OHIO AUDITOR OF STATE
KEITH FABER

Lake County Engineer's Office

Performance Audit

September 2025

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65 E. State St.
Columbus, Ohio 43215

Phone: (614) 466-4514
Toll Free: (800) 282-0370

www.ohioauditor.gov

OHIO AUDITOR OF STATE
KEITH FABER

To the Lake County Community:

The Auditor of State's Office recently completed a performance audit of the Lake County Engineer's Office (the Engineer). This service to the Engineer and to the taxpayers of the County is being provided at the request of the Lake County Commissioners.

This audit report contains recommendations, supported by detailed analysis, to enhance the overall efficiency, effectiveness, and transparency of the Engineer's operations. This report has been provided to the Engineer and its contents have been discussed with appropriate staff and leadership.

It is my hope that the Engineer will use the results of the performance audit as a resource for improving operational efficiency as well as service delivery effectiveness. The analyses contained within are intended to provide management with information, and in some cases, a range of options to consider while making decisions about their operations.

This performance audit report can be accessed online through the Auditor of State's website at http://www.ohioauditor.gov and choosing the "Search" option.

Sincerely,

KEITH FABER
Ohio Auditor of State

Tiffany L Ridenbaugh

Tiffany L Ridenbaugh, CPA, CFE, CGFM
Chief Deputy Auditor

September 25, 2025

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Introduction

At their core, local governments are service-oriented organizations that provide residents with a multitude of benefits. Those services and benefits are paid for using public dollars generated through taxes and fees, and so it is vitally important that local governments act as good stewards of public money and balance the needs of their constituents alongside transparent management. Sound financial planning, communication, and transparency are important parts of ensuring good stewardship, as are human resource and operational management practices that optimize efficiency and effectiveness.

Counties are a political subdivision of the state of Ohio, governed under Title 3 of the Ohio Revised Code. Counties are typically governed by a Board of Commissioners, consisting of three elected individuals serving staggered four-year terms. The Board of Commissioners make decisions on behalf of their county and have the responsibility to ensure that the county government fulfills its duties to the state and to county residents. Other elected county officials include the prosecuting attorney, sheriff, coroner, engineer, recorder, auditor, and treasurer. These elected officials have authority over all operations under their purview, while the Commissioners have top-level budgetary authority.

County Engineers are responsible for the maintenance, repair, and improvement of county-owned roads, bridges, and intersections to ensure they are safe and reliable. Each county in Ohio elects a County Engineer to serve a four-year term. The Engineer's duties include the preparation of all plans, contracts, estimates of costs, and other details related to county public improvement projects; as well as the completion of an annual report on the condition of county-owned assets for the Board of Commissioners and, if requested, the Ohio Director of Transportation. Additional responsibilities of the County Engineer include the inspection of county-owned roads and bridges, the construction and repair of sidewalks, curbs, gutters, approaches, and driveways, the erection of signposts and trail markers, and the establishment of traffic closures.

The Ohio Auditor of State's Ohio Performance Team (OPT) conducts performance audits of government entities and provides data-driven analyses and recommendations which can assist officials in improving the economy, efficiency, and effectiveness of both an organization as a whole, or a small department or program.[1] The Lake County Board of Commissioners requested a performance audit of the Lake County Engineer's Office. The goal of this audit was to provide the Lake County Board of Commissioners and the Engineer's Office with information and potential opportunities to ensure the continued fiscal health and operational efficiency of the organization.

[1] Performance audits are conducted in accordance with Generally Accepted Government Auditing Standards, see Appendix A for more details.

Lake County Engineer's Office

Lake County (Lake or the County) is the smallest county in Ohio by land area, consisting of 229.4 square miles in Northeast Ohio. The County encompasses five townships, nine cities, and nine villages. As of Calendar Year (CY) 2020, the County had a population of approximately 230,000 residents, with a population per square mile of approximately 1,000 and a median household income of about $75,000. Located along Lake Erie, the County experiences higher than average levels of winter storms in comparison to the rest of the state due to Lake Effect snow.[2]

The Lake County Engineer's Office (LCEO or the Office) is responsible for the inspection, construction, and maintenance of 300 lane miles[3] of county roads and 102 county bridges. The Ohio Department of Transportation (ODOT) defines road maintenance as including patching potholes, repairing pavement, sweeping, brush clearing, mowing, cleaning drains, replacing lighting, picking up litter, snow plowing, ice removal, and salting. ODOT additionally indicates that these activities are the responsibility of local municipalities within their corporation limits. LCEO indicated that it performs several road maintenance activities outside of the ODOT definition, including guardrail and retaining wall maintenance, striping, signage, and traffic signals. In addition to the 300 lane miles of county roads, LCEO performs maintenance on a 110-lane mile stretch of State Route 2 (S.R. 2), a state highway that runs along Lake Erie from Ohio's Northwest border to Painesville Township in Lake County. Within Lake County, S.R. 2 runs through six cities and one township.

The maintenance of state routes in Ohio is typically the responsibility of the municipalities that the state route runs through. In Lake County, LCEO is only statutorily required to maintain three lane miles of S.R. 2 because those miles are outside of municipal corporations. However, LCEO maintains the entirety of S.R. 2 within Lake County due to long-standing contractual agreements between the Office and the municipalities within the County. The costs associated with this maintenance are outlined within the contract and are shared evenly between LCEO and the municipalities. For more information on this, see **Recommendation 1**. The Office also assists local townships, villages, and cities with road maintenance and snow plowing as necessary, without charging them, which it is not legally required to do.

[2] Lake Effect snow is produced when cold, below-freezing air passes over a lake's warmer waters.
[3] Lane miles are used to measure the total length and width of a given highway or road. They are calculated by multiplying the length of a road by the number of lanes on that road.

Governance and Organization

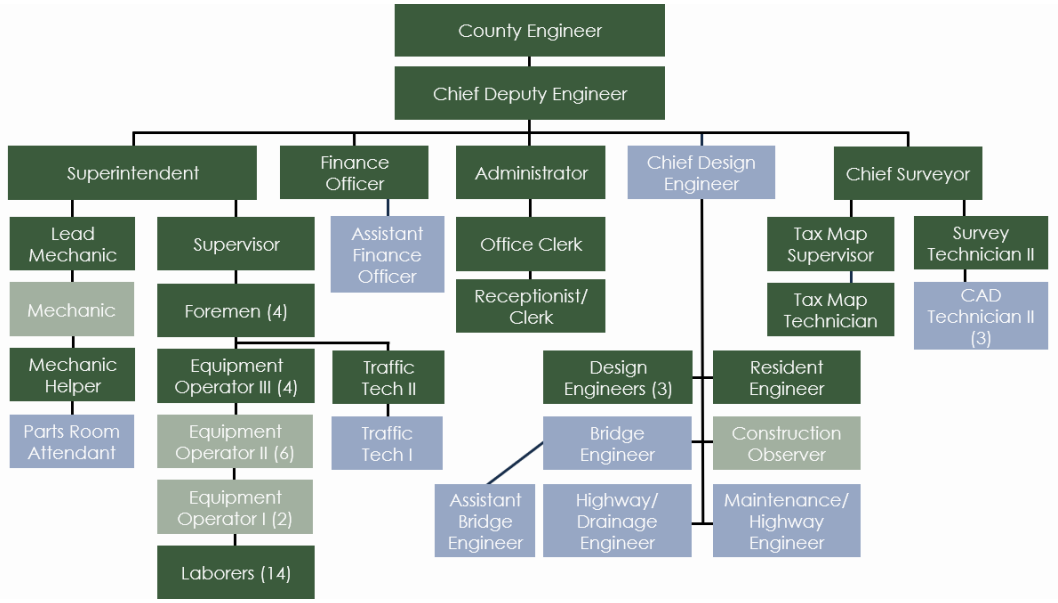
The Lake County Engineer is an independently elected official, voted into office by the citizens of Lake County. In addition to Lake County residents, the Engineer's Office is also accountable to the Lake County Board of Commissioners (the Commissioners) and the Ohio Department of Transportation (ODOT). The Ohio Revised Code (ORC) requires the Engineer to provide an annual report to the County Commissioners regarding the condition of county roads and bridges, as well as an estimate of the probable amount of funds required to maintain, repair, or construct these structures. These reports are used by the Commissioners in their review and approval of the Office's annual budget. The Engineer is also statutorily obligated to submit a report to ODOT if requested by the Director of Transportation. Additionally, ODOT must review and approve any projects the Office conducts using federal funding to ensure the Office is meeting all requirements for federally funded projects.

The Lake County Engineer's Office is organized into five operational areas, consisting of 68 positions, 49 of which were filled as of January 2025.[4] The operational areas include office administration, engineering and design, survey and inspection, mechanic garage, and road crew. For information on how LCEO's staffing levels compare to peers, see **Appendix C**.

The chart on the following page represents LCEO's organizational structure. In this chart, job titles with multiple position are indicated by a number in parentheticals, while titles without a number only have one position. Dark green positions were entirely filled, light green positions were partially filled, and light blue positions were entirely vacant as of January of 2025.

[4] Including vacant positions, seasonal, temporary, and part-time workers.

LCEO Table of Organization



Note: Adapted from LCEO's organizational chart structure. Lines in this visual do not necessarily denote the chain of command within the Office, instead reflecting the various ranks of positions.
Source: LCEO

During the course of the audit, a new Lake County Engineer was elected and took office. The former Lake County Engineer held the office for over 20 years; he was first elected in CY 2000 and did not run for reelection in CY 2024. The current County Engineer was the sole candidate in the election for Lake County Engineer in CY 2024, and took office in January of 2025. Prior to his election, he served as the Chief Design Engineer and had worked for LCEO for 28 years.

One of the reasons the Lake County Commissioners requested this audit was to provide the new engineer with information and potential opportunities for improvement as he took office. Because of this intention, staffing and financial information used in the following analyses reflect the state of the Office at the end of CY 2024.

Financial Background

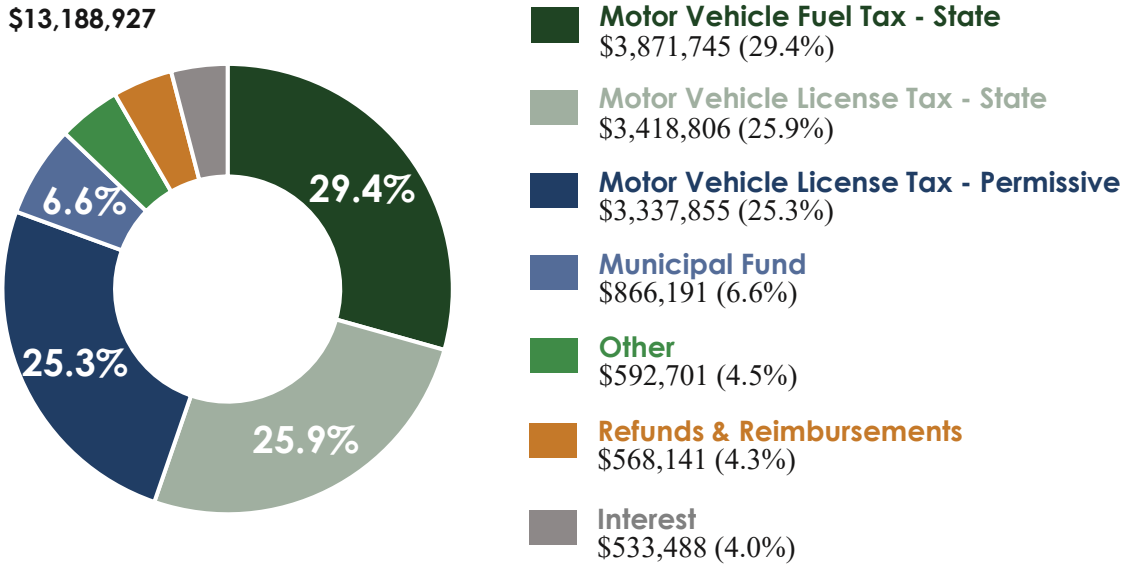
Generally, county commissioners are responsible for approving the budgets and allocations for all county offices and departments. Generally, Engineer's Offices are funded separately from a County's general fund, receiving the majority of revenue from specific tax sources designed to support the functions of an engineer's office. However, the Office is still subject to the appropriation authority of the County Commissioners. LCEO creates an annual budget, which is submitted to the County Commissioners for their approval and subsequent appropriation of funding. The Office's annual budget is constrained by the limitations of the funding appropriated by the Commissioners, which is, in part, due to the Office's designated revenue sources. The budget accounts for all of the costs associated with the Office's services, including staff salaries

and benefits, contracted services, equipment, supplies and materials, and building and facility expenditures.

Revenue

LCEO is largely funded from Lake County's share of the Auto License and Gas Tax (ALGT) revenue. This revenue comes from a combination of state and local taxes on motor vehicle fuel sales and registrations, representing over 80 percent of the Office's total revenue. A county's share of ALGT revenue must be used for specific purposes as outlined in ORC Chapter 4504, which include the planning, constructing, improving, maintaining, and repairing of public roads, highways, and bridges in the county. LCEO has not historically received any funding from Lake County's General Fund, although the Office has occasionally received dedicated purpose funding from the County's Casino Tax Revenue for specific projects in the past. The chart below shows the distribution of the Office's funding by revenue source for CY 2024.

CY 2024 LCEO Revenues by Source



Note: Other includes Transfers In, Advances In, Court Fines, Vehicle Sales, and Miscellaneous Revenue.
Source: LCEO

State Tax

The motor vehicle fuel portion of this tax is collected by the state. This revenue is split between the state and municipalities, as well as an allocation to the Waterways Safety Fund, Wildlife Boater Angler Fund, Ohio Turnpike Commission, and Motor Fuel Tax Administrative Fund. The county share of this revenue is distributed to all 88 counties in Ohio in equal amounts. This distribution represents 29 percent of the Office's revenue.

The motor vehicle registration portion of the tax is collected by both the state and municipalities. The state collects a base rate dependent on the type of vehicle and distributes this revenue in accordance with ORC Chapter 4504. A portion of this revenue is set aside for the Highway Operating Fund, Highway Bond Retirement Fund, and Highway Safety Fund. The remaining revenue is distributed as follows:

- 34 percent to the municipality of registration;
- 47 percent to the county in which the vehicle owner resides;
- 9 percent to all counties, in the ratio of county roads to the state total;
- 5 percent to all townships, in the ratio of township roads to the state total; and,
- 5 percent to all counties, distributed evenly.

Under this distribution structure, Lake County receives a portion of the tax revenue based on the number of vehicles registered in the county, the number of county residents registering their vehicles, as well as an even share with the rest of Ohio's counties. This total distribution makes up 26 percent of LCEO's total revenue.

Local Tax

The portion of the motor vehicle license tax collected by municipalities is referred to as a permissive tax. ORC Chapter 4504 prescribes counties the authority to levy four separate taxes on the operation of motor vehicles, each at the rate of five dollars per motor vehicle, for a total of twenty dollars per vehicle. Lake County has enacted all four motor vehicle license taxes that it is authorized to by the ORC, the most recent of which was enacted in CY 2018. Revenue from all four of these taxes falls within the Permissive Motor Vehicle License Tax category in the chart above, which makes up over 25 percent of total revenue. Each of these taxes, the year they were enacted, the associated fee, and the revenue generated in CY 2024 are shown in the table below. Revenue from the first three taxes must be shared with municipalities within the county, but the fourth does not require revenue sharing.

Lake County Permissive Motor Vehicle Taxes

Tax	Year Authorized by ORC	Year Enacted by Lake County	Fee Amount	CY 2024 Amount Generated for LCEO
Initial Permissive Motor Vehicle Tax	1967	1968	$5	$345K
Additional Permissive Motor Vehicle Tax	1987	1988	$10	$1.78M
Additional Permissive Motor Vehicle Tax #2	2017	2018	$5	$1.21M

Note: Additional Permissive Motor Vehicle Tax authorized in 1987 includes two $5 fees, for the total of $10 depicted in the table. The state budget bill for FY 2026 and FY 2027 authorized an additional permissive motor vehicle tax. However, the revenues from this additional tax do not fund the county engineer's office.
Source: LCEO

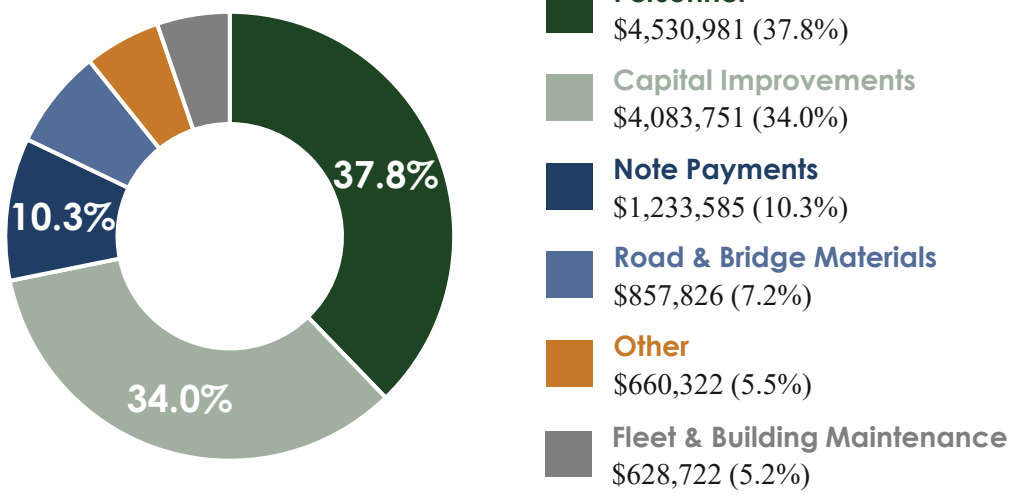
The remaining 20 percent of the Office's revenue comes from the Municipal Fund, refunds & reimbursements, interest, and other revenue sources. The Municipal Fund consists of payments from municipalities for the maintenance of State Route 2, which is conducted by LCEO. These cities include Painesville, Wickliffe, Willowick, Eastlake, Willoughby, and Mentor. For more information on this, see **Recommendation 1.** Other revenue sources include transfers in, advances in, court fines, and the sale of vehicles.

