



# DESIGNING ALL-GENDER RESTROOMS

GRID | JHSPH CASE STUDY





# PRESENTER INTRODUCTION



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# ADMINISTRATIVE APPROVAL



# PREPARING THE COMMUNITY

- Senior Leadership Support
- Student Support
- Messaging to Departments

**“We will, as always, continue our work to be an inclusive community in which our LGBTQ members, our patients, and visitors know they are a visible and valued part of the work, life, and mission of Johns Hopkins.”**

*Fenimore Fisher*

*Vice Provost for Diversity and Inclusion and Chief Diversity Officer, Johns Hopkins University*

*Inez Stewart*

*Senior Vice President, Human Resources, Johns Hopkins Medicine and Interim Chief Diversity Officer, Johns Hopkins Medicine*

*Demere Woolway*

*Director, Johns Hopkins University Office of LGBTQ Life*

*Paula M. Neira*

*Clinical Program Director, Johns Hopkins Center for Transgender Health*



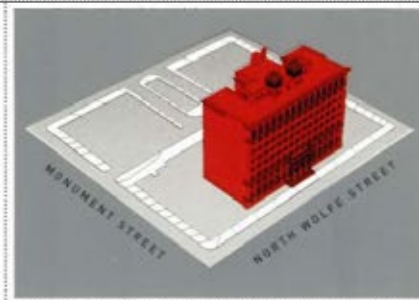


# HISTORY

# WOLFE BUILDING

## 615 North Wolfe Street

**Architects: Archer & Allen** | In February 1922 the Rockefeller Foundation appropriated \$6 million for the Johns Hopkins School of Hygiene and Public Health, noting its "appreciation of the splendid record already made by this unique institution and its confidence in the ability of the School to continue to make notable contributions to education and leadership in public health." One million dollars of this gift, the largest ever made by the Rockefeller Foundation at that time, was to be used for a new building. Three years later 615 North Wolfe Street, a formal and imposing eight-story structure, faced with light-colored brick and limestone, was ready for occupancy. It contained an auditorium, library, and lounge, a reading room for students, offices, classrooms, and laboratories. For the first time since the School's founding in 1917, its faculty and students were housed under a single roof. **Cost: \$1 million**



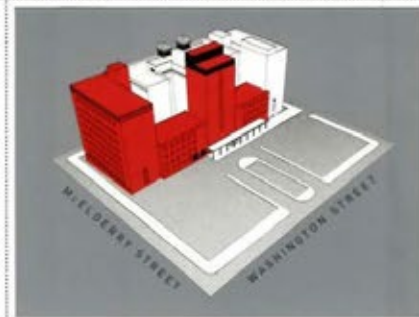
## The Hume Wing

**Architects: Wrenn, Lewis & Jencks** | By 1960 the School's faculty and student population had increased from 208 in 1926 to 340. The School was desperate for more space. In 1964 a bequest from the Jenkins family and federal support allowed the School to begin construction on a four-story building to house the department of Radiological Science to the north of the Wolfe Street building. Before it was completed, an additional \$1 million from the Avalon Foundation, the Ford Foundation, and the US Public Health Service made it possible to add another four floors to house the School's rapidly growing research programs and, for the first time, what was then state-of-the-art flexible laboratory space. The building was known as the North Wing until 1977, when it was named for Dean John Hume. **Cost: \$4.6 million**



## The Stebbins Wing, East Wing Auditorium, and Laboratories

**Architects: Wrenn, Lewis & Jencks** | The 1960s were a time of enormous expansion at the School. Federal training grants and research funds were readily available and the School continued to attract the highest caliber researchers and students. Despite an additional 62,000 square feet in the north wing, space was again scarce. Another addition was planned on the south side of the Wolfe Street building, to be completed in 1967. In addition to eight more stories of flexible office and teaching space, the new wing housed the East Wing Auditorium, the animal tower, and the first four floors of what are now called the East Wing Laboratories. The whole was crowned with a new cafeteria on the 9th floor, with one of the best views of the harbor to be had in Baltimore. It was dedicated in 1968 to Dean Ernest Lyman Stebbins. **Cost: \$8.6 million**



## East Wing Laboratories Extension and Hampton House Renovations

**Architects: Edmunds & Hyde** | In 1986, armed with a \$1 million challenge grant from the Kresge Foundation, the School raised enough funds to add four more stories and 24,000 square feet to the East Wing Laboratories. In 1987, in a measure indicating how desperate the School had become for space, two trailers were attached behind the Stebbins Wing. [Intended as a stop-gap measure they remained in use until 1999.] Meanwhile, the School acquired Hampton House on the other side of the East Baltimore campus. Previously a nursing residence, Hampton House was renovated with a gift of \$950,000 from the Pew Charitable Trusts, and 100,000 square feet of new faculty and teaching space were made available. In 1989, the old credit union in Hampton House was transformed into a café and outside garden. In addition, more than 60 years after the School's first library was created, the Abraham Lilienfeld Library was opened on the top floor of Hampton House, providing a central resource for periodicals and textbooks and a much needed workspace for students. **Cost: \$7.9 million**



## The AIDS Laboratory and Wolfe Street Renovations

**Architects: Verkerke Boyles** | By the end of the 1980s, although the School was one of the largest recipients of AIDS research funding in the country, its aging infrastructure was inadequate to provide the high-containment laboratories necessary to handle the live virus. When a study revealed that the Hume Wing could not bear the additional weight of a new laboratory space on its roof, there was no alternative but to build out into the parking lot. Built in accordance with a long-range master plan, the new AIDS facility included a structure and foundation system that could be extended nine floors. Buried chilled water lines that crossed the site required the new building to be placed 20 feet back from the existing structure, a placement that allowed a sky-lit gallery and the beginning of a new north-south axis for the entire complex. Meanwhile, support from the France Merrick Foundations, the William Baker Foundation, and the Middendorf Foundation, funded renovation of the School's first floor public and student spaces. **Cost: \$3.1 million**



## Teaching and Research Building 1 (TR1)

**Architects: Ziger Snead** | Throughout the early 1990s as more and more faculty were housed nearby in renovated town houses, or even as far away as the Inner Harbor, the school's traditional atmosphere of collaboration and collegiality began to erode. Aided by a \$2.6 million grant from the State of Maryland and private gifts, TR1 opened in 1996, providing another 61,000 square feet of space, which helped bring faculty back to a central campus. It was the first time since the original Wolfe Street building was completed in 1926 that the public face and image of the School were addressed. In contrast to the massive fortress-like architecture of the Hume and Stebbins Wings, TR1's lively interplay of light and glass established a lighter, more transparent look. The rhythmic façade reflected the energy of ideas and creativity within. The addition also established a new entry for the School. The American Institute of Architects praised the new building, describing it as "bold, new, and different and at the same time, a good neighbor and contributor to the city's urban fabric." **Cost: \$10.8 million**



## Teaching and Research Building 2 (TR2)

**Architects: Ziger Snead** | "If you are to remain the leading school of its kind, you need the space—and now." Thanks to the encouragement of Trustee Skip Sheldon, work on the second teaching and research addition began even while faculty were still moving into TR1. Again, the simple, economical pared-down design maximized office and teaching space. The design of TR1 had anticipated TR2: Both buildings could share elevators and bathrooms. In November of 1999, TR2, another 35,000 square feet of office space, was dedicated and rapidly occupied. During the same year, fiber optic cable was laid throughout the School followed by strategically placed wireless transmitters, making it the first institution at Hopkins and the first school of public health anywhere to offer complete broadband and wireless web connections to its faculty and students. **Cost: \$6.2 million**



## Teaching and Research Building 3 (TR3)

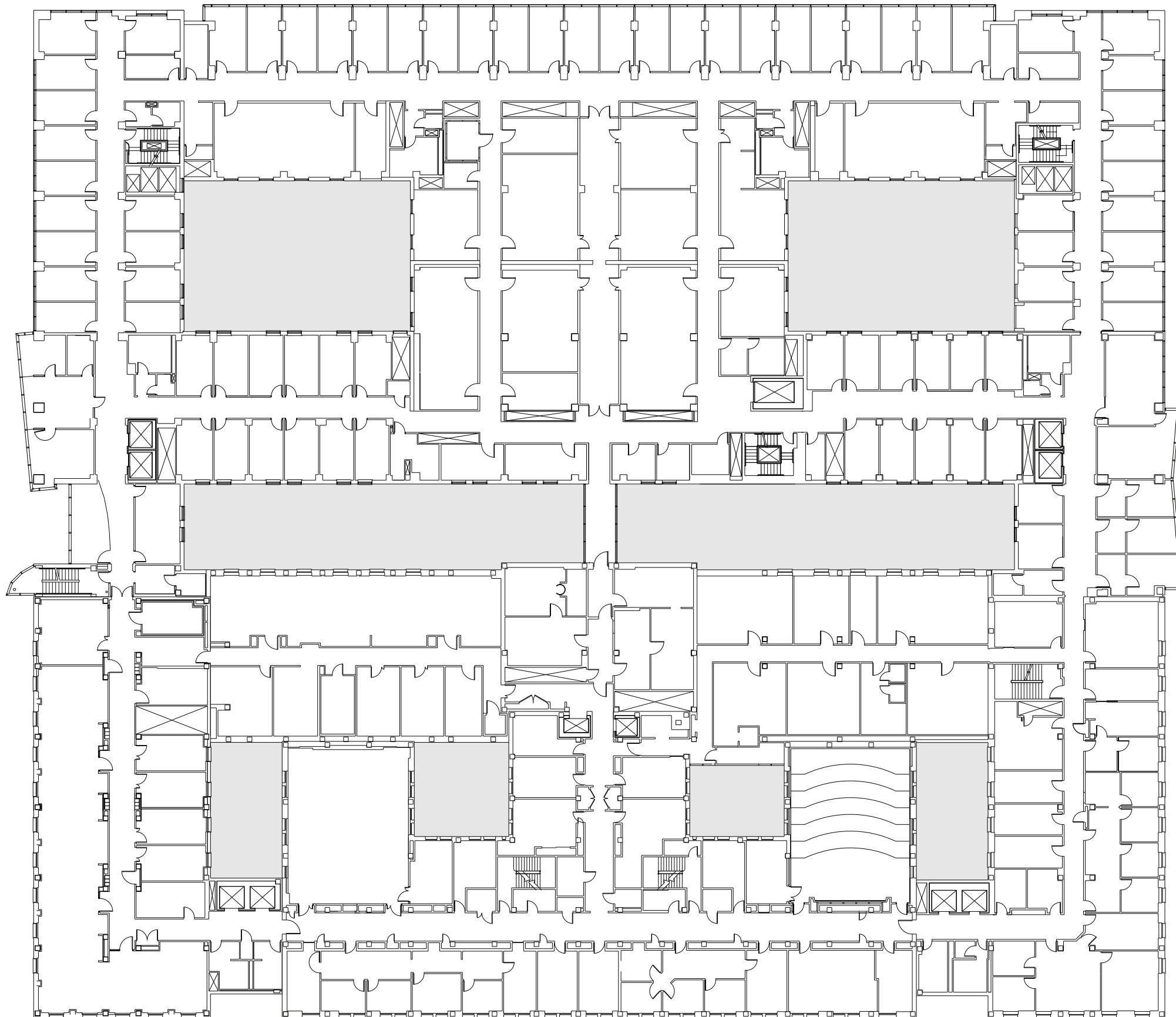
**Architects: Ziger Snead** | While TR1 and 2 provided office and classroom space, TR3, currently under construction, will address the pent-up need for more laboratory space. With emerging new infectious diseases like hantavirus and Lyme disease, increasing threat from old scourges such as malaria and TB, as well as the ongoing AIDS epidemic, basic research is as crucial today as it ever was. Appropriately equipped and technologically sophisticated laboratory space is critical if the breakthroughs the world has come to expect from the Hopkins School of Public Health are to continue. TR3 will provide 67,000 square feet of new laboratories. As provided for in the master plan, it expands the space and physical structure of the 1991 AIDS laboratory through nine floors. In concert with this new space, existing laboratories throughout the Wolfe Street facility are also being continuously updated and modernized. **Cost: \$18.5 million**



## Teaching and Research Building 4 (TR4)

**Architects: Ziger Snead** | TR4 will complete a new circulation loop between the original Wolfe Street building and the new additions, facilitating improved access and communication between faculty and students in the Wolfe Street complex. In addition to 52,000 square feet of new office space, this structure will house the School's new service entrance, disentangling it from the parking lot and connecting it to the new loading dock and large capacity freight elevator near the center of the building. By constructing TR4 together with TR3, the total construction time for the project will be shortened by approximately one year, and thus, the cost considerably reduced. Crowning this addition will be a spacious new conference room on the ninth floor that shares the present cafeteria's spectacular views and allows for efficient food service during meetings. Similar spaces are being incorporated into the floors below. A year and a half before they are due to open both TR3 and TR4 are oversubscribed. **Cost: \$10 million**





N. WASHINGTON STREET

TR6

TR2

TR5

E. MONUMENT STREET

McELDERRY STREET

TR1

TR4

EAST WING B-4  
NORTH INFILL 5-8 & PENTHOUSE

EAST WING ANIMAL TOWER  
B-8 & PENTHOUSE

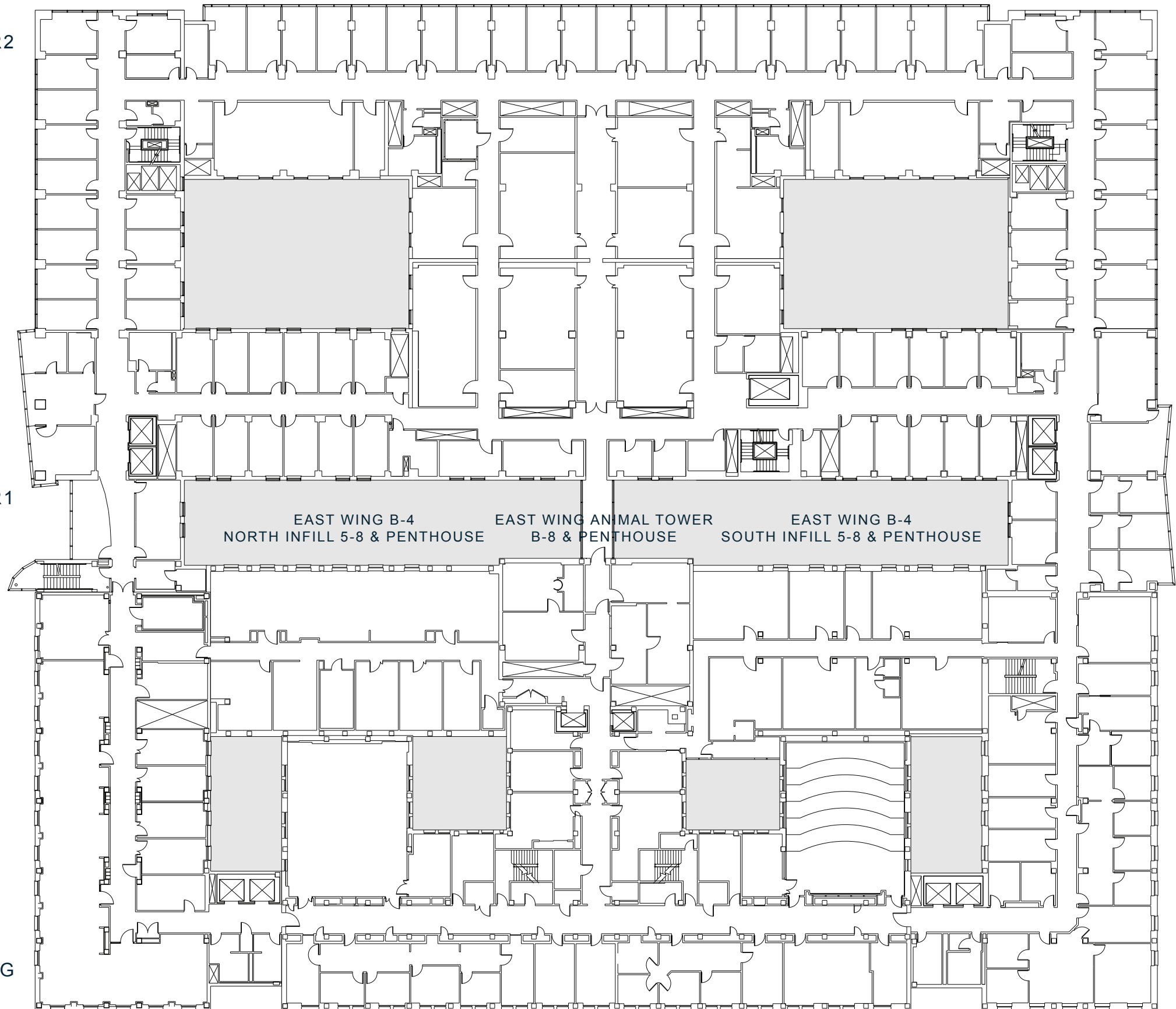
EAST WING B-4  
SOUTH INFILL 5-8 & PENTHOUSE

NORTH WING

SOUTH WING

ORIGINAL BUILDING

N. WOLFE STREET



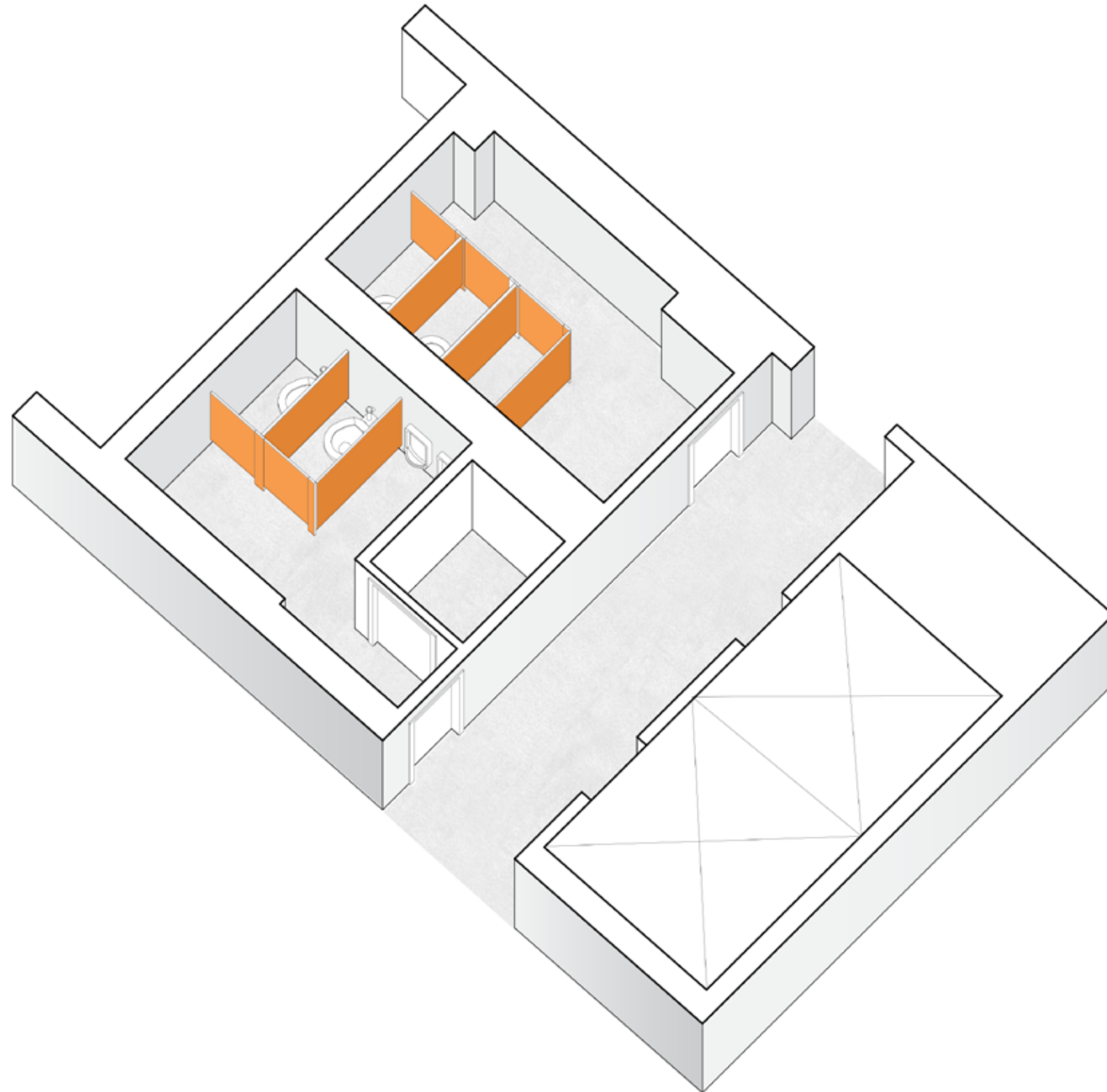
# ALTERNATING RESTROOMS



# ALTERNATING RESTROOMS







## PROJECT SUMMARY

- **Completed:** January 2020
- **Budget:** \$3.5 million
- **Scope:**
  - Full Upgrade to ADA
  - Updated Ventilation
  - Asbestos Removal
  - Upgrades to Elevator Lobby Finishes
  - Future Infrastructure Planning



# EXISTING FACILITIES







ALERT



The background is a dark blue, monochromatic image of a building facade. It features a central section with a grid of large, dark panels, flanked by brickwork. There are several windows: a vertical strip of windows on the left, a single window on the right, and another vertical strip of windows at the bottom. The overall aesthetic is modern and architectural.

# EVOLVING CODE REQUIREMENTS

2015

**2902.1.2 Family or assisted-use toilet and bath fixtures.** Fixtures located within family or assisted-use toilet and bathing rooms required by Section 1109.2.1 are permitted to be included in the number of required fixtures for either the mail of female occupants in assembly and mercantile occupancies

2018

**2902.1.2 Single-user toilet facility and bathing room fixtures.** The plumbing fixtures located in single-user toilet facilities and bathing rooms, including family or assisted-use toilet and bathing rooms that are required by section 1109.2, shall contribute toward the total number of required plumbing fixtures for a building or tenant space. Single-user toilet facilities and bathing rooms, and family or assisted-use toilet rooms and bathing rooms shall be identified for use by either sex.

**2902.1.3 Lavatory Distribution.** Where two or more toilet rooms are provided for each sex, the required number of lavatories shall be distributed proportionately to the required number of water closets.

