

# Utah Transit Authority 2009 Sustainability Report

*Sustainability*





## Message from the General Manager

Dear Friends,

The Utah Transit Authority (UTA) is proud to provide quality, sustainable transportation within the communities we serve. As our communities grow, it is critical that we evaluate the legacy that our growth leaves to the rising generation and generations to follow. At UTA we likewise consider it imperative to evaluate our operations and growth as we work toward becoming a sustainable community.

At UTA, we are dedicated to improving the quality of life and the health of the environment in the communities we serve. Each weekday we provide transit service to more than 140,000 riders along the Wasatch Front. By providing a quality transit service, we give people transportation alternatives that help to reduce emissions, create opportunities for dynamic land -use planning and improve the quality of life for the members of our community. Adopting and developing the latest technologies, we are not only reducing our own emissions, we also are serving as a model transit agency for the entire country.



UTA takes its environmental management seriously. UTA is the only transit Authority in the United States with both ISO 9001 certification for quality management and ISO 14001 Environmental Management System. ISO has helped UTA implement better energy management systems. As a result, in 2008, UTA reduced its electricity use 5.57 percent at most of its bus divisions and achieved a 5 percent reduction of energy in park & ride lots along the Sandy/Salt Lake TRAX line. Based on actual vehicle miles traveled in 2008, UTA was able to reduce the nitrogen oxide (NO<sub>x</sub>) emission rate of its fleet by more than 9.3 percent. This reduction is just the start of positive changes to come. UTA has developed a six-year bus replacement plan that will reduce particulate matter (PM) and (NO<sub>x</sub>) emissions by 80 percent by 2015. Sustainability for UTA means managing assets efficiently, minimizing environmental impacts while maximizing economic growth and social progress. UTA recognizes that progress unmeasured quickly turns into mediocrity. Preparing an Annual Sustainability Report is key to establishing and communicating UTA's sustainability goals and measuring progress in achieving them.

We recognize that sustainability takes time and hard work. With firm resolve and setting achievable, stretching goals each year we will become more sustainable. Soon we will be able to look over our shoulders and see just how far we have come.

Sincerely,  
John M. English  
General Manager





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## *Public Transportation along the Wasatch Front*



### *The Utah Transit Authority*

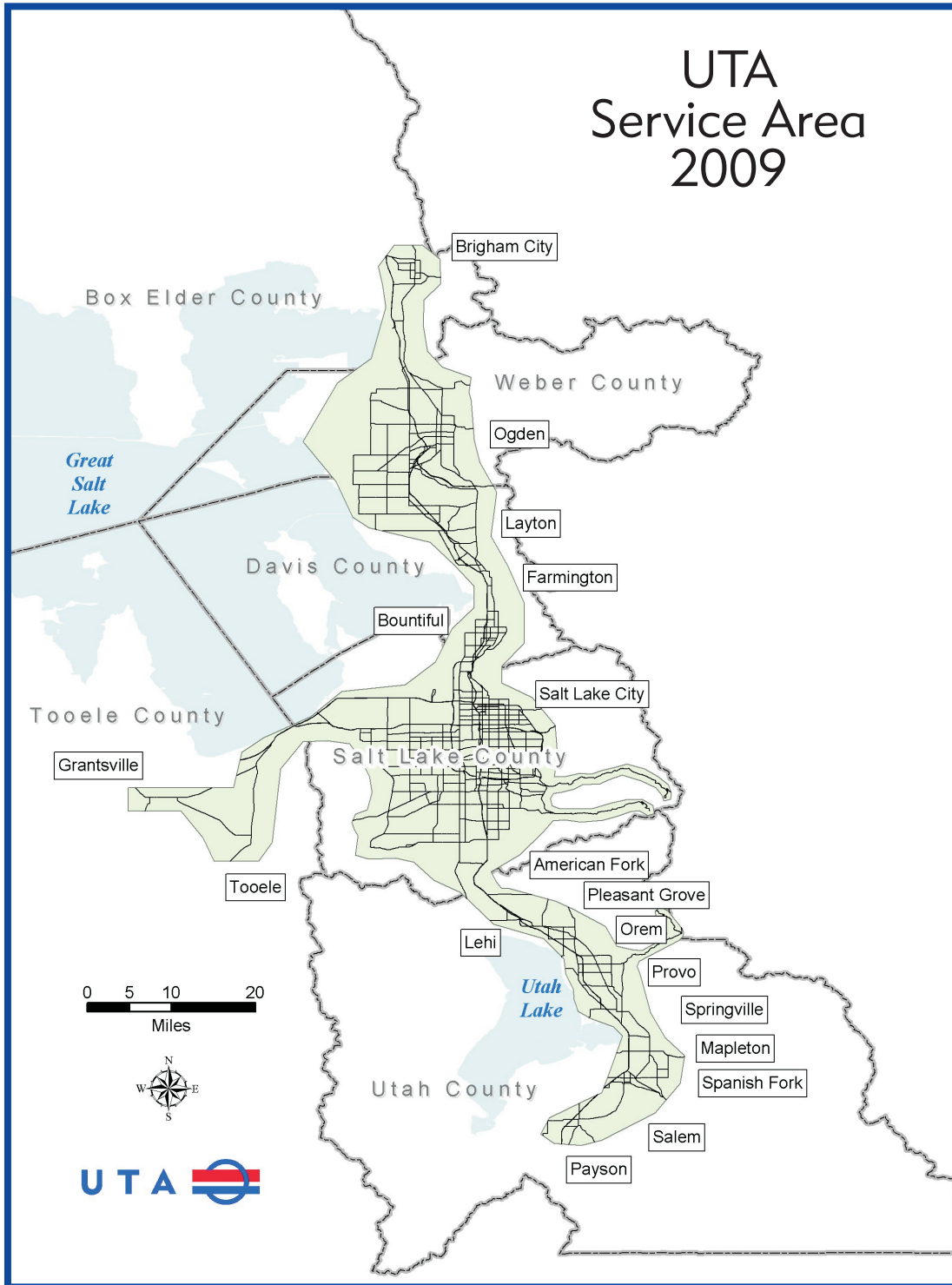
The Utah Transit Authority was incorporated on March 3, 1970, under authority of the Utah Public Transit District Act of 1969 for the purpose of providing a public mass transportation system for Utah communities. Today, with a service area of more than 1,400 square miles, the Utah Transit Authority (UTA) is one of the largest geographic public transportation agencies in the country. UTA serves 75 cities in six counties along the Wasatch Front. The population of UTA's service area is estimated at 2,183,528 residents and represents 79 percent of the State's total population.

