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July 19, 2013

Mr. Marcus J. Molinaro, County Executive  
Members of the Legislature  
County of Dutchess  
22 Market Street  
Poughkeepsie, NY 12601

Report Number: S9-13-5

Dear Mr. Molinaro and Members of the Legislature:

A top priority of the Office of the State Comptroller is to help officials manage their resources efficiently and effectively and, by so doing, provide accountability for tax dollars spent to support operations. The Comptroller oversees the fiscal affairs of local governments statewide, as well as compliance with relevant statutes and observance of good business practices. This fiscal oversight is accomplished, in part, through our audits, which identify opportunities for improving operations and governance. Audits also can identify strategies to reduce costs and to strengthen controls intended to safeguard assets.

In accordance with these goals, we conducted an audit of eight counties throughout New York State. The objective of our audit was to determine whether counties are properly maintaining their bridges to ensure the safety of those who travel on them. Included in this, we attempted to ascertain if counties have a plan in place to prioritize bridge maintenance and replacement needs. Additionally, we questioned whether the counties have consistently provided funding for maintenance and repairs of bridges and, if so, whether bridge ratings are improving. We included the County of Dutchess (County) in this audit. Within the scope of this audit, we examined the County's policies and procedures and reviewed the maintenance and funding of bridge repairs and the recent New York State Department of Transportation (NYSDOT) ratings of County-owned bridges for the period January 1, 2007, to December 31, 2011. We also reviewed financial data and inspections for the period January 1, 2002, to December 31, 2006, to gain additional understanding of the condition of the bridges.

This report of examination letter contains our findings and recommendations specific to the County of Dutchess. We discussed the findings and recommendations with County officials and considered their comments, which appear in Appendix A, in preparing this report. County officials agreed with our findings and recommendations and indicated they planned to initiate corrective action. Appendix B includes our comments on issues raised in the County's response.

## **Summary of Findings**

Although the County has not developed a written plan for bridge maintenance and repair, it has taken action in recent years to improve and maintain bridge ratings. The Department of Public Works (DPW) has implemented an informal plan to annually select eight to 10 bridges to address, rather than addressing only those issues raised by the NYSDOT. During the audit period, the County maintained average bridge ratings and a consistent level of funding for bridge maintenance, repairs, and replacements.

The County also received a relatively consistent number of flags from the NYSDOT, with an average of 11 flags per year over the years reviewed. We tested the flags issued during the last five years of our audit period to determine if the County complied with the NYSDOT's response and action requirements. Of the 83 flags we tested, the County lacked sufficient documentation for nine flags. We could not determine if the County had responded to these nine flags in a timely manner. For the remaining 74 flags for which the County provided documentation, the County responded in a timely manner to 40 flags and failed to respond in a timely manner to 34 flags. Of these 34 flags, four were red, which indicates that structural failure was a potential outcome before the next bridge inspection. The County's response to these four flags was an average of 37 days later (79 days total) than the NYSDOT's six-week response requirement.

## **Background and Methodology**

The County covers 796 square miles and has approximately 298,000 residents. The County's budgeted expenditures totaled \$411 million in 2012; major costs included economic assistance, general government support, and transportation. These costs are funded primarily through property taxes, departmental income, and sales tax.

The County is governed by a 25-member County Legislature (Legislature). The County Executive is the chief executive officer and is responsible, along with other administrative staff, for the County's day-to-day management. The DPW is responsible for the maintenance and monitoring of approximately 150 County-owned bridges, including 12 pedestrian bridges. The DPW includes a professional engineer who is directly involved with the oversight of bridges. The operating budget of the DPW was \$11.4 million for the 2012 fiscal year.

The NYSDOT requires that all highway bridges be inspected at least every two years, with certain bridges inspected annually if they are determined to be deficient. The inspections are performed by the NYSDOT inspectors and include an assessment of a bridge's individual parts and an evaluation, resulting in an overall condition score for a bridge. The NYSDOT issues a numeric rating of 1 to 7, with a rating of 5 or greater considered "in good condition." A rating of less than 5 is considered "deficient" and indicates that corrective maintenance or rehabilitation must be conducted to restore a bridge to a "non-deficient" condition. A rating of less than 5 does not necessarily mean that a bridge is unsafe, but highlights bridges that should be considered for further review and maintenance, repair, rehabilitation, or replacement. If a bridge is deemed unsafe, it must be closed to all traffic.

