

80 M ST, SE



Columbia  
Property Trust



Design Review Package 10.22.2019

ZONING COMMISSION  
District of Columbia  
CASE NO. 19-23  
EXHIBIT NO. 1

hickok cole

# Table of contents

01 COVER  
02 TABLE OF CONTENTS, PROJECT TEAM

## CONTEXT

03 ZONING MAP  
04 SURVEYOR'S PLAT  
05 FAR TABULATIONS  
06 SITE ANALYSIS  
07 CIRCULATION MAP  
08 EXISTING CONDITIONS  
09 ZONING DIAGRAMS  
10 MASSING CONCEPTS  
11 SE CORNER - FIRST & M

## MASS TIMBER

12 WHAT IS MASS TIMBER  
13 BENEFITS OF MASS TIMBER: SUSTAINABILITY  
14 BENEFITS OF MASS TIMBER: AESTHETICS & WELLNESS  
15 BENEFITS OF MASS TIMBER: STRUCTURAL STRENGTH AND FIRE SAFETY  
16 CONCEPT SECTION

## FLOOR PLANS

17 EXISTING - P3 FLOOR PLAN  
18 EXISTING - P2 FLOOR PLAN  
19 EXISTING - P1 FLOOR PLAN  
20 PROPOSED - 1ST FLOOR PLAN  
21 EXISTING - 2ND FLOOR PLAN  
22 EXISTING - TYPICAL FLOOR PLAN  
23 EXISTING - 7TH FLOOR PLAN  
24 PROPOSED - 8TH FLOOR PLAN  
25 8TH FLOOR TERRACE  
26 PROPOSED - 9TH FLOOR PLAN  
27 PROPOSED - 10TH FLOOR PLAN  
28 PROPOSED - ROOF PLAN

## DESIGN DRAWINGS

29 SOUTH ELEVATION  
30 SOUTH ELEVATION - NOTATED  
31 CROSS SECTION - NOTATED  
32 EXISTING ENTRY  
33 PROPOSED ENTRY  
34 GROUND FLOOR CONCEPT  
35 SOFFIT CONCEPT  
36 SOFFIT CONCEPT  
37 SOFFIT CONCEPT  
38 PARTIAL SECTION AT ENTRY  
39 PROPOSED ENTRY  
40 EAST ELEVATION  
41 EAST ELEVATION - NOTATED  
42 CROSS SECTION - NOTATED  
43 MATERIAL BOARD - EXISTING  
44 MATERIAL BOARD - PROPOSED  
45 MATERIAL BOARD - PROPOSED  
46 PROPOSED TERRACE & CANOPY  
47 PROPOSED ROOF TERRACE  
48 NORTH ELEVATION  
49 NORTH ELEVATION - NOTATED  
50 WEST ELEVATION  
51 WEST ELEVATION - NOTATED

## PROJECT TEAM

### OWNERSHIP:

COLUMBIA PROPERTY TRUST  
801 PENNSYLVANIA AVE, NW  
SUITE 801  
WASHINGTON DC, 20004  
202-750-1802

### ARCHITECT:

HICKOK COLE  
1023 31st STREET, NW  
WASHINGTON, DC 20007  
202-667-9776

### STRUCTURAL ENGINEER, MEP ENGINEER, CODE CONSULTANT, ACOUSTIC CONSULTANT:

ARUP  
1120 CONNECTICUT AVE, NW  
SUITE 1110  
WASHINGTON, DC 20036  
202.729.8220

### CIVIL & LANDSCAPE CONSULTANT:

WILES MENSCH  
11860 SUNRISE VALLEY DRIVE  
SUITE 200  
RESTON, VA 20191  
703.391.7600

### BUILDING ENVELOPE:

WISS, JANNEY, EISTNER ASSOCIATES, INC.  
2941 FAIRVIEW PARK DRIVE  
SUITE 300  
FALLS CHURCH, VA 22042  
703.641.4601

### SPEC WRITER:

HELLER & METZGER, PC  
1899 PENNSYLVANIA AVE, NW  
WASHINGTON, DC 20006  
202.364.2222

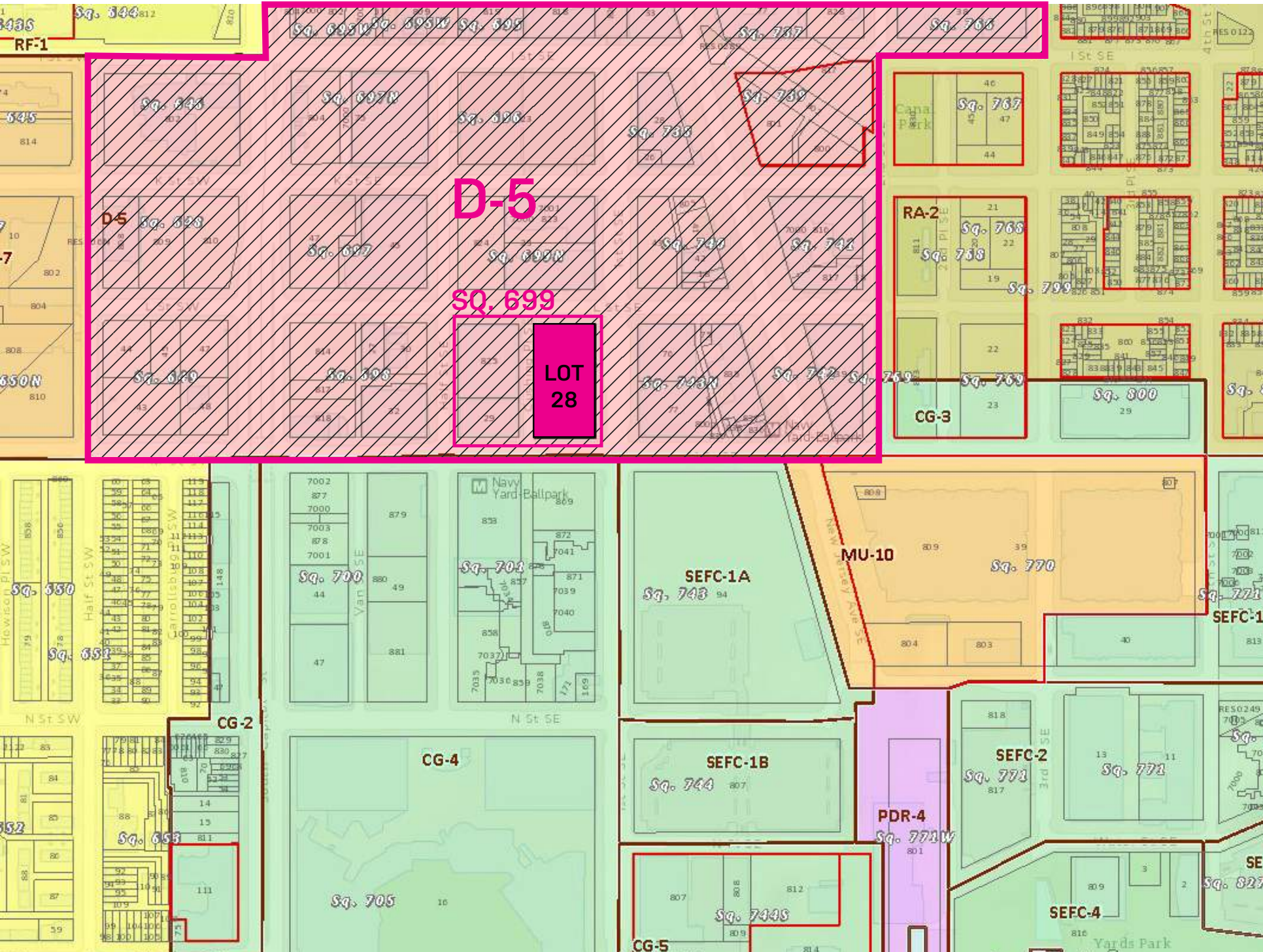
### LIGHTING:

CM + KLING ASSOCIATES, INC.  
1020 CAMERON STREET  
ALEXANDRIA, VA 22314  
703.684.6270

### VERTICAL TRANSPORTATION:

MICHAEL BLADES & ASSOCIATES, LTD  
5409 RAPIDAN COURT  
LOTHIAN, MD 20711  
410.798.8504

# Zoning Map



## 80 M STREET SE DESIGN REVIEW PACKAGE

### ZONING ANALYSIS

#### GENERAL AND ZONING CLASSIFICATIONS

OWNER: COLUMBIA PROPERTY TRUST  
 YEAR BUILT: 2000

NO. OF STORIES: 2 STORY ADDITION W/ OCCUPIED PENTHOUSE  
 7 STORIES OF EXISTING ABOVE GRADE  
 3 STORIES OF EXISTING PARKING BELOW GRADE

