

2012

Saint Paul Public Works Annual Report



CONTENTS

Letter from the Director	3
Traffic & Lighting	5
Sewer Utility	7
Bridge Division.	8
Technical Services	9
Street Maintenance	11
Administration	12
Municipal Equipment	13
Street Engineering & Construction	15
Transportation Planning	16





Dear Friends of Public Works

With this venerable proverb as a guidepost, we at Public Works wish to tell you more about our efforts – past, present and future – to make our operations more sustainable and thus kinder to our natural environment.

As we looked back on 2012 to take stock of our work and how it measured up against our value system, I was especially proud of our department when I learned that the Mayor’s Sustainable Saint Paul program honored Public Works with the “Sustainable City Staff Award” for its work on the “Hamline Pervious Alley Project.”

Although something of a pilot project, we trusted our research and embarked on a plan to replace over 12,000 square feet of old, impermeable pavement with the new variety of eco-friendly pavement. This new surface will dramatically reduce the amount of stormwater that would enter the stormwater sewer system as runoff, thereby allowing for natural filtration by the subsoils and keeping our streams and lakes cleaner.

A similar natural approach to handling storm runoff is another program of ours that merits a callout is our partnership with the Capitol Regional Watershed District (CRWSD) to add boulevard rain gardens along our residential streets.

Our Street Engineering and Construction Division incorporated the rain gardens into our Residential Street Vitality Program (RSVP) projects three years ago, and the outcome has been a huge hit with residents. Thanks to this program we’re now infiltrating more stormwater in our residential areas, and residents are also benefitting from an improved look to their properties.



Treat the earth well: it was not given to you by your parents; it was loaned to you by your children. We do not inherit the Earth from our ancestors; we borrow it from our children.

Native American proverb

As a leader in the acquisition of new technology, Public Works is evaluating the results of our conversion of over 1500 LED-illuminated street lights in the downtown area. Thus far, the results have shown real promise as a means to lower our energy and maintenance costs and reduce our carbon footprint. Accordingly, we will continue to add LEDs to our inventory of streetlights in concert with the LED industry’s efforts to make the capital cost more affordable.

As a capstone to these efforts to make our city more sustainable, our 2013 annual employee conference will focus on climate change and how our department can adapt to the challenges that confront all of us as we strive to make our piece of the earth worthy of passing to our children.

Rich Lallier
Director, Saint Paul Public Works



Traffic and Lighting



Starting in the summer of 2012, both residents and visitors noticed a new look in downtown Saint Paul. Gone was the clutter of the confusing mix of parking restriction signs, replaced by new signs that were more intuitive and reflected a lengthy and comprehensive review of parking needs in downtown.

But the signs were only one part of the new look. After twelve years of wear and tear on our parking meter inventory, the city decided it was time for an upgrade in technology for our equipment.

Working closely with residents, business owners and other stakeholders, the city replaced its downtown stock of parking meters with modern, user-friendly equipment that will, for the first time, allow motorists to use a credit card to pay for their meter time.

By accepting credit cards, the new meters are a marked improvement in convenience, to say nothing of the warm reception from users. The new meters will also ensure regular turnover for parking spaces in heavy demand. But they also feature benefits for the city as well.

Because the meters are web-enabled, we can track usage of our meters more efficiently, saving time for our maintenance staff. We'll know in an instant when a meter is malfunctioning, rather than waiting for a report from the field. The convenience of using a credit card means we'll capture more revenue than in past years, plus the new equipment is much more reliable resulting in fewer repairs.

Traffic engineering is a profession that appeals to me because it relies on "hard" engineering principles, e.g. equations that explain traffic flow, and yet there is always an element of the wild card, namely the human factor, that keeps my work from ever becoming mundane.

.David Kuebler, PE Traffic Engineer



The end of 2012 was a welcome one for our Traffic Engineering and Traffic Operations sections as it meant the completion of the Central Corridor light rail line. This project put a huge demand on our time, engaging us in purchasing equipment, building and outfitting traffic control cabinets, coordinating with the Met Council construction staging, traffic control signal timing, vehicle, business and pedestrian access, utility construction and relocation, signing and street lighting issues.

