



## ANTUNOVICH ASSOCIATES

ARCHITECTURE · PLANNING · INTERIOR DESIGN

Chicago, Washington DC

### MEMORANDUM

**DATE:** June 6, 2016

**TO:** Phetmano Phannavong – DOEE; Jay Wilson - DOEE Gary Englebert – DCRA

**FROM:** Antunovich Associates

**SUBJECT:** 1900 Half Street, SW: Floodplain Mitigation Alternative Construction Methods

DOEE has requested that the developer for the above-referenced case consider various alternatives to the design of the existing building as it relates to the adaptive reuse of the building into a mixed-use residential and retail/service building. One of DOEE's recommendations is to remove significant portions of the east side of the existing building; this memorandum addresses the serious disadvantages in doing so.

#### ENVIRONMENTAL DISADVANTAGE

1. It will be a challenging task to cut back the existing building along the entire east side in order to excavate to the bottom of the lowest level. Since the building is situated close to the shoreline at its southeast corner, deeper excavation and demolition work will result in more damage to the site and its shoreline.
2. Approximately 514 cubic yards of existing soil would have to be excavated to reach the bottom of the building. Approximately 2,165 cubic yards of fill would be needed to infill the void after cutting back the building. Preliminary estimated fill needed for the Riverwalk construction is 1,047 cubic yards.

