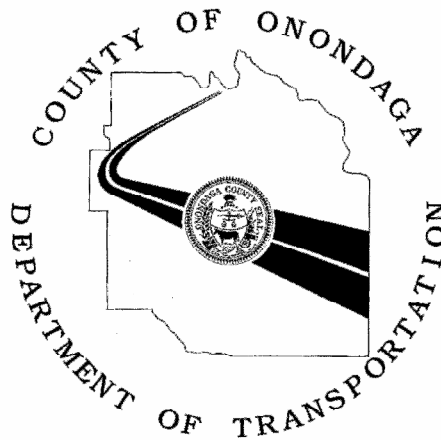


**DEPARTMENT OF TRANSPORTATION**  
**2009 ANNUAL REPORT**



**Onondaga County**  
**Department of Transportation**

**Commissioner**  
**Brian J. Donnelly**

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## **COMMISSIONER'S MESSAGE**

I am pleased to present the 2009 Annual Report for the Onondaga County Department of Transportation.

The mission of the Department of Transportation is to provide for the maintenance and care of approximately 800 miles of county owned roads and 210 bridge structures. Our primary objective is to ensure that this network of highways and bridges is safe, convenient and efficient for the traveling public.

### **2009 Accomplishments**

Below is a list of significant accomplishments for 2009:

- Completed the following bridge projects:
  - Warners Road bridge rehabilitation over the Fingerlakes Railroad in the Town of Camillus
  - Two Apulia Road bridge replacement projects over Butternut Creek in the Town of LaFayette
  - Hosman Road (East Molloy Road) bridge slip lining project over a branch of Ley Creek in the Town of DeWitt
- Completed the following highway project:
  - Bellevue Avenue Extension was reconstructed with full depth pavement, improved shoulder widths, new drainage facilities and a new signalized, coordinated intersection.
- Completed the following drainage project:
  - Lamson Road Drainage: The Department of Transportation completed the design and construction of a drainage project on Lamson Road, C.R. No. 34 and Plainville Road, C.R. No. 30 in the town of Lysander. Over 1200 feet of perforated 36" drainage pipe was installed on the north side of Lamson Road from the intersection with Plainville Road westerly to Ox Creek along with 9 new drainage structures.
- Secured funding via the American Recovery and Reinvestment Act (ARRA – better known as “Stimulus” funding) for the East Taft Road Reconstruction Project, an approximately \$8.4M highway project now funded by 100% Federal Dollars thus saving approximately \$420,000 of local dollars.
- Rehabilitated approximately ninety (90) centerline miles of highway using hot mix asphalt, cold mix asphalt and surface treatment applications. This department continues to test “Low Emissions Asphalt”, a newer technology which is more environmentally friendly so as to ascertain its durability in contemplation of more wide spread use throughout the County.
- Cleared 800+ miles of County and State highways of 149.6 inches (over 12 feet) of snow for the 2008/09 snow season.
- One Person Plowing: Onondaga County DOT successfully implemented a One Person Plowing (OPP) program on 25% of its 51 plow routes. The results were a \$103,000 overtime savings and a 22% reduction in the number of employee workdays in excess of 12 hours.
- Implemented a GPS-based Automatic Vehicle Location (AVL) system to track vehicles and heavy equipment. The system will maximize the safety of Department staff and the traveling public and aid in the management of DOT's work activities.
- Secured land in the Town of Clay was purchased and the preliminary design process for a new consolidated high performance highway maintenance facility to replace 2 existing outdated facilities (Camillus and North Area facilities) was begun.

### **2009 Inter-Municipal Cooperation**

In 2009, The Department of Transportation continued to look for opportunities to work cooperatively and collaboratively with the surrounding governmental agencies. The following is a list of initiatives in 2009:

- The DOT continued an agreement with the City of Syracuse to purchase hot mix bituminous asphalt from the city's recently updated asphalt plant. This agreement benefits both parties in that the asphalt plant runs more efficiently with higher output and the agreed upon price received from the City was lower than that supplied by our private vendor. As part of the agreement, we continue to experiment with recycled asphalt as part of the bituminous mix in an effort to reduce departmental costs and develop a more environmentally friendly approach to paving.
- The DOT continued agreements with eleven outside public agencies and five County Departments for vehicle refueling at our facilities. Doing so reduced overall municipal and public agency costs and eliminated the need for construction of new fueling facilities.
- The Department continued to provide technical services to the various towns and villages in the County relative to the maintenance of their roads and bridges. The Department also makes all of its commodity bids available to the municipalities for their use and has modified those bids to accommodate the towns' and villages' needs. Of particular note is a cooperative effort between the Town of Onondaga and Onondaga County DOT regarding a stream reestablishment project in an attempt to reduce flooding issues for residents along Kasson Road. This department prepared and obtained the necessary NYS DEC permitting and provided the engineering necessary for Town of Onondaga forces to perform the necessary work.

In the face of challenging economic realities, the Department of Transportation is constantly striving to find new and creative ways to do more with less. Attempting to do things differently has required change in our approach and our methods to accomplish our departmental mission. With any change comes a certain degree of uncertainty and apprehension. I am extremely proud of the DOT staff for their willingness to go beyond what has been expected of them in the past and find new ways to perform their day to day responsibilities.

Brian J. Donnelly  
Commissioner

## **ADMINISTRATION**

The Administration section of the Department of Transportation provides many critical services to the Department.

- Payroll and Personnel (also performs these functions for the Division of Emergency Management)
- Service requests
- Accounts payable and receivable
- Cost accounting
- Recruitment and interviewing of candidates for jobs
- Preparation and management of the annual budget
- Produces reports requested by management
- Application of progressive discipline
- Purchasing
- Safety training
- Personal injury and motor vehicle accident review

The managerial staff continues to refine the way the Department operates. The intent is to continue to perform at the highest level while reducing costs.

## **SAFETY PROGRAM**

The Department of Transportation is involved in a number of safety related programs. These programs are updated with new information whenever possible. The Department's Safety Training Instructor administers many of these programs.

Departmental personnel are required to attend a number of safety training courses each year. The Safety Training Instructor, and DOT employees who have been trained as instructors, teach CPR, First Aid, Work Zone Safety, Defensive Driving and Fork Lift Operator. Still, others are taught by industry trainers. For example, this year 120 DOT employees were trained in chainsaw safety and tree felling by Bill Lindloff's ProCuts. We also administered our own One Person Plowing training program in 2009, certifying 55 operators for the 2009/2010 snow season.

The Department administers a drug and alcohol testing program. This program complies with Federal Department of Transportation regulations. The policy applies to all employees who possess a commercial driver's license (CDL) and who operate motor vehicles requiring a CDL for the Department. In 2009, approximately 150 employees were in the Department's drug and alcohol testing program.

Prior to each construction season, the Department hires temporary employees to assist our full time employees. These temporary employees are trained in safety prior to reporting to work. Subjects such as proper flagging procedures, proper use of personal protective equipment, hazard communication, harassment, and proper interaction with the public are presented.

In the spring and again in the fall, we hold labor crew leader (LCL) meetings. These meetings concentrate on refocusing the minds of our leaders in the field to the upcoming season. The spring meeting aims to get our LCL's thinking about road work projects and related issues. Discussions are held about properly setting up a work zone, what should be covered in the daily "tailgate" meeting, first aid and any number of other subjects. The fall meeting gets our leadership back into the snowplowing mode. Our employees attend a snowplow seminar every year prior to the winter season to refresh them on safety practices. Safely changing steel and checking tires and wheels several times per day are some of the subjects covered.

With the assistance of the County's Loss Control Director, we review all of the DOT's personal injury reports to isolate problems and mitigate solutions. This has proved to be invaluable to the Department and have assisted in reducing the Department's lost time injuries.

The Department has continued to train employees on the National Incident Management System. This training prepares the Department to properly deal with catastrophic events whether natural or man-made.

# **HIGHWAY CONSTRUCTION AND RECONSTRUCTION PROGRAM**

In 2009, the Department of Transportation successfully conducted construction and reconstruction on the following County highways:

<b>Official Name</b>	<b>Common Name</b>	<b>County Road Number</b>	<b>Contractor</b>	<b>Town</b>	<b>Number of Lanes</b>	<b>Length of Project (mi.)</b>
Bellevue Avenue Extension - Reconstruction	Bellevue Avenue	101	Lan-Co	Onondaga	2	0.6
Taft Settlement Part II Reconstruction	East Taft Road	19	Barrett Paving	Clay/Cicero	4	2.97

The responsibility of the Department of Transportation in the above projects entailed conducting or overseeing all preliminary surveys, environmental studies, preparation of complete and detailed construction plans, right-of-way, maps, cost estimates, negotiations and acquisition of right-of-way, coordination of utility relocations, construction stakeout and inspection of force account work, and supervision of consultant inspection on contract work. Projects constructed by the Department of Transportation forces included all excavation, drainage, sub-base installation, paving and restoration work.

Each of the above projects presented its own special and unique planning, design and construction problems that were dealt with in a practical and economical manner by the Department's staff. The following is a brief overview of these projects:

## **Bellevue Avenue Extension (Bellevue Avenue), C.R. No. 101, Reconstruction**

The Bellevue Avenue Extension Reconstruction project improved the County Route 101 corridor from most westerly end of Bellevue Avenue at Onondaga Boulevard to the intersection with Bellevue Avenue on the easterly end with Onondaga Boulevard. This project encompassed approximately 0.6 miles of highway. One county bridge within this corridor was rehabilitated in 2003. The intersections of Bellevue Avenue at the east end with Onondaga Boulevard and Onondaga Boulevard and the West Hill High School Bus exit were improved for safety reasons with new coordinated traffic signals.

The highway had consisted of distressed pavement structure, inadequate shoulders, inadequate guide rails, inadequate drainage facilities and intersection safety concerns. Improvements included: new pavement, widened shoulders, enclosed drainage facilities, new guide rail, and signalization. Coordination was achieved with Centro towards providing a bus pull-off area and the area was aesthetically enhanced.

The field survey was completed in 2007 and final design was completed in the spring of 2009. The contract was let in June of 2009 and awarded to Lan-Co Companies from North Syracuse, New York. Lan-Co began construction activities in July of 2009. Utility work had begun earlier in anticipation of the road construction. The contract was completed in December 2009 for a total of \$1.4 million.

## **East Taft Road, C.R. 19 South Bay Road to Northern Boulevard**

Located in the Towns of Clay and Cicero, this project was initiated in 2004 to address a deteriorating pavement and an accident rate which exceeds the statewide average for this type of facility. The preliminary scope of the project included a two course asphalt overlay through the entire project area and the addition of a shared two-way left turn lane from South Bay Road to the Church Street Intersection. A realignment and new three color traffic signal are being added to the Church Street/Kreisler Road intersection.

The current schedule provides for construction to be completed in 2010. The low bid for this project, including inspection, is \$8,434,943.

This project is being constructed as part of the American Recovery and Reinvestment Act (ARRA) and is funded with 100% Federal Dollars.

## **BRIDGES**

During 2009, the Department of Transportation designed and reconstructed the following bridges:

**Vincent Corners Road over the West Branch of Tioughnioga River, County Bridge C-153**- is located on Vincent Corners Road, C.R. No. 178 in the Town of Fabius. This bridge was built in 1935 by County Forces. The original 15'x 5' Structure had a poor condition rating based on biannual County inspections. The existing structure was deteriorated beyond the point of rehabilitation and was replaced with a 16'x 5' precast concrete box culvert. Cast in place wing walls were utilized. The road side shoulders were widened and an improved guide rail system was installed. All work was completed in 2009 by County Forces.

**Halfway Road over Carpenters Brook, County Bridge C-249**- is located on Halfway Road, C.R. No. 107 in the Town of Elbridge. The existing 5'x 4' concrete box culvert was built around 1900. The structure failed causing a shoulder closure in November of 2008. The structure was replaced with a 103" x 71" aluminized steel pipe arch. Cast in place concrete cutoff and headwalls were constructed to provide bank stabilization. The structure was lengthened allowing widened shoulders. An improved guide rail system was installed both at the structure and approaches. All work was completed in 2009 by County forces.

**Pompey Center Road over Limestone Creek, County Bridge C-65**- is located on Pompey Center Road, C.R. No. 11 in the Town of Pompey. This bridge was built in 1923 and widened in 1961. The structure's poor condition dictated replacement. A 9'x 5' precast concrete box culvert was installed. Cast in place concrete wingwalls were installed on the upstream end to accommodate stream alignment. An improved guide rail system was installed. The design was completed by consultant with construction by contract forces in 2009.

