



# DEPARTMENT OF PUBLIC WORKS

**2016 ANNUAL REPORT** 

## **CONTACT US:**

For all questions regarding any DPW services or operations: Our office hours are Monday – Thursday, 7:00 AM – 5:30 PM

PHONE: 248-594-2800

FAX: 248-594-2810

#### **ADMINISTRATION**

Thomas W. Trice – DPW Director Noah Mehalski– DPW Superintendent Katie M. Fotherby – Public Works Manager

#### **ROAD DIVISION**

Duane Poole – Road Foreman road@bloomfieldtwp.org Snow Emergency Hotline: 248-594-2848

#### WATER & SEWER DIVISION

Steve Sierota – Water Foreman water@bloomfieldtwp.org Water Emergency Line: 248-433-7730

## FLEET & BUILDING MAINTENACE

Lance Scram – Fleet/Facilities Manager

## **GROUNDS MAINTENANCE**

Dean Begley – Grounds Foreman

**GFL (Green For Life)** 

1-866-772-8900

## Message from the Director:

Public Works is an integral part of the many services that are provided to the Township residents. Whether it be the actual infrastructure of our roads or water & sewer systems or the many vehicles and equipment utilized by Police & Fire services or the buildings that Township employees come to work in every day, Public Works is responsible for maintaining all of those many systems and assets. We achieve this through the labor and commitment that our highly skilled employees put into their jobs every day. They are the reason the Township's services stand above the rest.

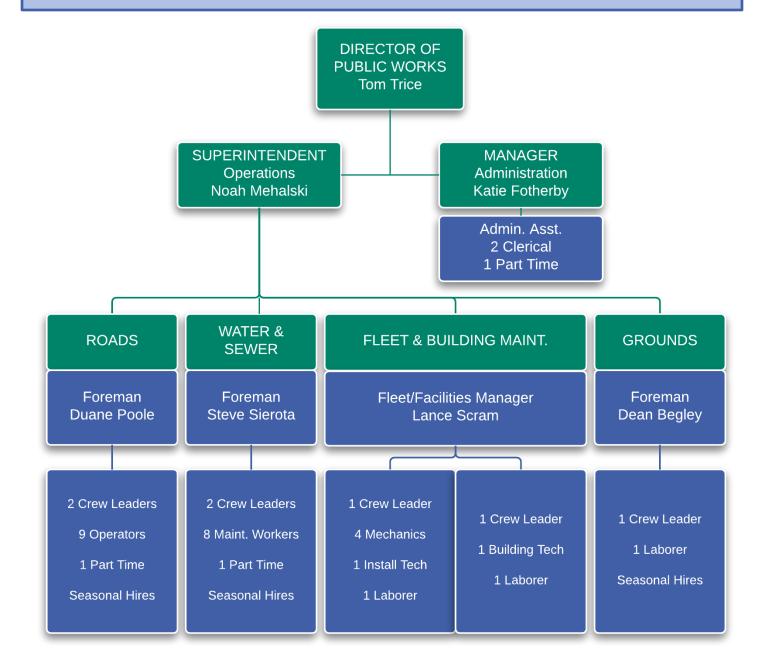
On behalf of the entire staff of the Department of Public Works, it is my pleasure to present the 2015 Annual Report. I hope this report provides good insight into the services we provide as well as a better understanding of our daily operations.

Thank you,

Thomas W. Trice
Public Works Director

#### **MISSION STATEMENT**

The Department of Public Works Administrative and Field staff commits to bring our best to work each day with a positive professional attitude towards providing the highest level of service possible to our customers.



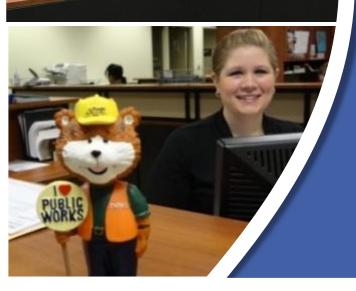
## **DEPARTMENT PERSONNEL**

Division	Employee	Title	Date of Hire	Years of Service
	Tom Trice	Director	09/19/2005	11
	Noah Mehalski	Superintendent	10/15/2007	9
A due in intention	Katie Fotherby	Manager	03/28/2005	12
Administration	Tia Kollar	Admin. Assistant	12/11/2000	16
	Kim Sasser	Customer Service	12/09/1996	20
	Kelly Lagarde	10/31/2005	11	
	Duane Poole	Road Foreman	02/23/1999	18
	Richard Bogusky	Crew Leader	04/13/1998	18
	Marco Nervo	Crew Leader	12/18/2002	14
	Clint Harwood	Operator	04/18/1993	23
	Jason Simpson	Operator	10/21/1995	21
	Jon Grigsby	Operator	04/01/1997	19
Road Division	Sean Caverly	Operator	08/23/1997	19
	Adam Roose	Operator	06/19/2004	12
	Bruce Carnahan	Operator	11/08/2004	12
	Jeff Krauskopf	Operator	01/13/2007	10
	James Davis	Operator	06/04/2011	5
	Glenn Wood II	09/26/2011	5	
	Steve Sierota	Water Foreman	05/18/2001	15
	Craig Lewis	Crew Leader	11/26/2001	15
	Michael Domine	Crew Leader	02/25/2008	9
	Rick Jenkinson	Water Operator	08/09/1999	17
	Paul Palace	Water Operator	07/09/2001	15
Water Division	David Keller	Water Operator	07/21/2003	13
	Shane Beslock	Water Operator	04/29/2011	5
	Josh Eubanks	Water Operator	11/21/2011	5
	Patrick McNamara	Water Operator	10/07/2013	3
	Toby Smith	Water Operator	06/10/2016	< 1
	Chris Baroli	Water Operator	06/13/2016	<1
	Lance Scram	Fleet/Facilities Manager	02/24/1997	20
	Pat Quinn	Facilities Crew Leader	11/01/1999	17
	Bill Diviney	Fleet Crew Leader	01/10/2000	17
	Joseph Davis	Master Mechanic	03/24/1987	30
Fleet/Facilities	Brett Moshier	Install/Service Tech	06/14/1999	17
Maintenance	Emmett Moody	Master Mechanic	06/13/2016	<1
	Lester Sproesig	Master Mechanic	08/22/2016	< 1
	Loren Miller	Master Mechanic	11/21/2016	<1
	Rob Stacherski	Laborer	11/24/14	2
	Gerald Keller	Laborer	06/08/2015	1
Grounds	Dean Begley	Grounds Foreman	08/22/1998	18
Maintenance	Hillary Drotoz	Crew Leader	11/25/2002	14





## **ADMINISTRATION**



## **ADMINISTRATION**

The Public Works Administration consists of an Administrative Assistant, two full-time customer service employees and one part-time customer service employee. Each employee is fully trained in every aspect of all the different Public Works Divisions so that they are able to answer questions and inform residents regarding all DPW operations.

Administration also includes management staff that is responsible for overseeing the entire department. The DPW Director is responsible for managing the Department's budget as well as developing and guiding the department's long-term direction and goals. The DPW Superintendent primarily oversees the DPW's operations. Each division's foreman and supervisors report to him directly regarding the day-to-day tasks and services. The Public Works Manager primarily oversees the DPW's administrative functions, such as contract management, billing dispute resolution and community events.

The primary function and top priority of administration is customer service. Administrative Staff answer all incoming calls for Roads, Water & Sewer, and Solid Waste. They are the first point of contact for addressing resident concerns and answering resident questions. 





Bloomfield Township is the only Township in the State of Michigan to offer its residents the services of a sophisticated Road Division. By a contractual agreement with the Road Commission for Oakland County (RCOC), Bloomfield Township maintains the surface of 213 miles of subdivision roads and RCOC retains responsibility for 50 miles of primary roads and state trunk lines within Bloomfield Township.

Since it was established in the early 1970's, it has grown to become a highly respected and well equipped operation. All employees are required to maintain a commercial driver's license and are

on call 24 hours a day as first responders.