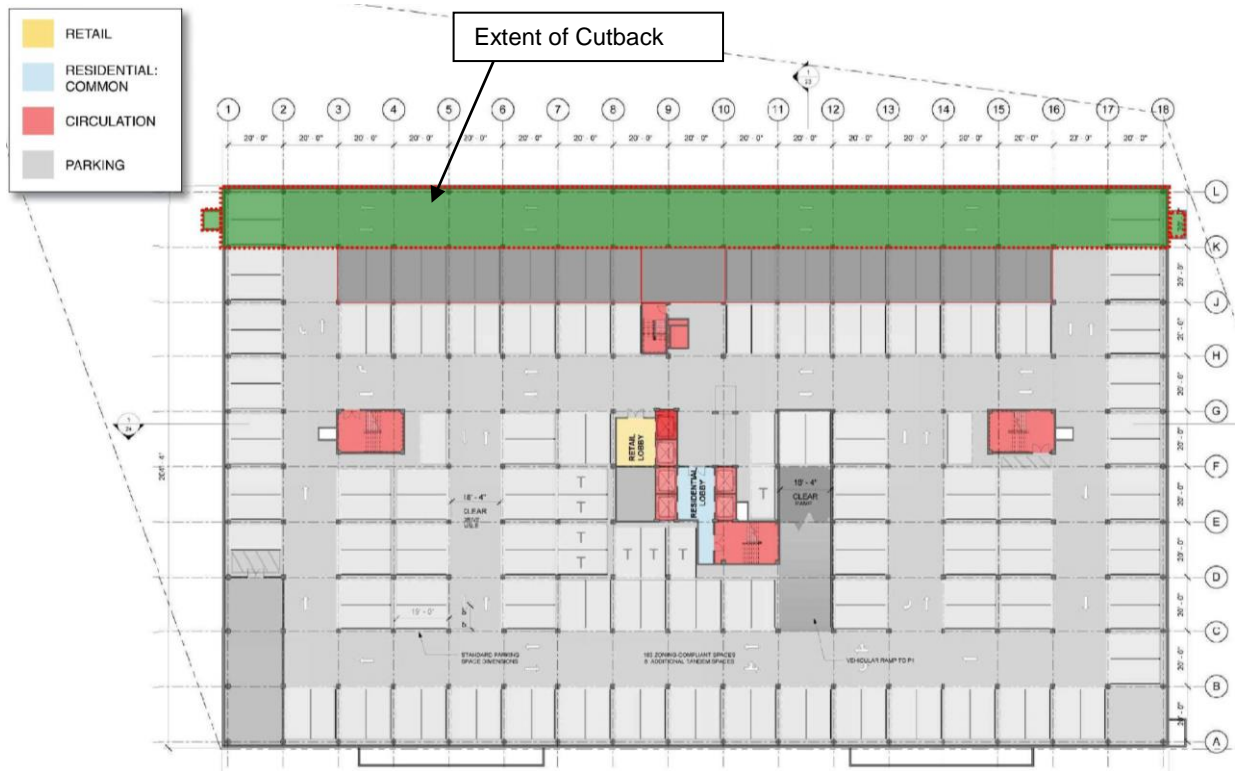
#### STRUCTURAL DISADVANTAGE

1. The proposed design allows for construction of the Riverwalk before renovation of the existing building. Doing the reverse will add a considerable amount of time and cost to the project, since the Riverwalk construction would be damaged due to building demolition, a new foundation wall would have to be constructed, and backfill would have to be completed.
2. Pile foundations and columns along grid line "L" are required to support the floors above. These elements cannot feasibly be removed without demolition of the 20 foot wide structural bay of the building above, for all floors.
3. A new reinforced concrete basement wall would need to be constructed at the new building line. This wall would function as a foundation wall to resist lateral earth pressure, and as a shear wall to resist lateral forces from wind and seismic events. The construction of this wall would add additional construction cost and time to the project.