Three new bikeways were planned in the preceding year: Jefferson, Griggs and Charles. Now in 2013 it's time to make them part of the actual streetscape. These bikeways will be a welcome sight to anyone who enjoys getting around on a bike. Pedestrians too will appreciate the traffic calming that follows with the implementation of a bikeway.

Other projects that have been planned are also in the schedule for 2013: They include: coordinating with MnDOT for construction staging and traffic control on the 35E/Cayuga interchange and Lafayette Bridge projects. We'll work with our sister departments to improve our control of special parking placards to open up additional parking spaces for the public and generate added revenue.

We'll also be busy with traffic signal projects and will continue exploring energy efficient street lighting. We'll add a new work zone safety manual to our training library, one that is especially geared for urban work zones.

While our projects and plans change from year to year, our value system remains constant: To improve safety and the quality of life for Saint Paul residents.



Sewer Utility



Our staff often tells me that working in our division is rewarding because we work on projects from start to finish. Seeing the progress and the final completion is very satisfying – both personally and professionally.

Richard Ekobena
Regulatory & Records Engineer

Spend any time in the Sewer Utility Division and you quickly come to see a model of teamwork among Richard's fellow staff there. Whether working in the field or behind a computer, each staff member is quick to credit the work of their fellow employees.

It was that spirit of cooperation that in 2012 that brought the utility another step closer to completion of the Sewer Data Conversion Project. In lay terms, this project involves the conversion of thousands of paper sewer records to electronic files.

The project, begun in 1995, involved hundreds of hours of painstaking staff work of scanning, organizing and editing 1920s era paper maps and records in preparation for conversion to digital images. With the project nearing completion, users can access a particular sewer record in seconds, where with the old paper system the same search might have taken days or weeks.

Another project that required a great deal of planning and oversight was the Hillcrest Knoll Water Quality Improvement Project. This project will allow for the interception, pre-treatment and infiltration of roughly 85,000 cubic feet of stormwater runoff per rain event. Similarly, on a smaller scale, the department constructed a runoff structure to treat stormwater runoff from its Dale Street campus.

As with many older cities, St. Paul is home to an aging sanitary sewer system that would have cost scores of millions of dollars to replace using conventional dig-and-replace construction. Fortunately for these older systems, cured in place pipelining (CIPP) technology is available at a fraction of the cost of dig-and-replace construction, while sparing residents the disruption of excavation and the loss of sewer service.



The use of CIPP was prominent during the construction of the Central Corridor light rail project. All told, eleven miles of sanitary sewer lines were rehabilitated in 2012 using this approach.

Calendar 2012 was witness to another major sewer project's completion: the Saint Anthony Storm Deep Tunnel System. By repairing more than one mile of this deteriorating storm tunnel, we prevented the possibility of catastrophic collapse, protecting a valuable public asset that handles a massive volume of storm water, and extended its life by thirty to forty years.

Other work completed last year included our submission of the necessary documentation to FEMA to certify the West Side Flood Wall and Levee System. Once authorized for construction, this project will protect West Side homes and businesses from the ravages of future Mississippi River flooding.

Looking ahead to 2013, Sewer Utility staff will complete the ten year comprehensive sewer television inspection program, implement the use of GPS equipment to enable us to capture sewer inspection data, and complete our engineering work to improve the city's response to flooding in the Lowertown neighborhood.



Bridge Division



A bridge can be a fascinating piece of infrastructure, especially in Saint Paul where subtle and unique details are often incorporated into the traditional aesthetic of the "Capitol City."

There is great satisfaction, as well as frustration, working through the puzzle that is a bridge project. As its beams are placed the bridge takes form. It becomes tangible, purposeful, and even symbolic.

This is infrastructure designed to outlive its designers, and – for better or worse -- will tell future generations something about our present-day culture. We have good reason to be motivated, take pride, and be fascinated by a bridge..

Brent Christensen, PE Bridge Engineer

One project that kept Brent and his colleagues busy in 2012 was the replacement of the old bridge on Edgumbe Avenue that spans a ravine located near the intersection with Hamline Avenue. Demolition of the old structure was completed in the fall.