Expenditures

In CY 2024, LCEO's annual expenditures totaled almost $12 million. The following chart shows the Office's expenditures based on high level categories. The largest expenditure category is personnel, which includes employee salaries and benefits. The second largest expenditure category is capital improvements, consisting of project related expenses, including contracted services, equipment, and advertising and printing.

CY 2024 LCEO Expenditures by Type

Total: $11,995,187



Source: LCEO

The third largest expenditure category is note payments, which represent annual principal and interest payments made on the Office's outstanding debt obligation. This debt was initially taken out in CY 2018 when LCEO's expenditures spiked, reportedly due to major improvements and repairs. The Office used a portion of its fund balance to pay for these increased expenses, however, there was not enough funding to complete the necessary repairs. LCEO requested that the County Commissioners enact the third permissive motor vehicle license tax to generate additional revenue for the remaining repairs. The Commissioners agreed, with the stipulation that LCEO take out debt to address the issues immediately and use the additional revenue to repay

the debt. This initial debt was taken out in the form of a one-year note that has been repaid through multiple subsequent short-term notes of one year or less.[5]

The fourth largest category was road and bridge materials, representing 7.2 percent of the Office's expenditures in CY 2024. The smallest category of expenditures was fleet and building maintenance, at 5.2 percent. LCEO owns all of its fleet vehicles and equipment and performs maintenance and repairs in-house, when possible. The Office utilizes four facilities, including a general operational facility and a State Route 2 facility, which LCEO owns, cleans, and maintains. The general operational facility is used for vehicle storage, salt storage, and the mechanic garage. The engineers and administrative staff work in a shared county office. The Office also utilizes a small portion of a village-owned building for additional salt storage.

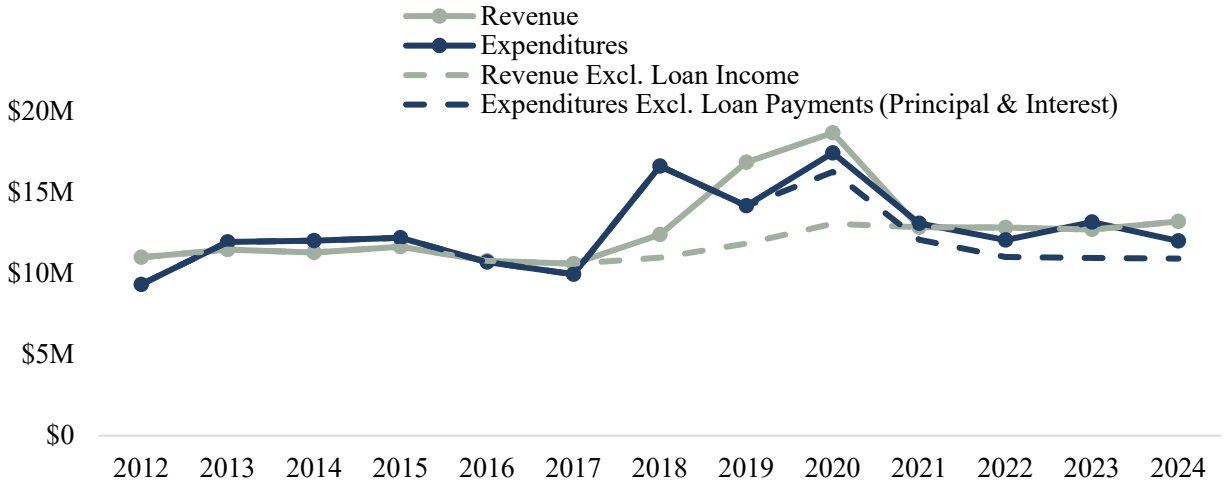
The other category includes office supplies, information technology services, education and training, professional dues and memberships, and uniforms. For information on how LCEO's expenditures compare to peers, see **Appendix B**.

Historical Revenue and Expenditure Trends

LCEO's revenues are limited by the allowed permissive motor vehicle license taxes and the state distribution of ALGT taxes. In the past thirteen years, these revenue sources have not always generated enough revenue to cover the Office's expenditures. The graph below shows the Office's revenues and expenditures from CY 2012 to CY 2024. Notably, annual expenditures exceeded annual revenues in six out of the thirteen years. Due to the nature of engineer's offices, it is not uncommon that annual expenditures exceed revenues on occasion.[6] In order to support operations when this occurs, it is important that organizations maintain an adequate fund balance. From CY 2013 to CY 2024, LCEO has maintained a fund balance between $3.7 million and $10.1 million. This balance has been used to pay for the Office's expenses in the years that they exceeded revenues. When there is a surplus of revenue in any given year, it is carried over into the fund balance. For more information on this, see **Recommendation 2**.

[5]It is unclear why this method of borrowing was chosen. Other potential options for obtaining this funding include a bond, road levy, or long-term loan.
[6] For more information on how LCEO compares to peers in this area, see **Appendix B**.

LCEO Revenues & Expenditures from CY 2012 to CY 2024



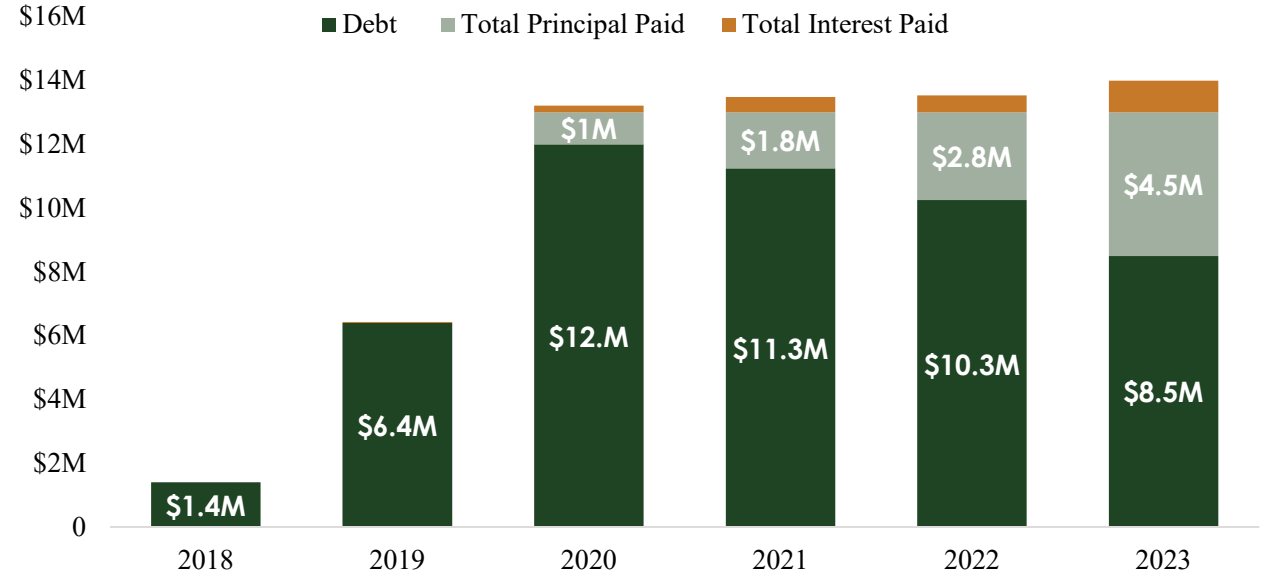
Note: Revenues and expenditures shown in this chart only show the net total of the notes taken out each year in order to reflect the revenues and expenditures that actually impacted the Office's budget.
Source: LCEO

The graph shows a significant increase in expenditures in CY 2018, which the Office stated was due to major improvement and repair projects that it undertook during that time period. As previously mentioned, a portion of the increased expenditures were paid for using the Office's available fund balances. However, to fully cover the increase in expenditures, the Office took out a short-term note for additional revenue. The graph also shows the Office's revenues and expenditures excluding the debt for context on how this obligation has impacted LCEO's operations.

Short-Term Note Repayment

As discussed in the Expenditures Section, LCEO took out a debt obligation in the form of multiple short-term notes in CY 2018, CY 2019, and CY 2020, for a total of $12 million. Each year, the Office repays the previous year's principal with a new note, along with a principal payment, reducing the balance of the debt over time. The graph below shows the cumulative debt, principal paid, and interest paid over the past six years. For further detail on the debt and payments made, see **Appendix B**.

LCEO Debt and Payments Made Over Time



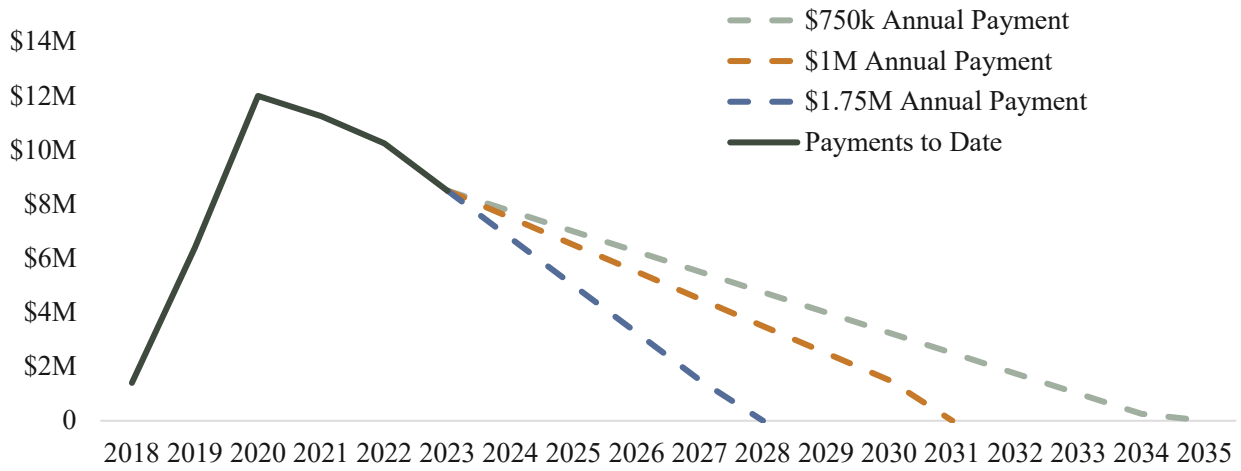
Source: LCEO

The County took out the initial note on behalf of LCEO in CY 2018, providing the Office with $1.4 million in revenue. Through the same process, the Office used the note in CY 2019 partially to repay the CY 2018 note as well as $5 million for the road repairs. Finally, in CY 2020, the Office used the $12 million note partially to repay the CY 2019 note, along with a payment out of pocket, with the remainder of the note providing the Office with $5.6 million of revenue. In total, the Office received $12 million from the notes over three years.

Each year since, the note taken out has been used entirely to repay the previous year's note, along with a principal and interest payment out of LCEO's budget. In CY 2023, this process occurred twice, resulting in a larger portion of the principal being paid off in that year. The Office uses the revenue received from the fourth permissive motor vehicle license tax enacted by the Commissioners to make these out-of-pocket principal and interest payments. So far, the Office has paid approximately $1.3 million in interest payments. The current outstanding debt balance is $7.75 million, due in September of CY 2025.

Since CY 2020, the Office has paid off between $750 thousand and $1.75 million of this debt each year. The graph below shows the payoff projection for each of the Office's previous annual payments.

Note Payoff Projection



Source: LCEO

If the Office pays off this debt with an annual payment out of pocket of $750 thousand, the debt will be paid off by CY 2035, with approximately $3.0 million paid in interest. If the Office opts for a higher annual payment of $1 million, the debt could be paid off by CY 2032, with approximately $2.6 million paid in interest. If the Office opts for an even higher annual payment of $1.75 million, which they paid in CY 2023 through two short-term notes, the debt could be paid off by 2028 with approximately $2.1 million paid in interest.

These interest estimates are based on the interest rate of the current note, which is 3.75 percent. The interest rate is subject to change due to the short-term nature of the note. Since the County takes out a new note each year, the interest rate has the opportunity to be adjusted annually. The initial interest rate was 2.25 percent, showing that there has been an increase in the six years since the first note was taken out.

Summary of Recommendations

Our performance audit was conducted at the request of the Lake County Board of Commissioners. We identified four main areas for analysis that would provide the County and Office with data-driven information to be used for strategic decision making. Specifically, we reviewed the Office's financial management, human resources, departmental operations, and fleet management. In this report, financial management and human resources are grouped together within Strategic Management, because it is critical for organizations to make strategic decisions regarding both finances and personnel to ensure they are spending their money efficiently and effectively. Departmental operations and fleet management are grouped together within Operational Management, because they both relate to how the Office completes its responsibilities.

Our office used best practices, peer counties, and historical data in our analyses. In consultation with LCEO, a set of seven county engineer's offices were selected for peer comparisons contained in this report. These peers were selected based on geographical proximity, size, and similarity of operations. The peer set consists of the county engineer's offices for Crawford County, Columbiana County, Erie County, Geauga County, Huron County, Ottawa County, and Summit County.

Strategic Management

As a public entity that operates using tax revenue, sound financial management is one of the foremost duties of government. This includes not only balancing current expenditures to stay within available revenues, but also developing long-term financial policies and plans for stability and transparency. We used peer comparisons and identified best practices in order to review LCEO's financial condition and evaluate financial policies and long-term planning.

Recommendation 1: LCEO is contractually responsible for the maintenance of a 110-lane mile stretch of State Route 2 (S.R. 2) on behalf of surrounding municipalities. The current arrangement for the provision of these services is that the Office provides maintenance on the participating Cities' portion of the State Route and assumes half of the costs associated with the maintenance. These contracts have not been updated since they were initially created and signed in CY 1972 and CY 2003, and some provisions are out of date, or were not considered at the time of writing the contract. LCEO and the County Commissioners should revisit these contracts and consider renegotiating them to reflect the current state of maintenance operations for the Office and potentially relieve some of the associated financial burden from the Office.

Recommendation 2: Maintaining adequate fund balances help entities to avoid financial difficulties that may arise from unforeseen expenses or reduced revenues. This is particularly important for entities that are vulnerable to natural disasters and other unpredictable needs for service. LCEO does not have a policy in place that indicates a desirable minimum and maximum fund balance level. Industry best practices emphasize the importance of a formal policy and

provide guidance on minimum fund balance thresholds. The Office should establish a formal, written fund balance policy and apply it to the existing balance. Doing so would help the Office maintain balances that would help to address future unforeseen budgetary issues, while ensuring the balance is not higher than necessary.

Recommendation 3: LCEO currently has no formal, written management plans in place. While there are informal processes in place related to the strategic management of finances, staff, and projects, these protocols are not documented within formal plans. Without documentation, these processes may not be followed consistently over time and amidst employee turnover and attrition. LCEO should develop formal, written strategic and capital plans, and utilize these plans to guide financial decision-making and align annual budgets with organizational goals.

Recommendation 4: Employee wages at LCEO are set by the Lake County Engineer because there is not a Collective Bargaining Agreement (CBA) or other formal document in place that dictates a salary schedule. However, the Engineer must set wages within the financial constraints of the Office's budget and is required to use the Countywide employee benefit plan. LCEO has faced difficulties maintaining a sufficient staff level in recent years, with LCEO officials indicating that the Office often loses employees to higher paying jobs at surrounding municipalities. In order to ensure the Office is making strategic decisions related to wages, LCEO should develop a formal compensation strategy or philosophy. This would assist the Office with ensuring wages are fair and competitive, prioritizing the employee experience, and clearly communicating the compensation structure to current and potential employees.

Operational Management

LCEO is responsible for a wide array of responsibilities related to the maintenance, repairs, construction, and snowplowing of county-owned roads and bridges. In order to accomplish all of these duties, the Office must maintain a skilled workforce, a multitude of vehicles and equipment, and facilities for storage, administration, and mechanical work. The adequate management of staff, fleet, facilities, and projects is critical to ensuring that the Office is operating as efficiently and effectively as possible.

Recommendation 5: While LCEO has a work order system in place, it is not currently utilized to its fullest potential and the Office is unable to extract complete datasets from it. It is unclear if the Office's inability to generate reports is the result of the data itself being absent from the system or a lack of training and knowledge of how to generate aggregated reports. After a key staff member left the Office, the Office lost access to the work order system, resulting in a disruption of regular operations. LCEO should fully utilize the work order system to track key metrics related to the Office's operations and use this data to assess the Office's efficiency and strategically manage operations moving forward. If the current system is not able to collect necessary datapoints, LCEO should consider replacing the system. Additionally, LCEO should ensure that multiple employees have the ability to access the work order system and the knowledge to use it properly in order to prevent a similar disruption from occurring in the future.

Recommendation 6: LCEO does not currently have utilization benchmarks in place for fleet vehicles or equipment. The Office relies on the experience and expertise of tenured employees for decision-making regarding fleet management. Industry best practices recommend the establishment of benchmarks and collection of vehicle and equipment utilization data in order to accurately assess fleet quality, size, and composition. LCEO should establish fleet benchmarks, in accordance with best practices, and use these benchmarks to conduct a fleet utilization analysis. This will enable the Office to review its fleet and make strategic, data-driven decisions regarding fleet acquisition, retirement, and rightsizing.

Recommendation 7: LCEO does not currently have a formal, written fleet replacement plan in place. There are informal standards and processes in place, but the Office has fallen behind on replacements due to budget constraints. Additionally, LCEO's fleet is aging, and a large number of vehicles and equipment are currently in need of replacement. The Office should develop and implement formal, written fleet replacement plans to ensure it is conducting fleet replacement in a timely manner, forecasting fleet needs to the best of its ability, and limiting unnecessary expenses on the maintenance and repairs of fleet vehicles and equipment in need of replacement.