UTA's service area includes Salt Lake, Davis and Weber counties. The service district in Utah County includes the cities of: Alpine, American Fork, Cedar Hills, Highland, Lehi, Lindon, Mapleton, Orem, Payson, Pleasant Grove, Provo, Salem, Spanish Fork, Springville, Saratoga Springs and Eagle Mountain, Provo Canyon in Utah County. The service area in Tooele County includes the cities of Tooele, Grantsville and the unincorporated areas of Erda, Lakepoint, Stansbury Park, and Lincoln. The service area in Box Elder County includes the cities of Brigham City, Perry and Willard in Box Elder County.

### *Governance*

UTA is governed by a 19-member board of trustees which is the legislative body of the Authority and determines all questions of Authority policy. All nineteen members have an equal vote as a Board of Trustees passes ordinances and sets policies for UTA. Fifteen members of the Board of Trustees are appointed by each county municipality or combination of municipalities which have been annexed to

# UTA Service Area 2009



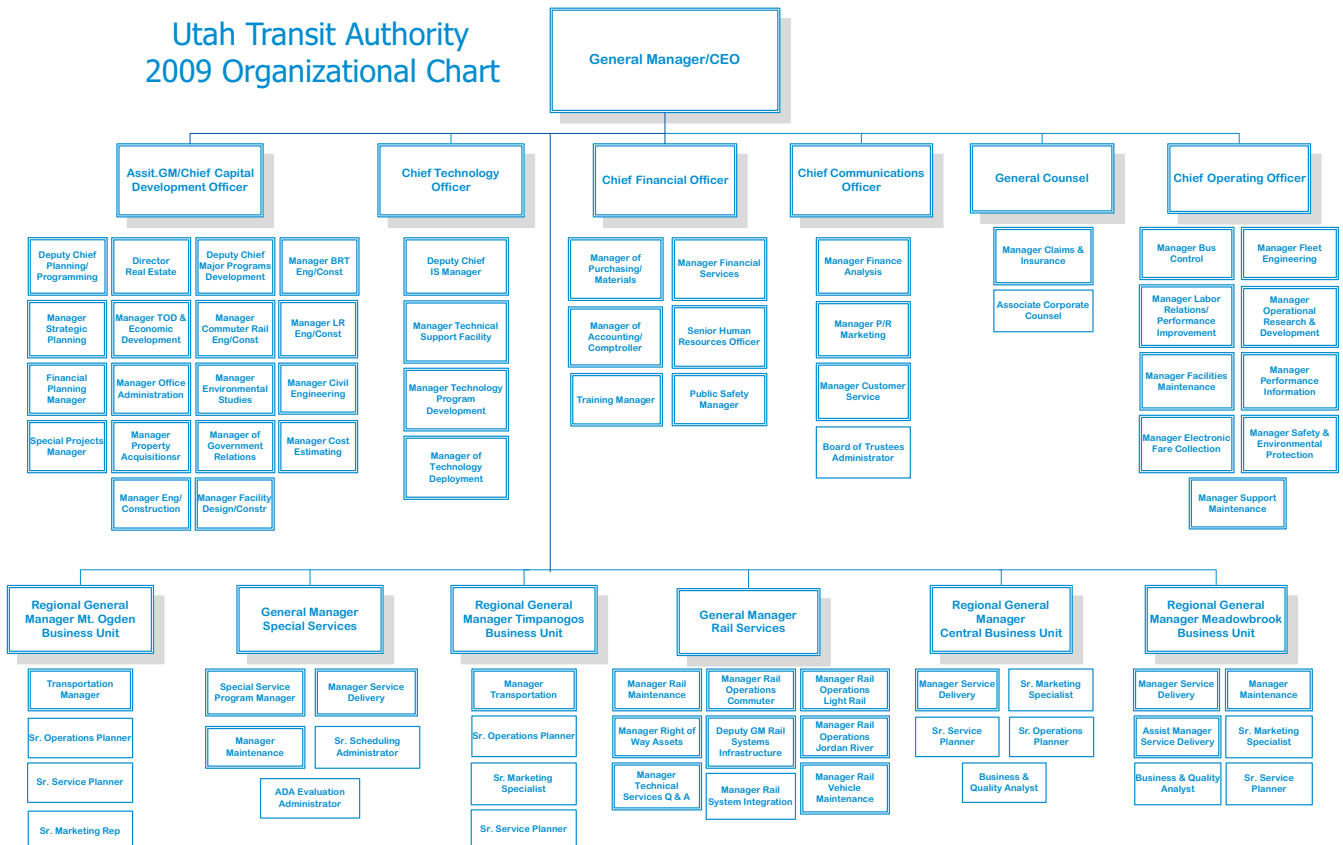
the UTA service district.

The Board also includes one member who is appointed by the state Transportation Commission who acts as a liaison between the UTA and the Transportation Commission; one member of the Board is appointed by the Governor; one member is appointed by the speaker of the Utah State House of Representatives; and one member is appointed by the president of the State Senate.

## Management

The responsibility for the operation of UTA is held by the General Manager in accordance with the direction, goals and policies of the Board of Trustees. The General Manager has full charge of the acquisition, construction, maintenance, and operation of UTA's facilities, services, and the administration of its the business affairs.

UTA's bus operations are managed in business units with geographical boundaries including: Central (for downtown Salt Lake City), Meadowbrook (for the greater Salt Lake County), Mt. Ogden (for Weber and Davis counties) and Timpanogos (for Utah County). UTA also has business units for rail operations (including TRAX light rail and FrontRunner commuter rail) and special services (for paratransit services and van pool).



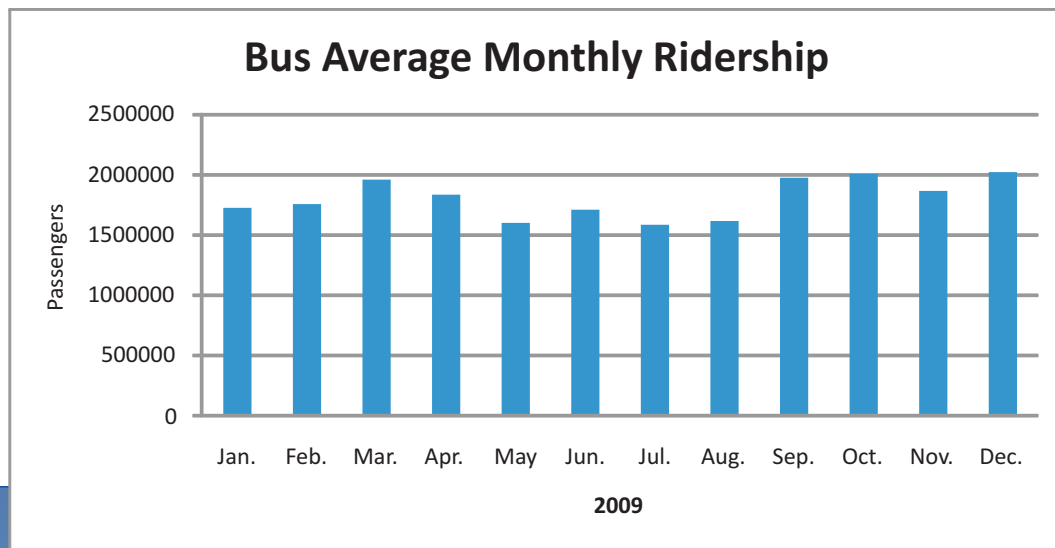


## Ridership

UTA operates three primary modes of transportation including bus (and Bus Rapid Transit), TRAX light rail and FrontRunner commuter rail services. UTA also supports rideshare and van pool programs. In 2008, UTA provided service for more than 139,900 weekday riders and 39,576,500 annual riders across its various services.