The new bridge, replete with ornamental lanterns and a concrete baluster railing, will be finished in the summer of 2013 and opened to traffic once final inspection is complete. Its ornamental features were designed in keeping with the original look of the old bridge.

Preparations for a new bridge to replace the current Hamline Avenue bridge that crosses over Ayd Mill Road and the Canadian Pacific Rail line were finalized in 2012. No less than five community meetings were convened by Bridge staff to engage the public, answer questions and solicit ideas.

With public comment contributing, a design for public art to augment the bridge's aesthetics was concluded. The new bridge will include both traffic and bicycle lanes, sidewalks, with the entire structure enhanced by ornamental railings and decorative lighting.

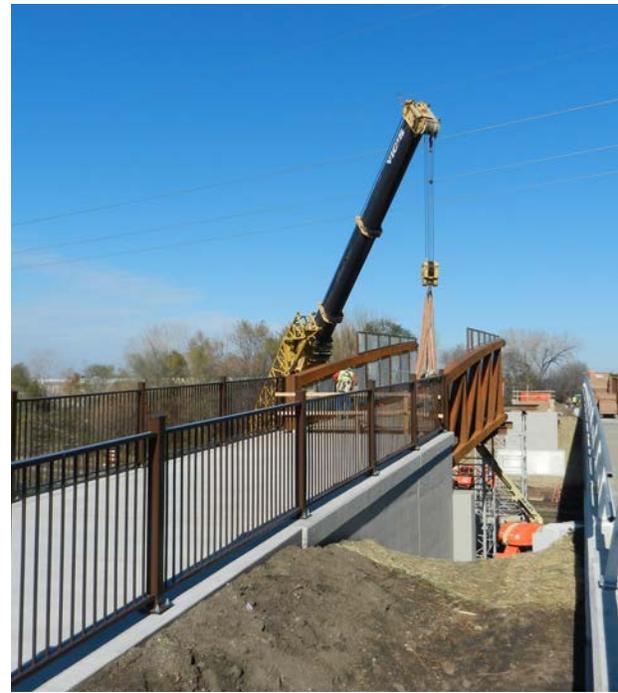
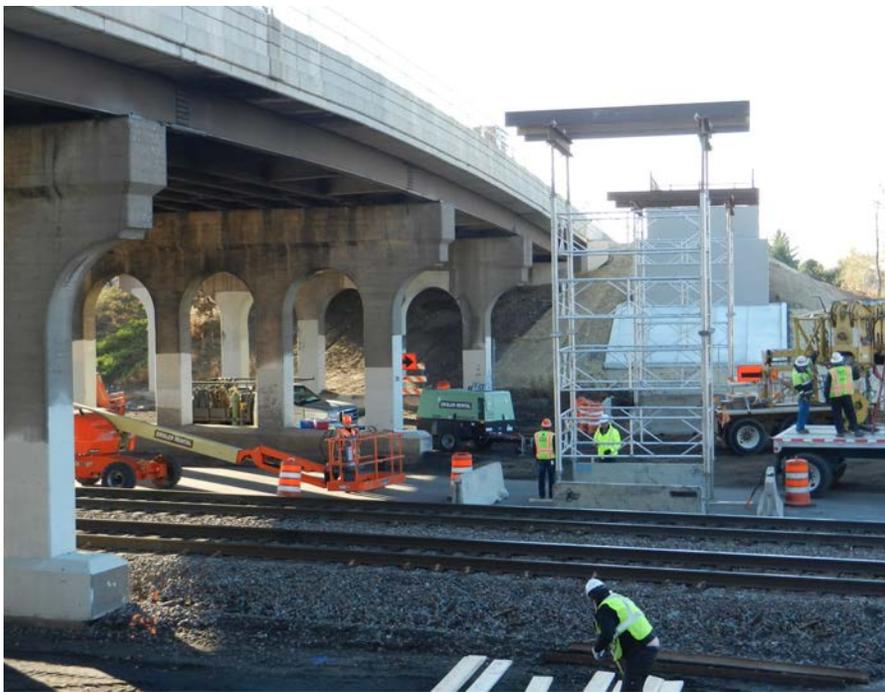
A long envisioned plan for a bike and pedestrian bridge spanning Pierce Butler Route and the Canadian Railroad Bridge was completed in the fall of 2012. This connection will enhance safety for both bikers and walkers by sparing them having to cross these two roads at grade.