**Apulia Road over a Tributary to Butternut Creek, County Bridge C-36** - is located on Apulia Road, C.R. No. 1, at the intersection of Weller Road, in the Town of LaFayette. This bridge was built in 1913 and widened in 1954. The existing 8' x 6' concrete structure was deteriorated beyond the point of rehabilitation and required replacement. An 8' x 7' precast concrete box culvert was installed with an improved guide rail system. The stream was realigned to allow for better hydraulic performance. The design was completed by consultant with construction by contract forces in 2009.

**Apulia Road over a Butternut Creek Tributary, County Bridge C-38** - is located on Apulia Road, C.R. No. 1, at the intersection of Colton Road, in the Town of LaFayette. This bridge was built in 1913 and widened with pipe in 1954. The existing 8' x 5' concrete structure and pipe extensions were in poor condition and required replacement. A 9' x 5' precast concrete box culvert was installed with an improved guide rail system. The design was completed by consultant with construction by contract forces in 2009.

**Hosman Road over the North branch of Ley Creek, County Bridge C-222** – is located on Hosman Road C.R. 71 (East Molloy Road) in the Town of Dewitt. The existing double 117" x 79" corrugated steel pipe arch structure was built in 1981. The structure was yellow flagged by New York State DOT due to rust in the invert area of the pipes. The structure was slip lined with aluminized steel pipes and the angular space between the old and new pipes were filled with grout. This avoided disruption to the public as traffic was not affected by the rehabilitation of the structure. The design was completed by consultant with construction by contract forces in 2009.

**Costello Parkway over CSX, County Bridge C-904** – is located on Costello Parkway C.R. 55 over CSX Railroad in the Town of Manlius. The existing 3 span bridge has a low condition rating and requires a rehabilitation project. The bridge joints shall be replaced with concrete repairs to be made to the piers and abutments. Minor steel repairs are required. The steel shall be painted. The design shall be completed by consultant with 2011 construction by contract forces anticipated.

**County Bridge Repair and Stream Cleaning** – was accomplished on various structures as required for maintenance purposes and to support the hot mix and cold mix paving programs:

- Lemoyne Ave. over Ley Creek– sidewalk repair
- Brooklea Drive over Limestone Creek – concrete repair to abutment wall
- John Glenn Boulevard over Onondaga Lake Outlet – joint repair
- Chatfield Road – stream cleaning - concrete curb replacement



## **LOCALLY ADMINISTERED FEDERALLY FUNDED BRIDGE PROJECTS**

### **Camillus – Warners Road over the Finger Lakes Railroad County Bridge C-173, PIN 375424 BIN 3093940**

– is located in the Town of Camillus on Warners Road (Route 173), C.R. No. 63 over the Finger Lakes Railroad. This bridge was built in 1975 as part of the construction of New York State’s Route 695. Design plans called for the replacement of the existing concrete deck and approach slabs, with concrete repairs to the piers and abutments. The Guiderail system was upgraded to meet current design standards. The design was completed in 2008 by consultant. The construction was undertaken by contract forces in 2009. All work has been completed with the exception of painting the steel beams which will be completed in the spring of 2010.

This project is a “LOCALLY ADMINISTERED FEDERAL AID PROJECT” with a financial cost breakdown of 80% Federal, 15% State, 5% County.

**Bridge Painting on Various Bridges PIN 375469** - Shall be performed on two bridges jointly owned by Onondaga County and Oswego County. BIN 4027420 - Route 57 C.R. 91, County Bridge C-237 over the Oneida River and BIN 3367540 and Lamson Road C.R. 29, County bridge C-42 over the Oswego River. Both structures have low paint ratings. Design plans call for cleaning the steel, removing the deteriorated paint and coating the steel with new paint. A consultant was selected in 2009 with design to be completed in the spring of 2010. Construction shall be undertaken by contract forces.

This project is a “LOCALLY ADMINISTERED FEDERAL AID PROJECT” with a financial cost breakdown of 80% Federal, 15% State, 5% County.

## **HIGHWAY DESIGN PROJECTS**

Official Name	Common Name	County Road Number	Town	Proposed Number of Traffic Lanes	Length of Project (mi.)
Syracuse-DeWitt Road	North Street	6	DeWitt	2	0.87
DeWitt-Cicero Road, Part II	Thompson Road	14	Cicero	3	1.68
Salina-Clay to Oak Orchard	Morgan Road	46	Clay	2/3	0.53
<b>Locally Administered Federally Funded Highway Projects</b>					
Taft Settlement Rd. Part II	Taft Road	19	Clay/Cicero	4/5	2.00
Velasko Road	(same)	130	Onondaga	2	1.00
Factory Avenue at LeMoyne Avenue	(same)	93/219	Salina	3/4	0.57
Orville-Jamesville Road	Jamesville Road	7	DeWitt	2	1.57
Morgan Road and Liverpool Bypass	Morgan Road and Liverpool Bypass	47 & 88	Salina and Clay	2/4	1.80

### **Syracuse – DeWitt Road, C.R. No. 6 (North Street in Jamesville)**

This project, in the Town of DeWitt, begins at NYS Route 173 in Jamesville and proceeds 1.4 kilometers northerly to the intersection of Rock Cut Road. Traffic counts performed in 2006 indicated 10,094 vehicles using North Street on an average day.

The highway currently consists of pavement structure, shoulder width and drainage facilities that are unable to handle both current and future vehicular demands. Slope failures along North Street adjacent to Butternut Creek and in the area of the intersection of Lime Kiln Road need to be corrected through the use of slope stabilization and/or retaining walls.

Improvements are proposed using 100% Onondaga County funds and include the reconstruction of the mainline to meet the needs of a design year defined as the Estimated Time of Completion plus 20 years (ETC+20) and will include all necessary pavement, shoulders, related drainage and slope stabilization/retaining walls. Intersection improvements at NYS Route 173 and Rock Cut Road are NOT anticipated. Major improvements/renovations are NOT anticipated to the railroad bridge over North Street located immediately south of Rock Cut Road. Design was begun in 2006 and progressed through 2009 with a 2010 Construction letting expected. Design is being coordinated closely with the Town of DeWitt to accommodate new sanitary sewer and potable water systems needed by the Town.

### **DeWitt - Cicero Road, Part II, C.R. No. 14 (Thompson Road)**

This project in the Town of Cicero begins at the intersection of Northern Boulevard Island Road and Thompson Road and continues north through the South Bay Road intersection to NYS Rt. 31 being approximately 1.68 miles in length.

The highway currently consists of distressed pavement structure, insufficient shoulder width, inadequate drainage facilities and intersection characteristics which are unable to safely handle the current and forecast traffic demands.

Improvements are proposed which will include all necessary pavement, shoulders, and drainage facilities. A 6.5' x 14' box culvert on South Bay Road just north of the Thompson Road intersection will also be replaced under this contract. Intersection improvements at South Bay Road will be made based on traffic forecast demands for the next 20 years. Survey was completed and Design began in 2009 with an anticipated construction start of summer 2010. The Legislature previously authorized \$2,675,000 for design and partial construction phases for this project.

### **Salina-Clay to Oak Orchard, C.R. No. 46 (Morgan Road)**

This project in the Town of Clay begins 200 feet south of Waterhouse Road on Morgan Road and continues north through Fairways Drive East being approximately 0.53 miles in length. The work is being done as an intersection safety and capacity improvement. Turn lanes will be added to the north and south bound movements at the intersection with Fairways Drive East and Morgan Road along with a new traffic signal and a south bound turn lane will be constructed at the intersection with Waterhouse Road. Signal design and timings were performed to meet forecast traffic demands for the next 20 years.

Improvements are proposed which will include all necessary pavement, shoulders, drainage facilities, signage, striping and new signal. The Legislature previously authorized \$800,000 for design and construction phases for this project.

## **LOCALLY ADMINISTERED FEDERALLY FUNDED HIGHWAY PROJECTS**

A policy change by the N.Y.S. Department of Transportation mandates that any projects funded by federal funds and matched by state funds be administered by the sponsoring locality. This change will require the Department of Transportation to utilize our staff to see these projects through from scoping to post construction audit. Projects under design in 2009 include:

### **Taft Settlement Road Part II (East Taft Road), C.R. No. 19, South Bay Road to Northern Boulevard**

This project was initiated in 2004 to address a deteriorating pavement and an accident rate that exceeds the statewide average for this type of facility. The preliminary scope of the project includes a two-course asphalt overlay through the entire project area and the addition of a two-way left turn lane from South Bay Road to the I-81 overpass. Further studies indicated the fifth lane should be extended farther to the east to a relocated and signalized Kreisler Road. In connection with that relocation, access to Taft Road directly from Church Street will be eliminated with the construction of a cul-de-sac.

The design was completed for an anticipated contract letting in the spring of 2009 and construction was begun in June of 2009 with completion by the end of 2010. The preliminary construction estimate for this project was \$10,000,000 with the low bid being opened at \$8,434,943, including inspection. This project design was a "LOCALLY ADMINISTERED FEDERALLY FUNDED PROJECT" with a financial cost breakdown of 80% Federal and 20% County. The Construction Phase of the project was approved for ARRA (American Recovery and Reinvestment Act) funds in 2009 and will be funded with 100% Federal funds.

### **Velasko Road, C.R. No. 130, NYS Rt 173 to the City of Syracuse Line**

This project was initiated to address a deteriorating pavement and an accident rate that exceeds the statewide average for this type of facility. The preliminary scope of the project includes a two-course asphalt overlay through the entire project area and the enclosure of existing deep open ditches. Additional dedicated turning lanes and a new three-color signal will be installed at the McDonald Road intersection. Storm water controls, requiring the purchase of right of way, will be installed at Furnace Brook.

The current schedule provides for design and the purchase of right of way to be completed in 2010 with a construction letting anticipated for late in the year. The preliminary construction estimate for this project is approximately \$2,500,000. This project is a "LOCALLY ADMINISTERED FEDERALLY FUNDED PROJECT" with a financial cost breakdown of 80% Federal, 15% State, 5% County.

### **Factory Avenue, C.R. No. 93 at LeMoyne Avenue, C.R. No. 219 Intersection Safety Project**

This project, in the Town of Salina, will improve capacity, mobility and safety at the intersection. Improvements are proposed which will include all necessary pavement, shoulders, and drainage facilities. The intersection is currently experiencing an accident rate exceeding the statewide average and studies will be conducted to determine if the need for turning lanes is warranted. Intersection improvements will be made based on traffic forecasts. Survey and preliminary design began in 2008.

This project will be a "LOCALLY ADMINISTERED FEDERAL AID PROJECT" with a financial cost breakdown for Construction of 80% Federal, 15% State, 5% County.

### **Orville-Jamesville Road (Jamesville Road), C.R. No. 7 Roadway Resurfacing Project**

This is pavement improvement project, in the Town of DeWitt, is being undertaken to maintain pavement condition and correct typical aged roadway deficiencies that include longitudinal and transverse cracking and minor roadway surface drainage. Guiderail, signage and striping will also be updated to current standards within this project. Survey and preliminary design began in 2009. Anticipated construction will take place summer 2010.

This project will be a "LOCALLY ADMINISTERED FEDERAL AID PROJECT" with a financial cost breakdown for Construction of 80% Federal and 20% County.

### **Morgan Road, C.R. No. 47 and Liverpool Bypass, C.R. No. 88 Rehabilitation Project**

This project was developed to rehabilitate approximately 1.8 miles of existing pavement on Morgan Road, (C.R. No. 47) between the southerly end of the Morgan Road Bridge over the NYS Thruway and Buckley Road and 0.5 mile on the Liverpool Bypass, (C.R. No. 88) from Route 57 (C.R. No. 91) to Morgan Road. The project provides for a new asphalt overlay, shoulder backup, full depth pavement and shoulder repairs, new signs, striping, guide rail upgrades, and drainage facilities repair. Survey and preliminary design began in 2009. A 2010 letting is expected.

This project will be a "LOCALLY ADMINISTERED FEDERAL AID PROJECT" with a financial cost breakdown for Construction of 80% Federal and 20% County.