Strategic Management

Strategic management of finances and human resources is important for government entities to ensure public dollars are spent in an effective, efficient, and transparent manner. To ensure the spending of public dollars is accounted for properly, Lake County is subject to annual financial audits. LCEO creates an annual budget for its operations that must be approved by the County Commissioners. In this budget, the Office allocates expenditures for the salaries, benefits, road supplies and materials, equipment, contracted services, and fleet maintenance required to conduct the maintenance, repairs, construction, and snow plowing of roads and bridges.

In addition to operational budgets, organizations such as LCEO must properly plan for future expenses through the use of long-term planning documents. Strategic and capital plans, when used wisely, can be tools that guide management decisions based on operational goals. Maintaining planning documents and routinely reviewing and updating them allows an organization to respond to operational needs in an efficient and effective manner.

Recommendation 1: Renegotiate Contracts for the Maintenance of State Route 2

LCEO is contractually responsible for the maintenance of a 110-lane mile stretch of State Route 2 (S.R. 2) on behalf of surrounding municipalities. The current arrangement for the provision of these services is that the Office provides maintenance on the participating Cities' portion of the State Route and assumes half of the costs associated with the maintenance. These contracts have not been updated since they were initially created and signed in CY 1972 and CY 2003, and some provisions are out of date, or were not considered at the time of writing the contract. LCEO and the County Commissioners should revisit these contracts and consider renegotiating them to reflect the current state of maintenance operations for the Office and potentially relieve some of the associated financial burden from the Office.

Impact

Renegotiating the Office's contracts for the maintenance of S.R. 2 would protect the County from legal vulnerabilities, reduce confusion regarding service delivery, and allow the Office to recoup more of the associated expenses. LCEO is currently responsible for maintaining more lane mileage than is indicated in the contract, which the municipalities are not contractually obligated to pay them for. There have been delays in service provision as a result of confusion regarding the work included in the contract. An updated, comprehensive statement of the scope of work would ensure that all parties involved are in agreement on what LCEO is responsible for. Renegotiation would also allow the Office to recoup a larger portion of the expenses associated with the road, particularly administrative expenses, which they do not currently charge the municipalities for. Additionally, the Office could choose to renegotiate the cost-sharing agreement to shift more of the cost onto the municipalities, who are statutorily

responsible for the maintenance. The Office would then have additional revenue to use for regular, statutorily required operations.

Background

The Ohio Department of Transportation (ODOT) is the State of Ohio's primary authority on road safety, accessibility, and maintenance. However, this Department is not responsible for the maintenance of all roads in the state. ORC § 5511.01 indicates that maintenance and repair of state highways within municipal corporations is not the responsibility of the ODOT, with the exception of bridges and any damages caused by ODOT. Instead, this responsibility falls on the municipal corporations that state highways run through.

State Route 2 is a state highway that runs along Lake Erie from Ohio's Northwest border to Painesville Township in Lake County. Within Lake County, S.R. 2 runs through six cities and one township. Although the maintenance and repair of S.R. 2 is statutorily the responsibility of these municipalities, ORC § 5535.08 allows government entities to contribute to the maintenance and repairs on roads under the control of another entity, if an agreement is in place.

Due to two long-standing contractual agreements between LCEO and all of the cities that the road runs through within the County, the Office maintains a 110-lane mile stretch of State Route 2 on their behalf. The Office has two contracts for the maintenance of this road: a CY 1972 contract with the Cities of Wickliffe, Willowick, Eastlake, Willoughby, and Mentor, and a CY 2003 contract with the City of Painesville.

Methodology

During initial interviews with LCEO's leadership, the Office's maintenance responsibility on S.R. 2 was indicated as a financial burden on the Office's operations. In order to assess this situation, we obtained copies of the S.R. 2 contracts and analyzed them to identify their impact and any potential issues. We compared the responsibilities, financial obligations, and scope of work outlined in the contracts to the current state of operations. Next, we obtained criteria related to contract management and State Route maintenance from peers, the County Engineer Association of Ohio (CEAO), and the National State Auditor Association (NSAA). We then compared LCEO's contract management practices to this criteria.

Analysis

The contracts in place between LCEO and the cities listed above for the maintenance of S.R. 2 stipulate the duties that the Office is responsible for, the number of lane miles covered within each municipality, and how costs associated with the maintenance will be calculated and shared. These contracts were initially negotiated and signed in CY 1972 and CY 2003. The CY 1972 contract includes five cities, and the CY 2003 contract contains the same provisions for one additional city. One difference between the two contracts is that the CY 1972 contract indicates that it was only meant to cover a term of two years, while the CY 2003 contract did not include a

specific contract term. Both contracts have a provision for the auto-renewal of the contracts every two years as long as no party involved terminates it. As a result of this provision, these contracts are still in effect.

Lane Mileage

Neither of the S.R. 2 contracts have been updated since they were initially created, which occurred over 50 and 20 years ago, respectively. As a result, some provisions are no longer accurate to the current state of operations. The primary example of this is the definition of lane miles maintained. Between the two agreements, LCEO is responsible for a total of 84.5 lane miles on S.R. 2. However, due to a third lane expansion conducted by ODOT, the actual number of lane miles on S.R. 2 within the municipalities involved in the contract increased by 25.7, resulting in a total lane mileage of 110.2. The table below shows the lane miles indicated in the contract and the actual lane mileage maintained on S.R. 2 by municipality.

S.R. 2 Lane Mileage

City	Contract Lane Miles	Actual Lane Miles
Wickliffe	12.3	12.8
Willowick	3.5	3.8
Eastlake	11.9	12.5
Willoughby	11.5	17.2
Mentor	31.8	47.1
Painesville	13.6	13.6
Lake County		3.1
Total	84.5	110.2

Source: LCEO

LCEO has been responsible for maintaining these additional lane miles, despite them not being included in the contracts. Invoices from the Office to the cities show that the municipalities are being charged based on the current number of lane miles maintained. However, the cities are not contractually obligated to pay the County for the work on the additional lane miles. If the cities were to abide by the explicit provisions in the contract, they could refuse to repay LCEO for the work done on the additional 25.7 lane miles. This represents a potential vulnerability for the Office, which would be resolved if the contracts were renegotiated and updated to reflect the current lane mileage.

Scope of Work

The contracts also outline LCEO's responsibilities on S.R. 2. As the contracts are written, these responsibilities include the following:

- Snow and ice control;
- Pavement repair;
- Berm repair;
- Pavement striping;
- Guardrail maintenance;
- Vegetation control;
- Drainage; and
- Installation of necessary traffic control signs.

Additionally, the contracts explicitly exclude any major repair or replacements due to unforeseen causes or deferred maintenance from LCEO's responsibilities. Although this scope of work is clearly defined in the contracts, it may not represent a comprehensive list of the duties LCEO is expected to perform, especially as needs have evolved since the contract was created. For example, street light maintenance is not explicitly included in the scope of work included in the contract. However, there has been a lighting outage on S.R. 2 for multiple years that the Lake County Commissioners and residents expected LCEO to address. The ambiguity in these contracts caused confusion regarding who was responsible for this, resulting in delays in service provision.

In *Contracting for Services: A National State Auditors Association Best Practices Document* (NSAA, 2003), the NSAA recommends that contracts include a clear definition of the scope of work expected from the contract. This is critically important for LCEO's S.R. 2 contracts in order to ensure that the Commissioners, the Engineer's Office, the municipalities involved, and Lake County residents are all aware of and in agreement on what is and is not LCEO's responsibility on S.R. 2. When renegotiating these contracts, the Office and municipalities must update the scope of work to be comprehensive and reflective of the current state of operations to ensure efficient and effective service provision.

Expenses Charged

LCEO keeps records of the costs associated with the completion of its S.R. 2 duties, calculates the cost per lane mile, and charges the municipalities quarterly based upon the proportion of lane mileage within each city. The chart below shows the total expenses and the expenses per lane mile that LCEO attributed to S.R. 2 maintenance in CY 2023, as reflected in the invoices sent to municipalities.

CY 2023 Total S.R. 2 Expenses by Category

Expense Category	S.R. 2 Total Expenses	S.R. 2 Expenses per Lane Mile
Salaries	$238,725.44	$2,167.08
Benefits	$89,882.27	$815.92
Vehicle Repair & Supplies	$57,905.67	$525.65
Fuel, Oil & Lubricants	$19,125.00	$173.61
Utilities	$16,866.14	$153.11
Information Technology	$270.00	$2.45
Other Expenses	$7,902.15	$71.73
Auction Administration/Liability	$2,362.19	$21.44
Other Supplies	$35,488.92	$322.16
Contracted Services	$264,462.77	$2,400.72
Equipment	$115,312.04	$1,046.77
Total	**$848,302.59**	**$7,700.64**

Source: LCEO

One expense category that is included in LCEO's general expenses, but not in S.R. 2 expenses, is administrative expenses, which include: office supplies, advertising and printing, postage, professional dues and memberships, uniforms, and travel expenses. There is currently no provision within the S.R. 2 contracts relating to the inclusion of administrative costs in the cost sharing agreement. As a result, LCEO is responsible for all of its administrative costs, including the costs that are related to S.R. 2 maintenance.

If any of these administrative costs that the Office experiences can be attributed to S.R. 2, LCEO should consider including them in the invoices sent to the municipalities. Alternatively, the Office could include an administrative fee in its invoices, to at least recoup the costs associated with tracking S.R. 2 costs and billing the municipalities. This would allow for an even split of all of the costs associated with the road.

Cost-Sharing Agreement

Another potentially outdated provision included in the S.R. 2 contracts is the cost-sharing agreement. Costs associated with maintenance completed on S.R. 2 are split 50/50 between the County and the cities. As a result, LCEO is responsible for 50 percent of the costs associated with a road that it is not statutorily required to maintain.

In addition to the lack of a statutory requirement, none of the peers maintain any State Route lane miles. The previous County Engineer indicated that Lake was the only county in Ohio which had a contract of this nature, and in reaching out to verify this claim with the County Engineer Association of Ohio, they indicated that a formal contract for the maintenance of an entire state route on behalf of municipalities is indeed rare. They are aware of a few instances where county engineer's offices assist municipalities with snow removal or emergency maintenance, but these

agreements tend to be small in scope. This indicates that LCEO is responsible for additional expenses that none of the peers, and few county engineer's offices in Ohio, face.

Due to the lack of statutory requirements and similar agreements within Ohio, LCEO and the County Commissioners should reconsider the cost-sharing agreement in place when renegotiating these contracts. If LCEO is to continue taking on this responsibility, it would be beneficial for the financial condition of the Office, and consistent with practices across the state, to shift more of the costs for the maintenance of S.R. 2 onto the municipalities. The chart below shows the additional revenue that the Office would receive from the municipalities for various alternative cost splits.

Annual Additional Revenue from Alternative Cost Splits

Cost Split (Cities/LCEO)	CY 2023	CY 2024
50/50 (Current Split)	$0	$0
60/40	$82,781.89	$88,639.82
70/30	$165,563.78	$177,279.64
80/20	$248,345.67	$265,919.46
90/10	$331,127.55	$354,559.28
100/0 (Entire Cost on Cities)	$413,909.44	$443,199.10

Source: LCEO

Shifting the entire cost onto the cities, or the 100/0 split, would allow LCEO to recoup all of the costs that the Office expends on S.R. 2 maintenance. Generating this additional revenue to cover S.R. 2 expenses would allow LCEO to utilize its own resources for the Office's general operations and financial obligations, including statutorily required responsibilities, debt repayment, and contributions to the fund balance.

Renegotiation Provisions

If LCEO continues to provide this service to the surrounding municipalities, it is critical that the Office renegotiates these contracts to reflect the current state of operations and remove any uncertainty surrounding contract provisions. The County could also consider discontinuing the contract and no longer taking on the responsibility of maintaining this road. However, LCEO currently has the personnel, equipment, and materials necessary to perform the work required, while the municipalities may not, due to how long the agreement has been in place. Therefore, it may be in all parties' best interests to continue the contract.

LCEO and the County should renegotiate the S.R. 2 contracts with all municipalities involved to ensure all provisions are reflective of current operations. This renegotiation must include updated lane mileage that LCEO is responsible for maintaining and a comprehensive scope of work that all parties agree on. The Office and County could also renegotiate the cost-sharing agreement to shift more, or all, of the costs associated with S.R. 2 to the cities involved. This would be in line

with statutory requirements and statewide county engineer's office practices. Additionally, in *Contracting for Services: A National State Auditors Association Best Practices Document* (NSAA, 2003), the NSAA recommends that contracts include a provision for timely contract renegotiation, which the S.R. 2 contracts currently do not have. This type of provision should be added to ensure that the Office, County, and municipalities revisit the contract more frequently than they have thus far.

Improved data collection, as discussed in **Recommendation 5**, would assist the Office in more accurately identifying the impact S.R. 2 has on its operations and allow leadership to make strategic decisions regarding this contract.

Conclusion

LCEO and the County Commissioners should renegotiate the contracts with the surrounding cities for the maintenance of S.R. 2. These contracts have not been updated since they were initially negotiated and signed, resulting in some out-of-date provisions within the contracts. The renegotiation of these contracts must include an updated scope of work that includes all of the duties that LCEO is responsible for, an updated lane mileage that reflects the actual lane miles currently maintained, and provisions for timely contract renegotiation. The renegotiation could potentially include an adjustment of the cost sharing agreement, which would enable the Office to recoup more of the costs associated with providing this service. Further, the Office should monitor and renegotiate the contract as needed when services or expectations change to reflect real-time operations.

Recommendation 2: Establish and Implement a Fund Balance Policy

Maintaining adequate fund balances help entities to avoid financial difficulties that may arise from unforeseen expenses or reduced revenues. This is particularly important for entities that are vulnerable to natural disasters and other unpredictable needs for service. LCEO does not have a policy in place that indicates a desirable minimum and maximum fund balance level. Industry best practices emphasize the importance of a formal policy and provide guidance on minimum fund balance thresholds. The Office should establish a formal, written fund balance policy and apply it to the existing balance. Doing so would help the Office maintain balances that would help to address future unforeseen budgetary issues, while ensuring the balance is not higher than necessary.

Impact

Establishing a formalized fund balance policy that sets a minimum threshold has practical benefits that include a lower risk of insufficient cash flow to meet short-term obligations, better solvency in face of unexpected downturns, and more favorable lending terms in the credit markets. Additionally, establishing a maximum fund balance threshold would allow the Office to determine if there is any additional funding available within the current fund balance that could be applied to current operational needs or outstanding debts.

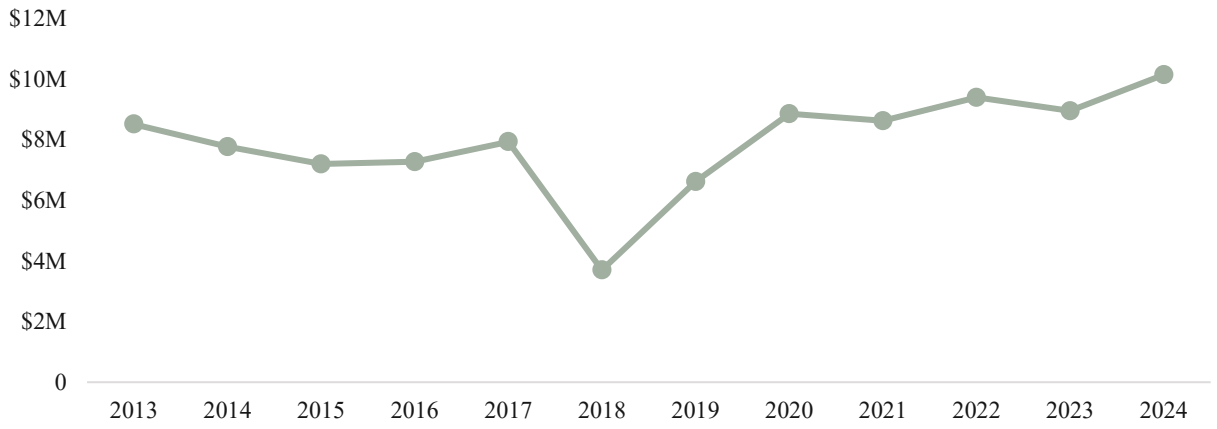
Methodology

We interviewed key personnel at the Engineer's Office and the County to understand any current financial management policies and practices related to fund balances. We reviewed the provided information and compared it with best practices identified by the Government Finance Officers Association (GFOA) and Moody's Investors Service, a well-known and respected agency that provides credit ratings for business and governmental organizations. We also obtained fund balance data from LCEO and the peers and compared the fund balance levels using various metrics.

Analysis

LCEO does not have a formal policy guiding fund balance requirements, although the County does have a policy for the County general fund balance, from which LCEO does not receive revenue. Over the past twelve years, the Office's total fund balance has increased from $8.5 million to $10.1 million. The graph below shows the Office's total fund balance from CY 2013 to CY 2024. This fund balance includes all of the Office's funds, which are generally aligned with the various revenue sources as described in the **Financial Background**.

LCEO Fund Balance from CY 2013 to CY 2024

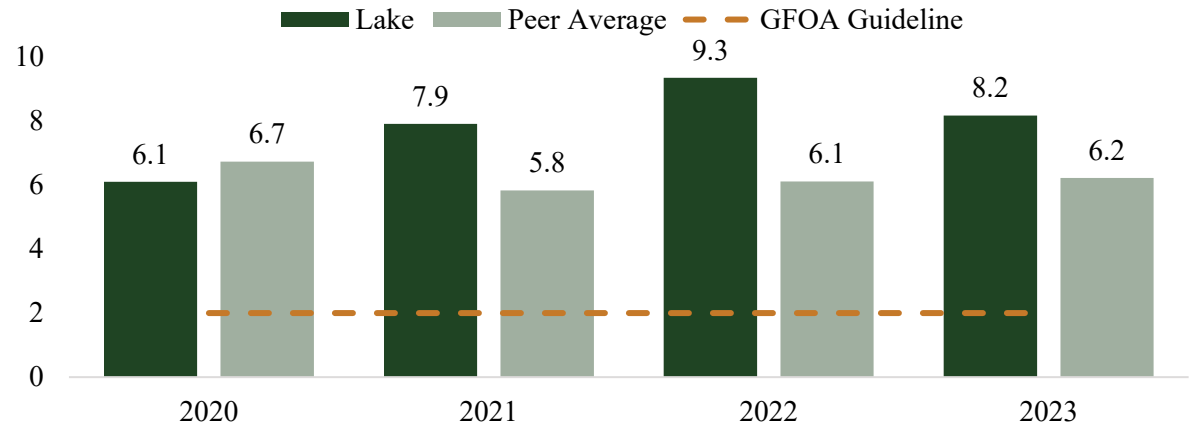


Source: LCEO

Over this time period, the Office has maintained a sizeable fund balance, representing between 22 and 85 percent of its annual expenditures. The only significant decrease occurred in CY 2018, as a result of an increase in expenditures, reportedly due to major improvements and repairs. This was previously discussed in the **Financial Background**.