Plans for other bridge replace projects slated for construction in 2013 include the Kellogg Boulevard Bridge at Market Street, the Wheelock Bridge between Jackson and Rice, and replacement of the Grotto Street stairway.



Brent's colleagues will also be kept busy in 2013 attending to Saint Paul's bridge inspection program. Each year, staff of the Bridge Division inspects all of the city's eighty-one bridges to ensure their safety.

And the workload in 2013 should be lightened somewhat by the addition of a new civil engineer and an engineering aide. This is welcome news for a division that -- like all public works agencies -- has had to be mindful of austerity measures in an era when public infrastructure needs have been deferred.



Street Maintenance



Calendar 2012 bore witness to the continued activity of the division's Safety Committee, and in 2013 the committee's work continued with several training seminars, including: DOT inspections, salt brine use, work zone traffic control, wing plow operation, adverse weather policy, chain saw use and salt truck calibration.

In a prolonged climate of fiscal austerity, asset preservation for a public works agency becomes all the more critical. Our city has over 1,900 lane miles of streets and so to extend the life span of these roads, Street Maintenance adopted a limited crack sealing program in 2012.

Crack sealing is a proven, cost effective road treatment feature that protects the road base from water intrusion, and is an important element of Saint Paul's pavement management program.

Harmony among managers and their employees is something that no institution that serves the public can ignore. To foster a sense of working harmony, Street Maintenance has established a Labor-Management committee that has earned accolades from all parties for the way in which it has fostered a dialogue between labor and supervisory staff.

Of course our regular season programming kept us busy in 2012. We seal coated in the city's West Seventh Street neighborhood, amounting to one-eighth of the city's streets and alleys. We overlaid some 70,000 square yards of pavement, swept the entire city both spring and fall – a job essential to improving our storm water quality – and battled snow and ice through several snow emergency declarations.

As we look to 2013, we plan to continue to update our equipment inventory. We will add five new salt spreaders which will afford us greater control and allow us to continue to reduce our salt use. We'll hope to add a new vacuum sweeper, which can pick up fine particulate matter nearly year round and that helps to improve water and air quality. Finally, we'll buy six new plow blades that can be mounted and removed by the plow driver.

I enjoy working for Street Maintenance because of the physical workout; every season brings different kinds of work and every day is a challenge. Working in Street Maintenance places you in the public eye and you meet a lot of different people. I enjoy the gratification I get from my job when the services I provide for the citizens can make them happy

*Shavone Glaser, Street Services Worker
Street Maintenance Safety Committee Member*

As a division that prides itself on the embrace of new ideas, division manager Kevin Nelson was quick to introduce a mandatory stretching program for his staff, as a way of reducing muscle strain injuries.

Upon hearing the success story of another public works agency, Kevin researched the stretching program, conferred with experts in the field and then adapted a program for all Street Maintenance staff. The result: a dramatic reduction in muscle strain injuries and an accompanying reduction in time lost from work.



Administration

The Administration Division provides a wide spectrum of services: health and safety, payroll and accounting, environmental programs, information support and media relations. Disparate though we are in our skill sets, our work often has to overlap, placing a high premium on teamwork.

This year's opening story began a few years ago. Knowing that environmental concerns touch every household in St. Paul, the city made the momentous decision to hire an environmental coordinator. That decision has been validated many times.

Most recently, we see the department's vision at work in successful ventures such as ComeClean!, an effort to create public awareness about litter that blights our neighborhoods and can pose health risks to residents. Through this outreach effort, residents have been engaged and can now volunteer to participate in the Adopt-a-Block and Adopt-a-Container programs. These programs continue to grow as more residents are informed and engaged.

Our biggest outreach effort, however, began last year with the launch of Recycle it Forward, the city's plan to solicit public comments from residents about the future direction that the city's recycling program will take.

Since last fall we have sought public opinion through our web pages -- most notably through the Open Saint Paul page -- where residents are asked to share their views about the path ahead for recycling in St. Paul. Once the survey work is complete, the city's decision makers will have a better idea on how and when to expand our curbside collection of recyclable material.