# **SURVEY ACTIVITIES**

The Department of Transportation utilizes a number of its engineering staff as survey technicians, who are supervised by a licensed Land Surveyor. The survey group conducts field surveys and produces base maps for a wide variety of projects undertaken by the Department each year. Typical projects include right of way surveys and mapping, highway surveys and mapping for road reconstruction, bridge survey and mapping for bridge reconstruction, drainage improvement surveys for County roads and boundary surveys for County property.

In addition the survey staff engages in projects for other County Departments as well as towns and villages throughout Onondaga County.

A list of projects that the surveyors worked on in the year 2009 follows:

## **DEPARTMENT OF TRANSPORTATION SURVEY PROJECTS**

### **Halfway Road Bridge C-249**

Construction layout for bridge replacement project.

### **Vincent Corners Road Bridge C-153**

Construction layout for bridge replacement project.

### **Hitchings Road Bridge C-101**

Design survey and base mapping for bridge reconstruction project.

### **Onondaga Boulevard Bridge C-62A**

Design survey and base mapping for bridge rehabilitation project.

### **North Burdick Street Bridge C-911**

Design survey for bridge rehabilitation project

### **Caughdenov Road Bridge C-16**

Design survey for bridge rehabilitation project

### **Mud Mill Road Bridge C-202**

Design survey and base mapping for bridge replacement project.

### **Bellevue Ave.**

Stake HCL, stake traffic signal pole locations, locate utilities for highway reconstruction project

### **Morgan Road and Fairway Drive East**

Complete base mapping for traffic improvement project, Signal pole layout.

### **Lamson Road and Plainville Road**

Construction layout for drainage project.

### **W. Dead Creek Rd @ Kingdom and Gunbarrel Rd**

Design survey and base mapping for intersection improvement.

### **Fenner Road**

Drainage survey and base mapping.

### **Jordon Road @ Skaneateles Village Line**

Drainage survey and base mapping.

### **Frank Gay Road**

Drainage survey and base mapping.

**Warners Road**

Drainage survey and base mapping.

**James Street and Kinne Street**

Design survey and base mapping for intersection improvement.

**North Street-Jamesville**

Locate utilities for road reconstruction project

**Thompson Road**

Locate utilities for road reconstruction project

**Grand Ave. and Fay Road**

Prepare survey map and deed description of proposed 2.8 acre conveyance to Town of Geddes.

**Salt Volumes**

Measure & determine volumes of County stockpiles of salt and sand.

**INTER-DEPARTMENTAL SURVEY PROJECTS**

**P&C Stadium Survey**

Research records, supply Law Department with boundary survey map. Assist with boundary description.

**Spafford Forrest**

Assist Law Department with deed preparation for proposed conveyance. Carusso to Onondaga County. Spafford Forrest annex.

**GEOGRAPHIC INFORMATION SYSTEM (GIS) ACTIVITIES**

The Department of Transportation is now utilizing ESRI ArcInfo GIS software. This software package, along with a handheld Trimble GPS unit, has been a valuable asset to the department this year. With these tools, the department has created interactive maps and databases based on a world coordinate system. These maps and databases enable the department to manage, maintain and utilize our facilities through a cost effective and efficient process.

A list of projects that have been completed in the year 2009 is as follows:

**Bridge Inventory Map:** The interactive map shows all of the bridges owned and maintained by Onondaga County. Each bridge has data, reports and pictures hyperlinked to it.

**Snow Plow Route Maps:** The interactive map shows all of Onondaga County Department of Transportation snow plow routes with hyperlinked data concerning individual routes.

**County Maintained Traffic Signal Map:** The interactive map shows all of the County Maintained Traffic Signals with hyperlinks to individual signals.

**Stormwater Maps:** The New York State Department of Environmental Conservation has imposed stormwater regulations that apply to all County Transportation departments. To comply, Onondaga County DOT has utilized GIS mapping and a handheld Trimble GPS unit. The Department is currently undertaking the following mandated projects:

- **Storm Sewershed Mapping:** A map showing boundaries of all of Onondaga County DOT stormsewer sheds and outfalls within the Syracuse Urban Area (MS4).
- **Stormwater Management Facility Inventory:** An interactive map showing an established and maintained inventory of post-construction storm water management practices – discharging to the MS4 – that have been installed since March 10, 2003. This will include: location, type of practice, inspection logs, check list, maintenance needed per the NYS Stormwater Management Design Manual, SWPPP and dates and type of maintenance performed.
- **Catch Basin Inventory Map:** An interactive map showing catch basins (storm drainage structures) owned by the Onondaga County DOT with hyperlinks to all structures. To date, 930 of over 2800 structures have been mapped.

## **RIGHT OF WAY**

The Department of Transportation is responsible for negotiating right of entry and release of damage agreements, temporary occupancy agreements, permanent and temporary easements, and all rights of way required by the Department for highway purposes. Due to attrition, the department no longer employs a right of way agent. Instead, the Department utilizes outside consultants on a project by project basis to acquire the necessary rights of way.

Activities undertaken by Department employees include:

- ✓ Identifying all properties to be sold at Tax Auction that are located on county roads and requesting that the Division of Finance Real Property reserve additional right of way for future highway improvements from all parcels sold.
- ✓ Presenting all right-of-way resolutions to both the Facilities and Ways and Means Committees for approval prior to presentation to the full session of the Onondaga County Legislature.

## 2009 CRACK SEALING

Crack sealing is a process by the Department of Transportation to retard the deterioration of the pavement. Each crack is cleared of debris with compressed air. An asphalt solution is then poured into the crack. This helps to prevent moisture, which would expand and contract thus harming the pavement, from working its way into the pavement. The Department, as part of our pavement preservation initiative, for the second year (2009) in a row, has increased the amount of crack sealing done by approximately twice the normal.

Following is a list of the roads that were crack sealed during the past year:

<b><u>Section I</u></b>	<b><u>Miles</u></b>	<b><u>Gallons</u></b>
Apulia Road C.R. 1 (NYS Rt. 20 to Palladino Road)	5.00	2817
Henneberry Road C.R. 182 (NYS Rt.173 to 200' south of Broadfield Road)	1.24	671
Lake Road C.R. 134 (Interstate Rt. 81 onramp to . Long Road)	2.64	683
Pompey Center Road C.R.11(NYS Rt. 20 South to .5 miles south of No. 5 Road)	3.78	1881
Sweet Road C.R. 109 (Broadfield Rd. to Gates Rd. & Pratts Falls Rd. to NYS Rt. 91)	3.43	1405
Academy Street C.R. 170 (Henneberry Rd. to NYS Rt.91)	0.49	267
DeRuyter Road C.R.12 (Dam Rd. to County Line )	0.98	391
Oran Delphi Road C.R. 5 (NYS Rt.92 to 0.5 miles South of No. 2 Rd.)	2.61	1052
<b><u>Section I Totals</u></b>	<b>20.17</b>	<b>0167</b>
<b><u>Section II</u></b>		
Bear Road C.R. 191( W. Taft Rd. to Buckley Rd.)	1.67	926
Caughdenoy Road C.R. 49 (Maple Rd. to NYS Rt.31)	1.89	1283
W.Taft Road C.R. 48 (NYS Rt.11 to Allen Rd. )	3.20	665
Exeter Street C.R. 181 (Thompson Rd. to Kinne St.)	1.27	287
Fremont Road C.R. 136 (seam north of Kirkville to Pine Grove Rd. )	1.19	646
Central Ave C.R. 245 (Fremont to 0.25 miles East)	0.27	81
Kirkville Road C.R. 53 (Fly Rd. to Fremont Rd. )	2.53	806
Old Route 57 C.R. 91 (Tulip St. to Meyers Rd.)	1.63	435
<b><u>Section II Total</u></b>	<b>13.65</b>	<b>5129</b>
<b><u>Section III</u></b>		
<b>PRE-PAVING</b>		
Old Route 31 C.R. 84 (NYS Rt. 31 to River Rd.)	1.90	1611
<b><u>Section III Totals</u></b>	<b>1.90</b>	<b>1611</b>
<b><u>Section IV</u></b>		
No Crack Sealing Done In This Section		
<b><u>Section IV Totals</u></b>	<b>-</b>	<b>-</b>
<b><u>SUMMARY</u></b>		
<b>SECTION I</b>	<b>20.17</b>	<b>9167</b>
<b>SECTION II</b>	<b>13.65</b>	<b>5129</b>
<b>SECTION III</b>	<b>1.90</b>	<b>1611</b>
<b>SECTION IV</b>	<b>-</b>	<b>-</b>
<b><u>TOTAL</u></b>	<b>35.72</b>	<b>15907</b>

## 2009 ASPHALT CONCRETE (PAVING) PROGRAM

In order to extend the life of a roadway, the Department of Transportation has determined that it is cost effective to periodically replace the wearing surface of its highways. This process waterproofs the road sub-base and provides additional skid resistance. Many of the roads that undergo this process are first trued and leveled to restore a proper crown. The shoulders on all roads that receive resurfacing are stabilized with asphalt concrete. Beginning in 2007 and continued in 2008 and 2009 the Department increased the use of "Pavement Preservation Techniques". These are lower cost initiatives whose goals are to prolong the life cycle of the highways. The idea of this program is to keep the highways which are presently in "good" condition in the same condition. In other words, keep the good roads good. Also in 2008 and continued in 2009 the Department tested "Low Energy Asphalt" products on two projects. This product, also known as "warm asphalt", is produced at much lower temperatures than conventional asphalt products. This process significantly lowers the volatiles released into the environment during production providing environmental benefits.

In 2008 the Department entered into an agreement with the City of Syracuse to purchase Hot Mix Bituminous Asphalt from the city's recently updated asphalt plant. This agreement benefits both parties in that the asphalt plant runs more efficiently with higher output thereby saving the City money and allowing a lower price per ton cost. This agreed upon price from the City was lower than that of our private vendor's which in turn saved money for this department. As part of the agreement, the DOT once again tested using recycled asphalt product as part if the Bituminous Asphalt as an economic and environmental initiative.

On a yearly basis the Department is required to plane off the riding surface of the highway (mill the road) before repaving. This is necessary for any number of reasons including the need to preserve curb reveal, to preserve existing closed drainage systems and the presence of very steep driveways. These projects are denoted as "Mill and Inlay" on the paving lists. The Department routinely reuses the millings for the reconstruction of driveways and shoulders and as subbase material in construction projects. In 2009 the Department found itself with a surplus of millings and for the first time sold the material on the Purchasing Department's auction site. The proceeds were then returned to the Department to offset the cost of the milling operations.

Following is a list of roads that received Hot Mix Asphalt treatment in 2009:

Road	C.R. No.	Location	Pavement Width (Feet)	Shoulder Width** (Feet)	Centerline Miles	Two Lane Equivalent Miles
<b>Section 1</b>						
1a	3	NYS Route 80 North to Railroad Bridge	22	4	2.08	<b>2.08</b>
***	6	City of Syracuse Line to Railroad Bridge (Nova Chip)	varies	8	2.94	<b>1.47</b>
1c	174	Kennedy Road to Smith Avenue (Mill and Inlay)	22	4	0.56	<b>0.56</b>
***	132	At North Eagle Village Road (Micro Pave)	22	6	0.47	<b>0.24</b>
1e	9	NYS Route 173 to Broadfield Road (Removed Crown)	22	4	1.07	<b>1.07</b>
<b>Section Total</b>					<b>7.12</b>	<b>5.42</b>
<b>Section 2</b>						
Electronics						
2a	148	Old Liverpool Road to Seventh North Street	48	8	0.63	<b>1.35</b>
2b	93	Townline Limits to 1999 Limits	24	8	0.53	<b>0.71</b>
Franklin Park						
2c	181	Kinne Street to Kirkville Road (Mill and Inlay)	22	8	1.14	<b>1.52</b>
2d	214	Northern Boulevard to Ferguson Road (Mill off Cold Mix)	21	2	2.56	<b>2.38</b>
^^^	87	US Route 11 to Florida Drive (Mill and Inlay)	24	6	0.66	<b>1.33</b>
^^^	46	Railroad Tracks to NYS Route 481	22	6	0.66	<b>0.80</b>
2g	46	NYS Route 481 to NYS Route 31	22	6	1.05	<b>1.26</b>
2h	46	Wetzel Road to the Railroad Tracks	22	6	0.29	<b>0.46</b>
^^^	New Venture Gear Drive		48	8	1.06	<b>2.82</b>
20%	North Kirkville Road		22	4	0.70	<b>1.05</b>
***	53	Barge Canal Bridge to NYS Route 290 (City Asphalt)	22	4	1.42	<b>2.08</b>
2l	91	Gaskin Road North to NYS Route 31 (Fiber & 1 1/2")	varies	varies	0.52	<b>0.83</b>
2m	96	Burning Tree to NYS Route 481 (Mill and Inlay)	22	8	0.30	<b>0.95</b>
2m	48	at North Syracuse District Offices (Route 11)	varies	0	0.30	<b>0.95</b>
<b>Section Total</b>					<b>11.52</b>	<b>17.54</b>



