TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MAY 28, 2018**
FROM:	**KELLY SCHERR, P. ENG, MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**SMART MOVES TRANSPORTATION MASTER PLAN ACCOMPLISHMENTS**

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the following report **BE RECEIVED** for information.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

- Civic Works Committee — June 19, 2012— London 2030 Transportation Master Plan
- Civic Works Committee – October 7, 2013 – Transportation Infrastructure Gap
- Strategic Priorities and Policy Committee — June 23, 2014 —Approval of 2014 Development Charges By-Law and DC Background Study.

2015-2019 STRATEGIC PLAN

The following report supports the Strategic Plan through the strategic focus area of *Building a Sustainable City* by providing a summary of programs that implement and enhance safe and convenient mobility choices for transit, automobile users, pedestrians, and cyclists.

BACKGROUND

Purpose

Municipal Council, at its meeting held on March 29th 2018 resolved:

> "the Civic Administration BE REQUESTED to provide an update on the 2030 Smart Moves Transportation Master Plan, including an overview of projects that have been completed so far and projects that are planned for future years."

This report provides Committee and Council with an overview of the Smart Moves initiatives undertaken since the creation of the plan.

Context

The 2030 Transportation Master Plan (TMP) is a long-term transportation strategy focused on improving mobility for residents of the City by providing viable choices through all modes of travel. The Smart Moves Transportation Master Plan was approved by Council in 2012. Smart Moves is a mobility transportation plan that covers all modes of how people and commerce move about the City. It includes a transit focused strategy that uses a Bus Rapid Transit network as the backbone for transit service enhancement, additional road capacity, and policies to make transportation efficient and green while contributing to a liveable City.

The TMP categorized the proposed actions under five "Smart Moves":

1. Rethinking Growth to Support the Transportation Master Plan
2. Taking Transit to the Next Level
3. Actively Managing Transportation Demand
4. Greater Investment in Cycling and Walking Infrastructure
5. More Strategic Program of Road Network Improvements

The relevant projects identified in the TMP were translated into the 2014 Development Charges Bylaw and budgets.

DISCUSSION

A summary of TMP initiatives completed and underway is provided as follows.

Rethinking Growth to Support the Transportation Master Plan

The London Plan

Smart Moves suggests a strong link between land use and transportation. The London Plan operationalizes the land use framework required to support the five smart moves. The Plan was created after an extensive two-year conversation with Londoners about their hopes, dreams and aspirations for London's future – to the year 2035. The new plan was adopted by City Council on June 23rd 2016. On December 28th 2016, the Province approved the London Plan with modifications.

Our Move Forward, London's Downtown Plan

On April 14th 2015, Council adopted Our Move Forward: London's Downtown Plan. Our Move Forward is organized into five sections: Planning Framework, Strategic Directions, Transformational Projects, Tools, & Implementation and Targets.

Dundas Place is the first Transformational Project identified in the London Plan. Other projects in the area of the Forks of the Thames are also under consideration as part of the One River Environmental Assessment (EA). Dundas Place represents the first large capital project in the Downtown in recent memory and has been characterized by enhanced consultation and communications to manage impacts to the surrounding intensive business and cultural environment. The return on investment for the City was enhanced through a successful application for Dundas Place funding under the federal Public Transit Infrastructure Fund. Dundas Place is currently under construction and phases will become operational through late 2018 to the end of 2019.

Taking Transit to the Next Level

Shift Rapid Transit

The Bus Rapid Transit Network was approved by Council on May 16th 2017. City Council subsequently approved the Rapid Transit Master Plan and Business Case at its meeting on July 25th 2017. The Shift Rapid Transit initiative has now progressed to a Draft Environmental Project Report (EPR) that builds on the Rapid Transit Master Plan and adheres to the legislative requirements of the Environmental Assessment Act. The draft EPR will provide a strategy for implementing a rapid transit system that will help meet the City's economic development, mobility, environmental and community building objectives while still being operationally feasible and economically viable.

