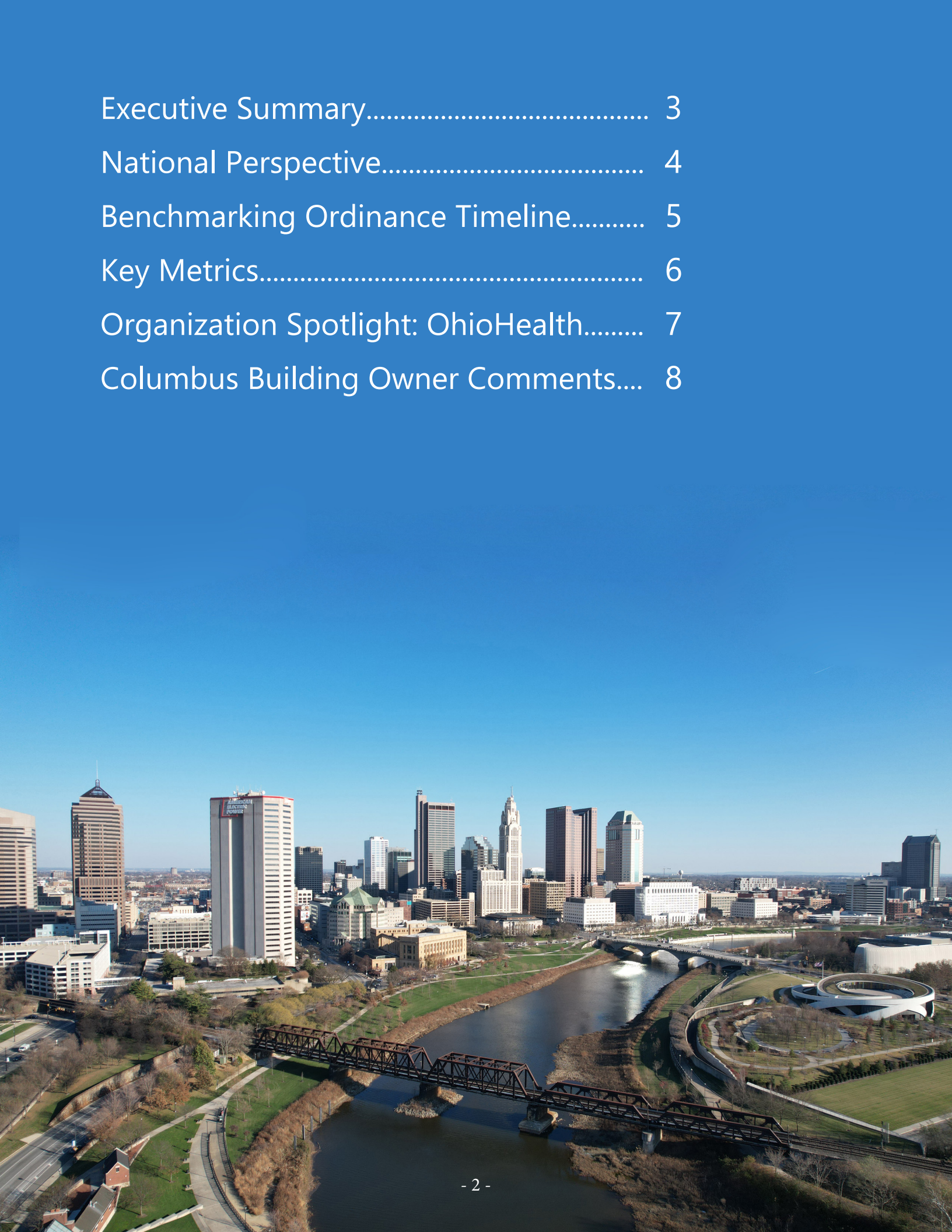# BENCHMARKING
2022
ANNUAL
REPORT

SUSTAINABLE COLUMBUS
ANDREW J. GINTHER, MAYOR

THE CITY OF
COLUMBUS
ANDREW J. GINTHER, MAYOR

DEPARTMENT OF BUILDING AND ZONING SERVICES

EXECUTIVE SUMMARY

In February of 2020, Mayor Andrew J. Ginther announced a bold and ambitious goal for Columbus to be carbon neutral by 2050. Buildings in Columbus account for 55% of community-wide greenhouse gas emissions. Making these buildings as energy and water efficient as possible is essential in our efforts to meet our climate goals and to ensure that Columbus remains a healthy and vibrant community.