The GFOA provides guidance to governmental entities in the development and maintenance of effective long-term planning. As a part of this guidance, the GFOA recommends that governments of all sizes should maintain a minimum of two months of regular operating revenues or expenditures in their fund balance. To compare LCEO and peers to this metric, we calculated the number of months of expenditures that each year's fund balance could support. The chart below shows this comparison from CY 2020 to CY 2023, as these are the years that we had fund balance data available for the peers. The Office's fund balance prior to CY 2020 is shown in the chart above.

Fund Balance Measured in Months of Expenses

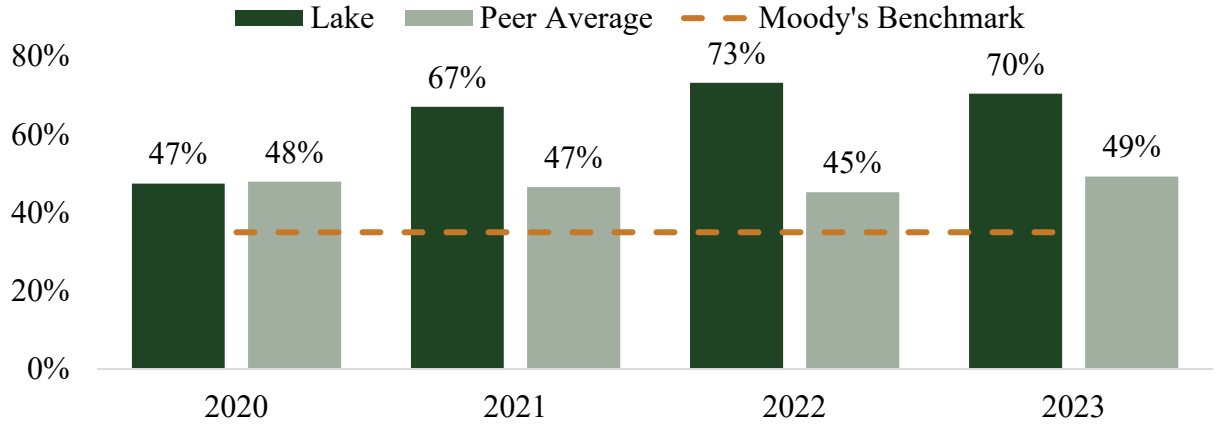


Source: LCEO, Peers, GFOA

By this metric, both LCEO and the peer average fall above the GFOA minimum recommendation. However, GFOA also recommends a higher fund balance for entities that may be subject to unpredictable expenses, such as those responsible for responding to natural disasters. County Engineer's Offices may be inclined to follow this recommendation, as they are subject to sudden expenses that are difficult to predict due to weather, accidents, and aging infrastructure. LCEO is still above the peer average for fund balance by this metric, with the exception of CY 2020.

Moody's Investors Service (Moody's) establishes ratings that are used to determine the creditworthiness of an organization seeking to borrow funds, such as a governmental organization issuing bonds. While it is important to understand that fund balances are only one of many factors that are considered by a bond rating agency, Moody's looks for fund balances of more than 35 percent of annual revenue to provide the highest rating (Aaa) for general obligation debt. The chart below shows LCEO's total fund balance as a percentage of annual revenues in comparison to a peer average and Moody's standard.

Fund Balance as a Percentage of Annual Revenue



Source: LCEO, Peers, Moody's

Both LCEO and the peer average fall above Moody's benchmark for fund balance as a percentage of annual revenue. LCEO's fund balance is higher than the peer average in three out of the four years examined.

The GFOA further recommends that governments establish a formal policy regarding the level of fund balance that must be maintained. This policy should contain a framework for the increase or decrease of the fund balance over time, as well as guidelines for the allocation of resources to replenish the fund balance, should it fall below the minimum level. Establishing a policy in accordance with this guidance would ensure that the Office's fund balance does not fall below the minimum acceptable level. Additionally, establishing a maximum level would potentially enable the Office to identify any excess funding and use it for current operations, planned projects, or the repayment of its outstanding debt obligation.

Conclusion

LCEO should develop a formal, written fund balance policy in accordance with best practices. The development of this policy would ensure LCEO is maintaining an appropriate amount in its fund balance. Additionally, the policy could enable the Office to determine if money in the fund balance exceeding the required level could potentially be utilized in other areas of operation, such as the repayment of the Office's outstanding debt obligation.

Recommendation 3: Develop and Utilize Formal Management Plans

LCEO currently has no formal, written management plans in place. While there are informal processes in place related to the strategic management of finances, staff, and projects, these protocols are not documented within formal plans. Without documentation, these processes may not be followed consistently over time and amidst employee turnover and attrition. LCEO should develop formal, written strategic and capital plans, and utilize these plans to guide financial decision-making and align annual budgets with organizational goals.

Impact

Municipal governments should have formal plans that identify future needs and that guide operational areas. Developing and utilizing formal plans for management allows government entities to ensure that the needs of all operational areas can be adequately met in an efficient and effective manner. Developing formal, written management plans and policies will allow the Office to make the best possible management decisions regarding its current and future operational and financial state. Additionally, the development of written plans will enable future employees to continue planning processes when key personnel depart the Office.

Methodology

We interviewed key Office personnel to develop an understanding of LCEO's planning and budgeting practices. Through this process, we confirmed that the Office does not currently have a formal, written strategic plan or capital plan. We identified planning best practices from the Government Finance Officers Association (GFOA) and the Government Finance Review (GFR) and compared LCEO's practices to these industry standards to identify opportunities for improvement.

Analysis

LCEO has no formal, written strategic or capital plans. There are informal planning processes in place, mostly related to future project and financial needs. These processes include the review of prior financial information and departmental needs and requests to inform budget decisions. According to LCEO officials, the Office sends a form to the various departments requesting information on expected expenses for necessary projects and equipment. The County Engineer uses this information to make the operational and budgetary decisions, then sends the budget to the County Commissioners for approval. The Office typically plans and budgets for the next five years. However, these processes rely on the experience and expertise of tenured employees rather than following established plans.

The GFOA recommends that all public entities develop and adopt a formal strategic and capital plan. *Establishment of Strategic Plans* (GFOA, 2005), defines strategic planning as "a comprehensive and systematic management tool designed to help organizations assess the

current environment, anticipate and respond appropriately to changes in the environment, envision the future, increase effectiveness, develop commitment to the organization's mission, and achieve consensus on strategies and objectives for achieving that mission."

Key steps in the strategic planning process include:

- Initiating the strategic planning process;
- Preparing a mission statement;
- Assessing and identifying environmental factors and critical issues;
- Agreeing upon and developing strategies for a small number of broad goals;
- Creating an action plan, including measurable objectives and performance measures;
- Obtaining approval of the plan; and,
- Implementing, monitoring, and reassessing the plan.

According to *Multi-Year Capital Planning* (GFOA, 2022), public entities should "prepare and adopt comprehensive, fiscally sustainable, and multi-year capital plans to ensure effective management of capital assets." Elements of an effective multi-year capital plan include identification and prioritization of expected needs based on a strategic plan, establishment of project scopes and costs, estimation of the amount of funding from various sources, and the projection of future operating and maintenance costs.

In addition to these recommendations, the GFR offers a *Comprehensive Framework for Financial Planning* (GFR, 2021) with principles and guidelines for government budgeting. These principles include establishing broad goals to guide financial decision-making, developing approaches to achieve these goals, developing a budget tied to these goals, and evaluating performance and making adjustments as needed.

While the Office may be following these best practices in its current planning practices, developing these practices into formal, written plans is essential to ensuring that these processes are followed consistently amidst attrition and employee turnover. The Office's current practices are driven largely by the experience and expertise of tenured employees. Without written procedures, this institutional knowledge would be lost if these employees were to leave the Office. Developing formal plans would assist the Office in making strategic financial and operational decisions and contribute to succession planning efforts. Additionally, formal plans would assist the Office with aligning their annual budget with organizational goals.

Conclusion

LCEO should develop a formal, written strategic plan and capital plan, in accordance with industry best practices. Documenting current planning practices in formal plans would allow the Office to make the best possible operational decisions and allocate resources efficiently and effectively to ensure all organizational responsibilities and goals are accomplished. Additionally, it would ensure that institutional knowledge regarding the Office's financial planning procedures is maintained when employees leave the Office, enabling remaining employees to continue these best practices.

Recommendation 4: Develop a Compensation Strategy

Employee wages at LCEO are set by the Lake County Engineer because there is not a Collective Bargaining Agreement (CBA) or other formal document in place that dictates a salary schedule. However, the Engineer must set wages within the financial constraints of the Office's budget and is required to use the Countywide employee benefit plan. LCEO has faced difficulties maintaining a sufficient staff level in recent years, with LCEO officials indicating that the Office often loses employees to higher paying jobs at surrounding municipalities. In order to ensure the Office is making strategic decisions related to wages, LCEO should develop a formal compensation strategy or philosophy. This would assist the Office with ensuring wages are fair and competitive, prioritizing the employee experience, and clearly communicating the compensation structure to current and potential employees.

Impact

LCEO conducts the majority of its operations in-house, which means it is critically important that the Office has a sufficient and skilled workforce, which it has not always been able to maintain. In order to attract talented employees and retain them long-term, the Office must have a fair and competitive compensation package. This includes wages, benefits, reward strategies, and promotion opportunities. LCEO does not have control over employee benefits, which makes it even more important to make strategic decisions regarding the aspects of compensation that it does have control over.

Background

Similar to many public entities, LCEO's largest expenditure category is personnel. This category includes both wages and benefits. The Office's staff are not covered by a CBA. As a result, the Office has the discretion to set, adjust, and communicate employee wages. While LCEO has this autonomy, it does not have the ability to adjust employee benefits, such as health insurance, retirement, and leave, because it is required to use the County-wide employee benefits.

Methodology

We interviewed key personnel from the Engineer's Office and the County to develop an understanding of the current employee compensation structure. We then obtained wage information for all employees from both LCEO and the peer offices. This information was standardized using responses to the annual wage study conducted by the County Engineers Association of Ohio. This annual study requests wage information from all of the county engineer's offices in the state and asks them to categorize their staff into a list of standardized job positions. These responses were obtained and used to ensure we were comparing similar positions between offices.

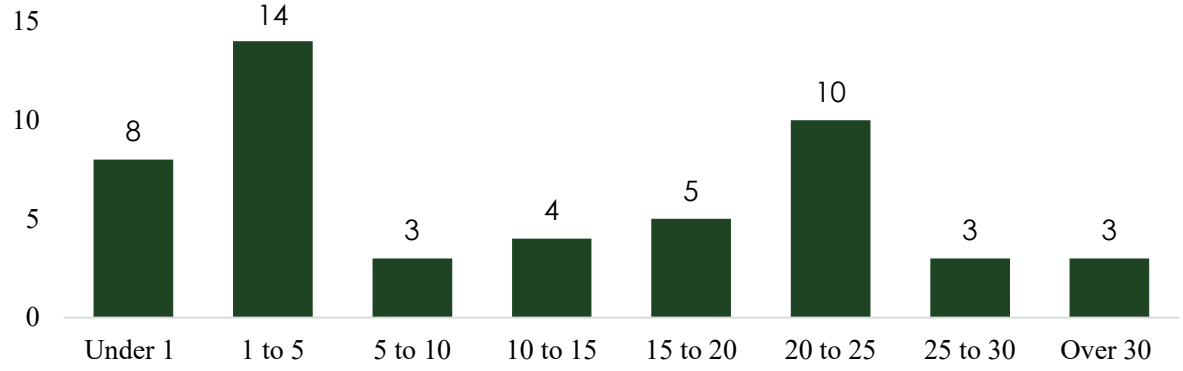
In order to provide additional context on LCEO's wages, we also obtained compensation information for local public entities with similar job positions and statewide averages. LCEO was compared to all three of these groups. Finally, best practices regarding compensation structures were obtained from the Society for Human Resource Management.

Analysis

The Lake County Engineer has the authority to set wages for the Office's employees because there is not a CBA or other formal document in place dictating a salary schedule. However, the ability to set wages is still constrained by the Office's limited revenue streams and other financial obligations within the annual budget. Since this ability to set wages is limited, and the Office is unable to adjust employee benefits to improve the total compensation package, it is also important to consider the employee experience when attempting to attract and retain talent.

LCEO officials indicated that the Office has faced difficulties in maintaining a sufficient employee level in recent years. Surrounding municipalities and other county offices pay more than LCEO does, and some municipalities also offer signing bonuses. The Lake County Engineer noted that the Office is losing employees to higher paying jobs at nearby municipalities more often than it has in the past. LCEO has the most difficulty filling the mechanic positions, indicating that there is a lot of turnover in that area. Due to these difficulties, approximately 45 percent of the Office's staff were hired within the last five years. However, the Office does also have many long-tenured employees, with approximately 30 percent of the Office's staff having a tenure of over 20 years. The following chart shows the distribution of LCEO employees by various tenure buckets.

CY 2025 LCEO Employees by Years of Service

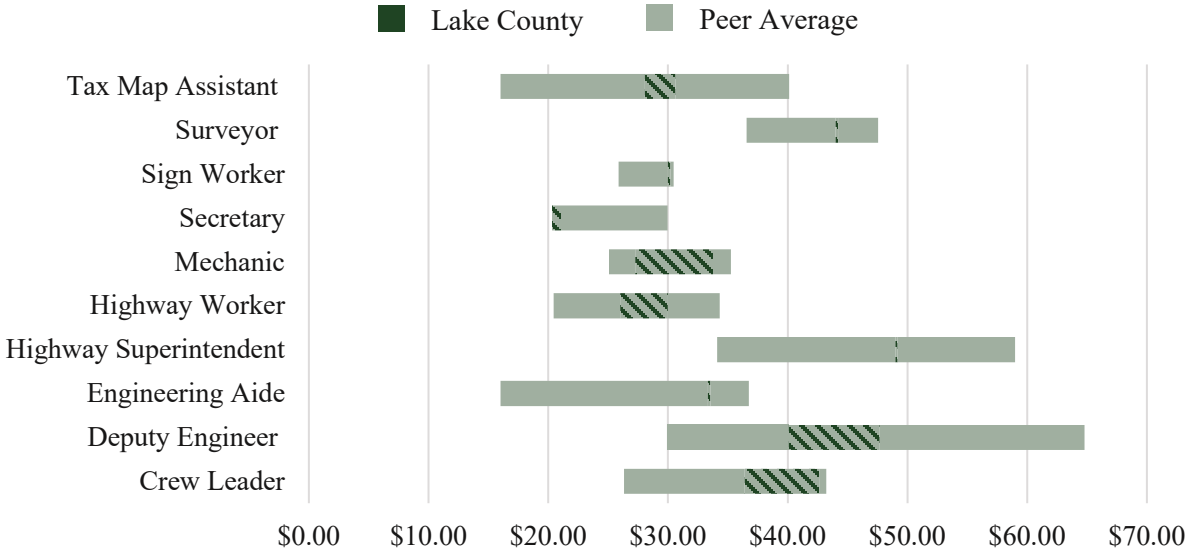


Source: LCEO

LCEO does not have a comprehensive salary schedule for all positions within the Office. There is a starting salary schedule for highway and garage employees that includes a starting rate, a promoted rate, and a permanent rate. However, this schedule does not account for years of service like typical salary schedules within CBAs do. As a result, the following salary analysis was completed based on actual wages earned by employees.

LCEO's minimum and maximum wages were compared to a peer average for 10 positions. Of these, LCEO was above the peer average for both the minimum and maximum hourly wage for seven positions. The Office was below the peer average for the Deputy Engineer maximum wage, the Mechanic minimum wage, and the Secretary minimum and maximum wage. The chart below shows the comparison of the Office's wage range to the peer average.

CY 2024 Hourly Wage Peer Comparison

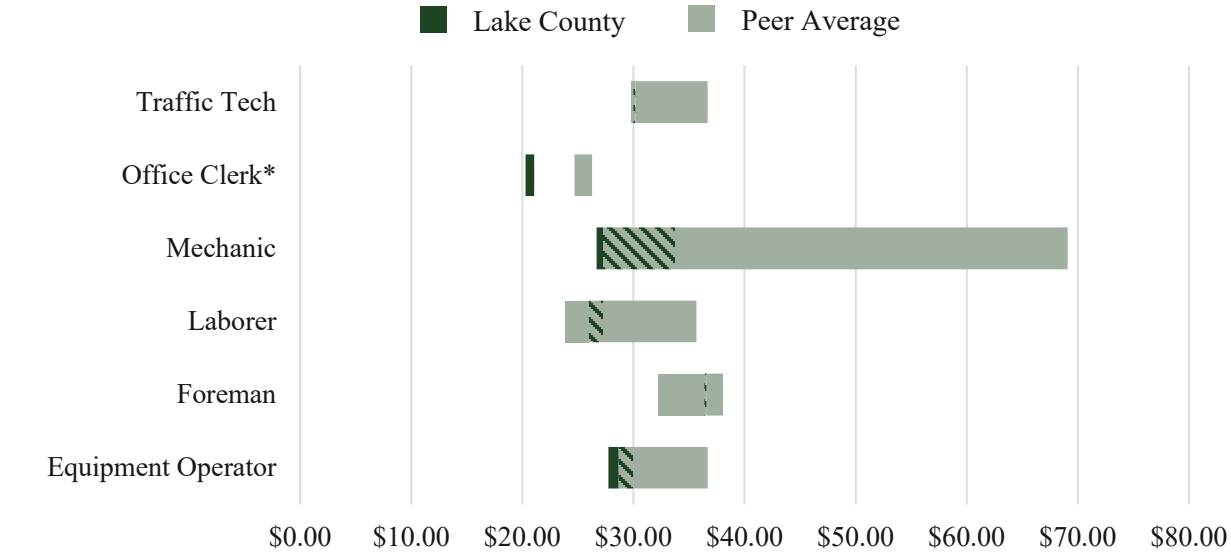


Source: LCEO and Peers

To provide more context on the local market surrounding LCEO, we also compared the Office's wages to local public entities. We selected entities based on proximity to Lake County, similar job positions, and publicly available wage data. These entities include the Cities of Eastlake, Mentor, Wickliffe, Willoughby, Willoughby Hills, and the Cuyahoga County Public Works Department.

