

**ENVIRONMENTAL, SOCIAL & GOVERNANCE 2020**



# TABLE OF CONTENTS

1 Key Achievements in Sustainability

2 From Our Chairman

ENVIRONMENTAL	SOCIAL	GOVERNANCE
3 Vision 2030 Roadmap	16 Health and Wellness	29 ESG Materiality Assessment
4 Task Force on Climate-Related Financial Disclosures (TCFD)	18 Tenant & Community Development	30 ESG Governance
6 Resilience and Adaptation	19 Our People	31 Global Reporting Initiative (GRI) Index
7 Energy Efficiency Targets	20 BMS / Green Cleaning	
8 Goals and Progress	23 Supply Chain	FRAMEWORKS
9 Environmental Results 2020	24 Cybersecurity	37 Assurance Statement - GRI Index
11 Environmental Results by Region	25 Social Results 2020	38 Appendix A – Sustainability Accounting Standards Board (SASB)
12 Energy Management Planning Cycle	27 Vornado Volunteers	42 Assurance Statement - SASB Index
13 Sustainable Development	28 Our Partnerships	44 UN Sustainable Development Goals
15 Recycling		

See more at [esg.vno.com](https://esg.vno.com)



# KEY ACHIEVEMENTS IN SUSTAINABILITY

---

GLOBAL REAL ESTATE  
SUSTAINABILITY BENCHMARK  
GREEN STAR RANKING 2020

8TH YEAR IN A ROW  
TOP QUINTILE PERFORMER  
“A” SCORE FOR PUBLIC DISCLOSURE

---

NAREIT LEADER IN THE LIGHT AWARD  
2020

11TH YEAR IN A ROW

---

ENERGY STAR PARTNER OF THE YEAR  
SUSTAINED EXCELLENCE 2021

6TH TIME WITH THIS DISTINCTION

---

EP100 MEMBER

COMMITTED TO DEPARTMENT OF ENERGY'S  
ISO 50001 READY PROGRAM

---

US GREEN BUILDINGS COUNCIL 2020  
LEADERSHIP AWARD





# FROM OUR CHAIRMAN

## ENVIRONMENTAL, SOCIAL & GOVERNANCE (“ESG”)

The various crises we endured in 2020 – economic, public health, social justice, and climate – underscore the importance and urgency of ESG. ESG remains a priority for all of us at Vornado and is further supported with oversight from our Board.

Climate change risks are imminent, as climate-driven events wreak havoc across the globe, damaging infrastructure and adversely impacting vulnerable communities. As corporate citizens we believe must do our part to reduce our impact on the environment and manage the associated risks. **Last year, we published our commitment to making our buildings carbon neutral by the year 2030.** Our six-point plan, known as Vision 2030, is discussed fully in this ESG Report. We have committed to aligning this plan with the Science-Based Target Initiative.

We have been focused on energy efficiency for over ten years. In fact, we reduced our energy consumption 24% between 2009 and 2019. We prioritize energy efficiency as the primary means to reduce our carbon emissions; we can and should do more, with less. To that end, below is an inventory of carbon emissions from our buildings in 2020, according to the Financial Control method<sup>1</sup>, measured in metric tons:

	CARBON EMISSIONS TOTAL			
	TOTAL MTCO <sub>2</sub> e	SCOPE 1 <sup>1</sup>	SCOPE 2 <sup>1</sup>	SCOPE 3 <sup>1</sup>
NEW YORK	163,424	23,559	105,456	34,409
theMART	20,996	4,367	16,612	17
555 CAL	8,405	37	8,368	-
OTHER	13,360	1,227	3,561	8,571
TOTAL	206,184	29,190	133,997	42,997

We realized a 20% reduction in our emissions from 2019 to 2020, mostly due to COVID-related dormancy in our office and retail spaces. We expect emissions to increase from these values, at least partially, with the return of our tenants in 2021.

Carbon emissions have a complex relationship with real estate. As property owners, we can control the emissions generated by our energy consumption, but we also must be aware of the resources expended to generate this energy. A “green” electrical grid is fully supported by renewable energy and other zero-carbon resources, like hydropower and nuclear. If the grid is green, a building whose sole energy source is electricity could become carbon neutral. Both New York State and California have mandates to achieve green grids (New York by 2040; California by 2045). Such regulation compels us to

consider electrifying our buildings as a plausible path to carbon neutrality. We are actively doing so in the PENN District and elsewhere. We have a seat at the table with climate policymakers at City, State, and Federal levels to advise not only on what role buildings must play in climate change mitigation, but also how it can be done.

We responded to COVID with determination to ensure that our tenants, employees, and visitors remain healthy and safe. We fortified our buildings with protections that include thermal scanning, social distancing and PPE requirements, enhanced HVAC and Indoor Air Quality, and more recently, onsite COVID testing locations. This infrastructure is further reinforced with our green cleaning program and our best-in-class operations team. An expanded discussion on our COVID-19 response is found in the Health & Wellness section of this report.

We have also provided our employees with the resources, support, and flexibility needed through the pandemic. We continually support our human capital by sponsoring continuing education and career development. We have actively engaged with our workforce and solicited their feedback through our divisional leaders and employee surveys.

Our Board, and particularly our Corporate Governance and Nominating Committee, is assigned with oversight of ESG, which includes climate change risk. A discussion of our corporate governance is included in our proxy

statement, which can be viewed at [www.vno.com/proxy](http://www.vno.com/proxy) and the governance section of our website at [www.vno.com/governance](http://www.vno.com/governance).

We proudly celebrate our continued achievements and recognition as a leader in ESG. In 2020, we were recognized by NAREIT as a Leader in the Light (11 years running), we achieved ENERGY STAR Partner of the Year with Sustained Excellence (6th time with this distinction) and we earned accolades from the Global Real Estate Sustainability Benchmark (8th year with “Green Star” Ranking, top quintile of performers, and an “A” grade for our public disclosure). We own and operate more than 27 million square feet of LEED certified buildings, representing 95% of our office portfolio, with over 23 million square feet at LEED Gold or better.

Our ESG narrative is told with transparency and supported by data. We have expanded our climate scenario analysis as recommended by the Taskforce on Climate-related Financial Disclosures and have updated our disclosures according to the Sustainability Accounting Standards Board and the Global Reporting Initiative. All can be found at [www.vno.com](http://www.vno.com).

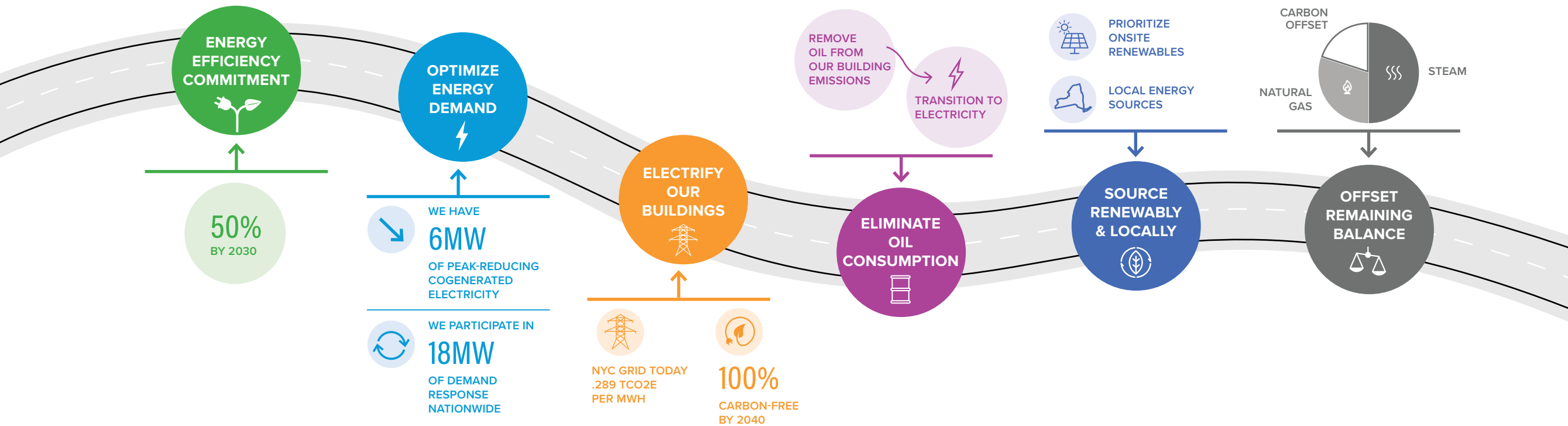
Steven Roth  
Chairman of the Board and  
Chief Executive Officer

<sup>1</sup> We have chosen to report our emissions according to the financial control method, as discussed in the World Resource Institute's *Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard: Revised Edition*. Our Scope 1 emissions include onsite combustion from oil and natural gas; Scope 2 emissions include our district steam consumption and electricity consumption, including electricity consumed by our submetered tenants; Scope 3 emissions include other utility consumption within the direct control of our tenants.



# VISION 2030 ROADMAP\*

## OUR COMMITMENT TO CARBON NEUTRALITY



### WE WILL ALWAYS PRIORITIZE ENERGY EFFICIENCY

We are proud of our accomplishments in energy efficiency thus far, with 24% of same-store energy consumption reduced since 2009. We will extend our energy efficiency goal to 50% below 2009 levels by 2030. This goal includes both landlord- and tenant-driven consumption. More information on this effort can be found in the Energy Efficiency Targets section of this report.

### WE WILL PERMANENTLY REDUCE OUR ENERGY PEAKS

In addition to doing more with less energy, we will shift our energy usage to occur during hours when the electric grid uses cleaner sources of generation. In addition to the existing grid benefits provided by our 6.2MW cogeneration plant, we will continue to expand our demand response and curtailment capability, and pursue energy storage where feasible and permissible. We also use building analytics software to more smartly operate our buildings and reduce demand on a permanent basis.

\*Any information relating to goals and progress against goals was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion, opinion, or any form of assurance on such information.

### ELECTRIFY OUR BUILDINGS

We know that a carbon-neutral building must consume energy from 100% renewable sources. As New York State pursues its plan to secure 70% of electricity from renewable systems by 2030 and 100% clean electricity by 2040, we will evaluate opportunities to convert our steam, gas, and oil-sourced consumption to electricity. We will prioritize electricity as our sole source of building energy in all ground-up new development.

### ELIMINATE OIL CONSUMPTION

We see a path forward to eliminate or modify all our legacy oil boilers to cleaner sources of energy. We will transition these systems to electricity where economically and technologically feasible.



**Vision 2030 is our commitment to reach net zero through a combination of emissions reductions and offsets from our buildings. We will rely on both existing and future technology, as well as meaningful stakeholder collaboration with our tenants, our employees, and our communities. Vornado has committed to aligning its Vision 2030 Plan with the Science Based Targets initiative.**

### SOURCE RENEWABLY AND LOCALLY

We will pursue opportunities to source our supply of electricity from 100% renewable sources while we wait for our grid systems to make their own fully renewable transition. We want the solution to be home-grown, so our local communities and economies can benefit from our investment. We will prioritize onsite renewable energy production, as well as sources located close to our buildings and cities.

### OFFSET REMAINING BALANCE

As we make this transition, we know there will be a remaining balance of energy consumed from fossil fuels. We will augment that balance with carbon offsets until we fully transition to zero-carbon utility consumption.



# TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)\*

GRI 201-2

## GOVERNANCE

Vornado became a signatory of the TCFD in February 2019, among the first American real estate companies to do so. Our Board’s Corporate Governance and Nominating Committee oversees environmental matters, including climate change risk. The Board is part of the top-down strategy on ESG risk management, which includes execution by our Corporate ESG Team, senior management, divisional leaders, and integration throughout all divisions of our business. Further discussion on our governance around climate-related risks and opportunities can be found in the ESG Governance section of this report.

## STRATEGY

We have identified IPCC Representative Concentration Pathway (RCP) 2.6 (targeting a 1.5 -to-2-degree scenario) as the primary scenario to assess transitional risk and opportunities over the short-, medium-, and long-term horizon, as informed by the regulatory frameworks in the communities where our properties are located. We identify a “business-as-usual” scenario of RCP 6.0 to assess the physical risks of climate change, due to the possibility of failure of global efforts to mitigate. The impact of such risks informs strategies of our current and future development projects, as well as financial planning for our stabilized assets. More information can be found in our SASB disclosures on climate change risk.

## RISK MANAGEMENT

We identify and assess physical risks through the use of data models and resources that use both historical and forward-looking climate data to determine potential exposure to climate-related events. We identify and assess transitional risk through analyzing our exposure to local climate regulations, which are imposed upon buildings to mitigate their emissions to contribute to climate scenarios aligned with RCP 2.6.

Where acute physical risk for a property is noted, we manage this risk through measures of climate resilience and adaptation. Our primary means of managing transitional risk is through our energy efficiency program, because energy consumption at our properties drives our ability to comply with regulations such as the Climate Mobilization Act (CMA) in New York City. The costs of energy efficiency work, electrification, and other efforts to comply for each of our buildings are factored into our risk analysis. We will forgo disclosure of these costs until compliance requirements for CMA and other climate regulations are more definitively known, although we do not expect these costs to be material.

Our climate risk assessment informs the risk profiles for our properties and is a component of our annual Enterprise Risk Management process. Further discussion on our climate risk assessment is found in the Resilience and Adaptation section of this report, as well as our SASB disclosures on climate change risk.

## METRICS AND TARGETS

Our metrics and targets that most meaningfully help us to assess our climate-related risks and opportunities are found in the Energy Efficiency Targets and Goals and Progress sections of this report. Greenhouse gas emissions are disclosed in the Environmental Results 2020 section of this report.



\*Any information relating to goals and progress against goals was not subject to Deloitte & Touche LLP’s review and, accordingly, Deloitte & Touche LLP does not express a conclusion, opinion, or any form of assurance on such information.



# TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)\* Continued

## TRANSITIONAL RISKS AND OPPORTUNITIES: SCENARIO ANALYSIS - RCP 2.6

### SHORT-TERM (1-10 YEARS)

We identify RCP 2.6 as our short-term transitional scenario, due to the regulations in the cities where we do business, as well as our carbon neutrality goal. Our Vision 2030 roadmap outlines the many components required to transition our portfolio to a climate trajectory that aligns with a 1.5-degree climate scenario.

### 2030 MEDIUM-TERM

**Risks**

De-carbonization of grid-supplied energy could lead to increased energy costs and operating expenses for our buildings.

Retrofitting our building systems to consume less energy could lead to increased capital costs.

Fossil fuel consumption, though mitigated through carbon offsets, may be subject to penalties.

**Opportunities**

Our overall energy consumption could decrease, yielding a reduced operating cost.

Carbon-neutral buildings could be more competitive in the long term and could yield higher value to our business.

Energy storage, onsite renewable energy, and distributed energy resource deployment could yield additional sources of revenue and attract and retain tenants.

### 2050 LONG-TERM

**Risks**

Full transition of grid-supplied energy to renewable sources could lead to increased energy costs and operating expenses for our buildings.

**Opportunities**

Improved air quality could lead to lower HVAC operating and maintenance costs.

Mitigated increases in temperature could lead to reduced costs to adapt our buildings to be resilient to more extreme climate scenarios.

Renewable energy delivered from the grid will reduce source-generated carbon emissions and potentially reduce exposure to climate regulation.

Full transition of grid-supplied energy to renewable sources could lead to decreased energy costs and operating expenses for our buildings.

## PHYSICAL RISKS – RCP 6.0

### SHORT-TERM

- Stormwater surge, flood risk in vulnerable areas
- Localized loss of power
- Degradation of air quality and public health

### MEDIUM-TERM

- Increase in temperature and humidity extremes
- Increase in seasonal heating and cooling demand
- Increase in insurance and disaster relief costs
- Increase in infrastructure and construction costs
- Increase in instances of business interruption

### LONG-TERM

- Heightened extremes in weather conditions and temperatures could lead to significantly higher heating- and cooling-related energy and maintenance costs.
- Accelerated increases in land and ocean temperatures could lead to increased climate-related events, including extreme precipitation events, which could yield significantly higher disaster response and flood mitigation costs.
- Accelerated increases in sea level rise could lead to increased damages from coastal urban floods.

\*Any information relating to goals and progress against goals was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion, opinion, or any form of assurance on such information.



# RESILIENCE AND ADAPTATION

Our properties are located in regions with recent history of climate-related events. As we assess our exposure to climate risk under varying scenarios, we understand that measures in property resilience are measures in adaptation. Our development project at 512 West 22nd Street exemplifies how our new building design is resilient and adaptive to future climate conditions.

1

## MECHANICAL EQUIPMENT

At 512 West 22nd Street, we placed all critical mechanical equipment and electrical switchgear above grade to avoid flood damage.

2

## GREEN ROOFS & STORMWATER RETENTION

Our new roof landscape systems are designed to absorb and retain stormwater, and slow runoff into the urban landscape and surrounding infrastructure. Green and white roofs also insulate our buildings; reduce current and future demand for heating and cooling; and contribute to heat island reduction, which provides local relief to surface temperature.

At 512 West 22nd Street, excess stormwater is captured in a retention tank and held for irrigation needs, and it is pumped to the rooftop terraces when needed, or to the cooling tower as make-up water.

3

## GLAZING & ENVELOPE

Our new glazing and envelope systems are designed to withstand heavy wind and ice conditions. They also are designed to reduce solar heat gains and improve insulation values to minimize heating and cooling demand.

4

## FLOOD BARRIERS

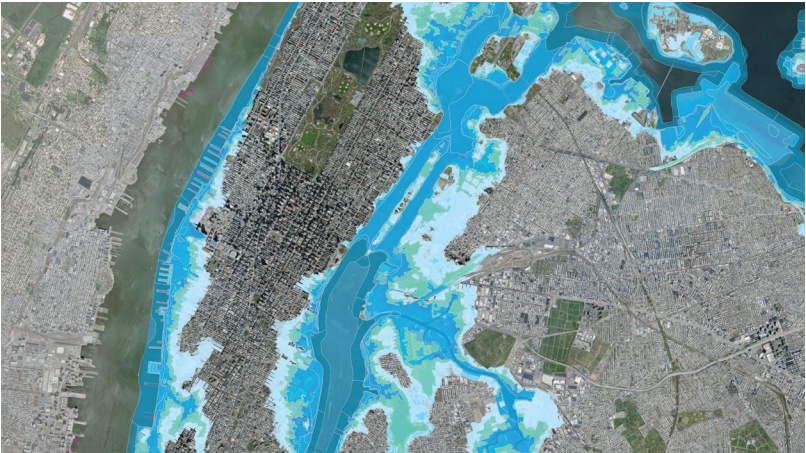
When a new building is located in a flood zone, we anchor temporary walls and venting systems inside our building lobbies to accommodate storm surges and floods and their associated water pressure build-up without damaging the building. At our existing buildings, we install temporary exterior barriers to prevent floodwater from touching the building envelope.

5

## BACKUP GENERATION

We install backup generation to support, at minimum, fire and life safety systems, as well as critical infrastructure. At 512 West 22nd Street, we have connected our elevators, lighting, and HVAC systems to backup generation systems to ensure safe and secure evacuation in the event of an outage.