<b>Section 3</b>							
3a	Belle Isle Road	102	Warners Road to Thomas Avenue	22	8	0.81	<b>0.81</b>
3b	Gerelock Road	220	Thomas Avenue to Horan Road (Mill and Fill)	22	8	0.28	<b>0.51</b>
***	Milton Avenue	190	Knowell Road To Village of Camillus Line (1 ½" Overlay)	22	8	1.37	<b>0.93</b>
3d	River Road	37	Potter Road to Old Lamson Road	22	4	1.74	<b>1.74</b>
3e	Thomas Avenue	97	Belle Isle Road to 90 degree curve	22	6	0.66	<b>0.75</b>
3f	Warners Road	64	Brickyard Road to 1000' West of West Sorrell Hill Road	22	6	0.94	<b>1.06</b>
<b>Section Total</b>						<b>5.80</b>	<b>5.80</b>
<b>Section 4</b>							
***	Bishop Hill Road	211	Lee Mulroy Road to US Route 20 (Nova Chip)	22	4	1.25	<b>0.63</b>
4b	Kasson Road	179	Howlett Hill Road to 1.1 Miles South	22	4	1.10	<b>1.00</b>
	Limeledge Road						<b>0.55</b>
4c	Repair	236	1500' N & S of Saunders Quarry Entrance (Mill and Inlay)	22	6	1.70	
***	Makyes Road	129	NYS Route 175 to Tucker Road (Nova Chip)	22	4	1.70	<b>1.02</b>
***	Makyes Road	129	Tucker Road to Young Road (Micro Pave)	22	4	1.61	<b>0.97</b>
***	Munro Road	206	Howlett Hill Road to Old Route 5 (Nova Chip)	22	6	1.73	<b>0.87</b>
4f	Oak Hill Road	23	Otisco Valley Road to Patterson Road	22	4	0.86	<b>0.85</b>
%%%	Otisco Valley						
%%%	Road	24	County Line to Bromley Road – Northbound Lane	22	4	0.90	<b>0.90</b>
***	Rose Hill Road	211	Route 20 to Coon Hill Road (Micro Pave)	22	4	0.94	<b>0.47</b>
%%%	Slate Hill Road	150	Rockwell Road to Seal Road (Northbound Lane)	22	4	1.50	<b>1.98</b>
<b>Section Total</b>						<b>13.29</b>	<b>9.24</b>
<b>County Total</b>						<b>37.73</b>	<b>38.00</b>

\*\*\* Pavement Preservation Program

^^^ - Funded in 2009 to be Paved in 2010

%%% - Low Energy Asphalt utilized on a test basis for reduced emissions

XX% - the percentage of Recycled Asphalt Product included in Hot Mix Bituminous purchased from the City of Syracuse

## 2009 BITUMINOUS SURFACE TREATMENT

The annual bituminous surface treatment program is designed to preserve and extend the life of pavement on the County's low volume highway system. The intent is to treat eligible highways on a five-year rotation basis. Following is a list of roads that received this treatment in the past year:

### Onondaga County Department of Transportation 2009 Bituminous Surface Treatment List

Road	C.R. No.	Location	Centerline Miles
<b>Section 1</b>			
1a	1	Apulia Road to 0.72 miles South (Dead End)	0.72
1b	182	Broadfield Road to Burke Road	1.84
1c	169	Peck Hill Road to NYS Route 173	1.8
1d	232	LaFayette Road to Eager Road	0.65
<b>Section Total</b>			<b>5.01</b>
<b>Section 2</b>			
2a	199	Maider Road East 1.07 Mile	1.07
2b	147	South Bay Road to NYS Route 31	0.55
<b>Section Total</b>			<b>1.62</b>
<b>Section 3</b>			
3a	165	Stevens Road to Old Route 31 NYS Route 31 to Beaver Lake County Park	1.00
3b	180	East Mud Lake Road Entrance	1.20
3c	153	East Sorrell Hill Road Ellsworth Road to NYS Route 690 On-Ramp	1.03
3d	60	Peru Road Village of Jordan Line to 1.60 miles East	1.60
3e	195	West Sorrel Hill Road Warners Road to Conners Road	2.10
<b>Section Total</b>			<b>6.93</b>
<b>Section 4</b>			
4a	201	Cole Road Makyes Road to Griffin Road	1.30
4b	27	Coon Hill Road Rose Hill Road to NYS Route 41	2.78
4c	248	Falls Road Frank Gay Road to North East Town Line Road	1.06
4d	236	Gypsy Road Old Seneca Turnpike to New Seneca Turnpike	0.32
4e	176A	North West Town Line Road Old Seneca Turnpike to Shepard Road	1.98
4f	244	Shepard Road Stump Road to Limeledge Road	1.48
4g	238	Solvay Road Tully Farms Road to NYS Route 11A	0.47
4h	184	Tanner Road Amber Road to Cedarvale Road	1.91
<b>Section Total</b>			<b>11.30</b>

**COLD MIX ROADS**

1a	Broadfield Road	250	Gates Road to Sweet Road	0.58
1b	Cemetery Road	170	US Route 20 to No. 4 West Road	0.88
^^	Meeting House Road	134	US Route 11 to NYS Route 281	0.80
1d	Old Coye Road	144	Coye Road to LaFayette Road	0.19
1e	Pratts Falls Road	218	NYS Route 91 to Sweet Road	0.82
1f	Ridge Road	128	Number 5 West Road South to Bumpus Road	1.35
1g	Watervale Road	9	Number 2 West Road to Gates Road	0.86
2a	Maiden Road	160	Bonstead Road to NYS Route 481	0.76
3a	Church Road	192	Plainville Road 1.54 miles E to 2008 limits	2.54
3b	Fenner Road	127	Lamson Road to Onondaga County Line	1.20
3c	Old Route 31	84	NYS Route 31 to Laird Road (Fiber and 2")	1.50
4a	Masters Road	260	Rickard Road to Bishop Hill Road	1.29
4b	Stanton Road	104	NYS Route 41 to Becker Road	0.80
4c	Stanton Road	104	Becker Road to Churchill Road	0.87
4d	Tully Farms Road Repair	138	At the NYS Route 80 End	0.19
4e	Woodworth Road	263A	NYS Route 41 to Bacher Road	0.93
4f	Woodworth Road	263A	Nunnery Road to Bacher Road	1.08
			<b>Cold Mix Total</b>	<b>16.64</b>
			<b>County Total</b>	<b>41.50</b>

## 2009 COLD MIX BITUMINOUS PAVING

Included in the County's highway system are 375 miles of low volume highways. In 1980, in order to restore badly deteriorated highways, the Department instituted the Cold Mix Bituminous Paving Program. In order to be eligible for this program, a highway must have deteriorated to the point where less expensive rehabilitation strategies are ineffective.

Following are a list of roads that were paved with Cold Mix Bituminous Pavement in the past year.

### Onondaga County Department of Transportation 2009 Cold Mix Paving List

Road	C.R. No.	Location	Centerline Miles	Equivalent Miles
<b>Section 1</b>				
1a	250	Gates Road to Sweet Road	0.58	0.58
1b	170	US Route 20 to No. 4 West Road (Single Lift)	0.88	0.52
^^	134	US Route 11 to NYS Route 281	0.80	0.80
1d	144	Coye Road to LaFayette Road (Used Hot Mix)	0.19	0.15
1e	218	NYS Route 91 To Sweet Road (Single Lift)	0.82	0.41
1f	128	No. 5 West Road South to Bumpus Road	1.35	1.35
1g	9	No. 2 West Road to Gates Road (Single Lift)	0.86	0.51
<b>Section 2 Total</b>			<b>5.48</b>	<b>4.32</b>
<b>Section 2</b>				
2a	160	Bonstead Road to NYS Route 481	0.76	0.76
<b>Section 2 Total</b>			<b>0.76</b>	<b>0.76</b>
<b>Section 3</b>				
3a	192	Plainville Road 1.54 miles East to 2008 limits	2.54	2.54
3b	127	Lamson Road to Onondaga County Line	1.20	1.20
3c	84	NYS Route 31 to Laird Road (Fiber and 2'')	1.50	1.50
<b>Section 3 Total</b>			<b>5.24</b>	<b>5.24</b>
<b>Section 4</b>				
4a	260	Rickard Road to Bishop Hill Road (Single Lift)	1.29	0.75
4b	104	NYS Route 41 to Churchill	1.67	1.67
4c	104	Stanton Road to Willowdale Road	0.15	0.15
4d	138	At the NYS Route 80 End	0.19	0.25
4e	263A	NYS Route 41 to Nunnery Road	2.01	2.01
<b>Section 4 Total</b>			<b>5.16</b>	<b>5.16</b>
<b>Total County Miles</b>			<b>16.79</b>	<b>15.15</b>

^^^ - Funded in 2009 to be Paved in 2010

# **TRAFFIC PROGRAM**

The traffic program consists of three units: the signal unit, the sign unit and the striping unit. In addition to their traffic program related duties, employees also perform snow removal work.

Following is a description of each unit and their accomplishments over the past year:

## **Traffic Signal Crew**

The County of Onondaga owns and maintains traffic signals at 100 locations throughout the county, consisting of the following:

Full Actuated – 43  
Semi Actuated – 39  
Flashers – 18

The Traffic Signal Crew consists of three men who maintain, revise, answer service request calls and erect new signals. The operation of these signals is very complex and highly trained individuals are needed to maintain them.

The Traffic Signal Crew accomplished the following work in 2009:

## **Maintenance**

All signals are visited a minimum of two times per year for maintenance checks in order to insure the proper operation of the equipment.

A number of signal units were completely repainted both for maintenance and to improve their appearance.

There were a total of 175 service calls of which 24 were false calls and 16 were the result of storm damage and power outages. Of the 175 service calls, 43 occurred after normal working hours.

## **Majors Repairs:**

Factory Avenue intersection with LeMoyne Avenue – complete replacement of the traffic signal controller cabinet, installation of a new electrical service riser assembly and complete replacement of the overhead wiring.

## **New Installations:**

The Department installed four new three color, actuated traffic signals in 2009. New signals were installed at the intersections of Buckley Road at Wetzel Road and at Morgan Road at Fairways East Drive. As part of the Bellevue Avenue Reconstruction project, the intersections of Bellevue Avenue at the east end with Onondaga Boulevard and Onondaga Boulevard and the West Hill High School Bus exit were improved with two new coordinated traffic signals. A new “Bouncing Ball” Stop Ahead signal was installed on Howlett Hill Road east of Harris Road.

## **Minor Repairs:**

This department answered 103 service calls requiring minor repairs.

## **Miscellaneous Information**

1. The signal crew also assists with advance warning for detours due to bridge closures and lane closures for culvert and highway repairs.
2. Assists the striping crew in striping and layout of roadways.

The traffic signal crew assisted all four sections of the DOT where the use of the bucket truck was needed for tree work and building repairs and various other maintenance works.

## **Traffic Sign Crew**

The County has two, two-man sign crews that are responsible for approximately 800 miles of road. Their responsibilities include maintaining and erecting traffic signs, pavement markings and other various projects related to traffic control devices. Their projects included:

1. 1105 signs were repaired or replaced.
2. 95 new signs were installed.
3. Put up road construction signs, road closure signs, detour signs and road flooded signs.
4. Maintain all construction barricades to avoid the need to purchase new barricades.
5. Erect and maintain all signs and barricades for all detours for road and bridge construction or emergency closings. This included those areas flooded in the spring.
6. Provided sign manufacturing or other support to various county departments.
7. The two traffic sign crews traveled 43,316 miles within Onondaga County performing their work.

## **TRAFFIC STRIPING PROGRAM**

In 2009 Onondaga County purchased a new full size striping truck that paints County road centerlines and edge lines. Three individuals man this unit.

The County has one walk behind pavement striper. This machine is used to paint symbols, crosswalks, stop bars, railroad markings and island cross-hatching. In 2009 the county added a full time three-man crew dedicated to the maintenance and installation of pavement symbols and hatching.

