



# **HUDSON YARDS**

A KPF FIELD GUIDE

**KPF**

# THE SITE

## SITE HISTORY

### EARLY WEST SIDE DEVELOPMENT

The West Side of Manhattan, once a marshy farmland, expanded its borders via landfill in the 1830s. It served as the city's industrial neighborhood, home to warehouses, factories, and access to overseas shipping. This expansion provided the land that the West and East Rail Yards occupy.

In 1846, the Hudson River Railroad negotiated with the City of New York to run tracks on an irregular route down 10th and 11th Avenues for the transport of freight via a ground-level railroad track. This became the main artery for shipping to Midtown.

The transport system led to hundreds of pedestrian deaths, lending itself the nickname "Death Avenue." In 1908, the Bureau of Municipal Research reported that over 56 years, 436 people were killed along the route. Men on horseback, known as the West Side Cowboys, were required to ride ahead of trains to warn pedestrians of the oncoming freight traffic.

### NORTH RIVER TUNNELS

The 1910 development of the North River Tunnels, a pair of tunnels under the Hudson River, provided a direct connection from Weehawken, New Jersey, to the West Side of Manhattan, terminating at the original Pennsylvania Station. The North River Tunnels enter Manhattan directly at the West and East Rail Yards that we see today.



#### ABOVE:

WEST SIDE COWBOYS  
AHEAD OF FREIGHT  
TRAFFIC ON 10TH AVE

#### LEFT:

THE ORIGINAL  
PENNSYLVANIA  
STATION BUILDING  
(MCKIM, MEAD,  
AND WHITE, 1910)



### THE HIGH LINE IS CONSTRUCTED

As part of the West Side Improvement Project, the High Line viaduct was constructed as an elevated rail line to connect St. John's Terminal Park on Spring Street to 34th Street. The elevated rail replaced the at-grade route, allowing goods to be delivered above the pedestrian level. The last train ran at ground level in 1941. The new, elevated system, which ran through the center of blocks rather than the avenues, constitutes what we now know as the High Line.

Today, the High Line's elevation gives visitors to the High Line park a mid-height intersection of New York City rarely experienced elsewhere in Manhattan.

The West Side Highway, which was also elevated at the time, ran parallel to the High Line. In 1989, the elevated portions of the road were dismantled and the highway was brought to grade.



#### ABOVE:

THE HIGH LINE UNDER  
CONSTRUCTION

#### LEFT:

THE COMPLETED HIGH  
LINE VIADUCT



# RESTORING THE HIGH LINE

## SAVING THE HIGH LINE

Due to the growth of the trucking industry, the last train ran on the High Line in 1980. With the High Line facing demolition in the early 2000s, the group “Friends of the High Line” was founded by Joshua David and Robert Hammon—Chelsea residents and advocates for the High Line’s preservation and re-use.

In 2002, a study by Friends of the High Line found the redevelopment project economically feasible and opened a design competition: *Designing the High Line*.

BELOW:

VIEW OF THE HIGH  
LINE IN 2013, PRIOR  
TO THE REDEVELOPMENT  
OF THE PARK



A design team was selected in 2004 and in 2005, the City of New York accepted the donation of the High Line land from CSX Transportation.

On June 9th, 2009, Section 1, stretching from Gansevoort Street to West 20th Street, opened to the public. Sections 2 and 3 followed in 2011 and 2014, respectively.

ABOVE:

VIEW OF THE HIGH  
LINE PARK, 2016

# THE KPF MASTERPLAN

## REZONING FOR THE OLYMPICS

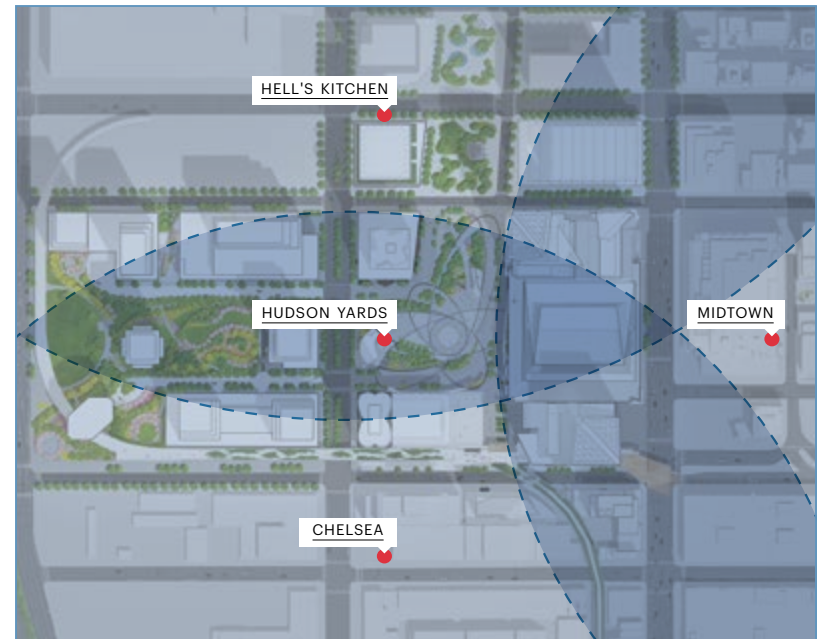
The development of Manhattan's West Side Yards commenced at the turn of the century, with The Related Companies and Kohn Pedersen Fox unveiling plans for a multi-sport stadium as part of the 2012 Summer Olympics bid.

