

Update: Public Transit

Initiative Title:	Public Transit
City Council Lead(s):	Councillor Sohi
Department Lead(s):	Charles Stolte, Transportation Services

Objective:

Edmonton Transit System (ETS) provides customer-focused, safe, reliable and affordable public transit services that link people and places. In order to optimally deliver public transit service, Edmonton Transit has identified a series of three-year initiatives.

Key Outcomes, Projects or Activities and their Status as of May 2013:

In order for public transit to achieve its desired outcomes, a series of public transit initiatives have been identified:

1. Smart Bus [\$35M] - Funding has been approved (\$3.4 million in 2011 and 2012) for the initial deployment of Smart Bus technology on 45 buses. Following a tender process, the Trapeze Group was awarded the contract to deliver the Smart Bus solution. The focus of Phase 1 is to implement the Smart Bus functionality on buses operating on Routes 111 and 128 with implementation in June 2013. Full deployment to all ETS buses will be undertaken as further funding becomes available.

Proven “Smart Bus” systems are available in the transit industry and designed to help improve gaps in terms of managing operations, improving service reliability, providing additional information for service planning and improving the amount and quality of information available to citizens. The ETS Smart Bus solution will include:

- *Automated Stop Announcements (ASA)* - Audible and visual stop announcements will improve accessibility for seniors and persons with disabilities.
- *Real-time Passenger Information* - Riders will know with certainty the arrival time of their bus and can receive this information through the medium of their choice.
- *Wayside Passenger Information Signs* - Wayside signs at University of Alberta and West Edmonton Mall Transit Centres will provide real-time transit information.
- *Automated Vehicle Location System (AVL)* - AVL will help in the event of an emergency as well as facilitating schedule adherence monitoring.
- *Computer Aided Dispatch (CAD)* - CAD in the Control Centre will enable Controllers to better monitor transit service and manage incidents.

- *Mobile Data Terminals (MDT)* - Onboard MDTs provide operators with electronic running boards and improved communication with the Control Centre.
 - *Security Camera/Covert Alarm* - A covert alarm will automatically trigger real-time video stream to the Control Centre, improving operator and passenger safety.
 - *Mobile Dispatching Software* - On-road supervisors will have the tools required to manage service in real-time.
 - *Expandable Bus Communication Network* - Automated passenger counters and future Smart Fare solutions can be connected with back-office systems.
2. Smart Fare [\$30M] – Replace obsolete, costly, manual, paper-based fare distribution and collection systems with account-based, open payment smart fare system that provides customer and operational value and benefits including superior data collection, flexible payment options, and seamless regional integration. The Regional Smart Fare System is eligible for Green TRIP funding which would require \$10.0 million to be funded directly by the Capital Region Board partnership - Edmonton's share at 70 percent amounts to \$7.0 million and this funding has been approved.
 3. Northeast Garage [\$14.8M] – The 2012 approved budget assigned \$14.8 million for land acquisition and design of a new 400-bus transit garage. Further funding is required for the estimated construction of the garage in 2015 with operation planned by 2018. The new garage is required to replace the existing Westwood Garage (constructed in 1960) and to provide for additional bus capacity to accommodate future growth in the transit system. Land has been acquired and the parcel is located east of Yellowhead Trail and south of Fort Road. Selection of the design consultant is in process. This initiative is partially funded.
 4. Westwood Garage Upgrades [\$1.6M] – This is a fully funded initiative for Westwood Garage rehabilitation to support operations until 2018.
 5. Northgate Transit Centre [\$5.6M] – The demolition and re-building of a new Transit Centre at the existing Northgate Transit Centre location included the rehabilitation of the existing bus platform and roadway. This initiative is fully funded. Work commenced at the end of May 2012 and will be completed in July 2013.
 6. Bus Fleet and Equipment Rehab [\$16.1M] - The ETS bus fleet must be replaced on a regular and predictable basis, every 20 years for conventional 40-foot low-floor and articulated buses (exceeding the industry-standard 18-year design life), and 7-year lifespan for community service buses. Replacement of buses also allows ETS to take advantage of design and technology improvements (e.g. “clean” diesel engines, corrosion protection). In order to maintain the buses for the expected lifespan, a comprehensive maintenance program is needed. For the vehicles with a 20-year design life, mid-life refurbishment of key components is required (body and frame, engine, transmission, etc.). Mid-life refurbishment is a cost-effective way to

ensure buses can operate for their expected lifespan. Other components, such as bus camera systems, Automated Passenger Counters, fare boxes and radios, are also replaced at the end of the component lifecycle.