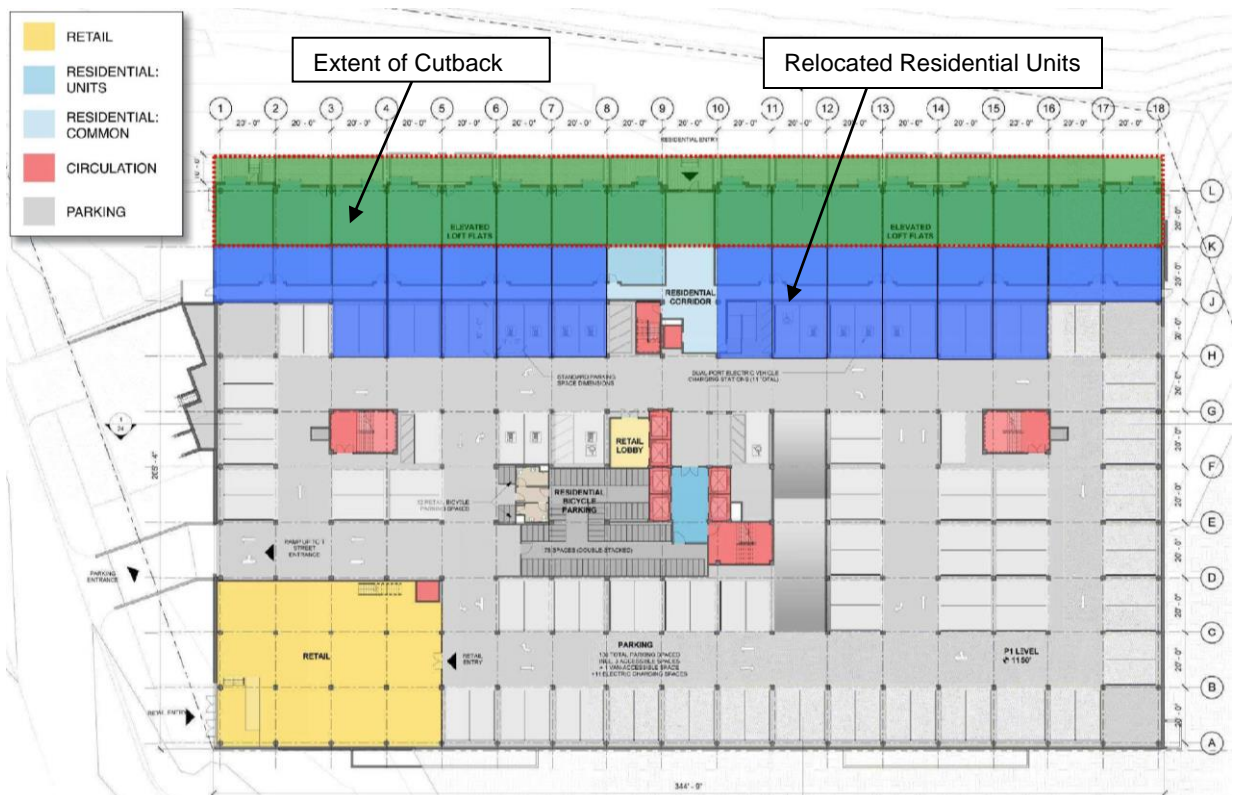
#### ARCHITECTURAL DISADVANTAGE

Removal of the first structural bay (20ft wide) along the entire east side of all floors of the existing building eliminates the cascading effects on the east façade of the north and south "wings," causing all three "wings" to have the same massing. In order to maintain the cascading effect, 11 units would have to be removed to maintain the setbacks on floors 7 through 9. The image below shows this reduction in greater detail.

