



MAINE MEDICAL CENTER

Construction Projects at the East Tower, Visitor Garage, Central **Utility Plant**

Construction Management Plan

December 15, 2017

Prepared for: Portland Department of Planning & Urban Development Department

Project Proponent: Colliers International

Construction Manager: Turner Construction

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Plan 12.15.17

Purpose Statement

The purpose of this document is to provide the details of the first phase of construction for MMC's Master Facility phase IIB. This document outlines Turner Construction's plan for controlling impacts from noise, vibrations, ground movement, truck traffic, and other construction related factors to the surrounding neighborhoods and buildings.

Maintaining normal campus operations and Public Safety are high priorities during the construction phase. This plan will be presented to the appropriate City and Neighborhood representatives. The City of Portland Planning Board will approve the final plan. It has been the goal of these programs to define the construction plan before construction begins. Turner's experience on projects with similar logistic constraints has proven that pre-planning and constant communication are necessary for a smooth efficiently run, incident free project.

It is Turner Construction's full intent to follow the guidelines set by the contract documents.

Turner Construction and its subcontractors shall schedule and conduct operations in a manner that will control the disturbance to the public in areas adjacent to the work and to occupants of buildings in the vicinity.

1.0 CONSTRUCTION MANAGEMENT PLAN

This Construction Management Plan (CMP), submitted to the Portland Department of Planning & Urban Development for approval by the City of Portland Planning Board prior to the start of construction, includes specific mitigation measures and staging plans to minimize impacts to surrounding residences and businesses. The Construction Manager and its trade contractors will be bound by the CMP.

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2.0 CONSTRUCTION SCHEDULE & WORK HOURS

Construction work hours will be in accordance with Section 17-18 and Section 25-129.

2.1 Work Hours

- The construction period for the project is expected to be approximately 19 months in duration.
- It is anticipated that the project is estimated to start on or about Spring 2018 and last through Fall 2019.
- Work hours will be 7AM to 7 PM Monday thru Friday.
- Workers will gather at their workplace from 6 AM to 7AM.
- Saturday work will be required on a periodic basis with hours from 7 AM to 6 PM.

2.2 Construction Timeline

2.2.1 Spring 2018 to Fall 2019

East Tower - Crescent Street

A new 60,000 SF addition is being added to the top of the East Tower. The addition consists of two new floors, level 6 and 7. On the roof is a helipad system capable of landing two helicopters. The exterior wall at Level 5 is being replaced in conjunction with

a new exterior wall for Level 6 and 7. This project is expected to start in March 2018 and complete by October 2019. (20 Months)

Visitor Garage- Congress Street

Three new floors of parking are being added to the Visitor Garage. These floors will be Level 8, 9 and 10. The added floors are precast and are being added to a garage which has been designed for this expansion. The added parking capacity is 220 cars. This project is expected to start in May 2018 and complete in November 2018. (6 Months)

Central Utility Plant – Gilman Street

The Central Utility Plant is increasing cooling capacity by adding one 2,400 ton chiller and two cooling towers. This project is expected to start in November 2018 and complete in March 2019. (5 months)

2.3 Construction Updates Reporting

The following shall be reported to Maine Medical as a part of the CMP.

- Monthly "look ahead" schedules and narrative for upcoming construction activities.
- Schedule of over-size deliveries to the site that will impact roadways
- Schedule of deliveries that will be outside the City of Portland's allowable work hours.
- Proposed schedule for utility connection or work in public roadways or sidewalks as a part of Turner work.
- Proposed off-hours or Saturday work.
- Construction activities that may impact the neighborhood in an adverse way, including noise, vibration, dust, on-street parking or work outside construction limits or times. Also, proposed options to mitigate these impacts.
- An estimate of the number of vehicles that will require off-site parking.

2.4 Construction Logistics

The proposed Logistics Plans included in the CMP are designed to isolate the construction while providing safe access for pedestrians, hospital operations, and automobiles during normal day-to-day activities and emergencies. Interaction with the public will occur mainly along Congress Street and Gilman Street. The logistics plan define the timeline of construction activities and the location of cranes, gates, access for each Phase. Each site will be secured by an 8-foot high fence with privacy screening in accordance with the Logistics Plan.

Logistics plans on the construction sequencing for East Tower Overbuild are Slides 2 to 9.

Logistics plans on the construction sequencing for Visitor Garage Overbuild are Slides 10 to 21.

Logistics plans on the construction sequencing for Central Utility Plant cooling upgrade Slides 22 to 24.

2.5 Perimeter Protection / Public Safety

- Turner Construction will work to ensure the sidewalk protection minimizes impact to pedestrian and vehicular flow.
- The specific configuration of sidewalk protection and pedestrian access around the site will vary depending on the phase of the work being performed.
- In general, secured fencing will be used to isolate construction areas from pedestrian traffic.
- Flagmen or Police Details will be provided at all active gates when there are deliveries.
- Construction procedures will be designed to meet all OSHA safety standards for specific site construction activities.
- Subcontractors will implement and manage their own Health and Safety Program for the project.
- All Subcontractors are required to wear appropriate personal protective equipment.
- Snow removal and ice treatment will be provided on the surrounding area within the construction fence.
- Sidewalks will be cleaned of trash and debris as needed.
- If existing street lights need to be removed for the duration of the project,
- Turner Construction will provide sufficient temporary site lighting to ensure the safety of all pedestrians accessing the sidewalks around the site, including lighting at all covered pedestrian walkways, until permanent street lights are installed Light levels will be tested prior to temporary removal of site lighting.

2.6 Worker Parking & Traffic Impacts

- Turner Construction and its subcontractors shall encourage the use of public transportation by their workers.
- Jobsite personnel will be expected to park at an offsite parking area to be determined and will be shuttled to the construction site.
- Worker parking shall not be allowed on site except for company vehicles required to perform the work.

The number of workers required during the construction will vary by Construction Phase.

Construction Phase - March 2018 to September 2019

- Spring 2018- Fall 2018 average workers 40 to 50
- Fall 2018 Spring 2019 average workers 70 90
- Spring 2019- Fall 2019 average workers 100

 No personal vehicles will be allowed to park at the project construction site or in the adjacent residential streets.

2.7 Truck Routes and Volumes – Refer to Site Logistics Plans

All street opening and occupancy in the public right of way will be in accordance with Chapter 25 of the City of Portland Land Use Code

- Truck traffic will vary throughout the construction period, depending on the activity.
- An offsite marshalling area will be utilized for large deliveries such as precast and structural steel.
- All trucks will be brought to the construction areas at MMC by experienced dedicated drivers from the marshalling lot.
- Radio and cell phones will be utilized to coordinate all trucking.
- Trucks routes must be submitted and approved by the City of Portland and the Owner before the start of construction.
- Truck idling will be held to a minimum on-site, to minimize the impact to adjacent properties..
- Turner Construction and its subcontractors shall ensure that haul routes, debris and soil removal, and staging areas are conducted in a manner that minimizes the impacts to the abutting communities,
- Wheel wash stations will be installed and maintained by Turner and its subcontractors as needed and maintained at construction site exit areas.
- Street sweeping / vacuuming of all impacted City streets and sidewalks shall be performed by Turner Construction and its subcontractors on an as-needed basis.
- Streets, sidewalks, bicycle ways or other means of travel may not be obstructed or closed without permission from the Owner and other authorities having jurisdiction. The Owner shall be notified one week in advance of any such obstructions or closures.

Construction - East Tower Overbuild – (Refer to Logistics Slides 2 thru 9)

All street opening and occupancy in the public right of way will be in accordance with Chapter 25 of the City of Portland Land Use Code

- All truck traffic will be directed to enter the site utilizing Ellsworth Street to Wescott Street. (Refer to Logistics slide 9)
- Turner will install way finding signage at strategic locations identifying no travel zones for construction vehicles
- All subcontractors and vendors will be provided with pamphlets indicating the appropriate truck routes to access the site.
- Trucks will be brought within the fence line.
- During crane erection a portion of Ellsworth Street and Wescott will be closed. (Refer to logistics slide 8)

Construction Visitor Garage Overbuild -

(Refer to Logistics Slides 10-22)

All street opening and occupancy in the public right of way will be in accordance with Chapter 25 of the City of Portland Land Use Code

- All truck traffic will be directed to enter the site utilizing Congress Street.
- During an eight week period when precast erection is occuring, Congress Street will need to be closed at the location of the Visitor Garage. Detailed logistics plans are included to identify the street closure requirements. (refer to logistics slides 16-21)
- This street closing will be coordinated with the City of Portland.
- All subcontractors and vendors will be provided with instructions prior to their project start indicating the appropriate truck routes to access the site.