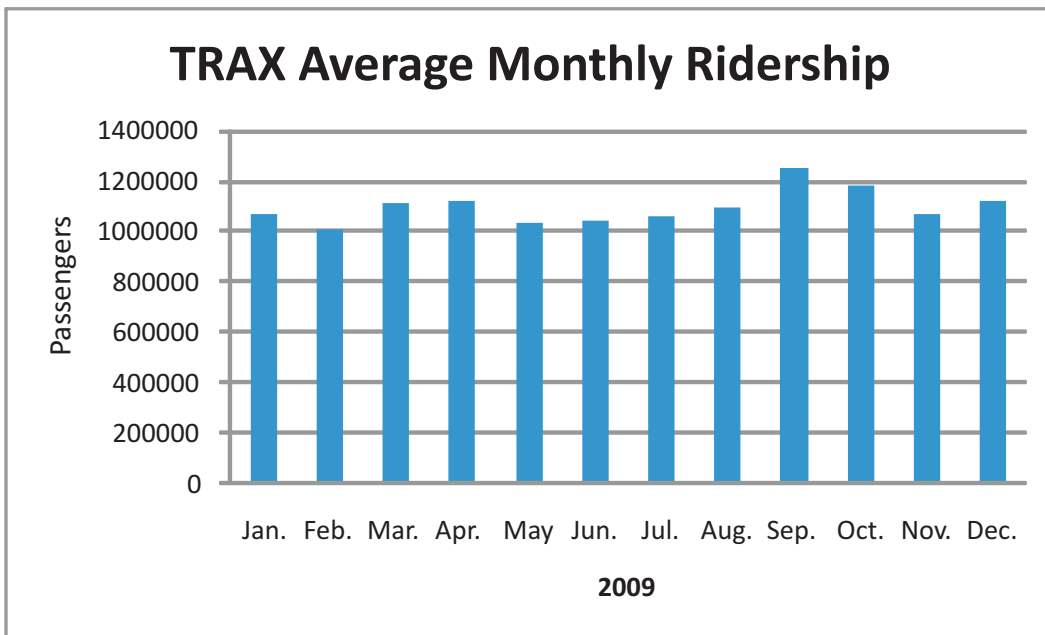
## Bus

UTA has more than 610 buses. The fleet includes hybrid-electric buses, ski buses, over-the-road coaches and more than 100 paratransit vehicles. A new addition to UTA's bus system is the MAX Bus Rapid Transit (BRT) system. The first MAX line opened in July 2008 and operates through South Salt Lake City, West Valley City and Magna. BRT is a relatively new technology designed to imitate the benefits of light rail. It offers park & ride lots, ticket vending machines, upgraded stations, limited stops, faster speeds, greater frequency, signal priority and specialized buses. The MAX BRT system will also include some portions of designated lanes along its alignment.



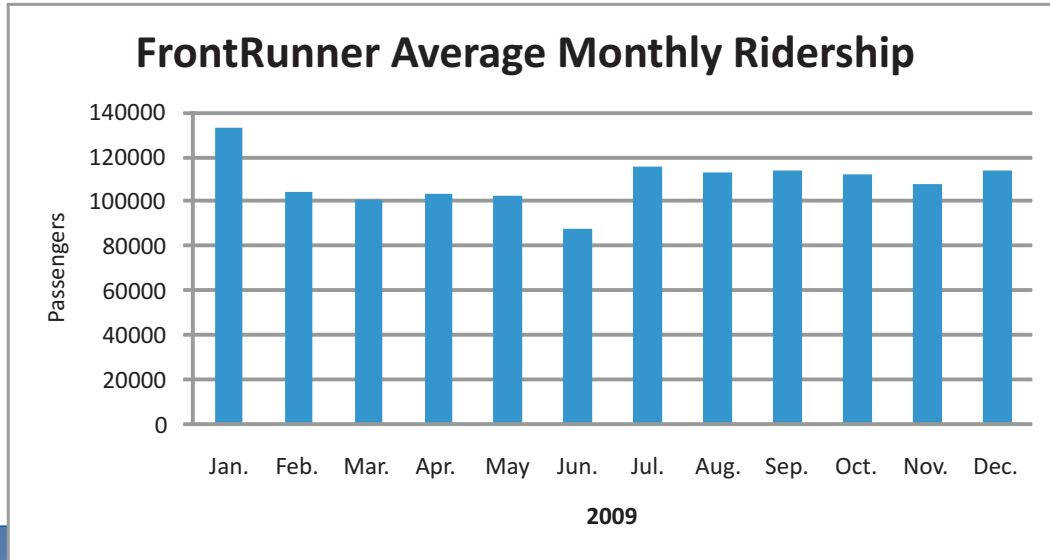
## TRAX Light Rail

UTA currently owns and operates 69 light rail vehicles on two light rail lines: the Sandy/Salt Lake TRAX line (completed in 1999) and the University TRAX line (completed in 2001). UTA has built extensions off of both of these lines: one to the Salt Lake Central Station, an intermodal hub, in 2008 and an extension to the University of Utah Health Sciences complex in 2003. There are currently 28 light rail stations on these lines. TRAX currently operates through five municipalities in Salt Lake county. Together these two lines carry more than 43,400 passengers each weekday.