Top: 512 West 22nd Street  
At right: Image of Manhattan from the NYC Flood Hazard Mapper, a localized coastal flood hazard mapping tool that assists our climate risk exposure analyses.





# ENERGY EFFICIENCY TARGETS\*

In Vision 2030, Energy Efficiency is our primary means to reduce our carbon emissions and make progress towards carbon neutrality. We have bifurcated our approach to address both landlord and tenant consumption, so we can holistically arrive at our goal of 50% reduction by 2030, below a 2009 base year. In 2020, the pandemic and resulting slowdown of activity in our buildings resulted in greater than usual reduction of energy. We expect our consumption to increase over 2020 levels in 2021 and 2022 before returning to a trajectory of reduction.

## TOTAL REDUCTION GOAL:

50% BY 2030 WITH SAME-STORE PORTFOLIO (IN-SERVICE OFFICE)

## 2020 PROGRESS:

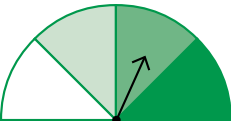
▶ 32% MEASURED IN kBtu/SF

### BUILDING ENERGY USAGE TREND 2020

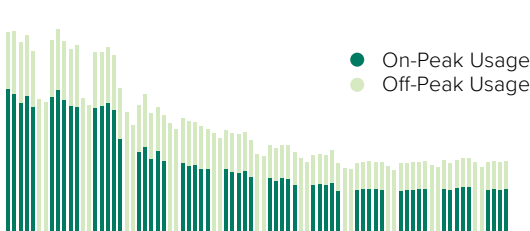


### LANDLORD EMISSIONS REDUCTION PLAN

55% BY 2030 ▶ 32% 2020 PROGRESS

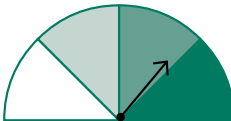


### TENANT ENERGY USAGE TREND 2020



### TENANT EMISSIONS REDUCTION PLAN

45% BY 2030 ▶ 32% 2020 PROGRESS



#### What's Working

- **Technical Assessments:** Our New York City, Chicago, and San Francisco properties over 50,000 SF have undergone ASHRAE Level II Energy Audits and Retro-commissioning, both of which identify existing deficiencies that, when addressed, reduce energy consumption, as well as Energy Conservation Measures (ECMs) that further optimize each asset's energy performance.
- **Energy Efficiency Capital Work:** Our ECMs serve as the basis of our capital projects, which reduce operating costs, energy consumption, and carbon emissions. We remain committed to completing new capital work every year.
- **Other Capital Work:** While energy efficiency is not the primary value driver for all capital projects, most capital work can save energy when managed responsibly. Such examples include elevator modifications and glazing and envelope improvements, which we procure responsibly and with energy efficiency as a deliverable.

#### Future Opportunities

- **Onsite Generation, Renewable Energy, and Energy Storage:** We continue to explore opportunities to employ onsite distributed energy resources.
- **Smart Building Technology:** We use predictive analytics and machine learning to run our buildings' electrical and mechanical systems more efficiently. We upgrade and replace our building management systems to increase the automation of this process.
- **Regulation & Compliance:** Our buildings are located in jurisdictions that have adopted bold climate legislation, which may regulate the carbon emissions from buildings and their related energy consumption. This regulation will have an impact on building codes, building infrastructure, and space planning.

#### What's Working

- **Publicly Sponsored Commitments:** We have facilitated the commitment of more than 2 million SF of tenants to the Carbon Challenge in New York. We promote tenant participation in energy reduction events such as the WWF Earth Hour and the Building Energy Exchange's Earth Hour.
- **Lease-Driven Provisions:** As standard practice, we have green provisions in our leases, such as submetered electricity (94% of all leases), submetered water (15%), and capital recovery clauses for energy efficiency projects (64%).
- **Meaningful Stakeholder Engagement:** In 2020, we established weekly virtual check-ins with our tenants across our portfolio to review their submetered energy consumption and make changes to reduce their loads throughout the pandemic.

#### Future Opportunities:

- **Regulation and Compliance:** Laws like New York's Local Law 88 of 2009, New York's Local Law 97 of 2019, and California's Title 24 contain energy or carbon requirements that will result in lower energy consumption in future tenant spaces.
- **Best Practices in Design:** Working with architects and engineers, we have identified several ECMs and will either require or recommend their inclusion in future design.



\*Any information relating to goals and progress against goals was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion, opinion, or any form of assurance on such information.



# GOALS AND PROGRESS\*

GRI 103-3

ENERGY  
MANAGEMENT



Our 2020 progress was distorted due to our tenants working from home and closure of retail stores during the pandemic. We expect our consumption to increase in 2021 and 2022 above 2020 levels before returning to a trajectory of reduction.

**GOAL** 50% total energy reduction below a 2009 baseline by 2030 measured in kBtu/SF



WASTE  
MANAGEMENT



In 2020, we were unable to conduct in-person education and instead achieved our education goal through virtual meetings and electronic communications.

**GOAL** 75% commercial waste diversion by 2026



PROCUREMENT  
AND RESPONSIBLE  
CONTRACTING



In 2020, our procurement was impacted by the emergency purchase of personal protective equipment (PPE).

**GOAL** Every year, purchase 75% of cleaning supplies that meet sustainability criteria. These criteria include certifications designated by UL ECOLOGO, Green Seal, and EPA's Safer Choice Standard



WATER  
MANAGEMENT



Our 2020 progress was distorted due to our office tenants working from home and closure of retail stores during the pandemic. We do not consider our 10% reduction goal to be achieved. We expect our consumption to increase in 2021 and 2022 above 2020 levels before returning to a trajectory of reduction.

**GOAL** 10% by 2030 below 2019 base year.



**GOAL** 55% energy reduction of landlord-controlled energy by 2030



**GOAL** Introduce organics recycling to 50% of portfolio by 2020




**GOAL** 45% energy reduction of tenant-controlled energy by 2030



**GOAL** Complete in-person demonstration and education on recycling procedures for 50% of total Vornado portfolio each year



\*Any information relating to goals and progress against goals was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion, opinion, or any form of assurance on such information.

GREEN BUILDING CERTIFICATIONS

**GOAL** LEED certify 100% of all in-service office properties by 2020

We paused LEED certification efforts until our tenants return to work post-pandemic.

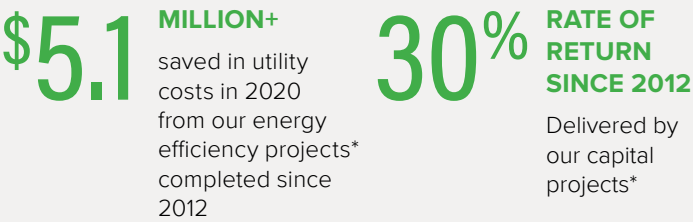
2020 PROGRESS

97%

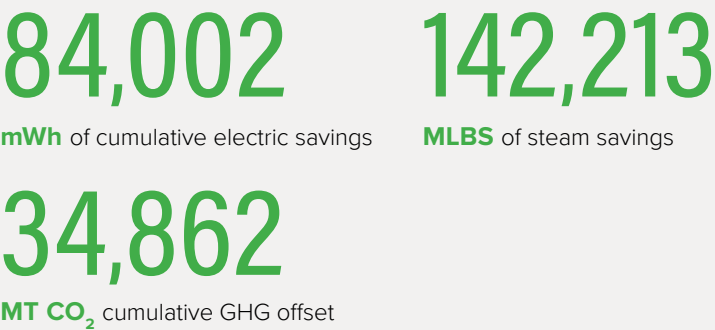


# ENVIRONMENTAL RESULTS 2020

## ENERGY EFFICIENCY INVESTMENT\*



## CUMULATIVE SAVINGS SINCE 2012\*

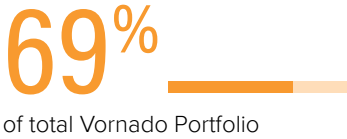
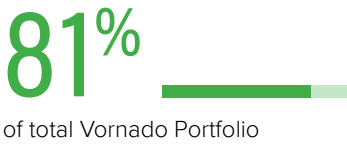


\*This information was not subject to Deloitte & Touche LLP’s review and, accordingly, Deloitte & Touche LLP does not express a conclusion, opinion or any form of assurance on such information.

\*For reporting boundaries, see note on p. 35.

## VORNADO OWNS AND MANAGES

GRI 413-1



## WATER CONSUMPTION†

GRI 303-1

3,378,035 CUBIC METERS IN 2018

3,187,066 CUBIC METERS IN 2019

2,027,913 CUBIC METERS IN 2020

WHICH WAS A **36% REDUCTION FROM 2019 TO 2020**

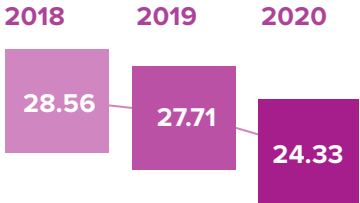
## INTENSITY MEASURES†

GRI 103-3

### BUILDING ENERGY

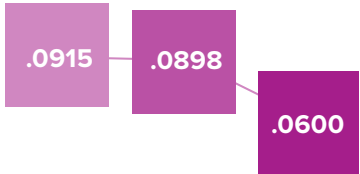
(kWh/SF)

GRI 302-3



### BUILDING WATER

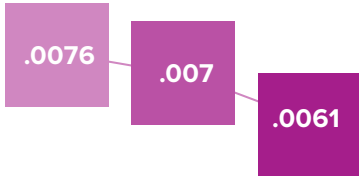
(m³/SF)



### GHG EMISSIONS

(MT/SF)

GRI 305-4



## NONHAZARDOUS WASTE TOTAL†

GRI 306-2



### 2020: 8,594 TONS

RECYCLED: 3,751 TONS

ENERGY RECOVERY: 3,043 TONS

COMPOSTING: 1,031 TONS

LANDFILL: 769 TONS

### 2019: 24,878 TONS

12,392 TONS

7,257 TONS

2,889 TONS







2,340 TONS



# ENVIRONMENTAL RESULTS 2020 Continued

The consumption and emissions data sets on this page are presented on an absolute basis.






Beginning with this 2020 report, we are transitioning our emissions reporting from the operational control method to the financial control method. The financial control method will more accurately reflect Scope 1 and Scope 2 emissions reductions that stem from all efforts discussed in our Vision 2030 plan. Below is a summary of the end uses we have assigned per emissions Scope.

SCOPE 1	
	Oil & Natural Gas Heating and Cooling
	Cogeneration
SCOPE 2	
	District Steam
	Base Building Electricity
	Submetered Tenant Utilities
SCOPE 3	
	Direct Metered Tenant Utilities

The COVID-19 pandemic caused a significant reduction of activity in our buildings in 2020, resulting in a related reduction of base building electricity and tenant electricity consumption and their related Scope 2 emissions. Our buildings remained open during the pandemic and we continued to heat and cool them. We also maintained consistent operations of our cogeneration plant at PENN 1. Consistency of these uses from 2019 to 2020 resulted in a less substantive decrease in Scope 1 emissions from 2019 to 2020.

OPERATIONAL CONTROL METHOD	2018	2019	2020
GHG emissions MT CO2e†			
SCOPE 1 GRI 305-1	27,040	34,413	34,674
SCOPE 2 GRI 305-2	256,684	221,901	171,510
TOTAL GRI 305-5	283,724	256,314	206,184
FINANCIAL CONTROL METHOD		2019	2020
GHG emissions MT CO2e†			
SCOPE 1 GRI 305-1		28,577	29,190
SCOPE 2 GRI 305-2		177,977	133,997
SCOPE 3 GRI 305-3		49,760	42,997
TOTAL GRI 305-5		256,314	206,184

WHICH WAS A 20%  REDUCTION FROM 2019 TO 2020

ENERGY CONSUMPTION (mWh)†			
GRI 302-1 & 302-4			
	2018	2019	2020
 DISTRICT CHILLED WATER	15,250	12,702	9,220
 DISTRICT STEAM	306,342	259,472	186,163
 ELECTRICITY	598,820	556,572	440,095
 FUELS	142,101	182,586	186,127
TOTAL	1,062,513	1,011,332	821,605
 COGENERATED FUELS	1,643	38,894	55,391

† For reporting boundaries, see endnotes, p. 35.



# ENVIRONMENTAL RESULTS BY REGION

## LEED CERTIFICATIONS

## TRANSPORTATION SURVEY RESULTS (MILEAGE)

As surveyed from our tenants in 2019

- Walk / Bike / Telecommute
- Bus
- Light Rail
- Heavy Rail
- Carpool / Alternative Fuel
- Ferry
- Car: Solo

## WASTE BY REGION (TONS)

- Non-Hazardous Recycling
- Energy Recovery
- Organic Diversion
- Landfill

## GRID ELECTRICITY MIX

## 2020 GHG EMISSIONS (MT CO<sub>2</sub>e)

- Scope 1

  - Oil & Natural Gas Heating and Cooling
  - Cogeneration
- Scope 2

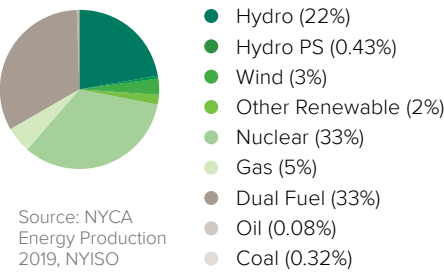
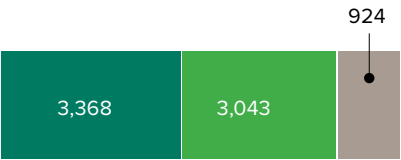
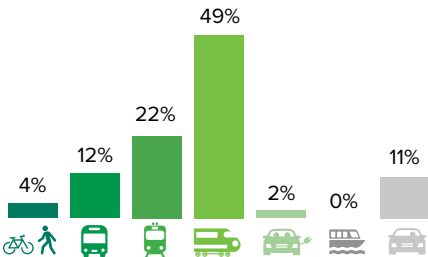
  - District Steam
  - Base Building Electricity
  - Submetered Tenant Utilities
- Scope 3

  - Direct Metered Tenant Utilities

## NEW YORK

21.7 MILLION SF

82% of total region (including retail);  
30 buildings

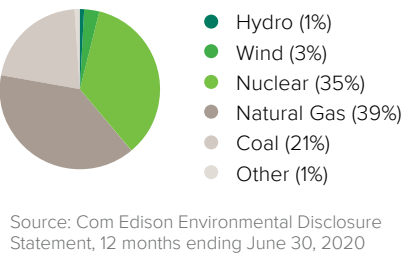
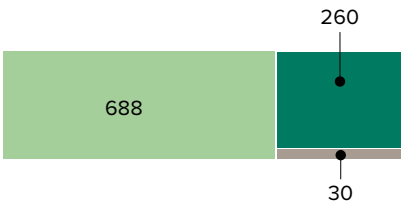
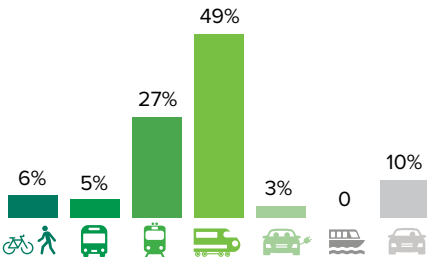


Scope 1	23,560
Scope 2	105,457
Scope 3	34,412
Total	163,429

## CHICAGO

3.7 MILLION SF

Over 99% of total region

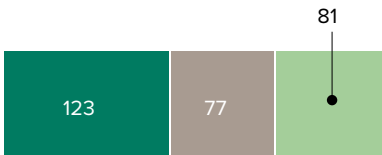
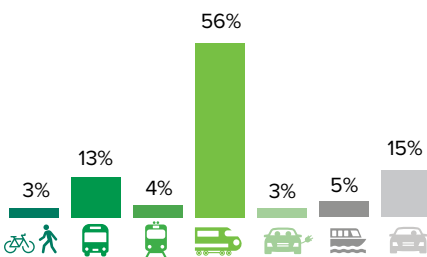


Scope 1	4,367
Scope 2	16,612
Scope 3	17
Total	20,996

## SAN FRANCISCO

1.8 MILLION SF

100% of total region; 3 buildings



Scope 1	37
Scope 2	8,368
Scope 3	—
Total	8,405



# ENERGY MANAGEMENT PLANNING CYCLE

## MAKE COMMITMENT

Vornado's dedicated energy management begins with team members who report directly to senior management, and it extends to the asset-level teams which operate and manage the properties. By identifying and executing energy solutions that are specific to each of our assets, Vornado will fulfill its commitment to reducing energy consumption 50% by 2030 — below a 2009 baseline.\*

## ASSESS PERFORMANCE

Our team uses research and data to comprehensively evaluate each asset by taking three different approaches: assessing the physical condition and efficiency of each property's mechanical infrastructure through energy audits and retrocommissioning; assessing the property's utility costs on an absolute and per-square-foot basis; and assessing the property's ENERGY STAR score, which measures the energy performance of a building against its unique attributes and characteristics.

## SET GOALS\*

Our Vision 2030 goal is to achieve carbon neutrality in our buildings by 2030, which includes a 50% energy efficiency goal. We use carbon intensity (MT CO2e PSF) as the metric to measure against our carbon neutrality goal, and energy intensity (kBtu/SF) against our energy efficiency goal. On an annual basis, we update one- to three-year capital improvement plans that will reduce energy on an incremental basis to reach our 10-year targets.\*

5+ MILLION SF  
earned the 2020  
ENERGY STAR Label  
GRI 413-1

## REASSESS



2018 ENERGY STAR  
CHARTER TENANT SPACE  
This space has been verified  
to meet energy design criteria  
set by the U.S. EPA



\*Any information relating to goals and progress against goals was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion, opinion, or any form of assurance on such information.

## CREATE ACTION PLAN

- Define technical solutions, both small scale (low- and no-cost) and large (energy efficiency capital projects).
- Assess projected energy savings of projects and measure their contribution towards property energy reduction goal.

## IMPLEMENT ACTION PLAN

Execute plan with projected energy and carbon savings with a variety of stakeholders:

### Internal:

- Site-Level Management and Engineering Teams
- Accounting Group
- Senior Management
- Our Board

### External:

- Utility Companies
- Vendor Partners
- Our Peers
- Our Community

## EVALUATE PROGRESS

- Measure and verify energy project savings using submeters.
- Assess energy cost savings on a utility bill. Subsidize cost of energy projects using utility rebates where available.
- Recover costs through lease-driven clauses for resource efficiency-related capital improvements.
- Monitor until the project's energy reduction goals are met.
- Reflect the impacts of our energy savings to the broader environmental performance of our company, through the key performance indicators in our Environmental Management System (EMS).
- Our EMS is aligned with the "Plan-Do-Check-Act" stages of ISO14001 EMS standards.

### DATA SOURCE

Resource, Consumption,  
Cost Info

### ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)



## RECOGNIZE ACHIEVEMENTS

- Annually recognize building operators and engineers who achieve 10% or greater energy savings on a weather-normalized basis.
- Apply for the ENERGY STAR Label where eligible, every year.
- Communicate energy savings and ENERGY STAR Label achievements to internal and external stakeholders.