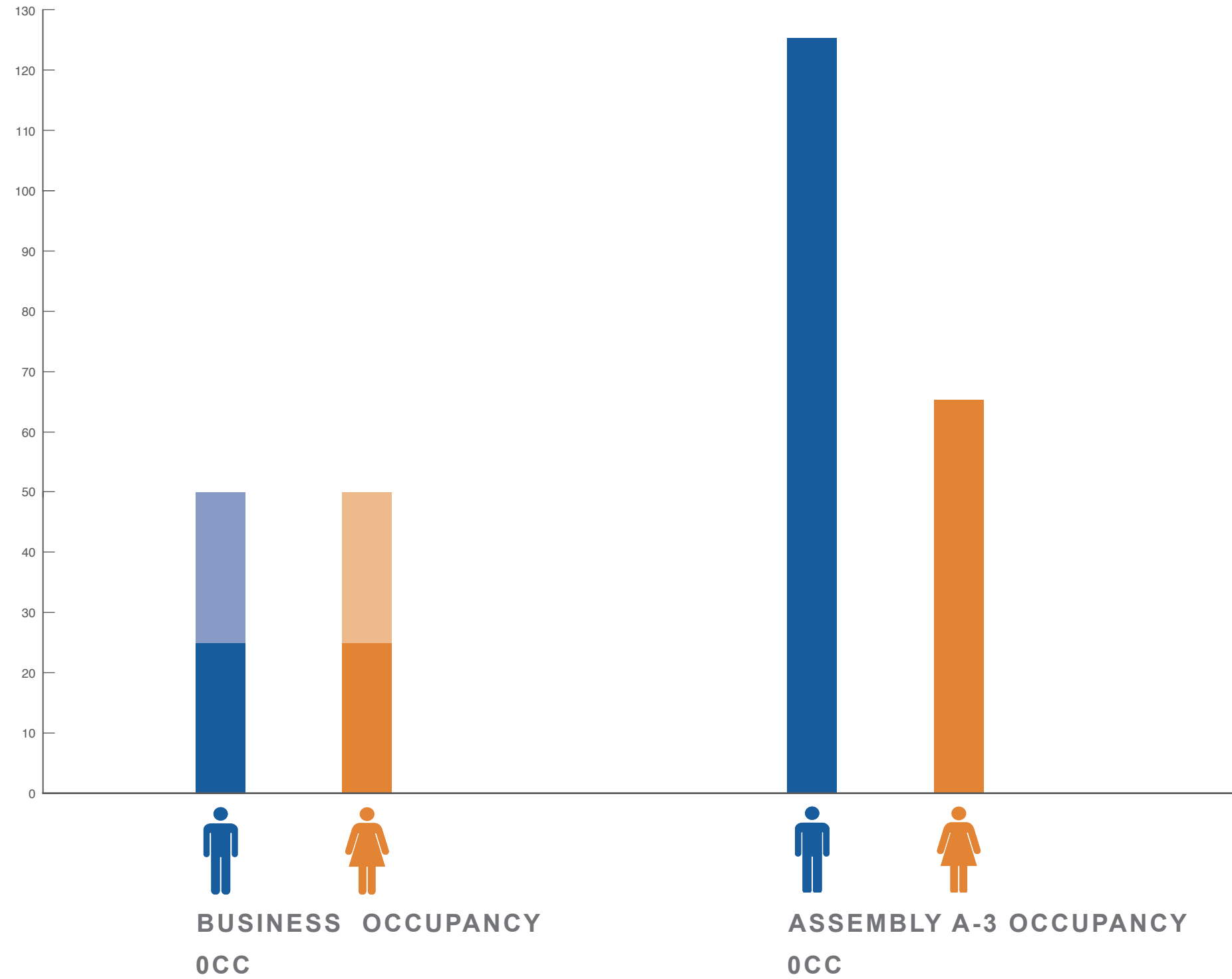
2021

**2902.2 Separate facilities.** Where plumbing fixture are required, separate facilities shall be provided for each sex.

**Exceptions 5.** Separate facilities shall not be required to be designated by sex where single-user toilets rooms are provided in accordance with Section 2902.1.2.

**Exceptions 6. Separate facilities shall not be required where rooms having both water closets and lavatory fixtures are designed for use by both sexes and privacy for water closets** are installed in accordance with Section 405.3.4 of the International Plumbing Code. Urinals shall be located in an area visually separated from the remainder of the facility of each urinal that is provided shall be located in a stall.

# EVOLVING CODE REQUIREMENTS





**SUMMARY: WHOLE BUILDING CALCULATION / 170 FIXTURES REQ.**

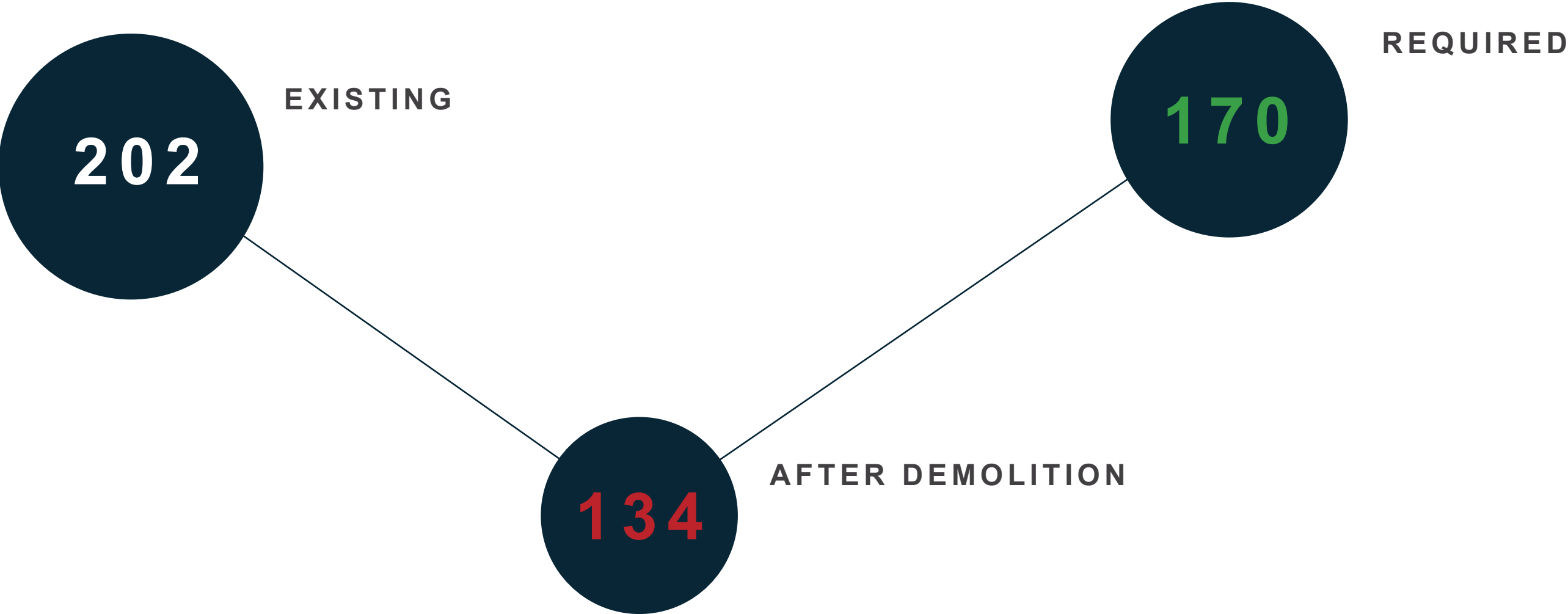
	CODE SF/OCC	TOILET		SINK	AREA	OCC CHECK	OCCUPANCY		FIXTURES REQ		
		MALE	FEMALE				TOTAL	GENDER	M	F	SINK
Parking	200	0.0100	0.0100	0.010	27,956	140	139.8	70	1	1	1
Business	100	3.0000			635,615	6,356	6356.2	3178	65	65	41
Mechanical	300	0.0100	0.0100	0.010	72,325	241	241.1	121	2	2	2
Assembly	15	0.0080	0.0154	0.005	38,340	2,694	2693.9	1347	11	21	7
Gym	50	0.0080	0.0154	0.005	2,258	45	45.2	23	1	1	1
					<b>776,494</b>	<b>9,476</b>	<b>9476.1</b>	<b>4738</b>	<b>80</b>	<b>90</b>	<b>52</b>

**FIXTURE COUNT DEFICIT AFTER DEMO OF EXISTING STACK / BEFORE ACCOUNTING FOR NEW PLAN LAYOUT**

LEV	OCC	PERC	TOILETS						SINKS					
			REQUIRED		EXISTING		AFTER DEMO		REQUIRED		EXISTING		AFTER DEMO	
			M	F	M	F	M	F	M	F	M	F	M	F
Level 0	587.5	6.20%	5.0	5.6	7	3	7	0	3.2	3.2	4	4	4	0
Level 1	1189.3	12.55%	10.0	11.3	11	8	5	5	6.5	6.5	6	6	3	4
Level 2	1,664	17.56%	14.0	15.8	11	11	7	8	9.1	9.1	9	7	6	5
Level 3	958	10.11%	8.1	9.1	12	8	8	5	5.3	5.3	9	6	6	4
Level 4	1,241	13.09%	10.5	11.8	12	11	8	8	6.8	6.8	9	8	6	6
Level 5	961	10.14%	8.1	9.1	12	11	8	8	5.3	5.3	9	8	6	6
Level 6	783.5	8.27%	6.6	7.4	12	11	8	8	4.3	4.3	9	8	6	6
Level 7	783.5	8.27%	6.6	7.4	12	11	8	8	4.3	4.3	9	8	6	6
Level 8	771.5	8.14%	6.5	7.3	12	11	8	8	4.2	4.2	9	8	6	6
Level 9	538	5.67%	4.5	5.1	8	8	4	5	3.0	3.0	7	6	4	4
TOTAL	9,476	100.00%	80	90	109	93	71	63	52	52	80	69	53	47
							<b>-9</b>	<b>-27</b>					<b>-1</b>	<b>5</b>

DEMO EX. WOMENS ROOM  
REMOVE 2 URINALS AT W1300B

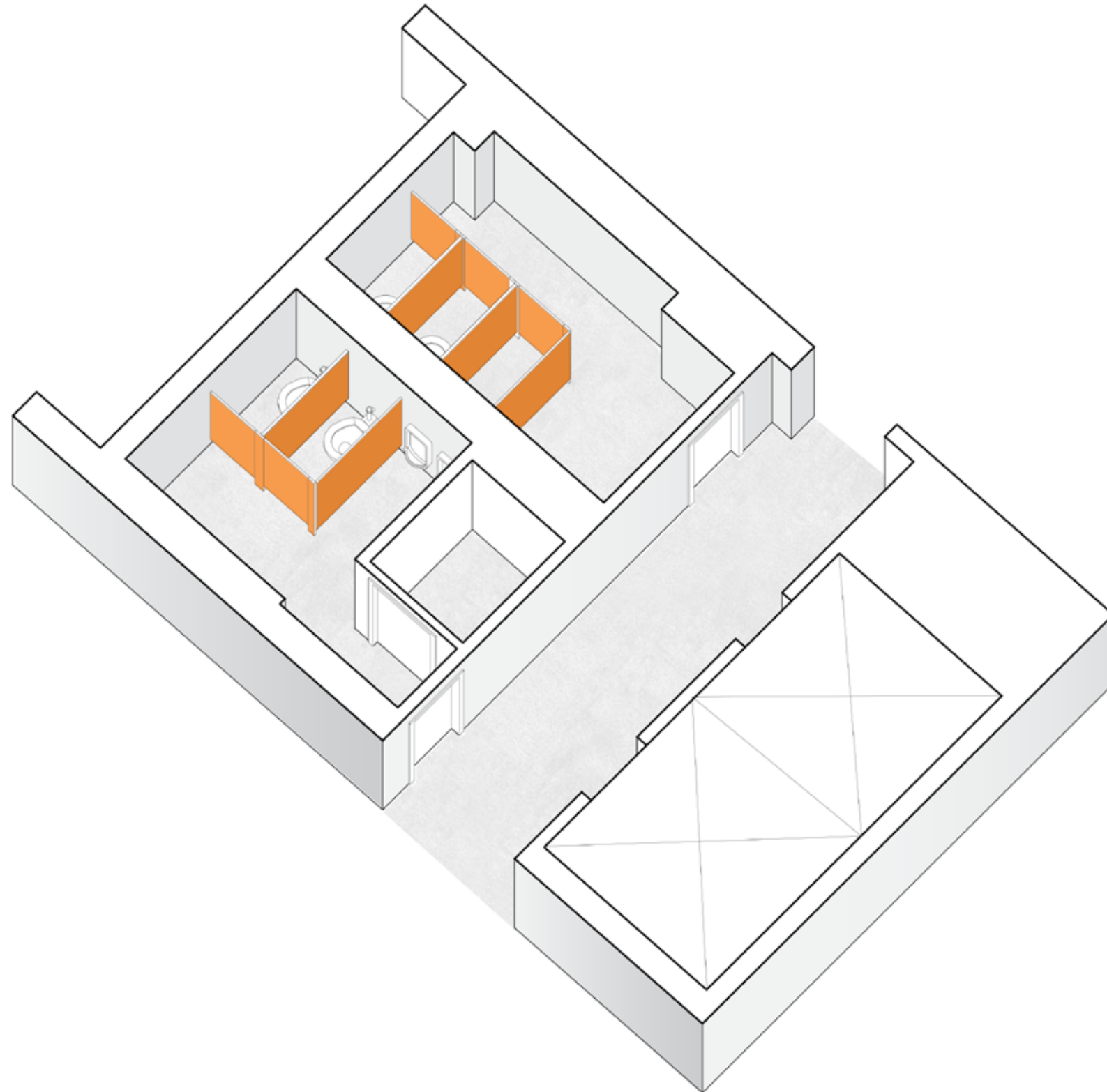
# FIXTURE COUNT ANALYSIS





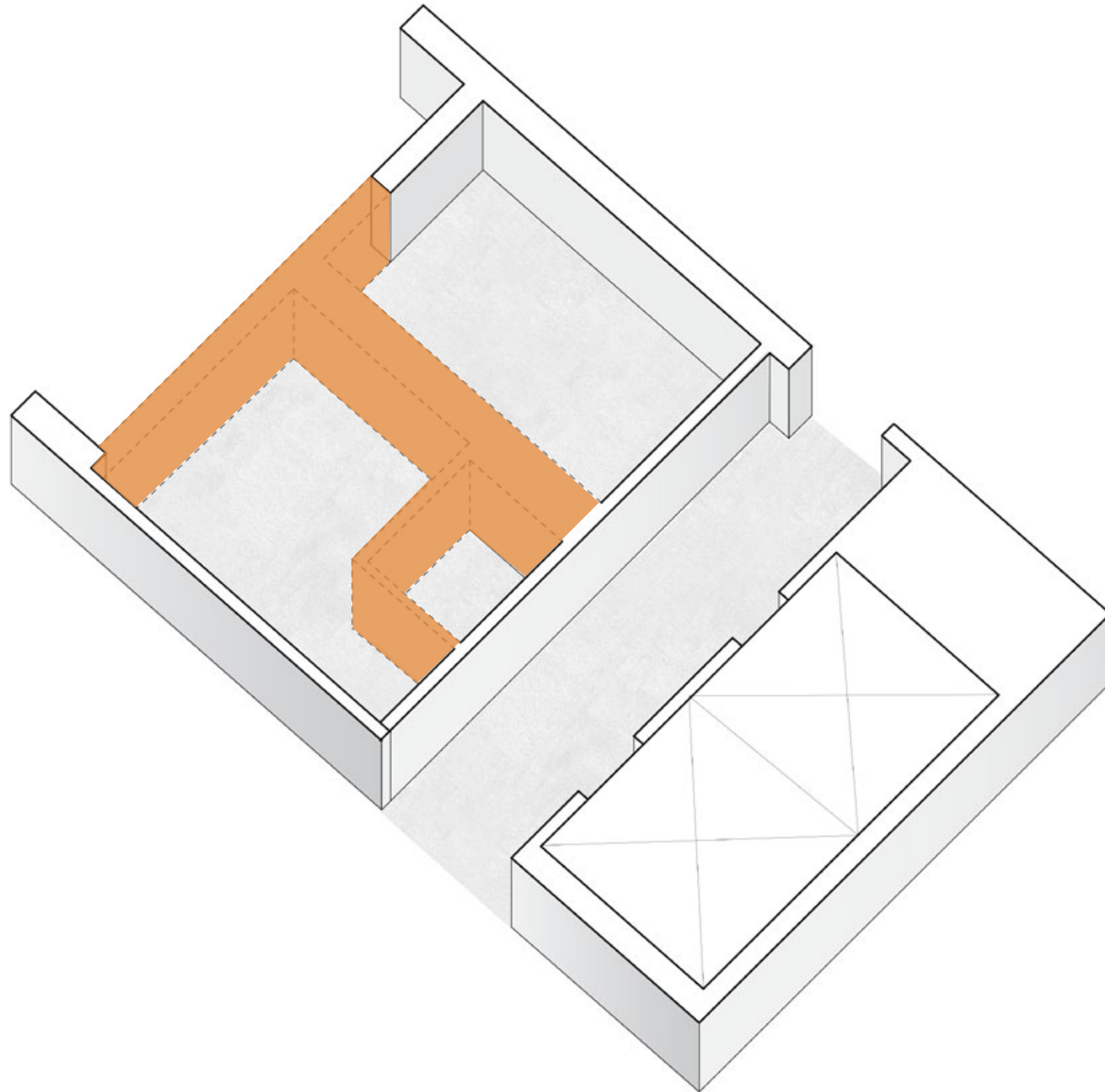
# DESIGN OPTIONS





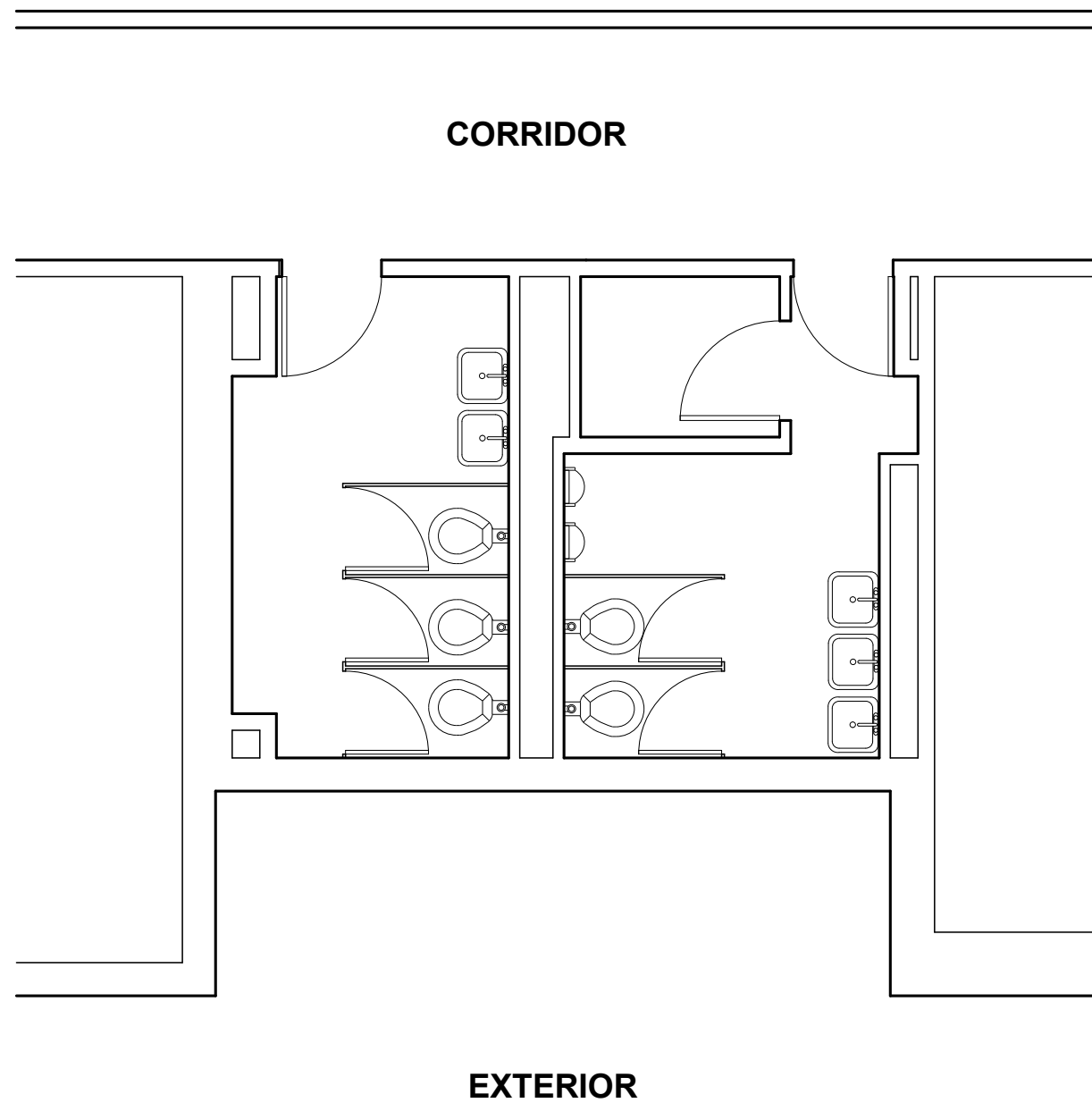
## EXISTING

- Gender Separation
- Non - ADA compliant
- 7 Fixtures (3 women, 4 men)
- Partial Height Toilet Partitions



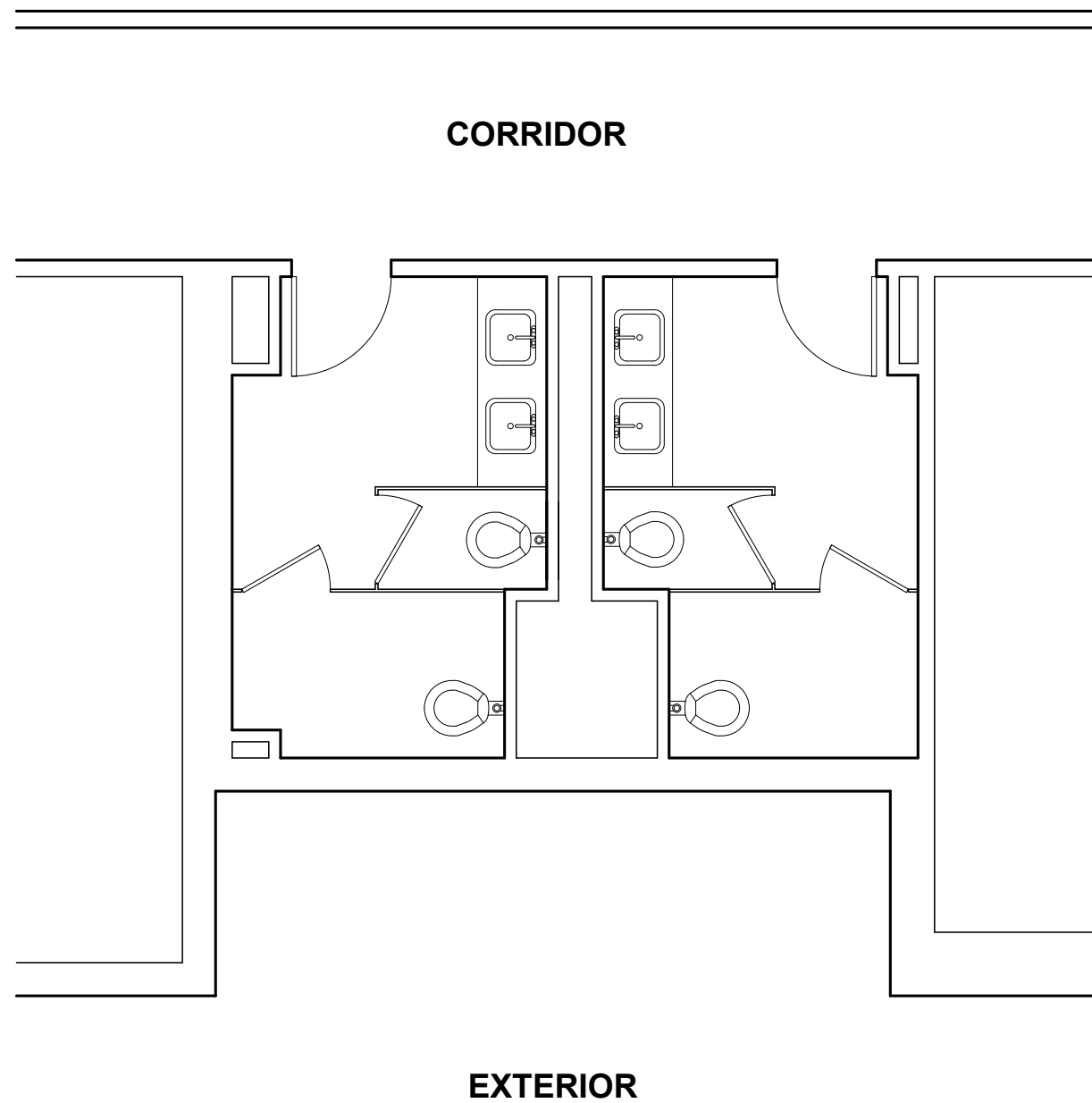
## RECONFIGURATION

- Removal of Binary Wall
- Consolidation of Entrances
- Demolition of Exterior Wall to allow for New Air Shaft and Natural Light
  - Air / Heat currently inadequate