The implementation of a rapid transit system will not only result in significant improvement in London's public transit system, it is a central component of London's land use and transportation policy. Rapid transit will help shape the city's future pattern of growth, encourage intensification and regeneration, and stimulate economic growth for decades to come.

Rapid transit corridors integrated with a strong conventional transit system, supportive land use planning policies and appropriate service coverage and frequency will facilitate more transit trips, reduce traffic volumes and make transit a faster, more reliable, convenient and comfortable transportation option in London.

Implementation of the BRT network will be phased, beginning with the construction of dedicated lanes in the downtown core starting in 2020 and advancing eastward. Between 2022 and 2028, BRT construction will continue through the north, south and west corridors, with Londoners able to begin riding BRT as each leg of the system is complete.

Actively Managing Transportation Demand

Complete Streets Design Manual

City staff have been implementing complete streets principles since the completion of Smart Moves. This approach is becoming formalized with the creation of the Complete Streets Design Manual currently underway. The document will be completed in 2018. Complete streets is a design approach that supports many different forms of mobility with priority allocated based on road classification, place type and surrounding context. Complete streets also provide a positive physical environment that supports the form of development that is planned for, or exists, adjacent to the street.

Downtown Parking Strategy

The Downtown Parking Strategy was approved by City Council on December 13th 2017. The Strategy is a comprehensive study that ties the Rapid Transit initiative, the TMP and the Downtown Plan objectives together. The key objectives for the Downtown Parking Strategy are to:

- provide sufficient shared public parking resources to serve development and facilitate the conversion of surface parking lots into new mixed use development;

- integrate parking management and sustainable mobility policies and programs to encourage the use of active transportation and public transportation options; and,
- effectively and efficiently deliver shared public parking resources.

The plan includes a recommendation to create 200 to 300 new public parking spaces in the downtown over the next twenty years through investment in joint venture projects by participating with developers.

Regional Rideshare

According to the 2009 Household Travel Survey, carpooling represents 10.5% of afternoon peak trips in London. There is potential for more commuters to carpool. In 2015, the City of London partnered with the Counties of Huron and Perth, the City of Stratford, and the Town of St. Marys to align resources and expand London's carpooling service into the broader London region. It was recognised that many of London's major employers have employees commuting from neighbouring communities and many Londoners are employed in these communities as well, and that this two-way flow of commuters are all using London roads. The partnership promotes a ride-matching web service called Regional Rideshare. The service supports those interested in carpooling in finding ride matches based on location and schedule. It is free for registrants, who can sign up as a driver, passenger, or either. Since launching, the service has expanded to include Oxford County, Middlesex County, and the City of St. Thomas, with over 2,000 people registered on Regional Rideshare, and of those over 800 are active and about 130 carpools have been formed.

Active and Safe Routes to School

Active and Safe Routes to School (ASRTS) is a transportation demand management initiative that is promoted in the London Road Safety Strategy. ASRTS is a community partnership. Interested schools are provided with a comprehensive strategy to meet the needs for safe and active transportation in the area of their school. Every year, staff support several ASRTS groups and these commitments are becoming more frequent as more schools and communities embrace ASRTS.

Downtown Transportation Alliance

A feasibility study is beginning. It will include several scenarios on governance, to develop London's first Transportation Management Association (TMA). A TMA is a non-profit, member-controlled organization that provides transportation services in a particular area, in this case, central London. TMAs are generally public-private partnerships, consisting primarily of area businesses with local government support. They are usually more cost effective than programs managed by individual businesses.

The Downtown Transportation Alliance will enable businesses to provide commuter option services for their employees that encourage more efficient use of transportation and parking resources. There is also a unique opportunity for the TMA to serve downtown residents as well. It will also provide an outlet for the City to communicate and engage downtown employers during rapid transit construction and encourage employees to use the system once operational.