ZONE: D5  
 SQUARE/LOT: 699/0028  
 OVERLAY: SUB-AREA: M and SOUTH CAPITOL STREET  
 CREDIT TRADE: CREDIT TRADE AREA 7  
 HISTORIC DISTRICT: N/A  
 WARD: 6  
 ANC: 6D  
 PARCEL AREA: 45,117 SF

#### EXISTING BUILDING INFORMATION

HEIGHT: 89'-9" TO TOP OF PARAPET  
 STORIES: 7 ABOVE GRADE, 3 BELOW GRADE  
 CURRENT GSF: 290,760 SF  
 MEASURING PNT: EL. 27.5' (TOP OF CURB ALONG CUSHING PLACE)  
 VEHICLE PARKING: 295 SPACES PROVIDED - 181 STD + 114 TANDEM (162 SPACES REQ'D/ZR1958)  
 BICYCLE PARKING: NO LONG TERM PROVIDED/6 SHORT TERM EXISTING  
 LOADING: 3 LOADING BERTHS/3 LOADING PLATFORMS/1 DELIVERY SPACE

#### PROPOSED BUILDING INFORMATION

HEIGHT: 124'-11" (130' MAX HEIGHT ALLOWABLE FROM 1ST ST RIGHT OF WAY)  
 STORIES: 9 STORIES W/ HABITABLE PENTHOUSE  
 PROPOSED GSF: 378,266 GSF - TOTAL INCLUDES 4,458 GSF OF PENTHOUSE SPACE ABOVE 0.4 FAR PER SECTION C-1503.1(c)  
 MEASURING PNT: EL. 23.4' (MEASURED @ TOP OF CURB AT 1ST STREET)  
 LOT OCCUPANCY: 100%  
 REAR SETBACK: REAR SETBACK NOT PROVIDED AS LOT FRONTS THREE (3) OR MORE STREETS  
 FRONT SETBACK: 15'-0" FROM CURB ALONG M STREET PER SECTION I-616.6(b)  
 VEHICLE PARKING: 288 SPACES PROVIDED - 175 STD + 113 TANDEM (162 SPACES REQ'D/ZR1958)  
 BICYCLE PARKING: 43 LONG TERM SPACES PROVIDED/6 SHORT TERM TO REMAIN  
 LOADING: 3 LOADING BERTHS/3 LOADING PLATFORMS/1 DELIVERY SPACE

**DISTRICT OF COLUMBIA GOVERNMENT  
OFFICE OF THE SURVEYOR**

Washington, D.C., October 9, 2019

Plat for Building Permit of: **SQUARE 699 LOT 28**

Scale: 1 inch = 40 feet

Recorded in Book 156 Page 3

Receipt No. 20-00192 Drawn by: A.S.

Furnished to: **DIANA HERNDON**

"I hereby certify that the dimensions and configuration of the lot(s) hereon depicted are consistent with the records of the Office of the Surveyor unless otherwise noted, but may not reflect actual field measurements. The dimensions and configuration of A&T lots are provided by the Office of Tax and Revenue and may not necessarily agree with the deed description(s)."

I hereby certify that on this plat on which the Office of the Surveyor has drawn the dimensions of this lot, I have accurately and completely depicted and labeled the following:

1) all existing buildings and improvements - including parking spaces, covered porches, decks and retaining walls over four feet above grade, and any existing face-on-line or party wall labeled as such, well as projections and improvements in public space - with complete and accurate dimensions;

2) all proposed demolition or raze of existing buildings duly labeled as such; all proposed buildings and improvements - including parking spaces, covered porches, decks and retaining walls over four feet above grade, any existing face-on-line or party wall labeled as such, as well as projections and improvements in public space and the improvements used to satisfy nervous surface or green area ratio requirements - with complete and accurate dimensions, in conformity with the plans submitted with building permit application \_\_\_\_\_; and

3) any existing chimney or vent on an adjacent property that is located within 10 feet of this lot.

I also hereby certify that:

1) my depiction on this plat, as detailed above, is accurate and complete as of the date of my signature hereon;

2) there is no elevation change exceeding ten feet measured between lot lines; or if so, this elevation change is depicted on a site plan submitted with the plans for this permit application;

3) I have/have not (*circle one*) filed a subdivision application with the Office of the Surveyor;

4) I have/have not (*circle one*) filed a division of lots application with the Office of Tax & Revenue; and

5) if there are changes to the lot and its boundaries as shown on this plat, or to the proposed construction and plans as shown on this plat, that I shall obtain an updated plat from the Office of the Surveyor on which I will depict all existing and proposed construction and which I will then submit to the Office of the Zoning Administrator for review and approval prior to permit issuance.

I acknowledge that any inaccuracy or errors in my depiction on this plat will subject any permit or certificate of occupancy issued in reliance on this plat to enforcement, including revocation under Sections 105.6(1) and 110.5.2 of the Building Code (Title 12A of the DCMR) as well as prosecution and penalties under Section 404 of D.C. Law 4-164 (D.C. Official Code §22-2405).

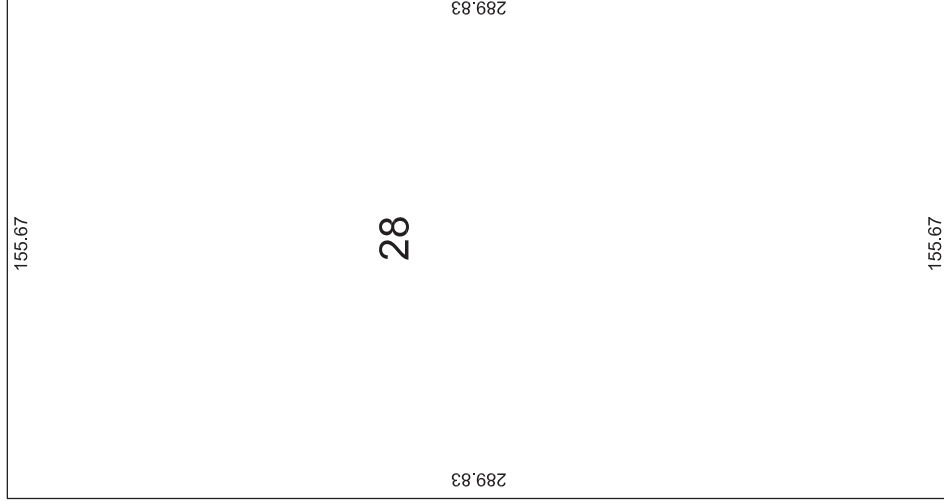
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Relationship to Lot Owner: \_\_\_\_\_

If a registered design professional, provide license number \_\_\_\_\_ and include stamp below.

Surveyor, D.C.

**L STREET, S.E.**



**CUSHING PLACE, S.E.**

**1st STREET, S.E.**

**M STREET, S.E.**



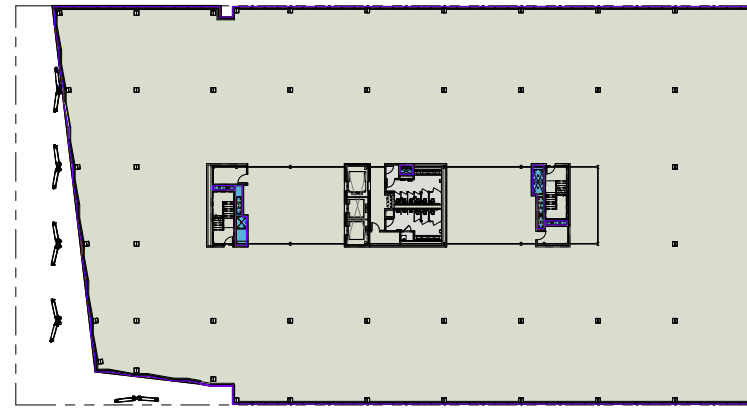
SCALE: 1"=40'

