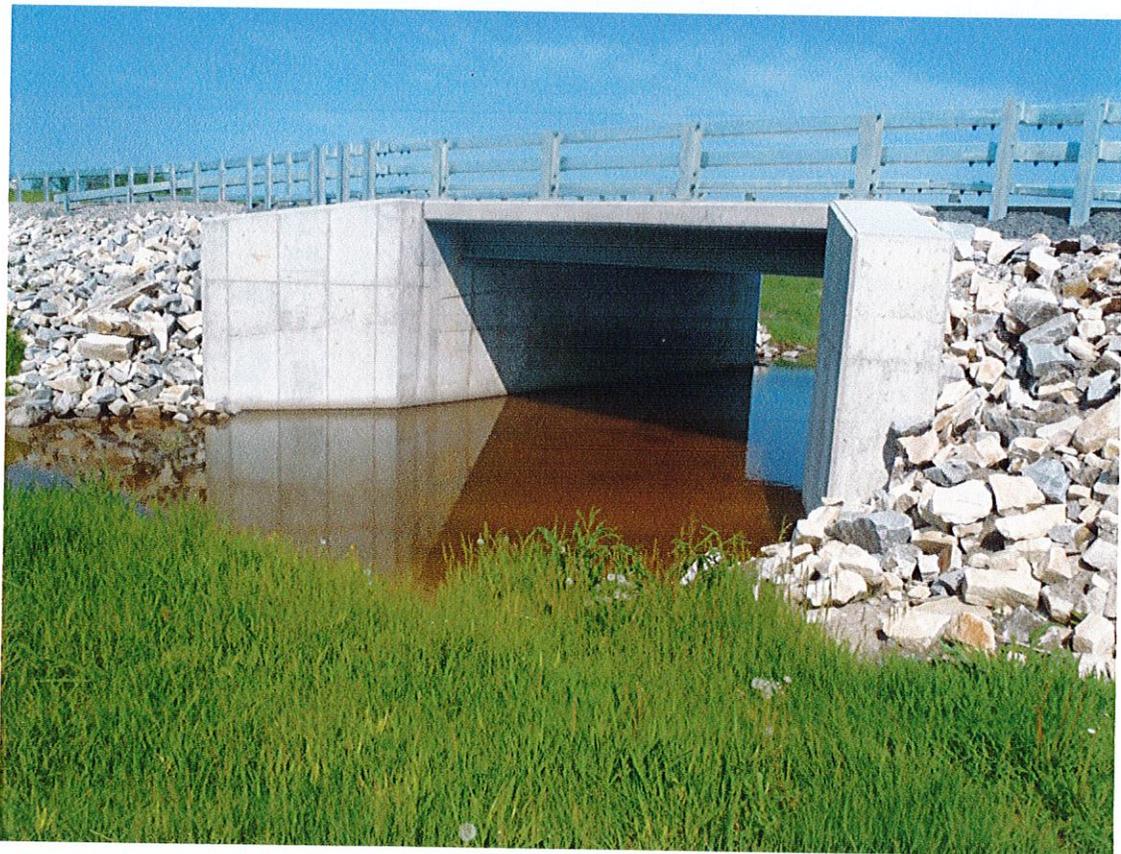


2017
ANNUAL REPORT



Washington County
Department of Public Works



Department of Public Works

Highways • Engineering

John C. McMillan
Acting Superintendent

March, 2018

The Honorable Board of Supervisors
Washington County Municipal Center
383 Broadway
Fort Edward, NY 12828

Members of the Board:

It is with great pleasure that I present you with the 2017 Department of Public Works Annual Report.

This report summarizes the operations of the department, and associated financial data for your reference.

Thank you for your continued support of the Department of Public Works.

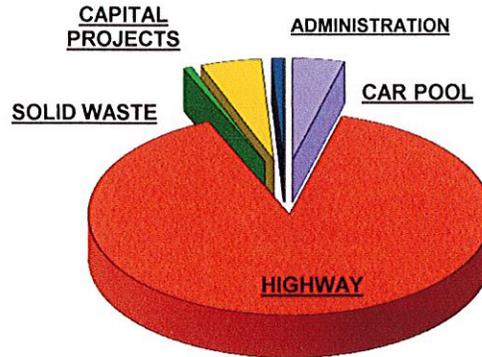
Respectfully submitted,

A handwritten signature in cursive script that reads "John McMillan".

John McMillan
Acting Superintendent

JM:lp

**2017
EXPENDITURES OVERSEEN BY DPW**



**2017 EXPENDITURES
(OVERSEEN BY THE DPW)**

<u>ACCOUNT NAME</u>	<u>EXPENDITURES</u>	<u>% OF TOTAL</u>
CAR POOL	\$747,845.90	4.13%
HIGHWAY	\$16,187,370.02	89.30%
SOLID WASTE	\$130,246.63	0.72%
CAPITAL PROJECTS	\$884,399.21	4.88%
ADMINISTRATION	\$178,035.37	0.98%
TOTAL	\$18,127,897.13	100.00%