Greater Investment in Cycling and Walking Infrastructure

Cycling Master Plan

The London ON Bikes Cycling Master Plan was created with comprehensive community and stakeholder input throughout 2015 and 2016 and was approved by Council in September 2016. The plan supersedes the 2005 Bicycle Master Plan. London ON Bikes takes the guidance provided by Smart Moves and identifies an ambitious plan for infrastructure, policies and programs required to support a growing and thriving cycling culture.

The Cycling Master Plan builds upon previously implemented infrastructure with a vision of a connected convenient network. The Cycling Master Plan identifies 305 km of cycling facilities for implementation in the 15-year horizon along with supportive measures such as bicycle parking, lockups, destination infrastructure and wayfinding signage.

On-road cycling infrastructure is implemented on an annual basis through multi-discipline capital projects and stand-alone cycling projects. Transportation Capital programs. Identified below is the centreline kilometres of cycling infrastructure installed along City roads from 2013 to 2017.

Year	New On-Road Cycling Facilities (centreline km)
2013	4.5
2014	6.4
2015	9.7
2016	11.8
2017	4.3
Total	36.7

Downtown cycle tracks are a premiere feature of the cycling master plan. Construction of the north-south cycle tracks on Colborne Street from Horton Street to Dufferin Avenue began in 2017 and is expected to be completed in June 2018.

A route selection study for an higher order east-west bikeway between the Downtown and Old East Village is beginning in coordination with the pending Old East Village Dundas Street Corridor Secondary Plan. This assessment will consider origins, destinations, route characteristics, rapid transit routing and community input.

The cycling network alos encompasses off-road routes. Critical gaps in the pathway network are also getting solved. The soon to be completed Kiwanis Park Pedestrian Pathway Connection is a critical link that will connect the Kiwanis Park trail system north and south of the CNR line. The completion of this project will create new bridges over the CNR and Pottersburg Creek in addition to 1.3 km of new multi-use pathway connecting the entire Kiwanis Park trail system to the Thames Valley Parkway.

The completion of London ON Bikes Master Plan positioned London well to access provincial funds from the Ontario Municipal Commuter Cycling (OMCC) program. With the recent approval of the Thames Valley Parkway North Branch Connection Environment Assessment (EA) and OMCC funding, the City is progressing the detail

design of this important connection. The project will see the construction of two multi-use pathway bridges across the Thames River North Branch and 1.3 km of pathway connecting Ross Park in the west to the North Athletic Fields to the east.

Cycling Promotion

The inaugural London Celebrates Cycling event was held in June 2017. This partner event consisted of five days of cycling events to celebrate and encourage bike riding for transportation and recreation. Events included guided rides throughout London, a cycling film and discussion at the Wolf Performance Hall, a bike expo at Boler Mountain, and the Celebrate 150 London Bike Rides along the Thames Valley Parkway. Combined, these events drew approximately 500 participants. The 2018 edition will expand to ten days from June 10 to 17, with more partners involved. Events will appeal to all ages and skill levels. It will follow the Thames Region Ecological Associations' Bicycle Festival, taking place in early June.

The City of London is working with Fanshawe College's GIS and Urban Planning Program to update the Bike & Walk Map and create new ways to access this popular information. Fanshawe students were instrumental in creating easy-to-read maps for the Celebrate 150 London Bike Rides in 2017. The students will create the maps for the 2018 event. It is expected that these projects will lead to more collaborations with the College.

Bike Parking

Providing bike parking continues to be a City priority and is addressed as resources and needs allow. This ranges from installing short-term bike rings and racks on public property and working with private property owners to increase available short-term bike parking. In 2014, in partnership with the Middlesex London Health Unit, Western University and the Urban League of London, fifty new bicycle parking posts were created and installed in Old East Village, Richmond Row and Byron Village. In 2016, the City introduced two bike corrals to London. Each corral is installed in an on-street parking space. Where the space would traditionally hold one motor vehicle, a corral can hold up to 14 bikes. Two more corrals are planned for 2018. The City is also planning a facility for secure long-term bike parking in downtown London, geared to Londoners riding to work. In addition, guidelines for bike parking at rapid transit stations and in neighbourhoods are under development.