SR-20-00192(2019)  
\* E-MAIL

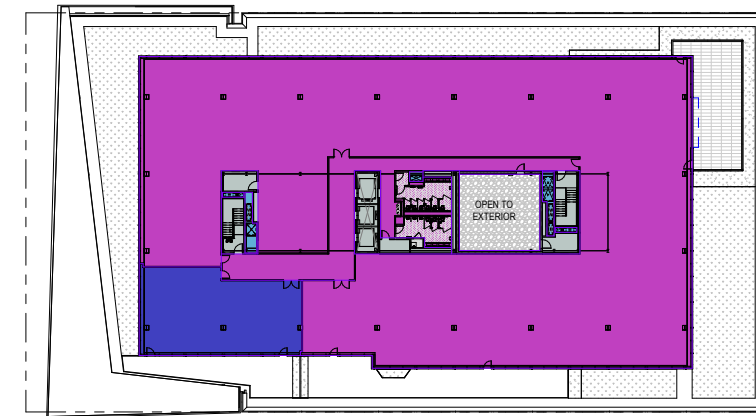
# FAR Tabulations



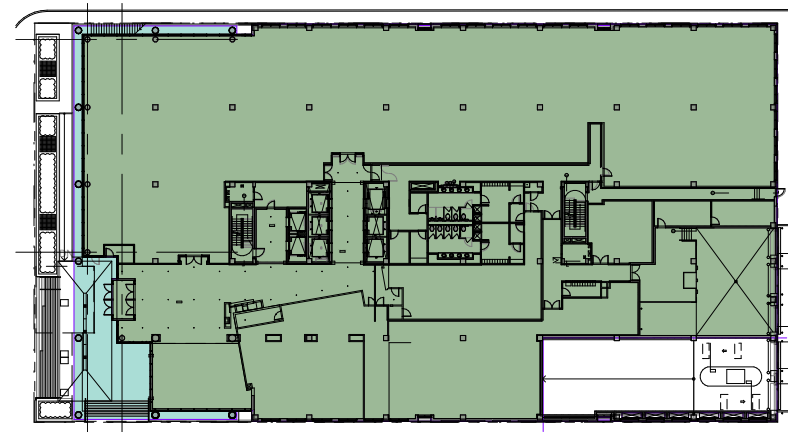
8th FLOOR - PROPOSED



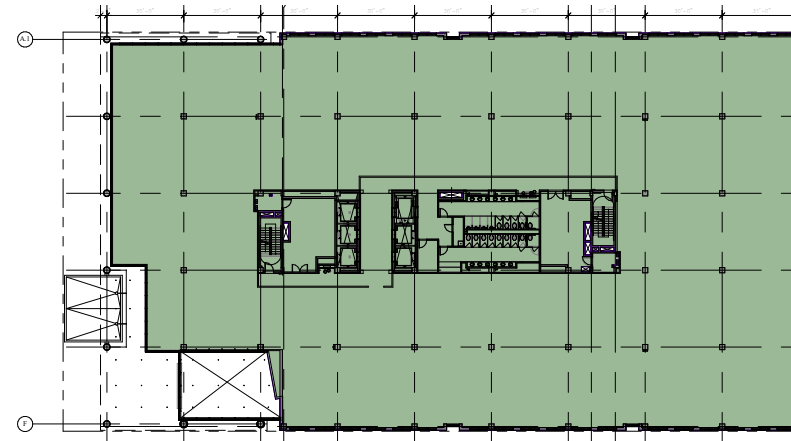
9th FLOOR - PROPOSED



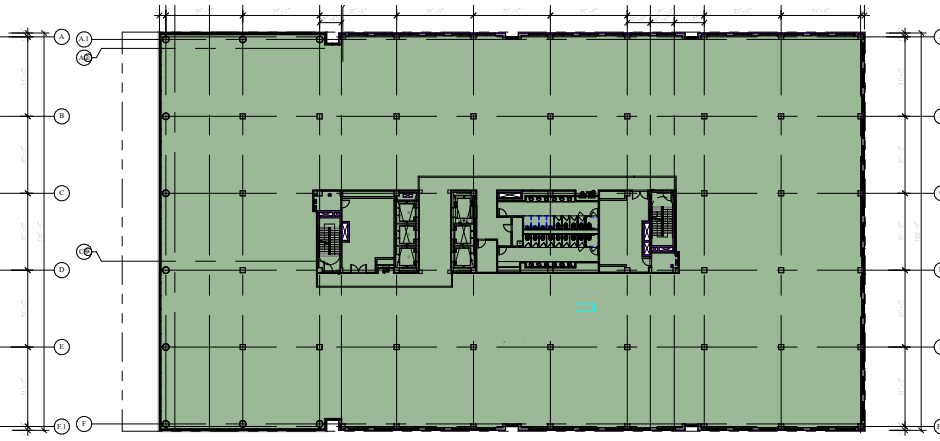
HABITABLE PENTHOUSE - PROPOSED



1ST FLOOR - EXISTING



2ND FLOOR - EXISTING



TYPICAL FLOOR 3-7 - EXISTING

## FAR CALCULATIONS

### FAR PLANS

- EXCLUDED - AMENITY
- EXCLUDED - COMMUNAL WORK AREA
- EXCLUDED - MECH
- FAR - EXISTING BUILDING
- FAR - EXISTING OVERHANG
- FAR - HABITABLE PENTHOUSE
- FAR - NEW BUILDING
- FAR - NEW OVERHANG
- FAR - OCCUPIABLE PENTHOUSE
- FAR - PENTHOUSE UTILITY SPACE
- GARAGE
- MAJOR VERTICAL PENETRATION