# SUSTAINABLE DEVELOPMENT

At Vornado, we value our employees as our greatest asset. Human capital management is critical to our success. To that end, we know that for our tenants to attract and retain the most innovative, collaborative, and talented people, they must be located in buildings that are sustainable, forward-thinking, and relevant to the modern workforce.

We therefore focus our development and repositioning efforts on buildings that share the following characteristics:

- Near transportation
- Architecturally and historically significant
- Comprised of physical spaces that foster collaboration and innovation
- Able to offer a variety of spaces for different types of work
- Walkable and amenity-rich

Our buildings throughout the PENN District, including the Farley Building, are emblematic of these key characteristics.



## PENN 1 AND PENN 2

We are committed to delivering PENN 1 and PENN 2 as carbon neutral, leading examples of transitioning existing buildings to a low-carbon economy. Our carbon neutrality strategy will borrow from Vision 2030 priorities and uphold energy efficiency as our guiding principle\*. Many of the details below contribute meaningfully to our carbon neutral commitment while providing an amenity-rich environment that provides the conveniences and flexibility of the modern workspace.

- Complete overhaul of mechanical and electrical infrastructure, including superefficient electric cooling, high-performance glazing (triple-glaze at PENN 1), and destination dispatch vertical transportation
- Up to an acre of new open space, green roofs, and setbacks
- Smart building technology that leverages occupancy data and optimizes HVAC control
- Low-carbon tenant fit-out design and operations guidelines to help tenants partner with Vornado to minimize carbon emissions and climate impact
- Industry-leading green cleaning and building-wide recycling and organics diversion programs
- Direct access to Penn Station, subway networks, and the newly opened Moynihan Train Hall
- Improving on the existing LEED Gold certification of both buildings through targeted renovations and operational programs

We are also transforming our buildings to serve the needs of a diverse, mobile, and active workforce, where collaborative space will foster productivity and creativity.

At PENN 1, the first three levels will deliver WorkLife, an amenity ecosystem for tenants to focus on both work and self-care. A social stair will connect the main entrance on the first level to amenities on levels two and three. The social stair’s bleacher seats and large LED panels will be the perfect location for casual meetings or private events. Level two will feature The Landing – a full-service restaurant, private dining rooms, and multiple tenant lounges for socializing and working; WorkLife Wellbeing – a 35,000 SF fitness and wellness center; WorkLife Meetings – a 20,000 SF conferencing facility; and WorkLife Flex Office – over 80,000 SF of adaptable workspace.

PENN 2 will include over 65,000 SF of outdoor tenant space including a 17,000 SF rooftop park, 16 loggias, and 3 expansive terraces. The building will also feature various flexible tenant spaces for working or socializing and private events – including a 280-person town hall, casual lounges, and rooftop pavilion. Tenants at PENN 2 will also have access to the PENN 1 WorkLife space, delivering a campus-style approach to the PENN District.

Rendering of PENN 1, 33rd Street entrance

\*Any information relating to goals and progress against goals was not subject to Deloitte & Touche LLP’s review and, accordingly, Deloitte & Touche LLP does not express a conclusion, opinion, or any form of assurance on such information.



# SUSTAINABLE DEVELOPMENT Continued



Rendering of rooftop pavillion, Farley Building



## THE FARLEY BUILDING

Vornado converted this iconic Beaux Arts New York City fixture into a best-in-class creative office hub, on par with the horizontal campuses of California, which are characterized by large floor plates and abundant green spaces. The adaptive reuse of the Farley Building will be further supported by our portfolio-wide sustainable operations strategy that prioritizes resources conservation, healthy indoor environments, and responsible procurement.

The 730,000 SF office building is targeting LEED v4 Gold certification, highlighted by the following:

- Direct access to Amtrak, Long Island Railroad, and New Jersey Transit regional train networks, in addition to multiple NYC subway lines
- Up to 70,000 SF of rooftop park space, with up to a quarter mile of continuous walkable outdoor paths
- A new 6,000 SF glass rooftop pavilion for use as programmable amenities space
- Zero-waste design guidelines that will include organics diversion for all office and retail spaces
- Ample stairwell access to facilitate collaboration among different floors in the buildings
- State-of-the-art energy management system that will contribute to demand reduction and demand response, and provide tenants with insights into their real-time energy consumption, demand, and carbon emissions
- Over 3 MW of emergency backup power to foster resilience and business continuity



# RECYCLING

Vornado works closely with industry service providers and regulators to understand how our buildings' waste can best support the global recycling market. We educate our tenants on best practice strategies to reduce overall waste, and we keep material out of the landfill by diverting recyclables and organics. We measure the impact of these efforts and programs with quantitative audits and monthly reports.



**WATCH OUR VIDEO ON THE RECYCLING PROCESS:**  
[www.vno.com/recycling](http://www.vno.com/recycling)

## VORNADO'S WASTE MANAGEMENT POLICY

- Reduce hazardous and non-hazardous waste generated at our buildings
- Increase diversion of waste from the landfill through recycling and composting acceptable materials and sending trash to waste-to-energy incineration plants
- Require tenants to divert business waste resulting from standard operations and packaging waste from deliveries and supplies

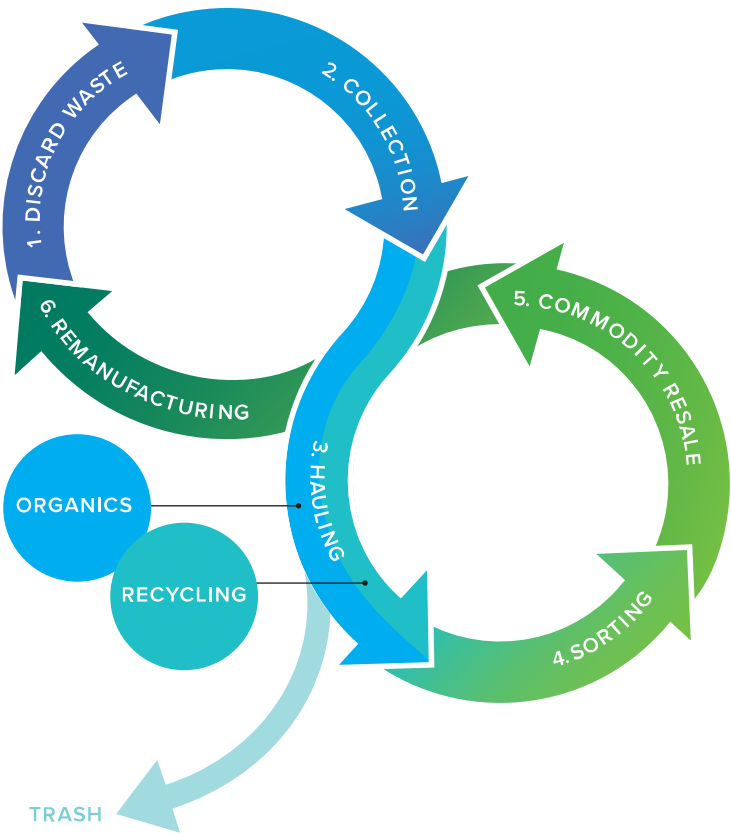
## TENANT ENGAGEMENT

- In 2019, we hosted in-person building-wide meetings at 77% of our office portfolio, representing 22 million SF
- In 2019, we hosted semi-annual electronic waste recycling drives at 73% of our office portfolio, representing 20.7 million SF
- We paused our in-person meetings and drives during the pandemic in 2020. We plan to resume these programs as tenants return to work in 2021 and beyond.

## DATA TRACKING

- Performed waste stream audits at 95% of our office portfolio, representing 27 million SF
- Monthly waste generation and diversion tracking at 95% of our office portfolio, representing 27 million SF

## RECYCLING LIFE CYCLE



### 1 DISCARD WASTE

Vornado provides our tenants with separate receptacles so they can discard items in the appropriate bin, whether paper, commingled recycling, or trash.

### 2 COLLECTION

BMS Green Clean collects waste from tenant spaces, ensuring waste streams remain properly separated for storage and pickup by our haulers.

### 3 HAULING: ORGANICS & RECYCLING

We've partnered with haulers that have proven compliance with local waste management requirements. The haulers remove waste from each building with three trucks: one brings garbage to a transfer station, another delivers recyclables to their sorting facilities for further processing, and a third picks up organic waste.

### 4 SORTING

At the sorting facilities, recyclables are hand-sorted and baled according to material type and quality.

### 5 COMMODITY RESALE

Baled materials are sold as commodities to factories and plants, such as paper mills and plastics manufacturers. Clean bales are more valuable and command higher purchasing prices.

### 6 REMANUFACTURING

The baled materials become inputs for new products, such as water bottles, polyester clothing, and paper towels, thereby reducing the use of virgin materials and natural resources.



# HEALTH AND WELLNESS

GRI 416-1

## MISSION TO IMPROVE OCCUPANT HEALTH

As a building owner and landlord to thousands of business tenants, we are responsible for maintaining and improving the health of our indoor environments, as well as communicating the value of our health and wellness programs with consistency and clarity to our stakeholders. Healthy buildings contribute to a healthy society. We believe that consistent health programming and communications protocols not only mitigate health risks within our buildings, but they also create a responsible behavior framework for our employees, our tenants, and our visitors to consider elsewhere in their daily lives.

**We uphold the Fitwel standard as a framework to align our operating protocols to support indoor health. Below are examples of areas of focus for health and wellness at Vornado:**

### Indoor Air Quality

- Semi-annual indoor air quality testing programs to measure carbon dioxide, carbon monoxide, volatile organic compounds, particulate matter, temperature, and relative humidity
- Air quality protection from MERV13 or higher filtration systems, entryway control systems, and walk-off mats
- Piloting of ongoing Indoor Air Quality (IAQ) monitoring in select locations
- Green cleaning with nonhazardous disinfectants and cleaners
- Smoke-free, tobacco-free company across all our properties

### Mobility and Physical Activity

- Transit-oriented locations
- Subsidized memberships to fitness centers at select locations
- Accessible stairwells and active design strategies

### Safety & Emergency Preparedness

- Emergency Action Plans
- Emergency supplies, Automated External Defibrillators (AEDs), and first aid kits
- Certified First Responder and CPR training for tenants and staff

## OFFICE PORTFOLIO ACCESSIBILITY METRICS



**87%** PROVIDE ON-SITE BICYCLE STORAGE



**87** AVERAGE BIKE SCORE



**98** AVERAGE WALK SCORE



**100** TRANSIT SCORE



**Fitwel®**  
Viral Response  
Certified



We presently have

**6.6 MILLION SQUARE FEET**

of buildings (23% of our office portfolio) certified under Fitwel's Multi-Tenant Whole Building program.

Vornado's Times Square LED signage showing support during the pandemic



# HEALTH AND WELLNESS Continued

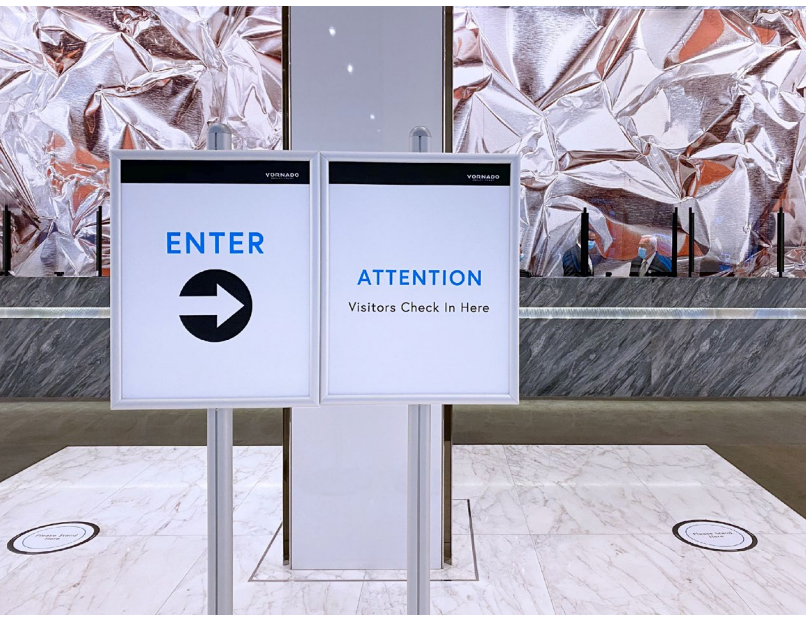
GRI 416-1

## COVID-19 RESPONSE

Our leadership and COVID-19 response team worked tirelessly to ensure our buildings could remain open for business while providing a healthy and safe indoor environment for our employees, tenants, visitors, and contractors. We uphold Fitwel's Viral Response Module framework to guide our pandemic response protocols:

### Enhance Indoor Environments

- Enhanced IAQ and humidity control policies, as recommended by CDC and ASHRAE
- IAQ testing and monitoring
- Legionella testing and water management plan
- Enhanced cleaning, disinfecting, and maintenance protocol

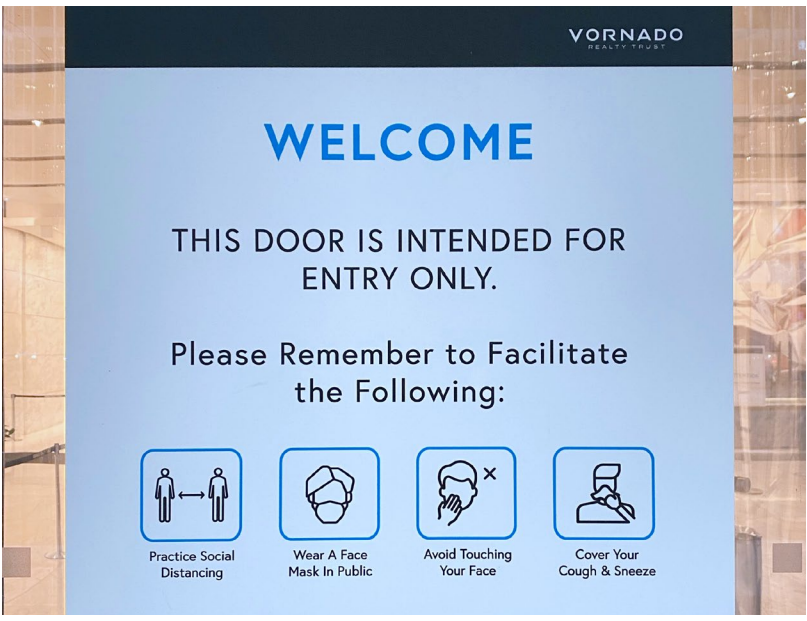


## Encourage Behavioral Change

- Provision of PPE with accompanying education and signage
- FDA-approved thermal scanning practices, social distancing, and PPE requirements in all of our lobbies and common areas
- Hand hygiene stations, including education and signage
- Health programming and services plan

### Build Occupant Trust

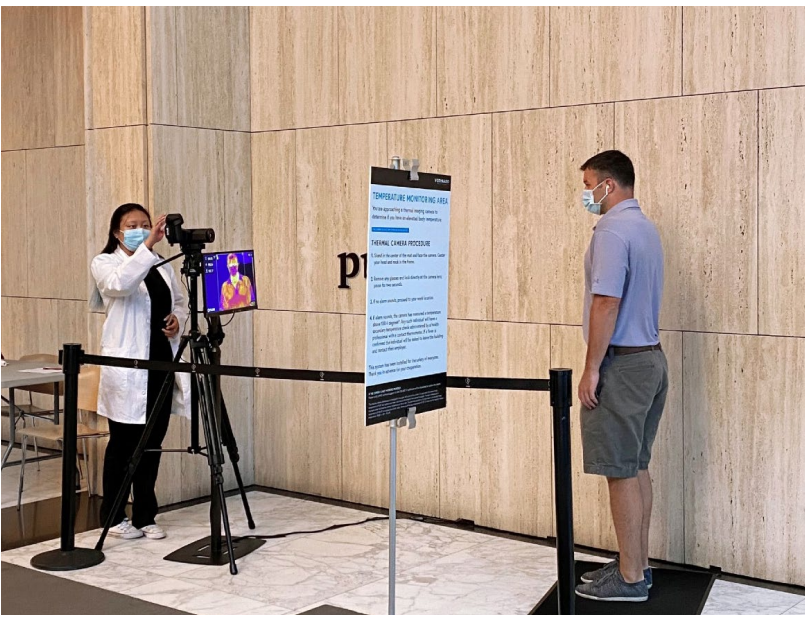
- Pandemic preparedness plan and business continuity plan
- Viral response design guidelines for our offices, lobby areas, and loading docks
- Enhanced stakeholder collaboration plan, including our employee survey and emergency communications plans
- Flexible and accommodating paid sick leave and family support policies for employees



## Additional Benefits Extended to Our Employees

- Daily health screenings and questionnaire
- Onsite COVID-19 testing on a weekly basis
- Weekly rotational staffing plans, to limit workforce occupancy to no more than 50%
- Provision of equipment for remote working capabilities and IT support
- Subsidized parking and lunch
- Flexibility to accommodate personal requests

Vornado was among the first five real estate companies to earn the Fitwel Viral Response Module designation in 2020 for our pandemic response program.





# TENANT & COMMUNITY DEVELOPMENT

Our strategy is to foster and nurture the community within our buildings for our tenants and visitors, and to enrich the neighborhoods and communities in which our buildings are located. Our proprietary Live.Work.Do. app was designed exclusively for our tenants to seamlessly connect with their buildings' amenities, services, and work order system, as well as connect the neighborhood to our tenants.



## FOOD, CULTURE, WELLNESS, AND ENTERTAINMENT

Exclusive Vornado tenant deals and promotions from onsite and neighborhood restaurants, gym classes, spa specials, local festivals and concerts, and more. During the pandemic, Live.Work.Do. connected Vornado with our tenants who were working from home via free online exercise programs, yoga classes, meditation podcasts, and recipes for special dishes and cocktails.



## TRANSIT

Live transit information alerts for neighborhood transit options conveniently originating at each office building.



## SAFETY

Direct links among the tenants, property management teams, and our security force to report on-site and local concerns and communicate in real time. Our in-house Security Operations Center (SOC) was built exclusively for the portfolio and is managed 24 hours a day, 7 days a week by experienced security professionals.



## CRITICAL INFORMATION AND EMERGENCY PREPAREDNESS

Live.Work.Do. served as a critical source of information during the pandemic, particularly while tenants worked from home. Through Live.Work.Do., Vornado was able to notify tenants of all COVID-19-related protection measures, including requirements for entry to the building, updates to building systems, green cleaning and disinfection, and updates on governmental regulations.



## MOBILE TENANT ACCESS

Mobile credentials provide tenants with frictionless access through the building's turnstiles, eliminating the need to carry building access cards.



## MOBILE VISITOR REGISTRATION

The Live.Work.Do. app provides the convenience of mobile credentials to our visitors. Tenants can quickly invite a visitor and a QR code will be provided for entry via email or text.



## BUILDING SUSTAINABILITY INITIATIVES

We keep our tenants informed of the building's sustainability profile, including energy, water, waste, and transportation data; initiatives such as Earth Hour; recycling programs; and philanthropic activities.