### *FrontRunner Commuter Rail*

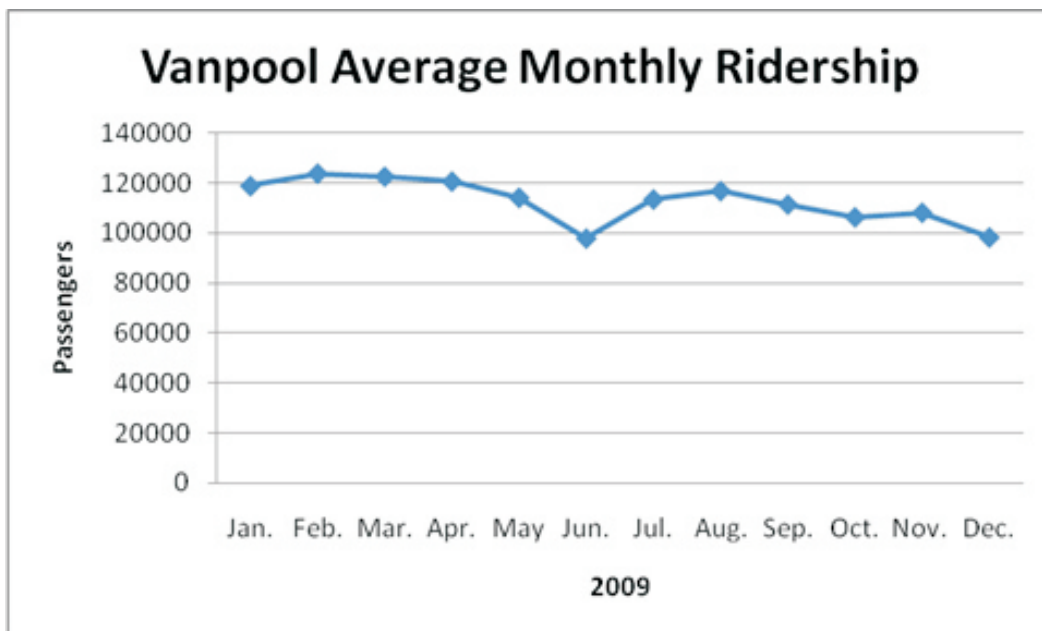
On April 27, 2008 UTA opened the FrontRunner commuter rail line. The FrontRunner project operates between Salt Lake City 44 miles north to Pleasant View, Utah. This is the first phase of the FrontRunner system and carried 166,874 riders in 2009 approximately . The second phase of FrontRunner will travel 45 miles south of Salt Lake City to Provo, Utah.





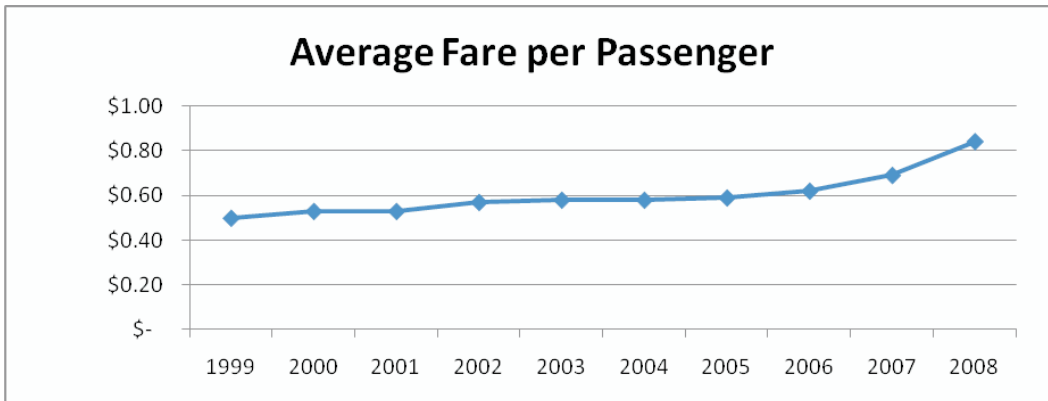
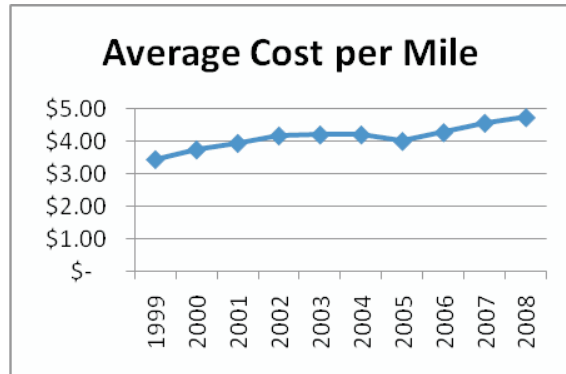
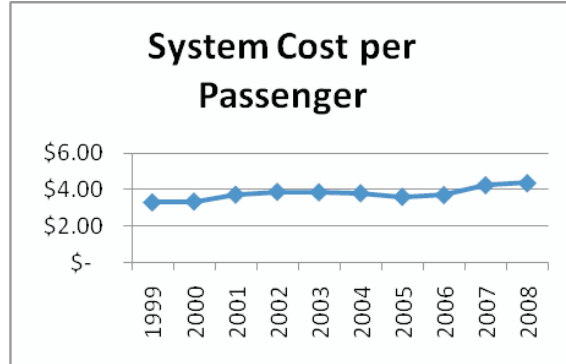
## Vanpool

The UTA Vanpool Program is one of the most effective transit product from an environmental, financial and customer convenience standpoint. Vans transport groups of five to fourteen people from similar home origins to similar work destinations on a daily basis. The vehicles have rosters of half the vehicle's capacity plus the driver. The groups share the cost of operating the van and the public subsidy of the program is relatively small. The pickup locations are mutually agreed to by each van so the service is practically door to door, generally car door to office door.



## Efficiency Figures

Additional efficiency figures showing service costs by passengers are shown below.







*Sustainability is meeting "the needs of the present without compromising the ability of future generations to meet their own needs."<sup>1</sup>*

*"Utah Transit Authority strengthens and connects communities, thereby enabling individuals to pursue a fuller life with greater ease and convenience by leading through partnering, planning and wise investment of physical, economic and human resources" – UTA Mission Statement*

### *Mission, Vision and Strategy*

In the UTA Transportation Master Plan project goals, it states "Transportation should, serve downtown, be pedestrian friendly, be easy to use, enhance mobility and balance the modes of transportation used along the Wasatch Front. Transportation should also serve suburban areas efficiently, facilitate seamless transfers, increase transit ridership, support anticipated land use and re-development and encourage transit-orientated development."

UTA's vision is to meet the goals of the plan while helping to protect the diminishing fossil fuel resources, higher energy needs, increased population and the mounting need to conserve our water, improve our air quality within an EPA designated non-attainment area.

<sup>1</sup>United Nations General Assembly (1987) *Report of the World Commission on Environment and Development: Our Common Future*. Transmitted to the General Assembly as an Annex to document A/42/427- Development and International Co-operation: Environment. Retrieved on: 2009-02-15.

### *Commitment to Sustainability*

Utah Transit Authority is a Full Signatory member of the International Union of Public Transportation (UITP) and the American Public Transportation Association (APTA) Sustainability Charters.

The APTA Sustainability Commitment requires UTA to report on water usage, criteria air and water pollutant discharge, carbon emissions, electricity and fuel use, recycling levels compared to waste generation, operating expense per unlinked passenger trip and passenger mile, and vehicle miles traveled per capita within the service district.

UITP Sustainability Charter membership means that UTA will evaluate its efforts in economic, social and financial sustainability.