Construction - Central Utility Plant – (Refer to Logistics Slides 22-24)

All street opening and occupancy in the public right of way will be in accordance with Chapter 25 of the City of Portland Land Use Code

- All truck traffic will be directed to the Central Utility Plant utilizing a truck path from Congress Street to Gilman Street, and an exiting path from A Street. (**refer to logistics slides 23-24**)
- During a two week period when the chillers and cooling towers are installed, trucks and a crane will be set up on Gilman Street. This is expected to occur in Fall/Winter 2018. Police detail will be fulltime during this period. Gilman Street will remain open.
- Lane closing will be coordinated with the City of Portland.
- All subcontractors and vendors will be provided with instructions prior to their project start indicating the appropriate truck routes to access the site.

3.0 Air Quality & Noise

3.1 Dust Control

To reduce emission of dust and minimize impacts on the local environment, the construction contractor will adhere to a number of strictly enforced mitigation measures. These include:

- Wetting agents will be used regularly to control and suppress dust that may come from the construction materials.
- All trucks used for transportation of construction debris will be fully covered with tarps intended to keep material in the truck.
- Construction practices will be monitored to ensure that unnecessary transfers and mechanical disturbances of loose materials are minimized and to ensure that any emissions of dust are negligible.
- Street and sidewalks will be cleaned to minimize dust accumulations as needed.

• Stock piles of soils will be covered with tarps and/or poly when they are not being utilized for current site activities.

3.2 Noise

- The project will require the use of equipment that can be heard from off-site locations. This project will strive to mitigate construction noise impacts, to the extent possible.
- Increased community sound levels are an unavoidable consequence of construction activities.
- Construction will occur during the daytime hours as defined by the City of Portland Code of Ordinances (7:00 a.m. to 6:00 p.m. Monday through Friday).
- In some instances, a second shift, off hour, holiday and weekends may be required.
- When these events arise, all required permits will be obtained and notification will be posted in accordance with section 2.3
- Work shall be performed so as to prevent nuisance noise conditions that are preventable (e.g., unmaintained equipment, brake squeal, etc.).
- Turner Construction and all subcontractors shall use all reasonable efforts to implement noise reduction methods listed below to minimize construction noise emission levels.
 Noise reduction methods shall include, but not be limited to:

Use of:

- o Tie to local power grid to reduce the use of on-site generators.
- Noise-deadening / isolating surrounds around exceptionally noisy work equipment or operations
- The maintenance of the access roadways to minimize the "bouncing" of construction vehicles within the construction site.
- Enforcing the site logistics plan, so as to maximize to every extent possible the forward movement of construction vehicles. This will, in turn, minimize the sound of back-up alarms.

Attaching:

- o Intake / exhaust mufflers, shields or shrouds
- o Noise-deadening material to equipment and fencing

Maintaining:

- o Equipment mufflers and lubrication
- o Pre-cast decking and plates to avoid rattling
- Smooth surfaces on construction sites and public ways to prevent unnecessary noise from surface irregularities.

Minimizing

 Noise from the use of backup alarms, using measures that meet OSHA regulations. The construction logistics has been designed such that the backingup of equipment and trucks is limited.

- Use of self-adjusting ambient-sensitive backup alarms.
- o Manually adjustable alarms on low setting
- Scheduling of activities so that alarm noise is minimized

3.3 Air Monitoring

- Turner Construction and its subcontractor's shall employ dust, odor, and gas control measures to minimize the creation of airborne dusts, odors, and gases during the entire construction process. At a minimum, standard dust control techniques shall be employed where heavy equipment will be traveling, standing, or loading, such as watering down the site or utilizing dust control measures. All measures shall be taken in accordance with Turner's approved Health & Safety plan.
- Turner Construction and its subcontractors shall perform dustless street sweeping / vacuuming for all construction activities including demolition, excavation, slurry / soil mixing operations on an as needed basis.
- An air monitoring plan shall be developed by the Owner based on site contaminants of concern, particulate quantities / densities, and risk-based evaluations. The plan will be developed for off-site impacts. Turner Construction and its subcontractors will be responsible for on-site health and safety issues.
- The Owner will engage a qualified consultant to monitor for dust along the perimeter of the construction site. Results of this monitoring that indicate exceedances of air quality criteria will be immediately brought to the attention of Turner Construction. Turner and its subcontractors shall immediately address the site condition, including terminating construction activities to remedy the site conditions to the satisfaction of the Owner.
- Ductwork snorkels will be installed as required on building air intakes surrounding the job-site to minimize the amount of dust and construction vehicle gases being taken in through the air handling systems. The maintenance of the filters is by the individual building managers.