The DATS fleet, originally purchased in 2005, has a design life of seven years, and 25 buses were replaced in 2012, with 25 in 2013 and 14 in 2014. The 40-foot low-floor buses purchased in 1993/1994 will be beyond their rated design life within the period 2012-2014. Of the 42 buses purchased in 1993/1994, which are still in service, funding is available for the replacement of 7 units (delivery of these buses in 2013). The remaining 1993/94 buses will be retired by the end of 2013.

7. Bus Fleet and Equipment Growth [\$68M] - Buses must be added to Edmonton Transit's fleet to meet increased demand for public transit service resulting from general growth in the city and changing travel patterns. Conventional 40-foot diesel buses are required for fixed-route/fixed-schedule service in developing areas of the city, and to provide additional capacity on existing routes "downstream" from the developing areas. Community service buses are required to accommodate the increasing needs of the aging population, and are also utilized on routes with lower passenger demand (off-peak services, initial implementation phase of new bus routes and for "developer-funded" service).

During the 2013 Budget discussions, City Council directed the Administration to develop a long term maintenance and replacement plan for the bus fleet including the financial implications, and provide a report to Transportation Committee prior to the end of the second quarter of 2013.

Two Compressed Natural Gas (CNG) buses were acquired in late 2012 and put into service in January as a 2-year pilot program got underway to test the fuel technology operation in cold weather.

8. LRT Fleet Retrofit [\$46.3M] – Thirty-seven U2 LRVs are being retrofitted to provide an additional 15 – 20 years of operational life. Work includes repairing body corrosion, refinishing the interior and exterior, replacing obsolete and worn electrical and mechanical components and upgrading passenger communication and security systems. The basic body and electrical panel work is complete and all vehicles have been delivered back to Transit. Work is underway to address deficiencies on the communications package with a resolution planned to be ready this Fall. The replacement of the obsolete electronic train control unit with a PLC application is planned to be completed by the end of 2014. A prototype control unit has been built and is scheduled for field testing this summer.
9. NLRT (LRVs and NAIT line) – The NAIT LRT extension and construction is underway. It will extend the line approximately 3.3 KM from Churchill Station north to NAIT. Three new stations will be opened in April 2014 (MacEwan, Kingsway/Royal Alex and NAIT). Service will operate from NAIT to Health Sciences/Jubilee using 3-car trains. The total cost of the project is \$755M. An additional 20 LRVs (SD160)

were ordered to provide service on the NAIT LRT line. All of these vehicles have been delivered. Costs are part of the NLRT budget.

10. LRT Central Station Roof Replacement [\$43M] – The roof on Central Station and the Jasper Avenue road surface is being replaced in 2012-2013. A new waterproofing membrane is being applied to the station roof and damage to the station structure will be repaired. As part of the rehabilitation work, the first phase of the Jasper Avenue New Vision plan (from 100 Street to 102 Street) is being implemented. This project is underway and scheduled for completion in October 2013. This initiative is fully funded.
11. LRT Station Rehabilitation [\$14.7M] – Various projects including: (1) Stadium LRT station platform renewal (\$3.8M); (2) addition of Variable Messaging Signs (VMS) to provide LRT train arrival times in the NE stations (\$1.1M); and (3) installation of new warning tiles on the edge of the LRT platforms at Bay/Enterprise Square, Corona, Central, Stadium, Grandin and University Stations. VMS signs are currently provided in the SLRT stations and, as part of the NLRT line scope, will be added to the underground stations and the NLRT stations. New signs have been installed at Stadium and Coliseum Station. With Belvedere and Clareview to be completed this summer. Central Station warning tiles have been installed and work is underway at Bay/Enterprise Square Station. University Station is planned to be done this summer and Grandin this fall. Corona will be done in the spring of 2014.
12. Transit Control Centre [\$5.5M] – The growing operational challenges presented across an ever-expanding system have created the need for additional space within the ETS Control Centre. This project involves the renovation of the Churchill Control Centre. The new facility provides the opportunity for the integration of all areas of the Control Centre that permits better communication with citizens, direct accountability, and ultimately, a strengthened and streamlined operation. The integration will include monitoring Bus and LRT service continuity; supervising and assisting on-road employees; and dispatching responses to Bus, DATS and LRT disruptions, collisions, incidents, personal injury and security issues, ensuring the system runs smoothly. This project is scheduled for completion by December 2013.

Other Highlights:

13. Transit Review: The City of Edmonton has retained Stantec Consultant Ltd. to undertake a comprehensive review of Edmonton Transit System. The objective is to review Edmonton Transit's current practices and its funding model, and assess the impact they will have on the effective and efficient delivery of public transit services in the future. Areas for review include: governance, fare structure, operating costs and efficiencies, asset management, and service delivery. The final report is scheduled to be completed in March 2014.