### *Three Pillars of Sustainability*

Sustainable business practices require the reconciliation of environmental, social and economic demands - the "three pillars" of sustainability. UTA is committed to achieving goals for economic growth, environmental protection, and social progress at the same time. UTA has established a policy to guide UTA's commitment to sound, sustainable practices relating to current and future transit operations, employee relations and community partnering within the UTA service district.



*To foster sustainable operations and economic growth,  
UTA is committed to enhancing revenue and managing assets wisely.*

### *Partnering*

UTA is focused on partnering with communities within the service district in creating sustainable land-use planning and transit-oriented development. Partnering with community leaders leads to the best decisions on how to grow the transit system. These efforts ensure that Utah will continue to be inviting for business and enjoy a thriving, sustainable economy.

### *Transit Oriented Development*

For decades development in Utah has promoted out-migration from the city to the sprawling suburbs. These development patterns contributed to air pollution by encouraging single-occupancy vehicle commuting. Public transportation is now helping guide smart growth land use and sustainable communities. Transit-oriented development will play a major role in shaping Utah's environment, helping Utahns to have a better quality of life—and air.

Market research indicates that Utah's population is overwhelmingly supportive of additional mass transit. In addition, more than 30 percent of Salt Lake metro residents would prefer to live in a smart, mixed-use, transit oriented development (TOD). In response, the Utah Transit Authority (UTA) has identified 25 stations and 80,000 acres of land available for development and is currently soliciting development partners.

Today, UTA is engaged in two well-established TOD projects: City Creek Center (owned by City Creek Reserve, Inc., division of the business arm of the LDS Church) in Salt Lake City and Daybreak (owned by Kennecott Land, division of Rio Tinto) at the south end of the Salt Lake Valley in South Jordan.

## City Creek Project



Upon completion in 2012, the \$2-billion City Creek Center will encompass approximately 20 acres (49 hectares) in the heart of downtown Salt Lake City. While limited underground parking will be available, the site's historic markers, 300 residences, numerous office towers and large retail center will be served by UTA's TRAX light rail system and bus fleet.

## DayBreak



Daybreak (Kennecott Land) serves as an anchor development in the southwest portion of the Salt Lake Valley. The development's masterplan calls for more than 20,000 residential units, along with more than nine-million square-feet of office, industrial and retail space, to be built on just over 4,000 acres. The project is well under way with several thousand homes and a number of businesses built and occupied. One of the area's key features is its accessibility to transit. UTA is in the process of completing construction on a new TRAX light rail line that will run 10.6 miles from the development's core to the main TRAX light rail line and then into downtown Salt Lake City.



### *Disadvantaged Business Enterprises*

The Disadvantaged Business Enterprise (DBE) program has been the US Department of Transportation's (USDOT) most important tool for promoting equal opportunity in federal transportation contracting. Each USDOT recipient (such as Utah Transit Authority) has the responsibility of developing an overall annual contract goal which reflects the level of DBE participation expected on USDOT assisted contracts in the absence of discrimination. Firms that participate in the DBE program are able to gain experience in their field, to compete in the mainstream marketplace.

Annually UTA sets an overall goal of DBE participation on federally assisted contracts. UTA's implementation of the DBE program has developed small businesses to offer specialized products and services for the transit industry. In 2008, UTA had DBE participation of \$184 million on federally funded Mid Jordan light rail line and the West Valley City Hub and plaza projects.





*Sustainability also serves the social needs of the community by creating jobs for individuals, regardless of their race, national origin, gender or religion.*

### *Social Progress*

UTA is committed to improve the quality of life for citizens within its service district regardless of their race, national origin, gender, or religion. UTA practices this philosophy externally in providing transportation options to passengers as well as internally with its employees.

### *Social Equity - ADA Compliance*

UTA provides accessible and inclusive services to individuals with disabilities throughout the service area to meet compliance with the Americans with Disabilities Act (ADA) and the ADA Amendments Act of 2008. All current UTA facilities that are open to the public, meet architectural accessibility guidelines. UTA is proud of its 100 percent accessible fleet of buses and trains. UTA is committed to assure transportation services are available to everyone who has the ability and desire to use the integrated, mainline services. Individuals whose disabilities are so severe or significant that they could not use the mainline services may qualify for UTA provided paratransit services.



### *CAT Committee-Input from People with Disabilities*

More than 10 years ago, UTA established an on-going advisory group, the Committee on Accessible Transportation (CAT). This group of community volunteers represents people with various disabling conditions and groups that have an interest in public transportation. The CAT meets monthly to advise and monitor UTA services and practices, to ensure viable, usable transit services are in place and all new programs and services are designed and implemented to be accessible and readily usable by people with disabilities.

### *Employee Relations*

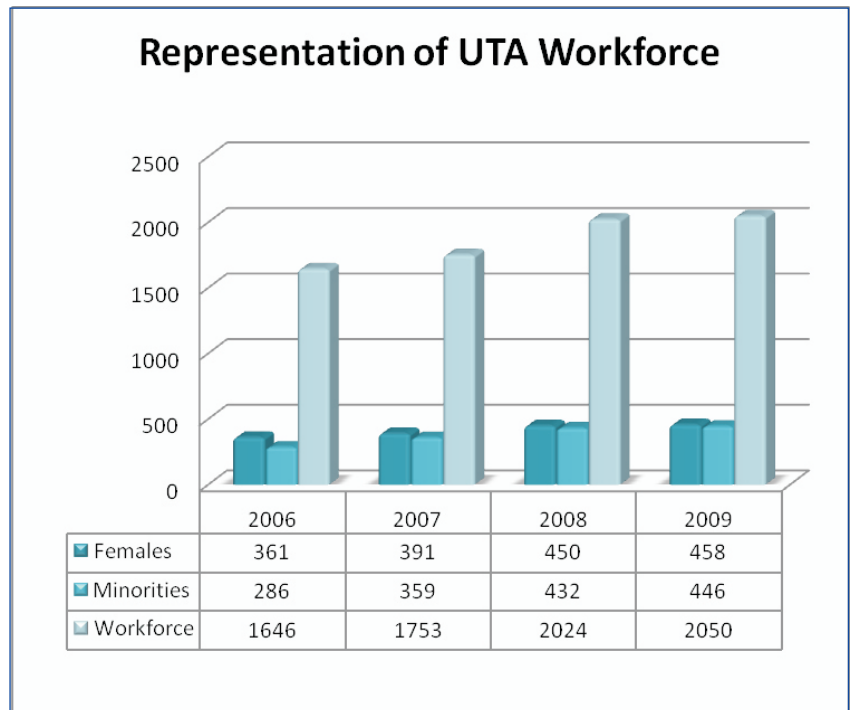
In order to achieve sustainability, organizations must include their employees in the process. As previously cited, one popular definition of sustainability includes the “ability to meet present needs without compromising the ability of future generations to meet their needs.” UTA continually examines the long term effects of the current obligations, policies and development opportunities and includes employees in this equation. By advertising and promoting a good health insurance plan, a defined benefit pension, competitive wages and encouraging advancement by promoting from within where possible, UTA recognizes what benefits the employees, benefits the agency.