## WORK REQUESTS

Direct links into the building's service order systems and resource reservations allow the tenant administrative teams to report on issues and receive updates on the go from the convenience of a mobile phone.



# OUR PEOPLE

GRI 102-18, 102-20, 102-32

Our employees are the foundation of our human capital. We provide training and education, promote career and personal development, and encourage innovation and engagement to foster their talent and growth. Vornado upholds strict policies against bribery and corruption, child labor, and forced or compulsory labor. Such policies extend to our Board and management as well as our employees. Any trustee, officer, or employee who becomes aware of any existing or potential violation of Vornado’s Code of Ethics is required to notify their Code of Ethics contact person promptly. Violations may be reported anonymously and all communications will be kept confidential. Our Code of Business Conduct and Ethics is found on our website at [www.vno.com/governance/conduct-and-ethics](http://www.vno.com/governance/conduct-and-ethics). Our policies are found in our employee handbook, which our employees must review and acknowledge on an annual basis.

**We offer our employees a competitive health and benefits package that includes the following:**

## EMPLOYEE HEALTH & BENEFITS

### Financial

- 401(k) and Employer Match
- Tuition Reimbursement
- Employee Referral Bonus
- Commuter Benefits
- Cellular Discounts
- New Jersey Manufacturers Insurance Planning

### Parental Benefits

- Dependent Care Flexible Spending Account
- Maternity Leave

### Work/Life Balance

- Employee Assistance Program
- Time Off / Paid Holidays

### Health and Wellness

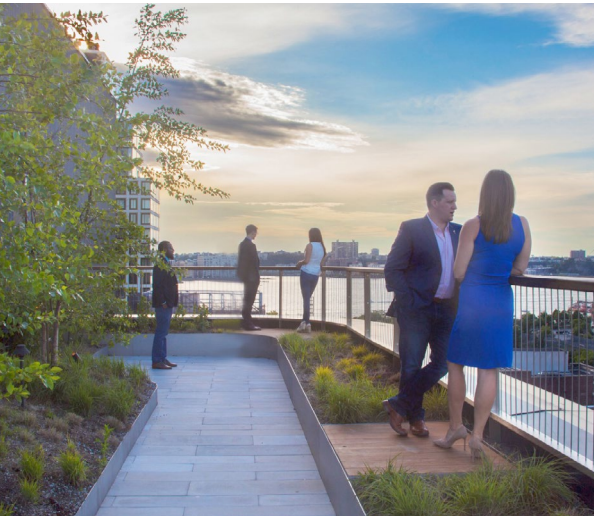
- Medical, Dental, and Vision Coverage
- Health Savings Account
- Life Insurance
- Short-Term and Long-Term Disability Insurance
- Employee Wellness Incentives
- Healthcare Flexible Spending Account
- Subsidized Gym Memberships
- Biometric Screenings
- In-Workplace Flu Vaccination
- CPR Trainings

## EMPLOYEE TRAINING

- Anti-Harassment
- Cybersecurity
- Active Shooter Training
- Manager and Executive Retreats for Training Purposes
- Continuing Education Through Building Owners and Managers Association (BOMA), IUOE Local 94, Local 32BJ.
- Green Professionals (GPRO) Training, Administered by Urban Green Council

## EVENTS

- Earth Week
- Corporate Challenge
- Town Halls
- Holiday Parties





# BMS / GREEN CLEANING

GRI 416-1

## BMS / GREEN CLEANING

Building Maintenance Service, LLC (“BMS”) is Vornado’s janitorial division and comprises our essential workers who play critical roles in our pandemic protection program. BMS adheres to an enhanced cleaning, disinfection, and maintenance protocol that prioritizes safety and compliance with CDC and EPA guidelines.

In 2020, our procurement was impacted by the emergency purchase of PPE. BMS achieved 73% sustainable purchases.  
GRI 416-1

## EMPLOYEE HEALTH & SAFETY, EMPLOYEE TRAINING



Our 2019 training included

65 BMS SUPERVISORS AND SENIOR-LEVEL STAFF TRAINED in GS-42 green cleaning standards.

100% OF BMS EMPLOYEES TRAINED MONTHLY IN COMPLIANCE with training requirements in the OSHA standards.

24 HOURS OF TRAINING, per employee, annually.  
GRI 404-1

371 SAFETY CHECKS IN 2019

Our in-person trainings shifted focus to COVID-19 in 2020. We plan to resume our standard safety training in 2021 and beyond.



37% REDUCTION IN WORKERS’ COMPENSATION CLAIMS 2019-2020 for BMS Employees

## SOCIAL DEMOGRAPHICS BMS 2020\*\* †

GRI 102-8, 401-1, 405-1

### KEY FINDINGS

Our BMS employees are 36% FEMALE 70% RACIAL MINORITIES

		TOTAL NUMBER OF EMPLOYEES	PERMANENT	TEMPORARY	FULL-TIME	PART-TIME	RACIAL MINORITIES <sup>§</sup>
GENDER							
ALL EMPLOYEES	MALE	2,073	1,899	174	1,681	392	68%
	FEMALE	1,148	1,081	67	792	356	73%
AGE							
ALL EMPLOYEES	< 30 YRS OLD	405	321	84	247	158	77%
	30-50 YRS OLD	1,414	1,320	94	1,093	321	71%
	> 50 YRS OLD	1,402	1,339	63	1,133	269	67%
REGION							
NEW YORK		1,954	1,876	78	1,916	38	58%
NEW JERSEY		38	29	9	11	27	89%
CHICAGO		341	187	154	185	156	64%
WASHINGTON, DC		873	873	0	358	515	97%
OTHER		15	15	0	3	12	40%

2020 EMPLOYEE TURNOVER RATE	22%
NEW HIRES IN 2020	460

<sup>§</sup> These figures represent the diversity of our organization and are inclusive of the following racial minority groups: Black/African America, Hispanic/Latina, Asian/Pacific Islander and American Indian/Alaskan Native.

<sup>\*\*</sup>This table covers BMS employees for the year ended December 31, 2020, inclusive of all hires that took place throughout the year. BMS employees represent Vornado’s technical staff.

<sup>†</sup> The Company provides equal employment opportunities to all employees and applicants for employment without regard to race, color, creed, citizenship status, religion, sex, sexual orientation, gender identity, national origin, age, disability, marital status, domestic partner status, protected veteran status, or any other characteristic protected by applicable federal, state, and local laws. This applies to all terms and conditions of employment including, without limitation, hiring, placement, promotion, termination, lay-off, recall, transfer, leaves of absence, compensation, and training. The Company will not tolerate unlawful discrimination and expressly prohibits any form of unlawful employee harassment based on race, color, creed, citizenship status, religion, sex, sexual orientation, gender identity, national origin, age, disability, marital status, domestic partner status, protected veteran status, or any other characteristic prohibited by applicable law.



# BMS / GREEN CLEANING Continued

In 2020, the BMS Green Clean program fully aligned with Fitwel's Viral Response Module (VRM). Highlights from our green cleaning include the following:

- Identification of high-touch surfaces to shift extra attention to cleaning and disinfecting of these areas.
- Active maintenance of PPE inventory, including masks, gloves, eye protection, face shields, and hazmat suits. These provisions are made available to all staff in every building. In addition to PPE, BMS is managing an inventory of hand hygiene supplies including hand soap, sanitizer, and paper towels, to ensure consistent supply.
- Prioritization of safer disinfectants, as outlined by Green Seal and Fitwel VRM, and hydrogen peroxide-based products across all regions of our operations.
- Use of vacuums with HEPA filtration. HEPA, or high efficiency particulate air, filters remove dust, pollen, mold, bacteria, and other airborne particles from the air as it passes through the vacuum. The HEPA filtration helps to supplement the IAQ mitigation strategy in place with HVAC filtration systems.
- Maintenance of healthy entryway systems in our lobbies by routinely cleaning at all high traffic access points, including walk-off mats, and the continuing disinfection of high-touch surfaces.

2020 also highlighted the critical success of the BMS health and safety program. Since the onset of the pandemic, BMS has been the primary procuring agent for all PPE and other critical supplies for Vornado and our divisions.

BMS established an internal pandemic protocol to respond safely and effectively to the ongoing threat posed by the pandemic. Communication methods for reporting illness, duration of quarantine, and contact tracing were outlined by Human Resources and distributed to all staff. Guidelines for

symptom checking and temperature reading were established and executed at the building level for all staff. Operational adjustments such as staggered shift times, limits to the number of staff in confined spaces, and encouraging employees to arrive fully uniformed when possible were activated in response to the pandemic.

BMS field staff has been trained utilizing the following COVID-19 specific training modules and methods:

- PPE – how and when to use it, proper donning and doffing techniques
- Proper pandemic disinfection protocol – emphasizes product selection, dwell time, procedures, PPE, how to properly use equipment
- Preventing the spread of contagious illness (DC/VA)
- ISSA Global Biorisk Advisory Council (GBAC) Cleaning and Disinfection Principles
- Equipment training – HEPA filtered vacuums, electrostatic sprayers
- BMS staff guidelines for health and safety during COVID-19 – social distancing, hand washing, PPE, communication, symptom checking
- 32BJ/BMS Partnership COVID-19 Training (1 hour)
- Creation of weekly safety/training virtual meetings (DC/VA region)

Types of QA/QC safety checks conducted to ensure a healthy workplace in 2020:

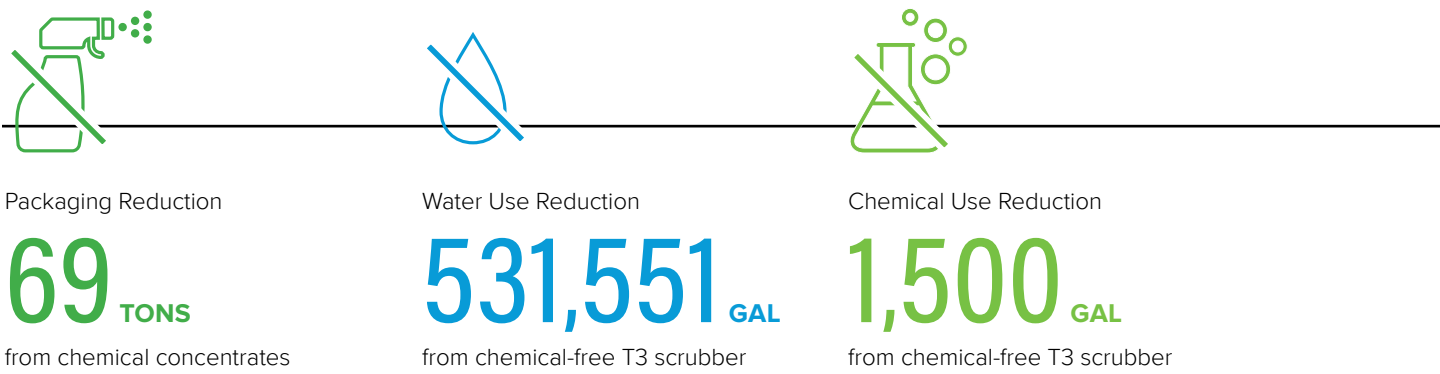
- Safety station inspections to ensure proper PPE, signage, Material Safety Data Sheets (MSDS), and bloodborne pathogen procedures in place
- PPE inventory, tracking, and distribution
- Emergency cabinet checks
- Employee injury/incident follow up





# BMS / GREEN CLEANING Continued

## 2020 SUPPLY PURCHASE IMPACT



Purchased 44,561 cases of paper products, including 967,531 pounds of recycled paper products, which represents more than

**1,596**  
CUBIC YARDS OF LANDFILL SPACE SAVED

Revolution liners use about 50% postconsumer recycled plastic. By purchasing these bags, BMS reduced emissions by

**102** TONS  
of CO<sub>2</sub>e in 2020.



“BMS meets the highest industry standards for safe, effective cleaning and disinfecting that prioritizes indoor air quality and the health of the people in the building. We see BMS as an outstanding green cleaning service provider and overall industry leader because of the company’s professionalism, commitment to sustainability, and consistent quality control. BMS not only provides excellent custodial services, but also delivers critically important indoor environmental health benefits and environmental savings through its services.”

Green Seal CEO Doug Gatlin

<sup>†</sup>This cleaning service meets Green Seal™ Standard GS-42 based on waste minimization, building-specific operational procedures, effective custodial training, and use of products with limits on human and environmental toxicity. [www.GreenSeal.org](http://www.GreenSeal.org).



BMS employees in 2020



# SUPPLY CHAIN

## VENDOR CODE OF CONDUCT

To extend our Business Code of Conduct to include our suppliers, we require compliance with Vornado's Vendor Code of Conduct (CoC) as part of our standard form of vendor contract. In addition to conveying our requirements on business ethics, integrity, and anti-bribery, we explicitly state that our vendors must comply with all applicable laws, including those pertaining to the following:

- Freedom of association and collective bargaining
- Human trafficking
- Forced labor and child labor
- Wages and working hours
- Health & safety
- Human rights and labor rights
- Anti-harassment
- Environmental impact and compliance with environmental regulations
- Air and GHG emissions
- Waste and recycling
- Anti-corruption
- Gifts and hospitality

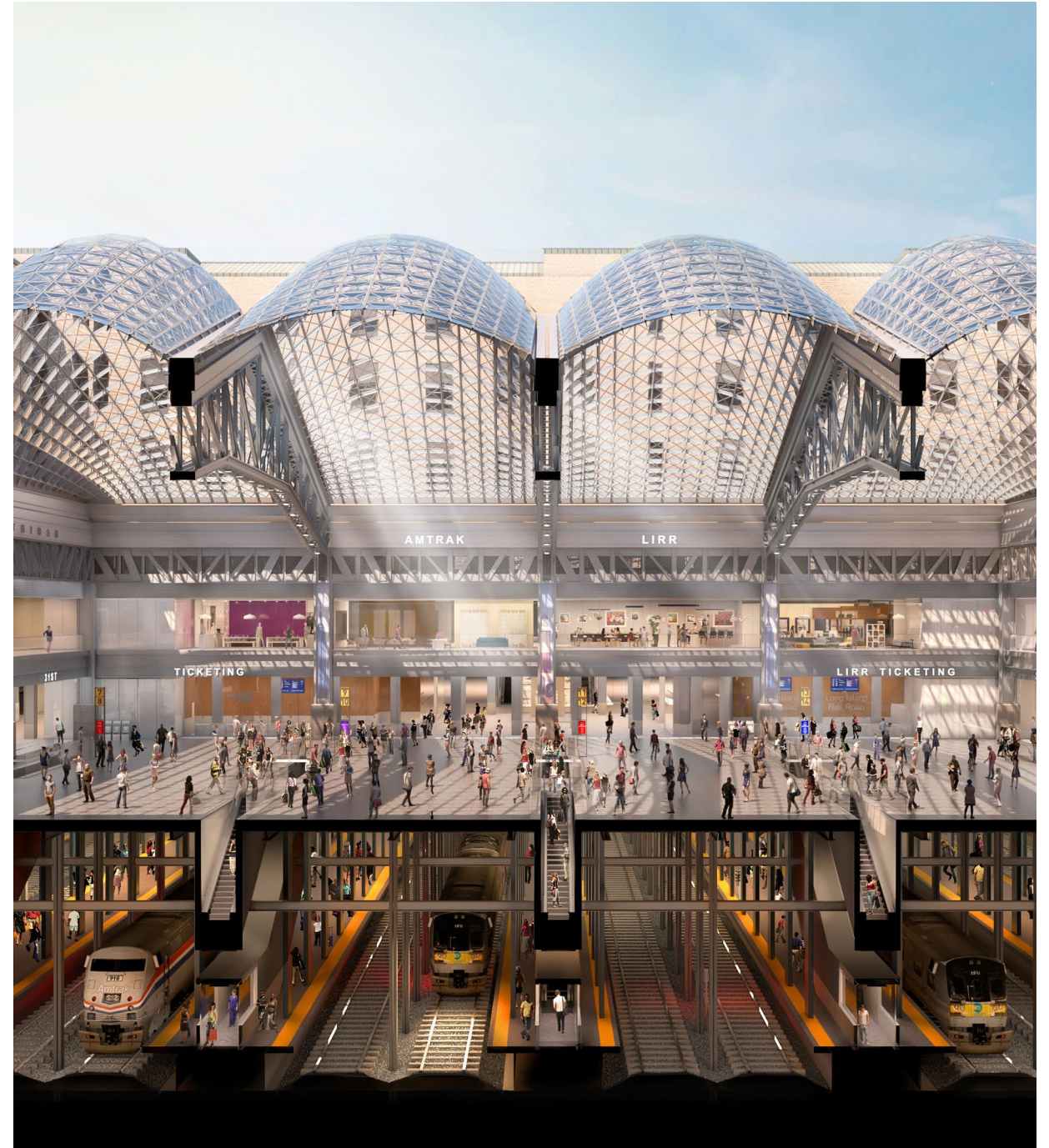
## VENDOR INTEGRITY PROGRAM

Vornado actively monitors compliance with our CoC and performs audits on our supply chain through our Vendor Integrity Program (VIP). Vendors are subject to review according to our VIP upon initial contract signing and at least once every three years thereafter. Our VIP uses federal and international databases to canvas our vendors for controversies that may indicate violation of our Code of Conduct. Such controversies may include, but are not limited to:

- Criminal and civil litigations
- Human rights violations, such as trafficking or slavery
- Controversial mentioning in the media
- Illegal business practices, including money laundering, terrorism, corruption, or fraud
- OSHA violations

Our VIP also researches and records our vendors' registration in Minority, Women, Disability, and Veteran-owned databases, as well as qualification as a small business, as recognized by various jurisdictions.

Cross-section rendering of Moynihan Train Hall





# CYBERSECURITY

Vornado is committed to rigorous cybersecurity protocols and employs a multifaceted approach for protecting our data and the computing environment utilized by our employees and external vendors. We engage with multiple third-party services that provide in-depth 24/7 network monitoring in addition to performing scans for vulnerabilities. We believe strongly in educating our employees by utilizing both online cybersecurity education and performing phishing campaigns to understand areas of additional educational need. Our Internet of Things (IoT) and corporate networks are physically separate to further enhance our data and access segregation. Furthermore, our IoT network is highly segmented for additional security and for minimizing vendor access. Our networks are audited by multiple external firms to further our commitment to ensuring the highest security. Formal reports to both the Audit Committee and Board of Trustees detailing our current cybersecurity program and future enhancements are instrumental in satisfying their responsibilities.

## OUR OBJECTIVE:

Vornado’s primary information security objective is to protect information assets from threats and vulnerabilities through active network monitoring and testing, and strong management of application, infrastructure, and physical access.



## IDENTITY AND ACCESS MANAGEMENT

We have engaged outside experts to continuously monitor network events and identify flaws or weaknesses through regular penetration testing. An Identity & Access Management (IAM) system analyzes application-level activities for suspicious behavior that might otherwise go undetected. Multi-Factor Authentication (MFA) is required for all remote network access and sensitive on-network applications.



## PATCH AND VULNERABILITY MANAGEMENT

Workstations and servers are secured via a strict patch management process and regular system scans to identify and remediate vulnerabilities. We have implemented restrictive data access through third-party software and perform thorough vendor cyber assessments to understand any potential risk posed by outside entities.



