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Shore Club Renovation Project – HPB submission Comments**MEMORANDUM**

Included below answers to the HPB Submission Comments regarding questions #17 and #18

17. Provide a preliminary structural methodology for the demolition of the Chipperfield building, the construction of the new addition and how the Cromwell hotel building will be protected.**MEANS & METHODS- “Floor-by-floor” Demo Method -Post Tension Building**

The team will perform a “floor-by-floor” method for multi-story total building demolition. This approach is especially suitable in heavily trafficked urban areas with many complicating factors in proximity to the Project: pedestrian/vehicular traffic, nearby buildings, environmental considerations such as waterways/beach front, etc. This Method is by far the safest & most proven approach to reduce the risk & liability effectively manage & virtually eliminate the liability that can occur when other more disruptive “conventional” methods for high rise demolition are utilized: wrecking ball, hydraulic hi reach excavators or “tripping” of buildings by undermining/cabling those columns to “drop” the building without explosives. As such this “floor-by-floor” approach is a more cautious, more time-consuming and more expensive procedure BUT a much more controlled technique versus any other “conventional” methods for this Project. With this structure being post-tension “floor by floor” is the only method of demolition that is feasible.

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Activity # 1: Interior finishes, Non-load bearing wall demo, MEPF, and Exterior Glazing & Framing

- To begin the demolition of the building we will clear the elevator shafts to enable the shafts to become debris chutes for the removal of the demolished building components. The team will place skid steers in the building to facilitate the removal of the interior non-load bearing finishes.
- This work will be performed with a combination of skid steers / hand labor – Skid Steers will be placed on the floors via the crane
- Materials will be lowered and sorted on the floors and then lowered to the ground via the elevator shafts
- Once the material is on the ground it will be further processed and loaded out via the team's excavators into containers and removed from the site.
- Should it be required per the Structural Engineer, install re-shoring at 4 to 6 levels from the roof down. This may be necessary to carry loads during the de-tensioning of any PT cables.

Activity # 2: Floor-by-floor Structural Demolition of the upper portion of the building – Including PT De-Tensioning

The sequence of activities involved with this portion of the job consists of the following:

- Upon the upper 8 floors of the tower being cleared of interior finishes as listed in the above Activity # 2 - The team will then initiate the structural Demolition of the Upper floors in a "floor-by-floor" top to bottom process. The lower floors will continue to be gutted.
- PT subcontractor will de-tension the existing floor that is to be demolished. The floor will be carried by the immediate shoring below along with the additional 4 or 5 floors that are re-shored below
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- o Once we are on the roof, we will strip roof of roofing materials down to bare concrete deck
- o Demo/Removal of roof top equipment & the parapet walls down to the height of the roof deck
- Then the mini excavators hammer the roof slab & that material falls to the floor below

- The shoring will then be dismantled and reinstalled at the next lower floor that can be re-shored
- The skid steer machines then collect this material off the floor to the elevator shafts where it can be dumped down the shaft
- The material falls to the ground floor in a controlled manner without the risk of an exterior chute or any of the dust & noise occurring on the exterior of the building.
- Once the floor slabs have been removed & only the Building framing remains on each floor then the columns & beam structural framing hammered down to the next slab deck
- The process repeats itself with the next slab being de-tensioned and the demolition continuing,
- As we progress down the building the protective measures / scaffolding will have to be removed; by The team subcontractor. The scaffold materials will be lowered to the ground via the buck hoist or crane
- Weatherproofing at the adjacent historical structure that is to remain is the responsibility of Plaza

This procedure is repeated on a “floor-by-floor” basis-from the roof down-until the building has been “lowered” enough to safely complete the work with conventional methods-Once we have “reduced” this building to a level of our choice (3rd level) we will then demolish the rest of the building “conventionally”, i.e. with large excavators equipped with specialty hydraulic attachments to better control the wrecking. The remaining structure will be demolished, processed, and loaded out until we reach the slab on grade

Activity # 3: Slab at Basement / Foundation Removal

The team will begin slab on grade removal. Foundation removal will follow behind. Foundations will be removed in their entirety to the top of the piles. Piles will remain.. The site will be rough graded at completion.

8 Level Tower MEANS & METHODS- “Floor-by-floor” Demo Method – Conventional Demo Method

-This building will be demolished in the same manner as the 23-story structure but void of post tension construction.