LCEO was compared to these local market entities for six positions. Of the six, LCEO falls below the local government market average for both the minimum and maximum hourly wage for four positions. The Office is above the local government market average for the Equipment Operator minimum wage, and both the minimum and maximum hourly wage for the Foreman. The chart below shows the comparison of the Office's wage range to the local market entity average.

CY 2024 Hourly Wage Local Government Market Entity Comparison



Note: The Equipment Operator and Laborer positions in this graph are combined into the Highway Worker category in the peer comparison graph above. Only one local market entity has an Office Clerk Position
Source: LCEO, Local Market Entity CBAs

The Office's largest expenditure category is personnel. In comparison to a peer average, LCEO spends more on personnel expenses while spending much less on contracted services, measured both by expenditures per lane mile and as a percentage of total expenditures. For more information on this comparison, see **Appendix B.** One contributor to this is the higher-than-average wages LCEO pays in comparison to peers. These higher wages may be necessary based on the competitive local market, highly tenured employees, and staff workload. Regardless of the reason, it is important that LCEO is making strategic decisions regarding compensation and clearly communicating the reasoning behind the compensation structure.

The Society for Human Resource Management (SHRM) offers best practices regarding compensation strategies and philosophies. SHRM suggests that organizations maintain an up-to-date compensation strategy to ensure they are able to adapt and continue to be a competitive employer. The steps involved with developing a compensation strategy are:

1. Adjust compensation in accordance with the local market and prioritize key aspects of the employee experience, such as work schedules, opportunities for promotion, and understanding of how effort affects pay.
2. Ensure compensation structures are flexible in order to accommodate change.
3. Understand and utilize the impact of pay transparency.
4. Ensure compensation structure can stand up to scrutiny and take steps to root out pay discrepancies based on irrelevant factors.
5. Communicate the compensation strategy to current and potential employees.

Additional SHRM best practices highlight the importance of a formal statement explaining an organization's compensation structure. This can be used to attract, retain, and motivate employees. A compensation philosophy typically seeks to do the following:

- Identify the organization's compensation program and reward strategies
- Identify how these strategies support the organization's mission.
- Attract people to join the organization.
- Motivate employees to perform to the best of their abilities.
- Retain key talent and reward high-performing employees.
- Define the position of the organization within the local market in relation to base pay, variable compensation, and benefits.
- Ensure equal pay for equal work.

LCEO does not currently have a formal compensation structure in place, because of the lack of a CBA or comprehensive salary schedule. Additionally, since the Office is unable to adjust employee benefits to improve its total compensation package, it is particularly important that it is strategic about the aspects that are within its control, such as wages and employee experience.

Conclusion

LCEO should develop a formal compensation strategy, in accordance with best practices, to ensure that its wages are fair, competitive, and clearly communicated to current and potential employees. The Office has the ability to set wages for its employees, within the financial constraints of the budget, but does not have the ability to adjust employee benefits. As a result, it is critical that LCEO makes strategic decisions regarding the parts of employee compensation that it can control. This will allow the Office to improve efforts to attract and retain talent within the local market, which LCEO has identified as a difficulty in recent years.

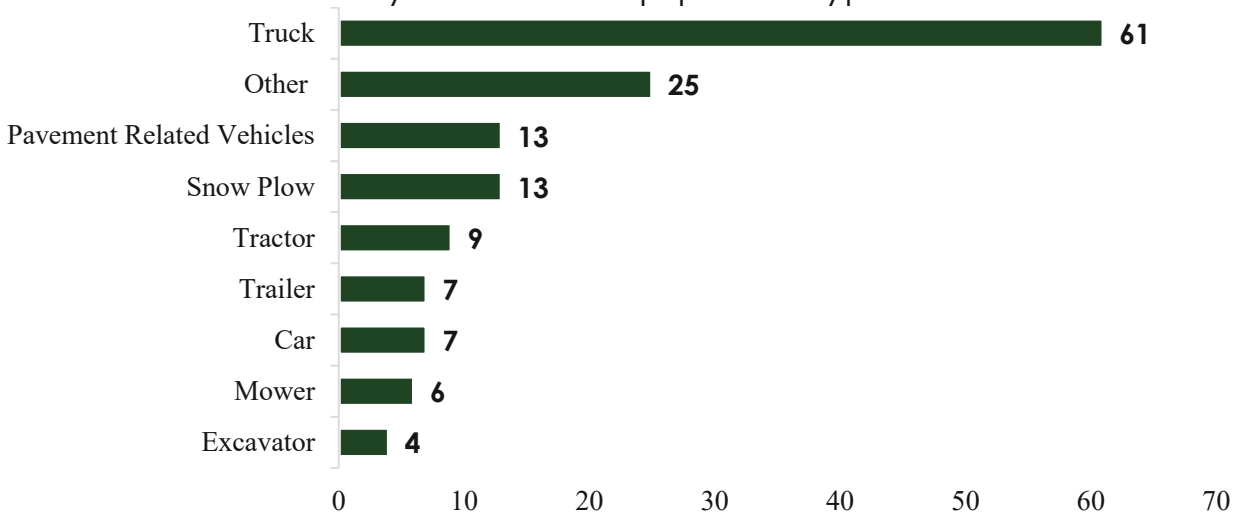
Operational Management

The Lake County Engineer's Office (LCEO or the Office) is responsible for the inspection, construction, and maintenance of 300 lane miles of county roads, 110 lane miles of S.R. 2, and 102 county bridges. With the wide array of responsibilities associated with these roads and bridges, the Office must maintain a skilled workforce, a multitude of vehicles and equipment, and facilities for storage, administration, and mechanical work.

Fleet

LCEO owns all of its fleet vehicles and equipment. This fleet inventory consists of 151 vehicles and pieces of equipment, including trucks, snowplows, tractors, cars, mowers, pavers, forklifts, and more, which are used to perform a wide array of job functions. The graph below shows the distribution of the Office's fleet by vehicle and equipment type.

CY 2024 LCEO Fleet by Vehicle & Equipment Type



Source: LCEO

The Other category shown in the graph above includes equipment such as chippers, compressors, loaders, backhoes, forklifts, pressure washers, saws, sweepers, welders, arrows, curbers, paint stripers, and seeders. LCEO has one to three of each of these pieces of equipment.

The Office typically uses pick-up trucks and cars to transport employees to various job sites within the county. Dump trucks and construction equipment are used by the road crew to complete their daily maintenance tasks. Snowplows are used in the winter months for snow and ice removal.

Facilities

LCEO utilizes a total of four facilities for the entirety of its operations. Administrative work is primarily performed in a shared County facility located in Painesville. LCEO does not own this facility, and therefore is not responsible for the cleaning or maintenance of it.

The Office's primary operational facility is called Blackbrook. This facility houses the Office's maintenance garage, sign shop, fuel pumps, and the storage of supplies, materials, equipment, and fleet. The road crew and mechanics report to this facility each day to obtain their assignments and necessary equipment. The other operational facility is called the Lost Nation facility, which is used primarily for vehicle, salt, and fuel storage for State Route 2. LCEO owns both of these facilities, and contracts out for the maintenance and custodial services needed.

Finally, LCEO utilizes a small portion of a building owned by the Village of Madison. The Office has an agreement with the Village that allows the storage of salt, one vehicle, and fuel at the facility.

Recommendation 5: Fully Utilize Work Order System for Data Collection

While LCEO has a work order system in place, it is not currently utilized to its fullest potential and the Office is unable to extract complete datasets from it. It is unclear if the Office's inability to generate reports is the result of the data itself being absent from the system or a lack of training and knowledge of how to generate aggregated reports. After a key staff member left the Office, the Office lost access to the work order system, resulting in a disruption of regular operations. LCEO should fully utilize the work order system to track key metrics related to the Office's operations and use this data to assess the Office's efficiency and strategically manage operations moving forward. If the current system is not able to collect necessary datapoints, LCEO should consider replacing the system. Additionally, LCEO should ensure that multiple employees have the ability to access the work order system and the knowledge to use it properly in order to prevent a similar disruption from occurring in the future.

Impact

The majority of LCEO's staff do not have access to the work order system. The staff members that do were unable to produce complete reports from the system. This lack of access and knowledge of the system suggests that the Office is not utilizing the system to monitor the efficiency of operations or make strategic, data-driven decisions. Additionally, the Office losing access to the system after the departure of one key employee represents an internal control deficiency. For more information on this, see **Appendix A**.

The main uses of the system currently are to facilitate communication between the administrative office and the maintenance garage and keep a fleet inventory. If the Office expanded the metrics tracked and were able to extract reports for management purposes, LCEO could more accurately assess fleet utilization, maintenance and repair costs, response times, employee assignments, and the cost effectiveness of conducting the majority of operations in-house rather than outsourcing.

Additionally, as discussed in **Recommendation 1**, LCEO regularly seeks reimbursement from other municipal governments for the services rendered on S.R. 2. In order to accurately charge for these services, the Office must track the work completed and costs incurred in a centralized location.

Methodology

We conducted interviews with key personnel at LCEO to develop an understanding of their operations, responsibilities, and data collection and monitoring practices. LCEO officials indicated that the Office has a work order system that is used for fleet management, fuel usage, and job monitoring. We requested information from this system based on a list of data fields that was provided to us by the Office's Chief Deputy Engineer, who has since left LCEO. The Office was unable to provide us with any of the data that we requested, with the exception of a current

fleet inventory. As a result, we were unable to complete multiple planned analyses related to LCEO's operations.

Analysis

A work order system is a digital tool designed to organize, track, and manage maintenance tasks from initiation to completion. This includes defining the scope of work needed, scheduling and assigning the task, tracking the work completed and costs incurred, and recording the outcome. Using a software for work order management allows organizations to prioritize tasks, streamline communication, and collect data for future decision making.

The Lake County Engineer's Office utilizes a third-party system for its work order system, which is a county-wide system utilized by other county offices as well. The Office indicated that it utilizes this system for fleet management, fuel pump tracking, job monitoring, and citizen requests. LCEO staff do not use this system for project management as work orders are typically related to general maintenance tasks. Project management is completed in the administrative office by individual project managers. These managers keep a folder for each project tracking the starting balance, change requests, funding retained, percent of work completed, etc. Although this information is tracked for individual projects, a standard template for this process does not exist and the data contained within the project folders are not aggregated into one central location.

The former Chief Deputy Engineer was the primary user of this system, stating that she and the Office's superintendent would assign work orders to employees as citizen requests came in. She provided us with a list of data fields and reports that existed within the work order system, from which we requested a specific set of data fields that were relevant to the analyses that we planned to conduct. When this employee departed the Office, none of the remaining employees had access to the work order system. Once the remaining employees gained access to the system, they were unable to pull complete data reports. While there was some data within the system related to the fleet inventory and citizen requests, when employees attempted to pull this data into an external report, the report was missing years or data fields. LCEO contacted the Lake County Information Technology Department and personnel from the third-party system for assistance, but they were unable to pull complete data reports as well.

It is unclear if the Office's inability to generate reports is the result of the data itself being absent from the system or a lack of training and knowledge of how to generate aggregated reports. When we examined the system with an LCEO official, we saw that there was data related to the fleet inventory and citizen requests within the work order system. LCEO indicated that the work order system included additional fields for other areas of operational data, however, we did not see those fields or related data within the system. Regardless of the reason, we were unable to obtain data related to the hours worked and costs associated with LCEO's various tasks.

Due to the limited availability of data, we were unable to identify the financial impact or staff workload associated with specific operations at LCEO, such as the maintenance of S.R. 2. We

also could not analyze the utilization of fleet, cost of fleet maintenance, response times, or effectiveness of performing work in-house rather than contracting out. We used the financial data available to estimate these impacts, when possible, but comprehensive work order data would provide a much more accurate and useful view of the Office's operations.

The County Engineers Association of Ohio (CEAO) indicated that while there are no universal standards used for assessing county engineer's offices, commonly used metrics include the following:

- Cost per lane mile for maintenance and paving;
- Paving Condition Index (PCI);
- Bridge condition ratings;
- Average response time;
- Ratio of staff to road mileage maintained; and,
- Capital improvement plan execution rates.

In order to calculate these metrics for LCEO, the Office would need to track the statistics listed below in some capacity. The American Public Works Association (APWA) recommends that infrastructure maintenance activities should be documented through a tracking system, including the location, description, and cost of activities performed. Specifically, requests for maintenance should be documented within a work order system.

- Lane miles maintained, paved, and snow plowed;
- Pavement and bridge condition ratings over time;
- Request and completion time for maintenance tasks;
- Employees assigned;
- Hours worked; and,
- Cost of equipment and materials.

LCEO should fully utilize the work order system to ensure that key performance metrics are being tracked over time and can be accessed for management purposes. This will allow the Office to more accurately assess the efficiency of its operations, including response times, equipment and fleet usage, and cost of maintenance and repairs. The Office would additionally be able to determine if conducting the majority of its operations in-house is more cost effective than contracting services. However, if the Office's current work order system is unable to track these key performance metrics, LCEO should consider utilizing an alternative system.

Additionally, the Office should ensure that multiple employees within the organization have access to the work order system and are knowledgeable about data entry and extraction. This would contribute to LCEO's succession planning efforts and prevent any disruption in operations if key personnel leave the Office. The lack of succession planning related to the work order system negatively impacted the Office's operations, particularly the communication between the administrative office and the maintenance garage, as well as the progress of this audit. The

GFOA recommends that government entities of all sizes prioritize succession planning. This can be particularly challenging for smaller government entities, as staff sizes are generally limited, and employees may be siloed in their job duties. However, it remains an essential part of office structure in order to ensure continuity and consistency of service delivery amidst employee turnover.

Conclusion

LCEO should fully utilize the work order system for the collection of key metrics related to the Office's operation. If the current system is not able to collect necessary metrics, the Office should consider utilizing an alternative system. Additionally, the Office should ensure that multiple employees within the organization have the ability to access the work order system and the knowledge to enter data and extract reports. This will allow LCEO to more accurately assess the efficiency of its operations and make more strategic decisions moving forward.

Recommendation 6: Establish Fleet Utilization Benchmarks

LCEO does not currently have utilization benchmarks in place for fleet vehicles or equipment. The Office relies on the experience and expertise of tenured employees for decision-making regarding fleet management. Industry best practices recommend the establishment of benchmarks and collection of vehicle and equipment utilization data in order to accurately assess fleet quality, size, and composition. LCEO should establish fleet benchmarks, in accordance with best practices, and use these benchmarks to conduct a fleet utilization analysis. This will enable the Office to review its fleet and make strategic, data-driven decisions regarding fleet acquisition, retirement, and rightsizing.

Impact

Adequate fleet management is critical for organizations that own and maintain a large and diverse fleet, like LCEO. Establishing the benchmarks and collecting the data necessary for a fleet utilization analysis will allow the Office to optimize its fleet size and composition. This will reduce unnecessary expenses related to the maintenance, repairs, and fueling of underutilized vehicles and equipment.

Methodology

We interviewed key personnel at LCEO to gain an understanding of their data collection and planning processes related to fleet management. We then obtained fleet information from LCEO and peers including fleet inventories, plans, and benchmarks. After comparing LCEO to the peers, we also contacted the Ohio Department of Transportation to understand its practices regarding fleet utilization and benchmarking.

Analysis

Fleet utilization benchmarks represent the target number of miles, engine hours, or days used for each vehicle and piece of equipment within an organization's fleet. These benchmarks are used to compare against actual usage data, with the goal of identifying underutilized units. LCEO does not have any formal fleet utilization benchmarks in place. The Office does record fleet usage through the work order system, documenting mileage for vehicles and hours used for equipment. However, LCEO staff are currently unable to extract any historical fleet data from this system. Once an employee enters a new mileage is entered for a vehicle, the old mileage is overwritten in

the system and no longer available.[7] As a result, it is not possible for the Office to identify annual usage by vehicle or piece of equipment.

The American Public Works Association (APWA) recommends that entities establish a formal procedure for the review of equipment utilization. This review should include determining if each piece of equipment performs its intended purpose and meets all relevant health and safety requirements.

Government Fleet, a resource center for public sector fleet management, indicates that the collection and analysis of fleet utilization data is one of the best ways to improve fleet operations. This analysis uses data regarding how frequently and to what extent vehicles are used to build a comprehensive picture of fleet efficiency and effectiveness. This insight can guide strategic decision-making regarding which vehicles should be invested in or retired moving forward.

The Ohio Department of Transportation (ODOT) establishes fleet utilization benchmarks for various vehicle types. These benchmarks are used to compare actual vehicle and equipment usage to, which enables ODOT to accurately assess the adequacy of its fleet size. LCEO would benefit from conducting a similar comparison in order to right size its fleet.

Due to the lack of established benchmarks and historical fleet data, LCEO is currently unable to accurately assess its fleet utilization. As a result, it is difficult for the Office to make strategic, data-driven decisions regarding fleet size and composition. The current decision-making process for fleet purchases and retirement relies heavily on the expertise and experience of long-tenured employees. These employees leverage their detailed knowledge of the Office's fleet and operational needs to determine which vehicles and equipment should be retired or invested in, as well as what items may need to be purchased. While this may result in effective decisions, it is not a data-driven process and would not be able to be continued by other employees without the same institutional knowledge.