4.0 Communication Strategies

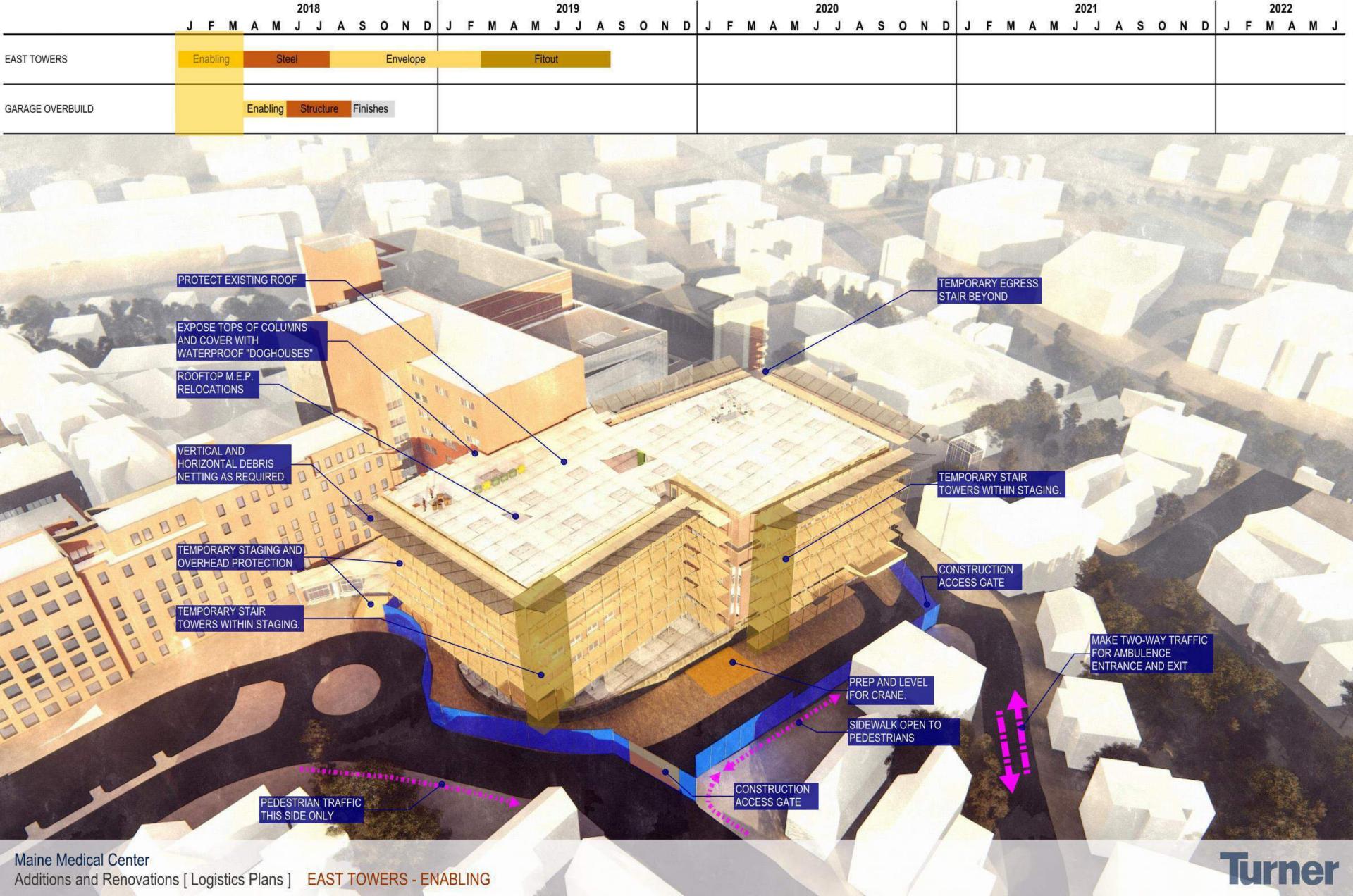
4.1 Contacts, Distribution Lists

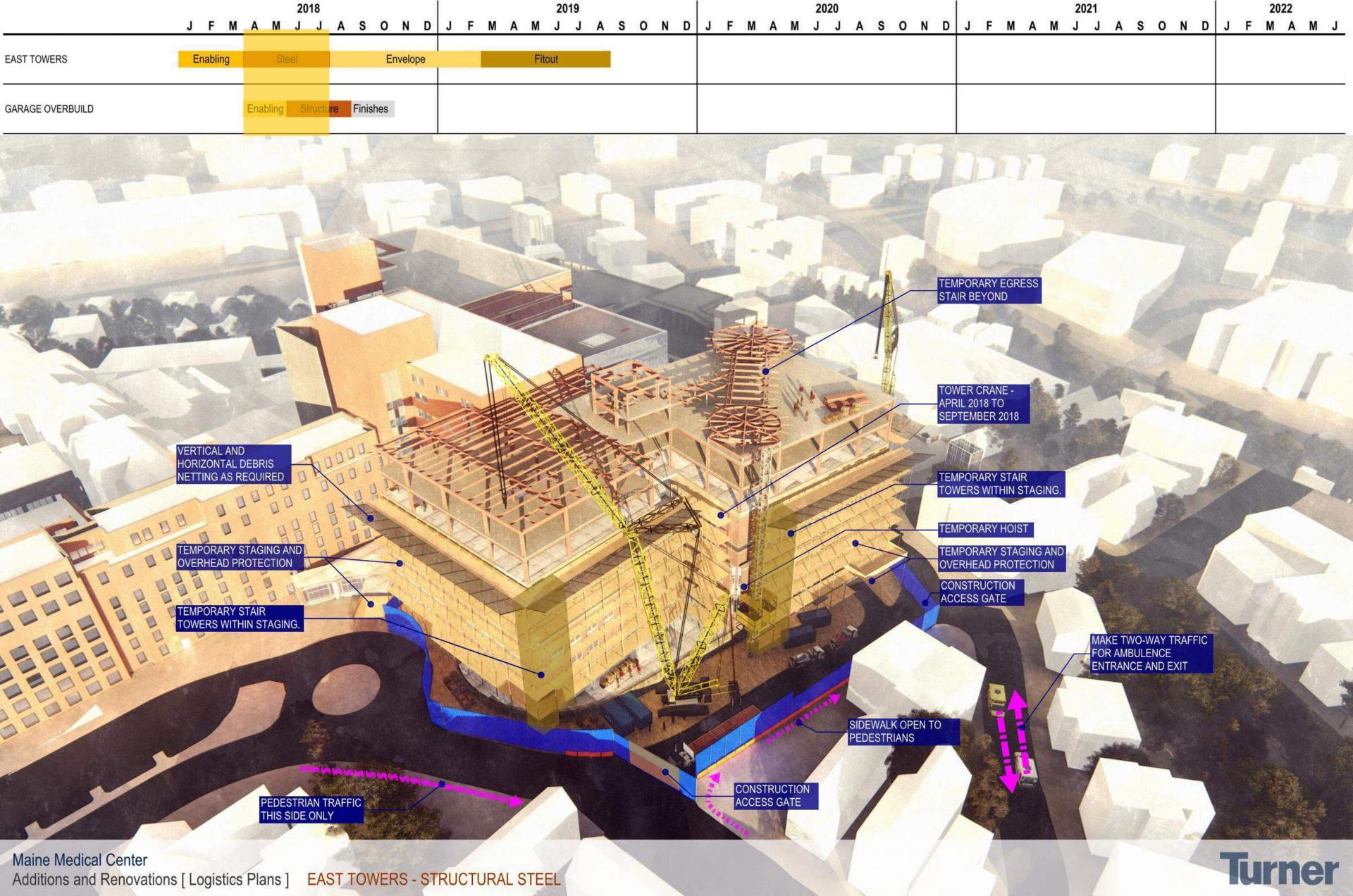
- Turner Construction shall develop a project contact list (e-mail addresses, office and cell phone numbers), to be posted by MMC on the project web site and supplied to Maine Medical Center (MMC) for 24/7 contacts.
- Turner Construction will request similar contact lists from the neighborhood associations. (e-mail addresses, and phone numbers) of key contacts for the specific project.
- Turner Construction will set-up a project bulletin board for each Phase. These boards will be used as communication tools to the surrounding community. There will be a project website thru MMC, developed that also will communicate construction related activities to the community.

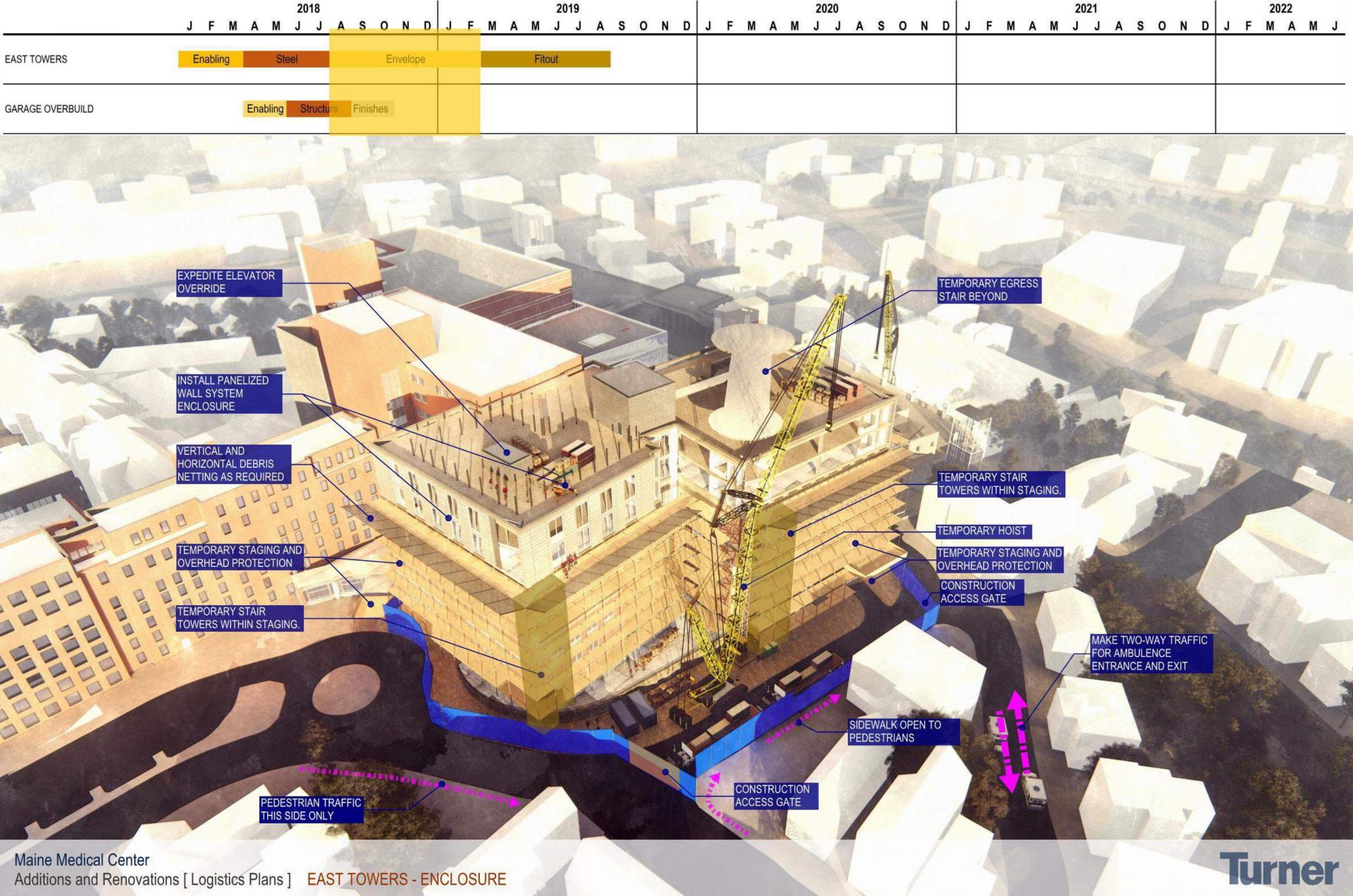
- Any last minute changes to the project schedule that may impact the neighborhood or Maine Medical Center (MMC) community will be communicated per section 2.3.
- Turner Construction will participate in the neighborhood council meetings as needed to discuss progress and issues.
- Turner shall maintain a log of all construction-related concerns, via the MMC website.
- MMC shall communicate final resolution of all complaints and concerns to the neighborhood, Maine Medical Center (MMC) community, and when appropriate, to the City of Portland.