The crews start striping the roads in early spring and continue through late fall. Additionally, the crews paint and stencil the County fleet when necessary.

The crews accomplished the following in 2009:

1. 635 miles of roads were striped.
2. Striped 4 crosswalks at signalized intersections
3. Painted 697 pavement symbols

The following supplies were used by the striping crew to accomplish the painting of the County roads:

1. 163,712 lbs. of glass beads.
2. 13,707 gallons of white paint.
3. 13,805 gallons of yellow paint.

## TRAFFIC ENGINEERING

On September 10, 2007 this department officially adopted the Manual on Uniform Traffic Control Devices for Streets and Highways published by the Federal Highway Administration, as mandated by New York State Department of Transportation. As part of this new requirement the Department has implemented a program to upgrade our Traffic signs to the standards set forth in the Federal Manual. In an effort to keep fully aware of all new standards in the field of traffic controls, our traffic technicians attended the Cornell Local Roads Program “Traffic Signs and Pavement Markings” seminar which is conducted each year in an effort to acquaint the various government agencies with the new equipment and trends in the complex field of traffic control.

Each year our engineers conduct studies, at the request of the traveling public and local municipalities, at various intersections on principal County highways. These requests include adding stop control, three color signals and the alteration of signal phasing and timing.

As part of a three color traffic signal request a determination is made whether the intersection qualifies for the installation of a signal by meeting certain warrants as set forth in the Manual on Uniform Traffic Control Devices for Streets and Highways published by the Federal Highway Administration.

Intersections of high volume, arterial type County highways that are already controlled by traffic signals produce complex problems. Problems pertaining to the degree of difficulty of turning movements and inadequate time allotted for specified movements during peak traffic conditions are examples.

The following list is of intersections studied by our staff during the past year:

- Howlett Hill Road @ Harris Road
- Henry Clay Boulevard and Metropolitan Drive
- Henry Clay Boulevard and Norstar Boulevard
- Buckley Road @ Hopkins Road
- Buckley Road @ Bailey Road
- John Glenn Boulevard @ Kings Park Drive
- Kinne Street @ James Street
- North Manlius Street @ Kirkville Road
- Bartel Road @ Miller Road
- Broadfield Road @ Whetstone Road
- Soule Road at Fairways East
- Onondaga Boulevard @ Bellevue Extension

Also, departmental forces performed layout and striping of all County roads each year and this program requires not only the striping of centerlines, but also the edge of pavement, providing, of course, that the width of pavement is adequate to permit same.

This Department operates the Highway Traffic Sign Shop, provides sign erection crews, and investigates all service requests where the legality and advisability of certain regulatory and warning sign installations are involved. There are 8,700± regulatory or warning signs installed on County roads. These signs are periodically inspected and maintained.

In 2009 Onondaga County added a temporary traffic control signal at the intersection of Buckley Road and Hopkins Road. This signal was installed as a result of a traffic study which showed traffic volumes reaching thresholds set forth in the Manual on Uniform Traffic Control Devices.

## **DRAINAGE PROJECTS**

A significant amount of development occurs in Onondaga County each year. The Department of Transportation is continually asked to investigate drainage problems, provide design and field layout and to construct and install drainage improvements.

A list of some of the major projects completed on the past year follows:

### **Lamson Road Drainage Project**

In the year of 2009, the Department of Transportation completed the design and constructed a drainage project on Lamson Road, C.R. No. 34 and Plainville Road, C.R. No. 30 in the town of Lysander. Over 1200 feet of perforated 36" drainage pipe was installed on the north side of Lamson Road from the intersection with Plainville Road westerly to Ox Creek along with 9 new drainage structures. This system is parallel to an existing storm sewer located on the south side of the road which was insufficient for major storm events. Other improvements included replacing several driveway pipes on the east side of Plainville Road, south of the intersection and regrading ditches to accommodate storm flows approaching the intersection. Over 100 feet of cross-culvert on Plainville Road was modified to minimize flooding for the local residents' south-west of the intersection. In addition, two cross-culverts were replaced and two were added within the project area to improve hydraulics. The project was designed by Engineering personnel and construction was completed with a combination of County work forces and contract forces provided by D.E. Tarolli, Inc..

The overall project cost was approximately \$240,000.

### **Miscellaneous Drainage Installation**

Cross culverts or closed drainage systems installed, replaced or improved in 2009 by county and contract forces due to deteriorated condition, maintenance operations or request by the public included facilities on Tully Farms Road in the town of Tully, Townline Road in the town of Dewitt, Howlett Hill Road, Rockwell Road and Sentinel Road in the Town of Onondaga, Franklin Park Drive in the Town of DeWitt and Cicero Center Road in



# UTILITY ENGINEERING

The Utility Engineer for the Department of Transportation is responsible for initiating first contact with each utility owner for any road reconstruction project. The Engineer identifies each utility that is involved on a project and requests their utility as-built drawings be sent to the County for further study. This first contact also informs the utility owner that a road project is under consideration or design.

The Utility Engineer is responsible for reviewing consultant or in-house proposed design features along with utility as-built drawings to identify possible conflicts. Onondaga County, State or Federal guidelines are used to identify any conflicts. Once conflicts are identified, the Utility Engineer works with the Project Engineer, Permit Engineer and utility owner to resolve conflicts and develop a proposed and acceptable utility plan for that project. When this has been accomplished a County permit is issued to the utility owner to work within the County right-of-way.

During construction of a project, the Utility Engineer monitors the progress of each utility and interacts with the Engineer-In-charge of the project. Any unforeseen utility conflict or suggested changes to the permit by the utility owner are reviewed by the Engineer-In-Charge and the Utility Engineer. A solution is discussed by all concerned parties and is brought to the attention of the Permit Engineer and Project Engineer for their approval.

For projects involving State and Federal monies, the Utility Engineer will prepare or have a consultant prepare any utility reports and agreements that are necessary for these types of projects. These reports are monitored by the Utility Engineer and sent to the New York State Department of Transportation Planning and Program Management Group for their review and approval.

When utilities are located on private property, the Utility Engineer will request verification of private ownership and a cost estimate for the cost involved in relocating each utility. Once this is done, an agreement to provide compensation for the removal, relocation, replacement or reconstruction of utility facilities and appurtenances located on privately owned property in connection with a project pursuant to Section 10, subdivision 24-b of the highway law is sent to the utility to be completed. This document is then signed by the County Executive.

The Utility Engineer works with 4 different county project engineers and a permit engineer to answer any utility issues for each project. In 2009 the Utility Engineer has worked on 10 different consultant designed projects and 2 in-house projects along with several miscellaneous projects. Also in 2009 the Utility Engineer has had contact with over 20 different utility owners involving various projects.

The utilities listed below, along with several towns, villages, their consultants or other private utilities are a sample of who the County does business with.

Adesta, LLC	National Grid Electric
All Tel Communications, Inc.	National Grid Gas
AT&T	Onondaga County Water Authority
Buckeye Pipeline Company	Onondaga Co. Water Environ. Protection
City of Syracuse Water Development	Quest Communications
Dig Safely New York	Soft Dig (Underground Services Inc.)
Elantic Telecommunications	Sprint
Exxon/Mobil Pipeline Company	Sunco Pipeline
Fibertech Networks	Syracuse Utilities, Inc.
Frontier Citizens	Time Warner Cable
Level 3 Communications	Town of Cicero Water & Sewer
MCI Fiber Security	Town of Clay Water
Metropolitan Water Board	Town of Dewitt Water
New York State D.O.T.	Town of Onondaga Sewer
New York State Electric & Gas Corp.	Verizon

The Utility Engineer also helps to resolve any outstanding work left undone by a utility owner.

## COUNTY SNOW REMOVAL PROGRAM

The primary function of the Department of Transportation during, the winter season is to keep roads as safe as possible for the driving public. In an area where winter weather can be expected from November to April and the average snowfall is in excess of nine feet, this can be a daunting task.

The department is continually attempting to determine the perfect amount of material to be used for the various conditions we face. Our goal is to apply the proper amount of material that will clear the road in the least amount of time and do it cost effectively.

Our vehicles are equipped with an automated spreader, a device known as a Dicky-John. This device spreads the material at a calibrated rate. Our Foremen determine what amount of material is to be used. Using a distribution rate chart created by the Salt Institute, Inc. and the Cornell University Local Roads Program. The operator can, from within the cab; instantly change the calibration to the setting given by the foremen.

In prior years, the Onondaga County Department of Transportation used a salt/sand mix on the roads it plowed. Through study and experimentation, the Department determined it could reduce the number of plow trips needed by switching to 100% salt usage. Not only did this increase the effectiveness of the DOT's snow and ice removal operations, but it also reduced its material, overtime, and equipment use costs. Eliminating the use of sand has also reduced the need for street sweeping and culvert cleaning in the spring. In addition to regular road salt, the County continues to use treated salt, which is a mix of regular salt and magnesium chloride. Treated salt works at lower temperatures while requiring less material be spread per mile than salt itself. In recent years the cost of treated salt has outpaced that of regular salt therefore mitigating its cost effectiveness versus untreated salt

In order to more effectively serve the driving public, in the 2008-2009 winter season we contracted with 19 towns, 2 villages and Cayuga County to plow certain County roads. Together, they perform snow removal and ice control on 303.52 miles of road. We also contract with the State of New York to serve 219.52 miles of State roads within Onondaga County.

In 2009, the Department expanded its one person plowing program. Additional employees have been trained and new routes are now able to be plowed by a single operator. This program has been very successful to date. There have been no accidents involving a truck operated by a single individual that have been attributed to One Person Plowing. This program has allowed the Department to increase its level of service without increasing spending.

### COUNTY ROADS, SECTION I

#### JAMESVILLE

#### SNOWPLOWING

<u>Shop</u>	<u>C.R.</u>	<u>Road</u>	<u>Total</u>	<u>Miles</u>
<u>No.</u>	<u>No.</u>	<u>Name</u>	<u>Width</u>	
602	257	Assembly Park	20	0.36
625	198	Barker Hill	22	2.12
610	114	Berwyn	20	5.11
637	170	Cemetery (Pompey)	20	0.27
660	74	Dam	18	0.19
813	250	Edwards-Falls Road	18	0.30
663	145	Gates-Watervale	20	4.37
660	12	Gooseville-DeRuyter	22	3.07
665	174	Graham	20	1.70
675	182	Hall-Henneberry	20	6.49
679	1	Jamesville-Onativia	20	7.83
684	103	Jamesville Toll	20	1.81
699	112	LaFayette-Onondaga	18	6.92
703	5	Manlius-Delphi	20	9.60
706	9	Manlius-Watervale	20	5.12
710	10	Manlius-Pompey-Fabius, Pt.I	22	4.96
710A	11	Manlius-Pompey-Fabius, Pt.II	22	6.17
857	94	North Burdick St.	24	2.21
805	171	No. 5 West, Barber Hill	20	5.32
735	3	Onativia-Apulia	20	4.36

732	2	Onondaga-DeWitt, (South St.)	20	0.61
731	52	Onondaga-DeWitt, (Wms. Hill)	18	0.98
739	188	Onondaga-Highland	20	1.11
736	7	Orville-Jamesville	22	0.90
750	169	Palmer-Peck Hill	20	3.90
754	128	Ridge	20	5.73
635	173	Sentinel Heights	20	1.81
771	109	Sweet Road	16-22	7.04
784	237	Swift-Radway Road	20	3.03
761	6	Syracuse-DeWitt	20	1.79
792	111	Tully-LaFayette	22	<u>5.01</u>
			Total	110.19

**State Roads:**

**State Route**

**Miles**

92	8.6
257	1.9
80	18.6
11A	7.17
20	22.2
281	1.4
11	16.8
91	15.2
173	<u>10.2</u>
Total	102.7

**City Streets:**

**Miles**

Jamesville Toll Road – Jamesville Toll to Brighton Ave.	0.68
LaFayette Road - City/County Line to NYS #173	0.96
Brighton Avenue - NYS #173 to Thurber Street (4 lane)	<u>1.76</u>
Total	3.40

County Miles	110.19
State Miles	102.07
City Streets	3.40
Extra Lanes	1.28
Extra State Lanes	<u>4.37</u>
Section I Total	221.31