The Road Division provides a wide range of services not offered by other townships. We maintain over 200 miles of subdivision roads and provide the following services:

## **WE MAINTAIN**

- 176 miles of Subdivision roads
- 37 miles of unpaved gravel roads

- Snow Plowing
- Ice & Snow Control
- Winter Marker Program
- Asphalt Patching
- Gravel Road Grading
- Dust Control
- Median Maintenance on State Roads
- Roadside Litter Cleanup
- Street Sweeping
- Select Mowing
- Select Trimming
- Storm Damage
- Select Tree Removal
- Oakland County Tri-Party Paving Projects
- Oakland County 50/50 Drainage
   Improvements
- Oakland County 50/50 Bridge Projects





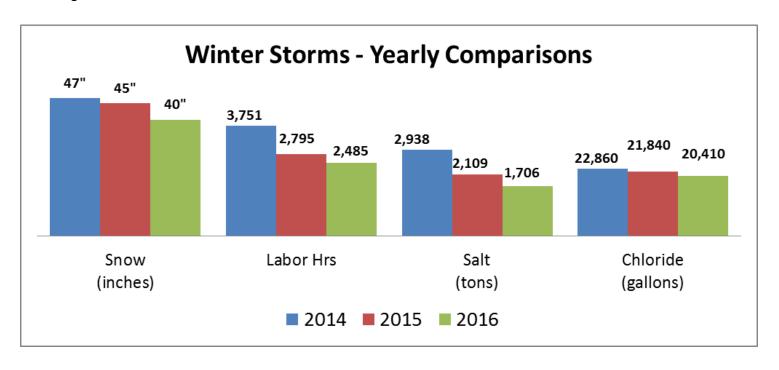
A look at the numbers	
Miles of Patch Paving Completed	2.98
Tons of Cold Patch to fill Potholes	442
Tons of Gravel added to Gravel Rds	1,637
Number of Winter Storm Events	19
Total Sq Yds of Concrete Repaired & Replaced	5,923

#### Wind Storm 2017

DTE Energy called it the largest weather event in its history: A non thunderstorm event with wind gusts over 60 m.p.h. hammered southeast Michigan on March 8, 2017, toppling trees that pulled down power lines, cutting power to more than 1 million utility customers between the area's two major power companies.

With the unusually warm weather over the winter season, as well as significant rainfall, the ground was very soft and saturated. That, combined with the high winds, caused many trees to uproot. DPW Road crews responded to and cleared 76 downed trees in the Township taking 821 labor hours to fully clear all the damage.

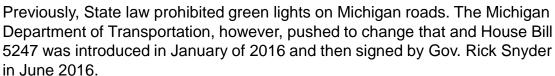




## **Green Emergency Lights for Plow Trucks**

The Road Division have equipped their plow trucks with new green emergency flashers. Experts say the green lights would be easier for drivers to see when heavy snow decreases visibility on the roads.

It also will help motorists distinguish what type of vehicle is on the road. Amber lights are commonly used by all types of vehicles: tow trucks, mail delivery, private snow plows; having the green flashers on only municipal vehicles will help to alert drivers that there is a slow moving municipal vehicle in the road and that they need to slow down and be cautious.



Other states have also started installing green lights. Ohio started using them after having to change their state law as well.







## New Wing Plow Increases Efficiency in Snow Plow Operations

The Road Division now has two plow trucks in its fleet equipped with a wing plow. The wing plow is deployed on the right side of the standard plow truck, extending the plow's reach and allowing the driver to clear a subdivision road in two passes rather than three. By reducing the number of passes needed to clear the road during and after a winter snow event, the Road Division has seen an increase in efficiency when clearing those plow routes.

Other nearby communities, such as Farmington Hills, Novi and Auburn Hills, have begun using the wing plows over the past several years and the feedback they've provided is very positive.

Task	Labor Hours	L	abor Cost	E	qp Cost	M	Mat Cost		tal Cost
Asphalt Overlay / S04	3,587	\$	93,111.14	\$	139,195.83	\$	110,756.90	\$	343,063.87
Building&ground Maint	255	\$	3,693.92	\$	297.97	\$	182.31	\$	4,174.20
Clean Sweep	1	\$	13.00	\$	9.88	\$	-	\$	22.88
Clerical	1,659	\$	38,411.64	\$	-	\$	-	\$	38,411.64
Clerical / WA2	30	\$	682.93	\$	-	\$	-	\$	682.93
Culvert Maintenance	15	\$	332.55	\$	366.50	\$	79.31	\$	778.36
Ditching	193	\$	5,126.48	\$	5,582.69	\$	450.50	\$	11,159.67
Dream Cruise	135	\$	4,773.23	\$	1,488.43	\$	-	\$	6,261.66
Dust Control	225	\$	5,917.56	\$	15,944.95	\$	19,152.00	\$	41,014.51
Emer. Drain Cleanout	100	\$	2,565.30	\$	528.82	\$	-	\$	3,094.12
Equipment Servicing	719	\$	17,050.69	\$	10,232.53	\$	-	\$	27,283.22
E-Waste	100	\$	4,002.40	\$	375.75	\$	-	\$	4,378.15
Grade Gravel Surface	888	\$	24,947.65	\$	54,659.43	\$	9,571.14	\$	89,178.22
Guardrail-Post Maint.	14	\$	375.69	\$	70.14	\$	-	\$	445.83
HHW Day	134	\$	5,650.52	\$	801.60	\$	-	\$	6,452.12
Holiday	910	\$	25,444.23	\$	-	\$	-	\$	25,444.23
Install/Remove C-markers	450	\$	12,120.33	\$	2,323.66	\$	1,716.72	\$	16,160.71
Mailbox&misc. Repair	370	\$	8,988.73	\$	1,742.66	\$	1,970.87	\$	12,702.26
Misc. Maintenance	682	\$	15,729.41	\$	7,025.11	\$	18.00	\$	22,772.52
Open House	232	\$	11,363.09	\$	3,698.42	\$	-	\$	15,061.51
Other	473	\$	13,558.43	\$	-	\$	-	\$	13,558.43
Patch Gravel Surface	664	\$	18,482.46	\$	37,343.79	\$	14,435.25	\$	70,261.50
Personal	238	\$	6,578.57	\$	-	\$	-	\$	6,578.57
Pothole Patching	7,449	\$	179,265.87	\$	107,747.54	\$	30,916.89	\$	317,930.30
Prv Maint.	20	\$	605.00	\$	529.10	\$	81.94	\$	1,216.04
Roadside Litter	434	\$	4,696.57	\$	2,227.99	\$	-	\$	6,924.56
Roadside Mowing	125	\$	2,806.60	\$	6,203.78	\$	-	\$	9,010.38
Salting & Plowing	2,142	\$	67,364.70	\$	134,881.28	\$	98,758.25	\$	301,004.23
Salting/Plowing cul-de-sacs	40	\$	998.31	\$	670.18	\$	-	\$	1,668.49
Sanding	102	\$	2,794.62	\$	6,556.88	\$	525.04	\$	9,876.54
School Training	57	\$	1,843.95	\$	2,299.93	\$	-	\$	4,143.88
Shoulder Repair	13	\$	353.78	\$	130.89	\$	20.65	\$	505.32
Sick	831	\$	22,968.70	\$	-	\$	-	\$	22,968.70
Sign-Maint. Install.	81	\$	1,842.37	\$	515.41	\$	205.26	\$	2,563.04
Sod Damage Repair	352	\$	9,335.25	\$	4,633.37	\$	812.57	\$	14,781.19
Supervision	2,478	\$	92,451.09	\$	-	\$	-	\$	92,451.09
Sweeping Curb/Gutter	295	\$	8,700.36	\$	27,144.01	\$	-	\$	35,844.37
Sweeping Intersection	62	\$	1,612.82	\$	2,103.83	\$	-	\$	3,716.65
Training Program	396	\$	11,474.58	\$	2,709.41	\$	180.00	\$	14,363.99
Trees And Shrubs	2,853		79,204.65	\$	80,309.60	\$	54.79	\$	159,569.04
Vacation	2,289	\$	65,337.77	\$	-	\$	-	\$	65,337.77
Vacation / WL01	23	\$	629.11	\$	-	\$	-	\$	629.11
Work For Other Dept.	1,011	\$	14,218.01	\$	1,133.91	\$	-	\$	15,351.92
Grand Totals	33,121		887,424.03	_	661,485.27		289,888.39		1,838,797.69
	,		•		•		•	•	





# WATER DIVISION

## **WATER & SEWER DIVISION**

The Water & Sewer Division is responsible for distributing safe drinking water to more than 16,000 customers. Drinking water is treated, tested and monitored on a continuous basis to ensure that it meets or exceeds all federally mandated requirements governing its quality.

The Water & Sewer Division is also responsible for providing a means to collect sanitary sewage disposal from more than 11,000 homes and businesses for transportation to the City of Detroit's wastewater treatment plant. The Division maintains the sewers and operates 9 sewage-pumping stations, which have been recently upgraded to ensure continuous operation.

The Water and Sewer Division employees all maintain Drinking Water Operator Certifications and are on call 24 hours a day as first responders.

The Water & Sewer Division performs many functions in order to ensure quality services. Some of those functions include the following:

#### **WATER SUPPLY**

- Maintain positive operating pressure over approximately 280 miles of public water mains that range in diameter from 6" to 24"
- Repair and maintain pressure regulating valves (PRV's) at 12 locations throughout the Township.
- Perform emergency repairs on public water mains as necessary.
- Repair and maintain over 2,900 fire hydrants.
- Repair and maintain over 2,900 operating valves.
- Install new water service connections to property lines.
- · Locate underground pipes for Miss Dig.
- Collect water samples for testing.
- Maintain a 1-million gallon storage tank and booster station.