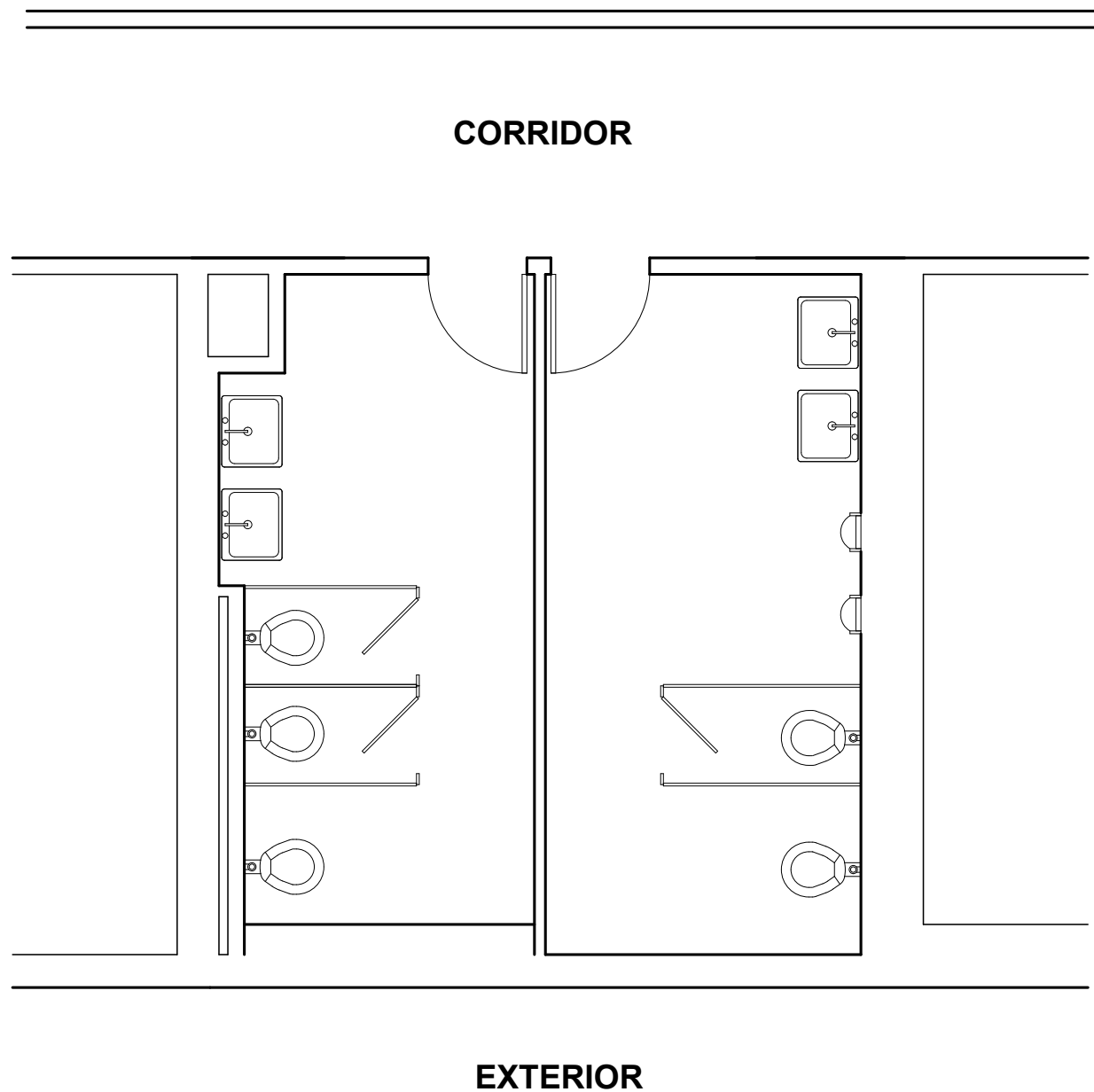
## EXISTING

- 7 Standard Fixtures
  - (non ADA)
- Janitor Closet
- Separate Facilities



## MEET ADA

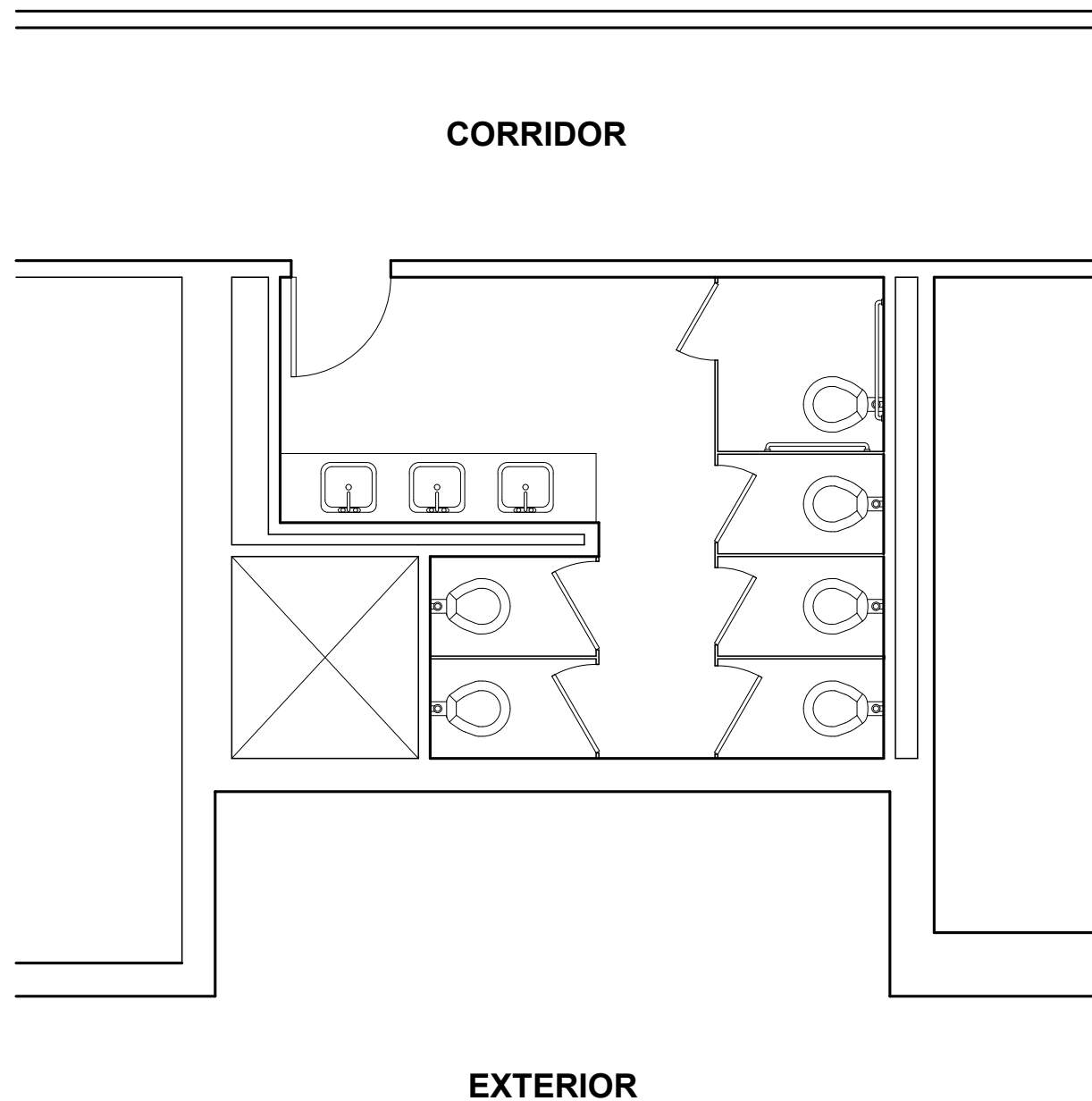
- 2 Standard Fixtures
- 2 ADA Fixtures
- Urinal in a stall
- Separate Facilities



## SEPARATE FACILITIES

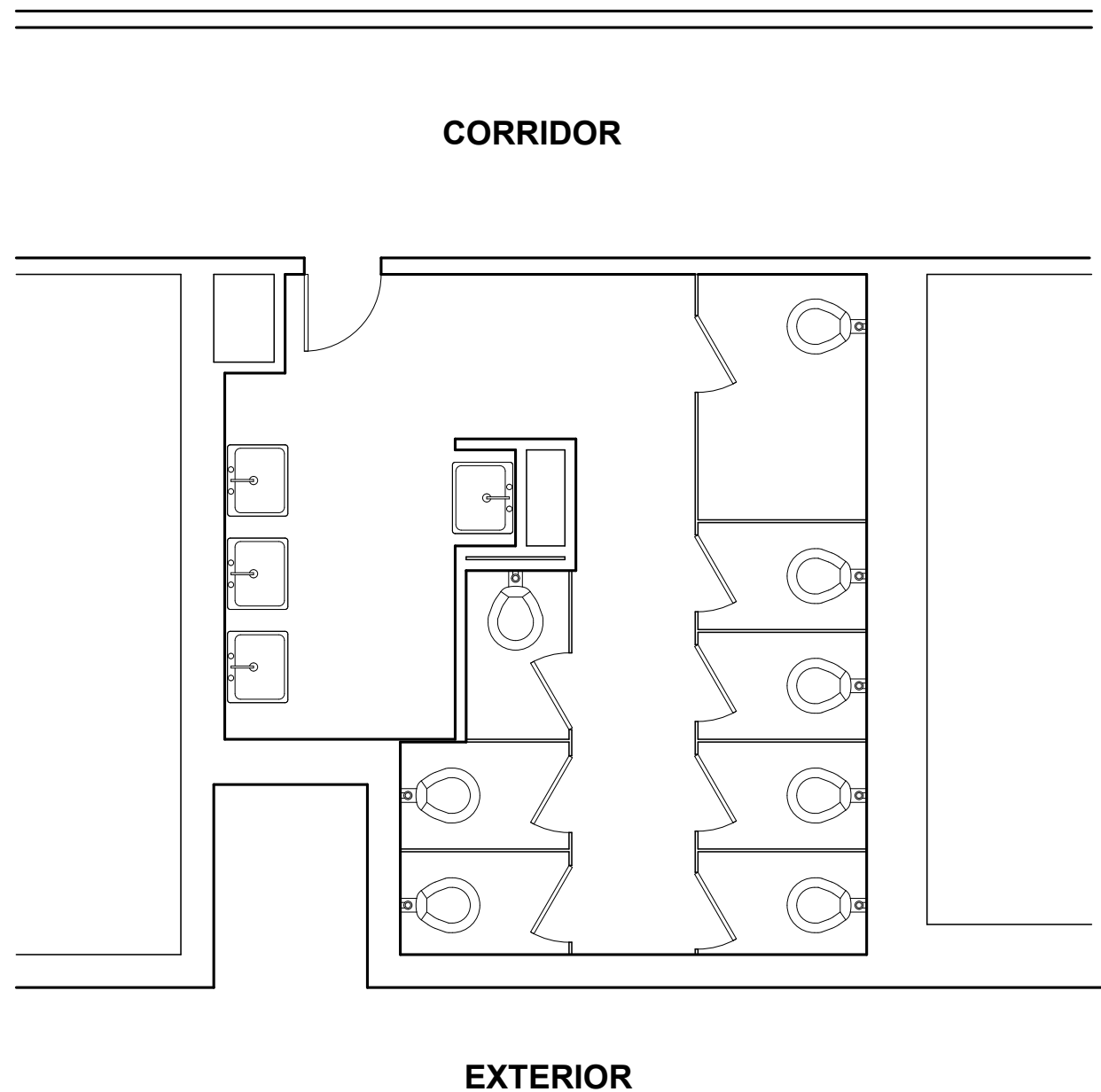
- 7 Toilet Fixtures
- Separate Facilities
- Full Expansion of exterior wall





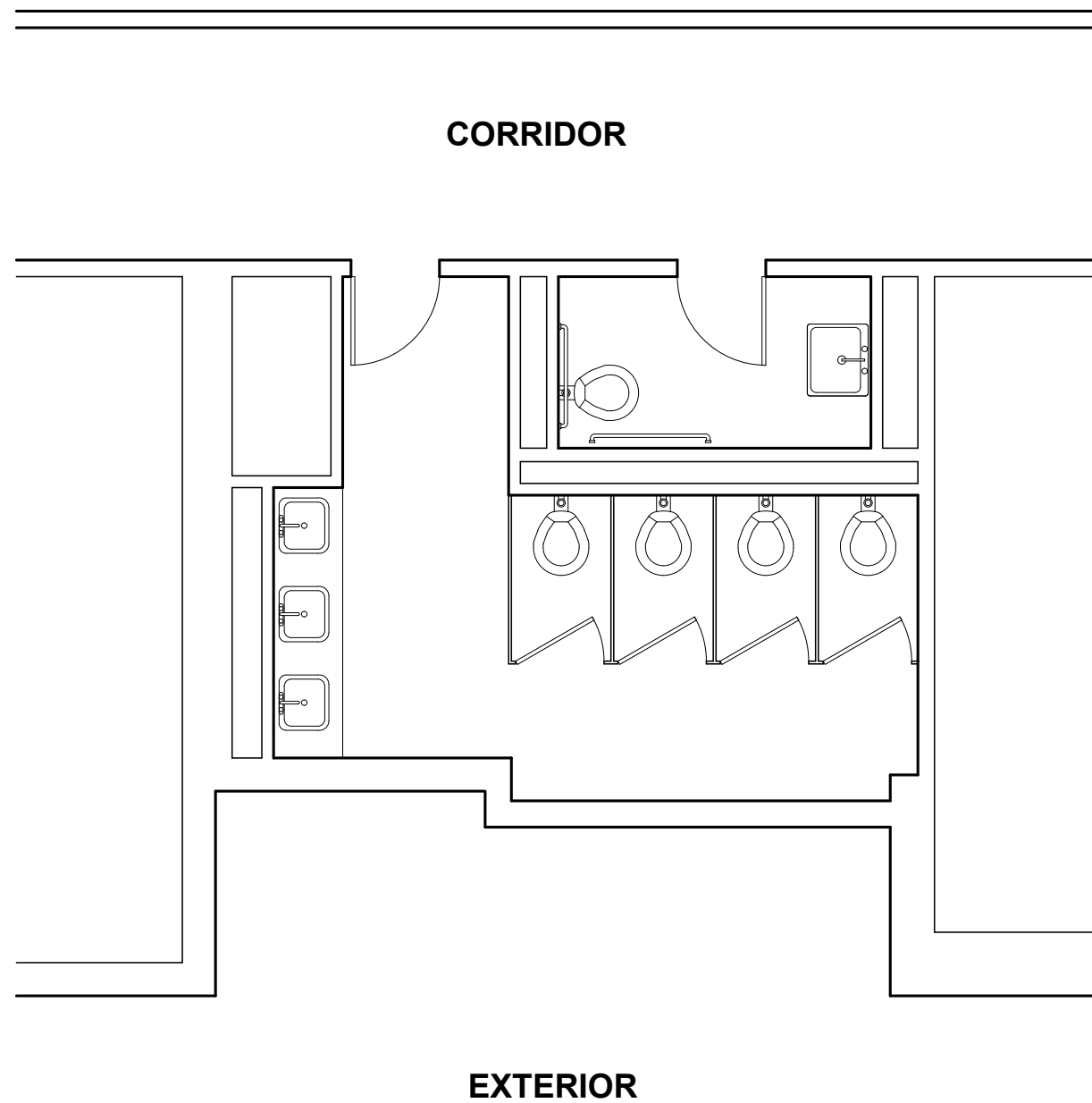
## AROUND THE CORNER

- 5 Standard Fixtures
- 1 ADA Fixture within restroom
- No expansion of exterior wall



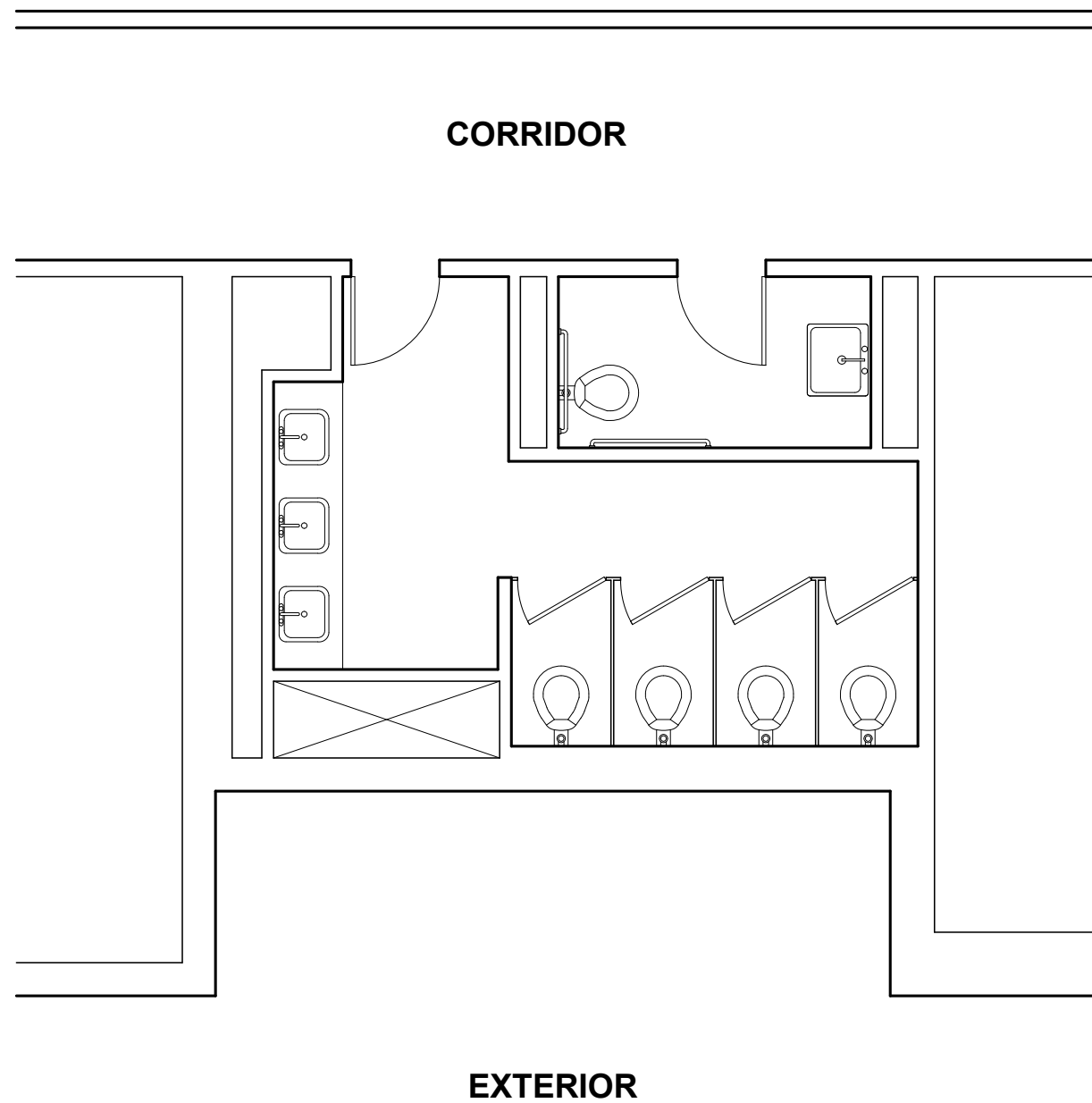
## A.T.C. EXPANDED

- 7 Standard Fixtures / Private
- 1 ADA Fixture / Private
- Expansion of exterior wall



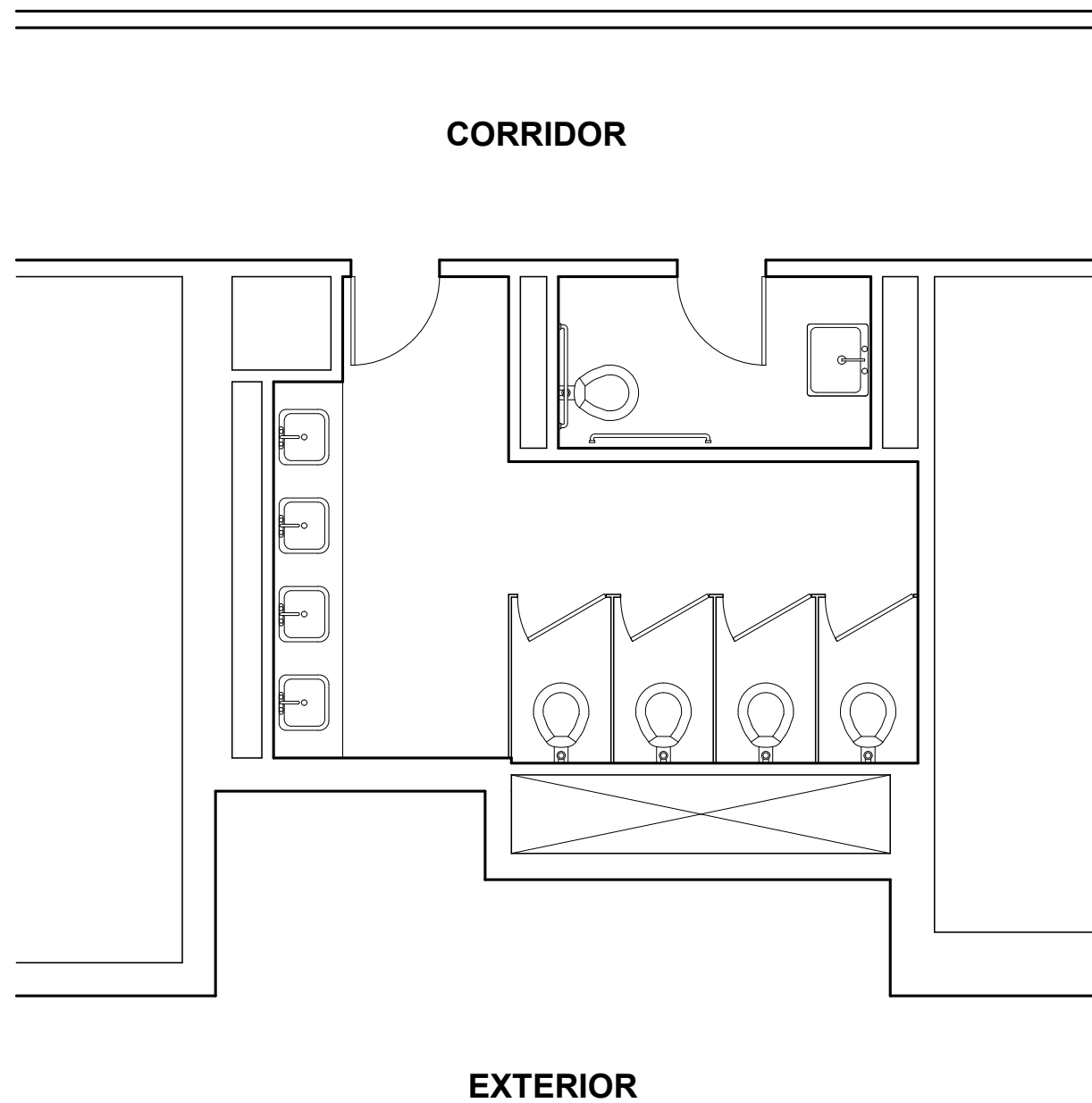
## “UNISEX”

- 4 Standard Fixtures / Private
- 1 ADA Fixture / Separate Facility
- Small expansion of exterior wall