Enhancing and Promoting London's Cycling Destinations

Building on existing bike-friendly destinations, several the City has enhanced and designated specific 'Cycling Destinations' in London. The purpose of this project is to encourage more recreational cycling on London's bike paths, routes and streets by highlighting key areas in London to visit on bike. The target audience includes both Londoners and visitors. As a first step, City staff identified five parks for enhancements:

1. Forks of The Thames in central London;
2. Kiwanis Park in the south east;
3. Ed Blake Park in the north east;
4. Medway Park in the northwest; and,
5. Springbank Gardens in the south west.

Enhancements such as adding bike racks, benches, picnic tables, and waste receptacles were made to these parks. The next step is to add signage, designating them as bike-friendly. This will be done in concert with other park signage upgrades and consider the desire of older adults to identify and enhance age-friendly locations.

Bike Share System

The London ON Bikes Cycling Master Plan included Action #4: Exploring a Bike Share System. In March 2018, the City of London was successful in its application to the Ontario Municipal GHG Challenge Fund for funding to cover 50% of the costs to establish the first phase of a bike share system ($822,500). The process includes preparation of a business case that details annual operating costs and revenues for the system. It will assist Municipal Council in determining the feasibility and scope of the bike share system. Council will receive a report to determine which provider will design, build, operate, and maintain the bike share system.

It is expected that the first phase of the bike share system would serve neighbourhoods in or near downtown, St. Joseph's Hospital and Western University. It would consist of approximately 300 bikes, serving approximately 40,000 residents, 35,000 employees, two hospitals, Western University and Fanshawe College (downtown campus) faculty, staff and students, and visitors to London.

Walking

Walking is an active mode of transportation promoted by Smart Moves and is an integral part of a transit trip. Implementing new sidewalks is part of a complete streets approach aiming to reduce car-dependency and make neighbourhood streets welcoming, equitable, safe and accessible for community members of all ages, abilities and means. The provision of sidewalks greatly reduces the risk to vulnerable road users by reducing the intermingling with motor vehicles. The Warranted Sidewalk Program is designed to respond when requests and concerns are identified by the public. New sidewalks are also installed through infrastructure renewal capital projects.

In 2016, the funding for the Warranted Sidewalk program was increased from $230,000 to $550,000 to help shorten the wait time for response to sidewalk requests. A larger $1,100,000 program was implemented in 2017 by mobilizing federal funds from the Public Transit Infrastructure Fund (PTIF). 11.1 kilometres of sidewalk have been installed in the last five years as shown in the table below.

Year	New Sidewalk Length (m)
2013	1,137
2014	1,181
2015	1,402
2016	2,243
2017	5,109
Total:	11,072

More Strategic Program of Road Network Improvements

Transportation Growth Program

The Transportation Growth program implements major road expansion projects. These projects provide comprehensive improvements that provide urbanization, capacity and active transportation benefits to support growth and create better environments for a growing city. Smart Moves road improvement projects since 2013 that have been completed or are underway include the following:

Road	Limits	Category	Year	Approximate Investment ($ M) *
Oxford Street	Hyde Park Road to Sanatorium Road	Expansion to four through lanes	2013	12.12
Southdale Road	Wonderland Road to Wharncliffe Road	Expansion to four through lanes	2013	8.89
Sarnia Road	Wonderland Road to Aldersbrook Road	Expansion to four through lanes and Rail Bridge Replacement	2013	2.77
Hyde Park Road	Oxford Street to CPR	Expansion to four through lanes	2014	29.86
Sunningdale Road	Wonderland Road / Sunningdale Road Intersection	Roundabout	2014	2.89
Commissioners Road	Wonderland Road to Viscount Road	Expansion to four through lanes	2015	16.01
Hyde Park Road	CPR to Fanshawe Park Road	Expansion to four through lanes	2015	16.33
Fanshawe Park Road	Adelaide Street to Highbury Avenue	Expansion to four through lanes	2016	16.15