## **WE MAINTAIN**

- 280 miles of public water mains
- 210 miles of sanitary sewer pipes

#### **SEWAGE COLLECTION**

- Maintain over 210 miles of sewer pipes to ensure sewage can flow freely by gravity.
- Inspect and repair 6559 sanitary manholes
- Perform necessary emergency repairs of sewer pipes.
- Clean public sewers with vactor truck.
- Internally inspect public sewers with video equipment.
- Maintain pumping facilities for continuous operations.

A look at the numbers								
Number of Meters replaced	75							
Number of Main Breaks	32							
Linear Feet of Sewer Lines cleaned	77,646							
Number of Miss Dig requests	2,937							

## WATER & SEWER DIVISION

#### **SOCWA**

In July of 2011, the Township began purchasing water from Southeast Oakland County Water Authority (SOCWA) instead of directly from Detroit Water and Sewerage Department (DWSD), now the Great Lakes Water Authority (GLWA). The large water storage capacities provided by SOCWA allow them to avoid more costly peak demand charges and provide a more stable rate. We are continuing our efforts with SOCWA to seek a permanent membership status with their organization.

### **Meter Replacement Program**

For the past several years the Water and Sewer Division has been systematically replacing old meters throughout the entire Township. The newer meters help to alleviate inaccurate meter readings that attribute to the Township's total water loss and also improves efficiency by streamlining and speeding up the meter reading process.





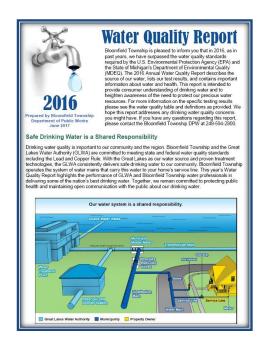
#### **Capital Improvement Projects**

Throughout the year, the Engineering and Environmental Services Department is tasked with replacing and upgrading the Township's water and sewer line infrastructure. These projects could not be done without the assistance of the Water and Sewer Division crews. The staff helps with the locating of valves, shut-offs, manholes and hydrants for the contractors and also helps and assists with overseeing the inspections of the work completed.

## **Annual Water Quality Report**

Bloomfield Township, as in past years, has surpassed the water quality standards required by the U.S. Environmental Protection Agency (EPA) and the State of Michigan's Department of Environmental Quality (MDEQ). The 2016 Annual Water Quality Report describes the source of our water, lists our test results, and contains important information about water and health. This report is intended to provide consumer understanding of drinking water and to heighten awareness of the need to protect our precious water resources.

\* Please go to www.bloomfieldtwp.org/WaterReport to view your 2016 Annual Water Quality Report and learn more about your drinking water. If you would like a paper copy of the 2016 Annual Water Quality Report mailed to your home, please call the Department of Public Works at 248-594-2800.



## **WATER & SEWER DIVISION**

Task	Labor Hours	L	abor Cost	E	p Cost	M	at Cost	Тс	otal Cost
After Hours Miss Dig	146	\$	6,607.08	\$	1,269.60	\$	-	\$	7,876.68
Call Duty	440	\$	24,014.54	\$	-	\$	-	\$	24,014.54
Clerical	27	\$	507.60	\$	-	\$	-	\$	507.60
Clerical / WA2	4575	\$	87,054.78	\$	-	\$	37.28	\$	87,092.06
Driveway Repairs	30	\$	813.15	\$	806.80	\$	-	\$	1,619.95
Equipment Service	36	\$	970.39	\$	566.40	\$	-	\$	1,536.79
Exceptions	49	\$	1,350.60	\$	335.92	\$	967.34	\$	2,653.86
Finals	43	\$	1,205.69	\$	326.04	\$	87.94	\$	1,619.67
Gate Valve Maint.	40	\$	1,070.85	\$	200.40	\$	-	\$	1,271.25
Gate Well Repair	266	\$	7,145.43	\$	1,805.50	\$	-	\$	8,950.93
General Maint.	1748	\$	47,552.66	\$	9,977.80	\$	1,778.04	\$	59,308.50
Holiday / WL06	890	\$	23,409.26	\$	-	\$	-	\$	23,409.26
Hydrant Repair	524	\$	14,043.73	\$	2,475.69	\$	15,258.86	\$	31,778.28
Lawn Restoration	24	\$	596.90	\$	120.24	\$	-	\$	717.14
Manhole Inspect	1190	\$	28,284.42	\$	5,909.92	\$	-	\$	34,194.34
Manhole Repair	5	\$	139.03	\$	24.70	\$	-	\$	163.73
Meter Installed	524	\$	13,908.65	\$	3,398.40	\$	46,635.35	\$	63,942.40
Meter Miscellaneous	4119		109,521.16	\$	23,456.76		173,266.92	\$	306,244.84
Meter Reading	448	\$	9,607.55	\$	3,759.58	\$	-	\$	13,367.13
Meter Replaced	206	\$	5,632.76	\$	1,339.60	\$	14,896.27	\$	21,868.63
Miss Dig Staking	2692	\$	74,083.38	\$	19,024.58	\$	1,005.17	\$	94,113.13
Other	218	\$	6,002.90	\$	-	\$	-	\$	6,002.90
Other / WL05	242	\$	6,436.89	\$	_	\$	-	\$	6,436.89
Personal / WL02	222	\$	5,865.04	\$	_	\$	-	\$	5,865.04
Prv Maint.	32	\$	1,009.33	\$	218.76	\$	-	\$	1,228.09
Pump Maint.	155	\$	4,508.76	\$	1,300.48	\$	-	\$	5,809.24
Service Calls	431	\$	19,468.06	\$	4,340.61	\$	903.43	\$	24,712.10
Service Taps	3	\$	90.75	\$	29.64	\$	-	\$	120.39
Sewer Cleaning	1319	\$	32,952.93	\$	41,137.38	\$	1,250.00	\$	75,340.31
Sewer Repairs	71	\$	2,609.77	\$	3,125.05	\$	-	\$	5,734.82
Sewer System Construction	8	\$	218.56	\$	283.20	\$	-	\$	501.76
Sick	10	\$	214.80	\$	-	\$	-	\$	214.80
Sick / WL03	948	\$	25,969.42	\$	-	\$	-	\$	25,969.42
Stop Box Repair	286	\$	7,528.92	\$	6,181.15	\$	688.50	\$	14,398.57
Supervision	32	\$	1,129.90	\$	-	\$	-	\$	1,129.90
Supervision / WA1	2016	\$	71,223.78	\$	270.54	\$	-	\$	71,494.31
Training Program / WG4	344	\$	10,404.40	\$	109.66	\$	-	\$	10,514.06
Transponder Replacement	368	\$	9,894.67	\$	1,990.82	\$	30,251.36	\$	42,136.85
Vacation / WL01	1669	\$	45,051.52	\$	-	\$	-	\$	45,051.52
Video Sewers	436	\$	11,673.26	\$	15,823.17	\$	-	\$	27,496.43
Water Main Breaks	347	\$	11,663.61	\$	2,935.33	\$	10,096.44	\$	24,695.38
Water System Construction	58	\$	1,464.17	\$	296.40	\$	-	\$	1,760.57
Water System Miscellaneous	1793	\$	50,219.74	\$	10,694.01	\$	471.27	\$	61,385.02
Work For Other Dept. / WG3	10	\$	260.95	\$	343.55	\$	-	\$	604.50
Grand Totals:	29033	_	783,381.71		163,877.68		297,594.17	_	1,244,853.56





# MAINTENANCE DIVISIONS

FLEET BUILDING GROUNDS

There are eight employees in the Fleet Maintenance Division (Motor Pool), including the Fleet Manager, Crew Leader, Installation Tech, four State Certified mechanics and one Laborer. The Motor Pool is responsible for the maintenance and emergency work on over 167 fleet vehicles and 55 pieces of equipment.

The Fleet Manager and Crew Leader work together to oversee the management and daily operations of the Division. One mechanic is dedicated to the maintenance and repair of light vehicles.



This includes vehicles such as all of the police vehicles, building inspection vehicles, administrative vehicles and also small equipment like lawn mowers, chainsaws, pumps and generators used by the Roads, Water and Grounds Divisions.

Three mechanics are dedicated to the maintenance and repair of all large equipment and vehicles including Fire Department Engines, Paramedic Rescues and Snow Removal Equipment.

All mechanics, including the Crew Leader are State Certified, are crossed trained and able to work on any Township equipment. The mechanics are also trained in welding and fabricating for all facets of maintenance and repair.