By recognizing that today's employees influence the customers and community of tomorrow, Utah Transit Authority moves ahead by promoting viable, sustainable services that allow staff to enjoy a better standard of living that will benefit the generations yet to come.

### *Workplace Diversity*

Internally, UTA continues to focus on hiring and maintaining a diverse workforce. Over the last four years UTA has increased its representation on females and minorities in its workforce.

Among the thirteen executive level managers, two are female and one is a minority. Of the 243 first mid-level managers, 46 (18.9 percent) are female and 32 (13.1 percent) are minorities. To the right is a breakdown of current workforce demographics:



## *Safety*

Safety is UTA's highest priority. UTA is committed to ensure that facilities, vehicles, working conditions and job sites are safe, free from hazards that contribute to accidents and injuries. UTA has created a System Safety policy that encourages employees to be vigilant in reporting unsafe conditions and practices. UTA also has developed a System Safety Program Plan through structured, proactive processes that monitor and check safety performance and provide for continuous improvement through corrective action plans.

Each UTA business unit has established Safety & Environmental committees that meet on a regular basis to monitor, advise and address safety & environmental concerns. The Federal Railroad Administration (FRA) is the designated regulatory agency for the FrontRunner commuter rail line and the Utah Department of Transportation is the designated Safety Oversight Agency for TRAX light rail.

## *Transit Police*

UTA's public safety mission is foremost to protect life and property of our patrons and employees, and to protect the interests of the UTA organization. UTA Transit Police takes a customer service based approach to policing. Each transit police officer makes several hundred customer contacts in an average day while checking for valid fare. UTA Transit Police understand that face-to-face communication and contact with passengers is critical to monitor safety and security on board UTA services. UTA strives to treat all customers with fairness and respect regardless of the circumstances. UTA Transit Police are responsible for treatment of violators and application of the law.





*Sustainability is also a commitment  
to protect and restore the environment.*

### *Environmental Protection*

UTA is obligated and committed to provide high quality transportation services to the communities it serves. Beyond transit, UTA is committed to the conservation of natural resources, the prevention of pollution, the re-use of as many assets as possible, and the reduction and recycling of waste and scrap to provide reusable materials.

### *Environmental Performance*

UTA is constantly searching for opportunities to be more efficient in order to better serve its customers and to optimize resources in balance with socio-economic needs. In an effort to improve the quality of its services, UTA began developing an environmental management system that conforms to the International Organization for Standardizations' (ISO) 14001: 2004. The ISO standard was selected because it encompasses all aspects and levels within UTA's organization from top level policy statements to shop floor procedures. UTA achieved certification in April 2006; and today maintains its Third Party ISO 14001:2004 Certification.



## Energy Conservation

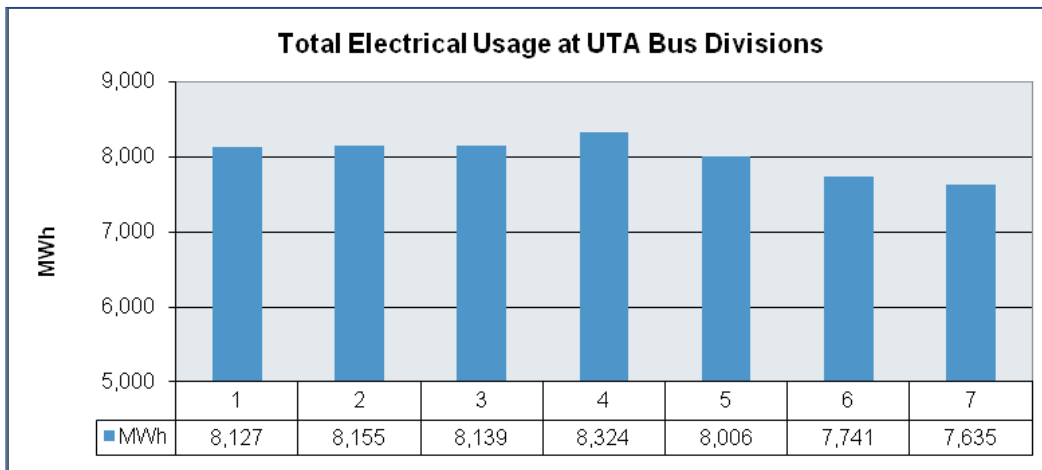
UTA identified Energy Management – Electrical Usage as one of its significant environmental aspects, using our Environmental Management System (EMS), ISO 14001. In 2006, UTA proposed a project with Clean Utah to decrease electrical energy usage by:

- Installing digital energy monitors in each building at the Meadowbrook campus;
- Improving lighting systems; and
- Conduct energy audits.

The use of digital energy monitors has enabled UTA to track savings from:

- Modification of air compressor operation in maintenance buildings to show an average savings of 338 kwh per day; and
- Reprogramming the systems that supply heat to fueling buildings for buses to save 200 – 300 kwh per day.

In addition to the use of energy monitors to identify areas for electricity conservation, UTA has installed energy efficient lighting at its transportation facilities. Since initiating this project with Clean Utah in 2006, UTA has reduced its electrical consumption by over 3% each year beginning in 2007.

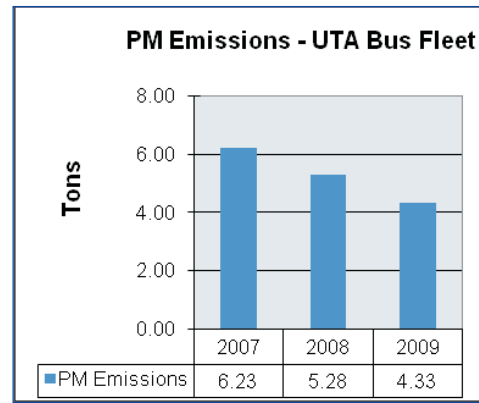
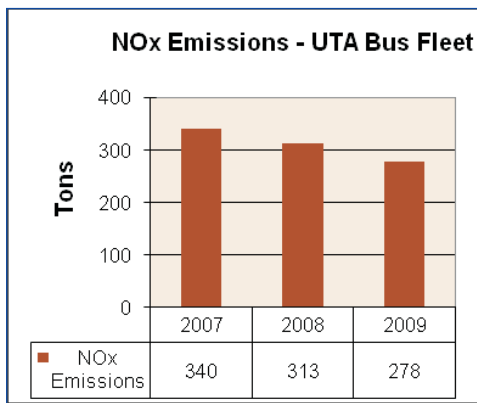




## Pollution Prevention

Most areas where UTA provides transportation services are currently designated as non-attainment areas by EPA; The entire Wasatch Front has been recommended as a non-attainment area under both PM2.5 and ozone standards. In light of these air quality challenges UTA is partnering with the Utah Division of Air Quality effort to revise the State Implementation Plan that will lead to the reduction of the overall levels of PM2.5 and ozone.