**COUNTY ROADS SECTION II**

**NORTH AREA  
SNOWPLOWING**

Shop <u>No.</u>	C.R. <u>No.</u>	Road <u>Name</u>	Total <u>Width</u>	<u>Miles</u>
621	181	Bartons Corners- East Syracuse	22	1.66
620	191	Bear Road	24	3.63
609	38	Belguim Cold Springs	22	3.45
617	161	Buckley Rd. Ext.		2.22
629	49	Caughdenoy Rd., Pt. I	22	5.21
629A	50	Caughdenoy Rd., Pt. II	22	5.55
639	205	Chestnut Rd. & Street (Allen & Chestnut)	22	1.74
642	13	DeWitt-Cicero, Pt. I	22	2.86
642A	14	DeWitt-Cicero, Pt. II	22	1.70
643	53	DeWitt-Manlius	24	9.86
	69	East Molly Rd.		1.42
	93	Factory Avenue		1.68
619	77	Fly Road	24	3.38

65	136	Fremont-Stevenson	22	4.14
751	78	Hancock Airport	48	0.60
672	148	Hopkins	22	1.19
	148	Hopkins Rd. (Seventh North to Buckley - 0.4 extra lanes)		1.19
841	71	Hosman	24	2.33
671	115	Hubbs Cors.-Schepps	22	3.31
849	86	Kinne St.		0.91
	51	Lawrence Cors.- Liverpool	24	2.93
864	219	LeMoyne Avenue	48	0.85
851	88	Liverpool Bypass	22	0.53
696a	35	Longbranch Rt. 57-River		1.52
	87	Malden Rd.		1.40
721	197	Maple Rd.		3.21
711	55	Minoa-Manlius Center	22	2.11
704	54	Minoa-Schepps Corners	22	2.10
707	47	Morgan Road	50 & 22	2.59
713	16	Mud Mill-Hush Acres		0.20
818	81	John Glenn Blvd.		2.56
821	251	North Street-Collamer	22	1.19
845	82	Northern Blvd.	48	4.48
758	187	Oak Orchard	22	2.40
854	91	Old Route 57	24	7.99
666	76	Reichert Road	48	1.45
763	48	Salina-Clay (Buckley Road)	24	4.19
758	45	Salina-Clay (7th North St.)	24	4.35
758A	46	Salina-Clay (Morgan Rd.)		5.55
840	70	Salina-DeWitt (Townline)		0.60
	70	Salina-DeWitt (.32 miles & .16 adjusted)		0.48
773	265	Seventh North St. Ext. (N. of Rt. 31)		1.56
773	121	Seventh North St. (Henry Clay)		3.11
722	137	Syracuse-Liverpool		2.17
779	208	Syracuse- South Bay		7.92
786	18	Taft Settlement Part I		3.14
786A	19	Taft Settlement Part II		4.41
	228	Teall Ave.		0.67
814	252	Wetzel Rd.		<u>3.58</u>
			Total	137.27
			County Miles	137.27
			Extra Lanes	14.15
			Four Lanes	37.54
			Rt. 57 (5-6-7-8 lanes)	<u>9.69</u>
			Section II Total	198.65

### COUNTY ROADS, SECTION III

#### CAMILLUS

#### SNOWPLOWING

Shop No.	C.R. No.	Road Name	Total Width	Miles
600	57	Amboy-Warners	22	3.04
613	106	Baldwinsville- Bell Isle-Lakeland	22	1.90
809	29	Baldwinsville-Phoenix Little Utica	22	5.22
844	80	Baldwinsville- State Fair-Syracuse	22	2.64

606	31	Baldwinsville-Warners	20	3.79
607	100	Belle Isle-Amboy	22	1.04
608	101	Bellevue Avenue Ext.	20	1.14
623	223	Bennett Road	22	0.11
614	118	Brickyard	22	4.01
617	161	Buckley Rd. Ext (RR – Taft)	24	2.22
630	36	Camillus-Warners	22	3.02
630	36	Camillus-Warners (New North Street)	24	1.14
630	36	North Street Connector	24	0.02
855	92	Downer Street Road	22	0.47
	122	Elbridge – Skaneateles (between Hart lot & Vinegar Hill)		1.69
647	58	Elderberry St. & Ext.	22	0.46
653	63	Fairmount-Amboy	22	3.39
837	271	Hamilton		1.96
674	194	Hardscrabble	22	0.13
	209	Hinsdale Rd		1.26
681	32	Jacks Reef-Plainville	22	4.62
818	81	John Glenn Blvd.	48	1.81
683	204	Jordan-B’Ville, Pt. I	18	0.21
847	84	Jordan-B’Ville (Old Route 31)	20	3.73
682	59	Jordan-Cross Lake (Grimes)	22	1.40
680	63	Jordan-Seneca River	22	1.79
	155	Kasson		0.81
694	30	Little Utica-Plainville	22	6.57
696A	35	Long Branch	22	0.84
695	33	Lysander-North Co. Line	22	1.49
698	34	Lysander-West Co. Line	16	1.00
705	67	Memphis-Hamlet	22	0.21
712	66	Memphis-Sweets Crossing	22	4.59
719	183	Memphis-Whiting		5.39
722	203	Memphis-Whiting Ext.		0.30
720	190	Milton Ave.-Amboy	20	3.63
	190	Milton Ave.-Amboy- Bennett		0.86
723	206	Munro Road	20	1.76
740	216	O’Brien-DeVoe	20	4.06
861	98	Old Route 5	40	3.88
603	240	Onondaga Blvd.	48	2.75
744	135	Peru-Fikes	20	4.28
742	60	Peru-Jordan	22	3.72
743	37	Phoenix-Belguim	22	3.86
746	164	Pottery Road	22	2.11
756	165	Richard-Cooper	20	2.57
862	99	Route 31B	22	0.37
776	140	Sixty	22	3.70
759	28	Syracuse-Baldwinsville	22	0.81
760	39	Syracuse-Cedarvale	22	4.01
799	64	Warners-Memphis	22	3.67
801	138	Warners-Memphis (Canal)	20	2.46
848	85	Willis Avenue	20	0.20
804	162	Winchell Avenue	22	<u>0.82</u>
		Sub-Total		122.93
		Unimproved John Glenn Blvd.		<u>-2.74</u>
		Total		120.19

**State Roads:**

<u>State Route</u>	<u>Miles</u>
Rt. 31-Downer St.-Co. line	12.60
Rt. 31C	0.50
Rt. 321	8.38
SH9544-Jordan-Elbridge	2.34
State Fair Blvd.	2.00
Rt. 173	1.80
Rt. 174	2.20
Forward Rd.	1.10
Old Rt. 5 City Line – Geddes Brook	<u>1.85</u>
Total	32.77

**City Streets:**

	<u>Miles</u>
Grand Avenue - County/City Line – Velasko Road	0.04
Onondaga Blvd. – County/City Line – Velasko Road	0.06
Bellevue Avenue – Bellevue to Velasko Road	<u>0.50</u>
Total	0.60

County Miles	120.19
State Roads	32.77
City Streets	0.60
Four Lanes	9.73
Extra Lanes	<u>2.11</u>
Section III Total	165.40

**COUNTY ROADS, SECTION IV****MARCELLUS****SNOWPLOWING**

<u>Shop No.</u>	<u>C.R. No.</u>	<u>Road Name</u>	<u>Total Width</u>	<u>Miles</u>
601	23	Amber-Otisco	18	4.68
604	24	Amber-Preble	18	8.77
626	211	Bishop Hill	20	3.98
631	44	Cedarvale-Amber	22	7.31
633	27	Coon Hill Road	18	4.24
835	266	County Home Road	20	0.18
645	110	Days Corners-Kelleys Corners	22	2.42
649	131	Eibert	20	1.25
648	122	Elbridge-Skaneateles	22	.69
664	172	Griffin Corners	22	2.98
664A	201	Griffin Corners Ext.	20	1.25
863	107	Halfway Road	22	1.76
837	271	Hamilton		1.54
673	151	Hitchings Road	18	2.01
669	40	Howlett Hill Road	22	6.80
691	179	Kasson Road & Extension	22	3.03
701	225	Lyons Road (Martisco- Lyons)	20	2.96
693	217	Kingston	20	3.37
734	73	Lee-Mulroy Road	12	3.50
702	236	Limeledge Road	20	3.93
725	235	Main Town Line Road	20	3.10
708	41	Marcellus-Skaneateles	20	5.97
716	133	Marcellus-W. Co. Line	22	6.37
717	154	Marcellus-West County Line Extension	20	1.00
715	124	Marietta-Amber	20	2.88
846	83	Marietta-Marcellus (South Street)	20	0.89
726	222	McDonald Road	22	1.48
738	168	Northeast Town Line	20	2.10

733	62	Onondaga Hill	20	0.31
737	129	Onondaga Hill- South Onondaga	20	5.72
741	247	Otisco-Joshua	20	3.74
830	113	Otisco Valley	18	2.58
842	72	Richard Road	18	0.26
753	21	Rose Hill	20	2.50
		Rush Road (Hitchings)		1.75
764	68	Sheehan Road	22	0.28
756	22	Skaneateles-Elbridge	22	3.89
774	150	Slate Hill	20	6.90
766	42	South Onondaga-Cedarvale Part I	18	3.56
766A	43	South Onondaga-Cedarvale Part II	18	1.80
777	176	Stump Road-E. Town Line	20	3.11
768	202	Stump Road Ext.	20	1.42
760	39	Syracuse-Cedarvale	22	1.90
794	130	Velasko Road	22	1.46
796	142	Vinegar Hill	20	2.99
800	26	Willowdale	18	<u>7.11</u>
		Total		141.03

**State Roads:**

**State Route**

**Miles**

Rt. 175	11.59
Rt. 41	15.97
Rt. 20W	9.03
Rt. 20E	7.99
Rt. 80	11.54
Rt. 175	12.97
Rt. 173	<u>4.93</u>

Total 74.02

**City Streets:**

**Miles**

McDonald Road - County/City Line - Glenwood Avenue.

Total 0.04

County Miles	141.03
State Roads	74.02
City Streets	0.04
Extra State Lanes	<u>2.33</u>
Section IV Total	217.42

## GENERAL AND HEAVY MAINTENANCE

Following are some of the highlights of the 2009 maintenance program:

<u>Miles of Ditch Cleaned/Re-Dug</u>	35 miles
<u>Guide Rail</u>	
Feet Repaired/Installed	6,944 feet
<u>Feet of Underdrain Flushed</u>	2,345 feet
<u>Catch Basins</u>	
Installed New	3 basins
Rebuilt	94 basins
Cleaned	135 basins
<u>Miles of Debris Pickup</u>	41 miles
<u>Miles of Road and Intersections Swept</u>	23 miles
<u>Miles of Shoulder Repair</u>	
Shoulder Regraded	36 miles
<u>Pounds of Patch Used</u>	
Hot	596,860 lbs.
Cold	151,220 lbs.
<u>Road Signs</u>	
Signs Maintained	1,105 signs
New Signs Installed	95 signs
<u>Mailboxes</u>	
Boxes Repaired	390 boxes
<u>Brush Cutting</u>	
Miles of road where brush was cut	19 miles
<u>Tree Stumps</u>	
Number of tree stumps removed	147 stumps



## **EQUIPMENT AND FACILITIES**

For the purposes of the Department of Transportation, Onondaga County is divided into four quadrants. Within these quadrants, the Department maintains 802 miles of County highways. The Department owns a fleet on trucks and construction equipment that is used for highway maintenance and snow removal.

Each quadrant or section is served by a highway maintenance facility. Each facility is capable of making repairs to equipment and each has a stockroom of parts.

The Jamesville Maintenance Facility is the primary facility in the system. It is equipped to make repairs of a more complex nature to the fleet. In addition, the stockroom in Jamesville is the primary warehouse of parts for the Department. The Administration building houses supervisors, offices, dispatching center, conference room, etc. The maintenance building provides space for the repair of our equipment. The bays are large enough so that snowplows can be brought in without having to remove the wing blades. This is a great time saver. Each bay gives our mechanics with tool storage areas and overhead hoses supplying water, compressed air, grease, etc. This building also contains our stockroom, tire shop, metal shop, wood shop, and welding shop.

The several storage buildings provide enough space for us to store all of our equipment indoors, out of the weather. These buildings are heated and are kept warm enough to facilitate the starting of our Diesel engines in cold weather. This allows us to respond more quickly when roads need attention.