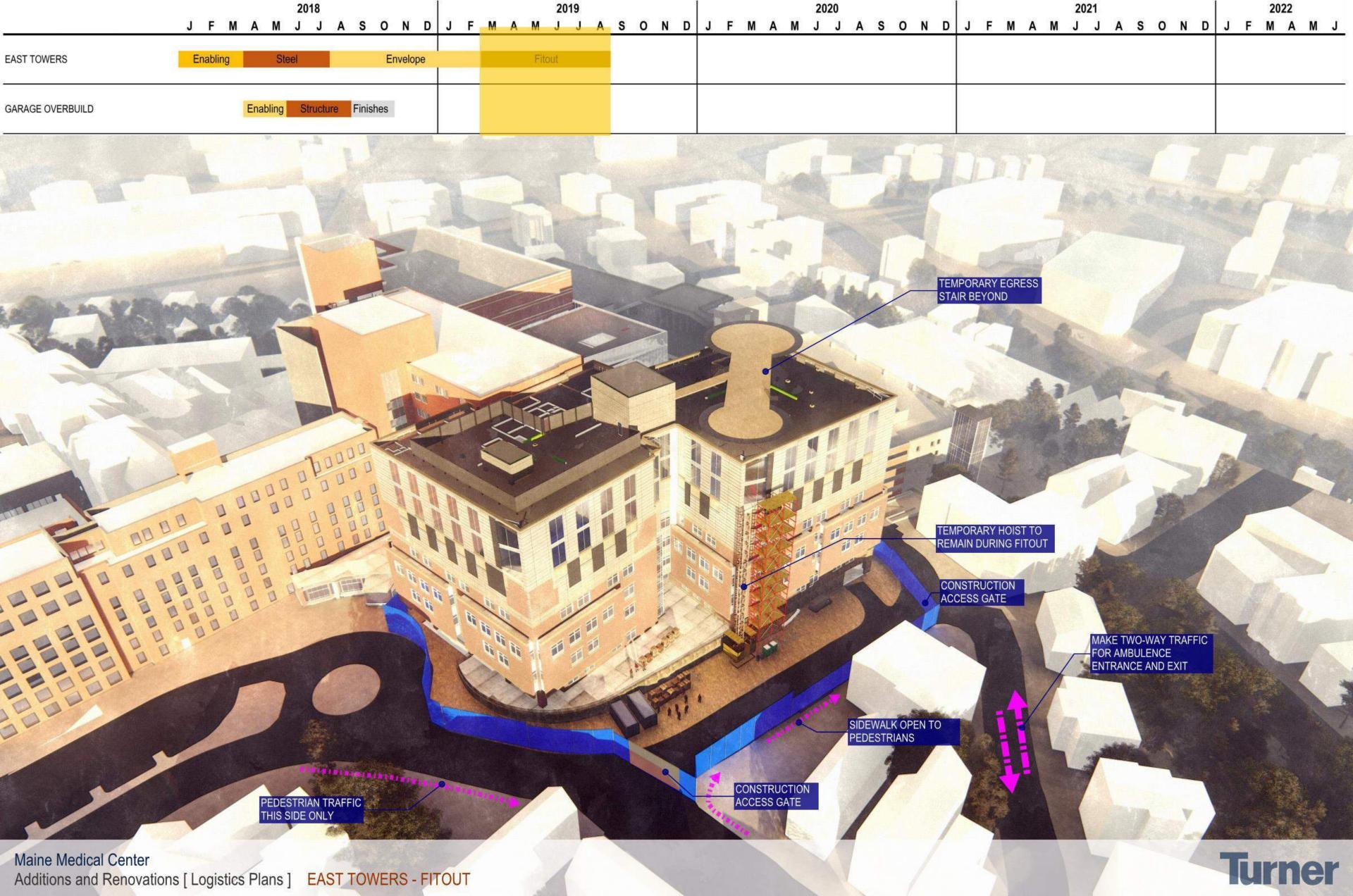
5.0 Vibration Monitoring – Not Applicable



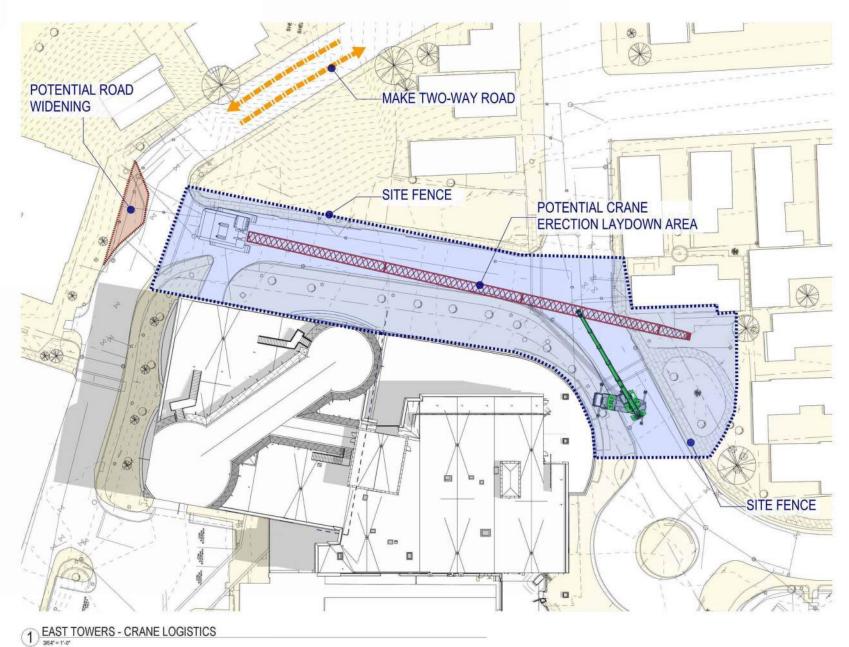












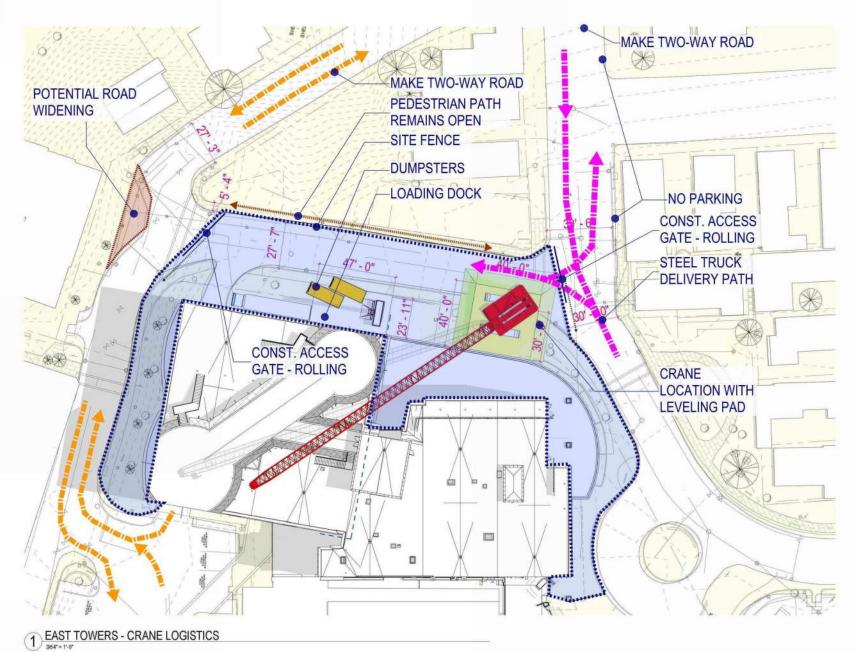


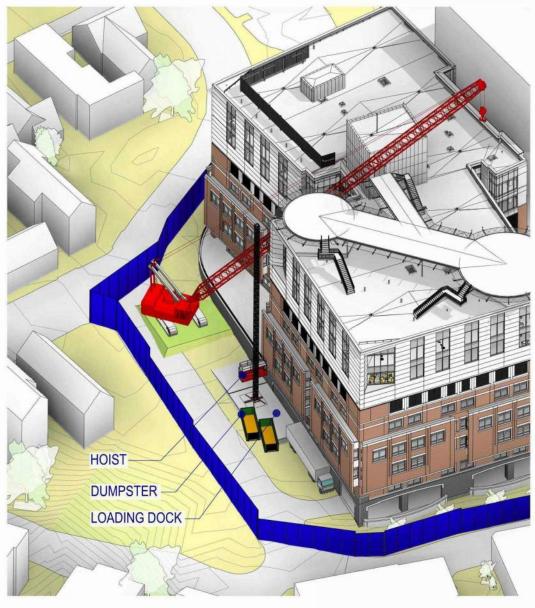
2 EAST TOWERS - CRANE LOGISTICS

Maine Medical Center, Portland Maine Additions and Renovations [Wescott Street Crane Erection Plan]