Designed on a platform above the Rail Yards, the structure would double as the home of the New York Jets, a National Football League team, with additional space for the Jacob K. Javits Convention Center. With talks of extending the No. 7 subway, the prospect of hosting the international games inspired a vision for revitalizing this long-neglected area of the island.



ABOVE:

KPF MASTER PLAN WITH  
LANDSCAPE DESIGN AND  
THE HIGH LINE



## CREATING A NEW NEIGHBORHOOD

In 2005, the City approved the rezoning of the far west side of Manhattan. In June of 2006, the State of New York denied the project's funding. New York City lost the Olympic bid a month later. Since the Rail Yards had already been permitted for construction, the city held a competition for developers to win the rights to the land.

KPF and Related entered a competition for the city to design and develop a master plan for the new neighborhood. The Hudson Yards District would exist in two parts, with certain allotments for commercial, cultural, residential, public, and open space. While the Eastern Rail Yards had been rezoned in 2004 prior to the stadium's defeat, the Western Rail Yards gained its rezoning by 2008. KPF's master plan extends across 11th Avenue, with 10, 30, and 55 Hudson Yards making significant headway in the Eastern Rail Yards.

ABOVE:

THREE ADJACENT  
NEIGHBORHOODS  
INTERSECT AT  
HUDSON YARDS

## CONSTRUCTION

### TIMELINE

1940

Street level freight trains run along the West Side starting in 1856, transporting goods as far south as 60th Street. The last ground level train runs in 1941, replaced by the High Line viaduct with its elevated rail line.



2014

Caisson drilling begins in March, laying the physical groundwork for KPF's master plan. Finished towers will extend from the caisson foundations, through two "platforms," and then rise skyward. Construction of the platform is completed while underlying railyards remain active.



2015

Caissons and platforms are completed. The No. 7 subway begins service, with an extension to 34th Street between 10th and 11th Avenues, connecting Hudson Yards to Times Square, Grand Central, and beyond the city.



2016

In May, 10 Hudson Yards is completed and opens to its tenants. Meanwhile, construction continues on the master plan's additional office, residential, retail, and green spaces.



# HUDSON YARDS FACTS

A KPF FIELD GUIDE



ABOVE:

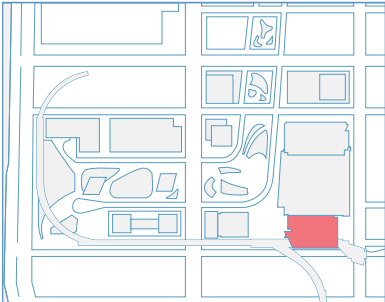
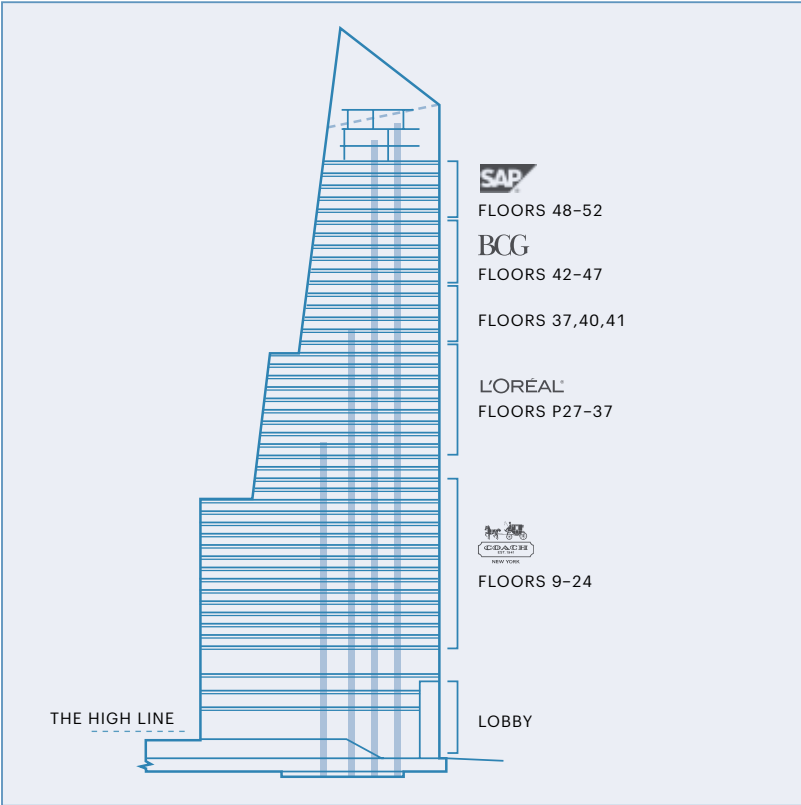
BUILT ON A PLATFORM, THE MASTER PLAN COVERS 28 ACRES WITH PARKS DESIGNED TO UNIFY THE RETAIL, OFFICE, AND RESIDENTIAL COMPONENTS

|                   |                   |                        |                   |                   |
|-------------------|-------------------|------------------------|-------------------|-------------------|
| 1 10 Hudson Yards | 4 55 Hudson Yards | 7 Residential Building | 10 High Line Park | 7 Subway Entrance |
| 2 30 Hudson Yards | 5 35 Hudson Yards | 8 15 Hudson Yards      | R Retail Podium   | Designed by KPF   |
| 3 50 Hudson Yards | 6 West Tower      | 9 Culture Shed         | V The Vessel      |                   |