The Jamesville facility also houses several specialty shops. Following is a description of some of our shops:

### **Mechanics Shop**

In these shops our mechanics make repairs to the Department's motor fleet. These skilled professionals use laptop computers to diagnose and repair vehicle systems. Repairs consist of everything from full engine rebuilds on large diesel trucks to repairs of weedwackers and chain saws. These mechanics do all that is needed to keep our fleet and equipment running.

### **Welding Shop**

This shop allows us to make in-house repairs to broken parts. Our employees also possess the skills to manufacture parts that can no longer be purchased or fabricate new apparatus for specialty purposes. These functions allow us to keep down time low and save the Department money. The machinery used in this facility includes: large and small lathes; vertical and horizontal milling machines; a radial arm drill; and a grinding machine.

### **Tire Shop**

This facility is responsible for the repair and replacement of tires and wheels on all Department of Transportation vehicles. Vehicles range in size from pick up trucks to snowplows and heavy construction equipment. Repairs are undertaken at the shop when possible. However, through the use of our tire truck, repairs are frequently made in the field.

### **Vehicle Maintenance**

The DOT has 4 maintenance facilities for vehicle storage and supervisor offices, a staff of mechanics and a small stockroom in 3 facilities (North Area, Camillus & Marcellus). There is a larger staff of mechanics and a large stockroom at the Jamesville maintenance facility.

The DOT maintains a fleet of rolling stock of 260+ vehicles and 60 pieces of small equipment.

The mechanical staff from our 4 maintenance operations accomplished 3026 work orders in 2009. Examples of what were done range from minor engine repair to total rebuilding of engines & transmissions.

The department operates a large wrecker that responded to 82 calls for towing operations for DOT equipment, other county departments, town vehicles and our bridge unit.

The list below shows the diversity of the equipment that the department needs to maintain in order to support our mission.

Athey Loaders	Skid Steers
Arrow Boards	Small Equipment Inventory
Backhoes	Snow Blowers
Catchbasin Cleaners	Stake Rake truck (for welding)
Dozers	Street Flushers
6 & 10 wheel Dump trucks	Stripers
Forklifts	Stump Grinders
Gang trucks	Suburbans and SUV's
Gradalls	Sweepers/ Tow Brooms
Mowers	Tankers
Payloaders	Tire Truck
Pick-ups	Tower Trucks
Plows (1 ton)	Trailers
Rollers	Truck Tractors
Scout Vehicles	Vans
	Wood Chippers
	Wrecker

During the winter, the DOT needs to be prepared with 55+ snowplows to cover all the routes needed for state and county snow routes.

During the summer, there are different demands on the vehicle maintenance staff. The staff supports paving operations, shoulder repairs, striping operations, bridge projects, catch basin cleaning & repairs, and any other projects for road maintenance.

### **Stockroom**

In order to oversee the large number of parts required to maintain the department's equipment, the Jamesville maintenance facility houses the main stockroom that also supplies the other 3 facilities. The stockroom carries 10,000+ parts in the inventory for various pieces of equipment that are used frequently. Many parts needed are unique or not cost effective to stock and need to be processed immediately by our stockroom staff in order for the equipment to be able to get back out on the road as soon as possible.

The stockroom also processes all the orders for the other 3 stockrooms so that a constant accurate inventory is kept. Requests for all building maintenance supplies are also ordered through the stockroom.

The stock personnel continue to work to find ways to lower stock levels and to find more efficient ways to keep track of the inventory.

### **Facilities**

The Department has 4 maintenance facilities that have a total of 14 buildings and 5 salt sheds. The facility at North Area is a very large building that has 6 tenants. These tenants are from other county departments that have storage or offices. Through use and age there are numerous repairs that need to be done throughout the year.

The DOT has fueling stations at each facility with a total of (10) ten fuel tanks. The DOT is responsible for the reconciliation of the fuel purchased and dispensed and has fueling contracts with the following departments and municipalities; Van Duyn, Emergency Management, Corrections, Health, OCCRA, Sheriffs, City of Syracuse Water, Pompey FD, Navarino FC, Town of Marcellus Highway, Town of Marcellus Parks, Town of Marcellus Fire, Marcellus Ambulance, Village of Marcellus Police, Sewer & Highway Departments, and the Marcellus School Bus District.

The department has a maintenance person who oversees the maintenance of the facilities. Work that needs to be accomplished is done either by house staff or by contractors, and all work is overseen by this maintenance individual. Listed below is a list by facility of work that was done by either contractor or by our staff.

**JAMESVILLE (6 buildings, salt shed and upper quarry building)**

Repairs as follows:

Electrical  
Overhead doors  
Plumbing  
Lights  
Heating  
Sewer System  
HVAC  
Gutters  
Locks  
Furnace  
Repaired rails on oil pit  
Cleaned drains in building 2 floor

Fabricated as follows:

Boxes  
Sideboards  
Picture frames  
Grade stakes  
Road flags  
Chainsaw chains  
Trailer beds  
Forms & jigs  
Mailbox posts  
Creeper  
Extension cords  
New:  
Brine tank installed

**NAMF (1 building, 6 tenants & salt shed)**

Repairs as follows:

Plumbing  
Heating system  
Overhead doors  
Locks  
Electrical  
Sewer System  
Air Condition system

New:

Installed doorbell for Auction area  
Replaced batteries in fire alarms

**CAMILLUS (4 buildings, salt shed, Amboy)**

Repairs as follows:

Heating  
Plumbing  
Overhead doors  
Man. Doors  
Electrical  
Lights  
Locks  
Generator  
Gutters

New:

Installed brine tank  
Fire alarm system repairs  
Reattached smoke detectors

**MARCELLUS (1 building, 2 salt sheds)**

Repairs as follows:

Electrical  
Plumbing  
Gutters  
Lights  
Overhead doors  
Locks  
Manual Doors  
Heating

New:

Installed brine tank  
Replace kitchen faucet drain  
Replace bathroom drains  
Fix truck exhaust blowers  
Rewire flagpole lights

Maintained Inventory:

Lumber  
Hardware  
Plexiglass  
Plumbing supplies  
Electrical supplies  
Sandbags for County  
Sandbags for U.S. Army Corps. Of Engineering  
Grass seed

## SERVICE REQUESTS

The goals of the Service Request System:

1. To better serve our customers.
2. To better track the quantity and type of service request that our Department receives.
3. To make sure that all of the service requests our Department receives get a response.
4. To track our Department's performance with our customers.

Since the conception of the service request system in 1996, our Department has maintained a 98% approval from our customers.

### Requests for service by type and area

TYPE	JAMESVILLE	NORTH AREA	CAMILLUS	MARCELLUS
Accident Cleanup	0	10	5	1
Brush	10	6	8	4
Dead Animals	83	79	48	95
Drainage	130	165	86	140
Driveway Repairs	20	26	37	24
Guide Rail	26	15	14	34
Mailboxes	90	60	88	152
Requests Directed to Other Agencies	98	62	25	18
Miscellaneous	38	69	54	43
Mowing Requests	16	37	23	12
Potholes	26	41	34	9
Road Striping	1	5	3	2
Shoulder Repairs	12	16	5	14
Snow Plowing Requests	21	33	18	10
Stump Grinding	29	18	2	1
Road Sweeping	8	10	5	4
Traffic Signal	2	134	31	8
Traffic Signs	73	61	50	71
Trash	4	16	6	3
Tree Requests	<u>112</u>	<u>46</u>	<u>52</u>	<u>76</u>
TOTALS	799	909	594	721

# MISCELLANEOUS DEPARTMENTAL SERVICES

## Permits

During 2009, the Onondaga County Department of Transportation issued 55 residential driveway permits, 18 commercial driveway permits, 7 special hauling permits, and reviewed and processed another 152 applications for permit for subdivision entrances onto County roads, drainage installation, water lines, rental agreements, and miscellaneous public utilities. As a mutual service with Syracuse-Onondaga County Planning Agency, this Department reviewed 472 cases for zone changes, 99 cases for subdivision approvals, and participated in three scoping sessions.

Beginning January 1, 1998 the Onondaga County Department of Transportation revised its residential driveway entrance program. A list of contractors permitted to install driveways was established. The permittee may choose a contractor of their choice or from the list provided to them by this Department. The permit fee for residential driveways is \$15.00 with the installing contractor supplying a \$500.00 deposit along with liability insurance to this Department. The permitted contractor is also responsible for ditching one hundred feet of roadside ditch, if necessary. This Department conducts a final inspection of the installation.

This Office issued 113 utility permits in 2009 to allow utility companies to install, repair or modify their facilities located within the County highway right-of-way. Beginning in 2003, an annual maintenance permit program was initiated for all utilities within the County highway R.O.W. In 2009, 15 annual permits were issued.

In 2001 Onondaga County entered into an annual rental agreement with Sun Oil Pipeline for a pipeline along the Syracuse Auburn Electric Railroad right of way.

		<u>2009</u>	<u>2008</u>	<u>2007</u>
Revenues collected for:	Driveway permits	\$ 11,055.00	\$ 6,247.00	\$ 8,896.00
	Utility permits	\$ 10,340.92	\$ 10,245.12	\$ 10,625.61
	Rental payments	\$ 8,248.22	\$ 8,728.22	\$ 7,768.22
	Other permits	<u>\$ 520.00</u>	<u>\$ 880.00</u>	<u>\$ 600.00</u>
		\$ 30,164.14	\$ 26,100.34	\$ 27,528.38

## Highway Damage Control

In 1993, a program was developed to monitor accident reports involving County highways. The main purpose of this program is to determine if any highway apparatus, such as guide rail, signs, etc., were damaged at the time of the vehicular accident.

For example, if we determine, through an accident report, that damage to the highway was incurred, we would make the repairs and, through the Law Department, be reimbursed.

In 2009, twenty-six (26) claims were filed with the Law Department resulting in collections of \$23,172.48

## Seeding and Topsoil Program

The purpose of this program is to topsoil and seed areas disturbed during highway construction and routine maintenance. In 2009 this Department had 14.05+/- acres hydroseeded by contract with Onondaga County Soil and Water Conservation District. Also 3510 square yards of topsoil were spread and turf established, an additional 185 square yards of turf established, 1271 linear feet of FILTREXX (mesh containment/erosion control system) was installed, work was completed under a low bid contract.

## Tree Planting Program

In 2009 the Onondaga County Department of Transportation continued its tree and shrub replacement policy, which replaces trees and shrubs removed during construction projects. A total of sixteen (16) trees and shrubs were planted in various parts of the County. Among the varieties planted were blue spruce, yews and spirea. This was completed under low bid contract.

## Driveway Paving Program

The Department of Transportation determined that the repaving of driveways that had been disturbed on drainage, maintenance paving, and heavy construction projects would best be completed by an outside contractor. Bids were taken and a low bidder was chosen. A total of four hundred (400) driveways were paved from the edge of shoulder to its construction limits in 2009.

## **Guide Rail Projects**

It is the policy and has been the policy of the Department of Transportation to consider as a priority the maintenance and upgrading of the guide rail system on County highways. Guide rail locations and installations are adequately justified, properly designed, constructed, and maintained by County forces.

In 2009 Five (6) project areas were scheduled to receive guide rail. These locations were on reconstruction projects and upgrading existing systems. New guide rail locations were installed by contract.

Guide rail was installed on sections of the following County highways:

<b><u>SECTION I</u></b>	<b><u>SECTION II</u></b>	<b><u>SECTION III</u></b>	<b><u>SECTION IV</u></b>
Nottingham Road	Fly Road	Devoe Road River Road	Oak Hill Road Bishop Hill Road

In 2009 County forces answered 60 filed service requests for repairs to damaged guide rail. In addition, County forces supported drainage projects by removing and resetting guide rail in a timely manner, thus reducing the amount of time construction zones needed to remain open.

## **Accident Litigation/Legal Claims**

The County of Onondaga receives numerous highway related accident claims every year. This Department searches its records to provide the appropriate information for each claim. This file is retained with a copy provided to the Department of Law for its use in litigation.

In 2009, a total of thirty-three (33) legal claims or litigation cases were reviewed by this Department.

## **State Environmental Quality Review Act**

This Department has incorporated the State Environmental Quality Review Act procedures and substantive information produced in the environmental review into the planning and design stages of County highway and bridge projects. It was the intent of this statute that agencies realize their obligations to protect and enhance the environment for the uses and enjoyment of this and all future generations.