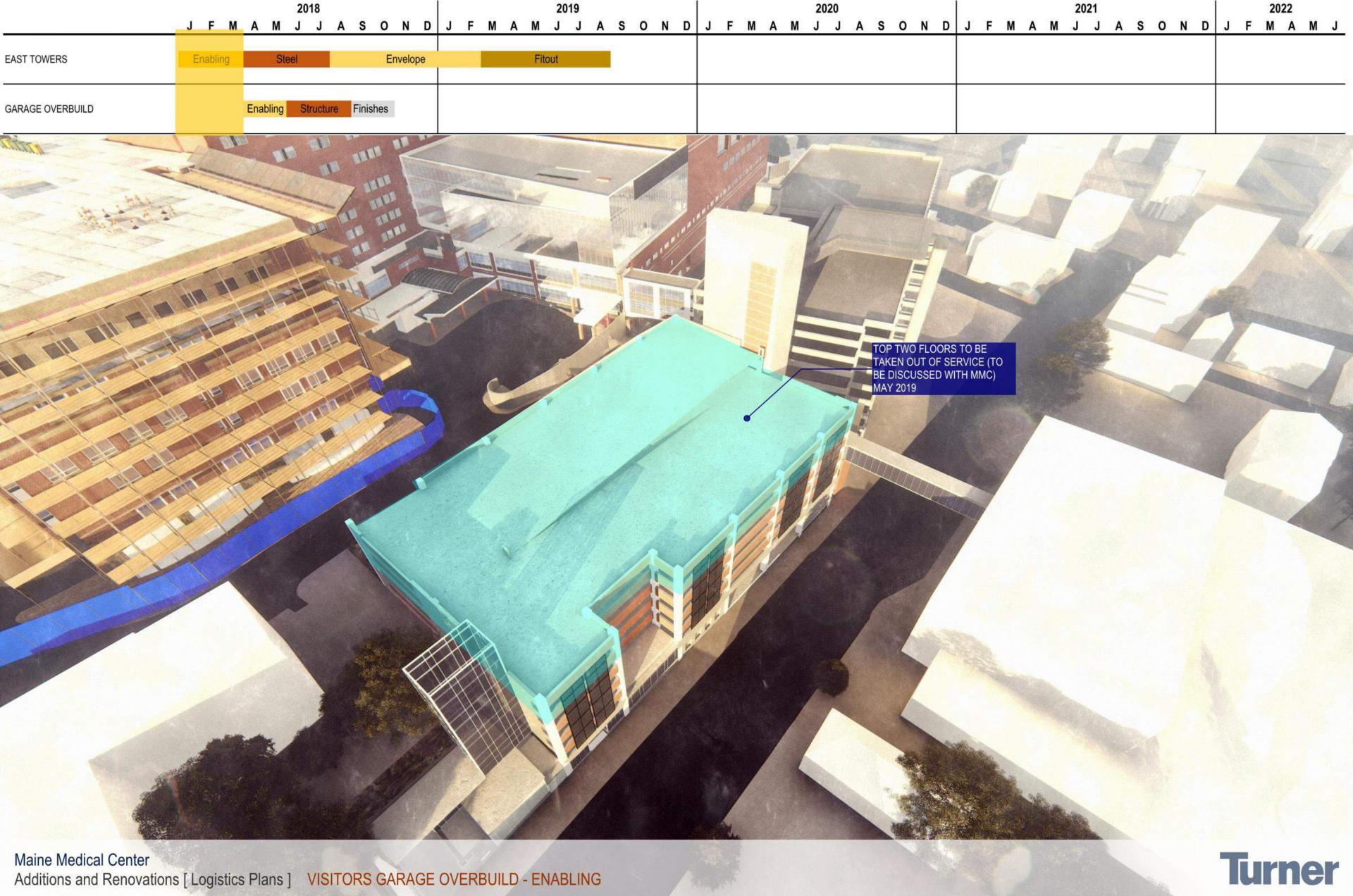


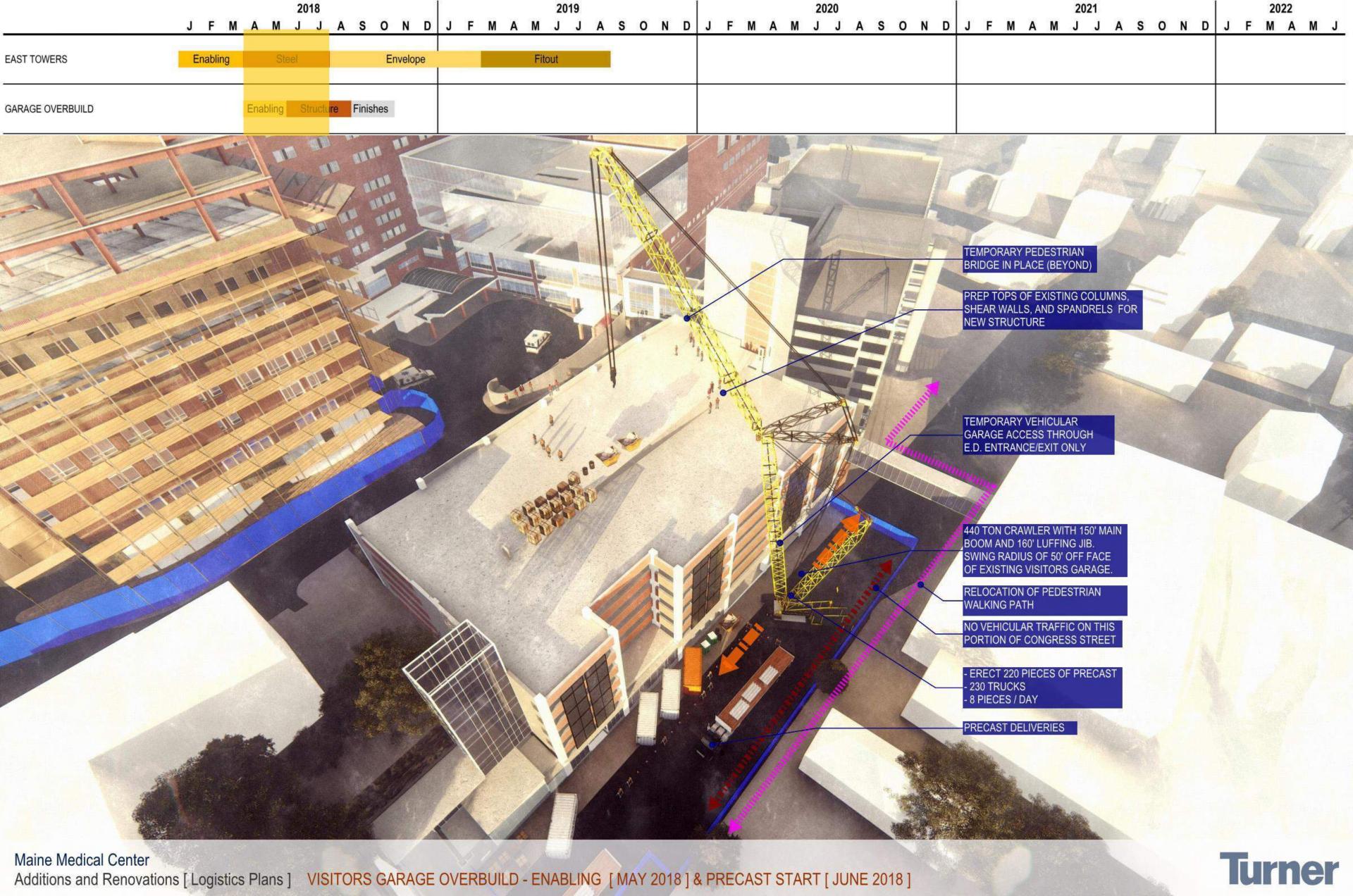


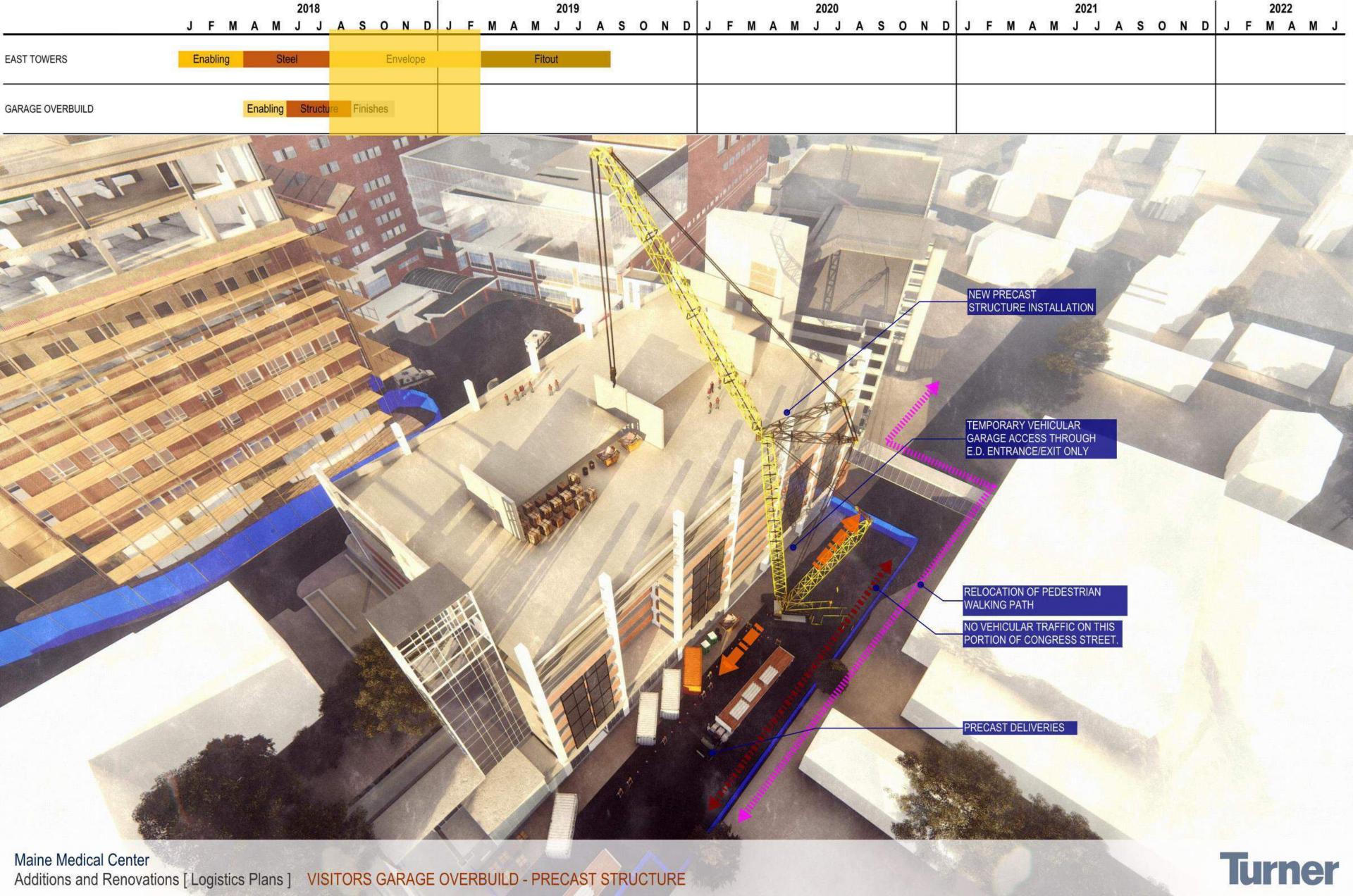
2 EAST TOWERS - CRANE LOGISTICS