# 10 HUDSON YARDS

**SIZE** 1,800,000 SF  
**HEIGHT** 876 FT  
**FLOORS** 52 STORIES  
**PROGRAM** OFFICE, STREET RETAIL  
**TENANTS** COACH, L'OREAL, SAP

**AMENITIES AND FEATURES**  
*The first completed building of New York's new neighborhood, 10 Hudson Yards boasts efficient floor plates, column-free office space, and floor-to-ceiling windows.*



**ABOVE:**  
ELEVATION OF  
10 HUDSON YARDS

**LEFT:**  
LOCATION OF  
10 HUDSON YARDS  
WITHIN KPF'S  
MASTER PLAN





ABOVE:  
HUDSON YARDS SITE  
FROM HELICOPTER

BELOW:  
10TH AVENUE LOBBY OF  
10 HUDSON YARDS

ABOVE:  
EASTERN ENTRANCE TO  
10 HUDSON YARDS

LEFT:  
SOUTH-FACING VIEW  
FROM 10 HUDSON YARDS

# 30 HUDSON YARDS

SIZE **2,600,000 SF**

HEIGHT **1,296 FT**

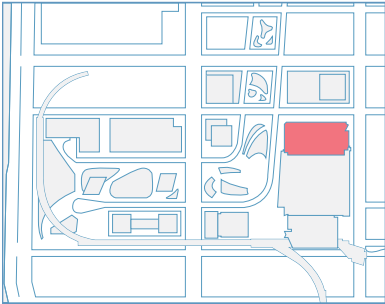
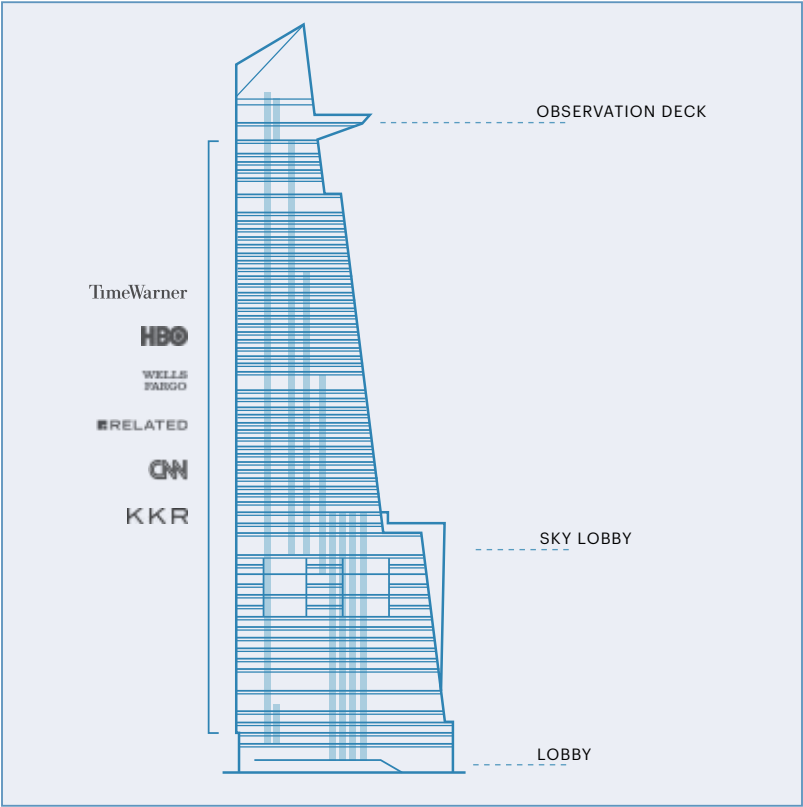
FLOORS **90 STORIES**

PROGRAM **OFFICE, STREET RETAIL**

TENANTS **TIME WARNER, HBO**

## AMENITIES AND FEATURES

*Due for completion in 2019, 30 Hudson Yards will be the second tallest office building in New York, featuring river-to-river panoramic views, outdoor terraces, a triple-height lobby, and direct access to the No. 7 subway station.*



ABOVE:  
ELEVATION OF  
30 HUDSON YARDS

LEFT:  
LOCATION OF  
30 HUDSON YARDS  
WITHIN KPF'S  
MASTER PLAN





TOP:

RENDERING, 30  
HUDSON YARDS' PUBLIC  
OBSERVATION DECK

BOTTOM:

RENDERING, VIEW  
FROM 30 HUDSON YARDS'  
OBSERVATION DECK



TOP:

RENDERING, STREET  
LEVEL VIEW OF  
30 HUDSON YARDS

BELOW:

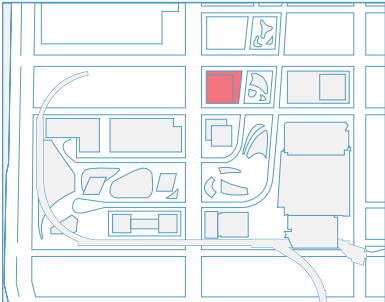
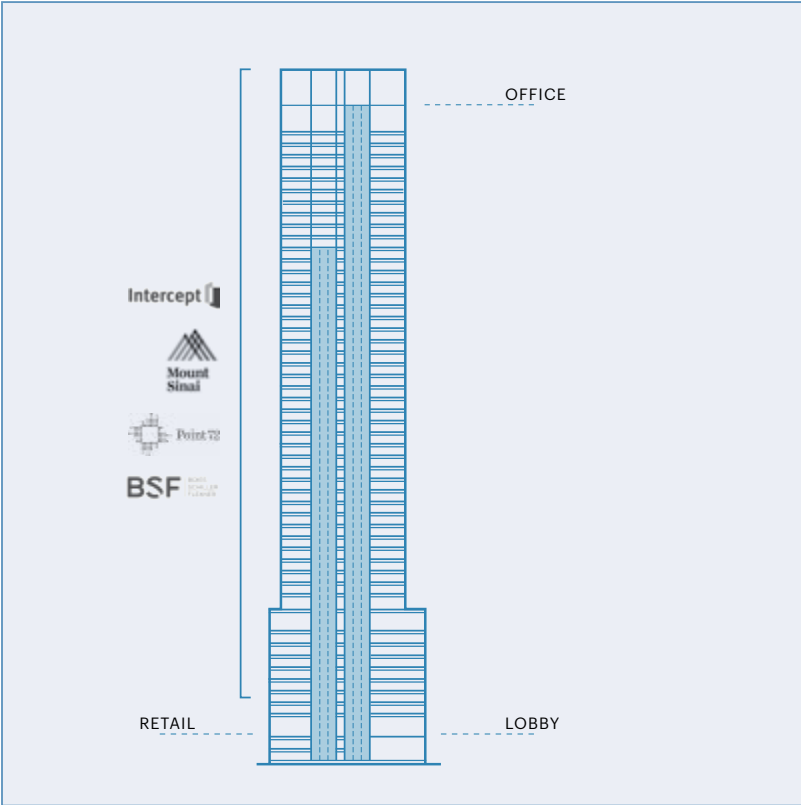
RENDERING, 30 HUDSON  
YARDS IN FRONT, 55  
HUDSON YARDS TO THE  
RIGHT AND 10 HUDSON  
YARDS IN BACK



# 55 HUDSON YARDS

SIZE 1,300,000 SF  
HEIGHT 780 FT  
FLOORS 50 STORIES  
PROGRAM OFFICE, STREET RETAIL  
TENANTS MILBANK, POINT72

AMENITIES AND FEATURES  
*55 Hudson Yards will offer flexible office layouts, with tall ceiling heights and column-free spaces. KPF served as Design Architect, working with Kevin Roche on the tower concept.*



ABOVE:  
ELEVATION OF  
55 HUDSON YARDS

LEFT:  
LOCATION OF  
55 HUDSON YARDS  
WITHIN KPF'S  
MASTER PLAN





ABOVE:

RENDERING,  
55 HUDSON YARDS

BELOW:

RENDERING, ENTRY TO  
THE 7 TRAIN EXTENSION



ABOVE:

CONSTRUCTION OF 55  
HUDSON YARDS FAÇADE

BELOW:

DETAIL OF 55 HUDSON  
YARDS FAÇADE



.....

ABOVE:

LIFT LOBBY

BELOW:

DETAIL OF 55 HUDSON  
YARDS LOBBY

.....

ABOVE:

55 HUDSON YARDS LOBBY

.....

BELOW:

RECEPTION DESK AND  
ENTRY TO LIFTS

# CONNECTIVITY & TECHNOLOGY

## CONNECTIVITY

### TRANSIT NETWORK

The extension of the No. 7 train to West 34th Street between 10th and 11th Avenues provides a transformative mass transit connection to the new Hudson Yards neighborhood previously isolated from the MTA subway system.

The No. 7 connects Hudson Yards to Times Square, Bryant Park, and Grand Central Terminal—transit hub for trains to Westchester and Connecticut—in a matter of minutes.

The site's proximity to Penn Station offers connections to New Jersey, Long Island, and numerous east coast cities via Amtrak.

#### BELOW:

HUDSON YARDS IS  
READILY ACCESSIBLE  
BY MULTIPLE  
TRANSIT NETWORKS



### THE HIGH LINE

Stretching from Gansevoort Street in the Meatpacking District through Chelsea, the High Line is an elevated, linear park that affords visitors unique exposure to Manhattan.

The park's third and final phase, completed in 2014, wraps around Hudson Yards, offering a panoramic view of the Hudson River. Visitors can now walk from the new Whitney Museum, at the park's southern-most entrance at West 14th Street, up to 34th Street without leaving the High Line.



#### ABOVE:

KPF INCORPORATES  
THE HIGH LINE  
PARK INTO THE  
MASTER PLAN OF  
HUDSON YARDS

#### LEFT:

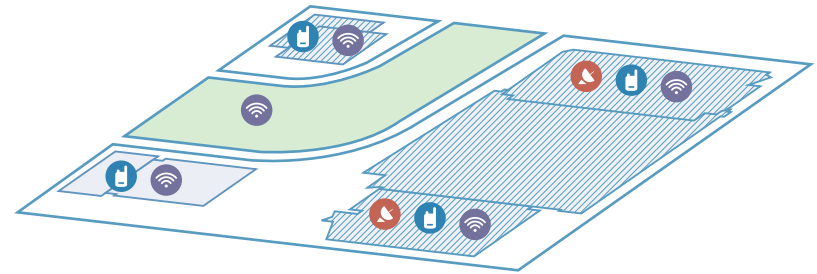
THE HIGH LINE  
STRETCHES MORE  
THAN 20 BLOCKS  
ON MANHATTAN'S  
WEST SIDE

# SMART CITY

## CONNECTED NEIGHBORHOOD

Communication will be supported by a future-proofed fiber loop, designed to optimize data speed and service continuity for rooftop communications and mobile, cellular and two-way radio. This will allow continuous access via wired and wireless broadband performance from any device at any on-site location.