## TRAINING AND OUTREACH

All staff are trained in cybersecurity awareness and tested through periodic email phishing campaigns. Frequent reminders in the form of newsletters make our employees an active part of our cyber defense.



## INCIDENT RESPONSE

A detailed Cybersecurity Incident Response Plan (CSIRP) is in place for organizational preparedness in the event of a cyber event. The CSIRP is vetted and updated regularly via multidisciplinary tabletop exercises.



## BUSINESS CONTINUITY

We validate replication of our critical financial systems at our disaster recovery site daily. All employees have secure remote capabilities to perform critical tasks for the enterprise without interruption.



# SOCIAL RESULTS 2020



Rendering of  
Farley office  
space, fifth floor

## TENANT SATISFACTION SURVEYS

### TENANT OUTLOOK

**8**  
AVERAGE TENANT  
SATISFACTION RANKING

**89%**  
OF TENANTS RANK THEIR  
EXPERIENCE AS POSITIVE

We ask tenants to rate their experience on a scale of 1-10 (10 being the most positive). We survey our tenants as part of our stakeholder engagement and our customer service. Our results are reviewed internally every year and help us target areas of improvement. We paused our tenant satisfaction surveys during the pandemic in 2020. We plan to resume our surveys in 2021 and beyond.

**OUR 2019 SURVEYS COVERED 57% OF OUR OFFICE PORTFOLIO.**

### OUR TENANTS CARE MOST ABOUT THE QUALITY OF:



**JANITORIAL SERVICES AND CLEANLINESS**



**THERMAL COMFORT AND VENTILATION**



**LIGHTING QUALITY IN WORKSPACES**



**PROMPTNESS OF BUILDING RESPONSE  
TO REQUESTS**



# SOCIAL RESULTS 2020

Continued

## VORNADO EMPLOYEE SURVEY RESULTS

Vornado surveyed employees for their satisfaction with the company’s COVID-19 response and return-to-work plan.



8.5 TOTAL SATISFACTION SCORE (OUT OF 10)

### SURVEY HIGHLIGHTS:

8.1 DISTRIBUTION AND TIMELINESS OF COVID-19-RELATED INFORMATION

9.0 QUALITY AND VISIBILITY OF COVID-19 PROTECTION SIGNAGE AND SOCIAL DISTANCING REQUIREMENTS

8.3 VORNADO'S WORKFORCE ROTATIONAL PROGRAM AND FLEXIBILITY POLICIES

8.8 PROVISION OF PPE AND CLEANING AND DISINFECTING PROGRAMS

## SOCIAL DEMOGRAPHICS VORNADO 2020<sup>†</sup>

GRI 102-8, 401-1, 405-1

### KEY FINDINGS

Our VNO employees are **54% FEMALE** **30% RACIAL MINORITIES**

		TOTAL NUMBER OF EMPLOYEES	PERMANENT	TEMPORARY	FULL-TIME	PART-TIME	RACIAL MINORITIES <sup>§</sup> (%)
GENDER							
ALL EMPLOYEES	MALE	264	262	2	259	5	27%
	FEMALE	313	310	3	310	3	32%
VP OR ABOVE	MALE	84	84	0	84	0	14%
	FEMALE	32	32	0	32	0	13%
AGE							
ALL EMPLOYEES	< 30 YRS OLD	97	91	6	94	3	20%
	30-50 YRS OLD	290	290	0	287	3	36%
	> 50 YRS OLD	190	190	0	189	1	25%
VP OR ABOVE	< 30 YRS OLD	1	1	0	1	0	100%
	30-50 YRS OLD	62	62	0	62	0	15%
	> 50 YRS OLD	53	53	0	53	0	9%
REGION							
NEW YORK		269	260	9	267	2	26%
NEW JERSEY		233	232	1	230	3	35%
CHICAGO		68	68	0	68	0	22%
SAN FRANCISCO		7	7	0	7	0	71%
		0-4 YEARS	5-9 YEARS	10-19 YEARS	20+ YEARS	TOTAL	
TENURE							
# OF EMPLOYEES		206	117	152	102	577	

2020 EMPLOYEE TURNOVER RATE	27%
NEW HIRES IN 2020	34



<sup>†</sup> GRI 401-1: This table covers Vornado corporate employees only at December 31, 2020 and does not include the BMS employees, or any employees of Alexander's.

<sup>§</sup> These figures represent the diversity of our organization and are inclusive of the following racial minority groups: Black/African American, Hispanic/Latina, Asian/Pacific Islander, and American Indian/Alaskan Native.

<sup>‡</sup> The Company provides equal employment opportunities to all employees and applicants for employment without regard to race, color, creed, citizenship status, religion, sex, sexual orientation, gender identity, national origin, age, disability, marital status, domestic partner status, protected veteran status, or any other characteristic protected by applicable federal, state, and local laws. This applies to all terms and conditions of employment including, without limitation, hiring, placement, promotion, termination, lay-off, recall, transfer, leaves of absence, compensation, and training. The Company will not tolerate unlawful discrimination and expressly prohibits any form of unlawful employee harassment based on race, color, creed, citizenship status, religion, sex, sexual orientation, gender identity, national origin, age, disability, marital status, domestic partner status, protected veteran status, or any other characteristic applicable by law.



# VORNADO VOLUNTEERS

Through employee engagement and social impact assessment, Vornado Volunteers identified the following localized community priorities: economically and socially disadvantaged populations, environmental restoration and protection, and health and wellness. In 2020, Vornado Volunteers commenced its commitment to community activism in each of our divisions, before transitioning to virtual volunteering where possible. Below is a selection of our 2020 activity.

- Partnered with Grant Associates for Vornado’s Career Discovery Week in February, where Vornado executives hosted career panels, resume reviews, mock interviews, and networking sessions for 30 New York City high school sophomore students.
- Participated in virtual discussion and presentation for Fellows Issue Day, a cohort-style leadership training series, issued through the partnership with the Real Estate Board of New York (REBNY) and Coro, NYC’s premier civic leadership training organization.
- Host sponsorship and virtual participation in the American Lung Association’s tenth annual Fight for Air Stair Climb.

We have also instituted **Vornado’s Day of Service**, which is a day of compensated time allowing our employees to volunteer for a cause of their choosing, starting in 2021.

Below is a selection from our 2019 volunteer program. We anticipate returning to in-person volunteering activity after the pandemic subsides in 2021 and beyond.

- |  |  |  |
|--|--|--|
| <ul style="list-style-type: none"><li>• American Lung Association, Fight for Air Stair Climb, raising over \$200,000 for lung disease research and awareness programs in New York.</li><li>• San Francisco Fire Department First Responders Stair Climb at 555 California Street in San Francisco.</li></ul> | <ul style="list-style-type: none"><li>• Partnership with Jersey Cares to provide shelters, hospitals, and food banks with supply kits and care packages.</li><li>• Over 600 hours of volunteering to revitalize Norman S. Weir School in Paterson, New Jersey, and provide mentoring support for students.</li></ul> | <ul style="list-style-type: none"><li>• Sponsorship of 2019 Canstruction Awards, which collected over 150,000 lbs of food to provide over 230,000 meals through the Greater Chicago Food Depository.</li><li>• Park cleanup efforts in Central Park in NYC as well as Liberty State Park in Jersey City, New Jersey.</li></ul> |
|--|--|--|

## CHARITABLE CONTRIBUTIONS

In addition to volunteering our time and expertise to worthy causes, Vornado generously supports charities with financial contributions. Our beneficiaries represent a broad range of worthy causes, with an emphasis on community development, education and youth services, cultural institutions, and medical research. Below is a selection of recipients of Vornado’s charitable giving in 2020:

- |  |   |   |
|--|---|---|
| <ul style="list-style-type: none"><li>• All Stars Helping Kids</li><li>• Bowery Mission</li><li>• Breaking Ground</li><li>• Building Skills New York</li></ul> | <ul style="list-style-type: none"><li>• Chicagoland Entrepreneurial Center</li><li>• Design Museum of Chicago</li><li>• Food 1st Foundation</li><li>• Greater Chicago Food Depository</li></ul> | <ul style="list-style-type: none"><li>• Inner-City Scholarship Fund</li><li>• Municipal Arts Society of New York</li><li>• New York Community Trust</li><li>• Regional Plan Association</li></ul> |
|--|---|---|



Vornado team volunteering for Habitat for Humanity



Vornado team's park cleanup effort, Central Park



# OUR PARTNERSHIPS

Our employees serve as members and hold board positions for organizations where we make meaningful contributions to ESG issues in real estate. Our partnerships strategically address topics that include, but are not limited to: energy and water efficiency; climate policy; green building certifications; building electrification; zero waste strategies and recycling; diversity, equity, and inclusion; ESG reporting frameworks; and sustainable operations and maintenance. Below is a selection of our 2020 involvement.

## NATIONAL

- EPA ENERGY STAR Partner
- US Green Buildings Council Corporate Member, Greenbuild Program Working Group (Co-Chair)
- Urban Land Institute, Center for Sustainability and Economic Performance (Board)
- NAREIT Real Estate Sustainability Council
- Real Estate Roundtable, Sustainability Policy Advisory Committee (Vice Chair), Equity, Diversity & Inclusion Policy Advisory Committee
- Global Real Estate Sustainability Benchmark (GRESB) Benchmark Committee Member
- Sustainability Accounting Standards Board (SASB) Real Estate Sector Advisory Group

## REGIONAL

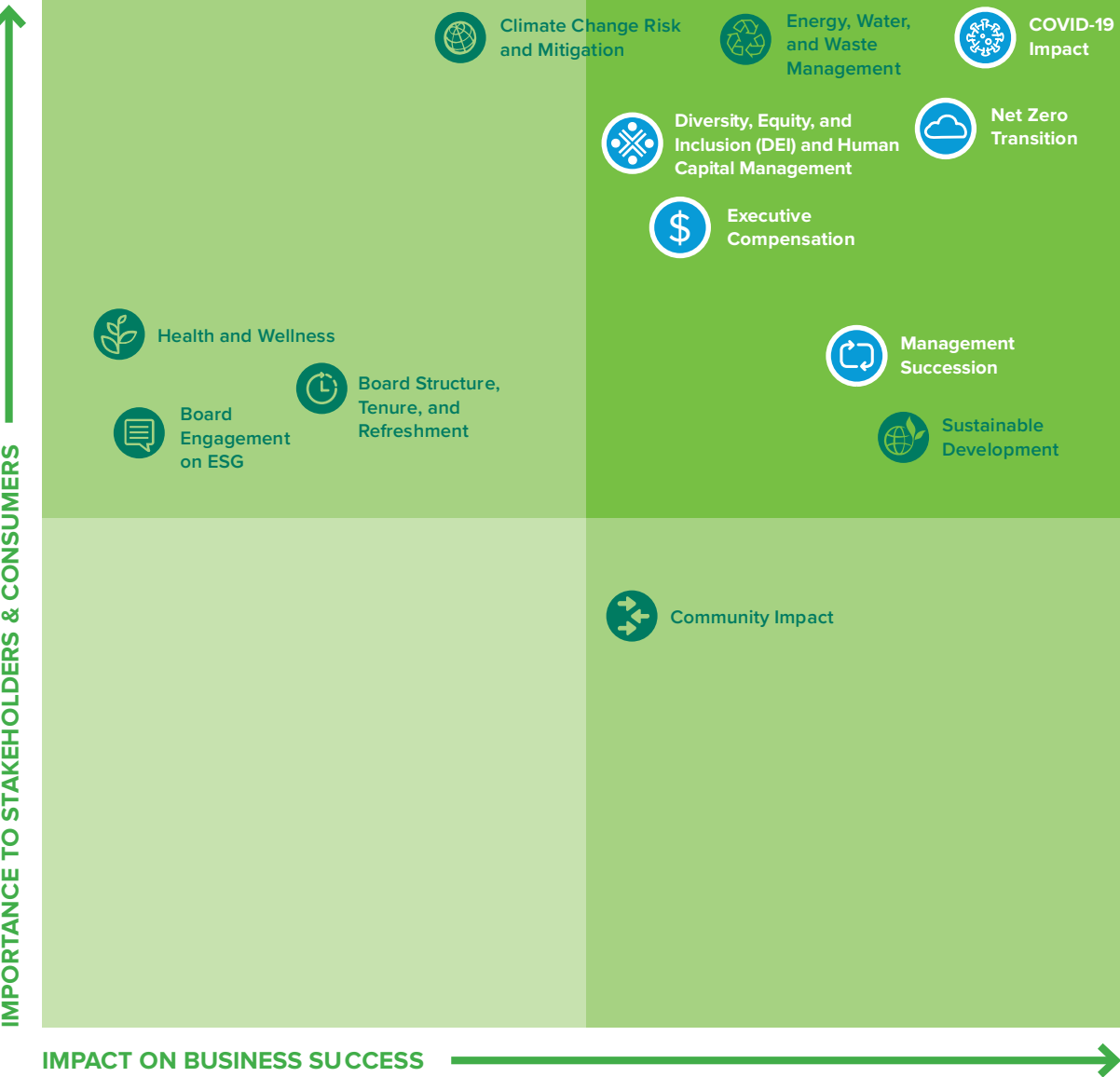
- New York Energy Consumers Council (Co-President)
- Real Estate Board of New York (REBNY) Sustainability Committee
- Building Energy Exchange (Nominating Committee Chair)
- Urban Green Council
- Energy Efficiency & Housing Panel Member, New York State Climate Action Council
- New York State Department of Public Service Energy Efficiency and Building Electrification Strategic Advisory Group
- NYC Commercial Buildings Working Group for Local Law 97 Implementation
- Retrofit Chicago
- Building Owners and Managers Association (BOMA) New York, Chicago, and San Francisco
- BOMA-New York Pinnacle Each Award Sub-Committee (Chair)
- AIA Committee on the Environment (COTE) Zero Waste Design Guidelines Advisory Board
- Regional Plan Association (Board)
- Young Men's / Women's Real Estate Association (Board)

Rendering of lobby terrace, PENN 2





# ESG MATERIALITY ASSESSMENT



\*Any information relating to goals and progress against goals was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion, opinion, or any form of assurance on such information.

GRI 102-40, 102-42, 102-43, 102-44, 102-46, 102-47, 103-1, 413-1

## OBSERVATIONS FROM 2020:

### COVID-19 Impact:

Our tenants, investors, Board, and employees all expressed concern about the impact of the COVID-19 pandemic on our business, our human capital, and our ability to continue progress on our ESG goals.\*

### Net Zero Transition:

Our tenants, investors, and Board each expressed support for Vornado's Vision 2030 Plan\* as our Net Zero Transition plan, and our investors supported aligning our plan with the Science Based Target Initiative.\*

### Management Succession Plan:

Our investors, Board, and employees all sought thorough discussion on Vornado's management changes and transitions made in 2020.

### Diversity, Equity & Inclusion:

Our investors, Board, and employees all supported our continued commitment to DEI, and particularly our transparency through publication of the data that Vornado submits to the US Equal Employment Opportunity Commission (EEO).

### Executive Compensation:

Our investors and Board prioritized changes to our executive compensation program, particularly in relation to transition of management and alignment with COVID-19-related financial performance.

STAKEHOLDER GROUP	NATURE OF ENGAGEMENT	FREQUENCY OF ENGAGEMENT	KEY TOPICS AND CONCERNS IN 2020
OUR TENANTS	Active relationship through our property management teams; meetings and discussions on tenant environmental performance; sustainability roundtable or webinar.	Daily (property management) As-needed (in-person meetings); Annually (roundtable/webinar)	COVID-19 Impact; Energy, Water, and Waste Management; Net Zero Transition; Community Impact; Health and Wellness
OUR INVESTORS	Conference calls to discuss corporate governance and ESG issues. Discussions include Vornado's Lead Trustee; President and Chief Financial Officer; Corporation Counsel; and heads of Investor Relations, Human Resources, and Sustainability. Conducted calls with investors representing ownership of at least 50% of all outstanding shares.	Annually, or more frequently as requested. Total investors reached represent over 50% of all Vornado's outstanding shares.	COVID-19 Impact; Financial Performance; Executive Compensation; Management Succession; Diversity, Equity & Inclusion and Human Capital Management; Net Zero Transition.
OUR BOARD	ESG update to the Board by the CFO; presentation from the head of Sustainability	Quarterly (from CFO); Annually (from head of Sustainability)	COVID-19 Impact; Financial Performance; Management Succession; Human Capital Management; Diversity, Equity & Inclusion; Net Zero Transition.
OUR EMPLOYEES	Informal and frequent check-ins on environmental performance; in-person or virtual meetings; employee surveys	Weekly (informal engagement); Annually (in-person meetings, Virtual Town Hall meeting)	COVID-19 Impact; Human Capital Management; Management Succession; Health & Wellness; Energy, Water, and Waste Management; Net Zero Transition; Sustainable Development.
OUR COMMUNITIES	Active membership and partnerships in community and government organizations focused on civic and environmental issues	Monthly or more frequently (per meeting schedule)	COVID-19 Impact; Net Zero Transition; Energy, Water, and Waste Management; Community Impact; Climate Change Risk and Mitigation; Sustainable Development



# ESG GOVERNANCE

GRI 102-7, 102-18, 102-20, 102-32

ESG at Vornado is vertically integrated and core to our business, starting with the Board and impacting every division.