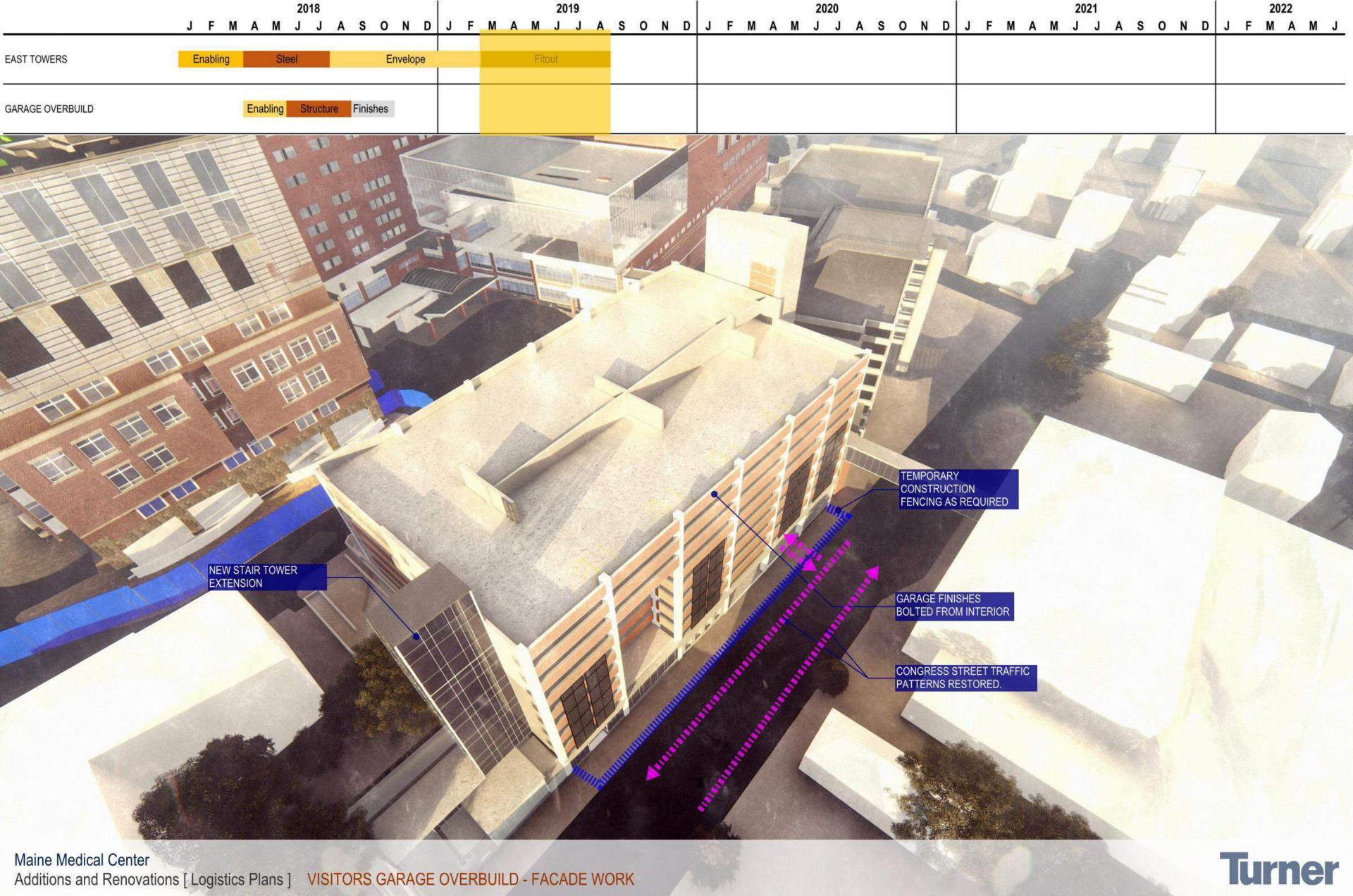


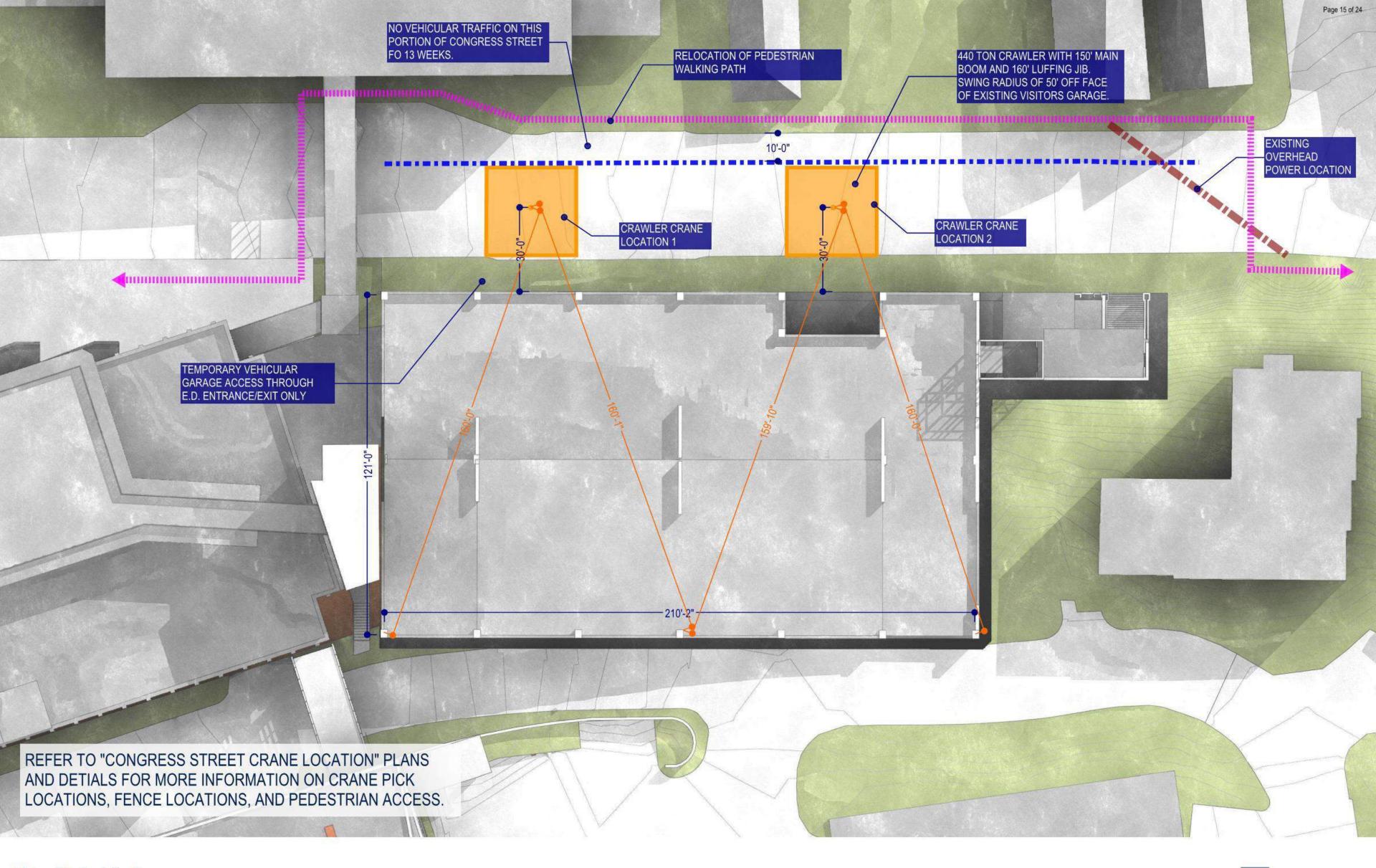




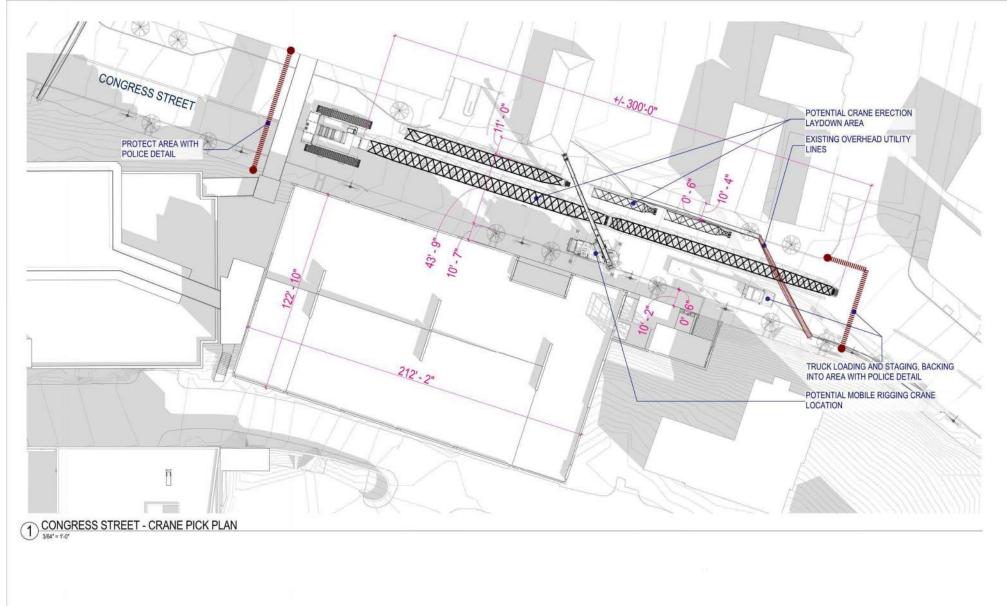


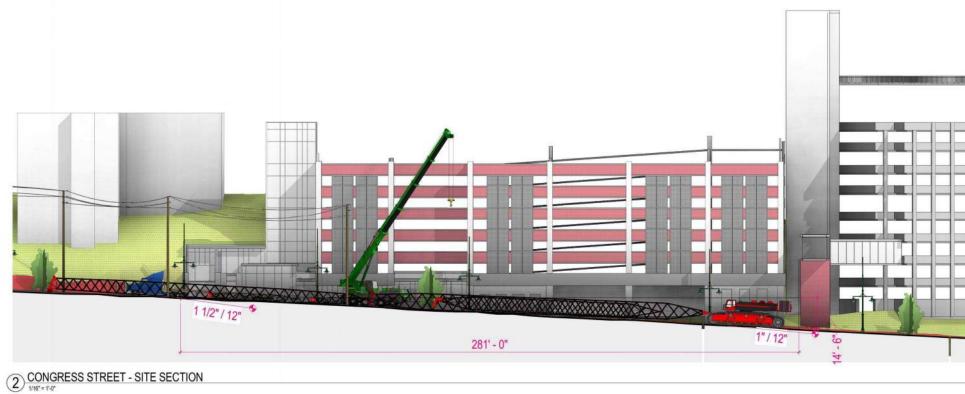