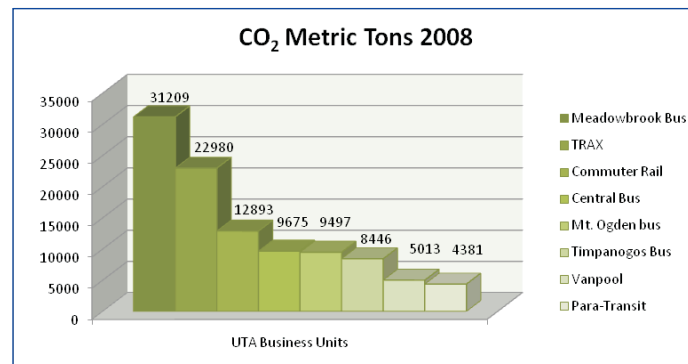
UTA has implemented a bus replacement program that optimizes the number of buses UTA will receive with the engines meeting the Environmental Protection Agency (EPA) 2010 emissions standard for nitrogen oxides (NOX). This replacement schedule will reduce NOX emissions and particulate matter (PM) emissions from UTA's bus fleet by 80% in 2015. Below is the current progress of UTA's reduction in emissions from its bus fleet.



## Greenhouse Gases

UTA became a Founding Reporter of The Climate Registry (TCR) in May of 2008. The Climate Registry is a nonprofit organization established to measure and publicly report greenhouse gas emissions (GHG) in a common and transparent manner consistent across industry sectors and borders.

GHG emissions are comprised of both direct and indirect sources. Direct emissions include those from onsite combustion, manufacturing processes and from company-owned transportation fleets. Emissions associated with electricity are indirect emissions. A third party verification of the GHG data assures TCR of a consistent and accurate published registry. UTA became the first transit agency to have third party verified GHG data approved by the TCR for public record, establishing 2008 as its baseline year. This information may be accessed at [www.theClimate registry.org](http://www.theClimate registry.org).





### *FrontLines 2015*

In 2006, citizens in Salt Lake and Utah counties voted to fund development and construction of additional rail projects within their counties. For the next two years, UTA worked on the environmental study and design of new light rail and commuter rail lines. In 2008, UTA broke ground on its largest capital project in the history of UTA: the \$2.8 billion FrontLines 2015 program. The FrontLines 2015 program features constructing 70 miles of rail projects in 7 years (opening all lines by 2015). The FrontLines 2015 project includes four light rail lines: West Valley, Mid Jordan, Airport, and Draper (currently in environmental study) lines and the FrontRunner South commuter rail line providing service to through Salt Lake and Utah counties.

### *Progress for 2009*

Each of the FrontLines 2015 project has made excellent progress in 2009, reaching 49 percent completion for the overall project. The individual lines have made similar strides in advancing toward completion. The figures shown below include construction progress, design, material purchases, vehicle acquisition, etc.

2015 Program Percentages	
Project	% Complete
CRS	48
Mid-Jordan	70
West Valley	63
Draper	11
AIRPORT	24
JRSC	57
Overall	49

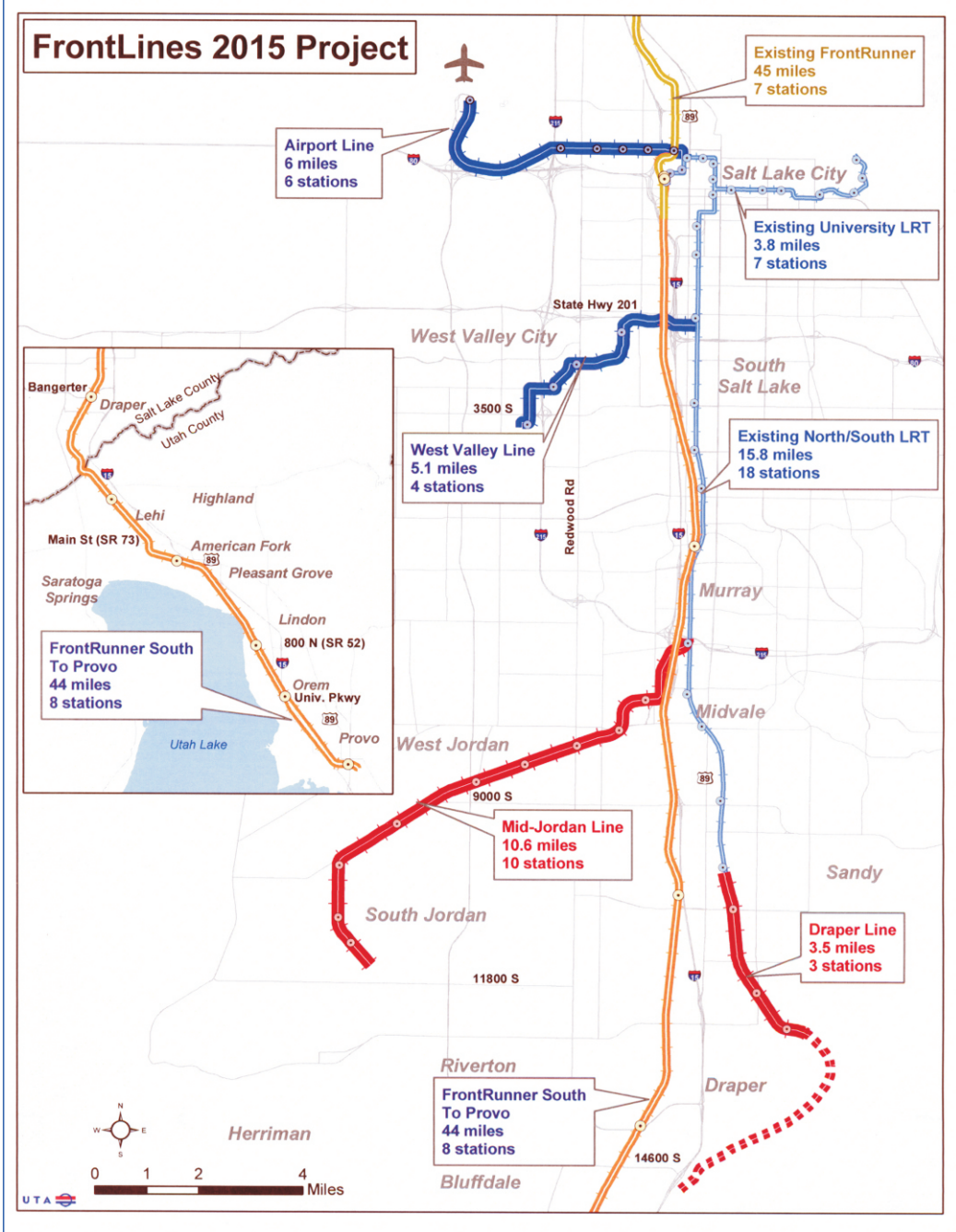
*Current as of Dec. 2009*

### *Vehicles*

Vehicles are a critical procurement item for 2015 project. UTA has procured 77 new low-floor light rail vehicles from Siemens for the light rail portion of the FrontLines 2015 project. These vehicles will help to make our system even more convenient for persons with disabilities. Previously, passengers with disabilities needed to board a high-block ramp at one end of the train. Now, passengers with disabilities will be able to board from the platform at any door they choose.