**2017 EXPENDITURES
ALL FUNDS**

<u>ACCOUNT NUMBER</u>	<u>ACCOUNT NAME</u>	<u>EXPENDITURE</u>	<u>% OF TOTAL</u>
A1490	DPW - ADMINISTRATION	\$178,035.37	0.88%
	<i>SUB-TOTAL</i>	\$178,035.37	0.88%
CM5135	POOL CAR	\$722,612.91	2.75%
	BENEFITS (CM)	\$25,232.99	0.26%
	<i>SUB-TOTAL</i>	\$747,845.90	3.01%
D3310	TRAFFIC CONTROL	\$291,030.39	1.88%
D5010	ADMINISTRATION	\$134,620.03	0.85%
D5020	ENGINEERING	\$237,727.38	1.32%
D5110	MAINTENANCE OF HIGHWAYS & BRIDGES	\$3,293,874.89	22.87%
D5142	COUNTY SNOW & ICE CONTROL	\$1,724,561.00	9.11%
D5144	STATE SNOW & ICE CONTROL	\$534,047.77	4.76%
D5149	WORK FOR OTHER DEPARTMENTS	\$820.13	0.03%
D5112	HIGHWAY PROJECTS (CHIPS)	\$4,196,304.37	15.31%
D5120	BRIDGE PROJECTS	\$889,825.52	4.13%
DM5130	ROAD MACHINERY	\$2,813,124.98	19.63%
	BENEFITS (D,DM)	\$2,071,433.56	11.46%
	<i>SUB-TOTAL DIV. OF HIGHWAYS</i>	\$16,187,370.02	91.36%
CLB8160	DPW - SOLID WASTE MANAGEMENT	\$57,207.48	3.27%
	BENEFITS (CLB)	\$73,039.15	1.49%
	<i>SUB-TOTAL DIV. OF SOLID WASTE</i>	\$130,246.63	4.76%
	TOTAL EXPENDITURES FOR 2017	\$17,243,497.92	100.00%

*Figures may vary slightly from County Treasurer's final reconciliation.

2017 DPW GENERAL FUND

	APPROPRIATIONS	EXPENDED	BALANCE
	(AMENDED)		
A1490			
DPW ADMINISTRATION			
PERSONAL SERVICES	\$170,532.00	\$164,860.62	\$5,671.38
EQUIPMENT	\$0.00	\$0.00	\$0.00
CONTRACTUAL SERVICES	\$14,400.00	\$13,174.75	\$1,225.25
	\$184,932.00	\$178,035.37	\$6,896.63

***Figures may vary slightly from County Treasurer's final reconciliation*

2017 POOL CAR FUND

	APPROPRIATIONS <i>(AMENDED)</i>	EXPENDED	BALANCE	ENCUMBERED TO 2018
CM5135 POOL CAR				
PERSONAL SERVICES	\$103,038.00	\$84,003.83	\$19,034.17	
EQUIPMENT	\$291,166.00	\$284,793.01	\$6,372.99	
CONTRACTUAL SERVICES	\$384,950.00	\$369,852.94	\$15,097.06	
<i>INVENTORY ADJUSTMENT</i>		<i>-\$16,036.87</i>	<i>\$16,036.87</i>	
	\$779,154.00	\$722,612.91	\$56,541.09	
CM9010-CM9060				
BENEFITS	\$32,200.00	\$25,232.99	\$6,967.01	
POOL CAR FUND				
Cash Balance as of 12/31/17:	Cash 200		\$849,419.07	

***Figures may vary slightly from County Treasurer's final reconciliation*

2017 COUNTY ROAD FUND

	APPROPRIATIONS (AMENDED)	EXPENDED	BALANCE	ENCUMBERED <i>to 2018</i>
D3310 TRAFFIC				
PERSONAL SERVICES	\$52,510.00	\$51,343.40	\$1,166.60	
CONTRACTUAL SERVICES	\$259,378.85	\$213,018.95	\$46,359.90	\$ 844.00
WQIP GRANT	\$395,760.00	\$26,668.04	\$369,091.96	
	\$707,648.85	\$291,030.39	\$416,618.46	
D5010 ADMINISTRATION				
PERSONAL SERVICES	\$130,943.00	\$120,285.68	\$10,657.32	
EQUIPMENT	\$4,235.00	\$3,635.00	\$600.00	
CONTRACTUAL SERVICES	\$17,012.00	\$10,699.35	\$6,312.65	
	\$152,190.00	\$134,620.03	\$17,569.97	
D5020 ENGINEERING				
PERSONAL SERVICES	\$204,596.00	\$203,863.76	\$732.24	
EQUIPMENT	\$5,000.00	\$0.00	\$5,000.00	
CONTRACTUAL SERVICES	\$38,000.00	\$33,863.62	\$4,136.38	
	\$247,596.00	\$237,727.38	\$9,868.62	
D5110 MAINTENANCE HIGHWAYS & BRIDGES				
PERSONAL SERVICES	\$1,809,550.00	\$1,786,096.47	\$23,453.53	
EQUIPMENT	\$13,250.00	\$743.19	\$12,506.81	
CONTRACTUAL SERVICES	\$1,969,150.00	\$1,507,035.23	\$462,114.77	
	\$3,791,950.00	\$3,293,874.89	\$498,075.11	

***Figures may vary slightly from County Treasurer's final reconciliation*

2017 COUNTY ROAD FUND

	APPROPRIATIONS (AMENDED)	EXPENDED	BALANCE	ENCUMBERED TO 2018
D5142 COUNTY SNOW				
PERSONAL SERVICES	\$510,000.00	\$297,915.13	\$212,084.87	
CONTRACTUAL SERVICES	\$1,485,000.00	\$1,026,218.84	\$458,781.16	
<i>INVENTORY/SALT USAGE ADJ.</i>		<i>\$400,427.03</i>	<i>(\$400,427.03)</i>	
	\$1,995,000.00	\$1,724,561.00	\$270,439.00	
D5144 STATE SNOW				
PERSONAL SERVICES	\$160,000.00	\$86,056.45	\$73,943.55	
CONTRACTUAL SERVICES	\$762,000.00	\$447,991.32	\$314,008.68	
	\$922,000.00	\$534,047.77	\$387,952.23	
D5149 WORK-OTHER DEPTS.				
PERSONAL SERVICES	\$10,000.00	\$330.40	\$9,669.60	
CONTRACTUAL SERVICES	\$2,000.00	\$489.73	\$1,510.27	
	\$12,000.00	\$820.13	\$11,179.87	
D5112 - CONSTRUCTION & CHIPS PROJECTS				
<i>INVENTORY ADJUSTMENT</i>	\$4,502,892.00	\$4,288,083.96	\$214,808.04	
		<i>-\$91,779.59</i>	<i>\$91,779.59</i>	
D5120 - BRIDGE PROJECTS	\$890,500.00	\$889,825.52	\$674.48	
	\$5,393,392.00	\$5,086,129.89	\$307,262.11	
D9010-D9060 BENEFITS	\$2,058,695.00	\$1,863,750.49	\$194,944.51	
GRAND TOTAL-ROAD FUND	\$15,280,471.85	\$13,166,561.97	\$2,113,909.88	
COUNTY ROAD				
Cash Balance as of 12/31/17:	D200		\$1,636,343.65	