Conclusion

LCEO should establish utilization benchmarks for fleet vehicles and equipment, using the institutional knowledge of current employees. The Office should also improve data collection regarding fleet utilization, as discussed in **Recommendation 5**. Establishing benchmarks and improving data collection will enable the Office to conduct a fleet utilization analysis to determine the most efficient fleet size and composition. The Office should then review vehicle and equipment categories to ensure that the fleet is optimized and unneeded vehicles or equipment are eliminated as they are identified.

[7] It is unclear if this is a result of a systematic flaw or a lack of staff training and knowledge of the system. If this is a systematic flaw, the Office should consider the potential replacement of the work order system, as discussed in **Recommendation 5**.

Recommendation 7: Develop Formal Fleet Replacement Plans

LCEO does not currently have a formal, written fleet replacement plan in place. There are informal standards and processes in place, but the Office has fallen behind on replacements due to budget constraints. Additionally, LCEO's fleet is aging, and a large number of vehicles and equipment are currently in need of replacement. The Office should develop and implement formal, written fleet replacement plans to ensure it is conducting fleet replacement in a timely manner, forecasting fleet needs to the best of its ability, and limiting unnecessary expenses on the maintenance and repairs of fleet vehicles and equipment in need of replacement.

Impact

High performing fleet management programs maximize efficiency by keeping low-cost vehicles on the road longer and replacing high-cost vehicles when the cost of ownership exceeds that of new assets. Proper replacement strategy reduces unnecessary costs sunk into ongoing maintenance and repairs and enables an organization to forecast upcoming replacement costs. Developing and implementing a formal, written fleet replacement plan will allow LCEO to prioritize necessary vehicle and equipment replacements, budget adequately for these replacements, and reduce expenses and employee labor associated with maintenance and repairs of aging fleet vehicles and equipment.

Methodology

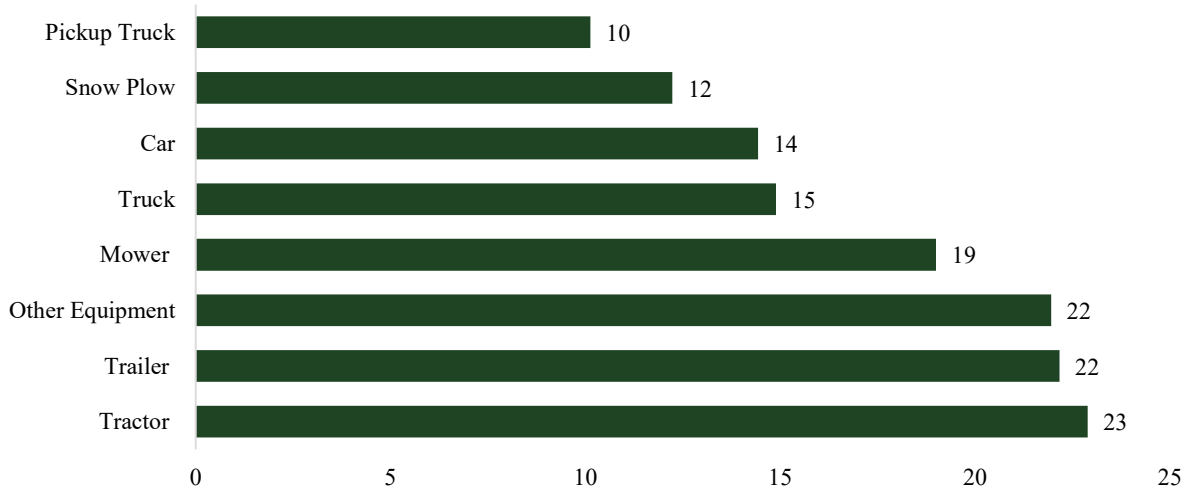
We conducted interviews with LCEO officials to gain an understanding of their fleet planning and procurement processes. We then obtained industry best practices regarding fleet replacement and life cycling from ODOT and APWA and compared them to LCEO's practices. Finally, we compiled information and conducted a sample lease versus purchase analysis. This was done to demonstrate the data that LCEO would need to make this calculation once it has improved data collection.

Analysis

LCEO does not have any formal, written fleet replacement plans in place. There is an unofficial process of evaluating vehicle needs annually and including the associated costs in the five-year budget. The Office attempts to use vehicles and equipment for as long as possible. Informally, vehicles are on the radar for replacement at 100,000 miles and staff attempt to replace dump trucks after 10 to 12 years. When vehicle repairs are needed, LCEO officials compare the cost of the repairs to the cost of replacement to determine which option is more cost-effective. However, the Office does not have these procedures formally documented in a fleet replacement plan.

The average age of the Office's fleet vehicles and equipment is 16.9 years. In addition to this, the Office indicated 42 of its vehicles and equipment are in need of replacement. The graph below shows the average age of vehicles and equipment by category.

CY 2024 Average Age of LCEO's Fleet Equipment by Category



Source: LCEO

Out of LCEO's 151 fleet vehicles and equipment, 42 have been identified as in need of replacement. The Office has also fallen behind on the replacement of dump trucks due to budgetary constraints. With an aging fleet, and many vehicles in need of replacement, the Office will likely experience an increase in repair costs. The Office completes all vehicle maintenance and repairs in-house, when possible. Outsourcing only occurs when they are unable to complete the necessary repairs, such as a major engine rebuild.

Additionally, the capital investment required to replace all of the aging equipment will increase as the number of vehicles needing replacement grows. Due to budgetary constraints, it is critically important that LCEO has a replacement plan in place and collects the data necessary to aid the Office in gaining support for additional fleet investments.

The Office's work order system has the capability to document fleet maintenance and repairs performed and the associated costs. However, this information is not consistently recorded in the system and is not able to be extracted or analyzed by vehicle. Instead, the Office's mechanics monitor maintenance and repairs to ensure that they are being completed correctly and that the same issues are not occurring repeatedly.

Due to this lack of data collection, it is not possible to calculate the cost of ownership for each vehicle and piece of equipment that LCEO owns. This information is necessary to develop the most economic fleet replacement plan. Additionally, if the Office is interested in the potential of leasing fleet vehicles rather than purchasing, cost of ownership is a critical piece of the formula to determine if this would be cost-effective. For more information on this calculation, see **Appendix E**.

According to the *Public Works Management Practices Manual* (APWA, 2014), effective management of fleet vehicles and equipment includes defining replacement cycles. *Planned*

Fleet Replacement (APWA, 2021) recommends that organizations establish fleet replacement criteria in terms of vehicle age or usage. This can be used to forecast necessary funding for vehicle replacement, develop budgets, and trigger the examination of specific fleet units for potential replacement. Additional factors that organizations must consider when developing fleet replacement cycles include maintenance and repair costs, reliability, type of use, condition, environmental sustainability, and fuel efficiency.

ODOT has established fleet lifecycle goals, including age, mileage, and hours used, for all of the equipment and vehicles in its fleet. The Department monitors age and usage for each vehicle and piece of equipment, with the plan of replacing them when they approach the end of their designated lifecycle. ODOT is able to use these replacement cycles in conjunction with actual usage to forecast when fleet units will be approaching the end of their effective lifecycle and will likely need replacement. See **Appendix E** for specific examples of lifecycles by vehicle.

Conclusion

LCEO should develop a formal, written fleet replacement plan including replacement criteria and lifecycles for all fleet vehicles and equipment. The Office owns a large and diverse fleet which is primarily maintained and repaired in-house. Additionally, the Office's fleet is aging, and a multitude of units are in need of replacement. Without an established fleet replacement plan, LCEO may not be able to effectively forecast the timing of vehicle and equipment replacement needs and prepare for the associated costs. If timely replacement is forgone, the Office's maintenance and repair expenses will likely increase, along with the capital investment required for future replacement.

Client Response Letter

Audit standards and AOS policy allow clients to provide a written response to an audit. Both the Lake County Commissioners' and the Lake County Engineer's Office were provided this opportunity. The letter on the following page is the County Commissioners' response letter. Throughout the audit process, staff met with LCEO officials to ensure substantial agreement on the factual information presented in the report. When officials disagreed with information presented during the audit process, and provided supporting documentation, revisions were made to the audit report.

Lake County Board of Commissioners

Morris W. Beverage III
John Plecnik
Richard J. Regovich

Lake County, Ohio

September 18, 2025

Auditor of State
State of Ohio
88 East Broad Street
Columbus, OH 43215

Subject: Confirmation of Intent to Comply with Audit Recommendations – County Engineer's Office

Dear Auditor of State Keith Faber,

The Lake County Board of Commissioners appreciate the work of the Office of the Auditor of State, specifically the Ohio Performance Team, for their efforts and collaboration during the recent State Performance Audit of our County Engineer's Office. We are writing to confirm our full intent to comply with the recommendations outlined in the recent audit of the Lake County Engineer's Office.

We take the recommendations of the Auditor of State seriously and agree with the recommendations and are committed to upholding accountability, transparency, and the responsible stewardship of public funds. In response to the audit report, the Board has reviewed the recommendations and is working in coordination with the County Engineer to implement the necessary corrective actions in a timely and effective manner.

Where appropriate, we are also taking steps to strengthen internal controls, enhance oversight, and ensure compliance with all applicable policies, procedures, and statutory requirements. We are confident these actions will address the issues noted and improve overall operations.

Please do not hesitate to reach out should your office require any additional information or updates regarding our implementation efforts.

Thank you for your continued partnership in supporting sound government practices across Ohio's counties.

Sincerely,

Richard J. Regovich
President

John T. Plecnik
Commissioner

Morris W. Beverage III
Commissioner

105 Main Street
Building A, Suite 513
Painesville, Ohio 44077
Office: 440-350-2745

lakecountyohio.gov

Appendix A: Purpose, Methodology, Scope, and Objectives of the Audit

Performance Audit Purpose and Overview

Performance audits provide objective analysis to assist management and those charged with governance and oversight to improve program performance and operations, reduce costs, facilitate decision making by parties with responsibility to oversee or initiate corrective action, and contribute to public accountability.

Generally accepted government auditing standards (GAGAS) require that a performance audit be planned and performed so as to obtain sufficient, appropriate evidence to provide a reasonable basis for findings and conclusions based on audit objectives. Objectives are what the audit is intended to accomplish and can be thought of as questions about the program that the auditors seek to answer based on evidence obtained and assessed against criteria.

We conducted this performance audit in accordance with 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.

Audit Scope and Objectives

In order to provide the Office with appropriate, data driven, recommendations, the following questions were assessed within each of the agreed upon scope areas:

Summary of Objectives and Conclusions

Objective	Recommendation
Financial Management	
How do LCEO's financial management practices compare to best practices and/or peers?	**R.1, R.2, R.3**
Departmental Operations	
How do LCEO's management practices and operations compare to peers and/or best practices?	**R.5**
Human Resources	

Is LCEO organized and properly staffed to successfully carry out its purpose, in comparison to peer and/or best practices?	**No Recommendation: LCEO is staffed appropriately in comparison to the peers.**
Are LCEO's salaries appropriate in comparison to peers, other government entities, or within the local market?	**R.4**
Fleet Management	
What opportunities exist to improve the efficiency and effectiveness of fleet management in relation to industry standards and leading practices?	**R.6**
What opportunities exist to improve the efficiency and effectiveness of vehicle and equipment acquisition practices?	**R.7**

Although assessment of internal controls was not specifically an objective of this performance audit, internal controls were considered and evaluated when applicable to scope areas and objectives. The following internal control components and underlying principles were relevant to our audit objectives[8]:

- Control environment
  - We assessed the Office's exercise of oversight responsibilities in regard to detecting improper payroll reporting and benefits administration.
  - We assessed the Office's exercise of oversight responsibilities in regard to detecting improper data entry in the dispatch system and fleet management information system.
- Risk Assessment
  - We considered the Office's activities to assess fraud risks.
- Information and Communication
  - We considered the Office's use of quality information in relation to its financial, payroll, staffing, and fleet data.
- Control Activities
  - We considered the Office's compliance with applicable laws and contracts.

An internal control deficiency was identified during the course of the audit and is discussed in the corresponding recommendation (**Recommendation 5**).

[8] We relied upon standards for internal controls obtained from *Standards for Internal Control in the Federal Government* (2014), the U.S. Government Accountability Office, report GAO-14-704G

Audit Methodology

To complete this performance audit, auditors gathered data, conducted interviews with numerous individuals associated with the areas of Office's operations included in the audit scope, and reviewed and assessed available information. Assessments were performed using criteria from a number of sources, including:

- Peer County Engineer's Offices;
- Industry Standards;
- Leading Practices;
- Statues; and
- Policies and Procedures.

In consultation with the Office, we selected County Engineer's Offices similar in location, operations, and other demographics to form the peer group for comparisons contained in this report. These peers are identified as necessary and appropriate within the section where they were used. The peers are:

- Columbiana;
- Crawford;
- Erie;
- Geauga;
- Huron;
- Ottawa; and
- Summit.

Appendix B: Financial Management

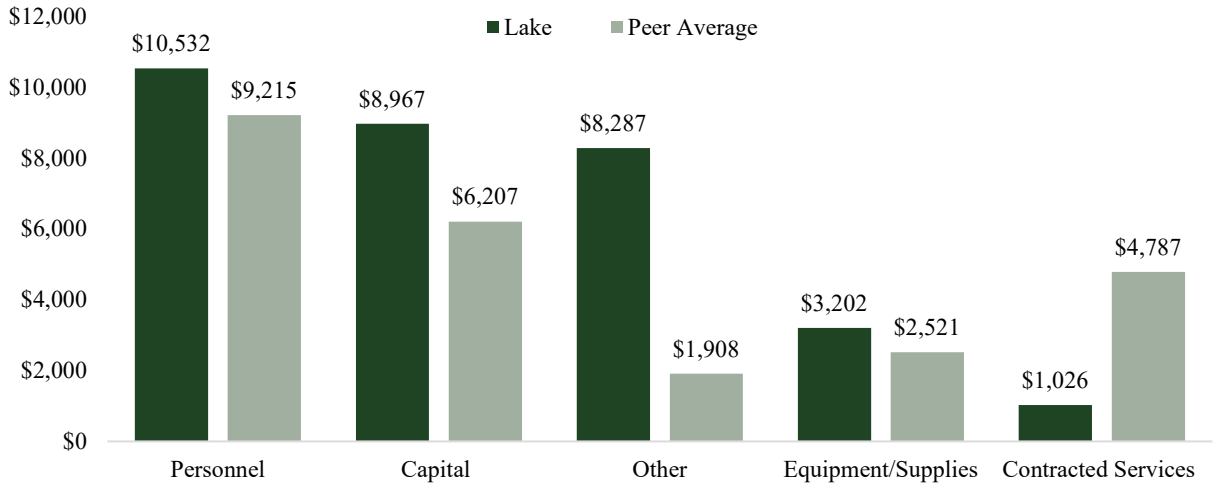
Resource Allocation

LCEO's revenues and expenditures per lane mile were compared to a peer average. CY 2023 was used for comparison because it was the most recent year of data we had from LCEO and all of the peers.

In CY 2023, LCEO's revenue per lane mile was $30,938, which falls approximately $4,600 above the peer average of $26,306. In the same year, LCEO's expenditures per lane mile was $32,014, which falls approximately $7,300 above the peer average of $24,639. However, when the Office's annual debt obligation payment is excluded from expenditures, the expenditures per lane mile decreases to $26,393, which is much closer to the peer average, but still approximately $1,700 thousand above.

There are a few potential explanations for LCEO's expenditures per lane mile exceeding the peer average. First, Lake County experiences higher levels of snowfall than six out of seven of the peers due to the location along Lake Erie. As a result, the Office is responsible for more snow plowing and ice removal than the peers. In addition, as discussed in the **Financial Background**, the Office has an annual debt obligation payment that accounts for more than 10 percent of its total expenditures. To understand how the Office allocates its expenditures, we calculated LCEO's expenditures per lane mile by category in comparison to the peer average. The chart below shows this comparison.

CY 2023 Expenditures per Lane Mile



Source: LCEO and Peers

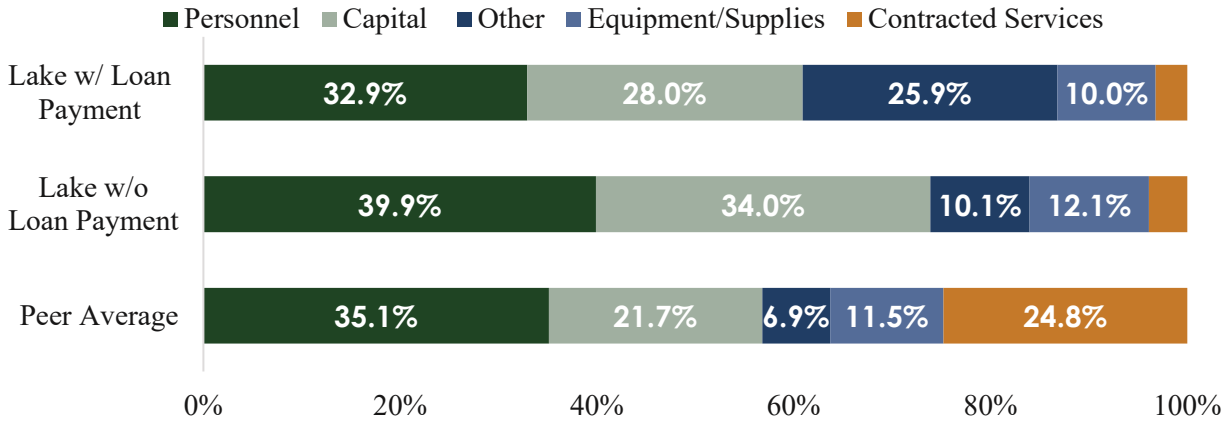
LCEO's expenditures per lane mile are above the peer average in Personnel, Capital, and Equipment/Supplies categories, but much lower than the peer average in Contracted Services.