For servicing the FrontRunner South line, UTA has procured 10 locomotives from Motive Power, 10 cab-cars and eight passenger cars from Bombardier. The FrontRunner cab cars allow for train operations at both ends of the train.

# FrontLines 2015 Project

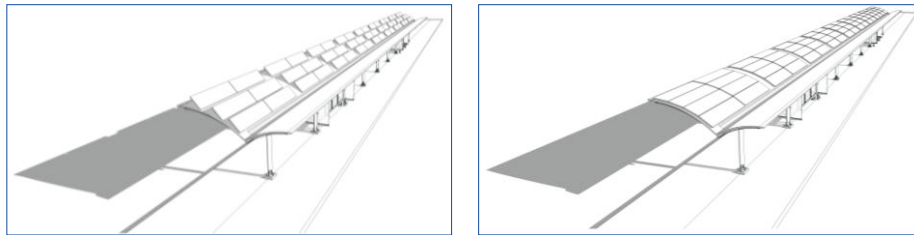


### *Sustainability and the 2015 Program*

The FrontLines 2015 program is already creating opportunity for synergistic land use planning. Some 20 percent of trips to and from the Kennecott Lands Daybreak development in South Jordan are expected to be made on the new Mid Jordan line. UTA, with Salt Lake City support, will remove the viaduct to open more city blocks for multi-use development, as part of the Airport line. Several cities have re-zoned land for transit-oriented development near station sites on the FrontRunner South line.

### *Green Design and Construction*

Other efforts have been made to look at more sustainable construction methods. The Airport line is utilizing several “Green” design and construction elements like using Warm Mix Asphalt which uses 40 percent less energy in the production process, in addition to emitting 15 to 20 percent less greenhouse gases than the normal Hot Mix Asphalt. The Airport line is also investigating the possibility of incorporating solar panels to help offset electrical use at the stations.



*Solar Panel concepts for Airport Line Canopies*

### *Recycling of Used Pavements*

As a part of the embankment along the southern end of the airport, engineers needed to utilize large stabilizing chunks of material since the soils in the area are very soft and “mucky”. Oftentimes in these situations virgin material is utilized from gravel pits, which has an associated impact relative to the mining process and land use. Instead of using these traditional methods and sources, the Airport TRAX Line is using recycled concrete chunks, which were reclaimed from the parking lot of the Jordan River Service Center in West Valley City.







## Sustainability Indicator Report Card

Indicators	2008	2009	2010	2011
<b>Economic Sustainability</b>				
Investment per rider	\$4.05	\$3.80		
Total Ridership				
Total Ridership	39,576,531	37,969,645		
Bus Ridership	22,584,185	22,136,237		
TRAX Ridership	13,948,710	13,165,613		
Commuter Rail Ridership	May-Dec 1,385,818	1,340,753		
Para Transit Ridership	510,783	490,577		
Van Pool Ridership	1,657,818	1,327,042		
Passenger Revenue	\$33,439,374	\$33,530,448		
Advertising	\$1,333,000	\$1,633,331		
Sales Tax Revenues	\$188,547,000	\$171,854,169		
Federal Non-Capital Assistance ?	\$45,677,000	\$44,974,000		
Interest Income	\$16,071,000	\$9,389,045		
Other	\$ 1,193,000	\$2,797,757		
<b>Social Sustainability</b>				
DBE Contracts awarded by percent	9.26%	5.74%		
<b>Pace Wellness Program</b>				
Number of Participants (Employees and Spouses)	1,157	1,213		
Fitness Testing (Employees and Spouses)	949	1,028		
<b>Apprentice Training</b>				
Advanced Internal Training offered by UTA: Indentured Apprentices	10	13		
Career Ladder employees	26	27		
Trade School Scholarships in Diesel Mechanics	19	14		
<b>Workforce Total</b>				
Females in Workplace Total	450	463		
Minorities in Workforce Total	432	449		
Average Employee Age	47	48		
<b>Safety</b>				
<b>Bus System</b>				
Collisions per 100,000 miles	3.5	3.3		

Indicators	2008	2009	2010	2011
<b>Commuter Rail / Front Runner</b>				
Collisions per 100,000 miles	May – Dec 0.4	0.4		
<b>Light Rail/ TRAX System</b>				
Collisions per 100,000 miles	0.3	0.2		
<b>Environmental Sustainability</b>				
<b>Recycling</b>				
Aluminum	23,353 lbs.	6,080 lbs.		
Steel	303,355 lbs.	280,270 lbs.		
Tin	27,360 lbs.	86,006 lbs.		
Used Oil	37,975 gal.	38,775 gal.		
Used Antifreeze	9,880 gal.	5,375 gal.		
Electronic Waste	34,317 lbs.	29,513 lbs.		
Electricity conservation (at bus divisions only) KWH	3% reduction 2007 to 2008	1.1% Reduction 2008 to 2009		
Electricity \$ Savings	\$21,038	\$6,980		
Paper Recycling	Yes	Combined weight in 2009: 53,336 pounds		
Aluminum Can Recycling	Yes			
Plastic Bottle Recycling	Yes			
Cardboard Recycling	Yes	Yes		
<b>Energy</b>				
Total Metric Tons of Carbon Dioxide equivalents emitted by UTA	104,094	Not yet calculated		
Total Metric Tons of Carbon Dioxide equivalents reduced by UTA (Carbon Avoidance)	33,101	31,259		
CO <sub>2</sub> pounds/ Bus Passenger Mile	0.582	0.578		
CO <sub>2</sub> pounds/ Vanpool Passenger Mile	0.151	0.151		
CO <sub>2</sub> pounds/ TRAX Passenger Mile	0.272	0.292		
CO <sub>2</sub> pounds/ Commuter Rail Passenger Mile	0.642	0.977		
<b>Air Pollutants</b>				
Total NO <sub>x</sub> Emitted in Metric Tons	284	252		
Total Particulate Matter Emitted in Metric Tons	4.79	3.93		





UTA   
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