***Figures may vary slightly from County Treasurer's final reconciliation*

2017 COUNTY ROAD MACHINERY FUND

	APPROPRIATIONS (AMENDED)	EXPENDED	BALANCE	ENCUMBERED to 2018
DM5130 ROAD MACHINERY				
PERSONAL SERVICES	\$425,351.00	\$420,998.35	\$4,352.65	
EQUIPMENT	\$892,225.90	\$673,365.47	\$218,860.43	\$ 194,135.00
CONTRACTUAL SERVICES	\$2,077,707.00	\$1,759,218.16	\$318,488.84	\$ 100.00
<i>(INVENTORY ADJUSTMENTS)</i>		(\$40,457.00)	\$40,457.00	
	\$3,395,283.90	\$2,813,124.98	\$582,158.92	
DM9010-DM9060				
BENEFITS	\$228,421.00	\$207,683.07	\$20,737.93	
CO. ROAD. MACH.				
Cash Balance as of 12/31/17: DM200			\$419,369.75	

***Figures may vary slightly from County Treasurer's final reconciliation*

2017 SOLID WASTE MGMT. FUND

	APPROPRIATIONS	EXPENDED	BALANCE
	<i>(AMENDED)</i>		
CLB8160			
DPW SOLID WASTE			
PERSONAL SERVICES	\$0.00	\$0.00	\$0.00
EQUIPMENT	\$0.00	\$0.00	\$0.00
CONTRACTUAL SERVICES	\$70,700.00	\$57,207.48	\$13,492.52
	\$70,700.00	\$57,207.48	\$13,492.52
CLB9010-CLB9060			
BENEFITS	\$59,000.00	\$73,039.15	(\$14,039.15)
SOLID WASTE MGMT.			
Cash Balance as of 12/31/17:	Cash 200		\$380,942.26

**Figures may vary slightly from County Treasurer's final reconciliation*

2017

HIGHWAY & BRIDGE CONSTRUCTION & MAINTENANCE

The Highway Department is responsible for the maintenance of 286 miles of County highways and 123 County bridges. By contract, an additional 100 miles of State highways are maintained during the winter months for snow and ice control. The combination of County and State maintenance provides an overall balance that effectively and efficiently keeps the work force productive, but more importantly, the public safe.

In addition to normal highway and bridge maintenance, our crews also completed a variety of other duties.

Our sign shop crew is responsible for signing and marking our County highway system. During 2017, 286 miles of center lines were striped, along with over 400 miles of edge lines by contract. They also painted several miles for various Towns. In order to stay compliant with the MUTCD (Manual on Traffic Control Standards), the sign crew fabricated signs in the sign shop. They also made numerous signs for various Towns and Villages. They were also responsible for signage and detouring for various road and bridge projects and closures. Due to vandalism, vehicle hits, and the elements, it is an ongoing task to keep up with the maintenance of over 6800 highway signs. They were also very helpful to numerous Towns in providing signs and placement of signs.

During the 2017 construction season, our bridge crews were able to get 3 bridges complete. Mother nature didn't cooperate early in the season. The high water levels made it difficult to complete the 4 bridge projects we had planned. We also were able to assist the Town of Jackson with one of our detour bridges that is spanning one of their failing structures.

Our construction crews were busy in 2017 with our 2 gradalls, a wheeled excavator and the rental of 2 track excavators, installing over 3900' of cross culverts. The replacement culverts were on our 17' projects, and we were also able to get some of our 18' projects completed with a couple of large diameter culverts. We also installed one multi-plate bolt together. They were also busy installing sediment basins in the Lake George Water Shed to help with run off and sediment getting into the lake. We also helped out a few of the Towns with culverts and erosion issues.

Our blacktop crew was also very productive with paving our wear course on 8.5 miles of roads that we bindered in 2016. We also experimented with 7.25 miles of Cold Mix Asphalt with a Pavement Placement Surface treatment. There was also 7.5 miles of Full Depth Reclamation with a binder coarse of blacktop. We also did 2.7 miles of just the Pavement Preservation Surface treatment. The shoulders were then backed up with gravel, top soil, and millings which we got from some of our milling projects. Driveways were also backed up with blacktop and item 4. They also found time to assist the towns of Easton, Granville and Hartford with paving and shoulders.

When not in construction mode, the crews were busy maintaining the highways with roadside pickup, brush cutting, road sign straightening, installing guide rail, and other related work. The 3 road side mowers were out mowing from early May to November. Our 2 over the rail mowers were out all year long mowing grass in spring, summer, and fall. Throughout the year the crews patched potholes, cut trees and took care of any "request for service" that came into the front office. They also maintained the equipment they were responsible for.