- This building is cast in place construction. Shoring will not be required to demolish this building.
- The team will install covered walkway at the alleyway. This will protect the neighboring properties employees and prevent debris from entering the alleyway. The walkway will expand 75' to the West of the existing 8-story and to the end of the alleyway to the East.
- Scaffolding with netting will be installed at the entire South & West elevations. Scaffolding will also be installed at a portion of the East elevation. A scaffold stair will also be installed for egress.
- Once this building is demolished to the 3rd level the remaining structure will be demolished conventionally with Excavators and Attachments
- Due care will be used during demolition of the south foundations as to not damage or undermine the alley walkway

DUST CONTROL NOTE FOR THIS SPECIFIC WORK

- To achieve optimal dust control the contractor will install a ground level booster pump to aid water pressure to either a existing riser or temp riser as applicable. The team will use water to mitigate dust throughout the project
- The team will use water at the ground level while loading debris disposal trucks
- The team will install misters in the shafts that will be engaged at all times

New Building Construction Methodology

Foundations

Soil Mix

Why Use Soil Mix

The largest risks for basement construction are vibration/damage to neighboring structures and over runs on cost and schedule due to dewatering challenges.

The most amount of time lost on a project is getting out of the ground due to dewatering and excavation sequences.

What Is Soil Mixing

Deep soil mixing is a “vibration less”, watertight system that allows the schedule to be predictable and expedite the work of the next trades in a safe manner.

Soil Mix Process

Wet soil mixing is also known as the Deep Mixing Method. A powerful drill advances a mixing tool as binder slurry is pumped through the connecting drill steel, mixing the soil to the target depth. Additional mixing of the soil is completed as the tool is withdrawn to the surface. This process constructs individual soilcrete columns, rows of overlapping columns or 100% mass stabilization, all with a designed strength and stiffness.

Wet soil mixing is used in nearly any soil type, including organics. If the moisture content is greater than 60%, dry soil mixing may be more economical. The ease of mixing depends on the soil type, strength, water content, plasticity, stratigraphy, and texture. With wet soil mixing, treatment is possible to depths up to 100 feet. Excess soilcrete generated may range from 10 to 40% of the treated volume and has been re-purposed as structural fill. Stiff soils and obstructions are sometimes pre-drilled ahead of the soil mixing process.

Soil Mix Quality assurance

Pre-production laboratory testing is used to prescribe mix methodology, energy, and the grout slurry system. A single or multiple column test program is often performed at the beginning of the program to determine the mixing energy, penetration rate, batching, and pumping operations. Keller has developed proprietary equipment and software for the real-time monitoring of all mixing parameters during the wet soil mixing process. Test columns can be excavated for visual inspection of the soilcrete. Visual inspection is possible with a camera lowered into a core hole. Wet sampling in fresh columns and coring of cured columns can be used to verify strength.

After the soil mixing is done, then auger cast piles for the deep foundations would be installed.

Auger Cast Piles

Auger cast piles also as known as CFA piles, continuous flight auger cast piles are cast in place piles, using a hollow stem auger with continuous flight.

The Process to Install Auger Cast Piles

CFA piles are constructed by rotating a hollow stem continuous flight auger into the soil to a designed depth. Concrete or grout is pumped through the hollow stem, maintaining static head pressure, to fill the cylindrical cavity created as the auger is slowly removed. The grout pressure and volume must be carefully controlled to construct a continuous pile without defects. The reinforcement cage is placed through freshly placed concrete

Construction of the New Tower, Villa & Historic Renovation of the Shore Club & Cromwell

The team will take care in ensuring the historical buildings to remain on the project site are safe during all construction activity. Vibration monitors will be placed on all structures to ensure notification should any settlement occur or otherwise and remedial action could be immediately taken. Protective netting and scaffolding will also be in place during exterior and structural demolition to ensure no debris can fall off site or within the site preventing damage to the existing buildings.

Once the soil mix is installed, the remainin structures will be underpinned, then the auger cast piles would be installed. Upon completion of auger cast piles we would then begin excavation. Excavation for the proposed basement would start on the west and work to the east. We would build the basement and bring the tower out of the ground first. We would continue with the tower structure, followed by the envelope of the building, interiors, elevators, amenities areas, pools, civil, site, hardscape, landscaping. The historical renovation restoration and new construction of the existing Shore Club, & Cromwell would all be done during this time as well, as well as the construction of the Villa which is to be located in the northeast corner of the existing property.