## **EPA Voluntary Audit**

The OCDOT participated in a voluntary audit of its Maintenance Facilities as part of the United States Environmental Protection Agency's (USEPA) Self-Audit Policy – Incentives for Self-Policing: Discovery, Disclosures, Correction, and Prevention of Violations (EPA Audit Policy). Upon completion of the audit, this department secured professional design and construction inspection services for the DOT Maintenance Facilities Corrective Action Upgrades project. Construction began in October 2009 and its completion is expected in January 2010. The Maintenance Facilities were Jamesville shop (Best Management Practices only) with Camillus, Marcellus, and North Area shops requiring corrective work that included oil/water and holding tank replacements and additions, a leach field closure, and stopping discharges from floor drains and wash bays. New York State SPDES permits were obtained for the Camillus and Marcellus shops.

## **Environmental Impact Statement Review**

Both commercial and residential developments need access to County highways. This Department conducts extensive analyses of Environmental Impact Statements as part of the review process, when called upon to do so as an involved agency. The Department's primary concerns are site-generated traffic, safe ingress and egress, and post-development surface drainage.

## **Stormwater Phase II Regulations**

The Environmental Protection agency (EPA) amended the stormwater regulations that operators of municipal separate storm sewer systems (MS4s) within "Urbanized Areas" develop programs for the control of stormwater under their jurisdiction. This Phase II took effect in March 2003.

Onondaga County applied for and received a general SPDES Permit No. GP-02-02 (Revised to GP-0-08-002 effective from May 01, 2008 to April 30, 2010), administered by the New York State Department of Environmental Conservation (NYSDEC), for its MS4 operations and will comply with the basic requirements of six minimum measures; public education and outreach, public involvement, illicit discharge detection and elimination, pollution prevention and good housekeeping, construction site runoff control and post construction stormwater management. This department entered into an agreement with the Central New York Regional Planning and Development Board (CNYRPDB) to administer portions of these measures.

DOT construction projects that disturbed one or more acres of land were required to obtain a SPDES General permit for Stormwater Discharges from Construction Activity GP-02-01 (Revised to GP-0-08-001 effective from May 01, 2008 to April 30, 2010).

This department's sixth Annual Report, as required by permit, was submitted to the NYSDEC for the period of March 10, 2008 – March 09, 2009. The report is available on the internet at the County website link to the Office of the Environment (<http://ongov.net>)

Yearly pre-season construction meetings are held to highlight stormwater concerns and construction site best management practices.

### **Vegetation Control**

In 2009, the Onondaga County Department of Transportation renewed a contract for the application of herbicides to control roadside vegetation. This was done in selective areas to control areas on shoulders that were to be overlaid with blacktop. The contractor had to be registered with the New York State D.E.C., have proper equipment, and be in material compliance and at least two years experience with references.

Shoulder Control, Cold Mix Blacktop, Section I-IV                      52,272 LF

### **Road Side Brush Control**

This was a very successful project in the past and the program will be evaluated for next year's program.

### **Preacquisition Hazardous Site Assessment**

As part of the review process for highway and bridge construction, this Department utilizes a Preacquisition Hazardous Site Assessment process. The purpose of this policy is to protect the County from liability associated with acquiring property with pre-existing environmental contamination. This Department worked with the County Office of the Environment to formulate a countywide policy to aid departments in determining the existence of contamination prior to acquisition. This County-Wide Policy was adopted December, 1995 and was revised in May, 2002.

### **Tax Delinquent Property**

It is also our responsibility to investigate for highway usage, all tax delinquent and surplus County land.

### **Network Level Pavement Management System**

The Department of Transportation began the development of its Pavement Management System in 1984. By 1987, the implementation of the program for high volume highways was completed, with 428.75 miles in the system. An annual update program was instituted to maintain the accuracy of the database.

In 1991, the update program continued, but with the budgetary problems plaguing county government, the Department was forced to look for more efficient ways to manage the limited funds available. It was felt that by incorporating the secondary County highways into the pavement management system, a savings could be realized in both the surface treatment and cold mix paving programs. The initial work was completed in 1994 and has continued annually since.

In 2009 the Department prepared documents to select a new consultant firm to continue the Pavement Management System. A new cycle of evaluation as well as asset management will begin in 2010.

## **Traffic Volume Studies**

The Department of Transportation operates ten (10) Jamar automatic traffic data recorders. These recorders are placed at various locations on County highways during non-winter months to provide traffic volume data for departmental use. Intersection traffic volume studies are also undertaken when needed.

Machine counts were conducted in 2009 at forty-four (44) locations. The Department performed 5 Turning Movement Counts and 1 stop sign delay count.

## **Computer Systems**

Our current computer system includes six PC workstations dedicated to the mapping, design and finished document drafting of public works projects utilizing CAD software. An additional PC is dedicated to GIS applications with access to the Onondaga County GIS database. Other PCs run applications in highway design, traffic engineering, hydraulics, quantity calculation, cost estimating and bid tabulation, and various administrative functions.

## **Bids for Goods and Services**

The Department of Transportation currently maintains 44 annual contracts for goods or services. The majority of these contracts (17), are for the paving or maintenance of our highway system and include both materials and contract services. Other contracts (3 each) include snowplow parts or snow and ice removal materials, vegetation removal or planting, guiderail, traffic signal parts or services, equipment rental, Bridge materials or services and miscellaneous materials. Other bids include Material Testing Services, Striping and Animal Carcass Removal. Our staff supplies the Purchasing Department with specifications and assistance in writing these bids. In 2009 we re-bid 19 of the 44 annual contracts.

The Department also is required to advertise for bid all of our contract road reconstruction projects, bridge reconstruction projects, bridge decks, facilities enhancements and new vehicle purchases on a per project basis. In 2009 we opened bids for 2 bridge reconstruction projects and 2 bridge decks or precast bridges. The Department also advertised and awarded the East Taft Road Reconstruction Project, an \$8.4M project funded 100% Federal Dollars through the American Recovery and Reinvestment Act (ARRA). This is the largest single Highway or Bridge project to be let by the Department of Transportation.

## **Pesticide Application For Wasps And Hornet Control**

In 2009 our Department continued training employees in pesticide application to control wasps and hornets. This training establishes these employees as apprentice level pesticide applicators. Wasps and hornets nests in and around traffic control devices are the Departments main concern.

In 2009 our Department made two applications of wasps and hornet spray. This is a decrease of three applications from the previous year.

## **Beaver Dam Removal**

In 2009 our Department applied for and was granted five permits from the New York State Department of Environmental Conservation to remove beaver dams located within our maintenance right-of-way. This is an increase of one permit from the previous year. Our Department will only remove a beaver dam when it becomes absolutely necessary to do so.



## **INTER-DEPARTMENTAL SERVICES**

The Department of Transportation is asked to assist other County Departments with a wide assortment of construction, administrative and engineering problems.

### **Professional Engineers**

A Professional Engineer, from our Department, is available at all times to interpret maps and give testimony to all condemnation hearings associated with the acquisition of land for the improvements of County highways. Also, professional engineers are available to represent the County of Onondaga at all public hearings and lawsuits involving personal injury and/or property damage claims against the County.

### **Professional Land Surveyor**

A professional Land Surveyor, from our Department, is available to determine property lines, to interpret survey information, and to prepare maps for acquisition and conveyances of County property. This professional land surveyor is also available to aid the County Attorney's Office in court actions involving the County in land claims.

### **Department of Law**

Various surplus properties adjacent to County roads were conveyed to towns or private owners in cooperation with the Department of Law. This allowed the properties to be placed back on the tax rolls and relieved the County of the liabilities of ownership of these properties.

### **Wrecker Service**

The Department's wrecker is made available to various County departments to tow large equipment

### **Syracuse Metropolitan Transportation Council**

Representatives of the Department of Transportation serve on the Syracuse Metropolitan Transportation Council. In 2009, the Commissioner of Transportation served on the Planning Committee and the Executive Committee. These committees are responsible for review of all Transportation projects involving federal funds. It is the responsibility of the Syracuse Metropolitan Transportation Council to formulate a five-year Transportation Improvement Plan, a Unified Planning Work Plan and a Transportation Systems Management Program. These programs involve all modes of transportation utilized by the community.

A Civil Engineer from our Department serves as Chairman of the Capital Projects Committee. This Committee is responsible for the technical review and prioritizing of prospective projects to be included in the five-year Transportation Improvement Plan.

In 2009 Department personnel have participated in projects undertaken by the Syracuse Metropolitan Transportation Council such as The Congestion Management System Study, The Emergency Travel Routes Study, the Onondaga County Long Range Transportation Plan Update, the Northern MPA study, the Downer Street Corridor Study, the Village of Liverpool Transportation Modeling task, the NYS Route 31 Corridor Study, the I-81 Travel Demand Modeling task and the State Transportation Improvement Program.

Onondaga County has requested that SMTC perform two studies as part of their 2009 Unified Planning Work Program (UPWP).

The Safety Improvement Analysis will look at the County network and attempt to locate areas that exhibit a high frequency of traffic accidents. The locations will be analyzed and the data will be used to program future capital projects.

The OCDOT Traffic Signal Optimization Project will analyze approximately 25 signals each year for four years to encompass the entire system of County signals. Traffic Counts and phasing diagrams will be used to optimize individual signals as well as closed loop systems. The study will make recommendations to improve the efficiency of the network.

### **Department of Parks and Recreation**

The Department provides technical services to the Parks Department relative to the Maintenance of their many internal roads and parking facilities. The Department also provides specialized maintenance equipment to the Parks in order to eliminate duplication of the purchasing of costly equipment.

### **Onondaga Lake Canalways Trail, PIN 375355**

This project, funded with federal and county dollars, is a multi phase project to complete the pedestrian trail around Onondaga Lake.

This Office has been providing and will continue to provide into 2010 technical assistance to the Department of Parks and Recreation relative to moving this project through the FHWA/NYS DOT process.

### **Department of Emergency Management**

This Department provides Accounting, Purchasing and Payroll services to the Department of Emergency Management. This cooperative has been in existence since 2002. The Department provides for the purchase of all goods and services and keeps all payroll records for Emergency Management.

### **Erie Canal Museum**

The Erie Canal Museum, an authorized agency of Onondaga County received Multi-Modal monies to refurbish and update the exhibits in the Weighlock Building, which is owned by Onondaga County. The Onondaga County DOT administers all FHWA monies that come through the New York State DOT. Our department will administer and oversee these projects to their completion.

### **Towns and Villages**

The Department provides technical services to the various towns and villages in the county relative to the maintenance of their roads and bridges. The Department also makes all of our commodity bids available to the municipalities and will modify our bids to accommodate the town's and village's needs.

## FOUR AND FIVE LANE HIGHWAYS

<u>FOUR LANE</u>	<u>C.R. NO.</u>	<u>MILES</u>
Airport Boulevard	78	0.60
Electronic Parkway	241	1.22
John Glenn Boulevard	81	4.19
Vine Street	51	1.70
Northern Boulevard	82	4.48
Chrysler Drive	76	1.09
Fay Road (Taft Road, Buckley to South Bay)	48	0.90
Seventh North Street	45	4.00
Salina-DeWitt-Town Line Road	70	0.63
Kinne Street	86	0.45
Old Liverpool Road	137	2.17
South Bay Trolley Road	208	0.91
Taft Road	19	3.60
Teall Avenue	228	0.67
Morgan Road (Commerce Blvd. to Buckley Rd.)	47	1.93
Onondaga Boulevard	240	1.76
Old Route 5	93	3.88
Route 57	91	<u>2.42</u>
	TOTAL	36.60
 <u>FIVE LANE</u>		
Route 57	91	2.29

## MILEAGE OF COUNTY ROADS WITHIN TOWNS

<u>Towns</u>	<u>County Roads Within Villages</u>	<u>County Roads</u>	<u>Total</u>
Camillus	0.52	47.70	48.22
Cicero	1.68	41.22	42.90
Clay	----	71.20	71.20
DeWitt	1.50	28.15	29.65
Elbridge	.87	32.26	33.13
Fabius	0.57	30.05	30.62
Geddes	----	8.81	8.81
LaFayette	----	40.81	40.81
Lysander	----	61.95	61.95
Manlius	3.96	35.63	39.59
Marcellus	0.74	47.43	48.17
Onondaga	----	71.61	71.61
Otisco	----	26.56	26.56
Pompey	----	75.35	75.35
Salina	1.78	22.48	24.26
Skaneateles	0.41	38.61	39.02
Spafford	----	27.23	27.23
Tully	0.83	16.22	17.05
VanBuren	----	56.32	56.32
TOTAL	12.86	779.59	792.45