### EXISTING LEVELS

#### LEVEL 01

EXISTING BUILDING AREA	37,335 SGF
EXISTING OVERHANG	2,040 GSF
<b>TOTAL</b>	<b>39,375 GSF</b>

#### LEVEL 02

EXISTING BUILDING AREA	39,185 GSF
------------------------	------------

#### LEVEL 03-07

EXISTING BUILDING AREA	42,440 GSF
<b>TOTAL - 5 LEVELS</b>	<b>212,200 GSF</b>

<b>TOTAL</b>	<b>290,760 GSF</b>
--------------	--------------------

### PROPOSED LEVELS

#### LEVEL 08

PROPOSED BUILDING AREA	40,468 SGF
EXISTING OVERHANG	2,077 GSF
<b>TOTAL</b>	<b>42,545 GSF</b>

#### LEVEL 09

PROPOSED BUILDING AREA	40,504 GSF
------------------------	------------

#### HABITABLE PENTHOUSE

PROPOSED HABITABLE AREA [AREA ABOVE 0.4 FAR]	4,458 GSF
---	-----------

<b>TOTAL</b>	<b>87,507 GSF</b>
--------------	-------------------

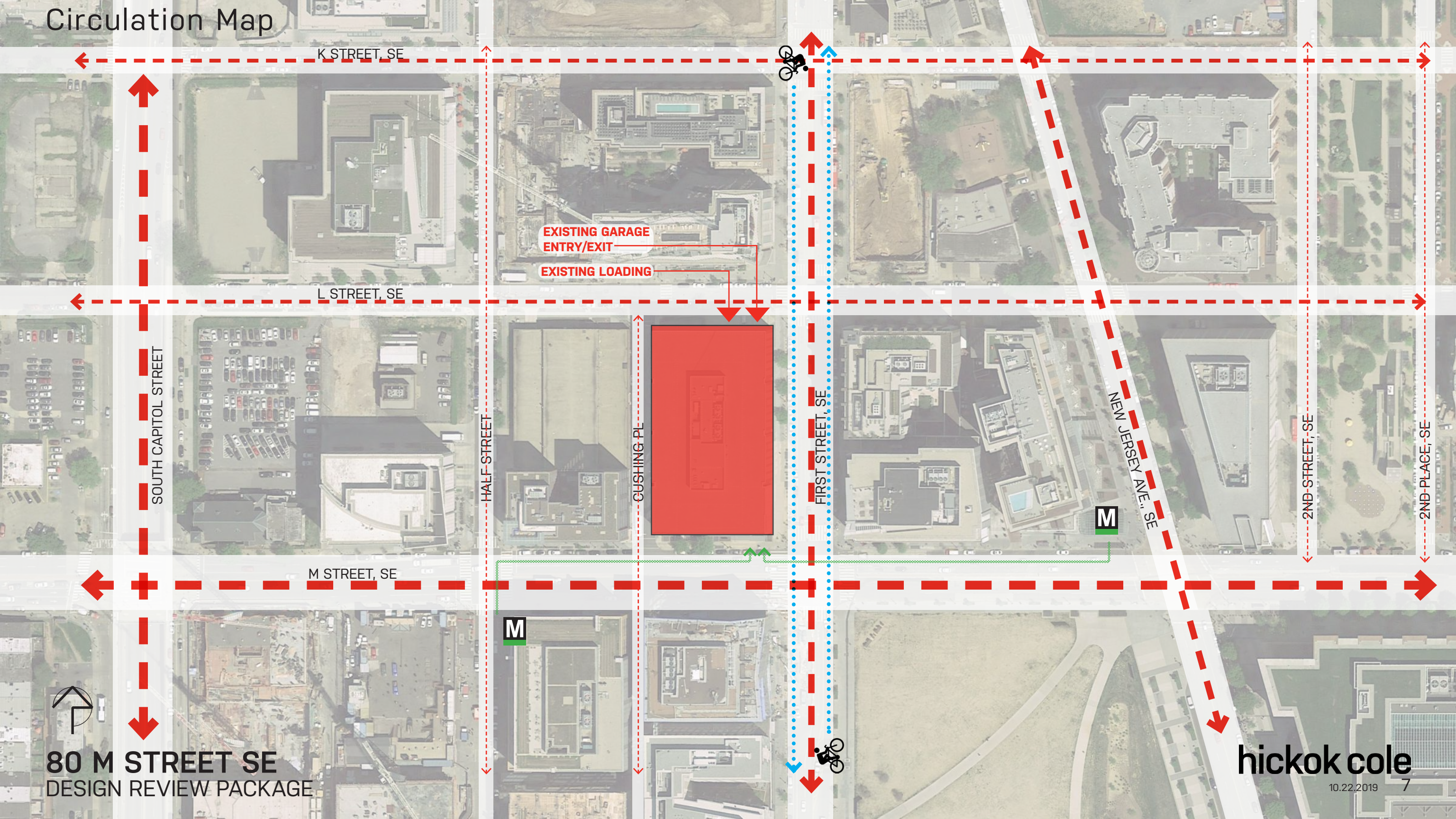
**TOTAL PROPOSED FAR - 378,267 GSF**

# Site Analysis



**80 M STREET SE**  
DESIGN REVIEW PACKAGE

# Circulation Map



K STREET, SE

L STREET, SE

M STREET, SE

SOUTH CAPITOL STREET

HALF STREET

CUSHING PL

FIRST STREET, SE

NEW JERSEY AVE., SE

2ND STREET, SE

2ND PLACE, SE

EXISTING GARAGE ENTRY/EXIT

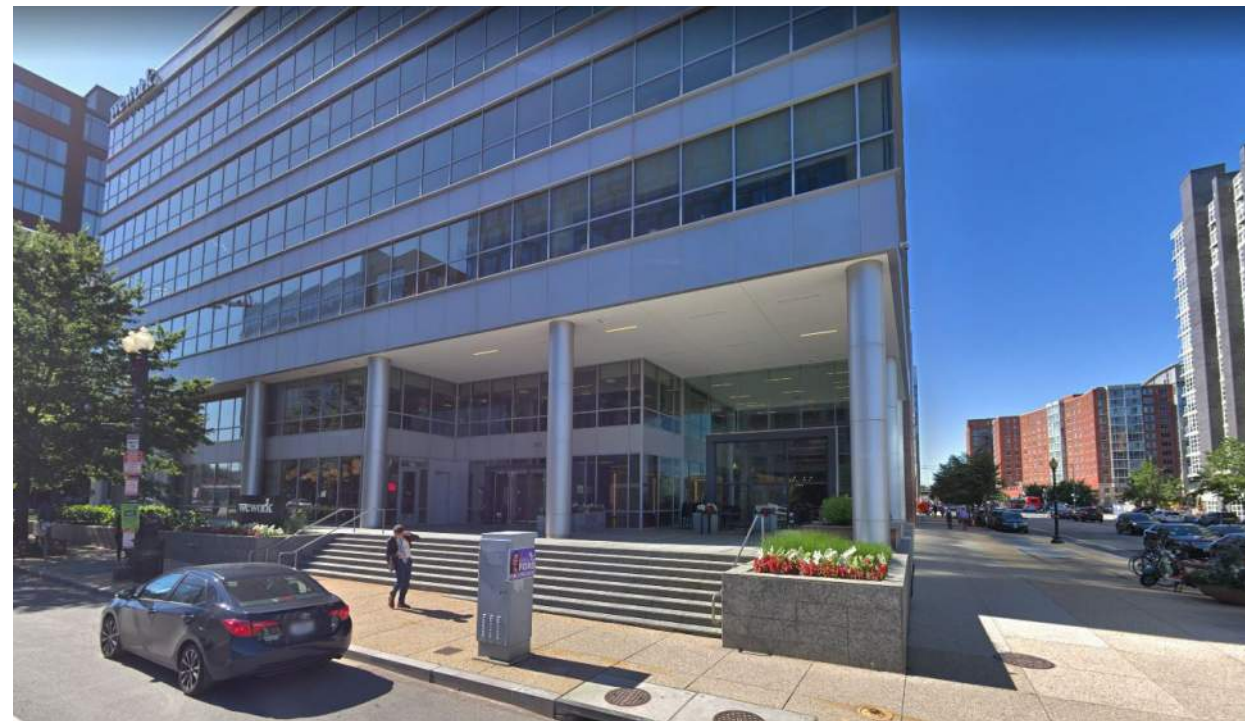
EXISTING LOADING

M

M

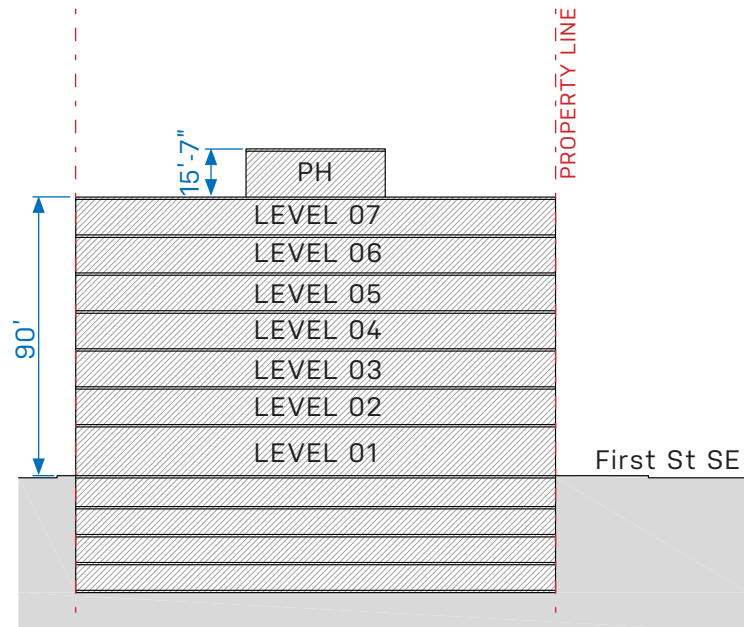
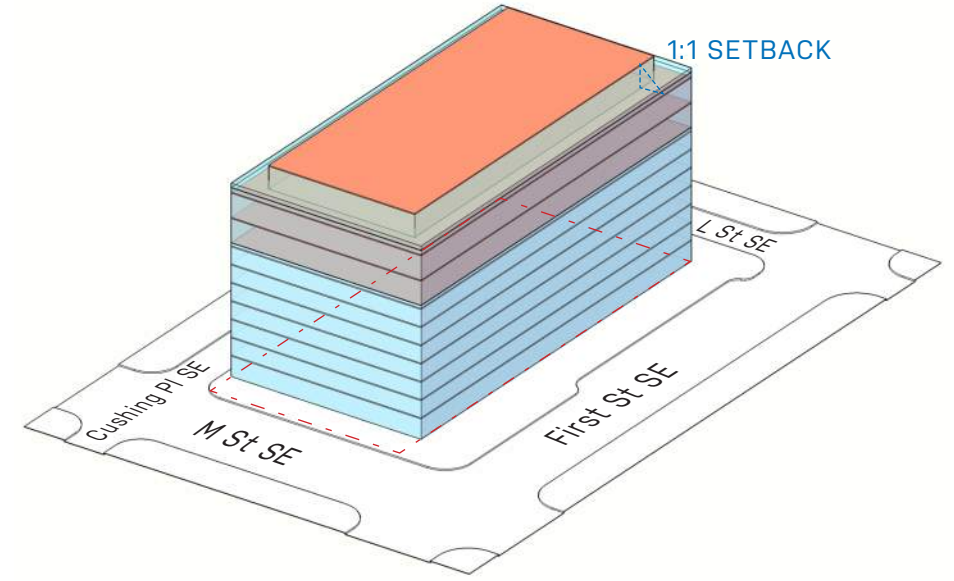
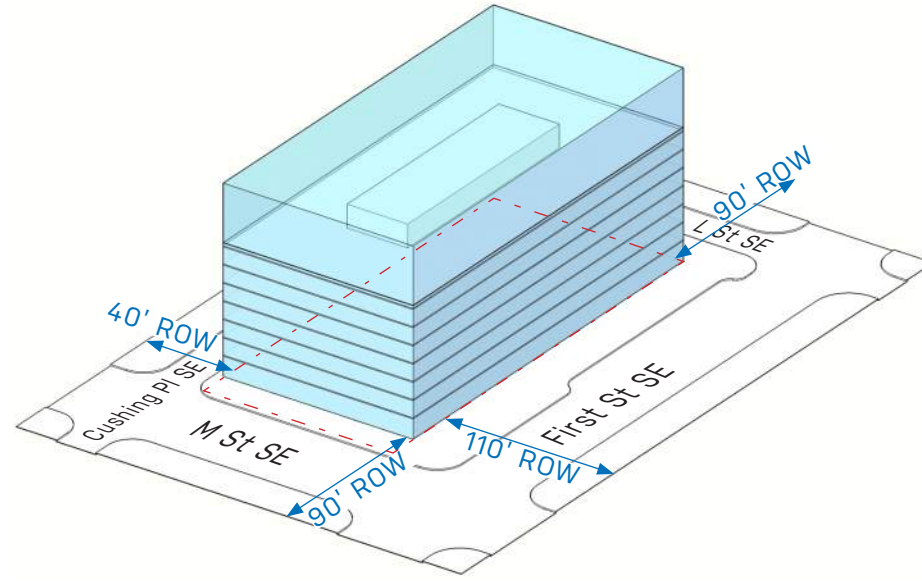
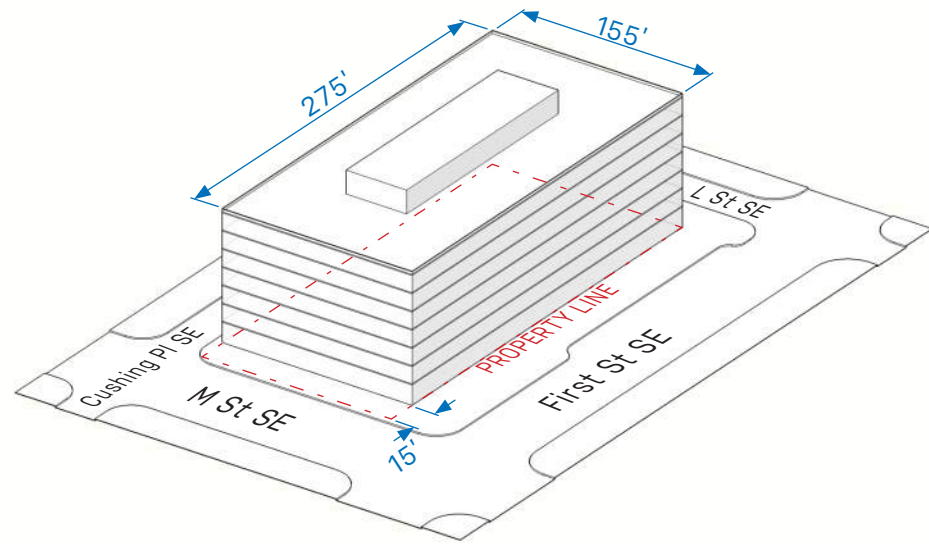