**2017
MILES OF HIGHWAYS IN TOWNS***

TOWN	STATE MILEAGE	COUNTY MILEAGE OUTSIDE VILLAGE	COUNTY MILEAGE INSIDE VILLAGE	TOWN MILEAGE	VILLAGE** MILEAGE	TOTAL MILEAGE
ARGYLE	14.13	23.47		95.15	0.95	133.70
CAMBRIDGE	5.34	19.38	0.14	62.60	1.79	89.25
DRESDEN	10.51	9.04		34.26		53.81
EASTON	16.70	23.67	0.68	86.09	0.73	127.87
FORT ANN	18.14	14.49	0.54	73.48	1.82	108.47
FORT EDWARD	13.04	13.65	0.37	34.49	13.74	75.29
GRANVILLE	25.82	18.64	1.77	68.82	9.98	125.03
GREENWICH	17.13	15.95		76.50	7.09	116.67
HAMPTON	7.40	8.51		17.64		33.55
HARTFORD	20.26	10.34		49.34		79.94
HEBRON	9.06	21.26		68.05		98.37
JACKSON	13.70	11.90		56.92		82.52
KINGSBURY	21.39	19.16	2.28	52.56	21.57	116.96
PUTNAM	8.36	10.30		32.73		51.39
SALEM***	10.35	19.96		71.58		101.89
WHITE CREEK	9.74	10.78	0.62	53.58	8.49	83.21
WHITEHALL	13.08	26.74	0.36	35.26	13.35	88.79
TOTAL	234.15	277.24	6.76	969.05	79.51	1566.71

STATE MILEAGE	234.15
COUNTY MILEAGE	284.00
TOWN MILEAGE	969.05
VILLAGE MILEAGE	79.51
TOTAL MILEAGE IN COUNTY	1566.71

* Figures based on reported mileages as of 12/31/2017, and in many cases are reflective of adjustments to Local (County, Town, & Village) mileages made by New York State Department of Transportation (NYSDOT) using Global Positioning System (GPS) technology.

** Village mileage figures do not include State & County mileages inside villages

*** Town of Salem assumed jurisdiction of streets and roads (+5.07 miles) in former Village of Salem per Order of Dissolution, effective May 1, 2016

WASHINGTON COUNTY DEPARTMENT OF PUBLIC WORKS 2017 COUNTY ROAD PROJECTS

- 1. County Route 16** **Town of Fort Ann**
 1.25 mi S of West Rd (n) to Friedmans Pit Entrance (2.21 miles) Roadway FDR (Full Depth Reclamation) at a depth of 8"-12" with calcium added, work performed by Gorman Bros. Inc.. Roadway re-graded, then repaved with 3" type 3 HMA (Hot Mixed Asphalt) binder course x 22'± wide. Installed screened gravel (topsoil & compost mix in front of residence) 3'- 4' wide. Work performed by County Forces.
\$245,646.37 (*\$153,529/mi*)
1.6 miles

- 2. County Route 23** **Town of Granville**
 Guilder Hollow Rd to NYS Route 22 (2.69 miles) Roadway FDR (Full Depth Reclamation) at a depth of 8"-12" with calcium added, work performed by Gorman Bros. Inc.. Roadway re-graded, then repaved with 3" type 3 HMA (Hot Mixed Asphalt) binder course x 22'± wide. Installed screened gravel (topsoil & compost mix in front of residence) shoulders, 3'- 4' wide. Work performed by County Forces. **PaveNY**.
\$421,866.03 (*\$162.256/mi*)
2.6 miles

- 3. County Route 27** **Town of Granville**
 NYS Route 22 to NYS Route 149 (1.35 miles) Roadway FDR (Full Depth Reclamation) at a depth of 8"-12" with calcium added, work performed by Gorman Bros. Inc.. Roadway re-graded, then repaved with 3" thick CMA (Cold Mixed Asphalt) binder course x 22'± wide. CMA mixed by Jointa Galusha, hauled and paver placed by County Forces. Installed screened gravel (topsoil & compost mix in front of residence) shoulders, 3'- 4' wide. Paver Placed Surface Treatment (PPST) performed by Gorman Bros. Inc. **PaveNY**
\$254,584.75 (*\$188,581/mi*)
1.35 miles

- 4. County Route 29** **Town of Granville**
 NYS Route 22 to VT Line (1.08 miles) Roadway FDR (Full Depth Reclamation) at a depth of 8"-12" with calcium added, work performed by Gorman Bros. Inc.. Roadway re-graded, then repaved with 3" thick CMA (Cold Mixed Asphalt) binder course x 22'± wide. CMA mixed by Jointa Galusha, hauled and paver placed by County Forces. County Forces performed T&L with HMA process. Installed screened gravel (topsoil & compost mix in front of residence) shoulders, 3'- 4' wide. Paver Placed Surface Treatment (PPST) performed by Gorman Bros. Inc. **CHIP Project**
\$153,671.38 (*\$219,531/mi*)
0.7 miles

5. **County Route 31(#847)** **Town of Hebron**
 NYS Route 22 to VT Line (1.02 miles) Roadway FDR (Full Depth Reclamation) at a depth of 8"-12" with calcium added, work performed by Gorman Bros. Inc.. Roadway was T&L with HMA process by County Forces. Installed screened gravel (topsoil & compost mix in front of residence) shoulders, 3'- 4' wide. Fiber Mat & Paver Placed Surface Treatment (PPST) performed by Gorman Bros. Inc. **CHIP Project**
1.02miles **\$147,797.55** (\$144,900/mi)
6. **County Route 31(#838)** **Town of Hebron**
 Campbell Rd to Middle Rd (2.33 miles) Roadway FDR (Full Depth Reclamation) at a depth of 8"-12" with calcium added, work performed by Gorman Bros. Inc.. Roadway re-graded, then repaved with 3" thick CMA (Cold Mixed Asphalt) binder course x 22'± wide. CMA mixed by Jointa Galusha, hauled and paver placed by County Forces. Installed screened gravel (topsoil & compost mix in front of residence) shoulders, 3'- 4' wide. Paver Placed Surface Treatment (PPST) performed by Gorman Bros. Inc. **CHIP Project**
2.5 miles **\$440,850.75** (\$176,340/mi)
7. **County Route 47** **Town of Argyle**
 Bain Rd to Moon Rd (2.21 miles) Roadway FDR (Full Depth Reclamation) at a depth of 8"-12" with calcium added, work performed by Gorman Bros. Inc.. Roadway re-graded, then repaved with 3" thick CMA (Cold Mixed Asphalt) binder course x 22'± wide. CMA mixed by Jointa Galusha, hauled and paver placed by County Forces. Installed screened gravel (topsoil & compost mix in front of residence) shoulders, 3'- 4' wide. Paver Placed Surface Treatment (PPST) performed by Gorman Bros. Inc. **CHIP Project**
2.4 miles **\$485,949.82** (\$202,479/mi)
8. **County Route 59A** **Town of Cambridge**
 County Route 74 to County Route 59 (0.79 miles), Roadway was T&L with HMA process by County Forces. Fiber Mat & Paver Placed Surface Treatment (PPST) performed by Gorman Bros. Inc.
0.79 miles **\$109,918.87** (\$139,138/mi)
9. **County Route 61** **Town of Jackson**
 County Route 62 to NYS Route 22 (1.70 miles), Roadway was T&L and Type 3 binder HMA performed by County Forces. **CHIP Project**
1.70 miles **\$246,712.22** (\$145,125/mi)

