standards.

Division's Objectives:

- Maintain Township roads, bridges, drainage systems, sidewalks, road signs and streetlights in a safe and usable condition for residents by meeting or exceeding the Minimum Maintenance Standards under O.Reg 239/02 and develop a program of implementing recently announced modifications to Minimum Maintenance Standards.
- Respond to service requests in a timely manner to ensure that the needs of the public are met; and public safety and protection of property are achieved.
- Provide assistance to emergency responders (Fire, Police, EMS) through road closures; road clean-up; traffic control and other emergency response.
- Provide assistance to all other Township Departments; Region of York Transportation and Works staff; service providers; and community groups requiring the use of Township roads and right-of-way features.
- Provide good customer service both internally and externally to the residents of King Township.

Major Initiatives:

- Modernization of procedures for inspection and record keeping of roads, bridges sidewalks, traffic control signs, streetlights to meet the requirements of the Minimum Maintenance Standards O.Reg 239/02 under the *Highway Traffic Act* and to reduce risk and liability to the Township. Staffs continue to implement GPS monitoring of maintenance equipment usage and are working towards electronic record keeping of inspections.
- Maintenance and replacement of roads within available budget resources. Existing pavement structure and gravel surface roads are nearing the end of their useful life and will require replacement or rehabilitation (identified by Roads Needs Study). This issue is made worse through increased traffic, both local and commuter traffic, that accelerates the deterioration of road surfaces and increases the need for maintenance.
- Maintenance of the additional road and sidewalk sections as they are added to the existing inventory through new development and plans of subdivision. Planning will be required to ensure that adequate resources (staffing, equipment and contracted services) are provided to meet the additional needs.

- With support from Engineering division staff, investigate and implement appropriate electronic work-order management systems, and asset management systems.
- Review and tender operational contracts
- Explore cooperative initiatives to achieve efficiencies and cost savings
- Review operations and budget tracking

Public Works – Water & Wastewater Operations

Division's Roles & Responsibilities:

The Public Works Division operates and maintains the Township's water distribution systems and wastewater collection systems (sanitary sewers, pumping stations, and storm sewers). The Public Works Division also operates and maintains the Township's solid waste sanitary landfills (one inactive site, one closed site). Public Works staff provide 24-hour, 365 days per year operation and response to public safety issues through on-call staff.

The Township has successfully implemented the Drinking Water Quality Management System (DWQMS) and is an Accredited Operating Authority for the Township's four Municipal Drinking Water Systems and has obtained the Municipal Drinking Water Licence (MDWL) and Drinking Water Works Permit (DWWP) for all four Drinking Water Systems. The DWQMS is implemented through an Operational Plan that provides policies standard operating procedures, and schedules to ensure that the systems are well managed and regulatory compliance is maintained.

The Township has MOECC Certified Water Operators and MOECC Licenced Waste Water Collection System Operators. Requirements for certification and licensure are outlined within the Safe Drinking Water Act and its regulations as well as the Ontario Water Resources Act and its regulations. Staff are responsible for maintenance, monitoring and operational compliance for the four drinking water systems as well as the three waste water collection systems including 7 Sanitary Pumping Stations (SPS).

The Township is currently in the process of certifying the operators through the Ministry of Training, Colleges and Universities Water Meter Installers. Township operations staff install water meters and/or certify water meter installations for both new development as well as within established communities. Customer billing and financial record keeping is performed by the Finance Department.

Division's Objectives:

- Operate and Maintain the Township's four municipal drinking water distribution systems in compliance with Operational Plan Approved for the Township Drinking Water Quality Management System (DWQMS), and the Drinking Water Works Permit.
- Seek continuous improvement of the operation of the drinking water distribution systems and wastewater collection systems through the Plan-Do-Check-Improve policies outlined in the DWQMS.
- Operate and maintain the drinking water distribution systems and wastewater collection systems in a fit state of repair.
- Respond to service requests in a timely manner to ensure that the needs of the public are met while ensuring public safety and protection of water quality.
- Maintain water quality, supply and pressure for users of the system, while minimizing service disruptions for repairs and maintenance.
- Maintain continuity of wastewater collection to meet the needs of customers, while minimizing service disruptions for repairs and maintenance.
- Increase level of preventative maintenance to avoid unforeseen problems through operational contracts such as CCTV and valve turning.
- Protect the environment during all operational activities on the Township's water distribution and wastewater collection infrastructure.
- Operate and Maintain the Township's solid waste landfill sites in compliance with all applicable Regulations and Certificates of Approval.

Major Initiatives:

- Continue to implement the use of computer tablets or other devices to allow Water Operators to access drawings, and Standard Operating Procedures; O&M manuals; and mobile work management systems.
- New growth and development has also created additional work load for Licenced Operators. The expansion of the systems and the increased number of customers increases the operation and maintenance requirements and customer service request. Additional staff have been added in the department to accommodate these needs. As these systems double in size over the next 10-15 years additional staff resources will be required to meet the demands of customer service and O&M requirements.
- Investigation and implementation of a Supervisory, Control and Data Acquisition (SCADA) system for all wastewater pumping stations.

- Investigation and implementation of automated meter reading (AMR) is a major initiative that will affect Public Works staff. This initiative is being undertaken in close coordination with the Finance and Water Billing Divisions.
- Implement the asset management program with the Ontario Clean Water Agency (OCWA) for the sanitary pumping stations in the Township in order to maintain our infrastructure in good condition and prevent unexpected failures.
- The Division will continue to lead the implementation of the Drinking Water Quality Management System (DWQMS) to maintain Accreditation of the Township as the Operating Authority for the four municipal drinking water distribution systems. The Township's Municipal Drinking Water Licences are maintained in good standing. The Licencing and Permitting Program will lead to better management of the systems and provides for a higher level of accountability with respect to ownership of the system.
- The Engineering Division will be responsible for the Engineering review and approval of extensions and replacements of the Municipal Drinking Water Systems under the Drinking Water Works Permit. This is a significant change in the approval process whereby the existing Certificate of Approval Process that was managed by the Ministry of the Environment and Climate Change will be replaced by Approvals at the municipal level under the Drinking Water Works Permit.
- The Engineering Division will be exploring opportunities to implement Adenosine tri-phosphate (ATP) testing and in field Nitrate group testing to better monitor and manage nitrification challenges within the Schomberg Drinking Water System.

Sustainable King - Major Initiatives/Issues:

Pillar	Initiative
Socio-Cultural <ul style="list-style-type: none"> • Safety 	<ul style="list-style-type: none"> • Roads upgrade program • Traffic Calming program, pedestrian connectivity
Economic <ul style="list-style-type: none"> • Village revitalization 	<ul style="list-style-type: none"> • Urbanization, Servicing and Stormwater Master Plans.
Environmental <ul style="list-style-type: none"> • Water - Protect groundwater • Water - Reduce water consumption 30% • Waste - Reduce solid waste 30% • Transportation 	<ul style="list-style-type: none"> • Mandatory septic inspections • Automated Meter Reading (AMR) • By-law update, SMA4RT Living waste master plan • Waste Master Plan • Transportation Master Plan