# Existing Conditions

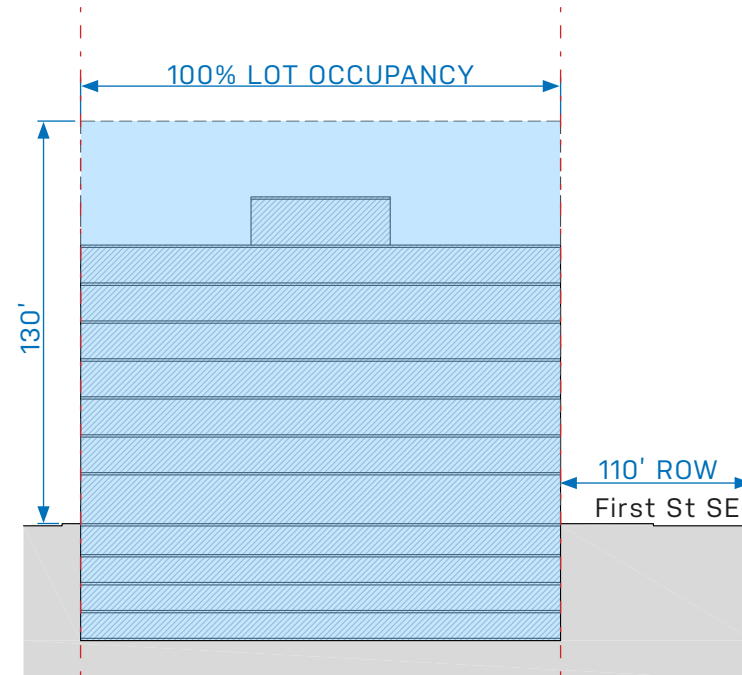




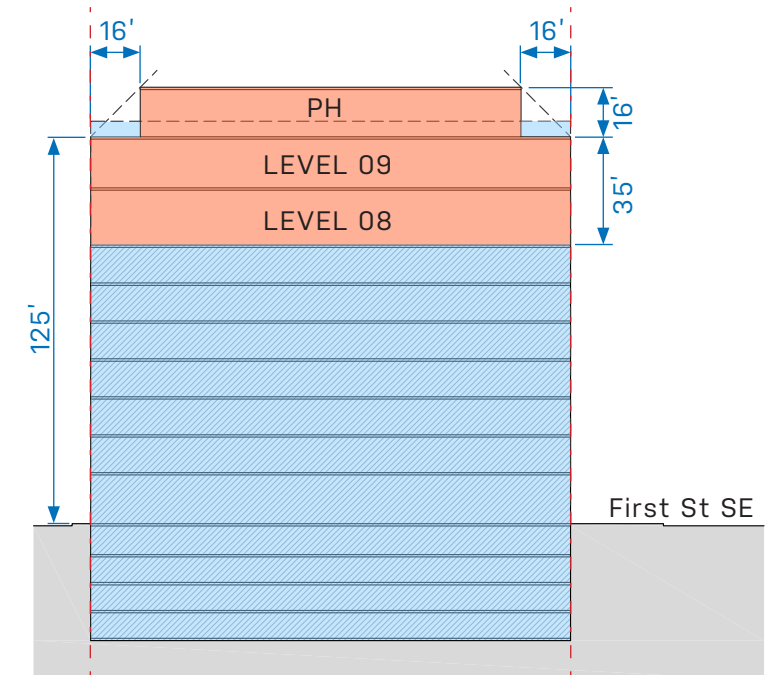
# Zoning Diagrams



EXISTING BUILDING

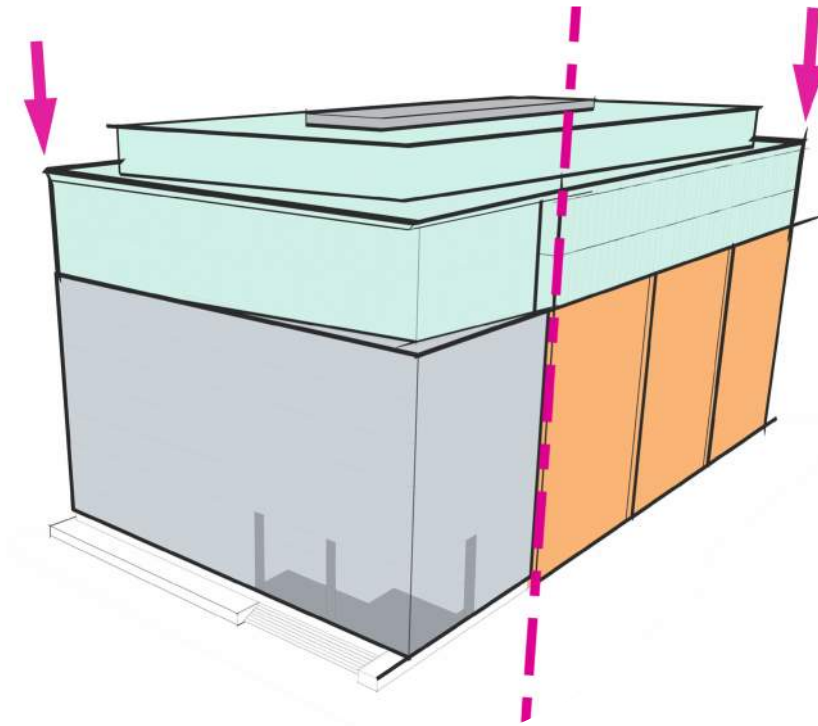


ZONING EXTENTS

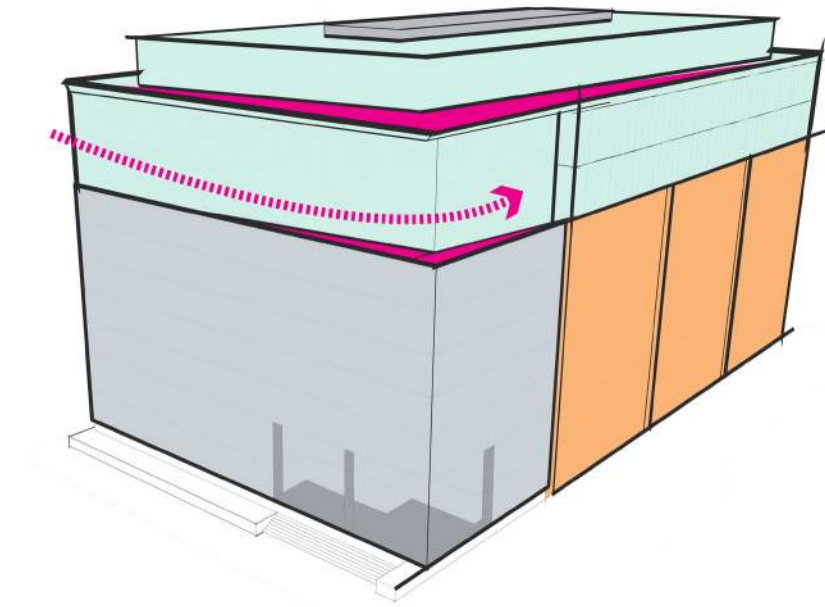


PROPOSED STRUCTURE

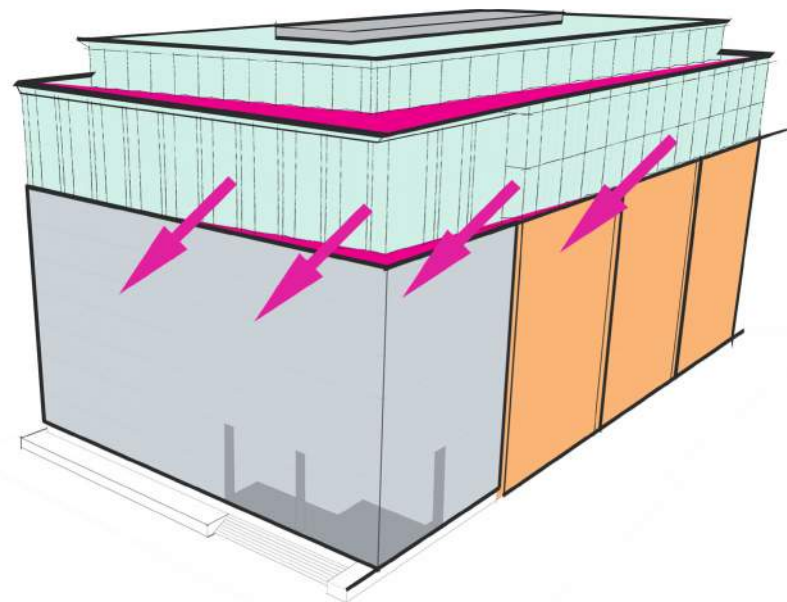
# Massing Concepts



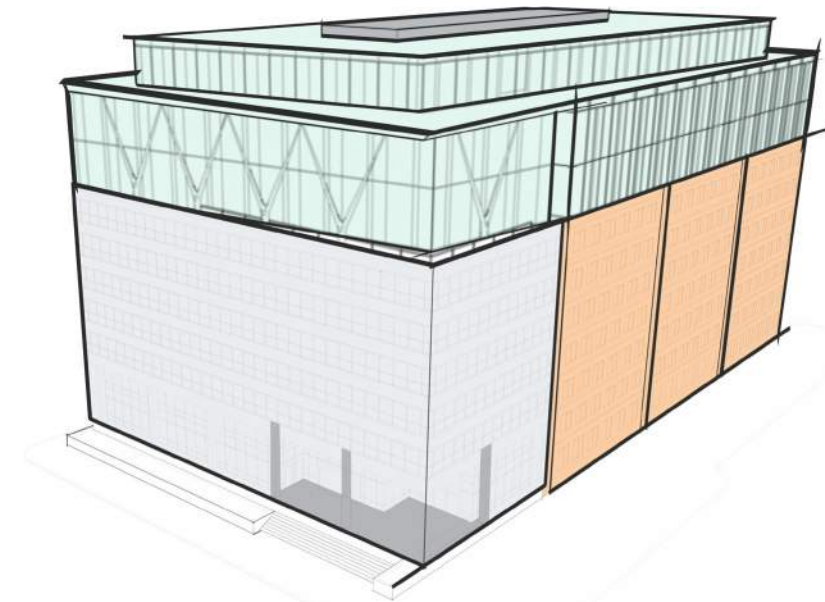
Hold SW & NE Corners



Fold Mass to Highlight Corner



Create Opportunities to Maximize Expansive View



Articulate Mass and Highlight Structure



## PARALLEL STRAND LUMBER

Composite of wood strands  
The strongest and stiffest  
wood product available. It  
is the most effective choice for  
beams. Unlike other heavy  
timbers, PSL is often used in  
applications because it can be  
created.

Manufacturing Process:  
1. Selection of log  
2. Cutting  
3. Drying into veneers  
4. Gluing and clipping  
5. Adhesive application  
6. Pressing  
7. Sanding and curing  
8. Cutting, marking, and packaging

Product Size:  
Up to 12" thick x 18" deep x 60' long  
Application:  
Beams, columns, and trusses

Trees Used:  
Douglas-Fir, Larch, Pacific Silver Fir,  
Yellow Pine, Western  
Hemlock, and Poplar

Fun Fact:  
PSL uses waste materials from  
plywood manufacturing

## NAIL-LAMINATED TIMBER

NLT is created by stacking dimensional  
lumber together on its edge and fastening it  
together with nails. Plywood sheathing can  
be added to one side to allow the product to  
be used as a wall panel. It is cheaper than  
other heavy timber options and more widely  
accepted in building codes because it is  
simple to make and simple to understand.

Manufacturing Process:  
1. Grading and selection of  
dimensional lumber  
2. Fastening individual dimensional  
lumber, stacked on edge, into  
one structural element with nails  
3. Installing the plywood sheathing  
(optional)  
4. Finishing the underside

Product Size:  
Up to 12" thick x 12" wide x 100' long,  
(width and length of panel only  
limited by shipping and erection  
constraints)

Application:  
Floors, decks, walls, roofs, stair and  
elevator shafts

Trees Used:  
Spruce-Pine-Fir, Douglas-Fir Larch,  
Alaska Yellow Cedar, Port Orford  
Cedar, Southern Yellow Pine, and  
many other species

Adhesive:  
Nails

Fun Fact:  
Nail-laminated timber has been  
used to build warehouses and  
factories for the past 150 years.  
It was previously referred to as  
heavy timber or mill decking.

## GLUE-LAMINATED TIMBER

Glulam is an engineered product made  
of two or more layers of lumber glued  
together with the grain of all layers running  
parallel to the length. Its composition  
enables the production of a variety of sizes  
and shapes, including curves. Glulam's size  
is limited only by the manufacturing and  
transportation capabilities. Glulam has  
many advantages over sawn lumber, such  
as greater size and strength.

Manufacturing Process:  
1. Selection of dimensional lumber  
2. Splicing and joining with staggered  
finger joints  
3. Adhesive application  
4. Pressing  
5. Sanding  
6. Cutting, marking, and packaging

Product Size:  
Up to 20" thick x 7' wide

Application:  
Beams, columns, arches, trusses, and walls

Trees Used:  
Douglas-Fir Larch, Southern Yellow Pine,  
Hem-Fir, and Spruce-Pine-Fir

Fun Fact:  
Glulam's earliest use can be traced to a  
bridge built in Bavaria, Germany in the early  
1800s. However, it wasn't until World War II  
that glulam flourished as a building material  
due to developments in waterproof glues  
and fabrication technologies.

## CROSS-LAMINATED TIMBER

CLT consists of several boards stacked  
and glued together. To obtain specific  
consecutive layers may be placed in  
A typical CLT cross-section contains

Manufacturing Process:  
1. Lumber selection (each piece is  
2. Lumber grouping and planing  
3. Adhesive application  
4. Panel lay-out and pressing  
5. Cutting, marking, and packaging