Shortly after the Mayor's announcement, in March of 2020, Columbus City Council unanimously voted to adopt the Energy and Water Benchmarking and Transparency Ordinance. The Benchmarking Ordinance, housed within The Building and Zoning Services Department, requires buildings in Columbus 50,000 square feet and larger to track monthly energy and water usage data and submit yearly reports directly to the city in ENERGY STAR® Portfolio Manager®, a free website provided by the U.S. Environmental Protection Agency (EPA).

Benchmarking is an easy way for building owners to measure and manage their energy and water use. Tracking this information enables more informed decision-making regarding energy use along with weatherization improvements and energy efficiency upgrades. The transparency component of the ordinance permits certain building information such as address, building use type, and general energy usage information to be made public. Making this information public allows potential investors and renters to evaluate a building's energy performance.

According to a report by the American Cities Climate Challenge, buildings that benchmark consistently save on average 7 percent energy usage over a three-year period, or 2.4 percent annually. In addition, energy efficiency changes can enable owners to see an increase in their property value and increased rents. Renters also benefit from the program by making informed decisions regarding where they live and work based upon a building's energy performance which will save on utility bills.

Successful execution of a Benchmarking Ordinance requires cooperation from multiple parties including building owners and property managers, utility companies, community organizations, and the development community. The creation of the Benchmarking Ordinance involved a comprehensive stakeholder engagement process that was conducted from April of 2019 through March of 2020. Columbus is committed to providing building owners with all of the tools necessary to make the benchmarking process as beneficial and efficient as possible.

Implementation of the Benchmarking Ordinance was done in phases over the first two years. In the first year, 2021, all buildings over 100,000 square feet had to submit energy data. In 2022, all buildings over 50,000 square feet were required to comply. The first year had many milestones, including the development of an automated benchmarking program for water data. Columbus also collaborated with AEP Ohio to establish an electric meter lookup system for multi-family owners. Additionally, AEP Ohio launched their benchmarking help desk that provides building owners electric data. Columbia Gas established a benchmarking tool for commercial building owners only. At the time of this report, multi-family owners using natural gas did not have an aggregation tool available for natural gas data and therefore were unable to submit benchmarking reports for the 2021 and 2022 compliance cycles.

The first years of the ordinance introduced benchmarking to a lot of Columbus organizations, which is a new process for many building owners. In an effort to help building owners comply, the city created the Benchmarking Help Desk to work with these owners throughout the entire process. Since its inception, the Columbus Benchmarking Help Desk has fielded over 674 phone calls and 6,134 emails.

Energy and water data collected through the Benchmarking Ordinance will provide Columbus a better understanding of how we, as a city, use our energy, which is a necessary step to meet our climate goals. Local governments can improve the efficiency of city building stock and manage climate goals. To meet energy efficiency improvement targets, Columbus will need a trained work force which will stimulate local job growth. The work being done through the Benchmarking Ordinance will help Columbus create a vibrant, healthy, and equitable community through more efficient buildings.

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**The plan is rooted in equity and environmental justice.
- Mayor Andrew J. Ginther**

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NATIONAL PERSPECTIVE - BENEFITS OF BENCHMARKING ORDINANCES

Columbus is one of 33 state and local governments to join President Biden's Building Performance Standards Coalition, a first-of-its kind partnership between state and local governments around the country that have committed to healthier, more efficient buildings. Building owners and cities that are further along in their Benchmarking Ordinance are already seeing the benefits. The cities highlighted below have a similar ordinance to Columbus.