This suggests that the Office conducts most of its work in-house, which was also indicated by LCEO personnel. It was not possible to assess the cost effectiveness of this practice outside of this financial comparison due to the lack of data on the Office's day-to-day operations, as discussed in **Recommendation 5**.

LCEO is substantially above the peer average in the Other category, which is largely due to the annual debt payment that the Office is required to make. Excluding this payment brings the Other category down to $2,666, which is much closer to the peer average. This provides insight into the impact that this annual debt payment has on the Office's budget.

The following graph shows LCEO's expenditures by the same categories, represented as a percentage of total expenditures, in comparison to a peer average. LCEO is shown both including and excluding the debt payment, for insight into how this payment affects the percentage allocation of expenditures.

CY 2023 Percentage Allocation of Expenditures



Source: LCEO and Peers

This graph shows a similar result to the expenditures per lane mile comparison, with LCEO spending proportionally more than the peer average on personnel and capital, but spending much less on contracted services.

Short-Term Note Repayment

As discussed in the Financial Background, LCEO's debt obligation represents a financial constraint on the Office. The table below shows the notes issued each year, the principal that is repaid from the new note and out of pocket, the interest payment, the total paid out of pocket, and the total paid.

LCEO Notes Issued and Payments to Date

Year	Note Issued	Principal Paid from Note	Principal Paid out of Pocket	Interest Paid out of Pocket	Total Paid out of Pocket	Total Paid
2018	$1,400,000	$0	$0	$0	$0	$0
2019	$6,400,000	$1,400,000	$0	$31,500	$31,500	$1,431,500
2020	$12,000,000	$5,400,000	$1,000,000	$180,908	$1,180,908	$6,580,908
2021	$11,250,000	$11,250,000	$750,000	$270,000	$1,020,000	$12,270,000
2022	$10,250,000	$10,250,000	$1,000,000	$56,250	$1,056,250	$11,306,250
2023A	$9,250,000	$9,250,000	$1,000,000	$276,472	$1,276,472	$10,526,472
2023B	$8,500,000	$8,500,000	$750,000	$179,375	$929,375	$9,429,375
2024	**$7,750,000**	n/a	n/a	n/a	n/a	n/a

Source: LCEO

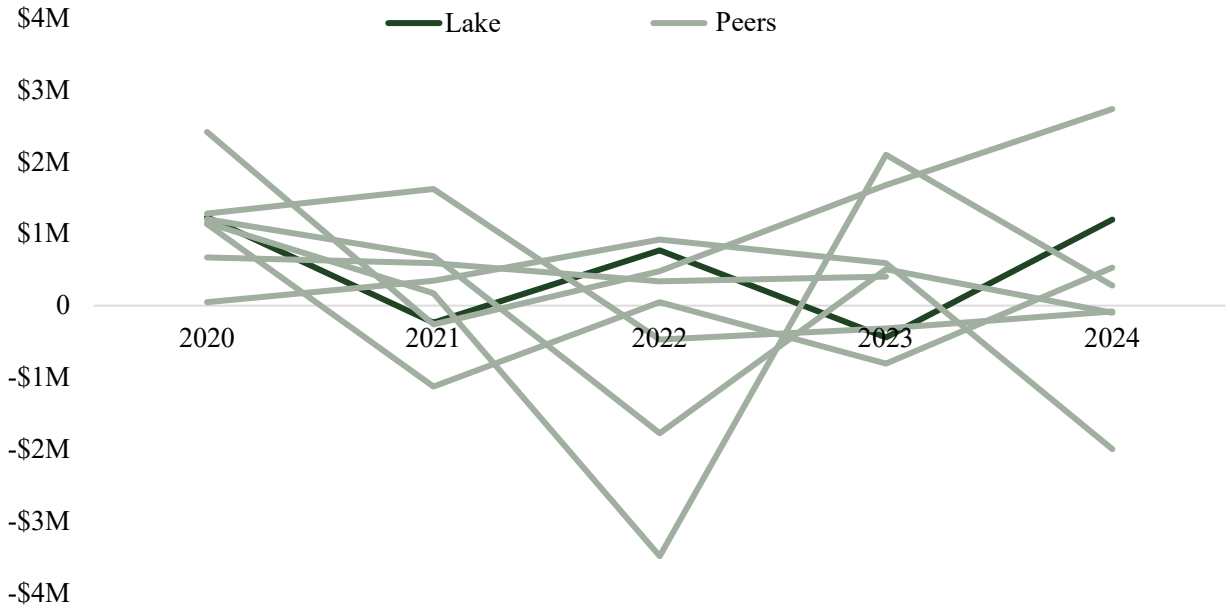
In CY 2018, LCEO took out a $1.4 million note. In CY 2019, it took out a $6.4 million note, which was used partially to repay the CY 2018 note and partially for the Office's operations. The Office did not pay any principal out of pocket in CY 2019, but did pay interest. In CY 2020, the Office took out a $12 million note, which was used partially to repay the CY 2019 note and partially for LCEO's operations. This year was the first year that the Office repaid part of the principal out of pocket, along with another interest payment. Each year since CY 2020, LCEO has taken out a slightly smaller note, used the entirety of it to repay the previous year's note, along with a principal and interest payment out of pocket. The current outstanding balance is $7.75 million.

Financial Planning

While the work of an engineer's office can be unpredictable due to the nature of responsibilities, we looked at the Office's spending versus budget over time to get a sense of how LCEO compares to the peers. From CY 2021 to CY 2024, the Office's total actual expenditures exceeded the original budgeted amount once. Two of the four expense categories examined, equipment and contracted services, exceeded the original budgeted amount at least once during this timeframe. The peer average total expenditures did not exceed the budgeted amount during this timeframe, but the same two expense categories exceeded the budgeted amount once.

From CY 2012 to CY 2024, LCEO's annual expenditures exceeded revenues six times, representing deficit spending in just under half of the years in the timeframe. When looking at the past five years in particular, LCEO deficit spent during two of them, slightly above the peer average of 1.4 years. The graph below shows the amount of deficit spending for LCEO and each of the peers.

CY 2020 to CY 2024 Annual Surplus or Deficit



Source: LCEO and Peers

Although LCEO's frequency of deficit spending is above the peer average, the amount that it has deficit spent over this timeframe is smaller than the majority of the peers. This comparison also shows the unstable nature of expenses for county engineer's offices.

Appendix C: Human Resources

Staffing by Function

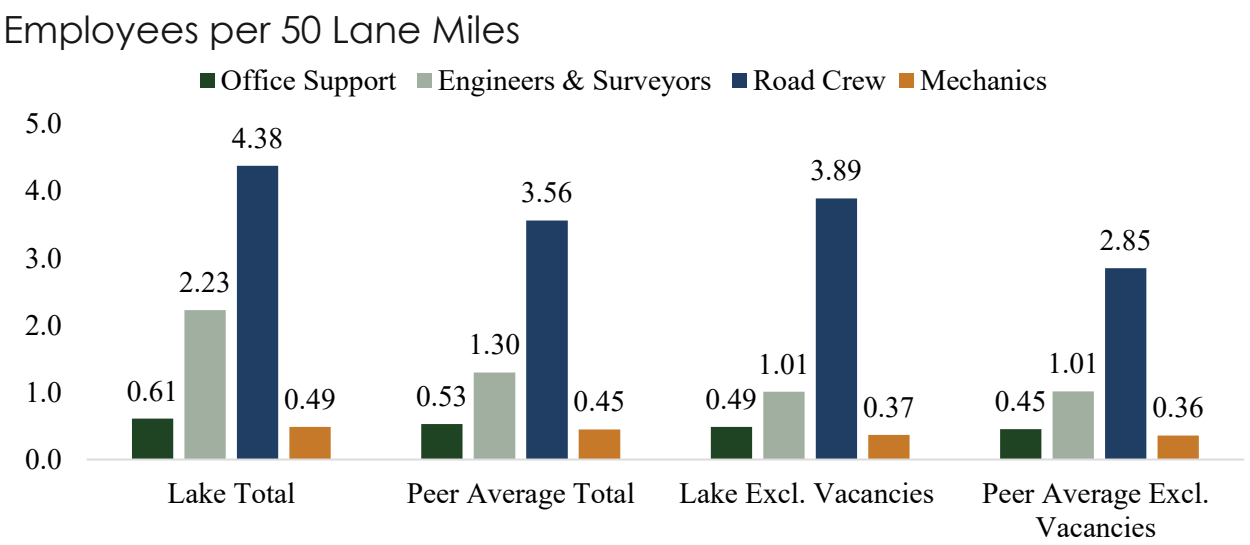
LCEO has a total of 65 positions, excluding the County Engineer and temporary staff. As of January of 2025, 49 of these positions were filled. These positions equate to 48.3 FTEs; 47 of these employees are full-time, one is part-time, and one is seasonal. Since the new County Engineer took Office in January of 2025, he has filled the Chief Deputy Engineer Vacancy, added an additional engineer position, and one Equipment Operator has retired. These employee changes, and any that have occurred since, are not reflected in the following analyses.

We categorized the Office's staff into four general functional areas. The list below shows these functional areas, as well as the positions that fall within each.

- Road Crew
  - Laborer;
  - Equipment Operator I, II, and III;
  - Traffic Technician I and II;
  - Road Foreman;
  - Supervisor; and,
  - Superintendent.
- Mechanics
  - Lead Mechanic;
  - Mechanic; and,
  - Mechanic Helper.
- Office Support
  - Administrator;
  - Finance Officer;
  - Assistant Finance Officer;
  - Office Clerk; and,
  - Receptionist.
- Engineers & Surveyors
  - Chief Deputy Engineer;
  - Chief Design Engineer;
  - Chief Surveyor;
  - Resident Engineer;
  - Design Engineer;
  - Maintenance/Highway Engineer;
  - Highway/Drainage Engineer;
  - Design Engineer in Training;
  - Assistant Bridge Engineer;
  - CAD/Inspection/Survey Technician;
  - Tax Map Supervisor;

- Tax Map Technician; and,
- Survey Technician.

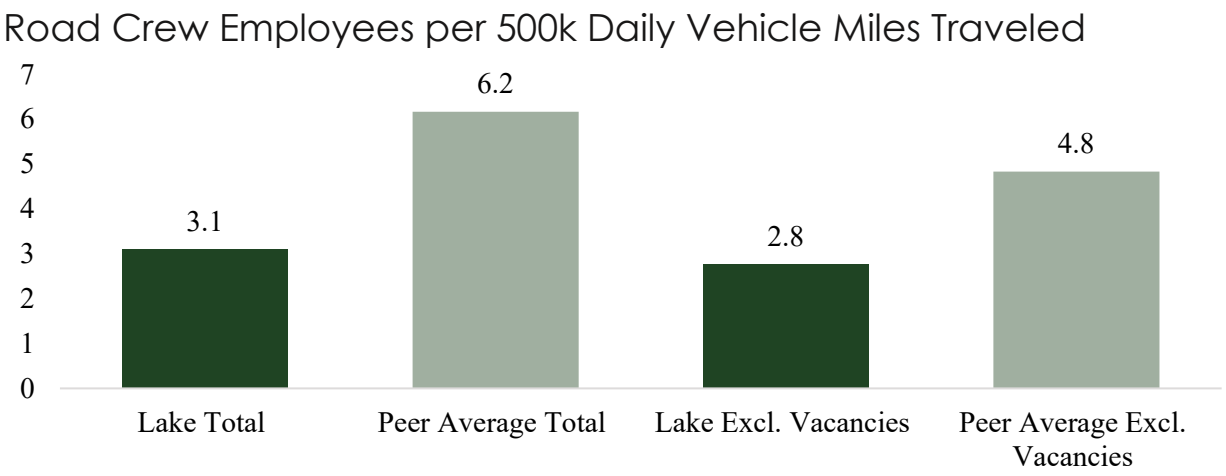
LCEO's staffing levels within each of these functional areas were compared to the peer average on a per lane mile basis, both including and excluding vacancies. The following graph shows our preliminary comparison for all four functional areas.



Source: LCEO and Peers

Both including and excluding vacancies, LCEO is above the peer average for all four functional areas, with the exception of Engineers & Surveyors excluding vacancies. For this functional area, the Office is in line with the peer average.

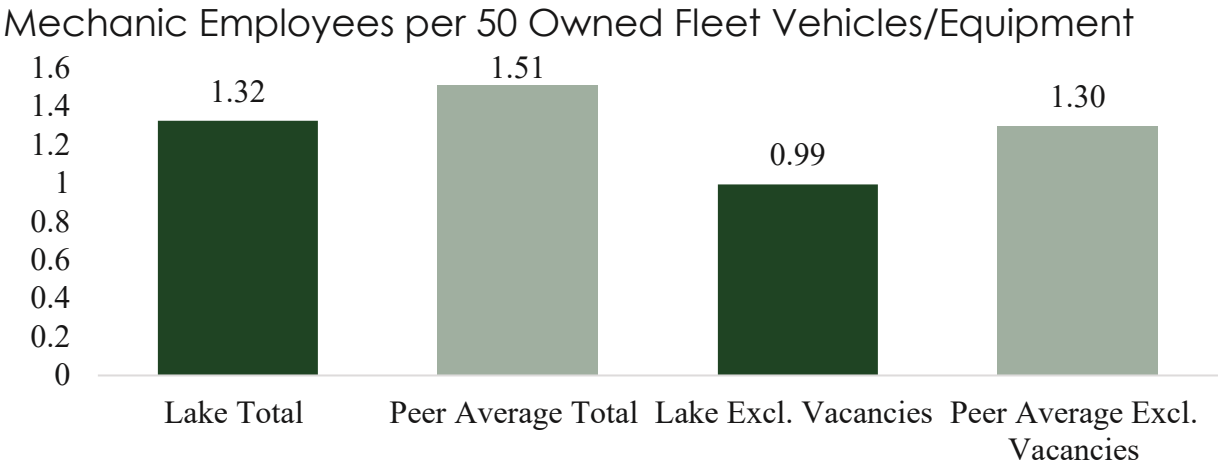
For each functional area, a more appropriate metric was selected for the standardization and comparison of staffing levels. Road Crew employees were compared using each County's traffic volume. This metric was chosen because the amount of traffic volume is correlated with the amount of maintenance roads will need. The more individuals driving on the roads, the faster they will deteriorate, and the more maintenance and repairs will be necessary. The following graph shows this comparison.



Source: LCEO and Peers

Both including and excluding vacancies, LCEO falls far below the peer average staffing level for Road Crew.

Mechanics were compared to the peer average using the number of owned fleet vehicles and equipment that they are responsible for maintaining. The following graph shows this comparison.

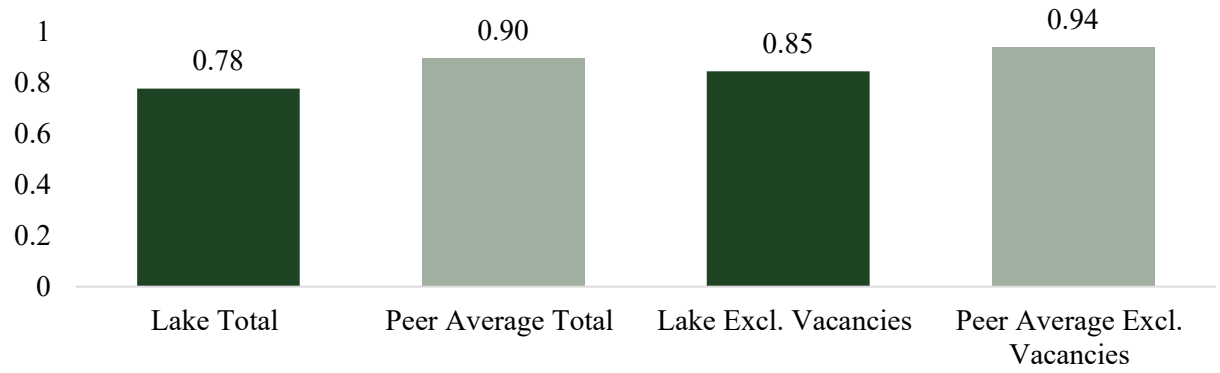


Source: LCEO and Peers

Both including and excluding vacancies, LCEO falls below the peer average mechanic staffing level.

Office Support Staff were standardized by the total number of employees that they are responsible for supporting. The following graph shows this comparison.

Office Support Staff per 10 Total Employees

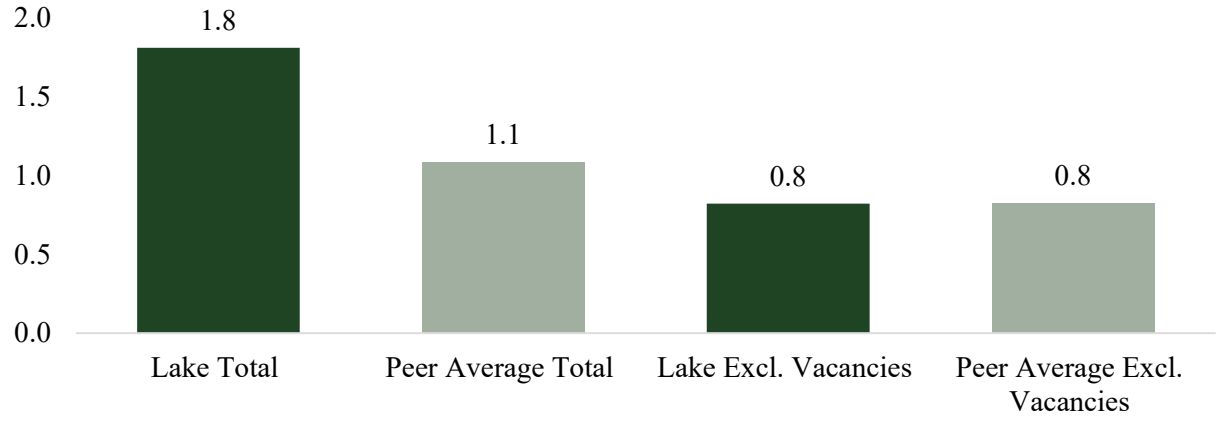


Source: LCEO and Peers

Both including and excluding vacancies, LCEO falls slightly below the peer average for Office Support Staff.