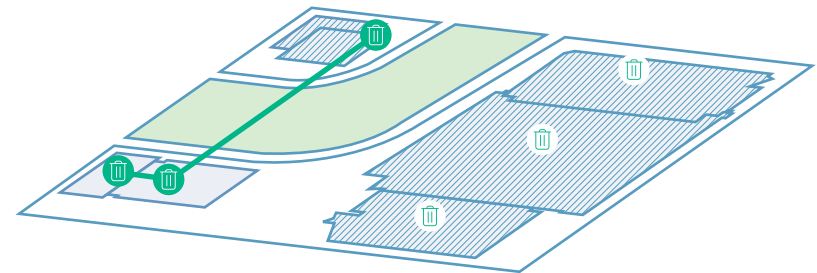
- ROOFTOP SATELLITE
- CELLULAR AND TWO-WAY RADIO
- WIRELESS RESPONDERS



## CLEAN NEIGHBORHOOD

The waste-management systems are designed to keep garbage out of sight. A vacuum-tube system that will accommodate three-streams (organics, recyclables, and trash) will send retail and residential waste straight from chutes on each floor to a central terminal—eliminating piles of garbage on sidewalks and considerable trash hauler traffic. Meanwhile, food-service waste will be converted to dry fertilizer at 10% of its initial weight and size.

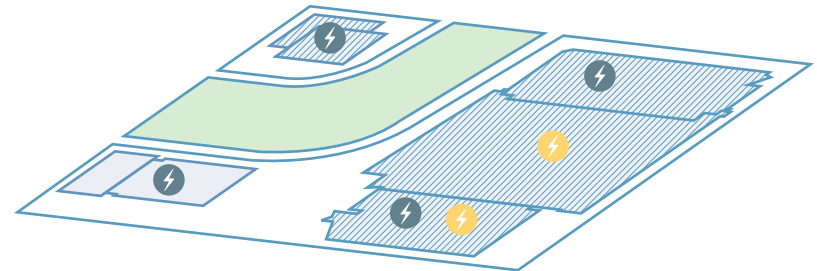
- ORGANIC WASTE DISPOSAL SYSTEM
- THREE-STREAM WASTE-VACUUM SYSTEM



## EFFICIENT AND RELIABLE NEIGHBORHOOD

Whatever the disruption—super storm, brown out—Hudson Yards will have the onsite power-generation capacity to keep basic building services, residences and restaurants running. As an above rail development, the first level of Hudson Yards is well above the flood plain.

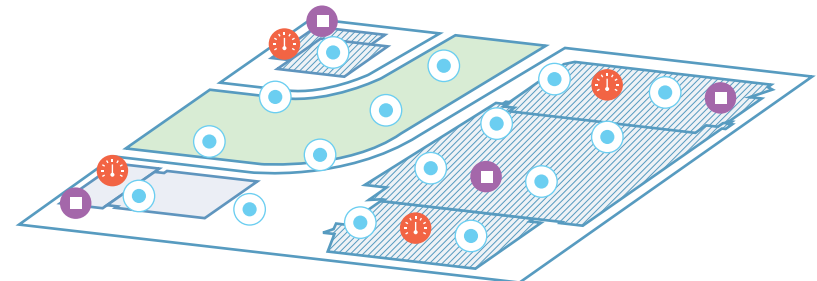
- 14.4 MEGAWATTS OF COGEN
- DIESEL GENERATORS



## RESPONSIVE NEIGHBORHOOD

Hudson Yards will harness big data to innovate, optimize, enhance and personalize the employee, resident, and visitor experience. Supported by an advanced technology platform, operations managers will monitor and react to traffic patterns, air quality, power demands, temperature and pedestrian flow.

- ENVIRONMENTAL SENSORS
- ELECTRICAL AND THERMAL SUB-METERING
- BUILDING DATA SENSORS



# SUSTAINABILITY

## THE LATEST STRATEGIES IN URBAN DESIGN

With the implementation of a state-of-the-art pneumatic trash removal tube on part of the site, waste as we know it will be a thing of the past at Hudson Yards. The energy needs of the site are supplied by an on-site Cogeneration power plant, which will allow the area to be self-sustaining in the event of brown-outs or black-outs.

Along with these forward thinking sustainable practices, the design of Hudson Yards is also highly conscious of open spaces, boasting a design that includes 50% open space, unifying the site with the High Line.