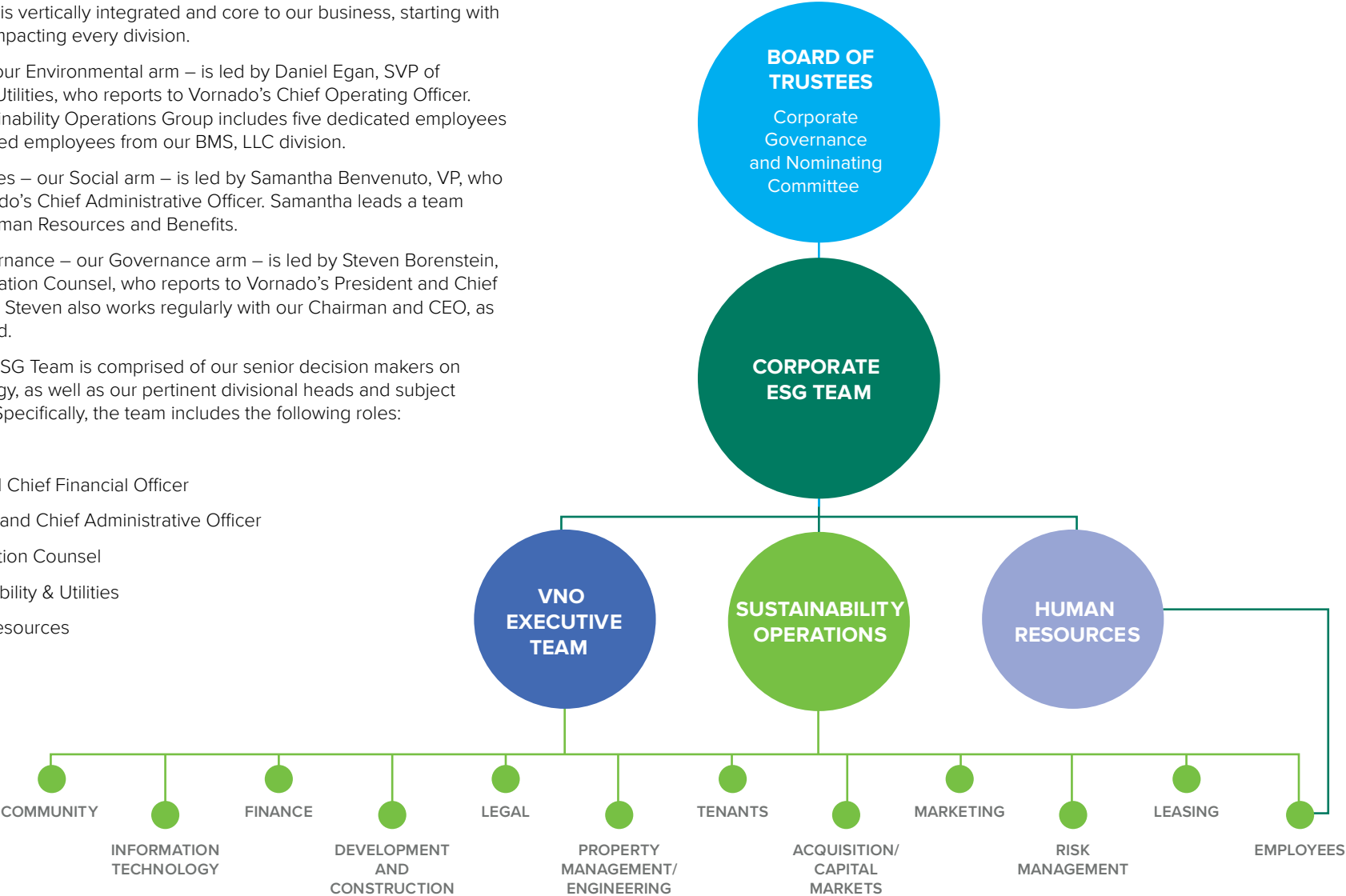
Sustainability – our Environmental arm – is led by Daniel Egan, SVP of Sustainability & Utilities, who reports to Vornado’s Chief Operating Officer. Vornado’s Sustainability Operations Group includes five dedicated employees and two dedicated employees from our BMS, LLC division.

Human Resources – our Social arm – is led by Samantha Benvenuto, VP, who reports to Vornado’s Chief Administrative Officer. Samantha leads a team dedicated to Human Resources and Benefits.

Corporate Governance – our Governance arm – is led by Steven Borenstein, SVP and Corporation Counsel, who reports to Vornado’s President and Chief Financial Officer. Steven also works regularly with our Chairman and CEO, as well as our Board.

Our Corporate ESG Team is comprised of our senior decision makers on corporate strategy, as well as our pertinent divisional heads and subject matter experts. Specifically, the team includes the following roles:

- Lead Trustee
- President and Chief Financial Officer
- EVP, Finance and Chief Administrative Officer
- SVP, Corporation Counsel
- SVP, Sustainability & Utilities
- VP, Human Resources



Oversight of social and environmental matters, including climate change risk; diversity, equity, and inclusion; and human capital management. Quarterly updates from senior management on ESG and an annual presentation from SVP, Sustainability and Utilities.

Stakeholder engagement, investor communication and outreach, and execution of ESG strategy. Formal schedule of annual investor engagement on ESG and frequent meetings and communication among members.

ESG strategy implementation within respective areas of focus. Daily discussions and active collaboration on specific projects as well as ongoing operations and maintenance.

Integration of ESG strategy across entire spectrum of business units and stakeholder groups. Frequent communication with respective heads of management.



# GLOBAL REPORTING INITIATIVE (GRI) INDEX

Management of Vornado Realty Trust is responsible for the completeness, accuracy, and validity of the disclosures in the Global Reporting Initiative Index (the “sustainability disclosures”) included within the Environmental, Social, and Governance 2020 Report of Vornado Realty Trust. Management is responsible for the collection, quantification, and presentation of the sustainability disclosures and for the selection of the criteria, which management believes provide an objective basis for measuring and reporting on the sustainability disclosures. Measurement of certain disclosures includes estimates and assumptions that are subject to inherent measurement uncertainty resulting for example from

accuracy and precision of conversion and other factors. The selection by management of different but acceptable measurement methods, input data, or assumptions may have resulted in materially different amounts or metrics being reported. Management asserts that the sustainability disclosures in the Global Reporting Initiative Index included within the Environmental, Social, and Governance 2020 Report of Vornado Realty Trust for the year ended December 31, 2020 are presented in accordance with the Global Reporting Initiative (GRI) Sustainability Reporting Standards under its Core option. The GRI has developed an internationally recognized standard for sustainability reporting.

GRI 102: GENERAL DISCLOSURES

DISCLOSURE	DESCRIPTION	RESPONSE
ORGANIZATIONAL PROFILE		
102-1	Name of the organization	Vornado Realty Trust
102-2	Activities, brands, products, and services	We currently own or portions of: New York; 20.6 million square feet of Manhattan office in 33 properties; 2.7 million square feet of Manhattan street retail space in 65 properties; 1,989 units in 10 Manhattan residential properties; The 1,700-room Hotel Pennsylvania located on Seventh Avenue at 33rd Street in the heart of the Penn District (closed since April 1, 2020 as a result of the COVID-19 pandemic); A 32.4% interest in Alexander’s, Inc. (“Alexander’s”) (NYSE: ALX), which owns seven properties in the greater New York metropolitan area, including 731 Lexington Avenue, the 1.3 million square foot Bloomberg, L.P. headquarters building; Signage throughout the Penn District and Times square; and Building Maintenance Services LLC (“BMS”) a wholly owned subsidiary, which provides cleaning and security services for our buildings and third parties; The 3.7 million square foot theMART in Chicago; A 70% controlling interest in 555 California Street, a three-building office complex in San Francisco’s financial district aggregating 1.8 million square feet; A 25.0% interest in Vornado Capital Partners, our real estate fund. We are the general partner and investment manager of the fund. The fund is in wind-down; and Other real estate and investments.
102-3	Location of headquarters	888 Seventh Avenue, New York, NY
102-4	Location of operations	United States of America
102-5	Ownership and legal form	Fully integrated REIT which conducts its business through, and substantially all of its interests in properties are held by, the Operating Partnership, a Delaware limited partnership. Vornado is the sole general partner of, and owns approximately 92.8% of the common limited partnership interest in the Operating Partnership as of December 31, 2020.
102-6	Markets served	Our primary property types are office and retail with geographic locations in New York, Chicago, and San Francisco.
102-7	Scale of the organization	ESG Governance, p. 30 of this report; 35+ office properties in New York, Chicago, and San Francisco; 70+ retail properties in New York and surrounding regions, Miami Beach, Florida, and Annapolis, Maryland, 1,989 residential apartments in New York City, \$1.528 billion total revenues.
102-8	Information on employees and other workers	BMS / Green Cleaning, p. 20 of this report, and Social Results 2020, p. 26 of this report
102-9	Supply chain	Vornado engages primarily with suppliers who provide supplies and equipment that help us manage and develop our properties. Our suppliers range in location but tend to be concentrated in our primary geographic regions of New York, Chicago, and San Francisco. Vornado considers BMS LLC as a supplier of janitorial supplies and equipment for our properties.
102-10	Significant changes to the organization and its supply chain	No significant changes
102-11	Precautionary Principle or approach	While Vornado has not formally adopted the Precautionary Principle, we apply a precautionary approach in our operational planning or when introducing new products to our buildings. Greenhouse gas emissions and indoor air pollutants are among many of the environmental risks that we seek to avoid and mitigate.
102-12	External initiatives	Key Achievements in Sustainability, p. 1 of this report
102-13	Membership of associations	Our Partnerships, p. 28 of this report



# GLOBAL REPORTING INITIATIVE (GRI) INDEX

Continued 1

GRI 102: GENERAL DISCLOSURES

DISCLOSURE	DESCRIPTION	RESPONSE
STRATEGY		
102-14	Statement from senior decision maker	p. 2 of this report
ETHICS AND INTEGRITY		
102-16	Values, principles, standards, and norms of behavior	Our Code of Business Conduct and Ethics promotes honest and ethical conduct, including fair dealing and the ethical handling of conflicts of interest; promotes full, fair, accurate, timely, and understandable disclosure; promotes compliance with applicable laws and governmental rules and regulations; ensures the protection of the Trust's legitimate business interests, including corporate opportunities, assets, and confidential information; and deters wrongdoing. Our expanded policy can be found on our Conduct and Ethics VNO Web page, found at <a href="https://www.vno.com/governance/conduct-and-ethics">https://www.vno.com/governance/conduct-and-ethics</a> .
GOVERNANCE		
102-18	Governance structure	ESG Governance, p. 30 of this report
102-20	Executive-level responsibility for economic, environmental, and social topics	ESG Governance, p. 30 of this report
102-32	Highest governance body's role in sustainability reporting	ESG Governance, p. 30 of this report



# GLOBAL REPORTING INITIATIVE (GRI) INDEX

Continued 2

GRI 102: GENERAL DISCLOSURES

Continued

DISCLOSURE	DESCRIPTION	RESPONSE
STAKEHOLDER ENGAGEMENT		
102-40	List of stakeholder groups	ESG Materiality Assessment, p. 29 of this report
102-41	Collective bargaining agreements	79.02% of our total 2,899 employees are covered by collective bargaining agreements.
102-42	Identifying and selecting stakeholders	ESG Materiality Assessment, p. 29 of this report
102-43	Approach to stakeholder engagement	ESG Materiality Assessment, p. 29 of this report
102-44	Key topics and concerns raised	ESG Materiality Assessment, p. 29 of this report
REPORTING PRACTICE		
102-45	Entities included in the consolidated financial statements	Vornado Realty Trust; BMS; Alexander's, Inc; JBG Smith
102-46	Defining report content and topic Boundaries	2020 Environmental, Social & Governance Report, p. 2 of this report ESG Materiality Assessment, p. 29 of this report
102-47	List of material topics	Energy, Water, and Waste Management; Climate Change Risk and Mitigation; Human Capital Management; Diversity, Equity, and Inclusion; Carbon Emissions and Carbon Footprint Reporting; Local Communities; Management Succession Plan; Executive Compensation; Health and Wellness, including our COVID-19 pandemic response; Sustainable Development; Board Structure, Tenure, and Refreshment; Board Engagement on ESG; Community Impact, p. 29 of this report
102-48	Restatements of information	No restatements.
102-49	Changes in reporting	No significant changes.
102-50	Reporting period	January 2020 - December 2020
102-51	Date of most recent report	2019 Sustainability Report, dated April 3, 2020
102-52	Reporting cycle	Annual
102-53	Contact point for questions regarding the report	Daniel Egan, SVP, Sustainability & Utilities, <a href="mailto:degan@vno.com">degan@vno.com</a>
102-54	Claims of reporting in accordance with the GRI Standards	This report references the GRI Standards.
102-55	GRI content index	This report references the GRI Standards.
102-56	External assurance	The Independent Accountants' Review Report can be found on p. 37 of this report, available online at <a href="http://www.vno.com">www.vno.com</a> .



# GLOBAL REPORTING INITIATIVE (GRI) INDEX

Continued 3

GRI 103: MANAGEMENT APPROACH

DISCLOSURE	DESCRIPTION	RESPONSE				
103-1	Explanation of the material topic and its boundary	The ESG topics listed in GRI 102-47 are deemed material based on our recurring stakeholder engagement, which is described on p. 29 of this report. Reporting Boundaries for environmental disclosures are found in the footnote at the end of this GRI index on p. 35. Reporting boundaries for GRI topics 401 and 405 are found in the footnotes on p. 20 and 26. Reporting boundaries for GRI topics 413 and 416 are the markets where we do business, primarily New York, Chicago, and San Francisco. Reporting boundary for GRI 419 is the extent of Vornado's business, which is referenced above in GRI 102-2.				
103-2	The management approach and its components		Policies/ Commitments	Goals and Targets	Responsibilities	Processes/ Projects /Programs
		GRI 201: Economic Performance	p. 3, pp. 4-5	p. 4	BMS / Green Cleaning, p. 20 Our People, p. 26 ESG Governance, p. 30	p. 41
		GRI 302: Energy	p. 3	pp. 8-10		p. 12, p. 38
		GRI 305: Emissions	p. 3	p. 10		pp. 4-6
		GRI 303: Water	p. 3, p. 8	pp. 8-10		p. 12, p. 39
		GRI 306: Effluents & Waste	p. 3, p. 15	pp. 8-10		p. 12, p. 16
		GRI 401: Employment	p. 19			p. 20, p. 26 including reference to grievance mechanism
		GRI 404: Training and education	p. 2, p. 16, p. 19, p. 20			p. 16, pp. 19-20
		GRI 413: Local Communities	pp. 27-28			
		GRI 416: Customer Health and Safety	pp. 16-17, p. 20			pp. 16-17, p. 20
		GRI 405: Diversity and Equal Opportunity	p. 19, endnote, p. 20 and 26			
		419: Socioeconomic Compliance	10-K FN 22 p. 114			
103-3	Evaluation of the management approach	Evaluation of climate-related topics: Environmental Results, pp. 9-10 of this report, and progress against environmental goals, found on p. 8. Evaluation of management approach to social topics: Social Results, found on p. 26.				



# GLOBAL REPORTING INITIATIVE (GRI) INDEX

Continued 4

GRI 200-400: TOPIC-SPECIFIC DISCLOSURES Continued

GRI TOPICS	DISCLOSURE	DESCRIPTION	RESPONSE
ECONOMIC			
GRI 201: Economic Perf. 2020	201-2	Financial implications and other risks and opportunities due to climate change	TCFD Scenario analysis, pp. 4-5 of this report, and SASB Disclosure on climate change adaptation, p. 41 of this report.
ENVIRONMENTAL			
GRI 302: Energy 2020	302-1	Energy consumption within the organization	2020 Results, p. 10 of this report.
	302-3	Building energy intensity	2020 Results, p. 9 of this report. Our denominator is the square footage as outlined in the boundaries found in the endnotes of this report.
	302-4	Reduction of energy consumption	2020 Results, p. 10 of this report. Energy converted from source unit of measure to megawatt hours (mWh).
GRI 303: Water 2020	303-1	Water withdrawal by source	2020 Results, p. 9 of this report. All water listed is municipal water supply. No other sources of consumed water are of material quantities. Water converted from source unit of measure to cubic meters.
GRI 305: Emissions 2020	305-1	Scope 1 GHG emissions	2020 Results, p. 10 of this report. Gases included are CO2, CH4, and N2O. We utilized the latest available emission factors for each energy type and Global Warming Potential factors from the Fifth Assessment Report (AR5) published by Intergovernmental Panel on Climate Change to calculate our GHG inventory. No significant recalculations occurred. Consolidation approach as defined in the reporting boundary endnoted in this report. On January 1, 2020, Vornado elected to change its method of accounting for greenhouse gas emissions from the operational control to the financial control method, as outlined within the GHG protocol. The Company believes that the financial control method of emissions reporting more accurately allows for the communication of progress on goals and execution of strategy going forward and is reflective of the emissions where the Company has direct influence over energy procurement.
	305-2	Scope 2 GHG Emissions	2020 Results, p. 10 of this report. All qualifiers for Disclosure 305-1 also apply to this disclosure.
	305-3	Scope 3 GHG Emissions	2020 Results, p. 10 of this report. All qualifiers for Disclosure 305-1 also apply to this disclosure. Vornado Scope 3 emissions are reported as defined by the GHG Protocol for category 13, downstream leased assets for direct meter tenant utilities. Vornado continues to evaluate all relevant Scope 3 categories.
	305-4	GHG emissions intensity	2020 Results, p. 9 of this report. Our denominator is the square footage as outlined in the boundaries found in the endnotes of this report.
	305-5	Reduction of GHG emissions	2020 Results, p. 10 of this report.
GRI 306: Effluents and Waste 2020	306-2	Waste by type and disposal method	2020 Results, p. 9 of this report. Waste disposal method has been directly confirmed by the organization through annual onsite visits to facilities. Information is provided by waste disposal contractor on a monthly basis.

Reporting boundaries:

**Intensities:** 2020 intensities were calculated by dividing the energy consumption, water consumption, and GHG emissions from the properties owned by Vornado at December 31, 2020 by the total square footage of that same list of properties.

**Energy and Water:** 100% of all in-service square footage as of 12/31/2020, not listed as under development, with more than 20% VNO ownership. Q4 2020 energy and water data was estimated at properties where actual consumption data was not available in time for the publication of this report. Due to observed reductions related to the COVID-19 pandemic, energy and water

were estimated by applying the weighted average monthly consumption variance from prior year beginning with April 2020 through the most recent available month of actual data. Energy consumption was also adjusted for weather & leased occupancy normalization. Approximately 7% of total energy consumption and 5% of total water consumption was estimated. Four properties have full year estimates for energy and water. The estimation consumption for these properties account for an additional 3% of total energy consumption and 3% of total water consumption.

**Waste:** 84.16% of all in-service square footage as of 12/31/2020, not listed as under development, with more than 20% VNO ownership. Waste generation in 2019 and 2020 is represented by actual data from waste haulers. Excluded from waste data are properties where waste hauling is not directly managed by Vornado, such as high street retail and residential properties. Construction & Demolition waste is excluded from the reporting boundary as it is considered extraordinary waste, which is in line with industry standards.



# GLOBAL REPORTING INITIATIVE (GRI) INDEX

Continued 5

GRI 200-400: TOPIC-SPECIFIC DISCLOSURES

GRI TOPICS	DISCLOSURE	DESCRIPTION	RESPONSE
SOCIAL			
GRI 401: Employment 2020	401-1	New employee hires and employee turnover	Social Results 2020, p. 26 of this report; BMS / Green Cleaning, p. 20 of this report.
	401-2	Full-time benefits not provided to temporary/part-time employees	Medical and prescription plan at low employee cost; Dental plan at no employee cost; Tax deferred 401(k) plan; Flexible spending accounts for medical and dependent care; Life insurance at two times an employee's annual compensation and at no employee cost; Paid time off for vacations, holidays, and personal days; Employee Assistance Program; Tuition reimbursement and professional reimbursement development plan
GRI 404: Training and Education 2020	404-1	Average hours of training per year per employee	BMS / Green Cleaning, p. 20 of this report.
GRI 405: Diversity and Equal Opportunity 2020	405-1	Diversity of governance bodies and employees	BMS / Green Cleaning, p. 20 of this report, and Our People, p. 26 of this report. As of December 31, 2020, our Board consisted of 33% women; 0% under age 30; 0% between ages 30 and 50, and 100% over 50 years old.
GRI 413: Local Communities 2020	413-1	Operations with local community engagement, impact assessments, and development programs	Environmental Results, p. 9 of this report Energy Management Planning Cycle, p. 12 of this report Tenant and Community Development, p. 18 of this report Vornado Volunteers, p. 27 of this report ESG Materiality Assessment, p. 29 of this report.
GRI 416: Customer Health and Safety 2020	416-1	Assessment of the health and safety impacts of product and service categories	Health and Wellness, pp. 16-17 of this report. BMS / Green Cleaning, p. 20-22 of this report.
GRI 419: Socioeconomic Compliance 2020	419-1	Non-compliance with laws and regulations in the social and economic area	None. We consider “significant” fines as those listed in Vornado Form 10-K for the fiscal year ended December 31, 2020, "Note 22: Contingencies" on p. 135.