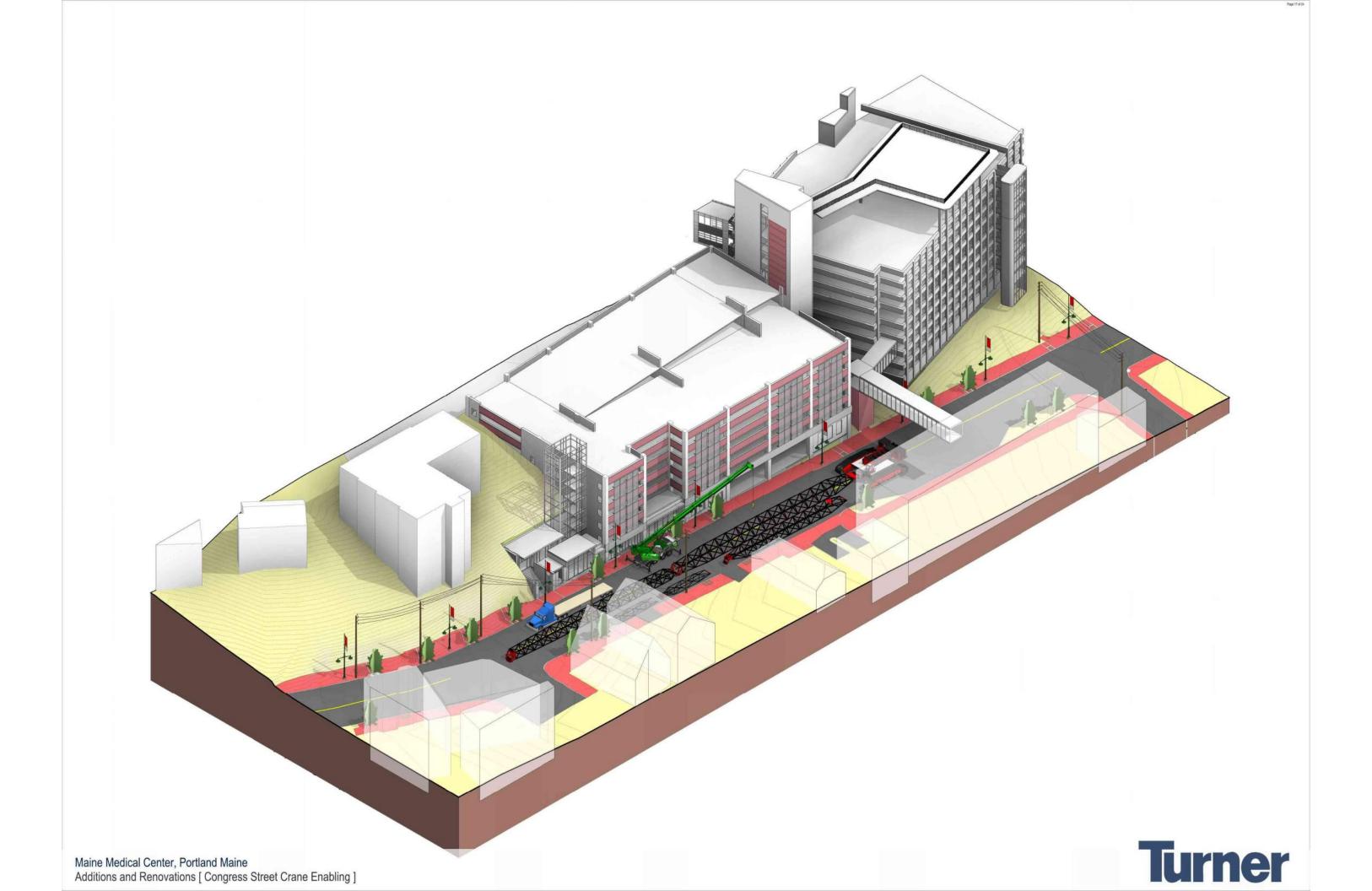




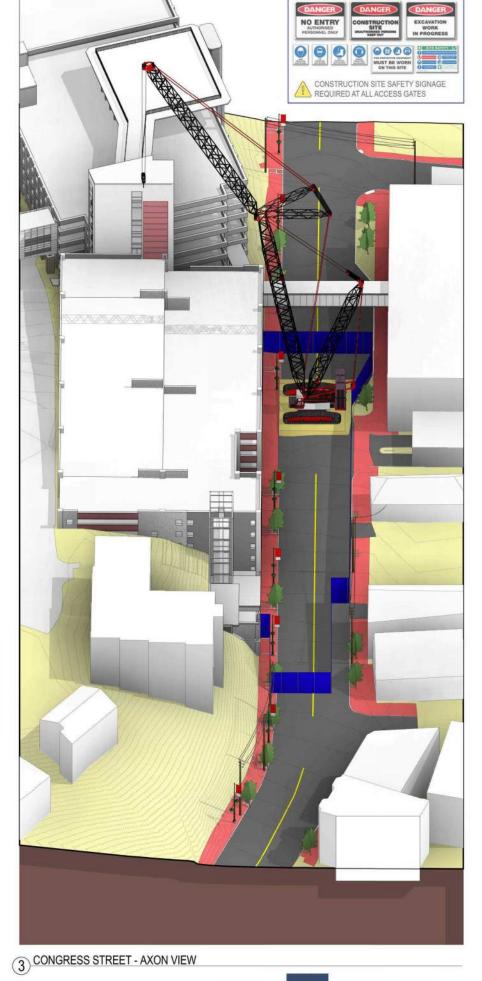
Turner

CONSTRUCTION SITE SAFETY SIGNAGE REQUIRED AT ALL ACCESS GATES