Sarnia Road	Wonderland Road to Sleightholme Ave	Expansion to four through lanes	2016	11.21
Bradley Avenue Extension	Wharncliffe Road to Wonderland Road	New alignment with four through lanes	2017	8.01
Western Road CPR	CPR Grade Separation	Rail Bridge Expansion	2017	17.26
Sarnia Road	Hyde Park Road to Oakcrossing Gate	Two lane urbanization	2017	5.42
Total				146.92

* Approximate value of financial commitments to date. Many projects are not fully closed out. Values include investments in coordinated cost-effective lifecycle renewal of watermain and sewers.

The planning of future major identified in the TMP is also underway. Some of the project planning initiatives currently in progress for improvements are listed below.

- Discover Wonderland is the EA for long-term multi-modal improvements to Wonderland Road from Southdale Road to Sarnia Road.
- The Bostwick Road Improvements EA will facilitate growth and develop the implementation plan for a long curve realignment as envisioned in the Southwest Area Plan.
- The Adelaide Street / CPR Grade Separation EA aims to provide a safer more reliable railway crossing that fits within the surrounding neighbourhood.
- The intersection improvements being scoped in the Fanshawe Park Road and Richmond Street EA are at the centre of a rapid transit village.
- The Wharncliffe Road South EA provides near term improvements to the CN Rail crossing to reduce congestion, improve safety and mitigate cut-through traffic in surrounding neighbourhoods.
- Multi-modal improvements are being scoped in an EA for Western Road, Sarnia Road and Philip Aziz Drive that facilitate mobility in the area of Western University including the interaction between active transportation, rapid transit and local transit.

Highway 401 Interchanges

Connectivity to the provincial freeway network to support growth and improved safety and operations is being implemented through a series of interchange improvements in partnership with the Ministry of Transportation.

A new interchange was constructed at Highway 401 and Wonderland Road to support growth in the Southwest Area. A south extension of Veterans Memorial Parkway to Wilton Grove Road and associated Highway 401 Interchange Improvements were more recently implemented to support industrial growth in the area.

Projects in the planning and design phases include an expansion of the Highway 401 / Highbury Avenue Interchange to support area growth and improvements to the Highway 401 / Highway 4 / Colonel Talbot Road Interchange that will improve safety and operations.

Accessibility and Traffic Signals

London has been proactive with implementation of accessibility improvements. City standards were enhanced to comply with the Accessibility for Ontarians with Disabilities

Act (AODA) in advance of the legislation. All reconstructed intersections are implemented with accessible ramps and tactile plates. Targeted retrofit improvements are also pursued when staff becomes aware of an issue.

Traffic signals improve operations and safety when installed based on the provincial warrant system. In the past five years, eleven new traffic signals were installed.

The City has taken a proactive approach to the retrofitting of audible pedestrian signals to accommodate the visually impaired with stand-alone installations at existing signals. At the end of 2017, 41% of signalized intersections included audible pedestrian buttons.

Countdown pedestrian signals have also been implemented at all signalized intersections for improved user information. Additionally, the assumed walking speed used to calculate pedestrian clearance times was lowered in order to provide pedestrians a more comfortable environment and to contribute to Age Friendly London initiatives.

Progress on traffic signal bicycle detection installations has increased in response to the cycling master plan recommendations and supportive provincial funding. At the end of 2017, 32% of traffic signals were able to detect cyclists.