INDEPENDENT ACCOUNTANT'S REVIEW REPORT

Board of Trustees  
Vornado Realty Trust  
New York, NY

We have reviewed management of Vornado Realty Trust’s assertion that the sustainability disclosures in the Global Reporting Initiative Index included within the accompanying Environmental, Social and Governance 2020 Report of Vornado Realty Trust (the "Company") for the year ended December 31, 2020 are presented in accordance with the Global Reporting Initiative Sustainability Reporting Standards under its Core option (the “GRI Standards – Core option”). The Company’s management is responsible for its assertion. Our responsibility is to express a conclusion on management’s assertion based on our review.

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants (AICPA) in AT-C section 105, *Concepts Common to All Attestation Engagements*, and AT-C section 210, *Review Engagements*. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to management’s assertion in order for it to be fairly stated. A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether management’s assertion is fairly stated, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. We believe that our review provides a reasonable basis for our conclusion.

In performing our review, we have complied with the independence and other ethical requirements of the Code of Professional Conduct issued by the AICPA. We applied the Statements on Quality Control Standards established by the AICPA and, accordingly, maintain a comprehensive system of quality control.

The procedures we performed were based on our professional judgment. In performing our review, we performed analytical procedures and inquiries, and for a selection of sustainability disclosures, reviewed supporting documentation in regard to the accuracy of the data in the sustainability disclosures.

The preparation of the sustainability disclosures in the Global Reporting Initiative Index included within the Environmental, Social and Governance 2020 Report requires management to interpret the criteria, make determinations as to the relevancy of information to be included, and make

estimates and assumptions that affect reported information. Measurement of certain disclosures includes estimates and assumptions that are subject to inherent measurement uncertainty resulting for example from accuracy and precision of greenhouse gas emission conversion factors. Obtaining sufficient, appropriate review evidence to support our conclusion does not reduce the inherent uncertainty in the amounts and metrics. The selection by management of different but acceptable measurement methods, input data, or assumptions may have resulted in materially different amounts or metrics being reported.

The Environmental, Social and Governance 2020 Report includes certain information relating to goals and progress against goals and such information is denoted by an asterisk (\*). Any information relating to goals and progress against goals were not subject to our review and, accordingly, we do not express a conclusion or any form of assurance on such information. Information for periods prior to December 31, 2018 were not subject to our review and, accordingly, we do not express a conclusion or any form of assurance on such information.

As discussed in the Global Reporting Initiative Index included within the Environmental, Social and Governance 2020 Report, the entity has elected to change its method of accounting for emissions reporting from the operational control method to the financial control method as of January 1, 2020. Our conclusion is not modified with respect to this matter.

Based on our review, we are not aware of any material modifications that should be made to management of Vornado Realty Trust’s assertion that the sustainability disclosures in the Global Reporting Initiative Index included within the accompanying Environmental, Social and Governance 2020 Report of the Company for the year ended December 31, 2020 are presented in accordance with the GRI Standards – Core option, in order for it to be fairly stated.

*Deloitte & Touche LLP*

April 9, 2021

**Deloitte & Touche LLP**  
695 E. Main Street  
Stamford, CT 06901  
USA  
  
Tel: +1 203 708 4000  
Fax: +1 203 708 4797  
[www.deloitte.com](http://www.deloitte.com)



# APPENDIX A – SUSTAINABILITY ACCOUNTING STANDARDS BOARD (SASB)

Management of Vornado Realty Trust is responsible for the completeness, accuracy, and validity of the specified metrics included in Appendix A (the “specified metrics”) of the Environmental, Social, and Governance 2020 Report of Vornado Realty Trust. Management is responsible for the collection, quantification, and presentation of the specified metrics and for the selection of the criteria, which management believes provide an objective basis for measuring and reporting on the specified metrics. Measurement of certain metrics includes estimates and assumptions that are subject to inherent measurement uncertainty resulting for example from precision of conversion and other factors, and assumptions used for the weather and occupancy

normalization of energy data. The selection by management of different but acceptable measurement methods, input data, or assumptions may have resulted in materially different amounts or metrics being reported. Management asserts that the specified metrics included in Appendix A of the Environmental, Social, and Governance 2020 Report of Vornado Realty Trust for the year ended December 31, 2020 are presented in accordance with the Sustainability Accounting Standards Board (SASB) Real Estate Sustainability Accounting Standard.

## ENERGY MANAGEMENT

CODE	ACCOUNTING METRIC	TOTAL	NEW YORK	theMART**	555 CALIFORNIA**	OTHER	UNIT OF MEASURE
IF-RE-130a.1	Energy consumption data coverage as a percentage of floor area, by property subsector.	100%	100%	100%	100%	100%	Percentage (%) by floor area (SF)
IF-RE-130a.2	Total energy consumed by portfolio area with data coverage.	2,957,779	2,434,053	221,350	133,809	168,567	Gigajoules (GJ)
IF-RE-130a.2	Percentage of total energy that is grid electricity, by property subsector.†	14.88%	14.70%	12.73%	15.58%	19.79%	Percentage (%)
IF-RE-130a.2	Percentage of total energy that is renewable, by property subsector.	2.07%	0%	27.73%	0%	0%	Percentage (%)
IF-RE-130a.3	Like-for-like change in energy consumption of portfolio area with data coverage, by property subsector (see note on normalization).	-12.88%	-12.94%	-17.90%	-16.55%	-0.72%	Percentage (%)
IF-RE-130a.4	Percentage of eligible portfolio that has obtained an energy rating.	83.52%	81.01%	99.49%	87.08%	84.07%	Percentage (%) by floor area (SF)
IF-RE-130a.4	Percentage of eligible portfolio that is certified to ENERGY STAR, by property subsector.	16.43%	18.99%	0%	12.92%	15.93%	Percentage (%) by floor area (SF)
IF-RE-130A.5 DESCRIPTION OF HOW BUILDING ENERGY MANAGEMENT CONSIDERATIONS ARE INTEGRATED INTO PROPERTY INVESTMENT ANALYSIS AND OPERATIONAL STRATEGY							

Vornado’s Scope 1 and Scope 2 emissions come entirely from the operation of our buildings. Energy costs are often among the largest controllable expenses on a property’s balance sheet. For these reasons, we consider energy management to be an environmental and fiscal priority.

In 2019, Vornado committed to making its buildings carbon neutral by the year 2030. This plan, known as Vision 2030, will combine various methods to reduce or offset all of the Scope 1 and Scope 2 emissions. A major component of Vision 2030 is an energy efficiency goal of 50% below a 2009 base year by the year 2030. Further information on this plan can be found in the Vision 2030 section of this report. Our progress towards this goal at the end of 2019 measured 24%. Due mostly to the impacts of COVID-19 causing our office tenants to work remotely throughout 2020, our present energy consumption levels are 32% below 2009 levels¹. We will continue to measure our energy consumption and evaluate our targets and goals.

We incorporate energy management into our acquisition due diligence process. We tour properties in person and review capital and operating budgets, as well as utility bills, to determine opportunities to reduce energy consumption and demand. We assess energy performance through quantifiable methods of consumption and cost on a per square foot basis, and we consider energy labels and benchmark values provided through ENERGY STAR. We gain an understanding of the building’s energy inventory and current energy initiatives implemented at the property.

Our building managers and operators are trained and supported by our centralized energy management team to employ sound and responsible energy management across the portfolio. Our engineers perform in-house technical assessments, akin to a Level I audit, per guidance from the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), as part of their ongoing preventative maintenance. We employ third-party engineering firms to complete technical assessments such as ASHRAE Level II Energy Audits and Retrocommissioning at all New York City, Chicago, and San Francisco properties over 50,000 square feet, and update these assessments at least once every five years. In our NYC market, the Audits and Retrocommissioning reports are part of Local Law 87 and are subject to City review to ensure that all landlord-controlled inventory is included in the scope, all low- and no-cost recommended repairs are included, and that the assessments were completed by licensed professionals. Such technical assessments are the basis for our

energy efficiency capital work. While total savings from these assessments is difficult to quantify, Vornado completes or seriously considers all low- and no-cost repairs and recommended measures, as well as all energy conservation measures (ECMs) with a simple payback of up to 5 years. Vornado uses Environmental Management Systems (EMS) and Data Management Systems as part of our strategy.

More information on our technical assessments and our EMS can be found on the Energy Management Planning Cycle section of this report.

We uphold energy ratings, benchmarking, and certifications as important recognition tools and performance indicators. We understand that our tenants prefer buildings that have earned green building certifications and demonstrate competitive energy ratings such as the ENERGY STAR score. We believe the benefits of such ratings and certifications outweigh the costs or resources associated with obtaining them. Because our core business is the maintenance and operation of existing assets, we believe that certifications based on ongoing performance are more relevant to us than those based on performance-modeled design objectives.

Vornado regularly evaluates opportunities to invest in renewable energy. We believe that onsite renewable energy is the most impactful in reducing carbon emissions, but we are limited in this opportunity by the lack of physical space and high construction costs that are typical for the dense urban markets where we are located. Off-site renewable energy can provide a virtual carbon offset to our Scope 1 and Scope 2 emissions. We believe that our future investments in offsite renewable power should contribute to the progress of the climate goals in the markets where we do business, and therefore seek to invest in offsite renewable resources that are within or close to the localities of our buildings. We have purchased renewable certificates to offset 17 mWh of our 2020 energy consumed at theMART property, which represents about 25% of annual electricity reported at the property or 2% of our company’s total electricity consumption.

We also will plan to purchase carbon offsets between 2020 and 2030 to reduce our Scope 1 emissions, as well as the Scope 2 emissions generated from district steam. This will be the balance of emissions that has not been reduced by energy efficiency, energy demand optimization, or renewable energy procurement. Carbon offsets, like renewable power, should bear localized benefit and wherever possible should align with those which are defined in the Climate Leadership and Community Protection Act (CLCPA) passed in New York State in 2019.

¹ Any information relating to goals and progress against goals was not subject to Deloitte & Touche LLP’s examination and, accordingly, Deloitte & Touche LLP does not express a conclusion, opinion, or any form of assurance on such information.  
\*\* Divisions are presented as disclosed in Vornado form 10-K for the fiscal year ended December 31, 2020.  
†Based on updated guidance from the SASB Implementation Supplement: Greenhouse Gas Emissions and SASB Standards released in September 2020, the Company has disclosed this metric as an expression of total grid electricity divided by total energy consumed for fiscal year ending December 31, 2020.



# APPENDIX A – SASB

Continued 1

## WATER MANAGEMENT

CODE	ACCOUNTING METRIC	TOTAL		NEW YORK		theMART**		555 CALIFORNIA**		OTHER		UNIT OF MEASURE
IF-RE-140a.1	Water withdrawal data coverage as a percentage of total floor area, by property subsector.	100%		100%		100%		100%		100%		Percentage (%) by floor area (SF)
IF-RE-140a.1	Percentage of floor area in regions with High or Extremely High Baseline Water Stress, each by property subsector.	7.86%		6.94%		0%		0%		46.42%		Percentage (%) by floor area (SF)
IF-RE-140a.2	Total water withdrawn in 2020, (1) by portfolio area with data coverage and (2) percentage in regions with High or Extremely High Baseline Water Stress, each by property subsector.	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	Thousand Cubic meters (m^3); Percentage (%)
		2,027.91	13.35%	1,805.59	10.78%	57.46	0%	39.71	0%	125.15	60.93%	
IF-RE-140a.3	Like-for-like change in water withdrawn for portfolio area with data coverage, by property subsector.	-28.40%		-27.60%		-51.26%		-35.24%		-21.70%		Percentage (%)

### IF-RE-140A.4. DESCRIPTION OF WATER MANAGEMENT RISKS AND DISCUSSION OF STRATEGIES AND PRACTICES TO MITIGATE THOSE RISKS

Vornado’s portfolio is concentrated in the dense urban cores of New York City, Chicago, and San Francisco. As such, Vornado’s primary water consumption includes potable water consumption for drinking across our portfolio; plumbing use; water used for specific business purposes, such as food service or showers in exercise facilities; and water use attributed to Heating, Ventilation, and Air-Conditioning (HVAC). We do not consider water consumption used for agricultural purposes to be significant and therefore do not include this consumption in our reporting boundary. Our sources for water are exclusively municipal water systems, and our discharge destinations are exclusively municipal sewer systems.

We face water-related environmental constraints and risks that are characteristic of urban places, and use publicly available maps, resources, and tools to gain insights into the risks inherent to our properties. Approximately 7% of our total properties operate in some regions with high or extremely high baseline water stress. As referenced in the SASB-issued Real Estate Sustainability Accounting Standard, the World Resource Institute categorizes high and extremely high stress based on the level of available water withdrawn annually to support agricultural, domestic, and industrial users. Our New York and San Francisco regions experience medium to high levels of interannual variability. Our San Francisco locations are subject to medium to high seasonal variability.

We also face water-related regulatory constraints. Our water costs increase regularly to pay for developing and maintaining the infrastructure that supports our municipal water and sewer systems. We incur sewer costs to pay for the treatment of water that is discharged from our buildings. We incur additional costs to control the temperature of the water we discharge. We may incur additional costs to comply with future stormwater management regulation in our regions. We expect costs for water to continue to rise into the foreseeable future, which will increase our operating costs.

Our primary means of water risk mitigation is to reduce our water withdrawals and consumption. In 2019, we achieved our corporate goal by surpassing a 10% reduction of our water consumption below a 2016 base year. We reset this goal in 2020 to achieve an additional 10% by 2030<sup>1</sup>. This target is

absolute in nature; our mechanisms in place for achieving this target include targeting reduction opportunities in our plumbing fixtures, our HVAC systems, our cleaning policies, and where applicable, our drip irrigation systems. Our restroom plumbing fixtures are retrofitted as part of renovation efforts, which occur annually as part of our recurring capital improvement process. Our HVAC water efficiency program includes water reduction and water re-use efforts such as the re-use of steam condensate to our cooling tower, to reduce sewer discharge; retrofitting our cooling tower with more efficient mechanical systems; and ensuring our chiller systems are serviced and maintained on an ongoing basis. Our janitorial company cleans our buildings with water conservation efforts including gray water re-use for washing and cleaning, and purchase and use of water efficient equipment. In new construction or redevelopment projects, we also mitigate our stormwater runoff with stormwater retention tanks that re-use storm water for irrigation and cooling tower use, and green roofs and terraces to capture stormwater. Due primarily to COVID-19-related vacancies in 2020, we realized a reduction of over 25% below 2019 consumption<sup>1</sup>. This reduction was greater in our office and retail properties than in our residential properties, which tracks with the observed occupancy during the pandemic. Anomalies such as those observed through the pandemic are not counted towards our corporate goals.

Our primary risk of achieving our water consumption reduction target is our lack of control over end users. Our tenants are the main drivers of water consumption. Increases in occupancy, operating hours, or densification of existing spaces will cause consumption to increase. Diversity of water use – such as retail uses in food service or health and exercise facilities – could also cause an increase in consumption, despite our efforts to reduce water consumption.

We collaborate with our water and sewer authorities, city governments, and community boards when issues arise in water management or water and sewer infrastructure concerns. We observe that our water conservation efforts have achieved tradeoffs in energy reduction but have not yet quantified these tradeoffs. We continue to consider these tradeoffs and evaluate additional lifecycle impacts and tradeoffs, such as GHG emissions reduction, as potential future opportunities to be realized.

<sup>1</sup> Any information relating to goals and progress against goals was not subject to Deloitte & Touche LLP’s review and, accordingly, Deloitte & Touche LLP does not express a conclusion, opinion, or any form of assurance on such information.  
\*\* Divisions are presented as disclosed in Vornado form 10-K for the fiscal year ended December 31, 2020.



# APPENDIX A – SASB

Continued 2

MANAGEMENT OF TENANT SUSTAINABILITY IMPACTS

CODE	ACCOUNTING METRIC	TOTAL		NEW YORK		theMART**		555 CALIFORNIA**		OTHER		UNIT OF MEASURE
IF-RE-410a.1	Percentage of new leases that contain a cost recovery clause for resource efficiency-related capital improvements and associated leased floor area, by property subsector.†	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	Percentage (%) by floor area (SF)
		80.34%	62.56%	78.59%	61.55%	90.40%	82.53%	100.00%	90.81%	0.00%	6.71%	
IF-RE-410a.2	Percentage of tenants that are separately metered or submetered for grid electricity consumption, by property subsector.	93.79%		95.20%		100%		99.13%		54.06%		Percentage (%) by floor area (SF)
IF-RE-410a.2	Percentage of tenants that are separately metered or submetered for water withdrawals, by property subsector.	14.80%		14.79%		3.66%		0%		53.70%		Percentage (%) by floor area (SF)

IF-RE-410A.3. DISCUSSION OF APPROACH TO MEASURING, INCENTIVIZING, AND IMPROVING SUSTAINABILITY IMPACTS OF TENANTS

At Vornado, tenants consume much of the electricity consumed in our properties, as is evidenced by the submetered electricity we record throughout our portfolio. Because so much of our energy consumption is under tenant control, it is essential to engage with them as partners in reducing our carbon footprint. There is clear value to be realized in communicating to our tenants their energy and water consumption, when known, and to encourage their participation in best practices in resource conservation.

While Vornado does not explicitly endorse third-party initiatives concerning green leases, our standard lease agreement includes several components that encourage tenant energy conservation. Across our office portfolio, we promote or require submetered or separately metered electricity consumption for all tenants over 5,000 square feet. We also require submetered or separately metered water consumption for all tenants whose predicted use is expected to exceed normal business practice. The submetered arrangement enables Vornado to share energy and water consumption with our tenants on a monthly basis through the generation of the submeter bill. Tenants are billed transparently based on their actual and exclusive consumption as recorded on the submeter. Included on the submeter bill are Vornado's energy reduction targets and links to Vornado's corporate sustainability page, where our broader strategy on energy and water management is found. Elsewhere in the lease, we include a clause to recover capital costs that reduce operating expenses – whether utility costs or another cost reduction benefit – and we may amortize that recovery over the useful life of the project. Because we have robust coverage of this clause across our entire leased portfolio, we have reported IF-RE-410a.1 metrics above to represent percentage of total leases containing this cost recovery clause, as opposed to new leases only, as of December 31, 2020.

Where there is an economic or environmental benefit, our company will prioritize sustainability requirements in a tenant fit-out. Our tenant fit-out guidelines and boilerplate drawings include requirements for energy efficient lighting and HVAC equipment and water efficient plumbing fixtures. These requirements

are also outlined in our rules and regulations which are also included in the lease. We believe that our lease fosters a sustainably designed tenant space, and an ongoing environment that encourages the tenant to both actively manage and measure their own carbon footprint.