14. Ridership: To the end of April 2013, ETS provided 31.73 million trips to customers. This is an increase of almost 1.62 million trips or 5.37% over the same time period in 2012.
15. Canadian Urban Transit Association (CUTA) Corporate Award: The ETS *S'no Fun to Fall – Slips and Falls Prevention Initiative* received the 2013 CUTA National Award in the Safety and Security category. This award recognizes transit organizations for their commitment to enhancing the safety and security of transit employees and/or customers through the development and implementation of effective safety and/or security programs. This non-traditional approach was a fun and engaging way to educate/inform employees about slips, trips and falls. It included posters, brochures, coupons for slip-resistant footwear, and a contest that had supervisory staff 'sole checking' employee footwear.
16. Regional Transit Service: ETS plays a key role in the ongoing integration of services with regional transit authorities, including administering operating agreements with St. Albert and Strathcona County (scheduled for renewal in 2014) and continued contracted operation of bus service on behalf of other regional municipalities.
17. Participate in Regional Paratransit Study: A regional paratransit study will be conducted as steps are taken towards a regional transit system. Participation in this study is critical as the expertise of DATS will help mold what regional paratransit will look like in the future.
18. Updating the DATS Application Process: With ETS now accessible, through 2013 DATS is introducing in-person assessments/interviews for new applicants. In early 2014, DATS plans to start re-certifying existing registrants. In 2012, DATS engaged stakeholders and professionals within the community who assist in filling out application forms to ensure an effective change management process.
19. Fully Accessible Transit Service: In 2013, DATS is leading an initiative to complete a conventional transit accessibility audit to review its infrastructure and practices to minimize barriers to access for persons with disabilities (updating the 1998-99 study). Through conventional transit initiatives such as the Automated Stop Annunciation (ASA), further steps will be taken towards making ETS more accessible. In addition, the use and type of securement devices used on low floor buses, contingency plans for pass-up of disabled riders, and mobility aid counting processes will be reviewed. Associated training and information campaigns for ETS staff, riders, caregivers and the public will play an important role in making this effort a success.
20. Customer Safety and Security: A key component to the success of Edmonton Transit is a focus on customer safety and security. Incorporating new innovative ideas, along with constant review with an eye for improvement, has lead to key projects that will be completed during the period of 2013 to 2014. Relocation of a new Control Centre continues to be a focal point, as it plays a pivotal role in the

gathering and delivery of timely customer focused information. A complete listing of key projects over the next two years is listed below:

- The continued implementation and refinement of the Youth in Transit program based on an enhanced integrated intelligence sharing model with stakeholders such as the Edmonton Police Service, YOUCAN, REACH and other stakeholders;
- Refined protocols and processes aimed at reduction in employee assaults;
- The completion of a Memorandum of Understanding with the Edmonton Police Service outlining response protocols and procedures;
- Public awareness and education initiatives designed to focus on acceptable behaviour on the system while educating the public on the role and authority of Peace Officers;
- The incorporation of *Total Station* scene management and mapping software to enhance collision investigations;
- The ongoing development of a Divisional Strategic Information Management plan;
- Develop a comprehensive set of Division level Key Performance Indicators/dashboards;
- Smart Bus integration into the Control Centre and surface operations;
- The creation and refreshment of Security Plans, Emergency Escalation Plans and Business Continuity Plans; and
- Security SMS (text) project.

21. LRT Station Escalators Replaced: Replacement of the south and north escalators in Churchill commenced was completed December 2012. Repairs to the University Station escalators were completed in May 2013, and three escalators at Grandin LRT Station are expected to be completed in June. The replacements are part of a program to replace escalators currently in operation in older stations that have exceeded their design life of 25 years. The replacement program for the rest of the older stations is currently unfunded.

22. Health Sciences/Jubilee Station Platform Construction: Construction started in February 2012 for the installation of an overhead pedway across 114 Street and along the west side of the station, connecting the LRT station, University Hospital, new Edmonton Clinic South and the new Edmonton Health Academy. The Pedway is scheduled to be opened in June 2013.

23. Developer Funded Service: Through arrangements with developers of new residential communities, Edmonton Transit is presently operating five weekday peak period bus routes in new neighbourhoods, with the operating costs for the service funded from developer contributions. This has allowed for implementation of service at the initial stage of neighbourhood development, prior to point where the neighbourhood would meet normal service warrants for the implementation of service. Previous experience with early service implementation has indicated that

higher ridership levels can be attained as the neighbourhood grows (compared to communities where early service was not implemented).

Future Steps:

- Future steps, where appropriate, are described within the public transit initiatives descriptions above.