The installation tech is responsible for upfitting and maintaining all aftermarket emergency equipment installed on Township emergency vehicles such as police patrol vehicles. Many components, including radios, emergency lighting, sirens, Mobile Data Computers (MDC), in-car video systems, mounted radar and prisoner partitions are all a part of the upfitting process.

Motor Pool employees are first responders and on call 24 hours a day.





#### **Equipment Overhaul / Replacement**

During the 2016-2017 fiscal year, the Motor Pool Division facilitated the complete overhaul and or refurbishment of equipment, along with replacement of a large service tool. There was an opportunity to rebuild our existing equipment to extend its useful life and limit future maintenance costs. One of our two road graders was completely overhauled and the other is scheduled for the same work in the next fiscal year. In addition, one of our pickups received a new bed and dump body. This has not only limited the high maintenance cost, but decreased the downtime related to repairs for this equipment. The air conditioning service tool was aging and beginning to require repairs. It was replaced to provide better, more reliable service







#### **Succession Planning**

Some time ago, the Division developed a plan for and manage upcoming retirements / hiring. The Division experienced 3 retirements this year. In order to maintain the high quality of service currently provided by the Division, this transitional plan has been developed and is updated and/or administered accordingly. Our new employees all have master mechanic certifications in both heavy and light duty vehicles. Completion of our staffing plan will be completed in the new fiscal year.