Product Size:  
Up to 15" thick x 10' wide x 64' long

Application:  
Walls, floors, roofs, stair and elevator

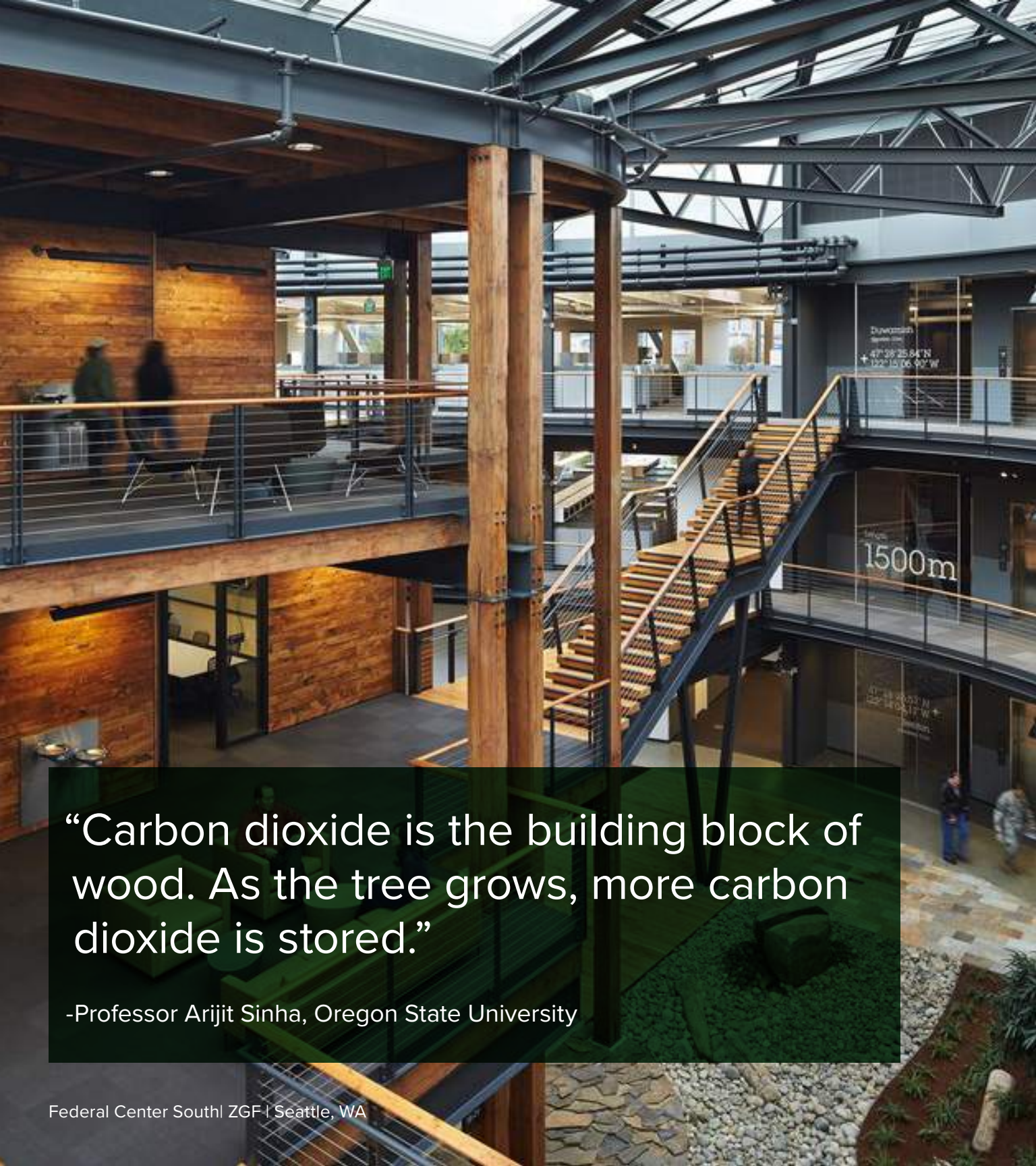
Trees Used:  
Douglas-Fir, Spruce-Pine-Fir, South  
and Alaska Yellow Cedar

Fun Fact:  
To fabricate CLT, some wood manu-  
facturers kill the Mountain Pine B

# WHAT IS MASS TIMBER?

The term “mass timber construction” is different from light-wood frame, stick-frame or even heavy timber post-and-beam structures. Mass timber usually refers to timber products engineered for loads similar in strength to structural materials like concrete and steel. -USGBC

- **Cross-Laminated Timber (CLT):**  
Panels consisting of three, five, or seven layers of lumber oriented at right angles to one another and glued together.
- **Nail-laminated Timber (NLT):**  
Panels created by fastening individual layers of lumber, stacked on edge, into one structural element with nails.
- **Glue-Laminated Timber (Glulam):**  
Usually beams or columns composed of individual lumber laminations and then glued together.
- **Parallel Strand Lumber (PSL):**  
Usually beams or columns manufactured by gluing strands of wood together under pressure.



“Carbon dioxide is the building block of wood. As the tree grows, more carbon dioxide is stored.”

-Professor Arijit Sinha, Oregon State University

## BENEFITS OF MASS TIMBER: SUSTAINABILITY

- Wood sequesters carbon for the life-cycle of its usage, especially when harvested from sustainably managed forests
- Mass timber buildings can be 30-40% of the weight of an equally sized concrete structure, which also means:
  - » foundations don't have to be as large,
  - » they require less fuel to get to construction site<sup>1</sup>
- 2014 study published in the Journal of Sustainable Forestry, found the ability to reduce global CO<sub>2</sub> emissions by 15-20% if CLT were used instead of steel
- Can have a total carbon footprint a third smaller than similarly sized steel and concrete buildings
- Reduces thermal bridging and performs well as an insulator, R-value = 1.25/inch of thickness (10x concrete, 400x steel)
- Wood from beetle-kill pines can be used in mass timber products

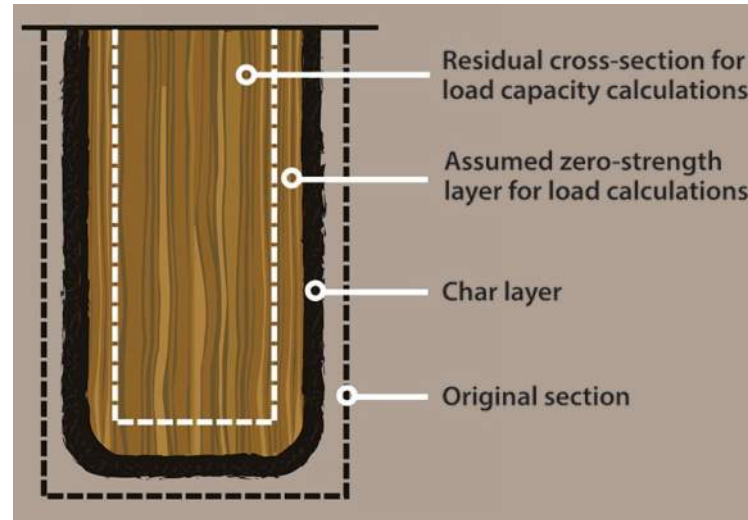
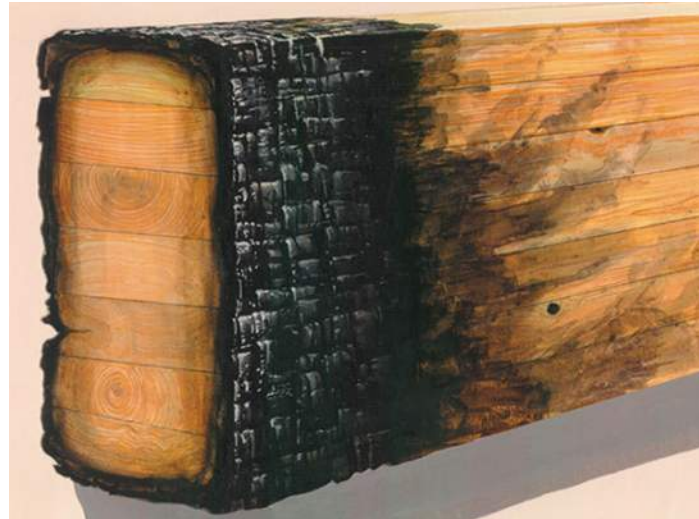
<sup>1</sup> Engadget, 'Timberscrapers' Could Soon Dominate Urban Skylines, <https://www.engadget.com/2017/09/28/timberscrapers-dominate-urban-skylines/>



## BENEFITS OF MASS TIMBER: AESTHETICS & WELLNESS

- Use of natural textures and biophilic design can combat absenteeism, presenteeism, information retention, hospital recovery times<sup>1</sup>
- Evidence suggests that wood, like other biophilic materials, provide health benefits and reduce stress<sup>2</sup>
- In a study presence of visual wood surfaces in a room lowered sympathetic nervous system (physiological stress) activation<sup>3</sup>
- Lower heart rate and blood pressure have been observed in lab settings when the scent of alpha-pinene (pine tree oil) is present<sup>4</sup>
- A 2015 study<sup>5</sup> of 7,600 workers noted that workers in environments with natural elements reported:
  - » 15% higher level of wellbeing
  - » 6% higher level of productivity
  - » 15% higher levels of creativity

1 2012, The Economics of Biophilia, Terrapin Bright Green  
2 2015, Wood as a Restorative Material in Healthcare Environments, FPIInnovations & Design with Science  
3 2011, University of British Columbia and FPIInnovations Wood and Human Health study  
4 2014, University of Tokyo and Forestry Products Research Institute of Japan  
5 2015, Human Spaces: The Global Impact of Biophilic Design in the Workplace, Interface