As the division's staffing includes our health and safety officer, it's fitting to call attention to our continuing success in lowering our workers compensation costs. Just five years ago, our annual costs topped two million dollars. For 2012, our costs came in at \$559,366.

By working closely with the city's risk management team, our health and safety officer has kept the communication lines open with our staff, identified and addressed existed



I'm privileged to work in a division where my managers and colleagues support my ideas, even when they're out of the mainstream thought process. Having the latitude to give full vent to my creative impulses has made me a better public servant and a better colleague.

Dave Hunt, Marketing & Media Relations Manager

work hazards, and worked with our Street Maintenance Safety Committee to prevent injuries.

In addition to its always demanding workload, our payroll section has had to prepare for the transition to the city's newly acquired Time, Attendance and Scheduling Solution (TASS) payroll system. Payroll administration for any department that employs four hundred people is always a complex duty and Public Works is no exception to this principle.

Our payroll staff has not only had to learn a new system, but have had to learn how to customize it for our department. As one example, we have to pay the people who staff our snow tagging operations during snow emergency. The new system must be able to absorb the complex array of hourly wage rates, shift differentials, overtime due, etc. that arise whenever a snow emergency declared.

Although unanswered questions about TASS remain, we're optimistic that this is the right system demanded by a 21st Century institution.

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Municipal Equipment



I take pride in knowing that the Municipal Equipment Garage plays a critical role in supporting nearly all field operations in Public works as well as for the Parks Dept. We are the equivalent of the handyman/pit crew that keeps things going no matter what the circumstances.

Karl Blakely, Vehicle Mechanic Supervisor I

Proof of Karl's beliefs is all around us here at the Municipal Equipment (ME) garage. Last year, we added a second all electric vehicle to the city fleet. By replacing a van that was powered by gasoline, we'll save over \$1,000 on fuel and operating costs with zero unit emissions. We also placed two Chevrolet Volt hybrid vehicles into service and both have outperformed our expectations.

Our ME facility is now using a new make-up-air (MUA) system installed in 2012. It is linked to the building's control system and will reduce energy usage while improving working conditions. Another benefit is that it will reduce our carbon footprint, thereby honoring the city's commitment to sustainability.

Two years ago, ME staff began the work of outfitting our

fleet with automated vehicle location (AVL) devices. An AVL system can provide an array of real time information about our equipment and the operators using it, saving city time and resources.

It's an important technology that is still being refined to give us added functionality. It has been an invaluable aid for our supervisory staff, especially when snow plowing operations are underway.

To take further advantage of AVL, last year ME staff began researching the system to track equipment usage to enable notices to be sent to the shop foreman when equipment is due for service. In turn, the foreman would then notify the end user. This process will result in improved control of our equipment rentals.

For the coming year, we will continue to research new ways to provide equipment and better services for our customers. As we add new equipment to our plowing fleet, which has the advantage of easy conversion to warm weather operations, we will reduce the overall size of our fleet resulting in additional cost savings.

In that vein, we will continue researching the purchase of new 4x4 plow trucks. The smaller size of these vehicles offers several advantages. Because they're smaller than a standard plow truck they're more maneuverable, they also cost less to purchase and less to operate.

Finally, we'll continue to explore alternative fuels and vehicles that will meet our equipment needs while at the same time reducing both costs and environmental impact. We have made great strides in these areas in the past several years, and we want to maintain our momentum in the coming years.



Street Engineering & Construction

It's no wonder that Lisa feels the sense of pride that she does in working with her colleagues in Street Design, as a look back at 2012 demonstrates.

At a glance we saw the completion of three Residential Street Vitality Program (RSVP) projects. Launched in 1996, the RSVP program is a twenty-five year plan to reconstruct the city's residential streets, many of which are aging and have reached the end of their useful life.

But RSVP is also an excellent opportunity to replace the aging infrastructure under and around these streets: water and sewer lines, gas and other utility services. Sidewalks are reconstructed and old streetlights replaced with ornamental fixtures, giving the surrounding neighborhood a much more contemporary look, while still retaining the area's historical character.