In addition to numeric ratings, the NYSDOT can issue one or more flags on a bridge, indicating a clear and present danger or a condition that would result in a clear and present danger prior to the next scheduled inspection. There are three levels of flags: safety, yellow, and red. A safety

flag represents a danger to vehicles or pedestrians, but no threat to the structural integrity of the bridge. A yellow flag represents a potentially hazardous structural condition which, if left unattended, could become a clear and present danger before the next scheduled inspection. The highest level of flag is red, indicating a failure or potential failure of a primary structural component of the bridge that is likely to occur before the next scheduled inspection. Additionally, the NYSDOT can issue a notice that prompt, interim action is required after issuance of a red or safety flag, indicating there is an extreme situation that requires a response within 24 hours. All of these flags require prompt acknowledgement<sup>1</sup> by the responsible government and prompt action, ranging from correcting the safety issue to closing the bridge. A State-certified professional engineer is required to certify any repairs made in response to both the yellow and red flags.

To complete our audit objective, we conducted interviews with County officials and reviewed adopted policies and procedures. We also reviewed the most recent 10 years of bridge inspection reports and corresponding years' budgets and actual expenditures. We reviewed available documentation addressing responses to notification of flags on bridges for the most recent five years. We conducted our audit in accordance with generally accepted government auditing standards (GAGAS). More information on such standards and the methodology used in performing this audit is included in Appendix C of this report.

## **Audit Results**

Counties have a responsibility to taxpayers to ensure that public roadways, including bridges, are properly maintained and repaired. The failure to provide regular maintenance and needed repairs represents a hazard to the public and a potential liability to the County.

Due to the high costs of materials and limited financial flexibility, it is important that the County have a plan for both maintaining and repairing bridges. An established bridge maintenance and repair plan should include a mechanism for determining when and which bridges should be repaired and/or replaced. The County should ensure that the plan is sufficiently funded and feasible for the County to execute. Annual budgets for bridge repairs, replacement, and maintenance should be based on realistic expectations of expenditures. In addition, the Department should ensure that it complies with the NYSDOT requirements for responding to flags.

While the County does not have a written plan in place, it has implemented practices to maintain bridge ratings. The County selects eight to 10 bridges per year to be addressed. According to County officials, the estimated cost to complete these eight to 10 bridges is a basic estimate based on the evaluation done by the Engineering Division. Officials indicated that once bridges are selected, the Engineering Division then uses the approved budget to monitor the repairs.

In addition, County officials indicated that maintenance, construction, and planning for roads and bridges are included in the County's five-year capital project plans and that, while they budget for bridge replacement, funding is always subject to the approval of the Legislature. Additionally, the County does not track maintenance and repair costs by bridge, unless the bridge is being completely replaced or rehabilitated, which could make it more difficult to calculate

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<sup>1</sup> This acknowledgement is considered overdue if it has been longer than six weeks since notification was issued.

reasonable estimates in the future or to determine when it is more economical to replace rather than repair a bridge.

During our audit period, the annual bridge expenditures remained relatively consistent, with any significant variations attributed to various projects. During the same period, the County’s average bridge ratings fluctuated slightly, averaging a “non-deficient” rating overall. Ratings ranged from less than 5 (considered deficient) to more than 5 (considered in good condition).