Year	New Traffic Signal Installations	Audible Pedestrian Signal Installations	Bicycle Detection Installations
2013	4	20	6
2014	2	23	4
2015	1	24	15
2016	0	23	16
2017	4	17	10
Total:	11	87	51

Intelligent Transportation Systems

Looking forward, several intelligent transportation system initiatives are under consideration:

- Improved Transit Signal Priority measures will be installed primarily in conjunction with the rapid transit system;
- Construction of a Transportation Management Centre with CCTV and travel time sensors will help staff proactively adjust traffic signal timings based on real-time data;
- Adaptive Traffic Signal Controls will be piloted to better manage traffic flow on priority corridors;
- Renew London will be integrated into the Waze travel management app;
- An Incident Management System including public notification will be implemented; and,

- A system to detect the frequency and duration of railway blockages is being piloted with potential for provision of real-time user data.

Lifecycle Infrastructure Renewal

Asset condition and corresponding investment needs for transportation infrastructure renewal are evaluated by comprehensive asset management systems. A thorough asset management analysis and the transportation infrastructure gap was identified in a 2013 analysis reported to Civic Works Committee on October 7, 2013 and the 2013 Corporate Asset Management State of the Infrastructure Report.

The quantity of pavement rehabilitation in the last five years to keep roads in a state of good repair for safe and efficient use are shown below in lane-kilometres.

Year	Pavement Rehabilitation (ln-km)
2013	133
2014	127
2015	112
2016	127
2017	96
Total:	595

Asset condition assessment to evaluate return on investment from these programs is performed annually. Below is a plot of the percentage of the road network with a pavement condition rated good to very good since 2013.

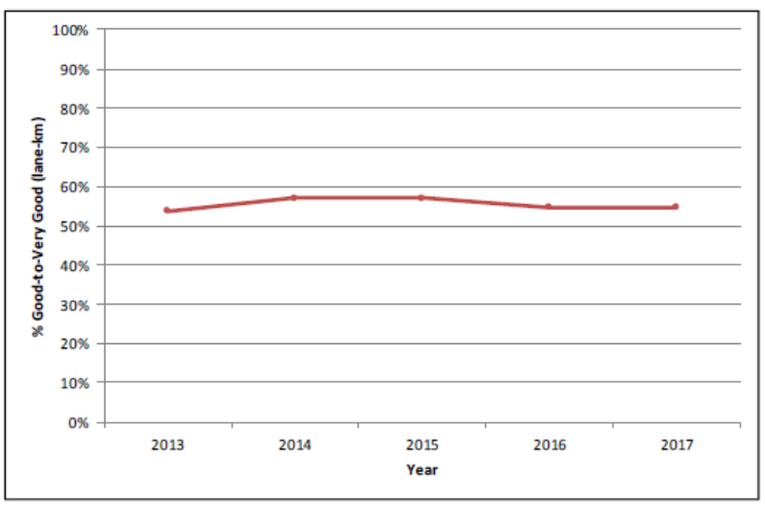

Figure 6.1: Network MBNC Good-Very Good Condition Results (2013-2017)

Condition inspections of bridges are undertaken biennially as required by legislation. Maintaining bridges in safe and functional condition remains a priority. The major bridge upgrade projects performed since 2013 are listed below.

Structure	Year	Work Type
Meadowlily Bridge	2013	Rehabilitation
West Broughs Bridge	2013	Rehabilitation
Second Street Bridge	2014	Rehabilitation
Gore Rd Bridge	2014	Replacement
Hyde Park Road / CNR Overpass	2014	Rehabilitation & Expansion
Highbury Avenue / CN Rail Overpass	2015	Rehabilitation
Hamlyn Street Bridge & Culvert	2015	Rehabilitation
Fanshawe Park Rd Bridge over Stoney Creek	2016	Rehabilitation & Expansion
Windermere Road Bridge over Stoney Creek	2016	Rehabilitation
Blackfriars Bridge	2017	Rehabilitation

In addition to the above major projects, miscellaneous repairs were performed on between 5 and 14 structures each year.