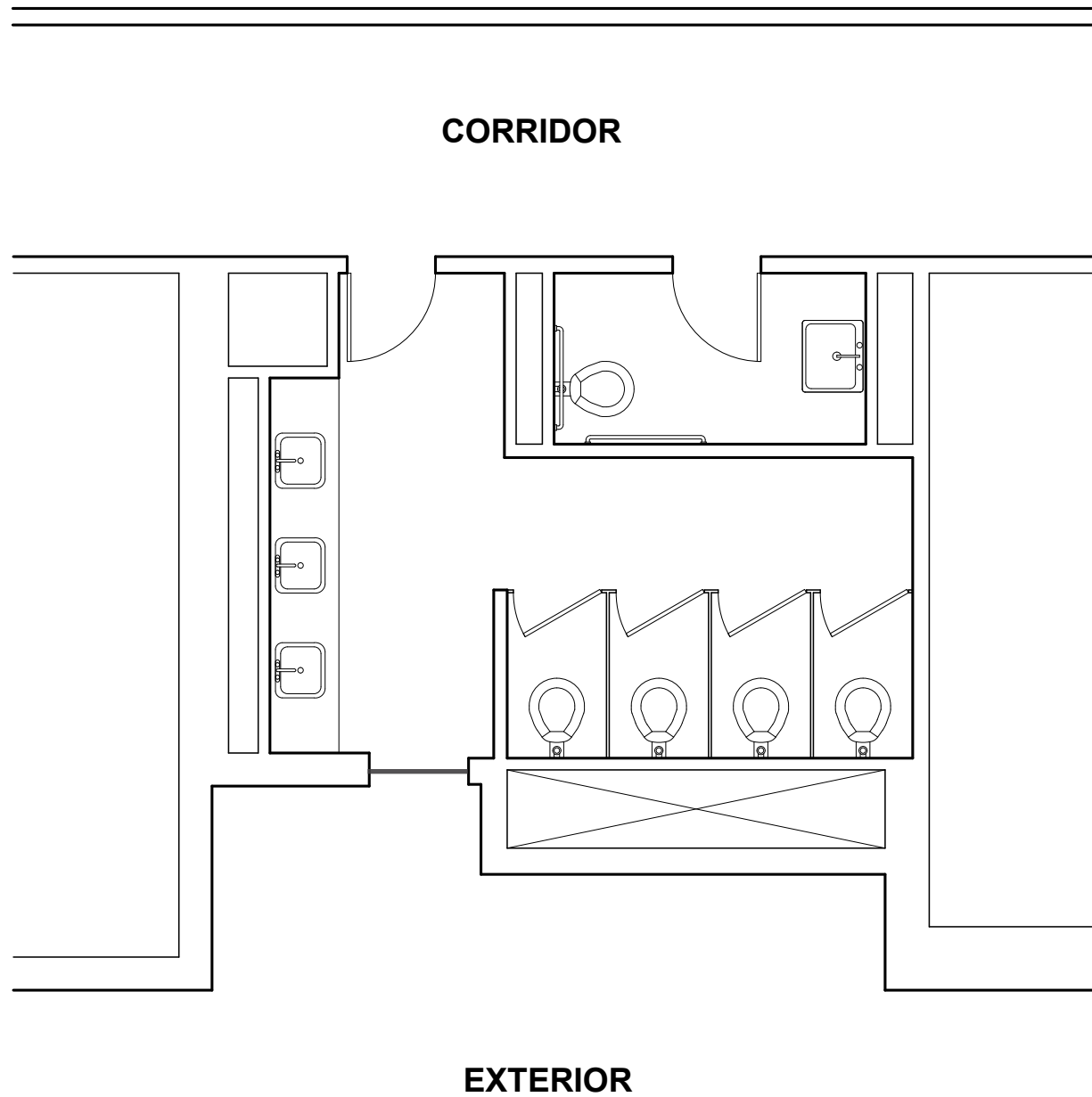
## NO EXTENSION

- 4 Standard Fixtures / Private
- 1 ADA Fixture / Separate Facility
- Shaft



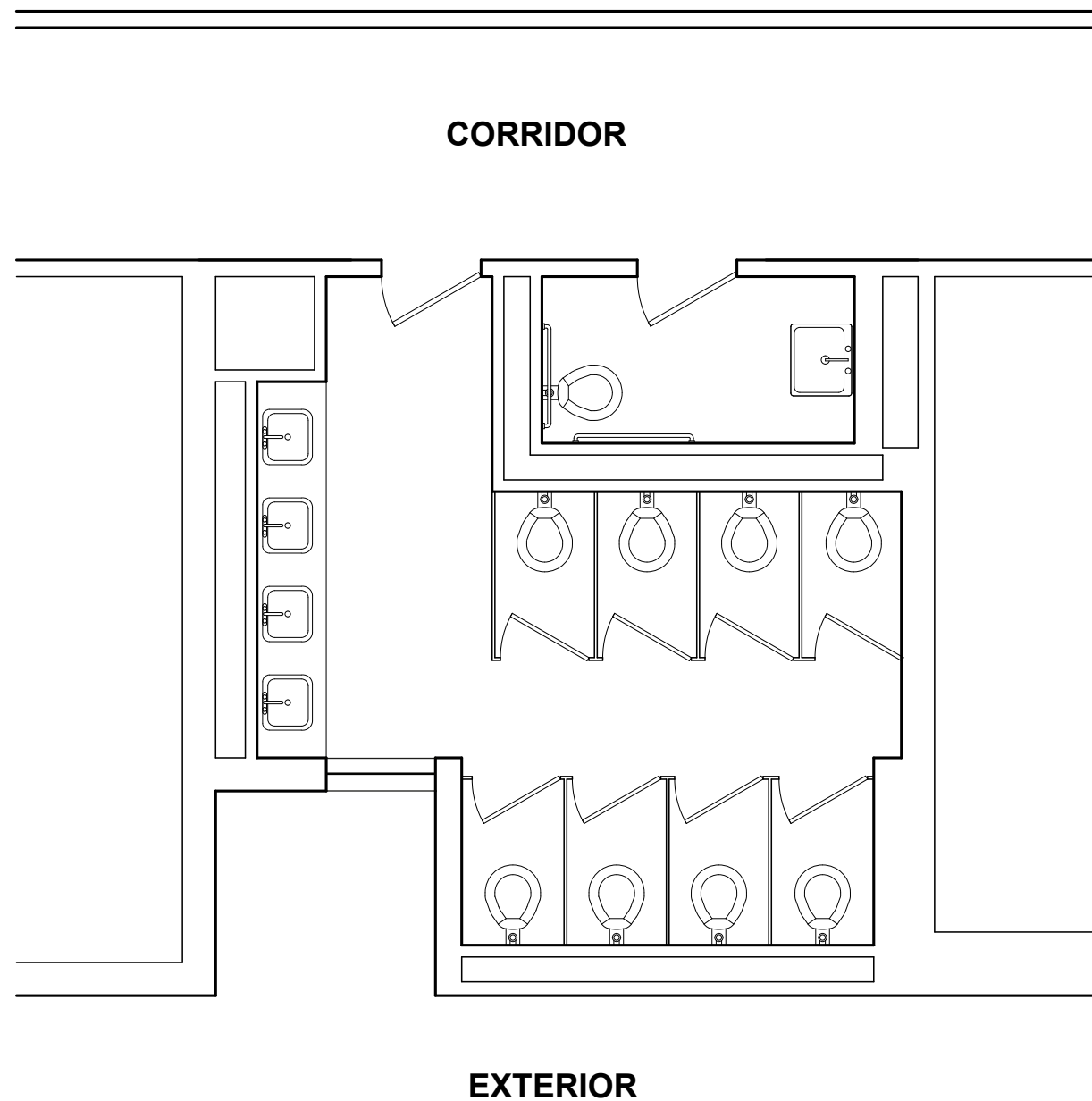
## OUTER SHAFT

- 4 Standard Fixtures / Private
- 1 ADA Fixture / Separate Facility
- Larger air shaft (future use)



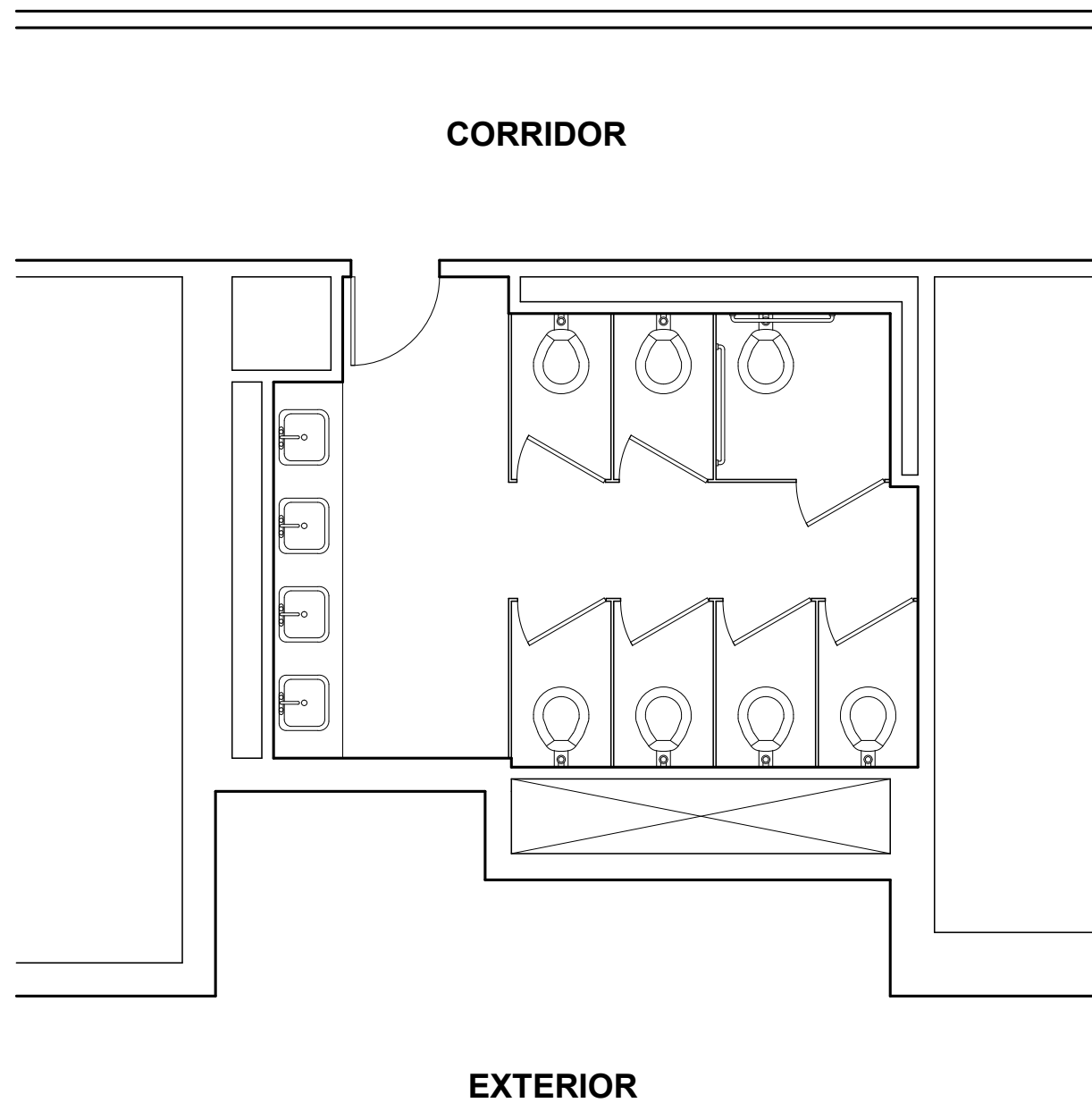
## WINDOW

- Open up sink area with natural light to reinforce public space



## MAX BUILDOUT

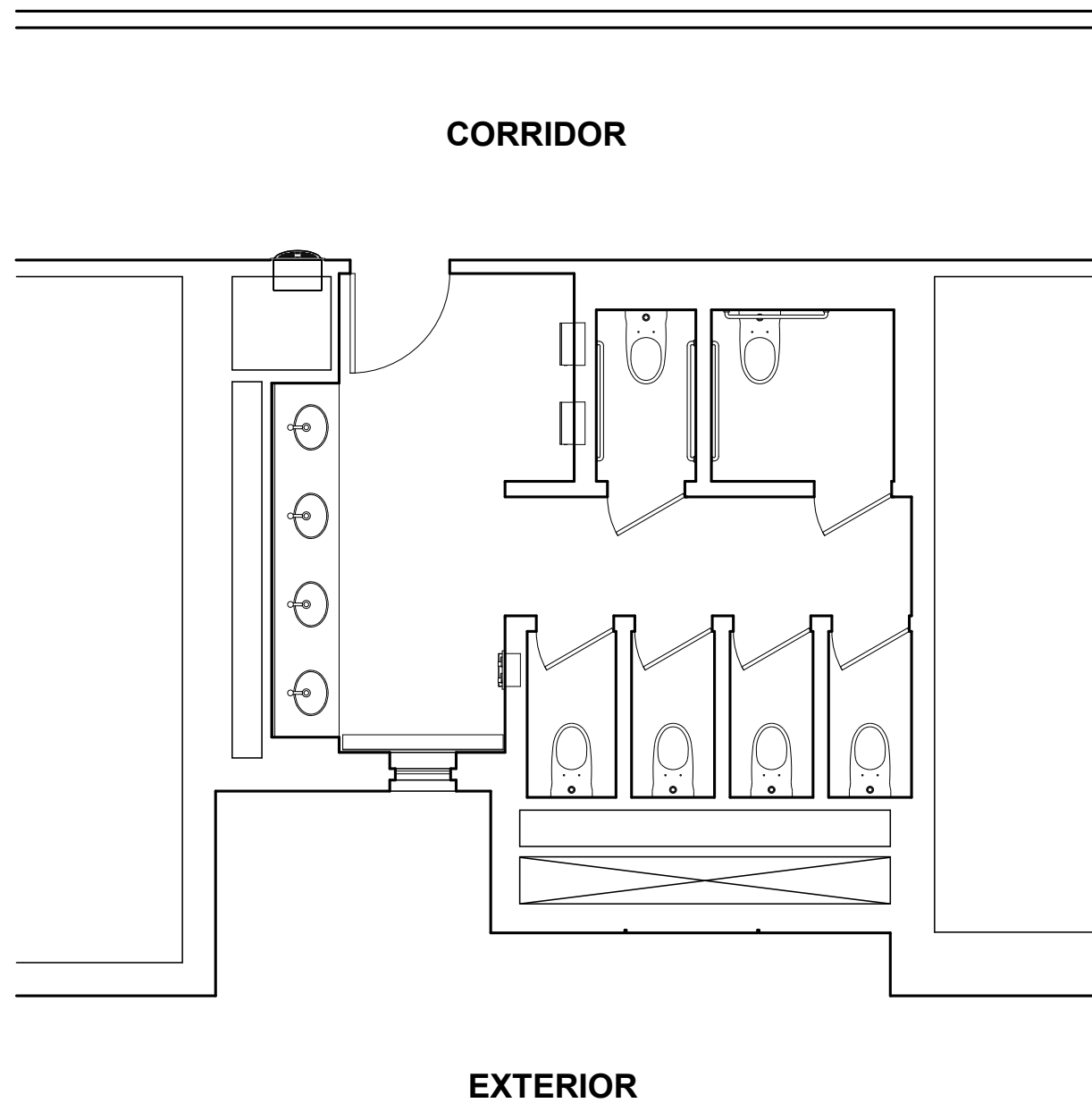
- 8 Standard Fixtures / Private
- 1 ADA Fixture / Separate
- Max buildout of toilet count



## “GENDER NEUTRAL”

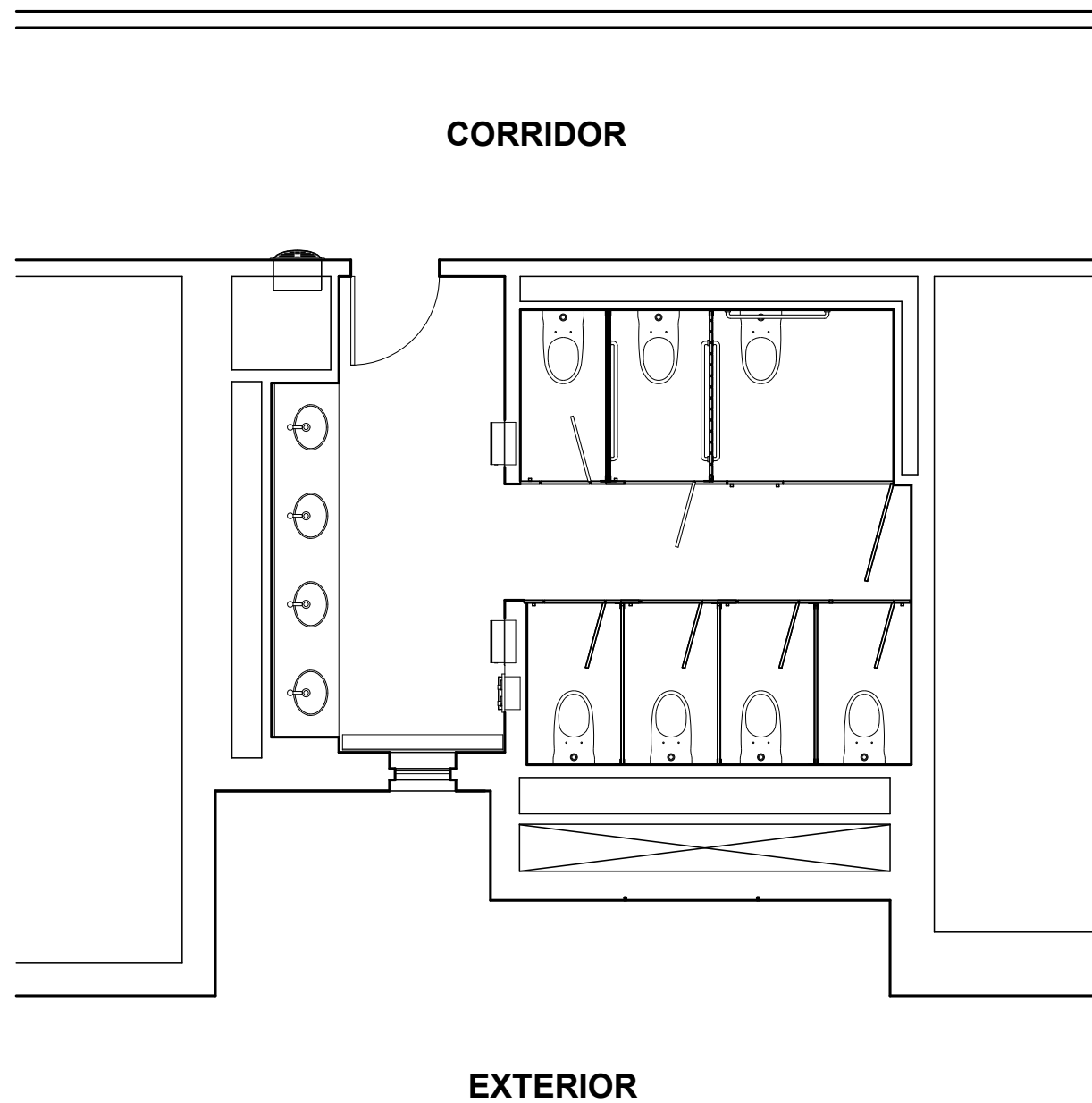
- 6 Standard Fixtures / Private
- 1 ADA Fixture / internal
- Partial exterior wall expansion





## DRYWALL STALLS

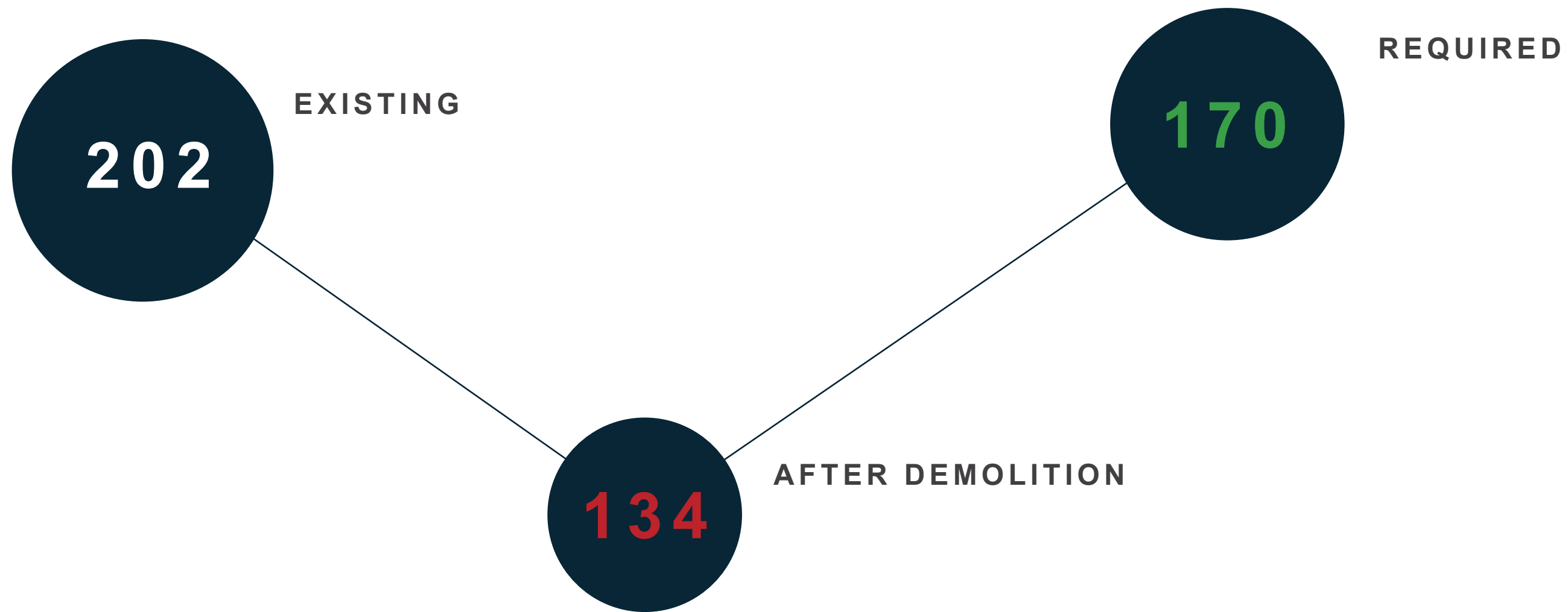
- 5 Standard Fixtures / Private
- 1 ADA Fixture / Internal
- Expansion of exterior wall



## “BUILT”

- 6 Standard Fixtures / Private
- 1 ADA Fixture / Private
- Solid wall between zones