10. County Route 62**Town of Jackson**

Kenyon Hill Rd to County Route 61 (0.70 miles) Roadway FDR (Full Depth Reclamation) at a depth of 8"-12" with calcium added, work performed by Gorman Bros. Inc.. Roadway re-graded, then repaved with 3" type 3 HMA (Hot Mixed Asphalt) binder course x 22'± wide. Installed screened gravel (topsoil & compost mix in front of residence) 3'- 4' wide. Work performed by County Forces. **CHIP Project.**

0.70 miles**\$116,882.92** (\$166,976/mi)**11. County Route 64****Town of Jackson**

NYS Rte 22 to Shunpike Rd (0.85 miles), Roadway was T&L with HMA process by County Forces. Fiber Mat & Paver Placed Surface Treatment (PPST) performed by Gorman Bros. Inc.

0.85 miles**\$134,163.20** (\$157,839/mi)**12. County Route 113****Town of Easton**

NYS Route 29 to Hogsback Rd (1.40 miles) Roadway FDR (Full Depth Reclamation) at a depth of 8"-12" with calcium added, work performed by Gorman Bros. Inc.. Roadway re-graded, then repaved with 3" type 3 HMA (Hot Mixed Asphalt) binder course x 22'± wide. Installed screened gravel (topsoil & compost mix in front of residence) 3'- 4' wide. Work performed by County Forces.

1.2 miles**\$203,630.38** (\$169,692/mi)**13. County Route 10 (Return to 2016 Roadway Projects)****Town of Whitehall**

County Route 9 to 0.3 mi past East Bay Rd (0.86 miles), Return to install traveling surface top course over binder course. Roadway trued and leveled with paving of 2" type 6 HMA (Hot Mixed Asphalt) overlay x 22'± wide. Installed screened gravel (topsoil & compost mix in front of residence) shoulders, 3'- 4' wide. Work performed by County Forces.

0.86 miles**\$116,595.19** (\$135,576/mi)**Total Road Projects Cost ('16 &'17)****\$278,273.49** (\$323,574/mi)**14. County Route 18 (Return to 2016 Roadway Projects)****Town of Hampton/Whitehall**

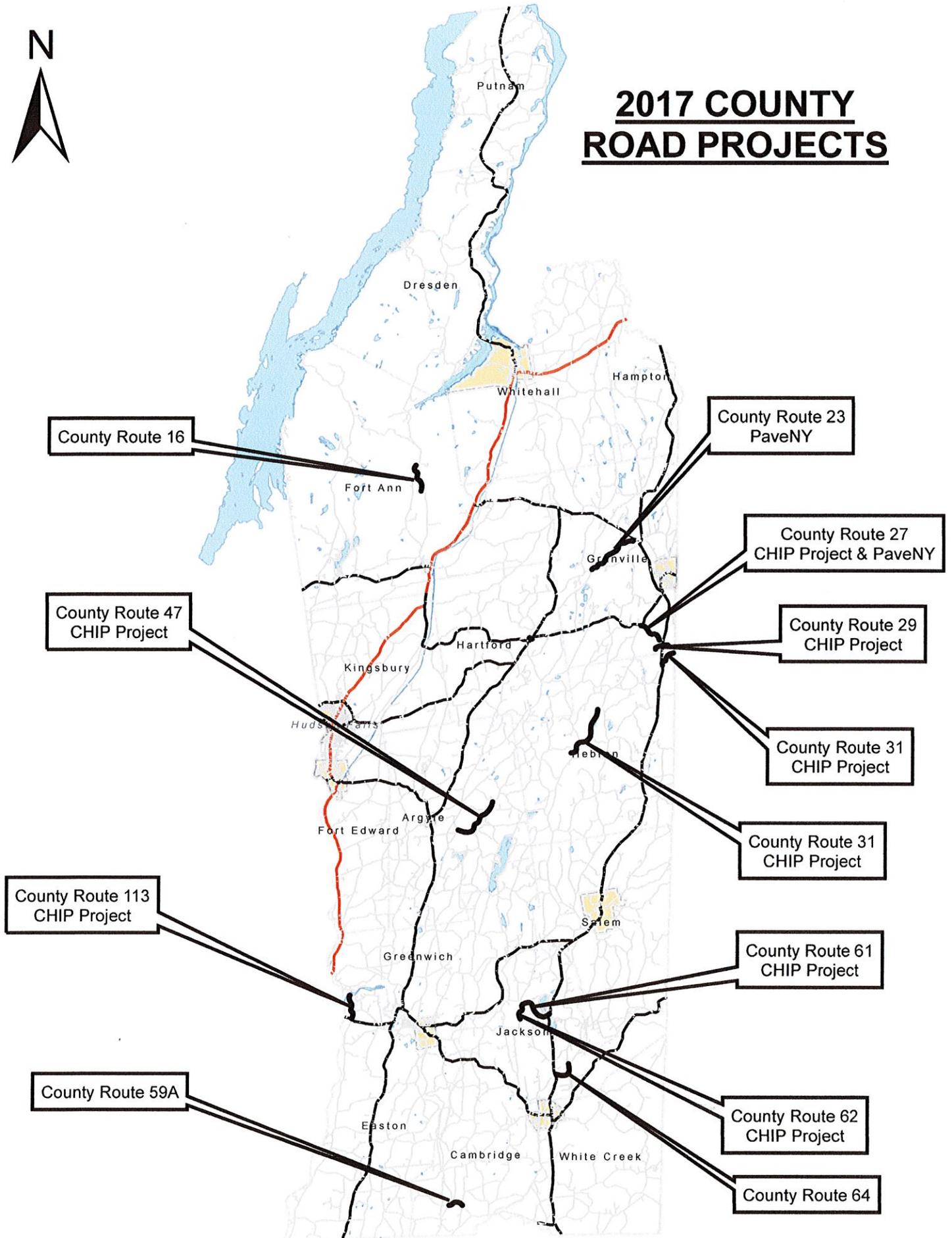
County Route 21 to Hickey Rd (2.26 miles), Return to install traveling surface top course over binder course. Roadway trued and leveled with paving of 2" type 6 HMA (Hot Mixed Asphalt) overlay x 22'± wide. Installed screened gravel (topsoil & compost mix in front of residence) shoulders, 3'- 4' wide. Work performed by County Forces.