### A MODERN, SUSTAINABLE NEIGHBORHOOD

|                                                                                     |                           |                                                                                     |                             |                                                                                     |                            |
|-------------------------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------------------------|----------------------------|
|    | High Density Infill       |    | Curb Cuts                   |    | Bicycle Lanes and Storage  |
|    | Compact Development       |    | Grey Water Filtration       |    | Vehicle Charging Station   |
|    | Rail Transit              |    | Reduced Parking             |    | Walkable Streets           |
|   | Bus Transit               |   | Brownfield Redevelopment    |   | Housing and Work Proximity |
|  | Public Transit Facilities |  | Cogeneration Plant          |  | Diversity of Uses          |
|  | LEED Certified Buildings  |  | High Albedo Surfaces        |  | Access to Recreation       |
|  | Water Efficient Landscape |  | Solar Powered Street Lights |  | Universal Accessibility    |
|  | Porous Paving             |  | Recycled Content            |  | Tree-lined, Shaded Streets |
|  | Water Catchment           |  | Centralized Pneumatic Waste |  | Neighborhood Schools       |
|  | Bioswales                 |  | Local Materials             |  | Farmers Market             |



ABOVE:  
RENDERINGS, GREEN  
AND CIVIC SPACES  
IN HUDSON YARDS

# THE SITE



LEFT:

THE VESSEL ON  
HUDSON YARDS  
PUBLIC SQUARE,  
LOOKING EAST

BELOW:

HUDSON YARDS' ADDITION  
TO THE CITY SKYLINE



TOP AND BOTTOM:

INTERIOR OF RETAIL  
PODIUM WITH SHOPS AND  
RESTAURANTS



# OUR FIRM

## OUR PROFILE

### WHO WE ARE

Kohn Pedersen Fox is a unified architectural practice focused on building design of all types and scales, in all geographic regions. Our projects, which span more than 40 countries, include the world's tallest towers, longest spans, most varied programs and inventive forms.

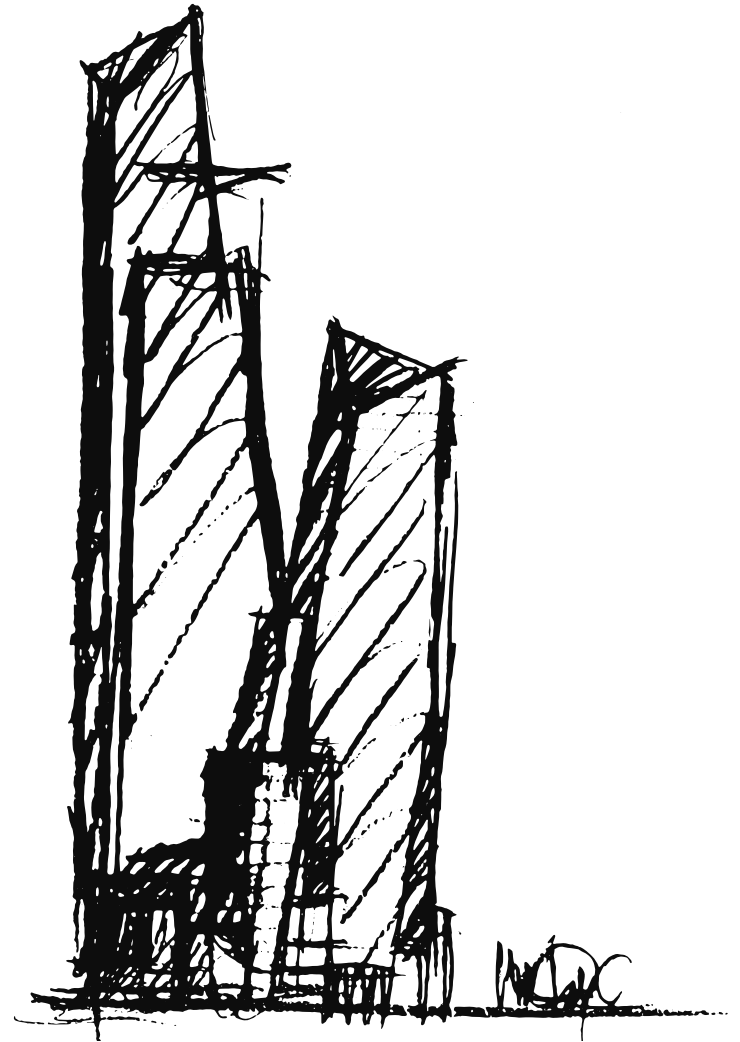
The goal that binds our work and motivates our efforts is finding the smartest solution for each project. We believe that the best design is the result of an open-minded search, one without preconceptions or stylistic formulae. Driven by individual design solutions, we strive to create buildings and places of the utmost quality and contextual sensitivity that valuably impact their cities.

Our firm consists of 600 staff led by 24 principals, with offices in New York, London, Shanghai, Hong Kong, Seoul, and Abu Dhabi.