Beyond the lease, we distinguish ourselves with in-person engagement with our tenants on sustainability. Prior to the pandemic in 2020, we hosted an annual tenant sustainability roundtable, where we share best practices on energy, water, and waste reduction, and discuss corporate ESG trends and regulatory updates. We collect information from our tenants that contributes to mandatory energy rating schemes, such as ENERGY STAR Portfolio Manager profiles. We encourage tenants to consider ENERGY STAR Tenant Space recognition, and leverage ENERGY STAR Treasure Hunt programs to identify low- and no-cost measures to reduce consumption. We met with tenants onsite to survey opportunities to save energy and water. We train our tenants on recycling programs. We host energy reduction competitions with tenants to promote awareness and foster their participation.

The COVID-19 pandemic brought new challenges and opportunities to our tenant engagement. While we were unable to meet with our tenants in person starting in mid-March, we were able to engage with them remotely. Our pandemic outreach included weekly communication with our tenants that included customized reports and snapshots of their energy consumption to help them monitor their performance and encourage deeper efficiency measures while their employees worked from home. Lessons learned from this engagement can be applied beyond the pandemic to achieve permanent energy reductions, which will reduce costs to tenants and contribute to our corporate efficiency goals.

We hold ourselves accountable and measure the success of our engagement. Success is measured in the observed reduction of energy from submetered tenant spaces, or from the square footage of space that our team reaches through our engagement program.

\*\* Divisions are presented as disclosed in Vornado form 10-K for the fiscal year ended December 31, 2020.  
†As permitted in the SASB Implementation Guide, the Company has chosen to disclose the percentage of all leases (in section 2) in addition to percentage of new leases during the reporting period (in section 1) that contain a cost recovery clause for resource efficiency-related capital improvements.



# APPENDIX A – SASB

Continued 3



CLIMATE CHANGE ADAPTATION

CODE	ACCOUNTING METRIC	TOTAL	NEW YORK	theMART**	555 CALIFORNIA**	OTHER	UNIT OF MEASURE
IF-RE-450a.1	Area of properties located in FEMA Special Flood Hazard Areas or foreign equivalent, by property subsector.	1,867,000	1,051,000	0	0	816,000	Square Feet
IF-RE-450A.2 DESCRIPTION OF CLIMATE CHANGE RISK EXPOSURE ANALYSIS, DEGREE OF SYSTEMATIC PORTFOLIO EXPOSURE, AND STRATEGIES FOR MITIGATING RISKS							

We identify and assess our exposure to climate change risk based on the 1.5° and business-as-usual scenarios discussed in the October 2018 Special Report by the Intergovernmental Panel on Climate Change (IPCC). We find these scenarios to be relevant to our properties for two reasons. The first is that they provide potential future states on the physical risks each scenario presents between the present time and the year 2100. The second is that they provide a shorter-term view of transitional risks related to climate-related policy change that our properties could be subject to. Each of our principal markets of New York, Chicago, and San Francisco has existing or pending legislation that would limit carbon emissions to align with a 1.5° scenario. We consider the costs for compliance with such legislation to be a financial impact attributable to the transition to a lower-carbon environment.

Our buildings are located in regions that have had recent history of extreme weather events, including but not limited to hurricanes and super-storms, nor'easters and ice storms, tornadoes, wildfires, temperature extremes, and heavy precipitation events. Under the business-as-usual scenario, there may be an increase in the frequency and severity of these events between now and 2100. Such events may impact our build-ings individually, depending on a building's specific use, design, and location characteristics, or regionally, depending on the magnitude of the event. We are also aware that while less than 6% of our property square footage is in areas designated as flood zones by FEMA, our coastal locations are susceptible to sea level rise (SLR). Various global warming scenarios could bring about differing amounts of SLR between now and the year 2100. Financial impacts under various warming scenarios include, but are not limited to: increases in capital and operating costs; increases in insurance premiums; increases in energy costs; and increases in overall utility costs.

Our properties are located in urban areas, which means the vitality of our properties is reliant on sound transportation and utility infrastructure. If that infrastructure is compromised in any way by an extreme weather event, such a compromise could have an adverse impact on our local economies and populations, as well as on our tenants' ability to do business in our buildings. This risk is not unique to Vornado, but is endemic to our regions.

Our strategies for mitigating physical risks require a combination of adaptive and preventative measures with a proactive reduction of carbon emissions. Adaptive and preventative measures are executed at both the property level and regional level. We adapt our properties to be resilient against the impact of climate change, with details of our resilience measures found on the Resilience and Adaptation section of this report. We train our operators in disaster risk management and emergency operating procedures. At the regional level, our cities and utilities adapt by creating programs that improve resilience against climate-related impacts. Examples of such programs include New York City's OneNYC plan and Consolidated Edison's Storm Hardening Protection Plan in New York; Resilient Chicago and ComEd's Resilient Electric Grid system in Chicago; and Resilient SF and PG&E's Emergency Preparedness and Response program in San Francisco.

Like adaptive and preventative measures, proactive reduction of carbon emissions requires property-specific and regional efforts. We have developed property-specific carbon reduction targets that address both landlord- and tenant-controlled energy consumption. These prop-erty-specific targets contribute to Vornado's company-wide Vision 2030, our carbon neutrality goal, and more specifically, our energy efficiency goal of 50% reduction by 2030, below a 2009 baseline<sup>1</sup>. Our progress towards these goals is measured in both energy and greenhouse gas

emissions. Our carbon reduction strategy prioritizes energy efficiency, while evaluating opportunities to incorporate renewable power into our energy sourcing as a secondary measure. More details of our carbon emissions reduction can be found in the Environmental Results section of this report. Our regions of New York, Chicago, and San Francisco each have municipally-driven carbon emissions reduction programs in place. These programs combine strategies of absolute energy reduction, through efficiency mandates, as well as fossil fuel intensity reduction of utility-delivered energy. We discuss the intent and requirements of these programs with our property managers and engineers, as well as our tenants. They provide important framework to the GHG reduction goals we set for our properties.

All carbon emission reduction strategies, whether property-specific or regional, present different risks and opportunities. Risks include unsuccessful investment in new technologies; costs to transition to lower emissions technology; increased pricing on GHG emissions; and uncertainty in market signals such as utility costs or carbon taxes. Financial impacts of such risks which could include increased capital and op-erating costs, and increased or unexpected shifts in energy costs. Opportunities, on the other hand, include reduction of energy and resource consumption; use of public-sector incentives, such as utility rebates; diversification of energy resources; and adaptation of new technologies. Financial impacts of such opportunities include reduction of energy and/or operating costs; increased value of fixed assets; reduced exposure to fossil fuel price increases; reduction of utility costs for our tenants; and various benefits to workforce management and planning. Addition-al opportunities also include the reduction or elimination of burden from emerging carbon pricing or carbon tax mechanisms, as well as the reduction or avoidance of carbon emissions-related penalties.

All three of our regions also have emissions-reporting obligations, which require us to publicly disclose our properties' carbon emissions via ENERGY STAR Portfolio Manager. We consider this requirement as an opportunity to measure the carbon emissions from our properties and manage the reduction of those emissions on an ongoing basis.

In 2019, NYC passed the Climate Mobilization Act (CMA), which contained several local laws to transition NYC to reduce greenhouse gas emis-sions 40% by the year 2030 and 80% by the year 2050, below 2005 levels. Included in the CMA was Local Law 97, which calculates carbon intensity for buildings on a per square foot basis and assigns limits to intensity beginning in 2024. The law further assigns penalties of \$268 per ton of carbon calculated in exceedance of the limits. We are planning energy efficiency strategies to avoid penalties at our NYC properties and consider the cost for energy efficiency to be part of our transition costs to a low-carbon environment. We also consider penalty avoidance in the value stack of energy efficiency projects, and the penalty amount of \$268 per ton of carbon to be considered when making capital allocation decisions.

Vornado Realty Trust has signed on as a supporter of the framework recommended by The Financial Stability Board's Taskforce on Climate Related Financial Disclosures (TCFD). We believe this framework will guide the real estate industry towards well-informed disclosure of climate change risks and opportunities. As our internal and external discussions on climate risk and disclosure evolve, we plan to provide expanded public disclosure.

<sup>1</sup>Any information relating to goals and progress against goals was not subject to Deloitte & Touche LLP's examination and, accordingly, Deloitte & Touche LLP does not express a conclusion, opinion, or any form of assurance on such information.  
\*\* Divisions are presented as disclosed in Vornado form 10-K for the fiscal year ended December 31, 2020.

**Normalization Note:**  
2019 and 2020 Like-for-Like energy consumption data have been normalized to adjust for fluctuations in weather and occupancy. Weather normalization uses inputs of total degree days (TDD), a fixed portion of energy consumption, known as a Base Load, and a variable portion of energy consumption, known as a Seasonal Load.  
Occupancy is normalized based on the following assumptions: 1.) 50% of the Weather Normalized Energy's Baseload is adjusted for Occupancy based on field research that demonstrates that roughly half of the baseload is occupancy dependent. 2.) 33% of the Weather Normalized Energy's Seasonal Load is adjusted for Occupancy based on field research that demonstrates that a third of the seasonal load is occupancy dependent. 3.) Quarterly occupancy rates are averaged for the year to calculate the current year and prior year annual occupancy rates.

**Estimation:**  
Q4 2020 energy and water data was estimated at properties where actual consumption data was not available in time for the publication of this report. Due to the observed reductions related to the COVID-19 pandemic, energy and water were estimated by applying the weighted average monthly consumption variance from prior year beginning with April 2020 through the most recent available month of actual data. Energy consumption was also adjusted for weather & leased occupancy normalization. Approximately 7% of total energy consumption and 5% of total water consumption was estimated. Four properties have full year estimations for energy and water. The estimation consumption for these properties account for an additional 3% of total energy consumption and 3% of total water consumption.  
**Reporting Boundary:**  
This SASB disclosure includes all in-service square footage as of 12/31/2020, not listed as under development, with more than 20% VNO ownership.





INDEPENDENT ACCOUNTANT'S REPORT

Board of Trustees  
Vornado Realty Trust  
New York, NY

**Deloitte & Touche LLP**  
695 E. Main Street  
Stamford, CT 06901-2141  
USA  
  
Tel: +1 203 708 4000  
Fax: +1 203 705 5455  
www.deloitte.com

We have examined management of Vornado Realty Trust’s assertion that the following specified metrics included in Appendix A of the accompanying Environmental, Social and Governance 2020 Report (the “specified metrics”) of Vornado Realty Trust (the “Company” or “Vornado”) for the year ended December 31, 2020 are presented in accordance with the Sustainability Accounting Standards Board (“SASB”) Real Estate Sustainability Accounting Standard:

Energy management:

- IF-RE-130a.1: Energy consumption data coverage as a percentage of floor area, by property subsector
- IF-RE-130a.2: (1) Total energy consumed by portfolio area with data coverage, (2) percentage of total energy that is grid electricity, by property subsector, and (3) percentage of total energy that is renewable, by property subsector
- IF-RE-130a.3: Like-for-like change in energy consumption of portfolio area with data coverage, by property subsector
- IF-RE-130a.4: Percentage of eligible portfolio that (1) has an energy rating and (2) is certified to ENERGY STAR, by property subsector
- IF-RE-130a.5: Description of how building energy management considerations are integrated into property investment analysis and operational strategy

Water management:

- IF-RE-140a.1: Water withdrawal data coverage as a percentage of (1) total floor area and, by property subsector, (2) percentage of floor area in regions with High or Extremely High Baseline Water Stress, each by property subsector
- IF-RE-140a.2: Total water withdrawn (1) by portfolio area with data coverage and (2) percentage in regions with High or Extremely High Baseline Water Stress, each by property subsector
- IF-RE-140a.3: Like-for-like percentage change in water withdrawn for portfolio area with data coverage, by property subsector
- IF-RE-140a.4: Description of water management risks and discussion of strategies and practices to mitigate those risks

Climate change adaptation:

- IF-RE-450a.1: Area of properties located in FEMA Special Flood Hazard Areas or foreign equivalent, by property subsector
- IF-RE-450a.2: Description of climate change risk exposure analysis, degree of systematic portfolio exposure, and strategies for mitigating risks

Management of Tenant Sustainability Impacts:

- IF-RE-410a.1: Percentage of new leases that contain a cost recovery clause for resource efficiency related capital improvements and associated leased floor area, by property subsector
- IF-RE-410a.2: Percentage of tenants that are separately metered or sub metered for grid electricity consumption and water withdrawals, by property subsector
- IF-RE-410a.3: Discussion of approach of measuring, incentivizing, and improving sustainability impacts of tenants

The Company’s management is responsible for its assertion. Our responsibility is to express an opinion on management’s assertion based on our examination.

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants (AICPA) in AT-C section 105, *Concepts Common to All Attestation Engagements*, and AT-C section 205, *Examination Engagements*. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether management’s assertion is fairly stated, in all material respects. An examination involves performing procedures to obtain evidence about management’s assertion. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of management’s assertion, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

In performing our examination, we have complied with the independence and other ethical requirements of the Code of Professional Conduct issued by the AICPA. We applied the Statements on Quality Control Standards established by the AICPA and, accordingly, maintain a comprehensive system of quality control.





**INDEPENDENT ACCOUNTANT'S REPORT** Continued

The preparation of the specified metrics in Appendix A of the Environmental, Social and Governance 2020 Report requires management to interpret the criteria, make determinations as to the relevancy of information to be included, and make estimates and assumptions that affect reported information. Measurement of certain metrics includes estimates and assumptions that are subject to inherent measurement uncertainty resulting for example from precision of greenhouse gas emission conversion factors, and assumptions used for the weather and occupancy normalization of energy data. Obtaining sufficient, appropriate evidence to support our opinion does not reduce the inherent uncertainty in the metrics. The selection by management of different but acceptable measurement methods, input data, or assumptions may have resulted in materially different amounts or metrics being reported.

Our examination was limited to those SASB Real Estate Sustainability Accounting Standard metrics specified by management in Appendix A of the Environmental, Social and Governance 2020 Report. All other information presented within the Environmental, Social and Governance 2020 Report was not examined by us and, accordingly, we do not express an opinion on such information.

Appendix A of the Environmental, Social and Governance 2020 Report includes certain information relating to goals and progress against goals and such information is denoted by an asterisk (\*) in Appendix A of the Environmental, Social and Governance 2020 Report. Any information relating to goals and progress against goals were not subject to our examination and, accordingly, we do not express an opinion or any form of assurance on such information.

In our opinion, management’s assertion that the specified metrics included in Appendix A of the accompanying Environmental, Social and Governance 2020 Report for the year ended December 31, 2020 are presented in accordance with SASB Real Estate Sustainability Accounting Standard is fairly stated, in all material respects.

April 9, 2021



# UN SUSTAINABLE DEVELOPMENT GOALS\*

Vornado supports the United Nations Sustainable Development Goals (UNSDGs) as a global framework to achieve a more sustainable future for the planet, and improve quality of life for all. As a corporate citizen we uphold and contribute to each of the 17 goals through the environmentally and socially responsible manner in which we run our



UN GOAL TARGET	UN GOAL INDICATOR	VNO RESPONSE
3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.	3.5.1 Coverage of treatment interventions (pharmacological, psychosocial, and rehabilitation and aftercare services) for substance abuse disorders	Vornado's Employee Assistance Program (EAP) and other wellness programs, referenced in the "Our People" section of this report. Our EAP is available to all Vornado employees, which represents our coverage.
3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all	3.8.1 Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn, and child health; infectious diseases; non-communicable diseases; and service capacity and access, among the general and most disadvantaged population)	Vornado offers all employees universal health coverage through our employee benefits program. Health care services include medical, dental, health and wellness, telemedicine services, seasonal flu shots and preventative screenings. More information can be found in the "Our People" section of this report.
3.a Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate	3.a.1 Age-standardized prevalence of current tobacco use among persons aged 15 years and older	To protect the health of the occupants, employees, and visitors to our building, Vornado transitioned all properties to tobacco-free and smoke-free environments in 2020. While the use of tobacco products and all smoking devices including electronic cigarettes and vaporizers had already been prohibited for all interior spaces, this policy now extends to all exterior property under Vornado's control.
3.d Strengthen the capacity for all countries, for early warning, risk reduction and management of national and global health risks	3.d.1 International Health regulations (IHR) capacity and health emergency preparedness	Pertinent to 2020, Vornado's COVID-19 response and pandemic preparedness program are discussed at length in the Health and Wellness section of this report.



UN GOAL TARGET	UN GOAL INDICATOR	VNO RESPONSE
5.1 End all forms of discrimination against all women and girls everywhere	5.1.1 Whether or not legal frameworks are in place to promote, enforce, and monitor equality and non-discrimination on the basis of sex	Vornado Realty Trust is an equal opportunity employer, and strictly prohibits discrimination of all forms on the bases of race, ethnicity, religion, color, national origin, gender, gender identity, sexual preference, age, status as a protected veteran, or status as a qualified individual with a disability.
5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life	5.5.2 Proportion of women in managerial positions	28% of Vornado's managerial positions are female. More information can be found in the Social Results section of this report.
6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	6.4.1 Change in water-use efficiency over time	Vornado reduced water consumption 36% in 2020 from 2019 levels. Much of this reduction was due to COVID-19. In prior year, Vornado reduced water consumption by 5.7% in 2019 from 2018.



\*This disclosure was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion, opinion, or any form of assurance on such information.

business and our properties. Below is a selection of metrics and programs where Vornado responds directly to targets identified through the UNSDG 2030 Agenda for Sustainable Development. We will expand upon these disclosures when new metrics and programs develop within the recommended SDG framework.



# UN SUSTAINABLE DEVELOPMENT GOALS\*

Continued



UN GOAL TARGET	UN GOAL INDICATOR	VNO RESPONSE
7.2 By 2030, increase substantially the share of renewable energy in the global energy mix	7.2.1 Renewable energy share in the total final energy consumption	In 2020 Vornado consumed 2.07% of energy from renewable resources. We plan to substantially increase our electricity supply from renewable resources in 2021 and beyond.
7.3 By 2030, double the global rate of improvement in energy efficiency	7.3.1 Energy intensity measured in terms of primary energy and GDP	We have measured our energy intensity per square foot. In 2020 our energy intensity was 24.33 kWh / SF.



9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.	9.4.1 CO2 emissions per unit of value added	We have measured our GHG emissions per square foot. Our 2020 GHG emissions intensity was .0061 MT CO2e / SF.
--	---	--



UN GOAL TARGET	UN GOAL INDICATOR	VNO RESPONSE
11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	11.2.1 Proportion of population that has convenient access to public transportation, by sex, age, and persons with disabilities	We measure our access to public transportation by the Transit Scores assigned to our properties, as determined by the agency that assigns Walk Score. In 2020, all of our office properties received a Transit Score of 100, indicating that 100% of our population has convenient access to public transportation.



12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse	12.5.1 National recycling rate, tons of material collected	In 2020, Vornado diverted 65% of our waste from the landfill. Our data represents waste collected from about 84% of our total in-service square footage.
--	--	--

\*This disclosure was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion, opinion, or any form of assurance on such information.