-MINOR-LUBE	System Component / Task	Labor Hours	Lal	or Cost	Pa	rt Cost	То	tal Cost
FUEL	-							
BULK FLUIDS	- FUEL	17.80		•	_	•	_	
-ANNUAL INSPECTION	- BULK FLUIDS							
- PREV. MAINT.				-	_	-		,
- PREV. MAINT.				60.762.00		39.082.53		99.844.53
- PREV. MAINT.				•		·	_	
- PREV. MAINT.	- PREV. MAINT.	22.30	\$	·		•	\$	
- PREV. MAINT.		11.80			_			·
- TIRES, AUTO	- PREV. MAINT.	354.80	\$	10,644.00			\$	
- TIRES,TRUCKS	- TIRES,AUTO		\$	•	\$	•	_	
- TIRES,OFF ROAD	·		\$	·	\$	•	\$	
- A/C,HEAT,VENT	- TIRES,OFF ROAD	5.70	\$	171.00	\$	·	\$	
- BODY SHEEY MET. 35.90 \$ 1,077.00 \$ 1,650.08 \$ 2,727.08 \\ - CAB 157.80 \$ 38,804.50 \$ 32,938.28 \$ 71,742.78 \\ - DUMP BOX 37.60 \$ 1,428.00 \$ 5,737.19 \$ 7,165.19 \\ - STRIPING 54.10 \$ 2,868.00 \$ 2,77.65 \$ 3,145.65 \\ - AXLE,REAR 23.50 \$ 705.00 \$ 683.79 \$ 1,388.79 \\ - BRAKES 591.70 \$ 17,751.00 \$ 30,269.48 \$ 48,020.48 \\ - FRAME 7.40 \$ 222.00 \$ 86.26 \$ 308.26 \\ - STEERING 70.40 \$ 7,855.74 \$ 6,378.06 \$ 14,233.80 \\ - SUSPENSION 100.90 \$ 9,691.03 \$ 13,285.93 \$ 22,976.96 \\ - TIRES 17.90 \$ 537.00 \$ 1,925.64 \$ 2,462.64 \\ - WHLS,HUBS,BRGS. 25.80 \$ 1,177.95 \$ 2,114.54 \$ 3,292.49 \\ - BUMPERS,P.BUMP. 1.10 \$ 33.00 \$ - \$ 33.00 \\ - AXLE DRVN.F.STR 3.30 \$ 99.00 \$ 63.61 \$ 162.61 \\ - TRANS.AUTOMATIC 17.00 \$ 3,890.00 \$ 4,407.75 \$ 8,297.75 \\ - CHARGING SYS. 138.70 \$ 4,161.00 \$ 4,540.73 \$ 8,701.73 \\ - IGNITION SYS. 19.60 \$ 588.00 \$ 170.78 \$ 758.78 \\ - LIGHTING SYS. 19.90 \$ 6,362.00 \$ 5,150.31 \$ 11,532.31 \\ - AIR BAG SYSTEM 0.40 \$ 12.00 \$ 14.065 \$ 152.65 \\ - BATTERY REPLACEMENT 15.10 \$ 453.00 \$ 4,495.17 \$ 4,948.17 \\ - COMP U SPREAD 0.00 \$ - \$ - \$ - \$ \\ - EMERGENCY LIGHTING 245.70 \$ 21,621.00 \$ 53,575.79 \$ 75,196.79 \\ - AIR INTAKE SYS. 0.60 \$ 18.00 \$ 78.65 \$ 96.65 \\ - COONP.CNTRL.SYS. 99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65 \\ - COMP.CNTRL.SYS. 99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65 \\ - COMP.CNTRL.SYS. 99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65 \\ - COMP.CNTRL.SYS. 99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65 \\ - COMP.CNTRL.SYS. 99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65 \\ - COMP.CNTRL.SYS. 99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65 \\ - COMP.CNTRL.SYS. 99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65 \\ - COMP.CNTRL.SYS. 99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65 \\ - COMP.CNTRL.SYS. 99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65 \\ - COMP.CNTRL.SYS. 99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65 \\ - COMP.CNTRL.SYS. 99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65 \\ - TRANS. 40.00 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65 \\ - COMP.CNTRL.SYS. 99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65 \\ - COMP.CNTRL.SYS. 99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65 \\ - COMP.	·	165.70	\$	7,550.45		•	\$	
- CAB	- BODY SHEEY MET.	35.90	\$	1,077.00	\$	·	\$	
- DUMP BOX	- CAB	157.80	\$	38,804.50	\$	·	\$	
- STRIPING	- DUMP BOX	37.60	\$	1,428.00	\$		\$	
- AXLE,REAR	- STRIPING	54.10	\$	·	\$	·	\$	·
- BRAKES	- AXLE,REAR	23.50	\$	705.00	_	683.79	\$	1,388.79
-FRAME         7.40         \$ 222.00         \$ 86.26         \$ 308.26           -STEERING         70.40         \$ 7,855.74         \$ 6,378.06         \$ 14,233.80           -SUSPENSION         100.90         \$ 9,691.03         \$ 13,285.93         \$ 22,976.96           -TIRES         17.90         \$ 537.00         \$ 1,925.64         \$ 2,462.64           -WHLS,HUBS,BRGS.         25.80         \$ 1,177.95         \$ 2,114.54         \$ 3,292.49           -BUMPERS,P.BUMP.         1.10         \$ 33.00         \$ -         \$ 33.00           -AXLE DRVN.F.STR         3.30         \$ 99.00         \$ 63.61         \$ 162.61           -TRANS.AUTOMATIC         17.00         \$ 3,890.00         \$ 4,407.75         \$ 8,297.75           - CHARGING SYS.         69.30         \$ 2,079.00         \$ 1,516.15         \$ 3,595.15           - CRANKING SYS.         138.70         \$ 4,161.00         \$ 4,540.73         \$ 8,701.73           - IGNITION SYS.         19.60         \$ 588.00         \$ 170.78         \$ 758.78           - LIGHTING SYS.         146.10         \$ 4,383.00         \$ 3,512.88         7,895.88           - MISC.         191.90         \$ 6,382.00         \$ 5,150.31         \$ 11,532.31           - AIR BAG SYSTEM	- BRAKES	591.70	\$	17,751.00	\$	30,269.48	\$	48,020.48
- SUSPENSION	- FRAME	7.40	\$		\$	86.26	\$	
- TIRES	- STEERING	70.40	\$	7,855.74	\$	6,378.06	\$	14,233.80
- WHLS,HUBS,BRGS.	- SUSPENSION	100.90	\$	9,691.03	\$	13,285.93	\$	22,976.96
- BUMPERS,P.BUMP. 1.10 \$ 33.00 \$ - \$ 33.00 - AXLE DRVN.F.STR 3.30 \$ 99.00 \$ 63.61 \$ 162.61 - TRANS.AUTOMATIC 17.00 \$ 3,890.00 \$ 4,407.75 \$ 8,297.75 - CHARGING SYS. 69.30 \$ 2,079.00 \$ 1,516.15 \$ 3,595.15 - CRANKING SYS. 138.70 \$ 4,161.00 \$ 4,540.73 \$ 8,701.73 - IGNITION SYS. 19.60 \$ 588.00 \$ 170.78 \$ 758.78 - LIGHTING SYS. 19.60 \$ 588.00 \$ 170.78 \$ 758.78 - LIGHTING SYS. 191.90 \$ 6,382.00 \$ 5,150.31 \$ 11,532.31 - AIR BAG SYSTEM 0.40 \$ 12.00 \$ 140.65 \$ 152.65 - BATTERY REPLACEMENT 15.10 \$ 453.00 \$ 4,495.17 \$ 4,948.17 - COMP U SPREAD 0.00 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	- TIRES	17.90	\$	537.00	\$	1,925.64	\$	2,462.64
- AXLE DRVN.F.STR - TRANS.AUTOMATIC - TRANS.AUTOMATIC - CHARGING SYS CHARGING SYS CRANKING SYS CRANKING SYS CRANKING SYS LIGHTING SYS LIGHTING SYS LIGHTING SYS AIR BAG SYSTEM - AIR BAG SYSTEM - COMP U SPREAD - COOLING SYS AIR INTAKE SYS AIR INTAKE SYS COOLING SYS COMP.CNTRL.SYS COMP.CNTRL.SYS COMP.CNTRL.SYS COMP.CNTRL.SYS 17.00 - 17.00 - \$ 3,890.00 - \$ 1,516.15 - \$ 3,595.15 - \$ 3,595.15 - \$ 4,161.00 - \$ 4,540.73 - \$ 8,701.73 - \$ 4,761.00 - \$ 4,540.73 - \$ 758.78 - \$ 758.78 - \$ 146.10 - \$ 4,383.00 - \$ 3,512.88 - 7,895.89 - 7,895.89 - 7,895.89 - 7,895.89 - 7,895.89 - 7,895.89 - 7,895.89 - 7,990.9 - 7,900.9 - 7,900.9 - 7,900.9 - 7,900.9 - 7,900.9 - 7,900.9 - 7,900.9 - 7,900.9 - 7,900.9 - 7,900.9 - 7,900.9 - 7,900.9 - 7,900.9 - 7,900.9 - 7,900.9 - 7,900.9 - 7,900.9 - 7,900.9 - 7,900	- WHLS,HUBS,BRGS.	25.80	\$	1,177.95	\$	2,114.54	\$	3,292.49
- TRANS.AUTOMATIC 17.00 \$ 3,890.00 \$ 4,407.75 \$ 8,297.75 - CHARGING SYS. 69.30 \$ 2,079.00 \$ 1,516.15 \$ 3,595.15 - CRANKING SYS. 138.70 \$ 4,161.00 \$ 4,540.73 \$ 8,701.73 - IGNITION SYS. 19.60 \$ 588.00 \$ 170.78 \$ 758.78 - LIGHTING SYS. 146.10 \$ 4,383.00 \$ 3,512.88 \$ 7,895.88 - MISC. 191.90 \$ 6,382.00 \$ 5,150.31 \$ 11,532.31 - AIR BAG SYSTEM 0.40 \$ 12.00 \$ 140.65 \$ 152.65 - BATTERY REPLACEMENT 15.10 \$ 453.00 \$ 4,495.17 \$ 4,948.17 - COMP U SPREAD 0.00 \$ - \$ - \$ - \$ - \$ - \$ - EMERGENCY LIGHTING 245.70 \$ 21,621.00 \$ 53,575.79 \$ 75,196.79 - AIR INTAKE SYS. 0.60 \$ 18.00 \$ 78.65 \$ 96.65 - COOLING SYS. 212.20 \$ 10,822.00 \$ 20,112.15 \$ 30,934.15 - EXHAUST SYS. 61.90 \$ 2,997.00 \$ 5,884.40 \$ 8,881.40 - FUEL SYS. 169.00 \$ 6,406.50 \$ 6,894.49 \$ 13,300.99 - COMP.CNTRL.SYS. 99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65	- BUMPERS,P.BUMP.	1.10	\$	33.00	\$	-	\$	33.00
- CHARGING SYS. 69.30 \$ 2,079.00 \$ 1,516.15 \$ 3,595.15 - CRANKING SYS. 138.70 \$ 4,161.00 \$ 4,540.73 \$ 8,701.73 - IGNITION SYS. 19.60 \$ 588.00 \$ 170.78 \$ 758.78 - LIGHTING SYS. 146.10 \$ 4,383.00 \$ 3,512.88 \$ 7,895.88 - MISC. 191.90 \$ 6,382.00 \$ 5,150.31 \$ 11,532.31 - AIR BAG SYSTEM 0.40 \$ 12.00 \$ 140.65 \$ 152.65 - BATTERY REPLACEMENT 15.10 \$ 453.00 \$ 4,495.17 \$ 4,948.17 - COMP U SPREAD 0.00 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	- AXLE DRVN.F.STR	3.30	\$	99.00	\$	63.61	\$	162.61
- CRANKING SYS. 138.70 \$ 4,161.00 \$ 4,540.73 \$ 8,701.73 - IGNITION SYS. 19.60 \$ 588.00 \$ 170.78 \$ 758.78 - LIGHTING SYS. 146.10 \$ 4,383.00 \$ 3,512.88 \$ 7,895.88 - MISC. 191.90 \$ 6,382.00 \$ 5,150.31 \$ 11,532.31 - AIR BAG SYSTEM 0.40 \$ 12.00 \$ 140.65 \$ 152.65 - BATTERY REPLACEMENT 15.10 \$ 453.00 \$ 4,495.17 \$ 4,948.17 - COMP U SPREAD 0.00 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	- TRANS.AUTOMATIC	17.00	\$	3,890.00	\$	4,407.75	\$	8,297.75
- IGNITION SYS. 19.60 \$ 588.00 \$ 170.78 \$ 758.78 - LIGHTING SYS. 146.10 \$ 4,383.00 \$ 3,512.88 \$ 7,895.88 - MISC. 191.90 \$ 6,382.00 \$ 5,150.31 \$ 11,532.31 - AIR BAG SYSTEM 0.40 \$ 12.00 \$ 140.65 \$ 152.65 - BATTERY REPLACEMENT 15.10 \$ 453.00 \$ 4,495.17 \$ 4,948.17 - COMP U SPREAD 0.00 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	- CHARGING SYS.	69.30	\$	2,079.00	\$	1,516.15	\$	3,595.15
- LIGHTING SYS MISC MISC AIR BAG SYSTEM - O.40 - BATTERY REPLACEMENT - COMP U SPREAD - AIR INTAKE SYS COOLING SYS COOLING SYS EXHAUST SYS COMP.CNTRL.SYS COMP.CNTRL.SYS MISC 191.90 - \$ 4,383.00 - \$ 5,150.31 - \$ 11,532.31 - 146.10 - \$ 4,383.00 - \$ 5,150.31 - \$ 11,532.31 - 149.80 - \$ 12.00 - \$ 140.65 - \$ 152.65 -	- CRANKING SYS.	138.70	\$	4,161.00	\$	4,540.73	\$	8,701.73
- MISC. 191.90 \$ 6,382.00 \$ 5,150.31 \$ 11,532.31 - AIR BAG SYSTEM 0.40 \$ 12.00 \$ 140.65 \$ 152.65 - BATTERY REPLACEMENT 15.10 \$ 453.00 \$ 4,495.17 \$ 4,948.17 - COMP U SPREAD 0.00 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	- IGNITION SYS.	19.60	\$	588.00	\$	170.78	\$	758.78
- AIR BAG SYSTEM       0.40 \$ 12.00 \$ 140.65 \$ 152.65         - BATTERY REPLACEMENT       15.10 \$ 453.00 \$ 4,495.17 \$ 4,948.17         - COMP U SPREAD       0.00 \$ - \$ - \$ - \$ -         - EMERGENCY LIGHTING       245.70 \$ 21,621.00 \$ 53,575.79 \$ 75,196.79         - AIR INTAKE SYS.       0.60 \$ 18.00 \$ 78.65 \$ 96.65         - COOLING SYS.       212.20 \$ 10,822.00 \$ 20,112.15 \$ 30,934.15         - EXHAUST SYS.       61.90 \$ 2,997.00 \$ 5,884.40 \$ 8,881.40         - FUEL SYS.       169.00 \$ 6,406.50 \$ 6,894.49 \$ 13,300.99         - COMP.CNTRL.SYS.       99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65	- LIGHTING SYS.	146.10	\$	4,383.00	\$	3,512.88	\$	7,895.88
- BATTERY REPLACEMENT - COMP U SPREAD - EMERGENCY LIGHTING - AIR INTAKE SYS COOLING SYS EXHAUST SYS EXHAUST SYS COMP.CNTRL.SYS COMP.CNTRL.SYS COMP.CNTRL.SYS COMP U SPREAD - 0.00 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	- MISC.	191.90	\$	6,382.00	\$	5,150.31	\$	11,532.31
- COMP U SPREAD       0.00 \$ - \$ - \$ -         - EMERGENCY LIGHTING       245.70 \$ 21,621.00 \$ 53,575.79 \$ 75,196.79         - AIR INTAKE SYS.       0.60 \$ 18.00 \$ 78.65 \$ 96.65         - COOLING SYS.       212.20 \$ 10,822.00 \$ 20,112.15 \$ 30,934.15         - EXHAUST SYS.       61.90 \$ 2,997.00 \$ 5,884.40 \$ 8,881.40         - FUEL SYS.       169.00 \$ 6,406.50 \$ 6,894.49 \$ 13,300.99         - COMP.CNTRL.SYS.       99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65	- AIR BAG SYSTEM	0.40	\$	12.00	\$	140.65	\$	152.65
- EMERGENCY LIGHTING       245.70       \$ 21,621.00       \$ 53,575.79       \$ 75,196.79         - AIR INTAKE SYS.       0.60       \$ 18.00       \$ 78.65       \$ 96.65         - COOLING SYS.       212.20       \$ 10,822.00       \$ 20,112.15       \$ 30,934.15         - EXHAUST SYS.       61.90       \$ 2,997.00       \$ 5,884.40       \$ 8,881.40         - FUEL SYS.       169.00       \$ 6,406.50       \$ 6,894.49       \$ 13,300.99         - COMP.CNTRL.SYS.       99.10       \$ 10,846.22       \$ 6,842.43       \$ 17,688.65	- BATTERY REPLACEMENT	15.10	\$	453.00	\$	4,495.17	\$	4,948.17
- AIR INTAKE SYS.       0.60 \$ 18.00 \$ 78.65 \$ 96.65         - COOLING SYS.       212.20 \$ 10,822.00 \$ 20,112.15 \$ 30,934.15         - EXHAUST SYS.       61.90 \$ 2,997.00 \$ 5,884.40 \$ 8,881.40         - FUEL SYS.       169.00 \$ 6,406.50 \$ 6,894.49 \$ 13,300.99         - COMP.CNTRL.SYS.       99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65	- COMP U SPREAD	0.00	\$	-	\$	-	\$	-
- COOLING SYS.       212.20 \$ 10,822.00 \$ 20,112.15 \$ 30,934.15         - EXHAUST SYS.       61.90 \$ 2,997.00 \$ 5,884.40 \$ 8,881.40         - FUEL SYS.       169.00 \$ 6,406.50 \$ 6,894.49 \$ 13,300.99         - COMP.CNTRL.SYS.       99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65	- EMERGENCY LIGHTING	245.70	\$	21,621.00	\$	53,575.79	\$	75,196.79
- EXHAUST SYS.       61.90 \$ 2,997.00 \$ 5,884.40 \$ 8,881.40         - FUEL SYS.       169.00 \$ 6,406.50 \$ 6,894.49 \$ 13,300.99         - COMP.CNTRL.SYS.       99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65	- AIR INTAKE SYS.	0.60	\$	18.00	\$	78.65	\$	96.65
- FUEL SYS. 169.00 \$ 6,406.50 \$ 6,894.49 \$ 13,300.99 - COMP.CNTRL.SYS. 99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65	- COOLING SYS.	212.20	\$	10,822.00	\$	20,112.15	\$	30,934.15
- FUEL SYS. 169.00 \$ 6,406.50 \$ 6,894.49 \$ 13,300.99 - COMP.CNTRL.SYS. 99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65	- EXHAUST SYS.	61.90	\$	2,997.00	\$	·	\$	·
- COMP.CNTRL.SYS. 99.10 \$ 10,846.22 \$ 6,842.43 \$ 17,688.65	- FUEL SYS.	169.00	\$	·	\$	6,894.49	\$	·
- TUNE UPS 12.30 \$ 360.00 \$ 150.00 \$ 528.00	- COMP.CNTRL.SYS.	99.10	\$	10,846.22	\$	6,842.43	\$	
12.50 ψ 303.00 ψ 103.00 ψ 320.00	- TUNE UPS	12.30	\$	369.00	\$	159.00	\$	528.00