1. P2 Level – Loss of 6,800sf of existing cellar area.

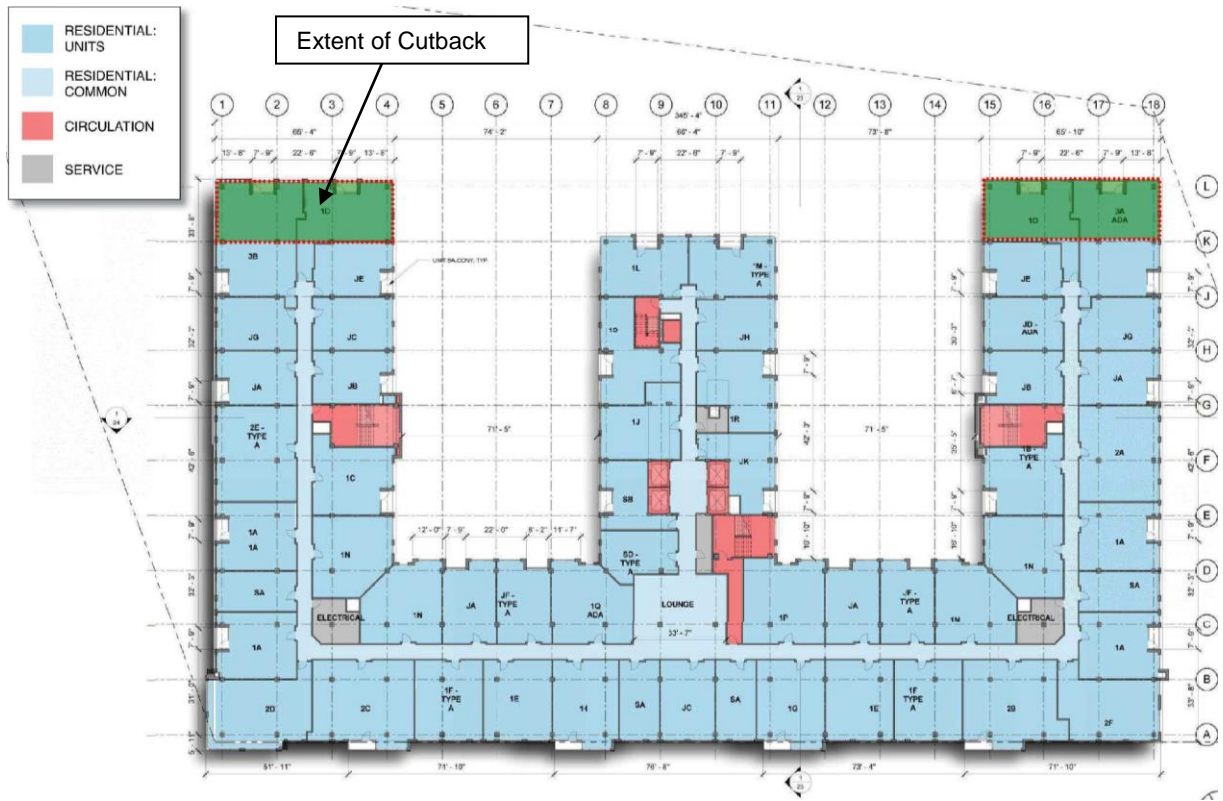


2. P1 Level - Reduction of residential units (at elevated floor) from 16 to 13, and loss of 6,800sf of basement space.

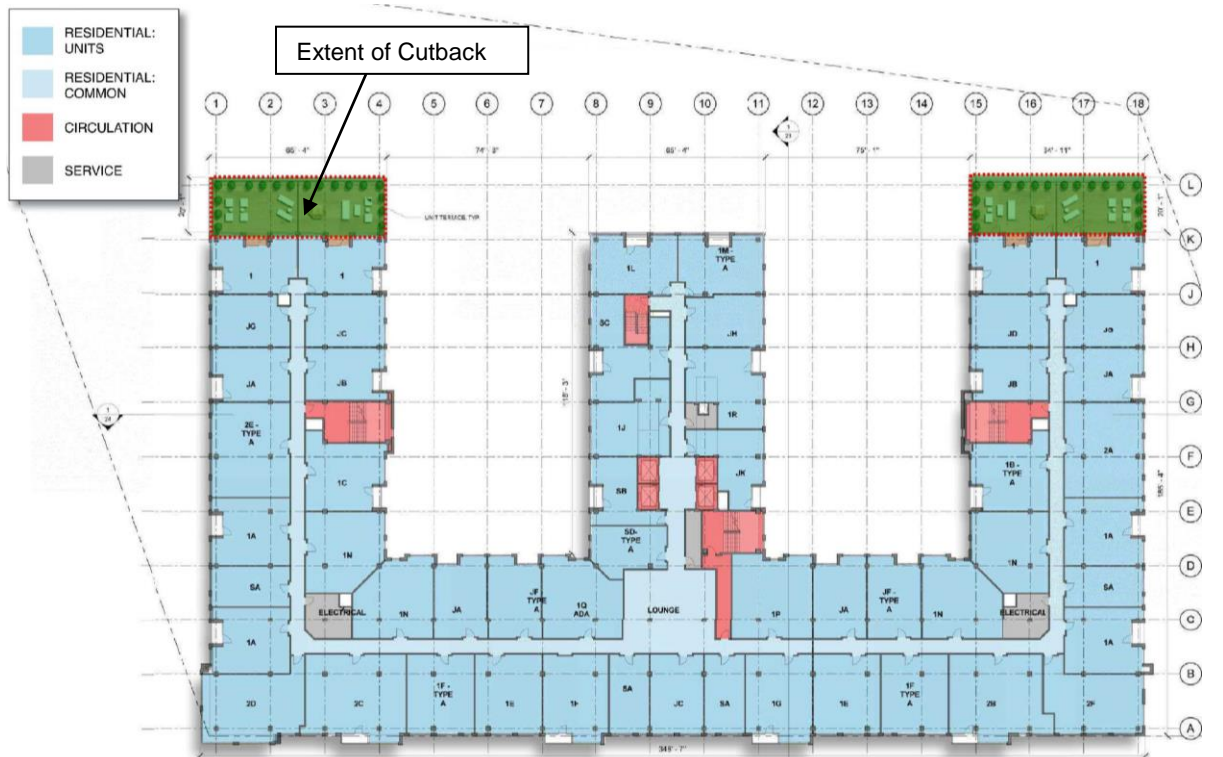




5. 3<sup>rd</sup> to 6<sup>th</sup> Floor – Loss of 9,600sf of residential gross floor (2,400ft per floor x 4 floors).



6. 8<sup>th</sup> Floor – Loss 2,400sf of private terraces on the east side



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