Engineers & Surveyors were compared using the total operational costs for the Office. Without specific data on how many design or survey projects or tasks are completed, this metric was chosen in an attempt to capture the overall operational work of the Office and its peers. It is important to note that LCEO conducts the majority of operations in-house, but the main area that is outsourced by the Office is large or high-liability design work. The following graph shows this comparison.

Engineers & Surveyors per $1 million of Operational Costs



Source: LCEO and Peers

When vacant positions are included, LCEO is above the peer average for Engineers & Surveyors. However, the majority of the Office's vacancies fall in this functional area. When vacancies are excluded, LCEO is in line with the peer average.

For all four functional areas, LCEO is either in line with or below the peer average, showing that its staffing levels are sufficient and appropriate for its operations in comparison to peers.

Staffing Organization

In addition to staffing levels by function, LCEO's organizational chart was also compared to peers. The following list contains the main takeaways from this comparison.

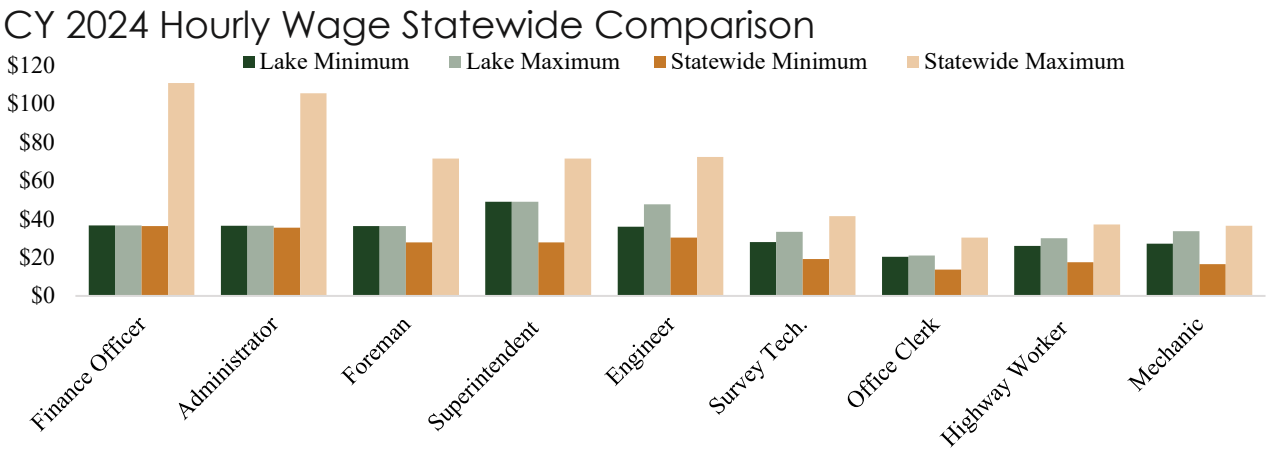
- The Lake County Engineer only has one direct report, whereas six out of seven peer county engineers have two or more direct reports.
- LCEO only has two clearly defined departments, while four out of seven peers have three or more clearly defined departments.
- LCEO's road crew and mechanics report to the same individual, the Superintendent. Three out of seven peers have their road crew and mechanics report to separate individuals.
- LCEO's road crew is not separated by location or function. Two out of seven peers have their road crew separated by location.

While we identified these differences between LCEO and peer organizational charts, we are unable to determine if these differences positively or negatively impact the Office's operations. However, LCEO can examine these differences if it is interested in potentially restructuring the Office.

Salaries

In addition to the peer and local market entity salary comparison discussed in **Recommendation 4**, we compared the Office's wages to statewide averages obtained from the Bureau of Labor Statistics (BLS). This comparison was done to provide insight into the wages paid by the private sector for similar job positions. While the public sector is unlikely to be competitive with private sector compensation when looking at wages alone, it provides helpful context for the Office when examining compensation structure.

We compared LCEO's wages to statewide minimum and maximum wages for similar positions based on LCEO's position titles and BLS position categories. LCEO is above average for the minimum wage and below the maximum wage for all nine positions examined. This aligns with the general trend that government entities offer higher wages for entry-level positions, but much lower wages for higher-ranking positions than private sector employers. This comparison is shown in the table below.



Source: LCEO, BLS

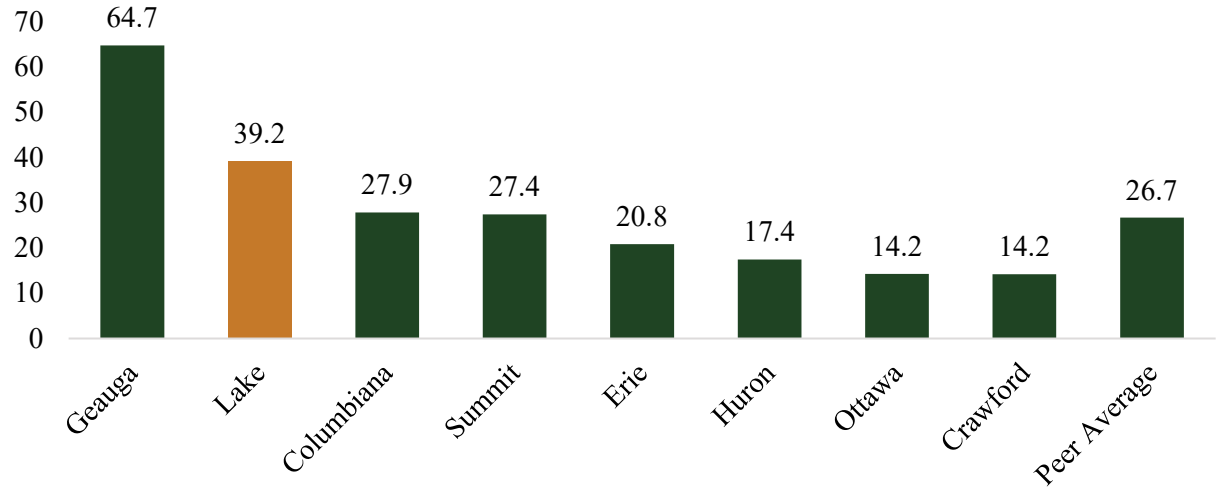
It is important to note that the LCEO minimum and maximum wages shown in the graph above are reflective of actual wages paid to current employees, not a salary schedule. The statewide minimum and maximum wages reflect entry level to top level wages.

Appendix D: Departmental Operations

Due to the underutilization of the Office's work order system, we were unable to conduct the majority of planned analyses related to departmental operations. However, there were some peer comparisons we were able to conduct without this work order data.

Lake County is located in Northeast Ohio along Lake Erie. As a result, the County experiences high levels of snowfall due to Lake Effect snow. The following graph shows five-year average snowfall for Lake County in comparison to peers.

Five-Year Average Snowfall Peer Comparison (CY 2019 to CY 2024)

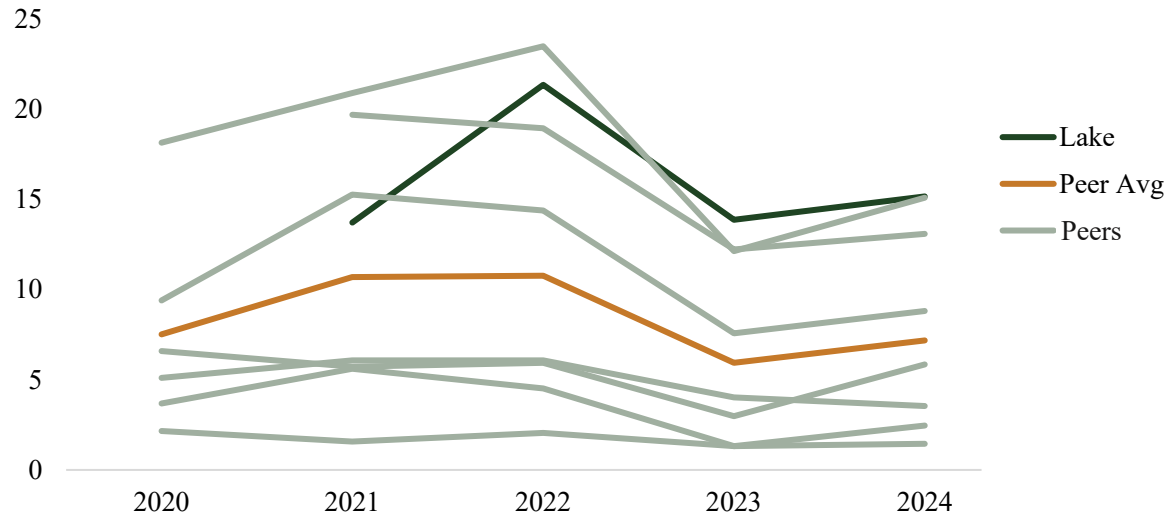


Source: National Center for Environmental Information

Lake County receives the second highest amount of snowfall in comparison to the peers, with only Geauga County experiencing a higher level. This level of snowfall significantly impacts LCEO's operations, as it is responsible for snow and ice removal on all county-owned roads and State Route 2. The Office additionally assists townships and villages within the County with snow and ice removal when necessary.

Due to the amount of snow and ice removal necessary within the County, one of LCEO's largest supply needs is salt. The graph below shows the tons of salt used per year for LCEO and peers.

Tons of Salt Used Annually Per Lane Mile

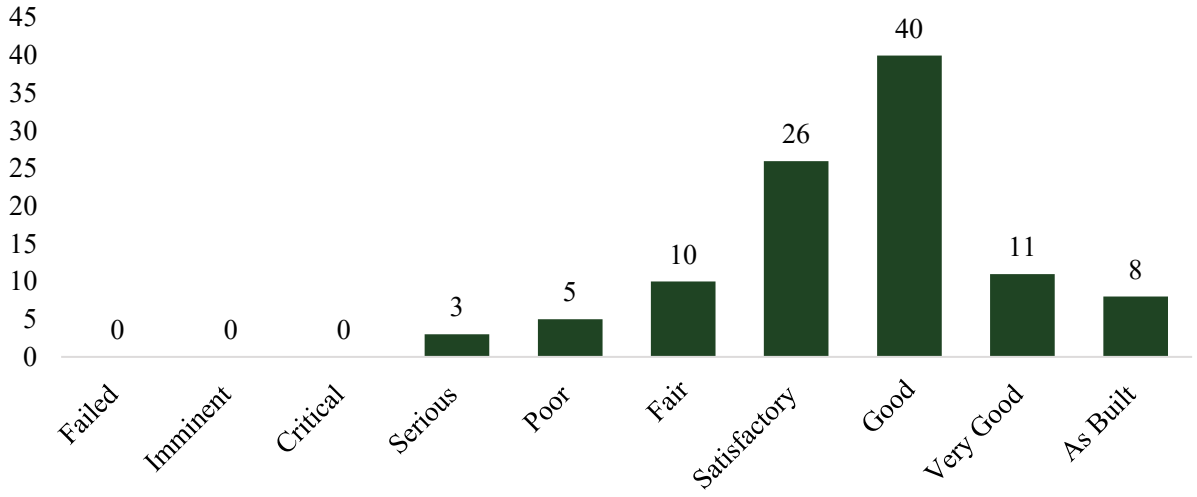


Source: LCEO and Peers

LCEO used more salt than the peer average and all individual peers, with the exception of Summit, over the four years that we have data for. The level of snowfall that Lake County receives in comparison to peer counties and the additional responsibilities that LCEO performs may contribute to the increased level of salt usage.

In accordance with ORC § 5543.20, LCEO conducts bridge inspections and reports to the County Commissioners regarding the condition of the County's bridges each year. These inspections must be in compliance with ODOT's bridge inspection manual. The following graph shows the condition ratings for all of Lake County's 103 bridges for 2024.

CY 2024 Lake County Bridge Condition Ratings

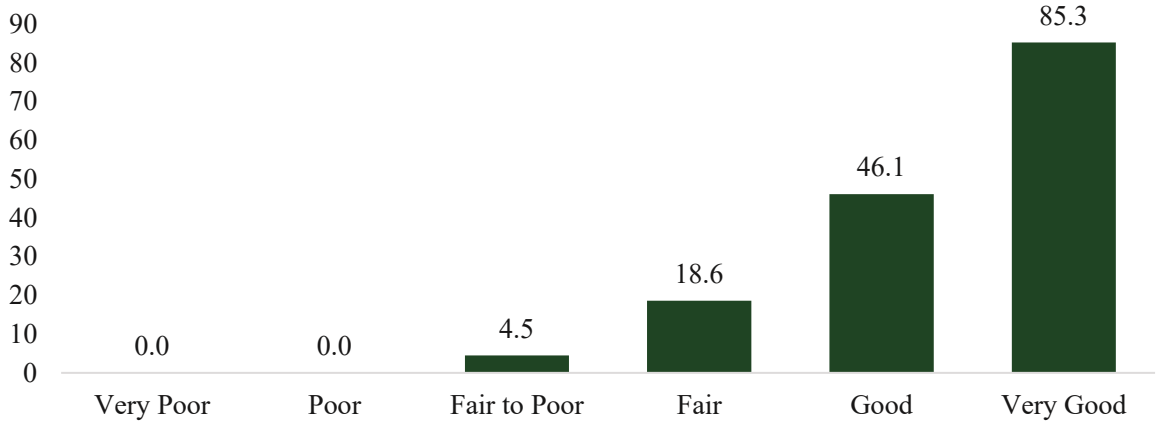


Source: LCEO

Lake County has no bridges in failed, imminent, or critical conditions. The majority of the County's bridges are rated satisfactory or good.

LCEO also conducts pavement inspections in accordance with ODOT's pavement condition rating system. The following graph shows the pavement condition ratings for all county-owned roads within Lake County.

CY 2022 County-Owned Road Miles by Pavement Condition Ratings



Source: LCEO

More than half of Lake County's roads have a pavement condition rating of very good. None of the roads are rated poor or very poor.

Appendix E: Fleet Management

Leasing Versus Purchasing of Vehicles

The Lake County Commissioners requested that we conduct an analysis to determine if leasing or purchasing vehicles was more cost effective for LCEO. Due to the lack of data regarding fleet maintenance and repair costs, it was not possible to complete this analysis, as discussed in **Recommendation 5** and **Recommendation 7**.

Once LCEO improves its data collection to include maintenance and repair costs by fleet unit, the staff will be able to calculate cost of ownership for each vehicle and piece of equipment within the fleet. Cost of ownership is the collection of all expenses that go into operating a fleet asset. According to Ernst & Young, the formula to calculate cost of ownership is:

$$= Acquisition\ Costs + Maintenance\ Costs + Depreciation + Downtime\ Costs$$

Any additional expenses associated with owning equipment must also be taken into account, including fuel costs or administrative costs. Next, the residual value of a fleet asset should be calculated. This figure represents the amount of revenue that could be generated from the sale of the vehicle or equipment. According to Ernst & Young, the formula for calculating the residual value of a fleet asset is:

$$= New\ Purchase\ Price - Total\ Depreciation$$

Once both of these figures are calculated, the residual value should be subtracted from the total cost of ownership to calculate the net cost of owning the fleet asset. This net cost can then be compared to the cost of leasing the same vehicle or piece of equipment to determine which is more cost effective.

A sample cost of ownership for a Dodge Ram 3500 was conducted as an example. The following figures were calculated using a cost estimating model and are not reflective actual expenses or revenues for the Office or County.

The chart below shows the annual depreciation, maintenance costs, and residual value for a Dodge Ram 3500.

Estimated Costs of Ownership for Dodge Ram 3500

Year	Average Annual Maintenance Cost	Expected Depreciation	Residual Value
1	$ 1,071	$ 11,987	$ 67,397
2	$ 1,250	$ 4,715	$ 62,682
3	$ 1,598	$ 3,843	$ 58,839
4	$ 2,060	$ 897	$ 57,942
5	$ 2,503	$ 5,898	$ 52,044
6	$ 3,302	$ 5,636	$ 46,408
7	$ 3,664	$ 1,421	$ 44,987
8	$ 3,840	$ 1,310	$ 43,677
9	$ 4,001	$ 2,016	$ 41,661
10	$ 4,155	$ 3,128	**$ 38,533**

Source: CarEdge Cost Estimating Model

The total depreciation and maintenance costs for the first 10 years for a Dodge Ram 3500 is estimated to be $68,295. With a new purchase price of $79,384, this results in a residual value of $38,533. The 10-year total cost of ownership would be $147,679. If the vehicle were sold at its residual value, the net cost of ownership would be $109,146.

ODOT Vehicle Lifecycles

ODOT has established fleet lifecycle goals, including age, mileage, and hours used, for all of the equipment and vehicles in its fleet. Examples of these lifecycle goals that ODOT utilizes include the following:

- Standard Sedan, Pickup Truck, and Sport Utility Vehicle (SUV): 90,000 miles
- Utility Truck: 120,000 miles
- Dump Truck, GVWR <=26,000 lb.: 120,000 miles or 6,000 engine hours
- Dump Truck, Tandem Axle, GVWR > 26,000 lb.: 150,000 miles or 6,000 engine hours
- Compressor over 125CFM: 3,000 engine hours
- Mower, Riding, 72” or under: 1,000 engine hours

As vehicles approach the end of these lifecycles, ODOT conducts an assessment for replacement and incorporates the results into future budgeting plans.

OHIO AUDITOR OF STATE
KEITH FABER

LAKE COUNTY

AUDITOR OF STATE OF OHIO CERTIFICATION

This is a true and correct copy of the report, which is required to be filed pursuant to Section 117.26, Revised Code, and which is filed in the Office of the Ohio Auditor of State in Columbus, Ohio.

Certified for Release 9/25/2025

65 East State Street, Columbus, Ohio 43215
Phone: 614-466-4514 or 800-282-0370