# FIXTURE COUNT ANALYSIS

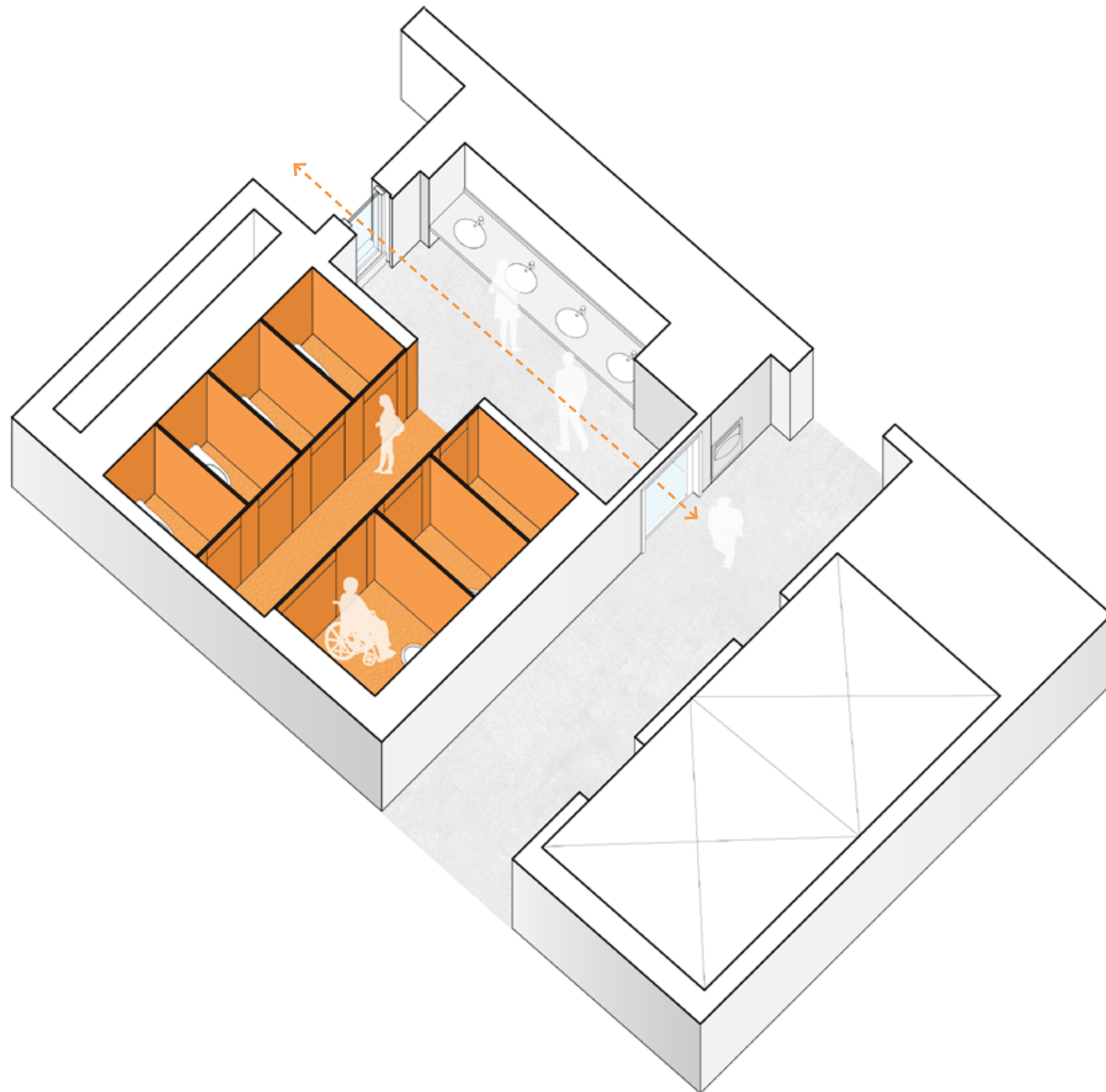


# FIXTURE COUNT ANALYSIS



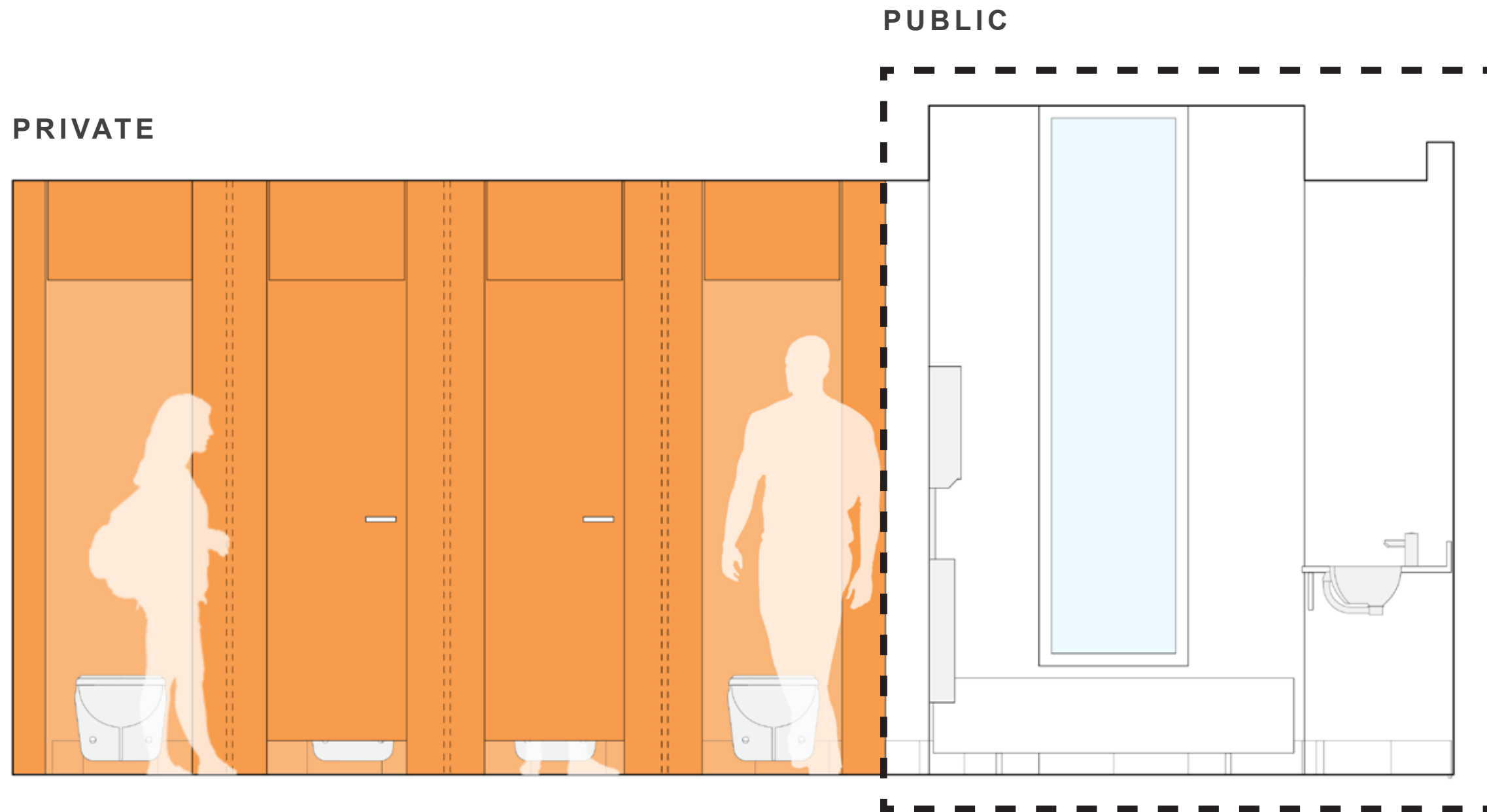


# OUR APPROACH

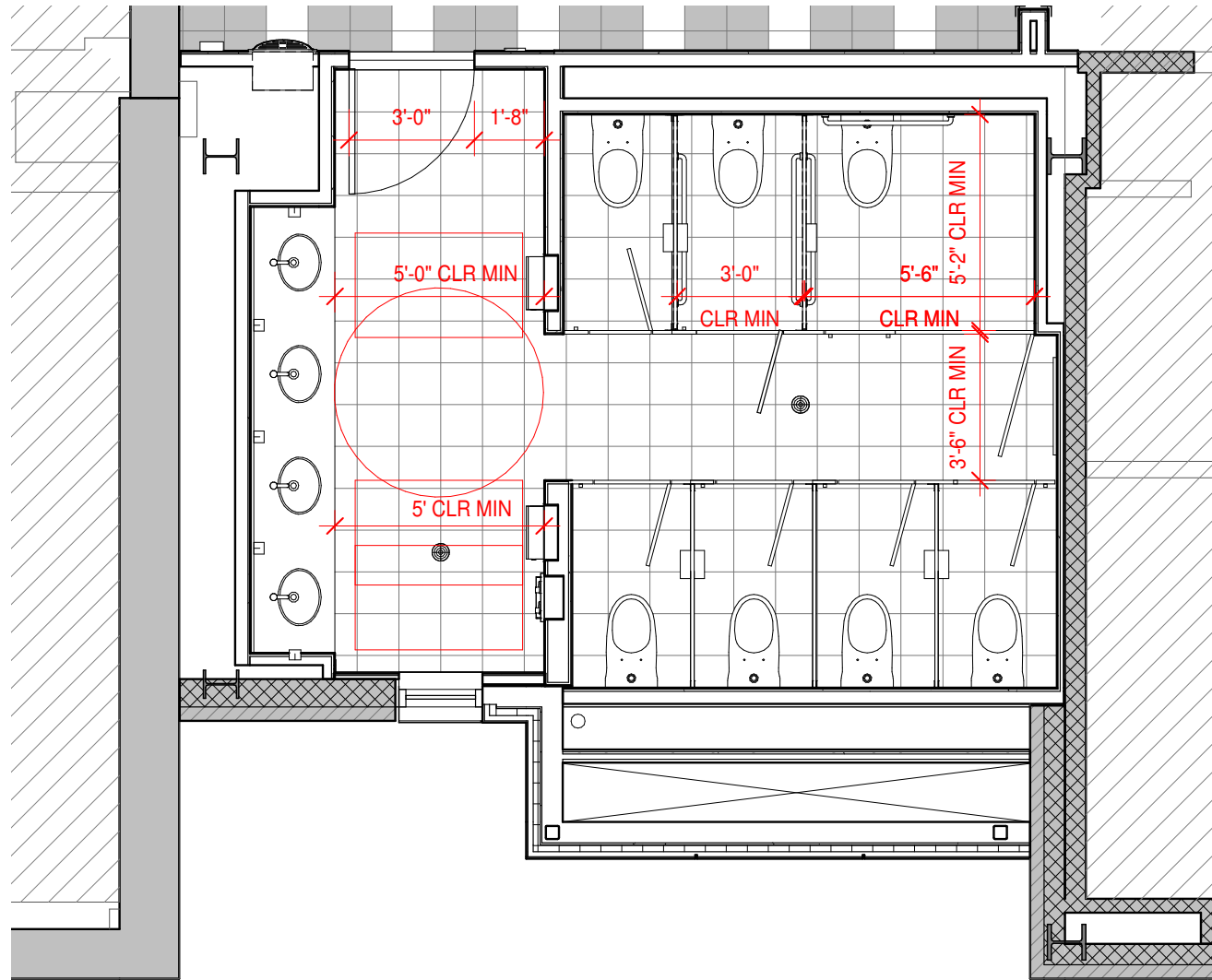


## OUR APPROACH

- ADA Compliant Stall
- Maintains Fixture Count (7)
- Full Height Toilet Partitions
  - 1" Thick
- Visual Connection to Public Corridor and Exterior
  - Use of glass corridor door
- One Entrance
  - Door discussed as optional
- Communal Grooming/Washing
- Air Shaft improves air quality + heating