---

#### BELOW:

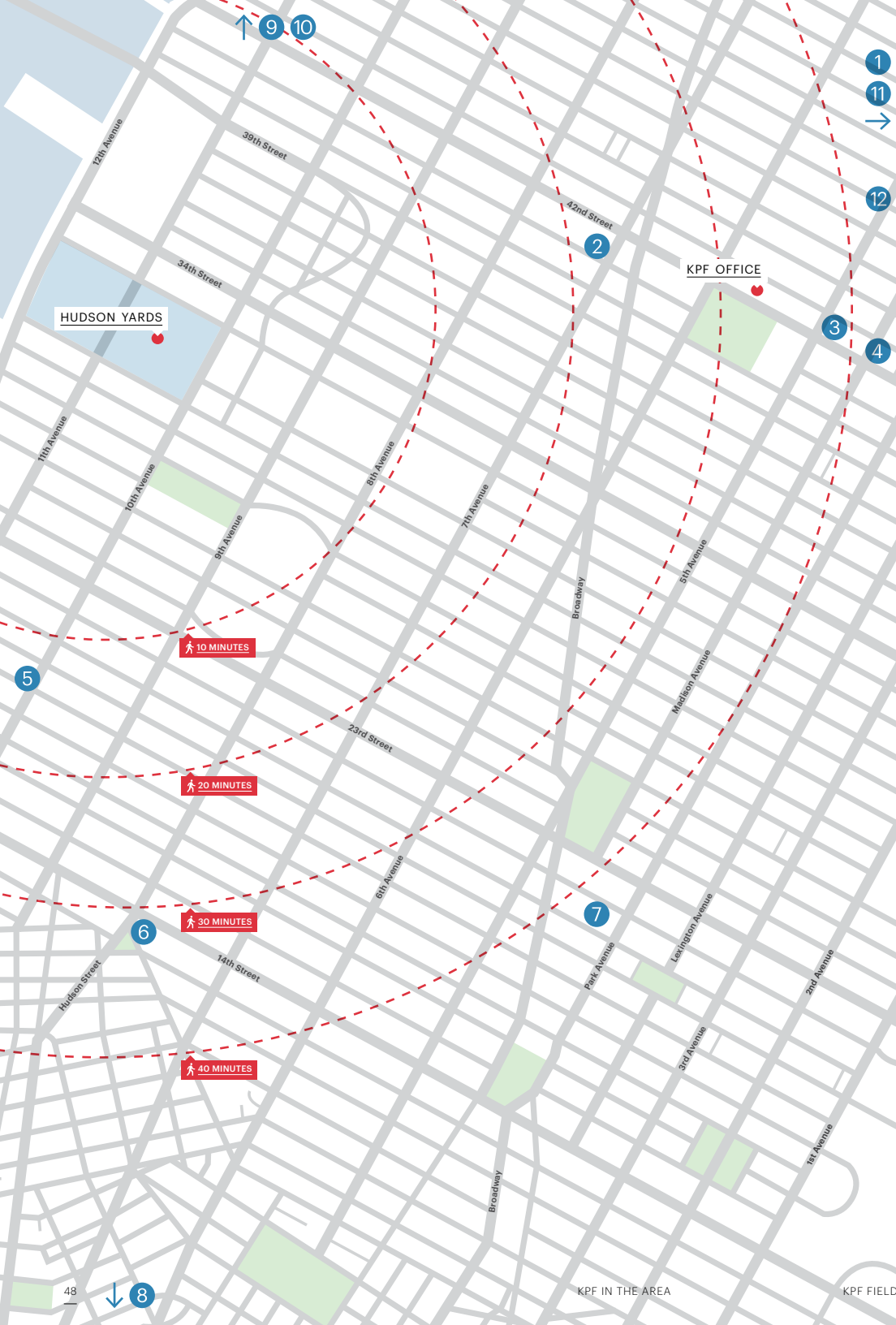
HUDSON YARDS DESIGN  
TEAM VISITING THE  
CONSTRUCTION SITE



---

#### ABOVE:

10 AND 30 HUDSON  
YARDS SKETCH BY  
WILLIAM PEDERSEN



## KPF IN THE AREA



### 640 FIFTH AVENUE

SIZE  
260,915 SF  
PROGRAM  
OFFICE  
CLIENT  
VORNADO REALTY



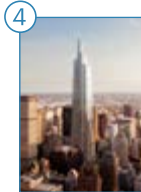
### 5 TIMES SQUARE

SIZE  
957,820 SF  
PROGRAM  
OFFICE  
CLIENT  
BOSTON PROPERTIES



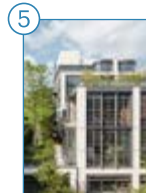
### 505 FIFTH AVENUE

SIZE  
298,000 SF  
PROGRAM  
OFFICE  
CLIENT  
579 5TH AVE LLC



### ONE VANDERBILT

SIZE  
1,750,000 SF  
PROGRAM  
OFFICE, OB DECK  
CLIENT  
SL GREEN REALTY



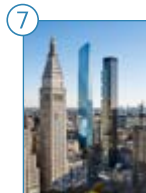
### 500 WEST 21ST ST

SIZE  
115,550 SF  
PROGRAM  
RESIDENTIAL  
CLIENT  
SHERWOOD EQUITIES



### ONE JACKSON SQUARE

SIZE  
65,000 SF  
PROGRAM  
RESIDENTIAL  
CLIENT  
HINES



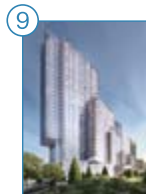
### 45 EAST 22ND ST

SIZE  
229, 992 SF  
PROGRAM  
RESIDENTIAL  
CLIENT  
CONTINUUM



### 111 MURRAY STREET

SIZE  
480,386 SF  
PROGRAM  
RESIDENTIAL  
CLIENT  
FISHER BROTHERS



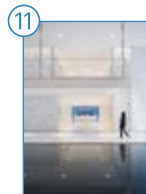
### 2 WATERLINE SQUARE

SIZE  
1,128,748 SF  
PROGRAM  
RESIDENTIAL  
CLIENT  
GID DEVELOPMENT



### COLLEGIATE SCHOOL

SIZE  
190,000 SF  
PROGRAM  
EDUCATION  
CLIENT  
COLLEGIATE SCHOOL



### 280 PARK AVENUE

SIZE  
60,000 SF  
PROGRAM  
OFFICE  
CLIENT  
SL GREEN REALTY



### 390 MADISON AVE

SIZE  
895,000 SF  
PROGRAM  
OFFICE  
CLIENT  
L&L HOLDING

## EASTERN YARDS WALKING TOUR

### FOOD AND DRINK RECOMMENDATIONS

 **Think Coffee**  
500 W 30th St  
Ethically and sustainably sourced coffee with locally sourced food and pastries.

 **Melt Ice Cream**  
High Line at 30th St  
Ice cream sandwiches with creative flavors made from locally-sourced ingredients.