<b>Year</b>	<b>Bridge Expenditures<sup>a</sup></b>	<b>Average Bridge Rating (Scale: 1 to 7)<sup>b</sup></b>	<b>Number of Bridges Inspected</b>	<b>Number of Deficient Bridges<sup>c</sup></b>	<b>Bridge Deficiency Percentage<sup>d</sup></b>
2002	\$235,075	3.81	27	8	30%
2003	\$254,575	5.17	118	58	49%
2004	\$237,920	5.39	29	14	48%
2005	\$241,320	5.10	121	59	49%
2006	\$233,712	5.59	31	18	58%
2007	\$300,736	5.10	121	62	51%
2008	\$305,284	5.26	30	15	50%
2009	\$305,370	5.06	121	64	53%
2010	\$357,105	5.45	30	16	53%
2011	\$362,913	5.03	121	64	53%

a) Excludes capital projects and Federal aid, which is recorded separate from bridge maintenance  
b) Based on average of NYSDOT Computer Condition Ratings for the bridges inspected during each year.  
c) Number of inspected bridges each year that fell below a rating of 5.  
d) The number of deficient bridges during the year divided by the number of bridges inspected during the year.

We reviewed all 83 flags issued by the NYSDOT for County-maintained bridges for the years 2007 to 2011. Of the flags reviewed, 43 (52 percent) were yellow, 30 (36 percent) were safety, and 10 (12 percent) were red, with three of the safety flags labeled as requiring prompt interim action. Nine flags, of the 83 flags reviewed, lacked sufficient documentation so we could not determine if the County responded in a timely manner. The County provided documentation for the remaining 74 flags showing that the County responded timely to 40 flags and failed to respond timely to 34 others. Of these 34 flags, four were red, which indicates that structural failure was a potential outcome before the next bridge inspection. The County’s response to these four flags was an average of 37 days later (79 days total) than the NYSDOT’s six-week response requirement.

Without having a written plan that prioritizes bridge maintenance and replacement needs, the County risks being faced with costly and unexpected bridge repairs, rehabilitations, or replacements in the future. In addition, the lack of records documenting the timeliness of the County’s action in response to the NYSDOT flags and the failure to track bridge maintenance and repairs by bridge may increase the County’s liability for any future vehicular damages because the County would have trouble demonstrating the adequacy of its repair actions.

## Recommendations

1. The DPW should establish a written plan for bridge maintenance and replacement.
2. The DPW should record and monitor repairs and maintenance by bridge.
3. The DPW should ensure that bridge flags are responded to within the NYSDOT's required timeframe.
4. The DPW should ensure that response letters to the NYSDOT are maintained.

The Legislature has the responsibility to initiate corrective action. A written corrective action plan (CAP) that addresses the findings and recommendations in this report should be prepared and forwarded to our office within 90 days, pursuant to Section 35 of the General Municipal Law. For more information on preparing and filing your CAP, please refer to our brochure, *Responding to an OSC Audit Report*, which you received with the draft audit report. We encourage the Legislature to make this plan available for public review in the Clerk's office.

Our office is available to assist you upon request. If you have any further questions, please contact Ann Singer, Chief Statewide Projects, at (607) 721-8306.

Sincerely,

Andrew S. SanFilippo  
Executive Deputy Comptroller  
Office of State and Local Government  
Accountability

## **APPENDIX A**

### **RESPONSE FROM COUNTY OFFICIALS**

The County officials' response to this audit can be found on the following pages.



**COUNTY OF DUTCHESS**  
DEPARTMENT OF PUBLIC WORKS

May 24, 2013

[REDACTED]

Associate Examiner  
Statewide and Regional Projects  
Division of Local Government and School Accountability  
Office of the State Comptroller  
295 Main Street, Room 1032  
Buffalo, NY 14203-2510

**RE: REPORT NUMBER: S9-13-44, Bridge Maintenance Audit, Dutchess County**

Dear [REDACTED]

This letter is Dutchess County's response to the report of the Office of the State Comptroller's audit of Dutchess County's bridge maintenance and management program for the period January 1, 2007, to December 31, 2011. Dutchess County is committed to the safety of the traveling public on all bridges owned and maintained by Dutchess County.

Dutchess County appreciates the guidance provided by the Office of the State Comptroller regarding the County's bridge maintenance and management program and believes the recommendations in the audit report will help assist the Department of Public Works in maintaining the County's bridges in safe condition efficiently and economically.

During the audit period, the Dutchess County Department of Public Works experienced many challenges, including the relocation of the Engineering Division office and all records relating to County-owned bridges twice within an eighteen-month period and the assignment of bridge management engineering duties to three different staff members as the result of personnel changes and program cuts. We believe it is a testament to the dedication and professionalism of the Department of Public Works' staff to be able to effectively administer the County's bridge maintenance and management program in the midst of these challenges.