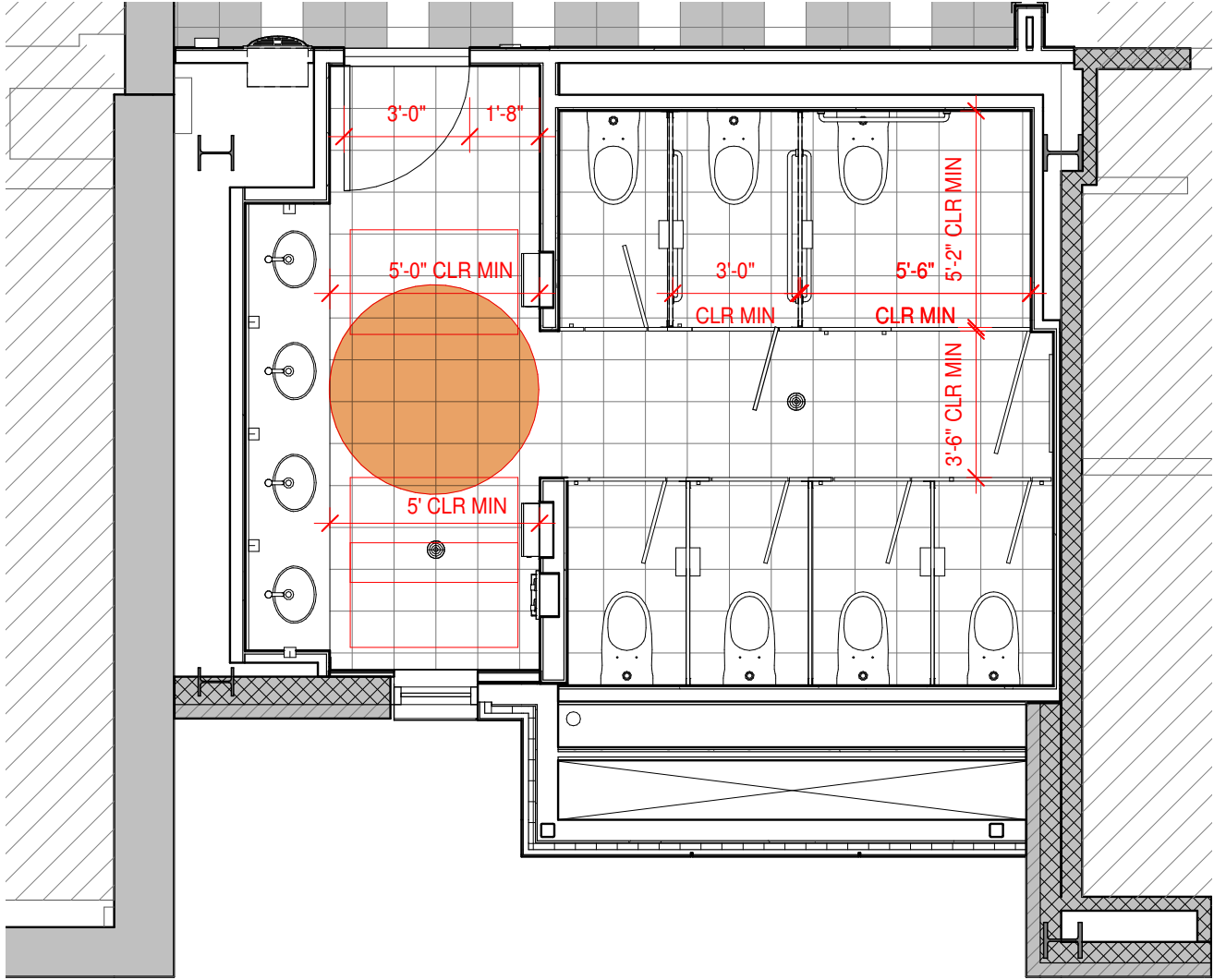


# CLEARANCES

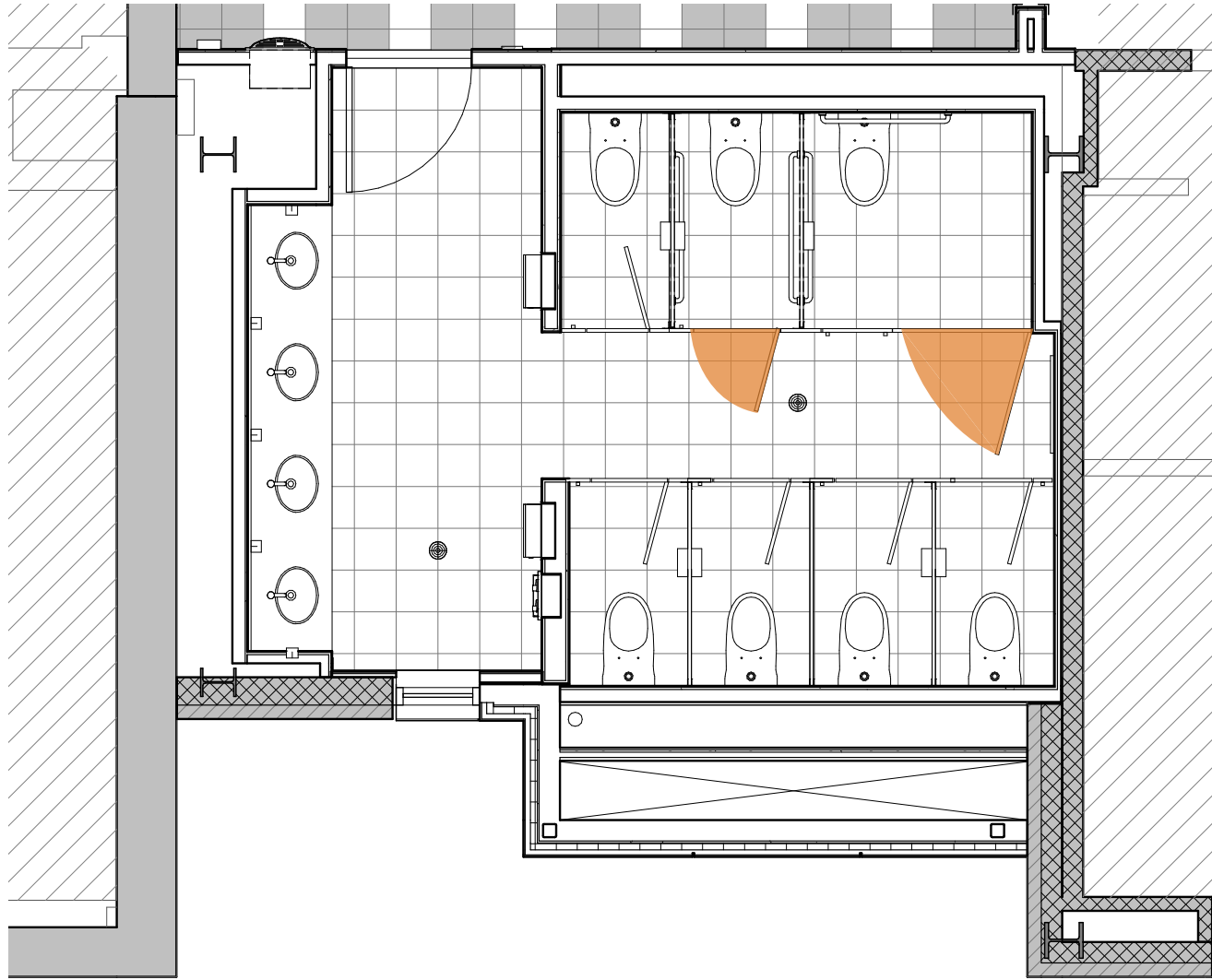




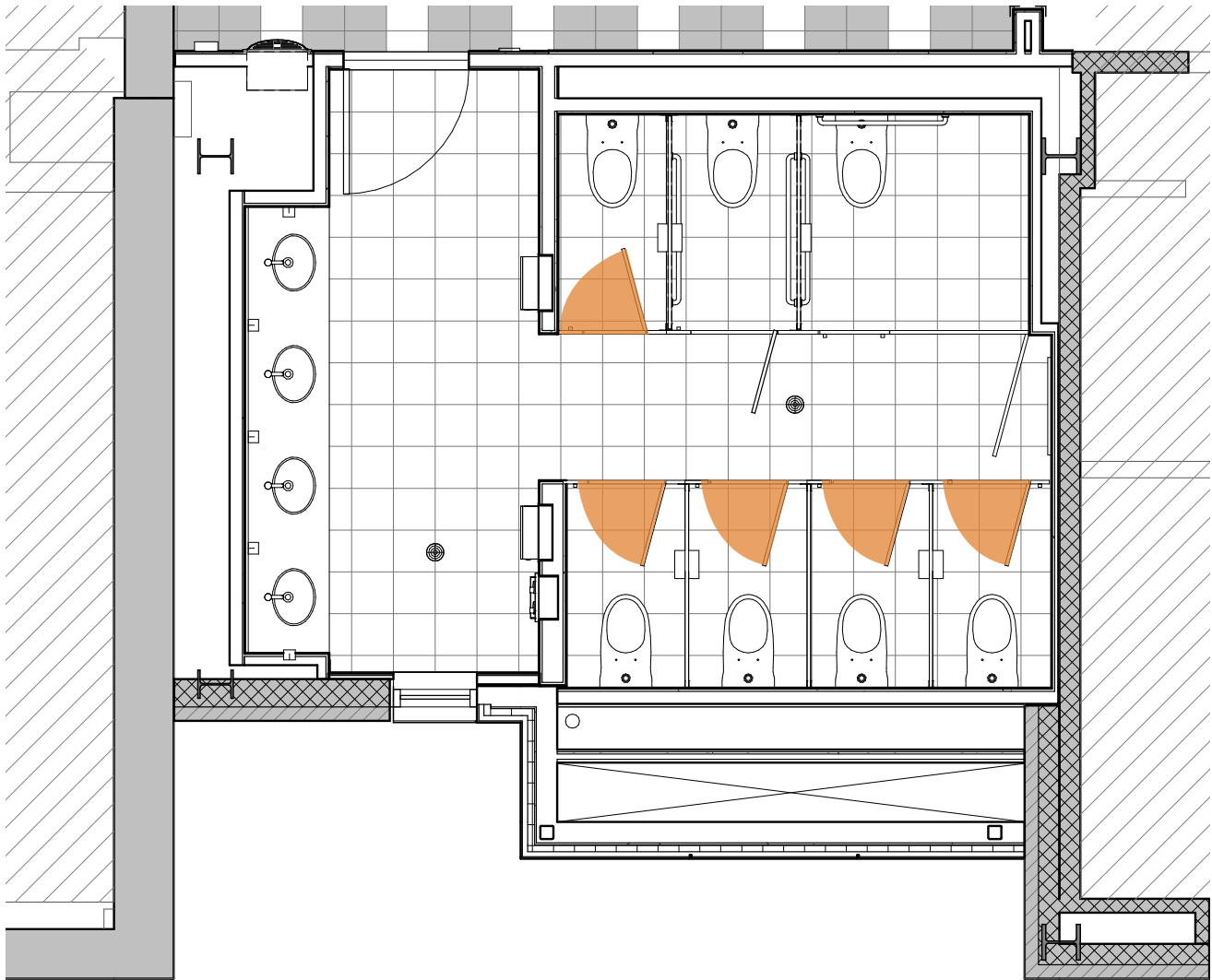
# TURNAROUNDS



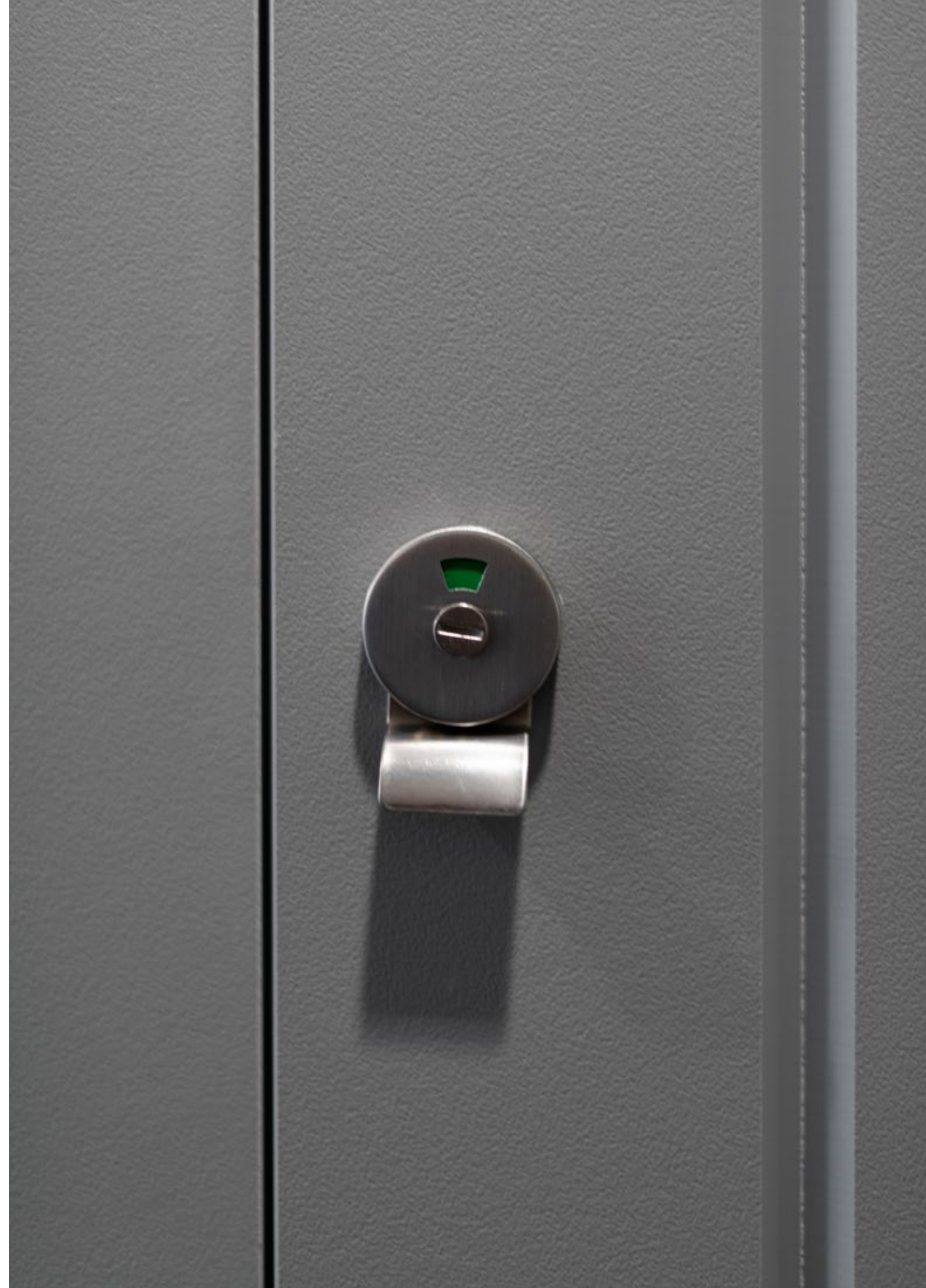
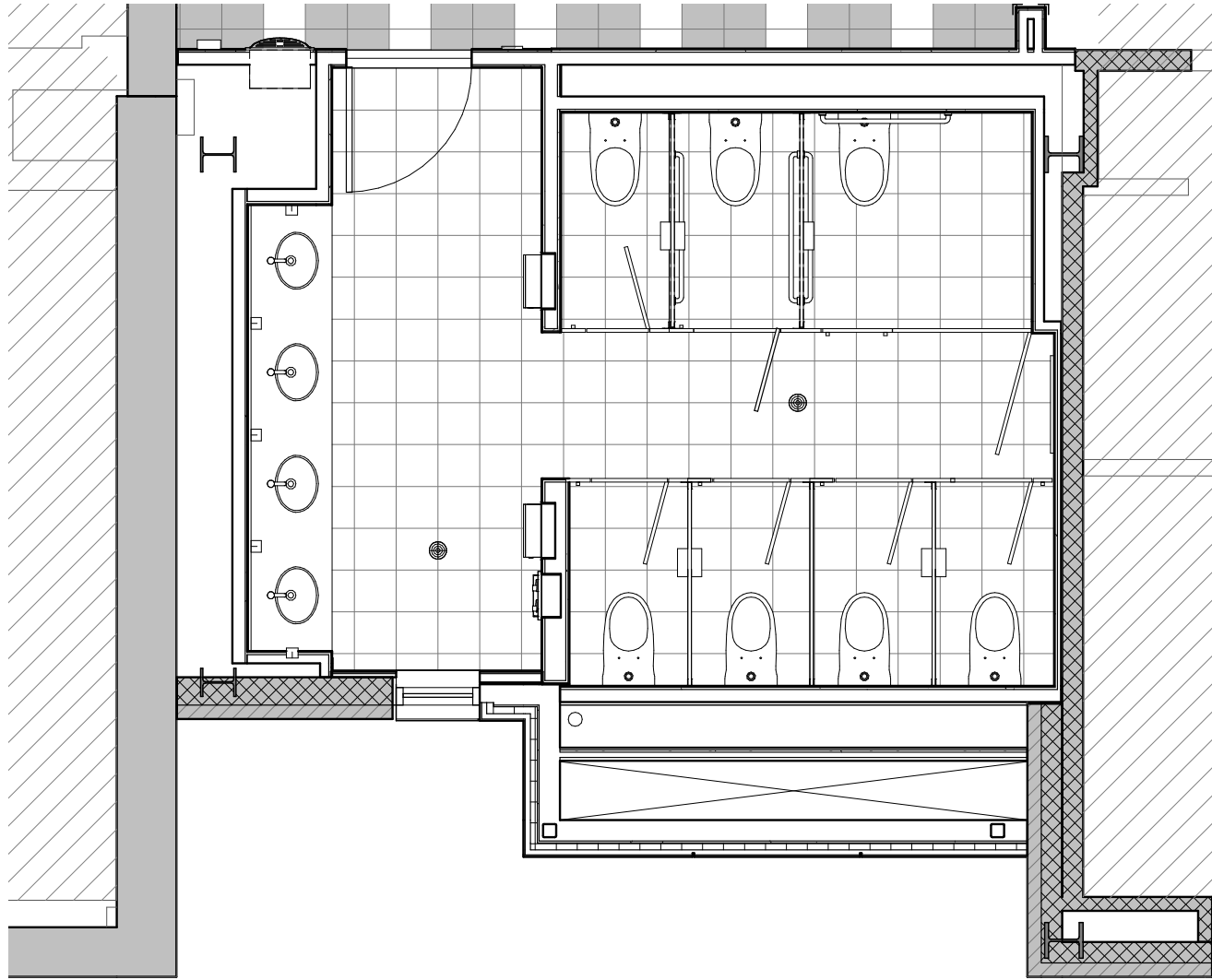
# DOOR SWINGS: ADA