Last year, the three RSVP project areas centered on the following intersecting streets: Hewitt-Tatum, Battle Creek-Upper Afton Road and Prior-Goodrich. Residents in these areas will quickly attest to the improved look of their neighborhoods once all the work was complete.

Turning to our maintenance and construction planning efforts, we added another dimension to our pavement management system (PMS). Going forward our division staff will now evaluate the condition of the city's paved alleys.

One may ask what is a PMS and why do we attach such importance to it? A PMS combines the creation and maintenance of an archive of pavement assessment data, and then uses that information to guide the city's future construction plans. Cities with a PMS already in place report that it tells them where – and when – to best spend their road maintenance dollars.

As we look to 2013, three new RSVP projects will get underway: Arlington-Rice, Madison-Benson and Hatch-Agate. As with previous RSVP work, the projects will last for the better part of the construction season, but residents will be left with a much improved look to their neighborhood.



Regrettably our annual report cannot capture all of the work by all of the staff involved with our construction projects. Handling the preliminary surveys, entering the utility locations, meet with residents to discuss design details draft the final plans and inspect and manage the contractors' work; these are but a few of the essential duties required of our staff to complete our projects. We're all proud of what we do and hope that shines through when you see our completed projects.

Lisa Falk-Thompson, PE Street Engineering & Construction Division

Other projects for the coming year include the reconstruction of Prince Street near the new Saints ballpark and widening of the sidewalk on the north side of Sixth Street from Sibley to Wacouta to accommodate sidewalk cafe seating.

We'll also oversee the construction of a "sidewalk infill" program along the corridor in those areas where gaps in the pedestrian walkway exists. This will allow for better pedestrian access to the LRT platforms and create a more welcoming pedestrian environment along the route.





14 SAINT PAUL PUBLIC WORKS



Transportation Planning

As Paul related in his introduction, the past year was a time of great change for our division. We combined our capital planning work with that of transportation planning. Our reasoning behind this merger was that we'll now have a more complete picture of our capital projects and the funding challenges ahead, resulting in a stronger division and a stronger department.

As interest in bicycling for commuting and recreation has grown, so has the city's response to biking's growing popularity. Following several conversations with community stakeholders, our division then completed plans for new bikeways on Jefferson Avenue, Prior Avenue and Griggs Street. The traffic calming design features of the bikeways will result in a more welcoming – and safer – experience for both bikers and pedestrians.

To learn more about biking from a bicyclist's perspective, last June our staff also participated in the "Bikeable Community Workshop." The workshop offered a refresher on biking laws and the benefits of increased bike riding. But it was on the group ride through St. Paul that many of us had our eyes opened to new perspectives about what it means to ride in traffic in an urban setting.

Of course, our planning work doesn't all center on bicycling, as evidenced by our completion of the Northwest Quadrant Transportation Study. Here again, we gathered community and business stakeholders to help guide us in our assessment of the current state of transportation network in this area.

We also shared our expertise with MnDOT's technical advisory committee on the Snelling Avenue Multi Modal Study. This study examined how best to accommodate all modes of transportation on the Snelling Corridor from Selby Avenue to Midway Parkway.

We also coordinated the city's interagency transit planning and development efforts. We made big strides in 2012 with the beginning of study on four corridors for transit investments: Robert Street, Riverview, Gateway and the Chicago-St. Paul High Speed Rail line. Similarly, we maintain oversight for internal transit studies, including



2012 was a year of transition for our division. Not only did the division continue its planning efforts related to project work, it also had to address the departure of key staff within the division. Nevertheless the focus for the division remains on providing a city-wide perspective to transportation planning and continuing to keep Saint Paul progressive in its approach to supporting and promoting all modes of transportation.

Paul Kurtz, Manager Transportation Planning Division

the Streetcar Feasibility Study. This study was begun in 2012 and will be completed in 2013.

We're excited about the year ahead as we'll be reviewing submissions for inclusion in the city's Capital Improvement Budget (CIB). This process will establish and fund projects for Public Works in the 2014 and 2015 calendar years. We look forward to working with our community partners as we light the way to make more sustainable and more livable.





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