2.26 miles**\$280,559.77** (\$124,141/mi)**Total Road Projects Cost ('16 &'17)****\$625,362.29** (\$276,709/mi)

- 15. County Route 28 (Return to 2016 Roadway Projects)** **Town of Hebron**
 Button Rd to County Route 31 (1.45 miles), Return to install traveling surface top course over binder course. Roadway trued and leveled with paving of 2" type 6 HMA (Hot Mixed Asphalt) overlay x 22'± wide. Installed screened gravel (topsoil & compost mix in front of residence) shoulders, 3' - 4' wide. Work performed by County Forces.
1.45 miles **\$180,328.48** (\$124,364/mi)
- Total Road Projects Cost ('16 & '17)** **\$393,406.51** (\$271,315/mi)
- 16. County Route 113 (Return to 2016 Roadway Projects)** **Town of Whitehall**
 Cheese Factory to NYS Route 29 (4.72 miles), Return to install traveling surface top course over binder course. Roadway trued and leveled with paving of 2" type 6 HMA (Hot Mixed Asphalt) overlay x 22'± wide. Installed screened gravel (topsoil & compost mix in front of residence) shoulders, 3' - 4' wide. Work performed by County Forces.
4.60 miles **\$457,067.99** (\$99,363/mi)
- Total Road Projects Cost ('16 & '17)** **\$1,211,029.18** (\$263,267/mi)
- 17. Crack Sealing (Prior Three (3) Years Paving Projects)** **Various Locations/Roads**
 Crack Filling Type II – NYS OGS PC67365; Award #23001, total of 4,762 gallons work performed by Gorman Bros. Inc.
53.99 miles **\$101,093.00** (\$1,872/mi)



2017 COUNTY ROAD PROJECTS



**WASHINGTON COUNTY DEPARTMENT OF PUBLIC WORKS
2017 COUNTY BRIDGE PROJECTS**

1. Salem Bridge C62 County Route 30 (spans Beaver Brook) 19.5' span

Demolished and removed the former 17' x 6'-8 1/2" x 29.4 lf Armco Plate Arch mounted on concrete footings originally constructed in 1934. No adjacent detour provided for the traveling public, but a detour using several local roads was signed accordingly. Constructed a new reinforced concrete footings (both 2' thick x 8' wide) set on #2 crushed stone bedding (12" minimum thickness). Both footings were constructed in such a way as to accommodate the municipal water main for the former village of Salem. Constructed reinforced concrete abutments & wingwalls (both 2' thick x 54'± long x 8.75'± high). Installed seven (7) ASTM A992 grade 50 W14x109 x 25'-3" long structural steel with bolted ASTM A992 grade 50 C9x20 diaphragms. Northern Stud Welding furnished and installed shear stud connectors on the top flange of each beam. A new reinforced, cast in place NYSDOT Class H 9 1/2" thick concrete deck, 33' wide x 25'-6" long. Constructed two (2) 29.67' x 22.5'± x 12" thick reinforced, cast in place NYSDOT Class E concrete approach slabs to lessen impact of traffic loads to structure. Installed NYSDOT approved steel bridge railing [3-rail curbless – 4 posts each side (8 total) at 7'-9 3/4"± c.c. and box beam guide rail at approaches. Medium stone bank protection installed at all four corners of structure.

Total Cost \$306,798.70

2. Cambridge Bridge C104 County Route 74 (spans Wampecack Creek) 19.5' span

Demolished and removed the former 11.1' lf concrete deck on concrete footings originally constructed in 1936. No adjacent detour provided for the traveling public, but a detour using several local roads was signed accordingly. Constructed a new reinforced concrete footings (both 2' thick x 8' wide) set on #2 crushed stone bedding (12" minimum thickness). Constructed reinforced concrete abutments & wingwalls (both 2' thick x 50'± long x 7.25'± high). Installed six (6) ASTM A992 grade 50 W14x109 x 22'-6" long structural steel with bolted ASTM A992 grade 50 C9x20 diaphragms. Northern Stud Welding furnished and installed shear stud connectors on the top flange of each beam. A new reinforced, cast in place NYSDOT Class H 9 1/2" thick concrete deck, 28' wide x 22'-9" long. Constructed two (2) 24' x 15'± x 12" thick reinforced, cast in place NYSDOT Class E concrete approach slabs to lessen impact of traffic loads to structure. Installed NYSDOT approved steel bridge railing [3-rail curbless – 4 posts each side (8 total) at 6'-9 3/4"± c.c. and box beam guide rail at approaches. Medium stone bank protection installed at all four corners of structure.