System Component / Task	Labor Hours	La	bor Cost	Pa	rt Cost	Total Cost		
- ENGINE OVERHAUL	1.70	\$	51.00	\$	39.30	\$	90.30	
- BELTS	2.20	\$	66.00	\$	657.08	\$	723.08	
- GASKETS & SEALS	13.80	\$	3,015.76	\$	3,618.95	\$	6,634.71	
- GEN. ACCESS.	512.80	\$	59,859.61	\$	74,784.51	\$	134,644.12	
- CHL.TANK TRAIL.	5.10	\$	153.00	\$	347.59	\$	500.59	
- FABRIC. WELDING	8.50	\$	255.00	\$	-	\$	255.00	
- FIRE TRKS. PUMP	88.10	\$	3,105.50	\$	4,066.92	\$	7,172.42	
- UNDER BDY.SCRP.	91.70	\$	2,751.00	\$	1,560.53	\$	4,311.53	
- SALT SPREADERS	291.50	\$	8,745.00	\$	2,367.38	\$	11,112.38	
- FRONT PLOW	43.70	\$	1,311.00	\$	1,207.30	\$	2,518.30	
- PLOW HITCH	2.50	\$	75.00	\$	52.63	\$	127.63	
- VEH.COUP. SYS.	1.90	\$	57.00	\$	-	\$	57.00	
- COMPUTER SYSTEM	571.00	\$	17,130.00	\$	4,482.09	\$	21,612.09	
- SIREN	24.80	\$	744.00	\$	-	\$	744.00	
- EMERGENCY RADIO SYSTEM	129.80	\$	3,894.00	\$	2,646.58	\$	6,540.58	
- VIDEO SYSTEM	120.40	\$	3,612.00	\$	47.65	\$	3,659.65	
- RADAR SYSTEM	62.50	\$	1,875.00	\$	2,412.83	\$	4,287.83	
- AFTER MARKET BUILD	205.80	\$	6,174.00	\$	2,058.79	\$	8,232.79	
- AFTER MARKET TEAR DOWN	33.50	\$	1,005.00	\$	62.33	\$	1,067.33	
- REMOVE/REINSTALL FOR VENDOR	61.80	\$	1,854.00	\$	1,308.29	\$	3,162.29	
- PUMP,MAGN.CLTCH	0.00	\$	-	\$	969.29	\$	969.29	
- HOSES,CUPL.CYL.	20.90	\$	627.00	\$	1,096.34	\$	1,723.34	
- TANK,VLVSHYD.	36.20	\$	1,536.00	\$	1,398.95	\$	2,934.95	
- MISC.	164.40	\$	4,932.00	\$	1,686.60	\$	6,618.60	
- SUPERVISION	1,828.50	\$	54,855.00	\$	-	\$	54,855.00	
- CLERICAL	924.70	\$	27,741.00	\$	-	\$	27,741.00	
- ROAD TEST	239.50	\$	7,185.00	\$	-	\$	7,185.00	
- VACATIONS	1,131.00	\$	33,930.00	\$	-	\$	33,930.00	
- SICK LEAVE	555.00	\$	16,650.00	\$	-	\$	16,650.00	
- PERSONAL LEAVE	35.50	\$	1,065.00	\$	-	\$	1,065.00	
- TRAINING	247.70	\$	7,431.00	\$	-	\$	7,431.00	
- PARTS PICKUP	420.40	\$	12,612.00	\$	-	\$	12,612.00	
- PARTS HANDLING	426.00	\$	12,780.00	\$	-	\$	12,780.00	
- MOVING VEHICLES	590.60	\$	17,718.00	\$	-	\$	17,718.00	
- CLEANING	403.10	\$	12,093.00	\$	-	\$	12,093.00	
- BUILDING,GROUND	4.00	\$	120.00	\$	-	\$	120.00	
- WASHING VEH.	48.60	\$	1,458.00	\$	-	\$	1,458.00	
- SHOP EQUIP.	23.00	\$	690.00	\$	-	\$	690.00	
- SNOW REMOVAL	35.50	\$	1,065.00	\$	-	\$	1,065.00	
- OPERATIONS	364.00	\$	10,920.00	\$	<b>-</b>	\$	10,920.00	
Grand Totals:	15,511.50	\$!	597,402.26	\$4	117,783.45	\$ 1	,015,185.71	

## **BUILDING MAINTENANCE**

The Building Maintenance Division employs two full time technicians and one full time laborer. The technicians have substantial knowledge and experience in all aspects of municipal building maintenance and are responsible for maintaining 12 Township buildings and also their exterior structures such as parking lot lights and signage. They also oversee and manage multiple service contracts, including the custodial contract for all the buildings. They are first responders and on call 24 hours a day.