A bridge infrastructure gap remains a concern. Pending near-term (0 to 5 year) needs to maintain a state of good repair are numerous and are estimated at a value of $55 M and include:

- Replacement of the Victoria Bridge (Ridout Street over Thames River South Branch);
- Rehabilitation of the Wenige Expressway Bridges (Highbury Avenue over (Thames River South Branch);
- Rehabilitation of the Riverside Drive Bridge over CN Rail;
- Rehabilitation of Queens Avenue Bridge over the Thames River;
- Rehabilitation of the Wharncliffe Road Bridge over the Thames River;
- Rehabilitation of the Kensington Bridge (Riverside Drive over the Thames River);
- Replacement of the Dundas Street Bridge over Pottersburg Creek;
- Rehabilitation of the Byron Bridge (Boler Road over Thames River);
- Rehabilitation of the Adelaide Street North Bridge (over the Thames River North Branch); and,
- Rehabilitation of the Grenfell Drive Bridge.

The annual bridge upgrade funding in the capital budget forecast to accomplish the infrastructure renewal identified above is inadequate to address the needs above, currently averaging $4M and increasing to $4.5 M in the 10-year horizon.

Other Initiatives

Road Safety Strategy

On March 18, 2014 Council approved the Road Safety Strategy and directed staff to begin development and implementation of the City-led road safety countermeasure action items as identified in the 5-year Road Safety Strategy Plan. In 2017, Vision Zero principles were adopted by Council. Consistent with the aspirational goal identified by Vision Zero, the London Road Safety Strategy outlines a path to a safer road environment for all transportation users in London with identified actions and measurable targets.

Since the start of the implementation of the Road Safety Strategy, many of the strategy countermeasures under the engineering category have been completed or are underway such as:

- red-light camera installations;
- a statistical network screening for all intersections in the City to identify high collision locations;
- pedestrian facilities improvements including more than 90 pedestrian crossovers;
- installation of advance street name signs at many key intersections; and,
- cycling facilities continue to grow in the City.

The strategy includes a focus on education and awareness. As part of the Road Safety Strategy and Vision Zero, the City and its partners in road safety have introduced many campaigns including “Embrace the Red”, “Share the Merge”, “Mind the Green”, “Respect the Limit”, Lego Brick PXO Videos, Share the Road, “Buckle Up Phone Down”, and Josh’s Story.

Transportation Energy Optimization Plan

Replacing the high pressure sodium (HPS) street lights with LED street lights along major roads is a cost effective program with a beneficial return on investment. Phase 1 upgraded 9,276 street lights from HPS to LED in 2014 and 2015. Energy savings of 5,500,000 kWh were achieved in 2017 with an associated cost avoidance of $950,000.

Phase 2 upgraded 10,455 street lights in 2017. The 2017 partial year energy savings extrapolate to 4,035,000 kWh annual energy savings with an associated savings of $620,000.

CONCLUSION

Smart Moves is a Transformational Plan that, when combined with The London Plan, is migrating London's transportation system towards sustainability. The key objectives of the TMP are to enhance quality of life by making existing transportation systems better, including providing more choices to travel, improving transit service and supporting more walking and cycling. The plan promotes a diverse array of initiatives and the report provides a summary of accomplishments to date.

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PREPARED BY:	**REVIEWED AND CONCURRED BY:**
DOUG MACRAE, P. ENG. **DIVISION MANAGER** **TRANSPORTATION PLANNING & DESIGN**	**EDWARD SOLDO, P. ENG.** **DIRECTOR, ROADS AND TRANSPORTATION**
RECOMMENDED BY:	
KELLY SCHERR, P.ENG., MBA, FEC **MANAGING DIRECTOR** **ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**	

Appendix A: Completed Road Projects, 2013 to 2017

cc. Jay Stanford, Director, Environment, Fleet and Solid Waste
John Fleming, Managing Director, Planning and City Planner

Appendix A
Completed Road Improvement Projects
2013 to 2017