U.S. City	Building Size	Energy Savings	Cost Savings Per Year	Compliance Rate
Chicago	>50,000 Sq Ft	5.2% (over five years)	$15.1 Million	88%
Denver	>25,000 Sq Ft	4.5% (over two years)	$13.5 million	93%
Minneapolis	>50,000 Sq Ft	3.4% (over four years)	$21 Million	80%

* American Cities Climate Challenge

Buildings included are commercial & multi-family

U.S. City, County, and State Policies for Existing Buildings: Benchmarking, Transparency, and Beyond
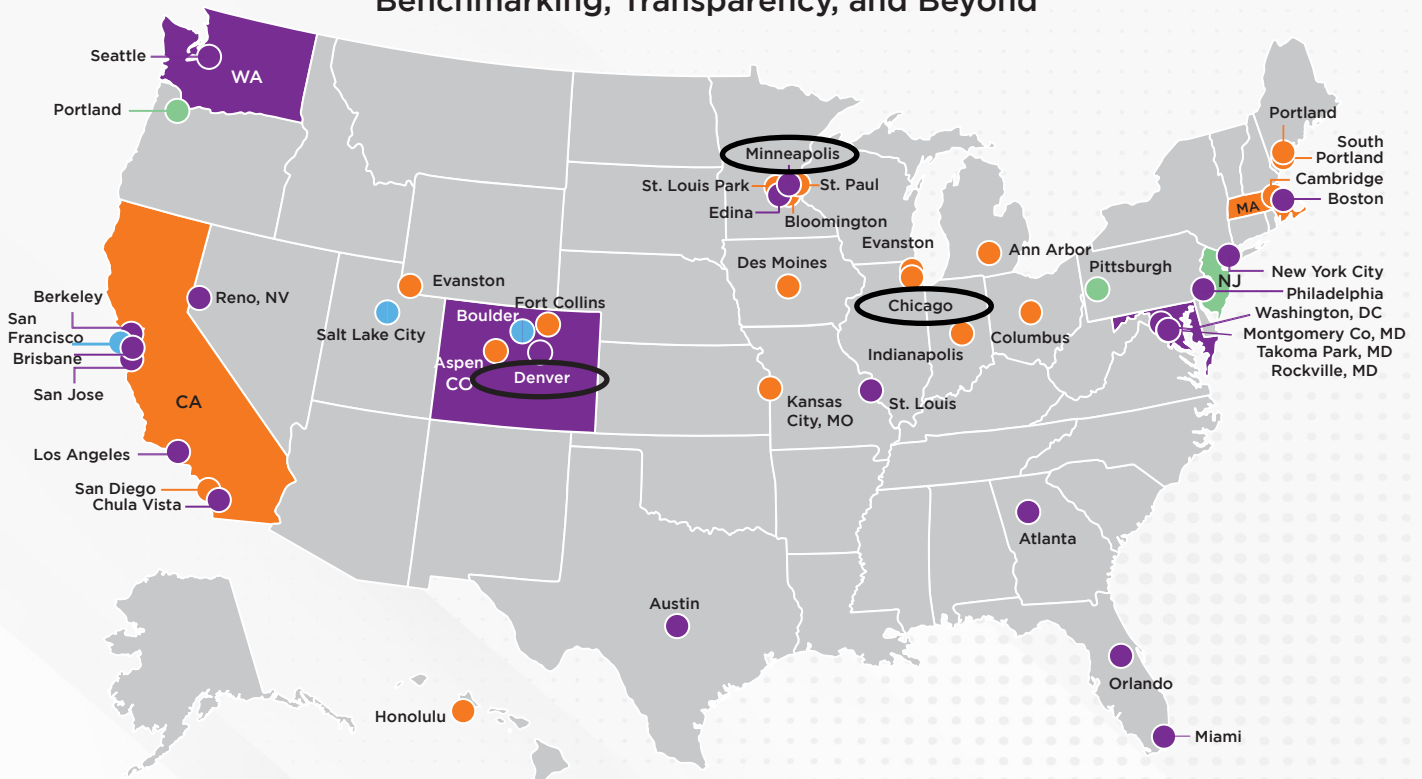
🟢 Benchmarking required for public and commercial buildings