The Building Maintenance staff's major responsibility and focus is in preventative maintenance. Routine inspections and maintenance help to keep the buildings running at optimum levels and helps to prevent system breakdowns. They are also responsible for technical repairs, construction and alteration of all Township buildings, maintenance and repair of HVAC units, electrical, plumbing and carpentry work. In addition to all their building maintenance responsibilities there are also many miscellaneous tasks frequently required of them such as set ups and break downs for special meetings and events, recycling collection and bio-hazard clean ups.



#### **Township Hall Fire Suppression System Replacement**

In July of 2015 there was a failure of the control board in the Township Hall Fire Suppression System. Evaluating the repair of the system revealed that, due to the design and age of the system, replacement would be the prudent option. The system was replaced and updated to current fire safety code requirements.

#### **Township Hall Carpet Replacement**

Several areas of carpet in Township Hall were worn and in need of replacement. The areas included: The Police Department Evidence Room and Traffic Office, Auditorium, and Administrative Offices. The work was completed in all the referenced areas and will provide a long service life for those departments.

#### Township Hall Ceiling Tile and Lighting Replacement

The Police Department requested a plan to replace ceiling tile in some of their offices, along with lighting upgrades. These projects were completed in the Records Area and Front Hallway. Completion of these projects signal the start of a new, higher efficiency service life, coupled with aesthetic improvements. More work of this type will be considered for the Detective Bureau area for the next fiscal year.

#### Township Hall Police Department Addition Boiler Pump Upgrade

The Police Department addition has been heated with the only conventional boiler pump remaining in the facility. The age and type of system was inefficient by current standards. The unit was replaced with a variable frequency drive pump with new valves and controls. The upgrade has resulted in greater energy efficiency and cost savings for the Township.

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## **BUILDING MAINTENANCE**

COMPONENT/TASK	Labor Hours	La	bor Cost	COMPONENT/TASK	Labor Hours	La	abor Cost
- SINKS	104.50	\$	1,926.38	- ELEVATORS	3.25	\$	54.16
- TOILETS	34.00	\$	504.00	- CRANES	0.50	\$	13.98
- SHOWERS	17.50	\$	329.69	- EXTERIOR STRUCTURES	159.25	\$	2,491.41
- FLOOR DRAINS	7.00	\$	99.01	- COMPRESSORS	17.00	\$	447.51
- BACKFLOW PREV.	9.50	\$	244.16	- POOL	4.00	\$	108.87
- POWER WASHERS	10.00	\$	252.26	- PARTS RUN	236.50	\$	3,431.47
- FIRE SUPRESSION	21.00	\$	768.65	- INVENTORY HANDLING	53.00	\$	698.97
- PUMPS	20.50	\$	495.70	- RECYCLE BINS	172.00	\$	1,922.59
- DRINKING FOUNTAINS	3.00	\$	80.92	- TRASH BINS	96.00	\$	1,051.68
- HOT WATER TANKS	7.50	\$	198.94	- AUDITORIUM SETUP	107.00	\$	1,715.93
- CHLORIDE TANK	1.00	\$	25.02	- BOXES	28.50	\$	472.51
- PIPING	35.00	\$	701.35	- MOVE/ASSEM FURNITURE	76.00	\$	1,226.40
- PARKING LOT LIGHTS	70.00	\$	1,485.14	- VENDING MACHINES	22.50	\$	229.27
- INTERIOR LIGHTS	297.75	\$	5,352.20	- RESTOCK MISC. SUPPLIES	88.50	\$	1,423.79
- EMERGENCY LIGHTS	31.50	\$	877.54	- RESTOCK COPY PAPER	76.50	\$	843.15
- GENERATORS	21.00	\$	629.73	- RESTOCK WATER BOTTLES	30.50	\$	378.04
- SWITCHES/OUTLETS	39.50	\$	1,059.85	- BATTERIES	7.00	\$	66.50
- CONDUIT/WIRING	35.75	\$	892.11	- BIO-HAZARD	3.00	\$	44.02
- EXTERIOR LIGHTS	43.25	\$	782.06	- JANITORIAL	3.00	\$	46.96
- APPLIANCES	81.75	\$	1,557.61	- MAIL RUN	92.50	\$	1,465.04
- BOILER	74.50	\$	2,265.00	- SHOP EQUIPMENT	17.00	\$	433.86
- HVAC	258.50	\$	5,322.66	- CLEANING SHOP/EQUIP	72.00	\$	1,159.74
- VAV BOXES	22.25	\$	534.92	- WORK FOR OTHER DEPT.	31.00	\$	492.90
- CHILLER	35.00	\$	853.80	- KEYS	10.50	\$	251.16
- UNIT HEATER	8.50	\$	200.69	- OFFICE EQUIPMENT	1.00	\$	27.95
- SPLIT SYSTEM	32.00	\$	885.64	- MEETINGS	163.50	\$	3,287.86
- EXHAUST FAN	52.00	\$	1,002.97	- CONTRACT/VENDOR MGMT	762.50	\$	22,223.91
- HV UNIT	1.50	\$	41.93	- CLERICAL	561.00	\$	15,508.87
- RADIANT TUBE HEATER	0.25	\$	2.38	- SUPERVISION	6.00	\$	149.25
- AIR HANDLER	61.00	\$	1,525.76	- VACATION	398.50	\$	9,580.69
- MISC. DISPENSORS	10.50	\$	197.27	- SICK	118.50	\$	2,255.51
- DOORS/LOCKS	162.75	\$	3,174.70	- PERSONAL	8.50	\$	181.63
- WINDOWS	34.00	\$	627.71	- FLOATING HOLIDAY	84.00	\$	1,668.37
- ROOF	8.50	\$	169.05	- FUNERAL LEAVE	29.50	\$	280.25
- CEILING	40.50	\$	653.15	- WORKERS COMP	592.00	\$	14,765.28
- WALLS - EXTERIOR	16.50	\$	311.95	- TRAINING	67.00	\$	1,291.43
- WALLS - INTERIOR	59.75	\$	1,055.65	Grand Totals:	5,973.50	\$	128,889.43
- FLOORS	5.50	\$	110.97				

## **GROUNDS MAINTENANCE**

The Grounds Maintenance Division employs three full time employees, one who is a certified arborist and both who are fully trained and certified in many aspects of landscaping, irrigation and plant and tree maintenance including pesticide application and having CDLs. They are responsible for the grounds maintenance on Township owned and leased buildings on the main campus. They are also responsible for administering the state highway landscape maintenance contract and the safety path and outlot mowing contracts.

#### **Township Campus Maintenance**

More than 4 acres of lawn is maintained on the Township Campus through mowing, trimming, weed control and fertilization. Also an additional 2+ acres of tree and bed maintenance is performed which includes weeding, trimming, mulching, design and installation of new beds and flower planting. Annually they plant over 120 flats of flowers each spring and apply 130 – 260 yards of mulch per season. They also maintain 12 irrigation systems on campus used to water all of the lawns and beds.

#### Winter Maintenance

During the winter season the Grounds
Division is on call 24 hours a day and
responsible for all snow removal in the main
Township campus area which includes over 4
acres of parking lots and over 3000 linear
feet of pedestrian walkways and stairs. One
employee is utilized by the Road Division and
assigned to a dedicated plow route for the
entire winter. The Grounds Division further
assists the Road Division with a fleet of
pickup trucks they use to help plow and clear
the cul-de-sacs.





## 2016 Beautification Project

For the past several years the Department of Public Works Grounds Division, in coordination with the Engineering and Environmental Services Department and MDOT has been working to enhance the state highway medians along Telegraph, Woodward and Square Lake. The work has involved planting new trees, replacing dead and dying trees — many of which are Austrian pines that have died due to diplodia, planting perennial beds and restoring areas that were impacted by the Telegraph Road reconstruction projects. In continuation of these projects, the DPW's 2016 Beautification Plan involved securing funding from several sources in order to coordinate a tree planting project that would largely complete and fill in the remaining areas along the highways.

The Beautification Project included the planting of approximately 260 trees along Telegraph, Woodward and Square Lake Rd areas. The project also included the addition of 10 new perennial beds and several thousand square feet of turf repair/restoration. The funding for this project was truly a joint effort with money coming from several grants, a MDOT donation and use of the Township's designated Woodlands Trust Fund.

## **GROUNDS MAINTENANCE**

#### **State Highway Landscape Maintenance**

The Grounds Division contracts out the landscape maintenance of our State highways and is reimbursed, in part, through an agreement with MDOT. The contract includes all lawn maintenance and bed/tree maintenance of the center islands and shoulders of Telegraph, Square Lake and Woodward. State highway maintenance also includes the Grounds Division designing and overseeing the planting of many trees each year. Also, they bid out and oversee the lawn spraying & fertilization contract and the Austrian Pine tree spraying contract. Currently all of the maintenance of the eight irrigation systems and lighting is retained in-house.