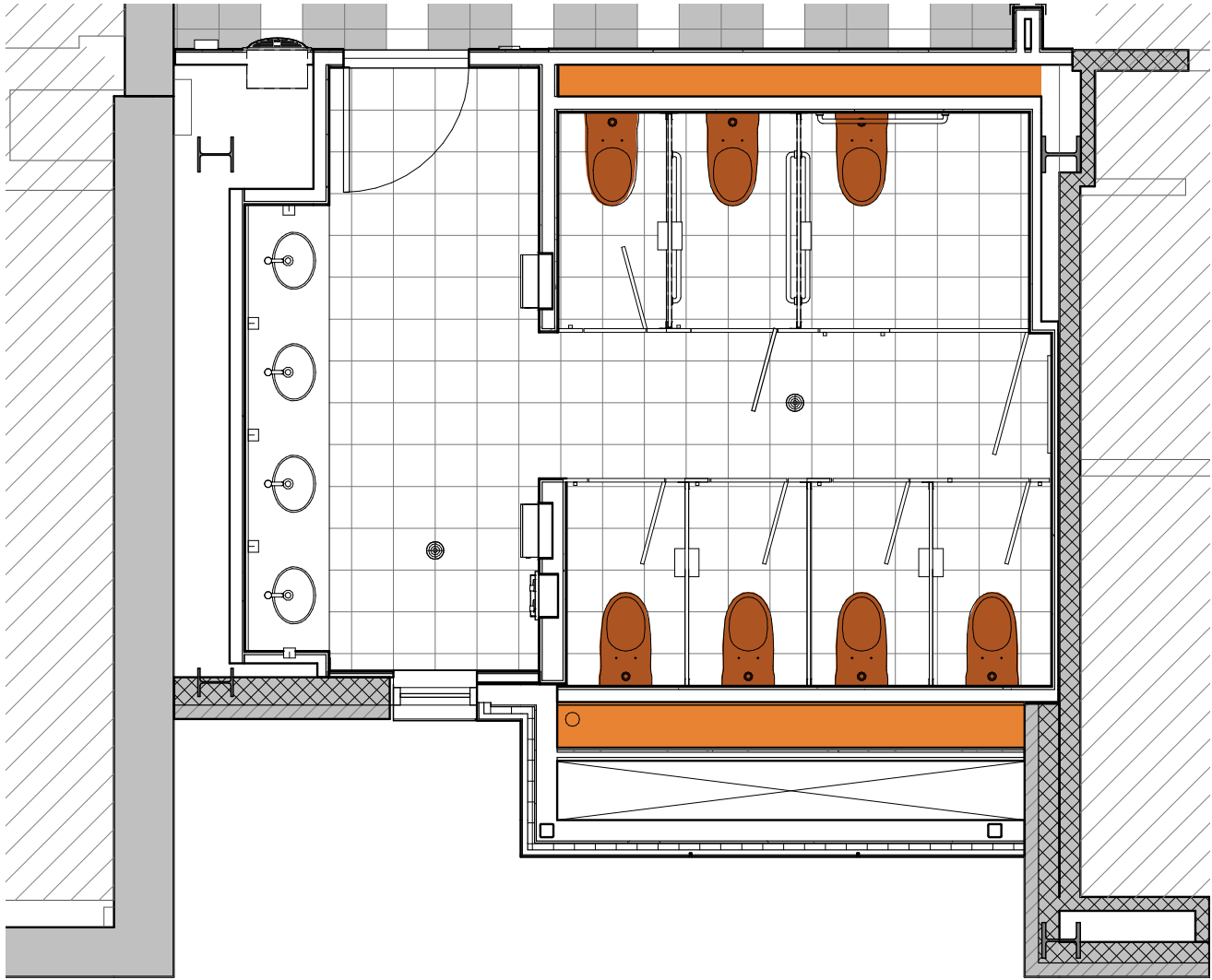
# DOOR SWINGS: NON ADA



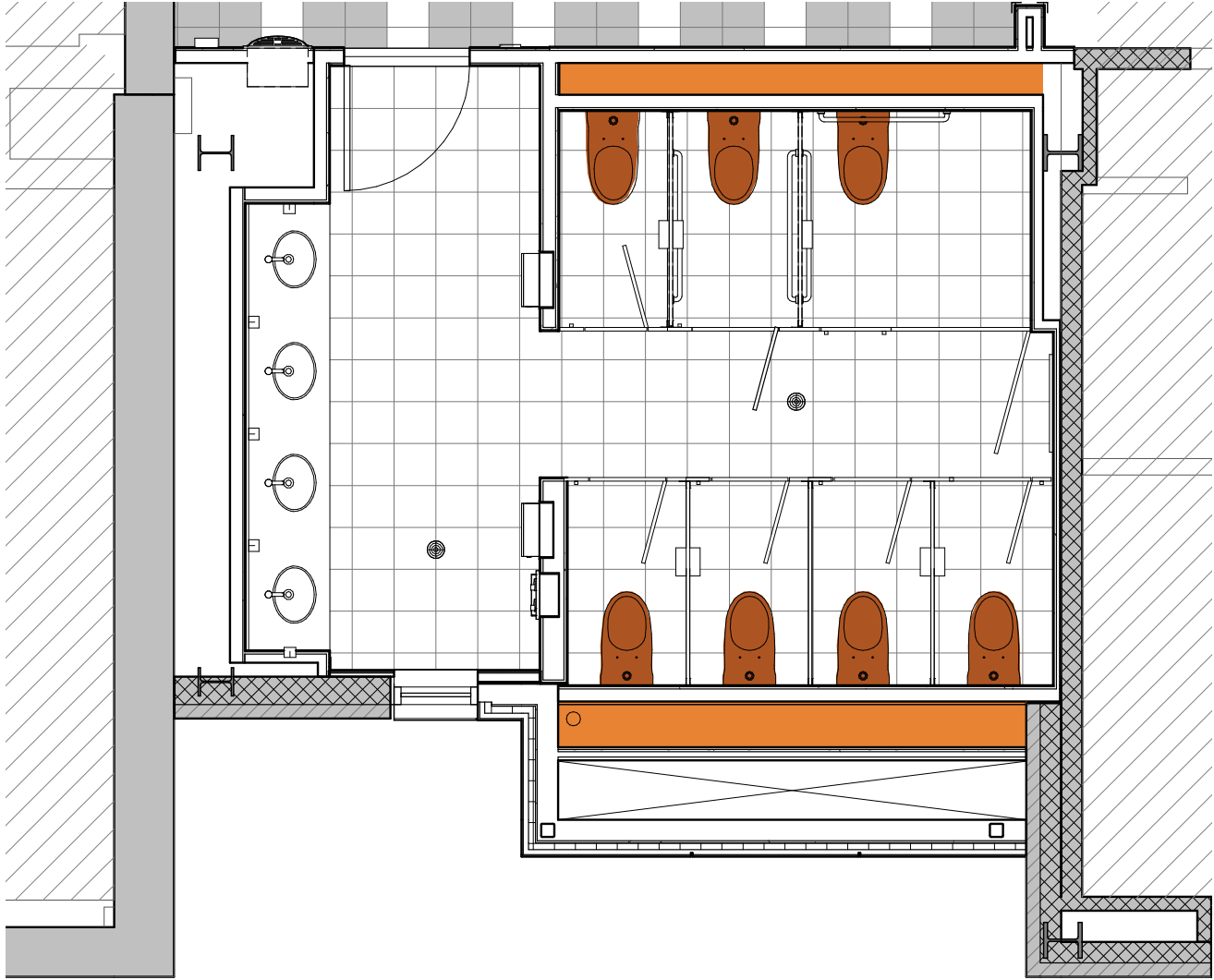
# INDICATORS



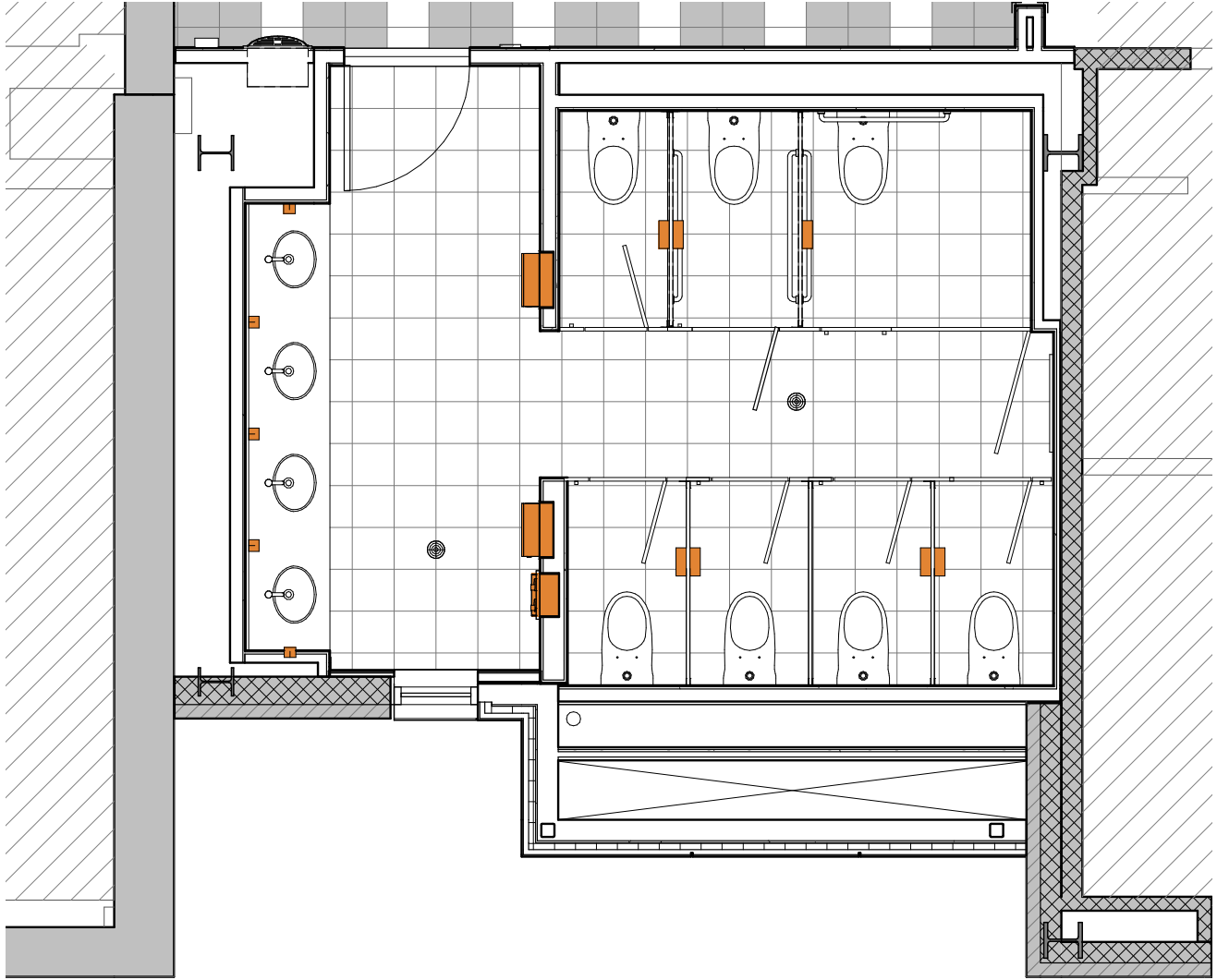
# TOILETS



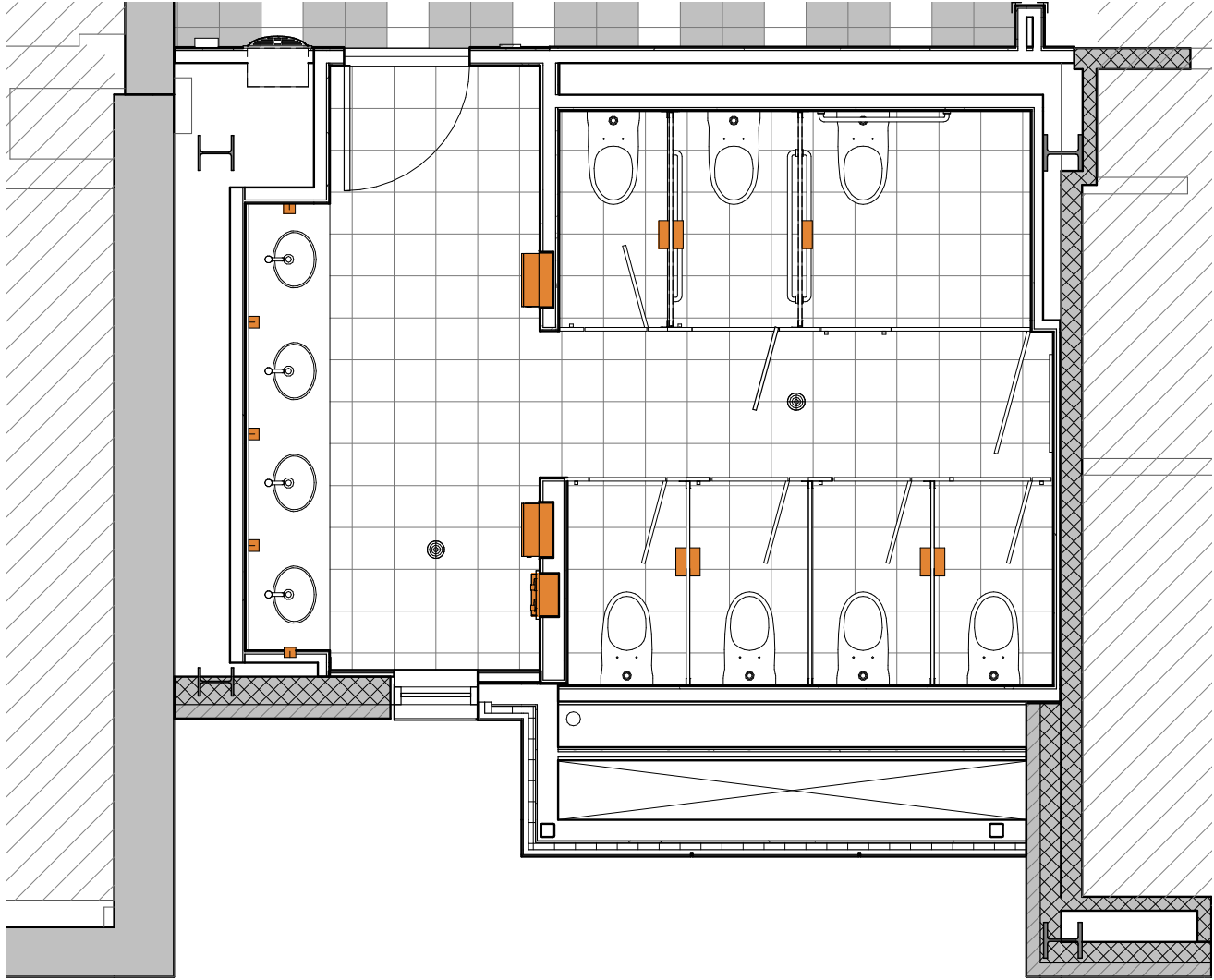
# TOILETS



# ACCESSORIES

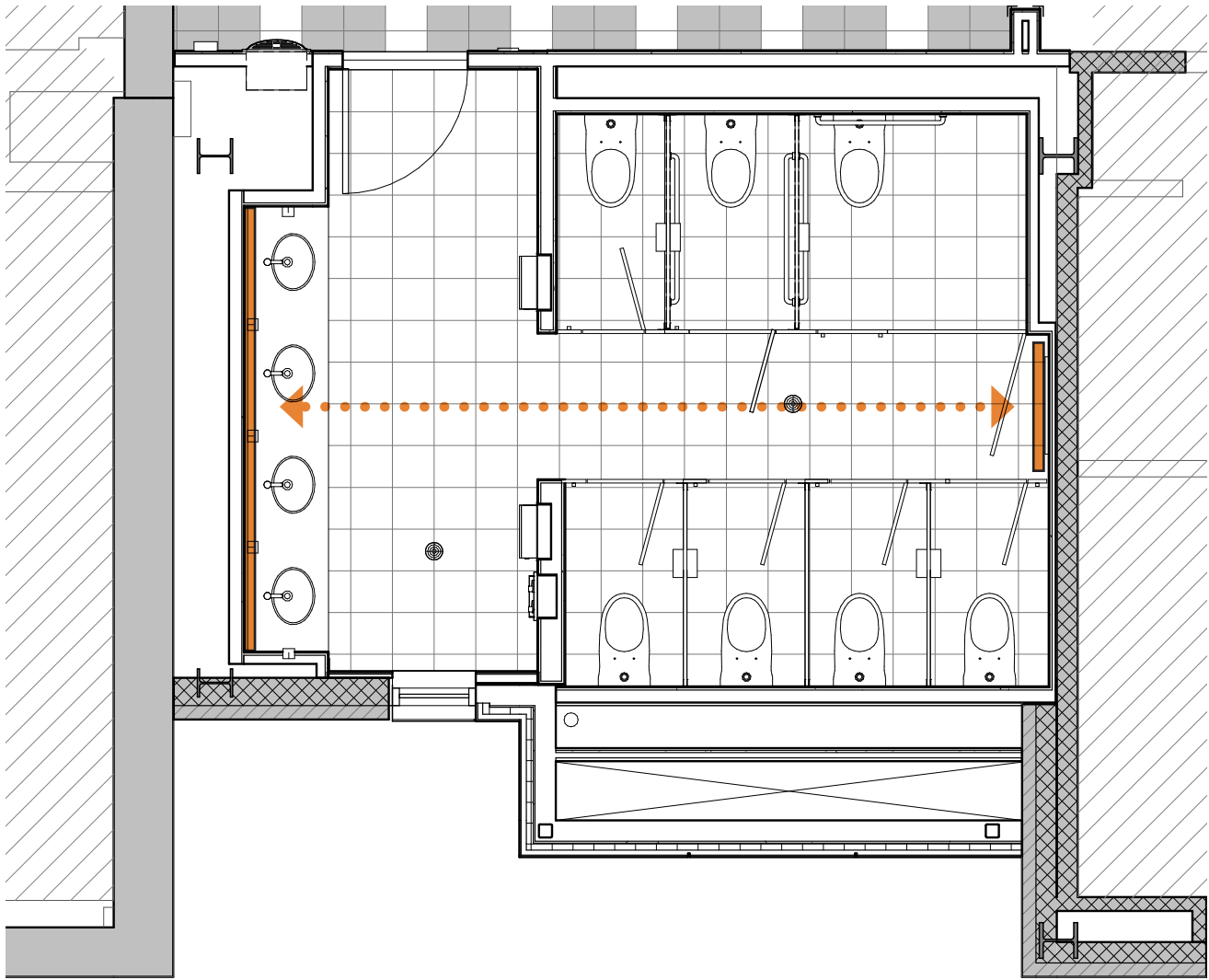


# ACCESSORIES

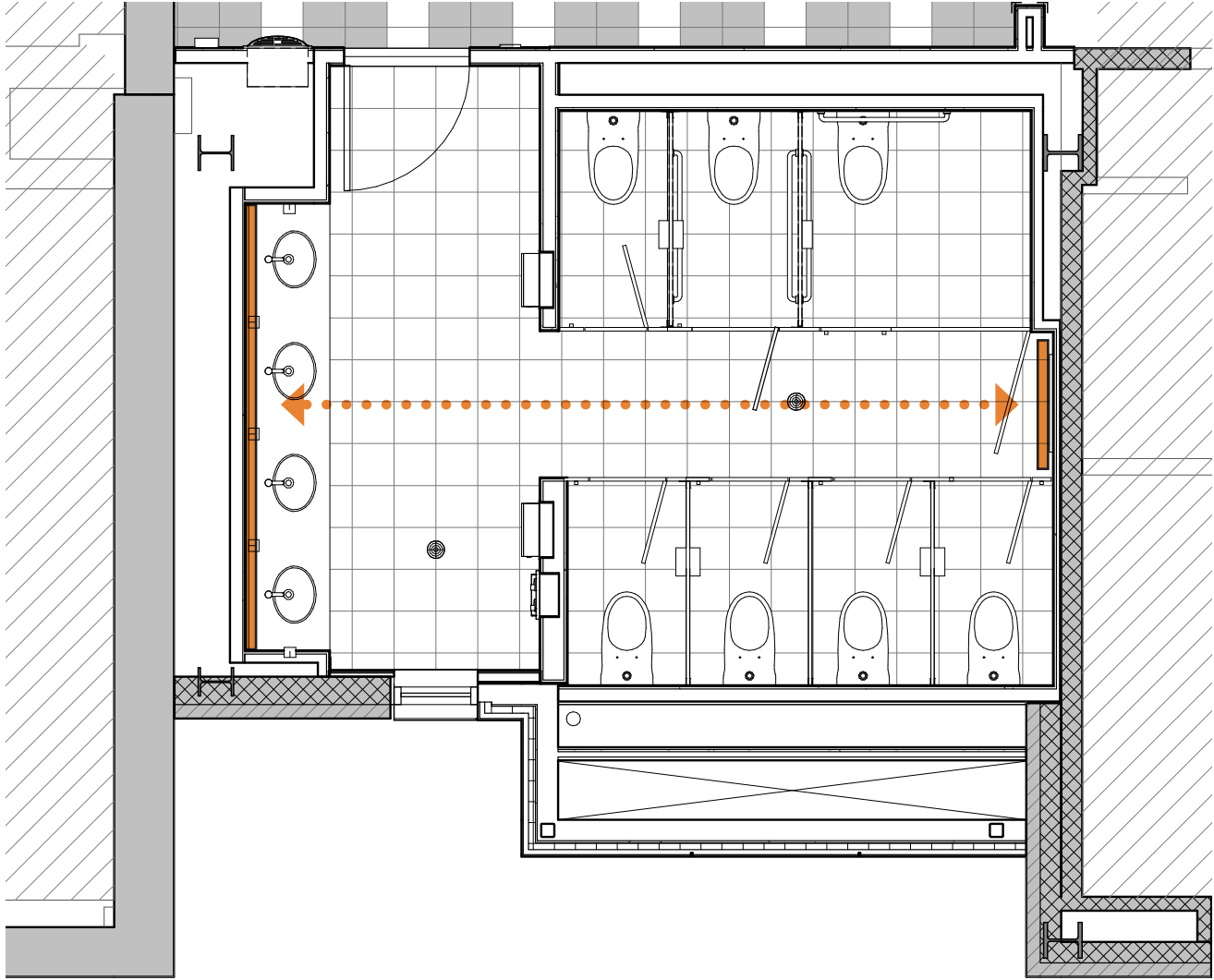




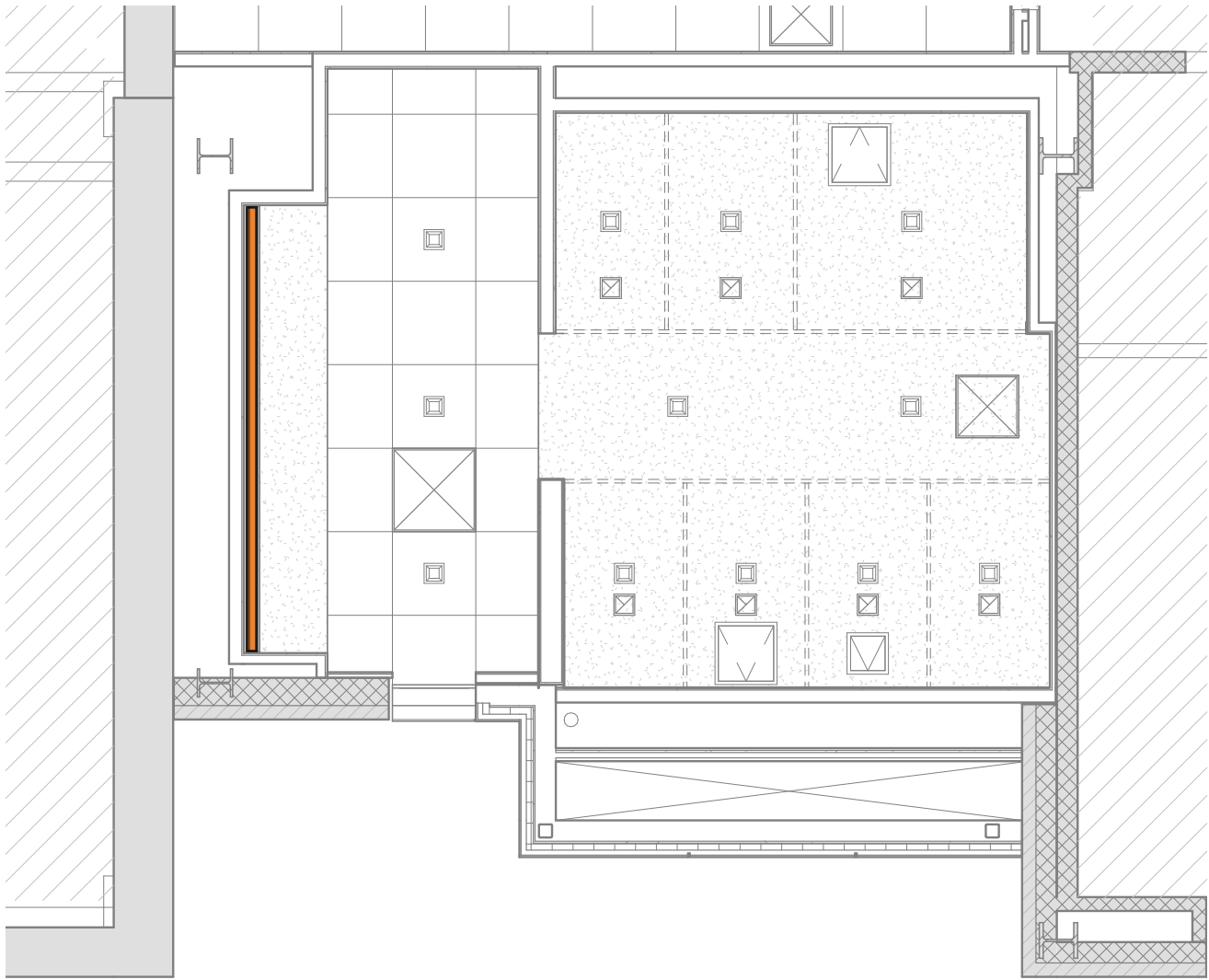
# MIRROR REPLACEMENT



# MIRROR REPLACEMENT



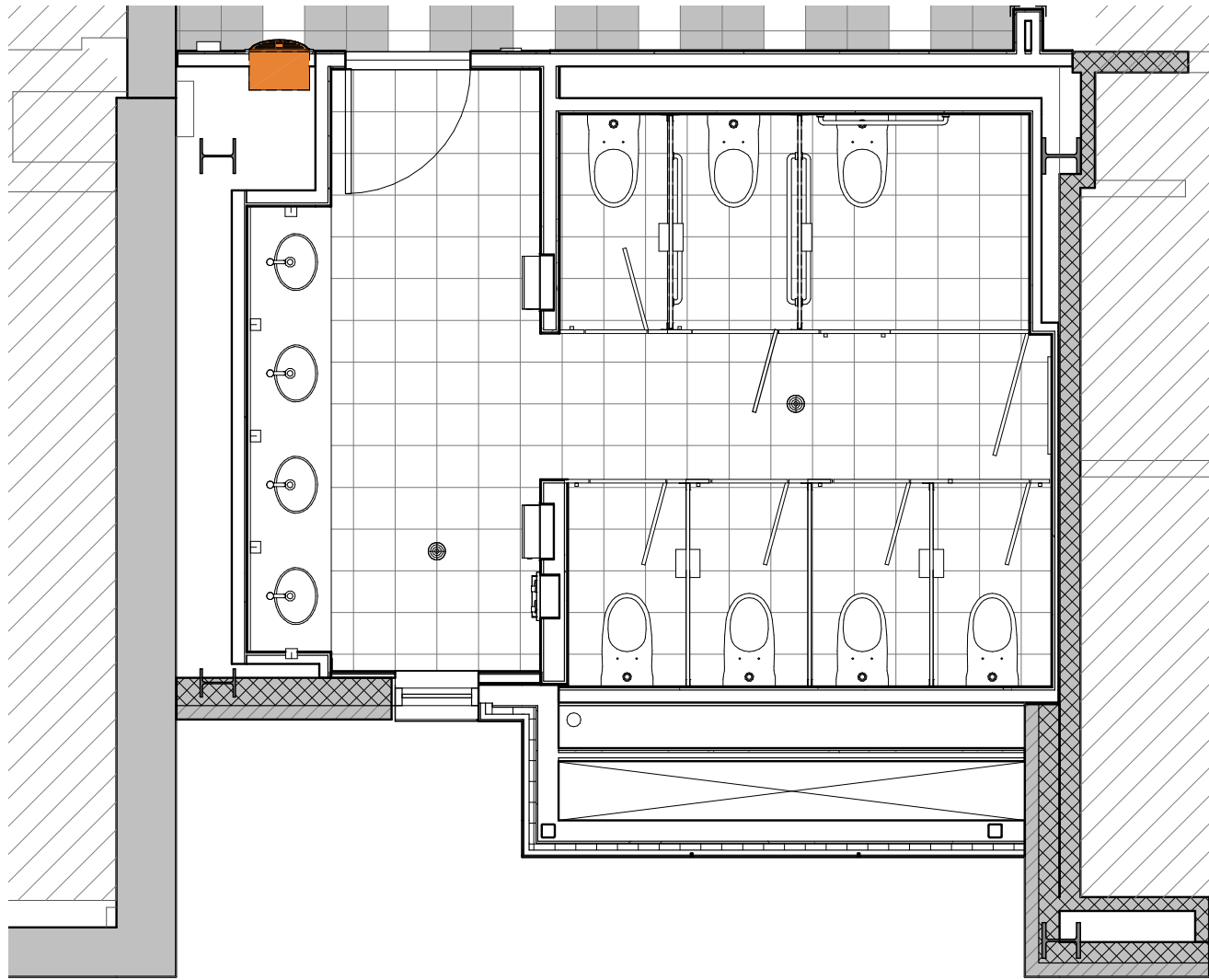
# LIGHT FIXTURES



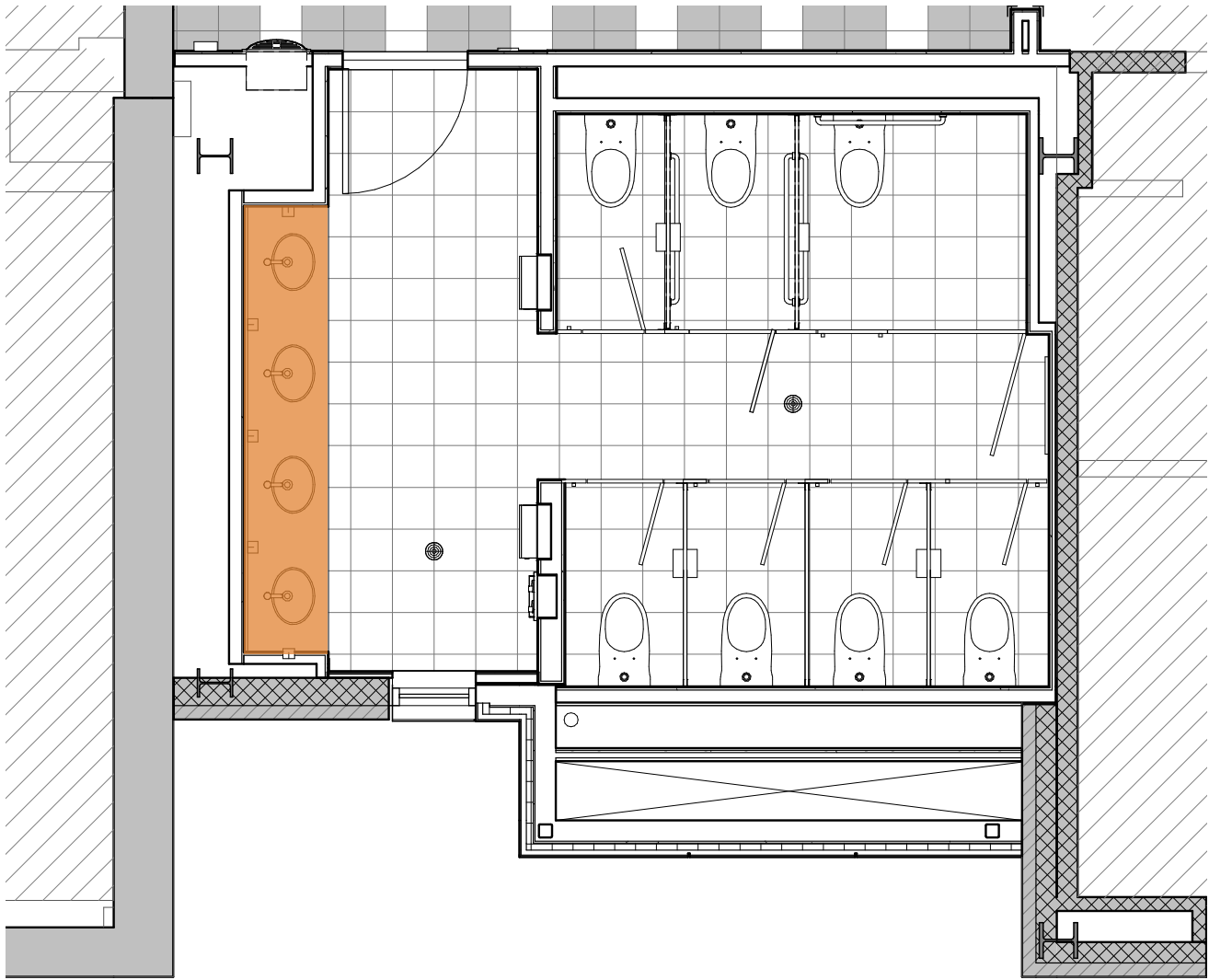
# LIGHT FIXTURES



# BOTTLE FILLER



# COUNTERTOPS



# DIFFUSERS

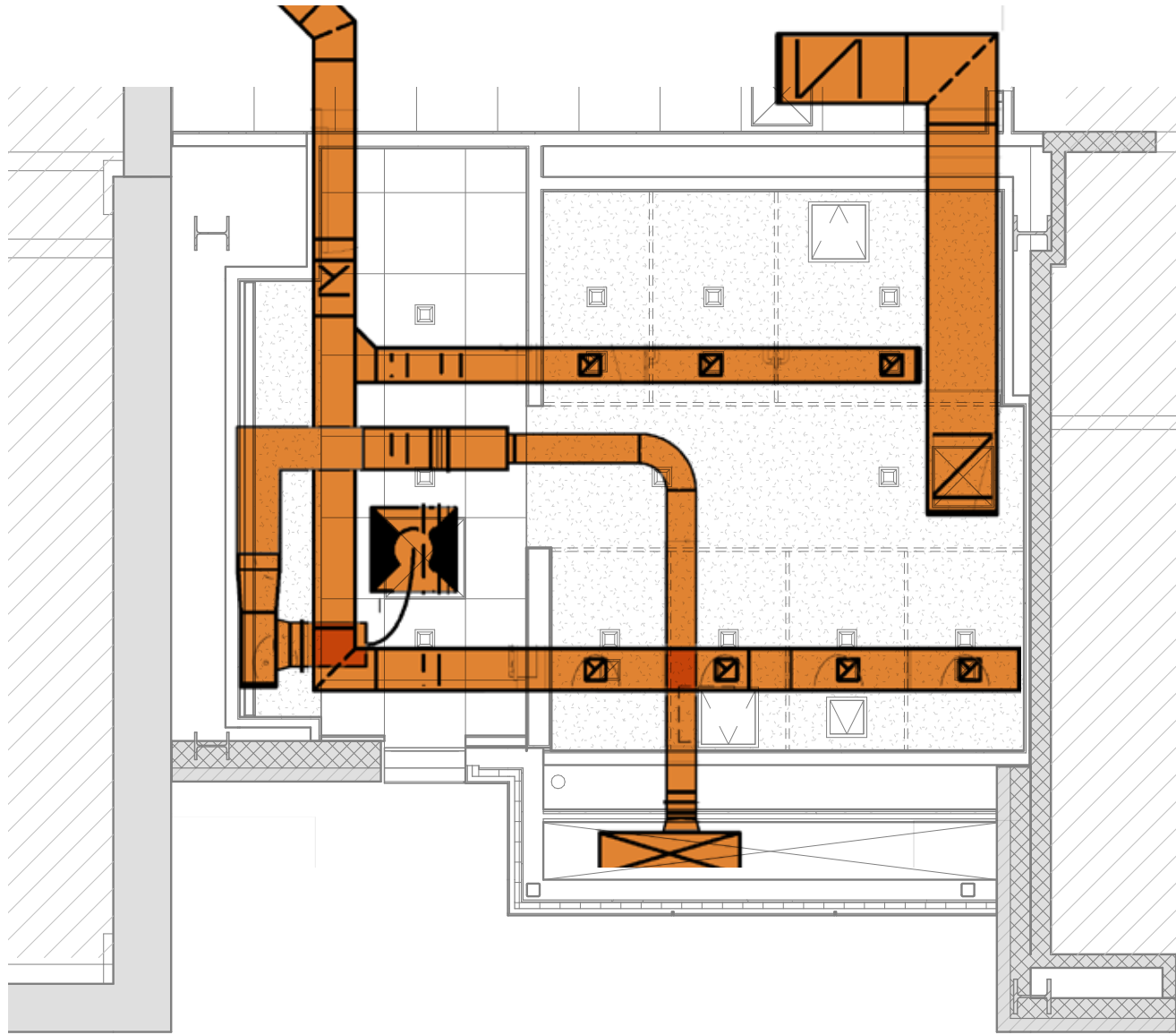


# DIFFUSERS

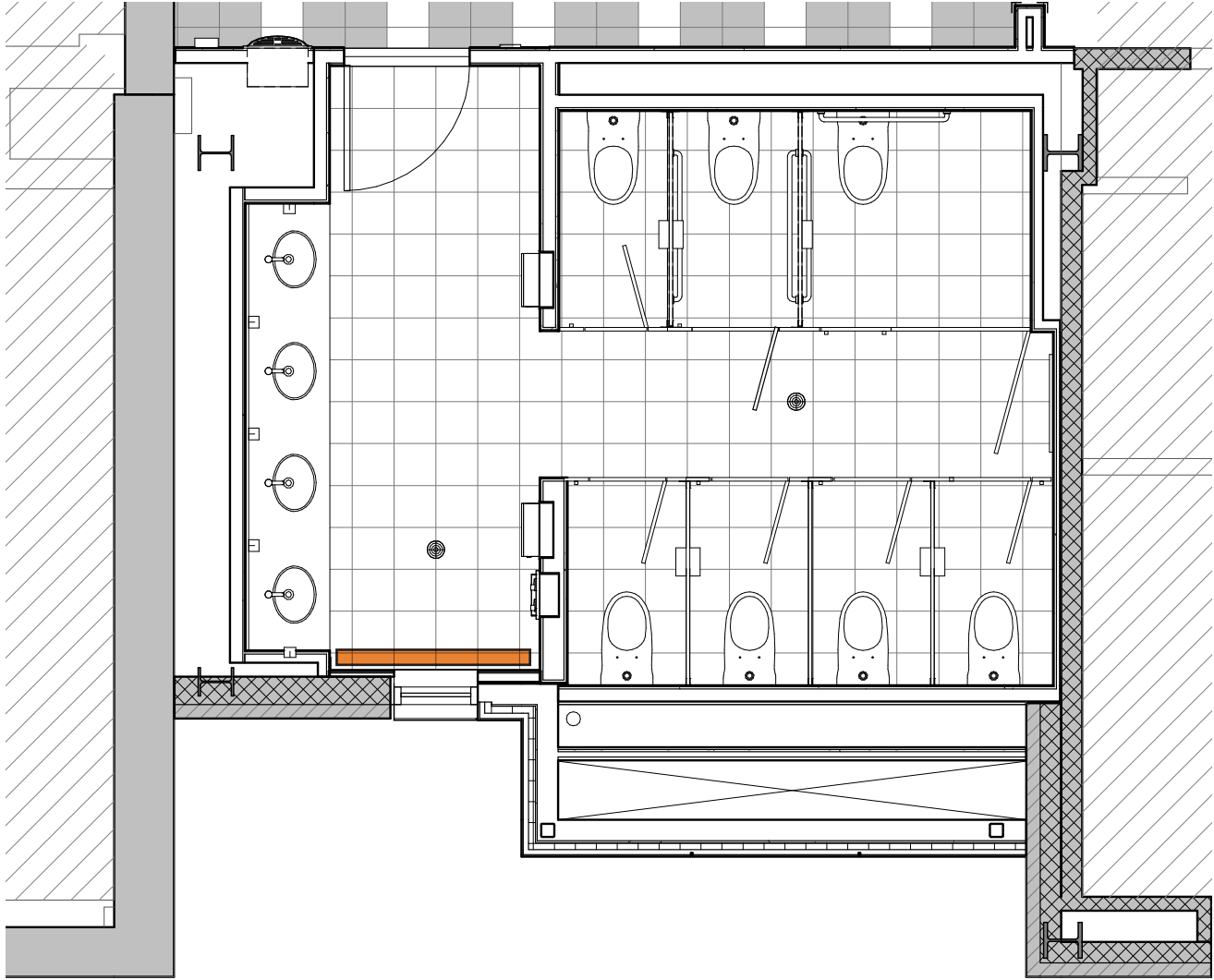




# DUCT WORK



# WALL UNIT HVAC





# FINISHES



# FINISHES

## FLOOR TILE



Daltile - Industrial Park Porcelain Tile  
Charcoal Gray in 12"x 12" format

Mapei Grout - Charcoal



# FINISHES

## WALL PAINT

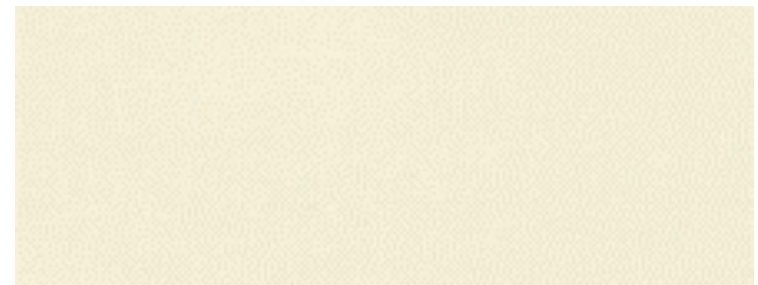


Popcorn



# FINISHES

## WALL TILE



Daltile - Modern Dimensions Ceramic Tile  
Biscuit in 4"x 12" format

Mapei Grout - Light Almond



# FINISHES

## COUNTERTOP



Wilsonart Solid Surface  
Morning Ice



# FINISHES

## SINK/TOILET ACCESSORIES



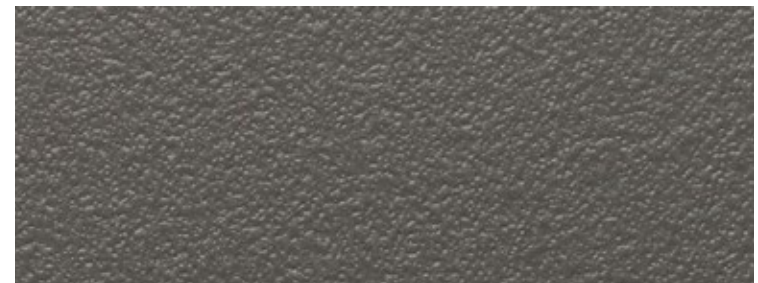
Stainless Steel





# FINISHES

## TOILET PARTITION



Scranton Products – Aria Partition  
Shale in Orange Peel finish



# FINISHES

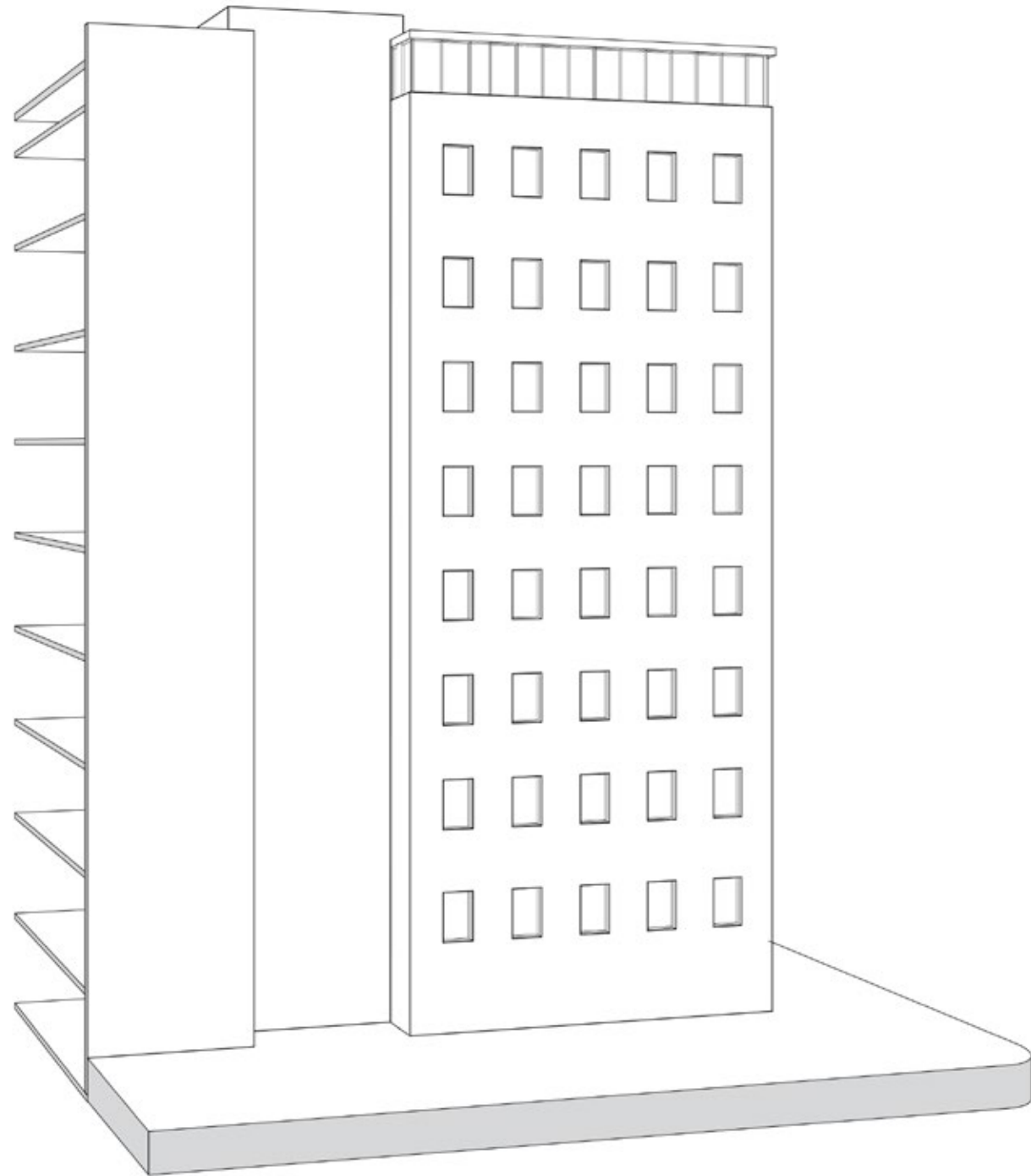
WOOD DOOR



Natural Maple

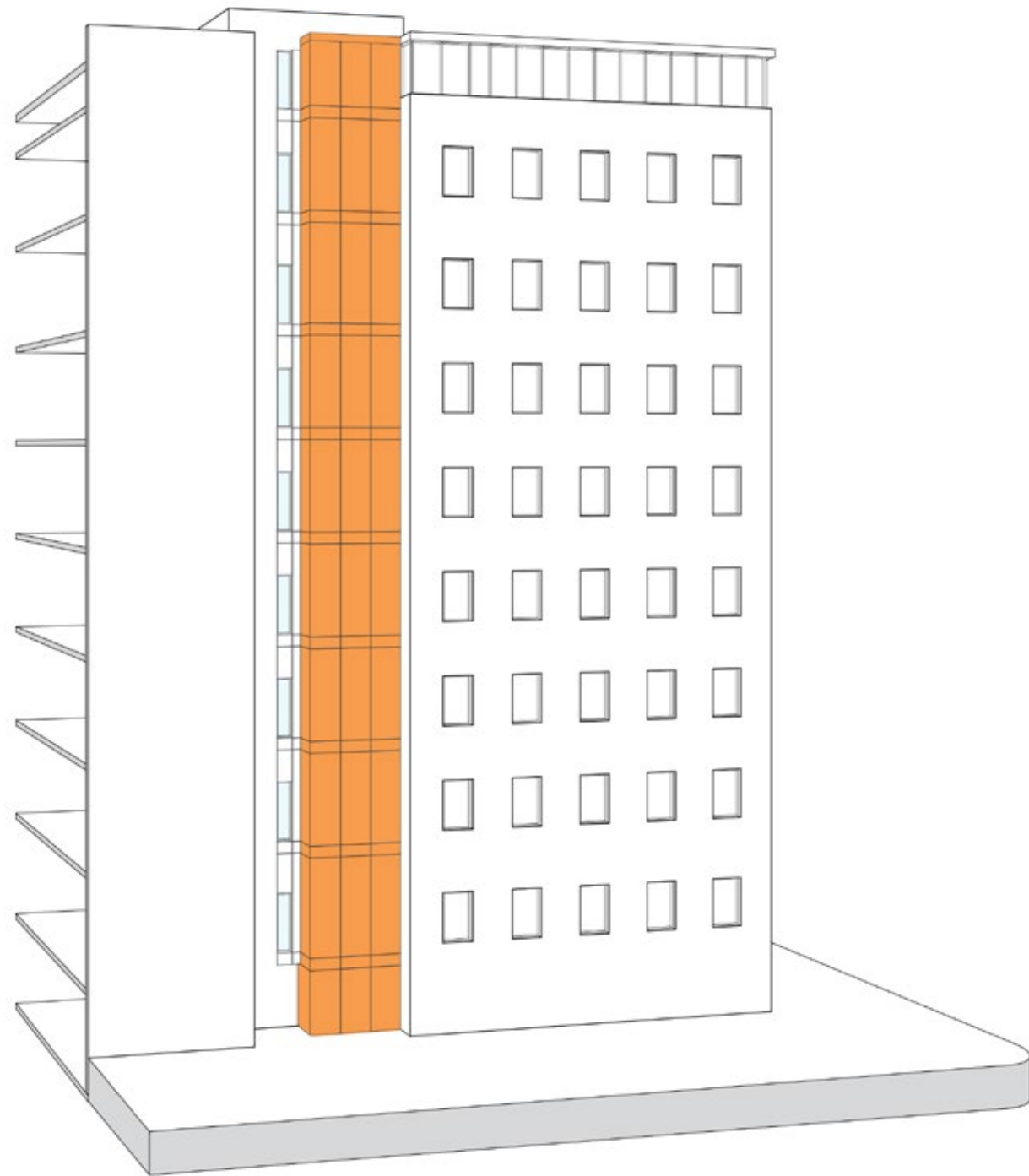


**THE APPROACH / EXTERIOR**



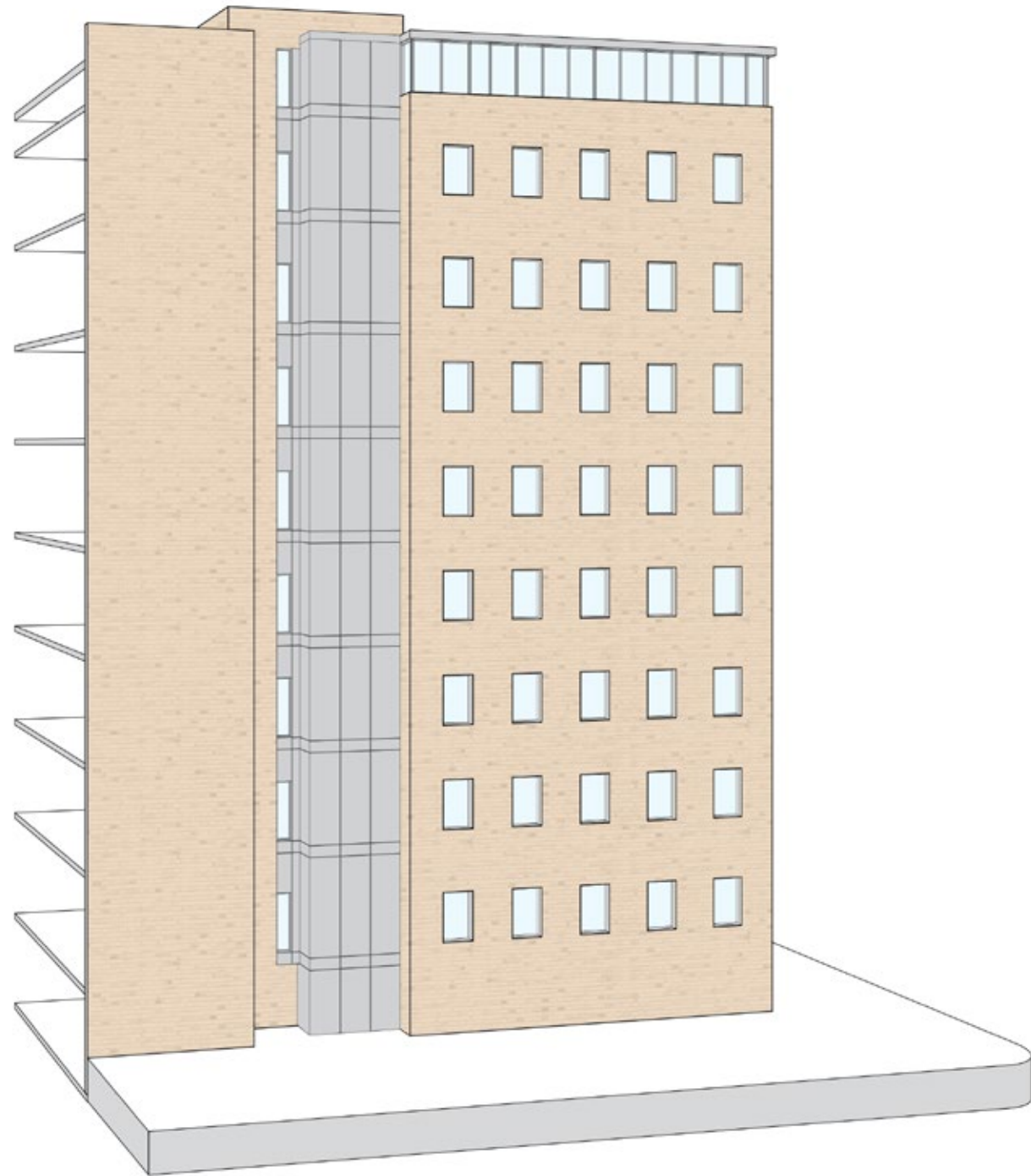
## EXISTING

- Recessed slot identified as an opportunity



## ADDITION

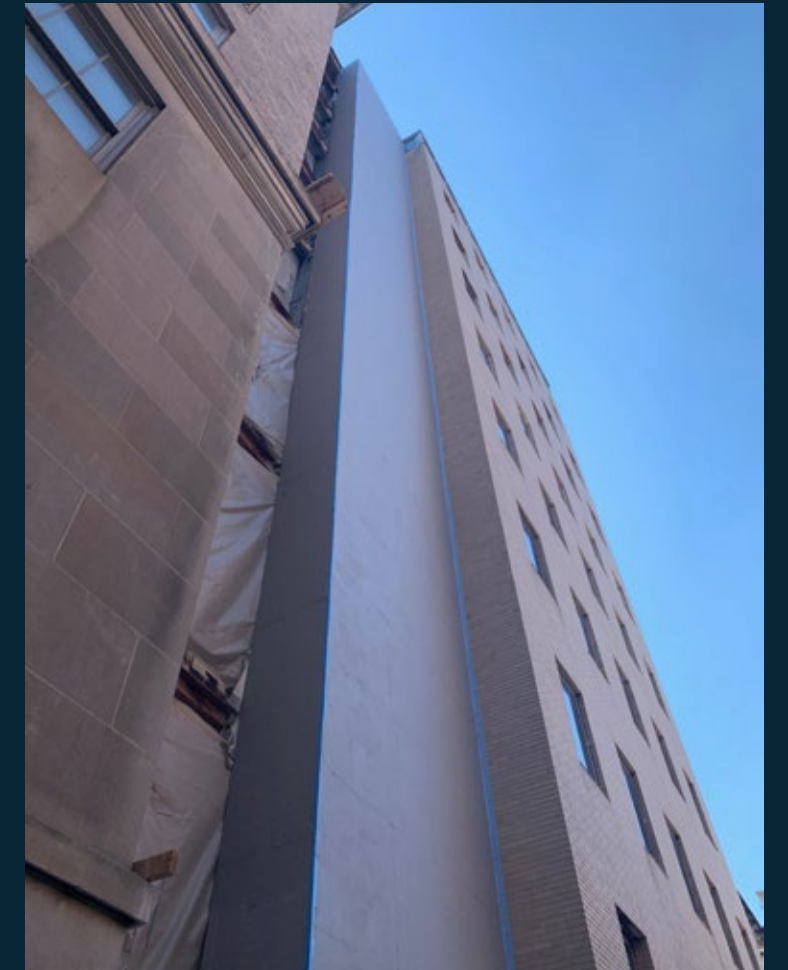
- Vertical exterior shaft discreetly placed in slot to provide supply + return air to the restrooms without using existing floor area (maintaining existing fixture quantity)
- Introduction of glazing to the communal grooming/washing area



## MATERIALITY

- Shaft clad in metal panel to match existing penthouse

# THE PROCESS





DESIGNING ALL-GENDER RESTROOMS  
GRID | JHSPH CASE STUDY





DESIGNING ALL-GENDER RESTROOMS  
GRID | JHSPH CASE STUDY



**BEFORE VS AFTER**









DESIGNING ALL-GENDER RESTROOMS  
GRID | JHSPH CASE STUDY







DESIGNING ALL-GENDER RESTROOMS  
GRID | JHSPH CASE STUDY









DESIGNING ALL-GENDER RESTROOMS  
GRID | JHSPH CASE STUDY







DESIGNING ALL-GENDER RESTROOMS  
GRID | JHSPH CASE STUDY





DESIGNING ALL-GENDER RESTROOMS  
GRID | JHSPH CASE STUDY





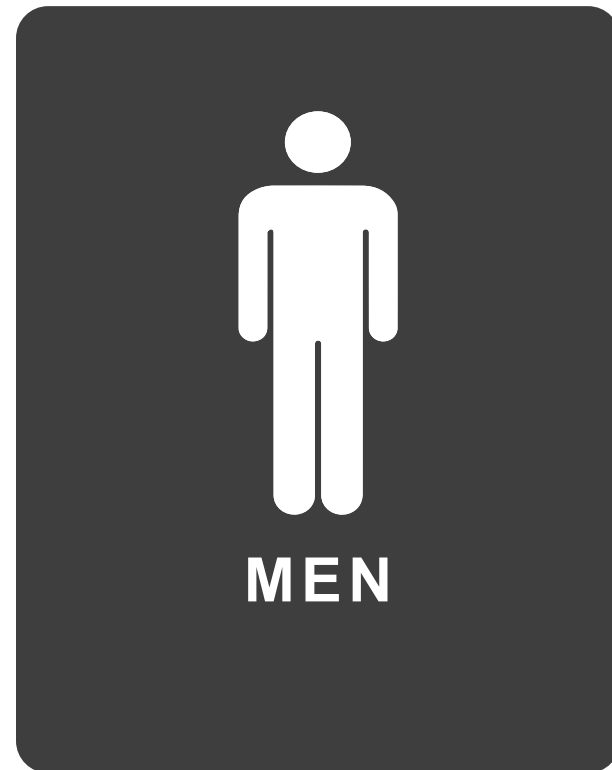
DESIGNING ALL-GENDER RESTROOMS  
GRID | JHSPH CASE STUDY

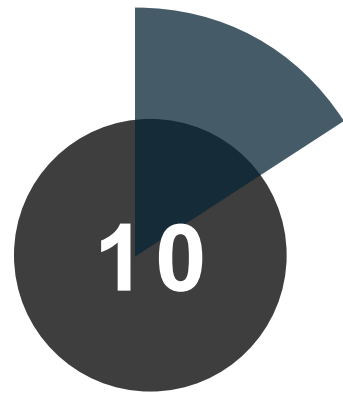
# RESULTS

A photograph of a public restroom, likely a school or office bathroom, featuring a long white vanity with three sinks. The vanity is set against a wall of white subway tiles. A large mirror is mounted above the vanity, reflecting the room. To the right of the vanity, there is a white paper towel dispenser and a white hand sanitizer dispenser. The floor is made of dark tiles. The entire image is overlaid with a dark blue tint, and the word "RESULTS" is written in large, white, bold, sans-serif capital letters across the center.