🟠 Benchmarking required for public, commercial, and multifamily buildings

🔵 Benchmarking and additional actions required for public and commercial buildings

🟣 Benchmarking and additional actions required for public, commercial, and multifamily buildings

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BENCHMARKING TIMELINE

Implementation of the Benchmarking Ordinance had many milestones before Columbus ever received its first benchmarking report. A deliberate and collaborative stakeholder process, that included over 50 organizations and 85 community meetings, resulted in a transparent ordinance that met community expectations and city goals.

April 2019 - March 2020

Benchmarking stakeholder engagement process

February 2020

Mayor Ginther announces ambitious goal for Columbus to be carbon neutral by 2050

March 16, 2020

City Council unanimously votes to adopt Energy & Water Benchmarking and Transparency Ordinance

April 2020 - December 2020

Community education and outreach

January 2021 - May 2021

Technical assistance and training for building owners, continued community outreach.

June 1, 2021

All buildings over 100,000 square feet submit energy benchmarking reports

December 9, 2021

Mayor Ginther unveils city's first ever Columbus Climate Action Plan, a community roadmap to achieve carbon neutrality by 2050

June 1, 2022

All buildings over 50,000 square feet submit energy and water benchmarking reports

KEY METRICS - ORDINANCE COMPLIANCE DATA

The transparency component of the Benchmarking Ordinance permits the city to share energy data with the public. The information will allow potential renters and investors to make more informed decisions about a property based on its energy performance. While the ordinance will eventually share individual building level energy data, there is an initial grace period for every building. Therefore, this annual report focuses on general ordinance compliance data and energy performance by building type.

Any building owner may submit an exemption request form if the building's function is primarily manufacturing, is less than 50% occupied for the reporting year, or if disclosing energy data would expose trade secrets. If the exemption is approved, the building is considered in compliance. City-wide total combined energy usage recorded through the ordinance is measured in MMBtu (Metric Million British Thermal Units). The greenhouse gasses (GHG) associated with this energy use are measured in $MTCO^2e$ (Metric Tons of Carbon Dioxide Equivalent), which represents the total GHG impact of the energy use.

ENERGY STAR® Scores range from 1 to 100, with higher values representing more efficient buildings and 50 being an average score. Energy Use Intensity (EUI) is the amount of energy a space has used over a period of time (total energy use in thousand British Thermal Units/ total square feet/ year), and is the most commonly used metric to evaluate the energy efficiency of buildings.

2021		2022
368 Buildings 'In Compliance'		728 Buildings 'In Compliance'
43 Exemptions Approved		110 Exemptions Approved
325 Benchmarking Reports Accepted and Approved		618 Benchmarking Reports Accepted and Approved
68,806,663 sq. ft. 'In Compliance'		109,040,622 sq. ft. 'In Compliance'
35,287,843 MMBtu		293,990,630 MMBtu
2,293,062 MTCO2e*		16,236,728 MTCO2e*

Multi-families with natural gas do not have an aggregation tool and have not reported yet

KEY METRICS - ENERGY PERFORMANCE BY BUILDING TYPE

2021

Building Type	Number of Accepted Submittals	Columbus Average ENERGY STAR® Score	Columbus Average Site Weather Nor-malized EUI (kBtu/ sq. ft./ year)	*National Median Site EUI (kBtu/sq. ft./ year) (ENERGY STAR®)
College/University	22	N/A	148	84.3
Fitness Center/ Health Club/Gym	12	N/A	110	50.8
K-12 School	11	71	70	48.5
Office	43	62	82	52.9
Retail Office	17	61	96	103.5