## BENEFITS OF MASS TIMBER: **STRUCTURAL STRENGTH AND FIRE SAFETY**

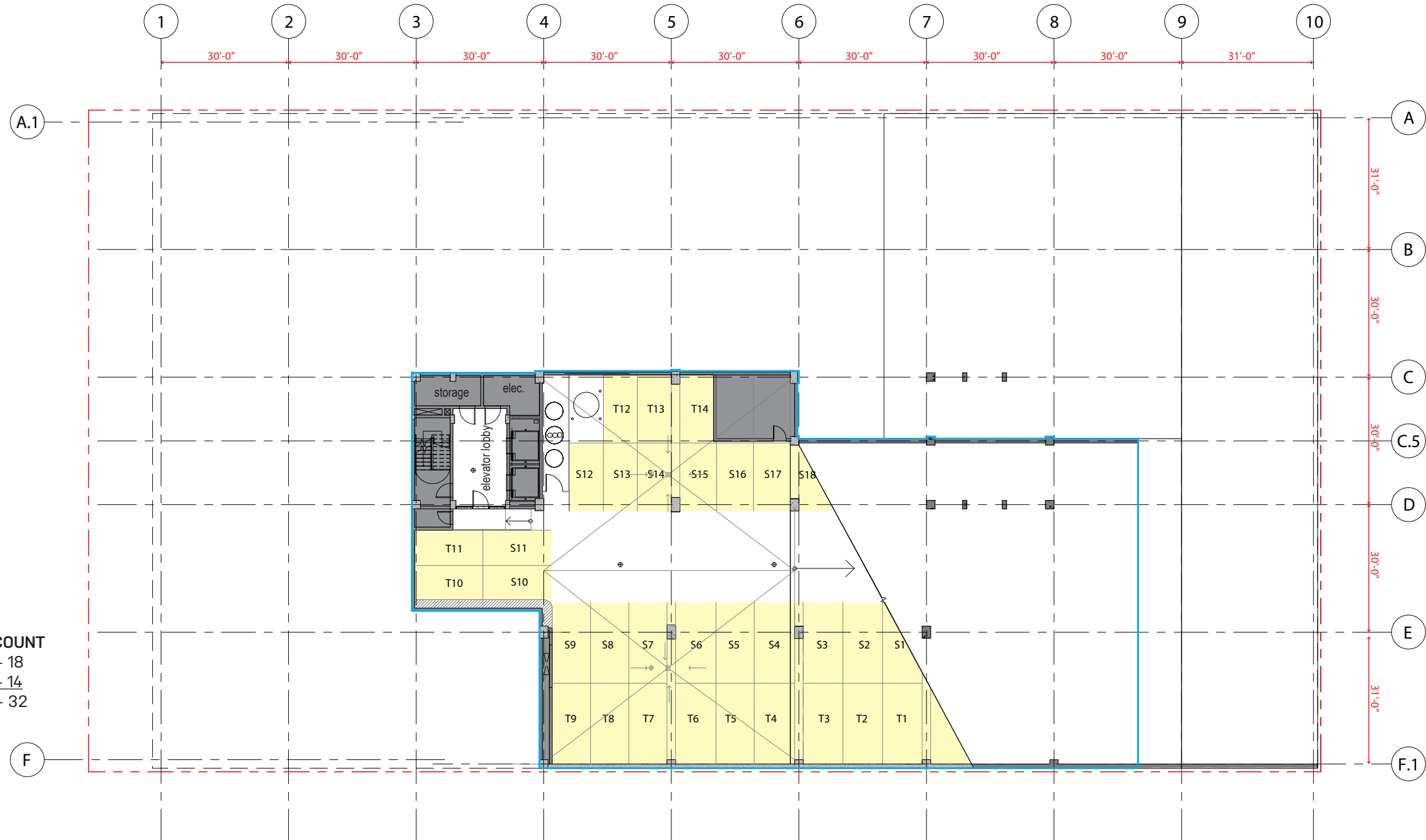
- CLT layers are rotated 90 degrees, composite material shows a structural strength that rivals steel
- Lighter wooden buildings can withstand earthquakes better and dissipate the energy of shaking more readily than steel structures
- CLT lamination negates imperfections that any one layer has
- Increasing the density of the wood causes it to char rather than burn outright which slows destruction and helps to maintain structural integrity
- Wood performance in fire is predictable, design for fire resistance through increasing wood depth:
  - » 1hr exposure = 1.8in/hr
  - » 2hrs exposure = 1.58in/hr<sup>1</sup>







# Existing - P3 floor plan

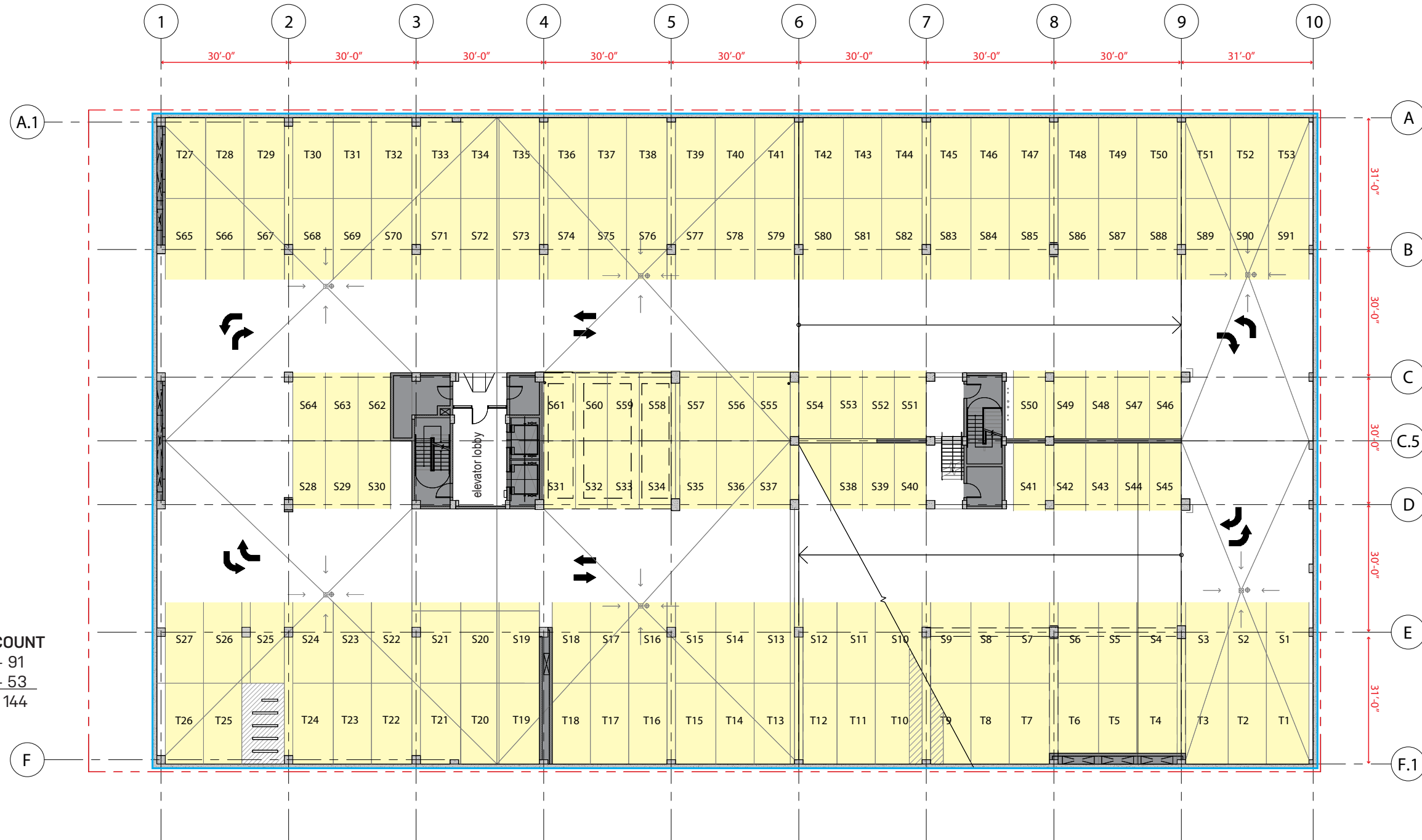


**EXISTING PARKING COUNT**  
 STANDARD SPACES - 18  
 TANDEM SPACES - 14  
 TOTAL SPACES - 32



# Existing - P2 floor plan

\*All floor plans are illustrative & final layout is subject to adjustment prior to permit review



**EXISTING PARKING COUNT**  
 STANDARD SPACES - 91  
 TANDEM SPACES - 53  
 TOTAL SPACES - 144



# Existing - P1 floor plan

\*All floor plans are illustrative & final layout is subject to adjustment prior to permit review



**EXISTING PARKING COUNT**  
 STANDARD SPACES - 66  
 TANDEM SPACES - 46  
 TOTAL SPACES - 112

# Proposed - 1st floor plan

\*All floor plans are illustrative & final layout is subject to adjustment prior to permit review