## **Safety Path Maintenance**

Maintenance of over 72 miles of safety paths, which includes the mowing, edging and string trimming, is contracted and overseen by the Grounds Division. In-house, they are still responsible for emergency tree removal, fence/wall repair and tree and brush trimming which is a full time job during the growing season.

#### **Outlot Maintenance**

The Grounds Division negotiated and implemented a contract for the lawn maintenance at the Township owned outlots, which includes sewer pumping stations, fire stations, retention basins, PRV locations, the water storage facility and the Westbourne booster station. They also oversee the contract for the spraying and fertilizing of these outlots as well.

## **GROUNDS MAINTENANCE**

Task	Labor Hours	L	abor Cost	E	qp Cost	Ma	it Cost	To	otal Cost
Apply Lawn Fertilizer	17.00	\$	398.75	\$	110.22	\$	-	\$	508.97
Apply Weed and Pest Control	28.00	\$	847.00	\$	23.00	\$	-	\$	870.00
Asphalt Overlay / S04	10.25	\$	366.86	\$	80.16	\$	99.99	\$	547.01
Clear and Salt Sidewalks	255.75	\$	5,065.35	\$	1,707.10	\$2	,099.31	\$	8,871.76
Clerical GA2	15.00	\$	453.75	\$	-	\$	-	\$	453.75
Daily Debris and Litter	241.00	\$	5,095.35	\$	1,924.25	\$	-	\$	7,019.60
Emergency Tree Removal -Safety Path and Outlot	86.50	\$	1,917.44	\$	429.73	\$	-	\$	2,347.17
Equipment and Shop Mait.	322.50	\$	6,803.45	\$	71.58	\$	-	\$	6,875.03
Equipment Service G	130.00	\$	2,926.05	\$	301.70	\$	-	\$	3,227.75
Fall Maintenance	270.00	\$	7,196.50	\$	1,489.48	\$	-	\$	8,685.98
Fence -Safety Path and Outlot	145.50	\$	3,340.19	\$	825.95	\$	-	\$	4,166.14
General Path Cleanup - Safety Path and Outlot	280.50	\$	5,408.49	\$	2,529.22	\$	-	\$	7,937.71
Holiday/GL6	227.75	\$	6,667.07	\$	-	\$	-	\$	6,667.07
Irrigation Install	15.00	\$	352.50	\$	10.00	\$	-	\$	362.50
Irrigation Repair and Mait.	285.50	\$	7,655.11	\$	1,497.39	\$	184.93	\$	9,337.43
Miscellaneous G	268.50	\$	7,509.15	\$	621.43	\$	-	\$	8,130.58
Mow and Trim Lawns	1,121.00	\$	17,489.80	\$	5,168.55	\$	-	\$	22,658.35
Other/GL5	49.00	\$	1,259.25	\$	-	\$	-	\$	1,259.25
Parts Pick-Up	61.00	\$	1,457.70	\$	310.22	\$	-	\$	1,767.92
Personal GL2	30.50	\$	996.75	\$	-	\$	-	\$	996.75
Plow and Salt Parking Lots	233.00	\$	7,479.10	\$	6,189.87	\$3	,012.65	\$	16,681.62
Roadside Litter	30.00	\$	540.15	\$	207.48	\$	-	\$	747.63
Safety Path Mowing	2.00	\$	40.25	\$	1.00	\$	-	\$	41.25
Salting/Plowing cul-de-sacs	62.50	\$	1,802.57	\$	1,069.50	\$	-	\$	2,872.07
Sick GL3	187.50	\$	5,651.48	\$	-	\$	-	\$	5,651.48
Supervision	10.25	\$	366.90	\$	-	\$	-	\$	366.90
Supervision GA1	1,256.50	\$	44,819.29	\$	11,664.22	\$	-	\$	56,483.51
Training Program	9.00	\$	272.07	\$	-	\$	-	\$	272.07
Tree & Bush Trimming - Safety Path and Outlot	1,396.00	\$	18,250.72	\$	13,169.61	\$	-	\$	31,420.33
Tree and Shrub Maitenance	2,023.50	\$	33,259.46	\$	12,055.25	\$2	,782.46	\$	48,097.17
Vacation GL1	447.00	\$	14,457.03	\$	-	\$	-	\$	14,457.03
Work for Other Dept	22.00	\$	443.30	\$	-	\$	-	\$	443.30
Grand Total:	9,539.50	\$	210,588.80	\$	61,456.91	\$8	,179.34	\$2	280,225.04









## SOLID WASTE

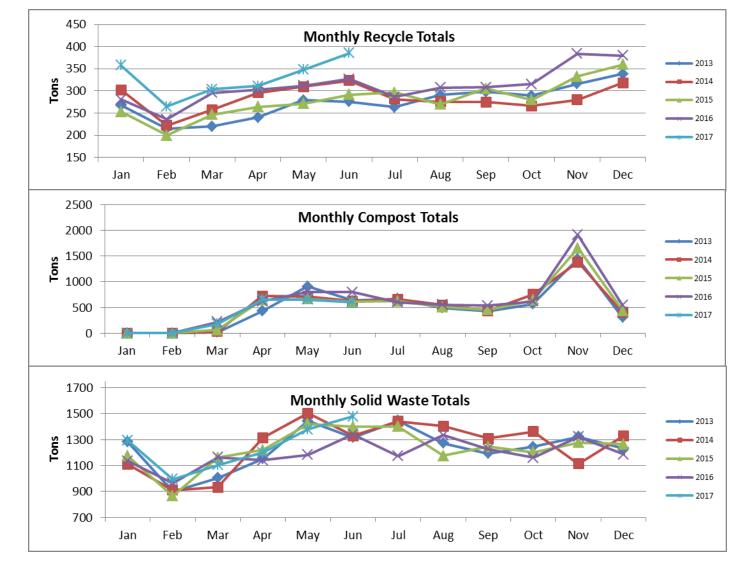
The Department of Public Works is responsible for the coordination of the Solid Waste contract for Township residents by acting as a liaison between GFL (Green for Life) and the Township residents, to ensure residents are provided quality customer service at all times.

#### GFL (Green for Life) Buys Rizzo Services

In October of 2016, Toronto based GFL Environmental Inc. purchased Rizzo Services. Rizzo's administration and operations building in sterling heights has now become GFL's US headquarters as they work to expand their presence in the U.S. No changes were made to the resident's rates or services, all the routes and drivers remained the same. The only change that residents noticed was the change from red trucks to GFL's signature lime green.

# Solid Waste Rates Effective July 1, 2015 (per quarter) No increases since 2015 Single Family: Curbside \$ 49.66

	T	
Doorside	\$	99.36
Inside	\$ :	116.64
Multi-Family (Condos/Apa	rtm	ents)
Attached (individual)	\$	43.16
Detached (individual)	\$	48.55
Detached Doorside	\$	99.33
Multi-Family Common	\$	33.44



## **COMMUNITY EVENTS**

The Township puts on several annual and bi-annual events throughout the year. Coordination, communication and planning amongst Township staff, contractors, volunteers and Township residents is the key to these events coming together successfully year after year.

#### **Household Hazardous Waste Days**

The Department of Public Works is responsible for the coordination and staging of the semiannual drop off days for Township residents. The DPW staff works very closely with the Solid Waste contractor to provide this safe and effective event on the first Saturday of the month in May and October of each year. The participation for this event averages 800 - 1,000 residents, per event, bringing in household hazardous waste to be disposed of properly. During the events the Township sponsors a mercury thermometer exchange, offering residents to turn in a mercury thermometer for a new digital one. The staff sets up signs for traffic flow and checks various forms of identification of residents participating in the events. The cost of each event averages \$60,000.









## **COMMUNITY EVENTS**

## **Electronic Recycling, Medication Disposal & Paper Shredding Event**

The spring 2016 Electronic Recycling, Medication Disposal & Paper Shredding Event was a big success. In total, we had 1095 vehicles that came through the drop-off line and our residents appeared to utilize all the available services equally. Approximately 35,500 pounds of paper was shredded and recycled and a semi-truck was filled with over 49,000 pounds of electronics were demanufactured and then recycled as well. In addition to the paper and electronics the event also took in approximately 6 cubic yards of unwanted or expired medications.





## Clean Sweep

The Department of Public Works is responsible for the coordination and staging of this annual event that has become very popular with Township residents. This event coincides with Earth Day in April each year. Residents are encouraged to clean up areas throughout their subdivisions and entrances to the subdivisions that get littered with debris during the winter months. The Township, along with the Solid Waste contractor, provides residents with paper lawn leaf bags and large orange trash bags to collect debris and litter. This event is a volunteer event and offers local high school students the opportunity to earn community service for their participation. The total trash and debris that was collected during this year's event was 9,600lbs of trash 19,000lbs of compost.