 **Friedman's**  
450 10th Avenue  
Contemporary spot specializing in seasonal, comfort classics.

 **Porchlight**  
271 11th Avenue  
Bar offering Southern-inspired cocktails & small bites in a handsome space.

 **Farmer's Market**  
Hudson Blvd E  
Local farmers and area food makers that source locally.

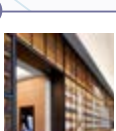
 **Gallow Green**  
542 W 27th St  
Rooftop bar with a green-garden vibe serving cocktails & punch bowls.

1  The 7 train extension opened in 2014. This entry will eventually connect directly to the plaza ushering residents, workers, and visitors to the front door or Hudson Yards.

2  The Javits Center to the north is New York City's busiest convention center. To the east, see 55 Hudson Yards, a collaboration between KPF and Kevin Roche.

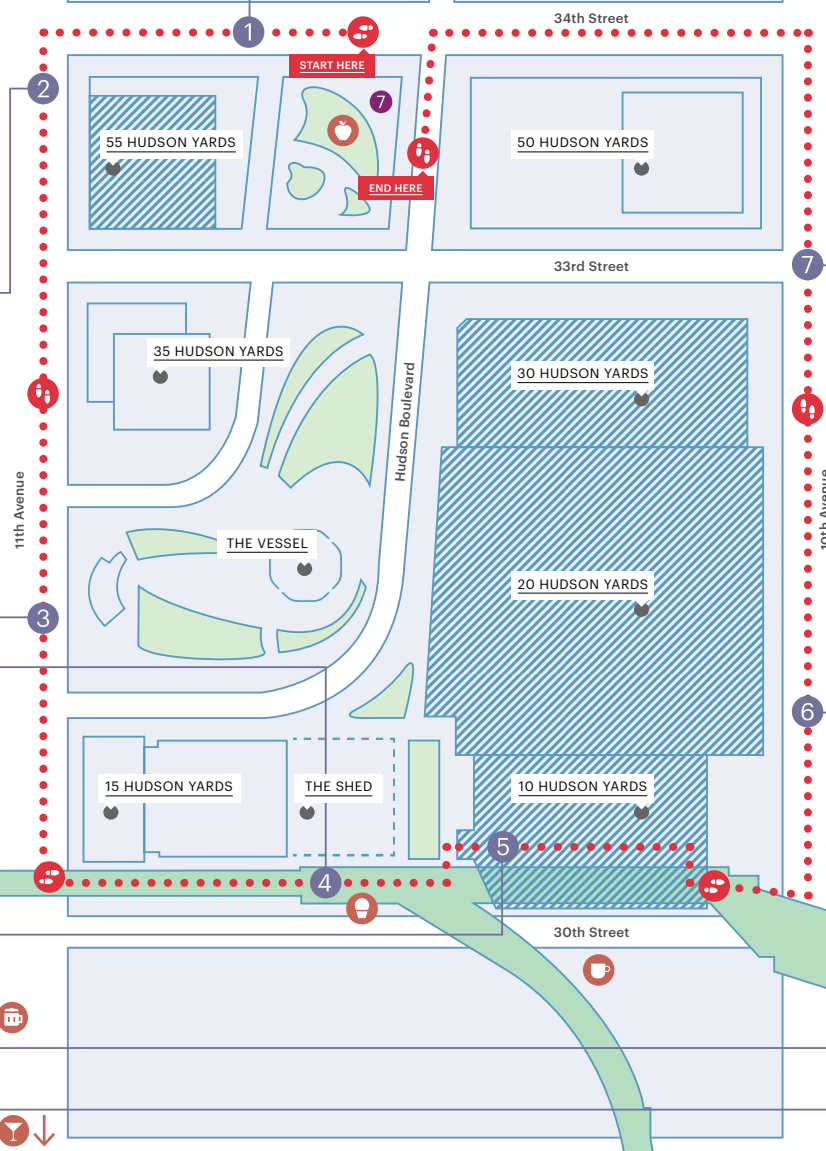
3  Water to the West, towers to the East. From this vantage point you can see 10, 15, 20, 30, 35 Hudson Yards as well as the Vessel. Here, a new neighborhood rises!

4  A direct connection from the High Line will lead visitors to the plaza by way of the Shed, the future home of New York Fashion Week.

5  The Coach Inc. Headquarters lobby at 10 Hudson Yards features Coach's vintage bags, displayed along a multistory vitrine wall.

6  The 6-story retail podium is home to the city's first Neiman Marcus. Take note of the perforated metal panels along 10th Avenue—a non-negotiable design point for KPF and Related.

7  Look up! 30 Hudson Yards will be the tallest building in the HY development, featuring the highest outdoor observation deck in New York City.



### ABOVE:

BUILT ON A PLATFORM, THE MASTER PLAN COVERS 28 ACRES WITH PARKS DESIGNED TO UNIFY THE RETAIL, OFFICE, AND RESIDENTIAL COMPONENTS