2022

Building Type	Number of Accepted Submittals	Columbus Average ENERGY STAR® Score	Columbus Average Site Weather Nor-malized EUI (kBtu/ sq. ft./ year)	*National Median Site EUI (kBtu/sq. ft./ year) (ENERGY STAR®)
College/University	62	N/A	135	84.3
Distribution Center	22	49.5	46	22.7
Fitness Center/ Health Club/Gym	14	N/A	113	50.8
Hotel	25	73.4	73	63
K-12 School	68	38.7	70	48.5
Laboratory	20	N/A	286	115.3
Manufacturing/ Industrial Plant	28	N/A	43,465	N/A
Medical Office	11	16.6	143	51.2
Multi-Family Housing	44	65.6	44	59.6
Non-Refrigerated Waterhouse	21	53.2	37	22.7
Office	98	53.1	89	52.9
Residence Hall/ Dormitory	19	60	73	57.9
Retail Store	29	60.7	63	103.5
Supermarket/ Grocery Store	17	62.8	180	196

ORGANIZATION SPOTLIGHT - OHIOHEALTH

Energy benchmarking helps OhioHealth develop system energy goals and prioritize energy efficiency. OhioHealth Corporation, a faith-based not for profit health system based in Columbus, is a network of 12 hospitals, 200+ ambulatory sites, hospice, home-health, medical equipment and other health services spanning a 47-county area across Ohio.

OhioHealth began its energy journey in 2014 with the creation of a multi-disciplinary utility task force to better understand utility usage across its 12 hospitals which have a physical footprint of over 9 million square feet.

The task force started utilizing ENERGY STAR® Portfolio Manager® in 2019 to benchmark hospital energy use. Benchmarking results helped OhioHealth understand how its energy use (electric, gas, and water) is compared to peer facilities and enabled it to strategize and develop achievable energy targets at each of its 12 hospitals, which differ in size, location, and energy use.

Once hospital-level energy targets were established, OhioHealth was able to use those targets to develop a system-wide energy goal that is now influencing energy efficiency in the existing portfolio and new construction projects.

COLUMBUS BUILDING OWNER COMMENTS

The Benchmarking Help Desk was established to assist building owners and managers through the benchmarking process. Owners may email, call, or schedule one-on-one video calls as needed to get assistance bringing their building into compliance. All of these services, along with multiple other compliance resources, are available through the Columbus Benchmarking Website.

The Benchmarking Help Desk was very quick to respond to all my questions by email and phone call... they even went to the lengths of setting up a video call to walk me through what buttons to click step-by-step. I appreciated that I was able to schedule this video appointment with city staff online at my convenience... Overall I was very impressed with the customer service that the Benchmarking Help Desk provided.

- Erin W., Estates at Brentwood Lakes

I am a property manager with Casto Communities in the City of Columbus. The Benchmarking Help Desk was a huge help in getting several properties benchmarking completed in a timely manner. He was always professional, helpful and patient. We had no idea where to start and he walked us thru the process and answered any questions we had and made it seem easy. We spoke with city staff on the phone and scheduled a few meetings with them and used the screenshare to make things easier. We were very thankful for the help desk and the helpful interaction we had with him.

- Jessica F., Wexford Lakes

I'm 70, so learning the process was so intimidating that I needed a lot of personal help... I'm just thankful the help desk was available to navigate me through these blind spots. They have immense patience and knew all the answers I needed to achieve compliance.

- Linda R.

I just wanted to say thank you for all the help you gave to me, when I first was using the Benchmarking program. I was more than a little confused as to what to do and how to do it. You were so kind, so helpful and made me feel so much better about what I was doing. You provided incredible customer service to me, when I really needed it.

- Sandy H., CBRE Property Management

The Benchmarking Help Desk was extremely helpful and knowledgeable in assisting me with navigating the City of Columbus Benchmark Reports. The staff was always patient and understanding in helping me pull together the data required and ensure that everything was submitted correctly.

- Jackie S., Capitol Equities

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