Regarding the results of the audit, Dutchess County submits that the audit report overstates the time the County took to respond to flags issued by the New York State Department of Transportation (NYSDOT). Based on supplemental information provided by the Office of the State Comptroller upon completion of the audit report, it appears

that the County's timeliness to acknowledge bridge flags was based upon the date NYSDOT discovered the flagged condition. According to NYSDOT's "Inspection Flagging Procedure for Bridges" as contained in the NYSDOT *Bridge Inspection Manual*, response times to flags are based on the date of written notification to the party responsible for the bridge. Since NYSDOT's flagging procedure does not specifically define the date of written notification of a flagged condition, Dutchess County contends that this date is the date written notification is received by the responsible party, not the flag discovery date. A Department of Public Works' review of the 34 flags in the audit report which were classified as not being responded to in a timely fashion by the County, revealed an average time between the discovery date of a flag by NYSDOT to receipt of written notification of the flagged condition by the County of approximately 10 calendar days and a maximum time of 33 days. As a result, the County's response to the four red flags identified in the audit report was 60 days versus 79 days as listed in the report. Also, the number of flags which were not timely responded to is reduced from 34, as listed in the report, to 31

See  
Note 1  
Page 10

Dutchess County is pleased to note that the audit determined that the County has implemented practices to maintain consistent bridge ratings during the audit period, despite dwindling resources. Dutchess County remains committed to maintaining its bridges in a safe and cost-effective manner.

We are concerned that the report is not fully reflective of the frequent coordination between our office and the NYSDOT Region 8 Bridge Maintenance Group regarding our flagged bridge conditions. We note that although formal written acknowledgment receipt of some flags was only accomplished as of flag resolution, DCDPW acted swiftly to assure public safety and implement repairs or other appropriate responsive actions. Throughout the period of the study, our responsible bridge maintenance engineering staff have all been former NYSDOT Region 8 employees. In recent years, our Bridge Maintenance Engineer was a previous employee of the NYSDOT Region 8 Structures Group. Our engineers maintain frequent, direct communication with our NYSDOT counterparts regarding bridge safety, repairs, and flag resolution. These communications often involve emails and telephone conversations, for which we did not preserve documentation. In the case of red flags or prompt interim action flags, much direct coordination between our office and the New York State DOT has taken place between the time of receipt of a flag and our official written notice of correction. We have instituted practices which will ensure that all such future working level communication is appropriately documented in our bridge files.

See  
Note 2  
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We thank you for the diligent and cooperative efforts of your audit staff and for the opportunity to review and comment upon the report. Dutchess County has implemented appropriate steps to ensure that bridge flags are responded to in accordance with



NYSDOT procedures in the future. We have also begun preparation of a Corrective Action Plan which will address the remaining recommendations contained in the report.

Sincerely,

Robert H. Balkind, P.E.  
Acting Commissioner of Public Works

Is

c: Marcus J. Molinaro, Dutchess County Executive  
Robert Rolison, Chairman, Dutchess County Legislature  
Gregory V. Bentley, P.E., Director of Engineering

## **APPENDIX B**

### **OSC COMMENTS ON THE COUNTY'S RESPONSE**

#### Note 1

We maintain that the date of notification is the date on the notification itself. As such, our calculations for response times are unchanged.

#### Note 2

This was conveyed to the audit team during fieldwork; however, without adequate supporting documentation, we cannot change the response times that we calculated with records provided by County officials.

## **APPENDIX C**

### **AUDIT METHODOLOGY AND STANDARDS**

To complete our audit objective, we conducted interviews with County officials and reviewed adopted policies and procedures. We also reviewed the most recent 10 completed years of bridge inspection reports and the corresponding years' budgets and actual expenditures. We reviewed and documented all 83 flags received by County bridges for the period 2007 to 2011. We reviewed available documentation addressing responses to the NYSDOT's notification of flags on bridges.

We conducted this performance audit in accordance with generally accepted government auditing standards (GAGAS). Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.