Total Cost \$265,883.44

3. Whitehall Bridge C168 County Route 9B (spans Mud Brook) 19.5'span

Demolished and removed the former 12' lf concrete deck on concrete footings originally constructed in 1941. No adjacent detour provided for the traveling public, but a detour using several local roads was signed accordingly. Constructed a new reinforced concrete footings (both 2' thick x 8' wide) set on #2 crushed stone bedding (12" minimum thickness). Constructed reinforced concrete abutments & wingwalls (both 2' thick x 50'± long x 8.5'± high). Installed five (5) ASTM A992 grade 50 W18x97 x 22'-6" long structural steel with bolted ASTM A992 grade 50 C10x20 diaphragms. Northern Stud Welding furnished and installed shear stud connectors on the top flange of each beam. A new reinforced, cast in place NYSDOT Class H 9½" thick concrete deck, 28' wide x 22'-6" long. No approach slabs were installed, instead HMA courses of base, binder was placed on approaches and finishe with HMA Type 6 top course, 2" thick over the concrete deck. Installed NYSDOT approved steel bridge railing [3-rail curbless – 4 posts each side (8 total) at 6'-9¾"± c.c. and box beam guide rail at approaches. Medium stone bank protection installed at all four corners of structure. **CHIP Project**

Total Cost \$257,309.41

4. Cambridge Bridge C105 County Route 74 (spans Wampecack Creek) 19.5'span

Project was postponed until the 2018 Construction Season.

Total Cost N/A

5. Granville Bridge C57 County Route 23 (spans Trib #18 of Mettawee River) 11.08' span

Demolished and removed former 8' span concrete deck, steel stringers on concrete abutments and wingwalls originally constructed in 1941. No adjacent detour provided for traveling public, but a detour using several local & state roads was signed accordingly. Assembled a new Aluminum Structural Plate Pipe Arch, 11'-1" x 6'-10" x 60 lf long, with reinforcing ribs for minimal cover. Prepared a 12" thick, #2 crushed stone bed for new plate pipe arch to rest on. Backfilled with #2 crushed stone to the level of each haunch, where separation fabric was installed. Continuing backfill with screened item four gravel to a level of 12" above the pipe. Continuing backfill with bank run gravel to the design subbase elevation and re-profiling of approximately 520± lf of roadway. Installed single steel box beam guide rail along both sides of structure. Guide rail post were installed by Town & County Bridge and Rail. Installed medium stone slope protection on both ends of new structure. Installed new HMA base, binder, and top courses over new structure and approaches. County forces were used for all operations except where noted.

Total Cost \$70,026.77

2017 BRIDGE PROGRAM



Bridge C-168
County Route 9B
Town of Whitehall
CHIP Project

Bridge C-57
Co Rte 23
Town of Granville

Bridge C-62
County Route 30
Town of Salem

Bridge C104
Co Rte 74
Town of Cambridge

WASHINGTON COUNTY DEPARTMENT OF PUBLIC WORKS 2017 ENGINEERING

During 2017, the Engineering section was involved in various activities related to the improvement of highway and bridge infrastructure throughout Washington County.

Administrative:

- 1) **2016 Annual Report** – summary of expenditures and construction/maintenance-related activities undertaken by the Washington County DPW in 2016.
- 2) **Salt stockpiles** in bins at all 8 DPW substations at end of snow removal season – total 3,234.64 tons (as of May 2017) – for documentation of County-incurred expenditures relative to State Snow and Ice Control for 2016-2017 winter season. The amount of salt that can be safely stored in all 8 bins is approximately 4,500 tons.
- 3) **Underground Facilities Protective Organization (UFPO) requests** – In 2017, most handled by each district foreman.
- 4) **Issued work permits** (under Section 136 of Highway Law) to individuals, businesses, organizations, and other municipalities to perform work on or near County roads inside right-of-way (R-O-W) limits. A total of 33 permits were issued in 2017. These included 9 for Utility work (electrical service & pole-related), 1 fundraisers, 20 driveways/field accesses, 1 Verizon, 1 ROW Usage, 1 Special Hauling Permits.
- 5) **“Adopt-a-Highway” requests** – Two request from organizations and clubs to perform periodic clean-up activities along County highways dealt with in 2017.
- 6) **assistance to general public** with requests for copies of Town, County, and State (the latter prior to 1946) purchased R-O-W and/or abandonment maps. Our office handled approximately 15 such requests in 2017, the majority from private land surveyors and consulting engineers; and also handled numerous highway-related R-o-W and/or abandonment inquiries from the general public and Office of Real Property (Tax Mapping). Addressed miscellaneous inquiries from the public, other municipalities, and organizations as well.
- 7) **Phase II of Municipal Separate Storm Sewer Systems (MS4) program** – in 2017, we assisted in the preparation of the 2015-2016 Annual Report (for term from March 10, 2016 to March 9, 2017). We continued to be involved with the inspections of catch basins and quantifying amounts of sediment removed from each at the County Municipal and Law Enforcement complex in Fort Edward (County maintenance crew from Fort Edward substation inspected and cleaned these) and along County Routes 32, 35, & 75. Our office performed annual inspection and took outfall photographs for the two outfall watersheds along County Route 37 (Burgoyne Avenue) at McIntyre Street & Fuller Pond and the two outfall watersheds behind the Law Enforcement Center.
- 8) **County Highway Inventory** – certification of County highway mileage (284.00 miles) in 2017 along with updated highway related information as required by NYSDOT for Consolidated Highway Improvement Program (CHIP) aid.
- 9) **DPW-related Freedom of Information Law (FOIL) requests.**
- 10) **Plan of Action for Fracture Critical Bridges** – Updated - as result of I-5 bridge collapse in Washington State, being mentioned at the Federal level. Candidates include bridges C2, C20, C29, C54, CL78, C80, C132, C149, C150, & CL157.
- 11) **assistance with miscellaneous administrative functions** – such as: a) adjustments to snow plowing routes; b) billing procedures for materials c) snow and ice removal/maintenance contracts with Towns; and

d) material bid openings – including culvert pipe, underdrain, crushed stone, concrete, blacktop, sign blanks, centerline/edgeline paint, structural steel, reinforcing steel, etc.