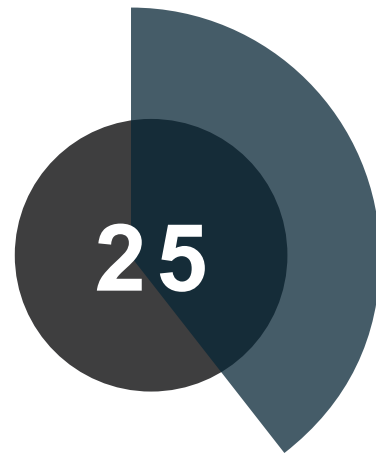




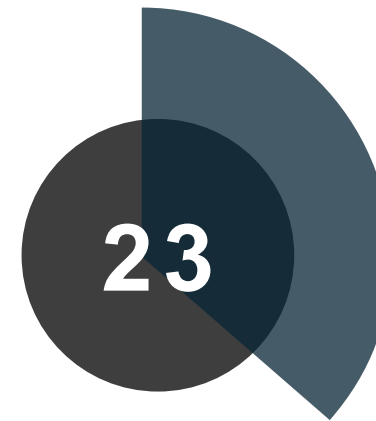




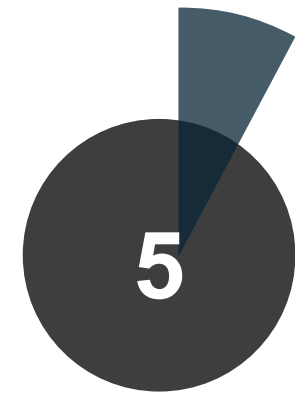
**ALL GENDER  
RESTROOMS**



**MEN'S  
ROOMS**

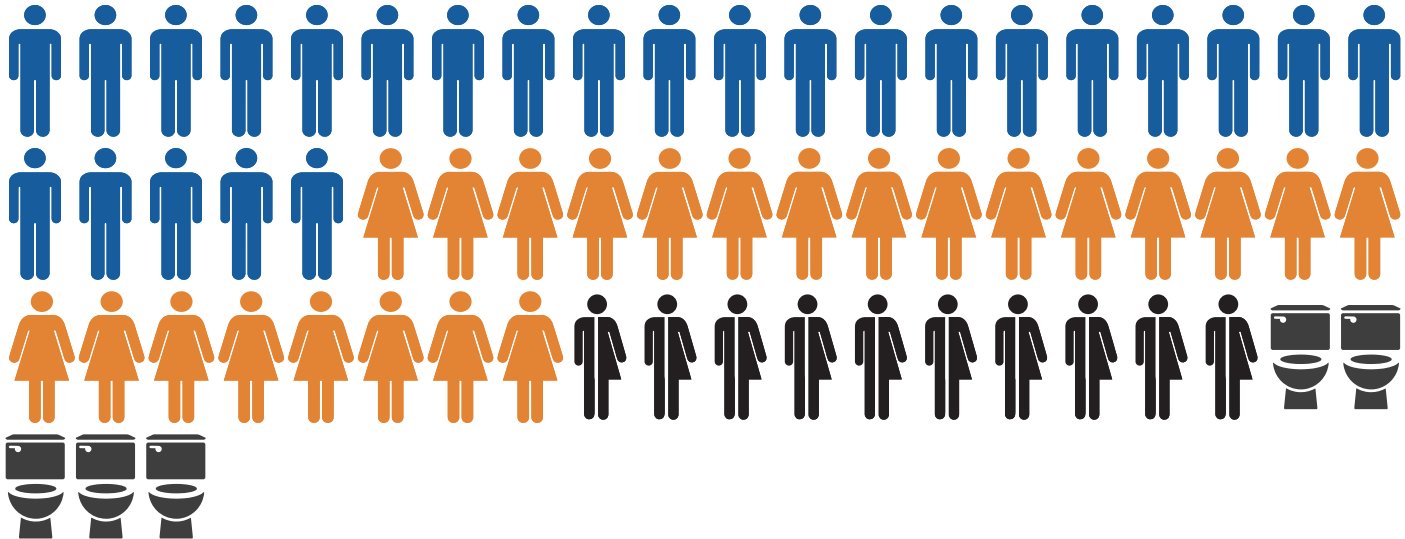


**WOMEN'S  
ROOMS**



**SINGLE STALL  
RESTROOMS**

# RESULTS



# MAINTENANCE

## PROS

- Tools/equipment reduce cleaning challenges presented by the tight space of the stalls
  - Flat mops
  - Cordless 'Moterscrubber'
- New finishes allow for ease of cleaning
- Granite counters and stainless steel sinks are more durable and less likely to stain as they are not porous
- Larger floor and wall tiles allow for less grouted area that requires time consuming maintenance
- Touchless faucet fixtures reduce the spread of germs
- Textured partitions are fingerprint resistant

## CONS

- Multiple and smaller individual stalls add to cleaning time of the restroom
- With exclusion of the handicap accessible stalls, the toilets sit low to the floor
- The elimination of urinals has increased the risk of urine splatter on partitions

# ENGINEERING

## PROS

- The same type of plumbing fixtures can be used within a gender-neutral bathroom as are used in a gendered bathroom.
- The piping sizes and quantities are largely the same. Some marginal savings can be realized if the fixtures can be grouped together, in lieu of split between two groups.
- Increased space efficiency may allow for additional fixtures over gendered bathrooms or individual unisex bathrooms.
- Floor drains can be located in the corridor outside of the compartments, in lieu of one drain in each.
- Urinals can be provided, if there is a dedicated compartment.
- Occupancy sensors are recommended to be placed only in the corridor and lavatory areas, in lieu of one in each compartment.

## CONS

- Ceiling mounted access doors are limited to approximately 24x24 and cannot span the partition wall, so careful planning of above ceiling aperture is necessary.
- Water Savings requirement for LEED can be challenging to meet without providing urinals.
- The compartments obstruct light distribution, requiring a downlight in each compartment.
- Full height partitions limit the size and quantity of devices.
- Because there is not a contiguous airpath, each compartment needs an exhaust grille sized for approximately 70-75 CFM. Each compartment door will need a small undercut to allow air into the space. This also promotes airflow from the bottom of the compartment to the top



# COMMUNITY REACTION





This restroom may be used by any person regardless of gender identity or expression.

**“We strive to protect the health and well-being of our students, faculty and staff, and foster an environment where everyone feels respected and valued.”**

*–Johns Hopkins Bloomberg School of Public Health*