12) Greenman-Pedersen, Inc, P.E., on board as per-diem consultant to sign and stamp engineering plans and drawings as required by state and Federal entities, particularly involving “red flag” structural repairs to bridges cited by NYSDOT contracted inspectors.

13) Annual Safety Day @ Washington County Fairgrounds, Town of Easton

14) 12th Annual North Country Regional Stormwater Tradeshow & Conference – attended @ Great Escape Lodge, Queensbury, NY

15) 23th Statewide Conference on Local Bridges – attended @ Liverpool, NY – Engineering the Federal Aid Process.

16) 2017 Bid Openings – reviewed submitted bids for miscellaneous bridge materials including multi-plate pipes, reinforcing rods, bridge rail, etc.

Township Assistance in 2017 included the following:

1) annual update of Town Highway Inventory for 2017 – enrollment dates were between October and November, 2014, when Town highway superintendents came to DPW Engineering office to update highway-related information and sign mileage certifications. Inventory updates and mileage certifications were processed and sent along with County inventory and mileage certification to Region 1 headquarters in Albany, NY. In addition, our office maintains a 40+ year old Town road history data base and continually updates addendums in back of certified copies of resolutions that define each Town highway system in effect since 1963. Serves as basis for local highway aid, particularly Consolidated Highway Improvement Plan (CHIP). Emergency Services and Real Property offices are kept informed of the road changes we receive from the towns.

2) Inspection of Town Bridges – continuing inspection and baseline surveys of town bridges/culverts ranging from 5’ span to 20’ span

3) Town of White Creek, Bridge T25A Waites Hill Rd – survey, inspection, assembly of structure, aluminum multi-plate pipe arch constructed in 2017

4) Town of Jackson, Johnson Road – field survey, design and construction inspection of closed drainage system including a series of differentiating depths and sizes of catch basins & HDPE pipe.

5) Town of Jackson, Murphy Lane survey, inspection, assembly of structure, aluminum multi-plate pipe arch constructed in 2017

6) Town of Hartford, Lily Pond Rd – survey & design for dam/cross culvert replacement

7) Town of Hartford, Hastings Rd – survey & design for cross culvert replacement

8) Town of Whitehall, Grey Lane – survey/stakeout of Right-Of-Way

9) Town of Granville, Upper Turnpike – rough design on aerial imagery for planning road realignment near slide area.

10) Town of Fort Ann, Hogtown Rd – traffic count for CulvertNY project

11) Town of Salem, Rexleigh Rd – survey of Salem Gravel Pit

County Engineering Projects in 2017:

- 1) **2017 County Bridge Program** – for information relative to major bridge projects completed in 2017, see 2017 Bridge Program and map
- 2) **Br C57 Co Rte 23 over Trib #18 of Mettawee River, Town of Granville** – construction inspection & quality control on installation, backfilling and road reconstruction.
- 3) **Br C62 Co Rte 30 over Beaver Brook, Town of Salem** – construction inspection & quality control on concrete pours.
- 4) **Br C104 CR74 over Wampecack Creek, Town of Cambridge** – construction inspection & quality control on concrete pours.
- 5) **Br C168 CR9B over Mud Brook, Town of Whitehall** – construction inspection & quality control on concrete pours.
- 6) **Br C144 CR64 over Owl Kill, Town of Jackson** – construction inspection & quality control on installation, backfilling and road reconstruction.
- 7) **Br C211, CR 2 over Charter Brook, Town of Putnam**– construction inspection & quality control on installation, backfilling and road reconstruction.
- 8) **Bridge Design for 2018 Bridges** – inspection, survey design, etc. for Br C108 & Br C109 on CR 74A, Town of Easton, Br C103 on CR74, Town of Easton, Br C152 on CR68, Town of White Creek.
- 9) **Fort Ann Highway Salt Screens** – layout, survey, design, construction of Salt Screen.
- 10) **Bridge C191 Easton (BIN 3-30672-0) Red Flag Repair** – construction repair of 6 week Red Structural Flag regarding mortared stone abutment repair.
- 11) **Misc Roadway Inspection** – Crack seal operations on last three (3) years of paving projects. Work performed by Gorman Bros. Inc.
- 12) **2017 County Road Pavement Ratings** – field survey/inspection of 286 miles of roads using CAMP-RS software
- 13) **Lake George/ Lake Champlain Watershed Grant** – meetings, correspondence, info, etc.
- 14) **AGFTC Roadway Traffic Count Grant** – gathered and submitted info and verified accuracy of counts for 2017 (1st year of 3 year program)
- 15) **Co Rte 6 Dresden**– locating and installation of sediment traps/ basins
- 16) **Co Rte 30 Hebron** – locating and installation of new cross culverts near Getty Farm to resolve drainage issues
- 17) **Co Rte 68 White Creek** – installation of cross culvert and discharge issues resulting of excessive sediment
- 18) **Co Rte 77 Greenwich** – locating and installation new catch basin structure and culvert pipe
- 19) **Co Rte 37 Fort Edward/Hudson Falls** – locating WCSD catch basins, inverts, elevations and drainage issues near Levy Hollow Rd