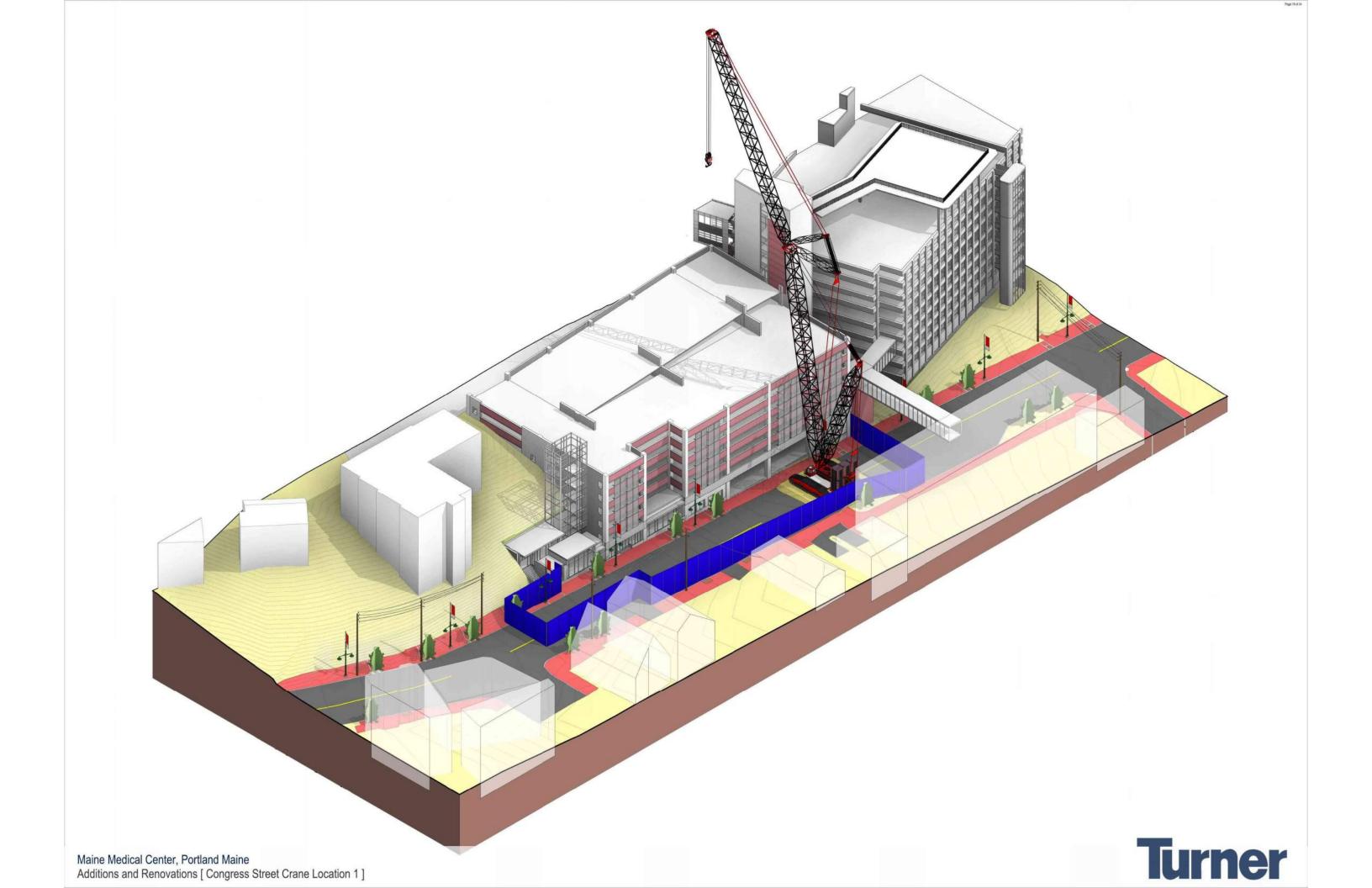
Maine Medical Center, Portland Maine Additions and Renovations [Congress Street Crane Enabling]

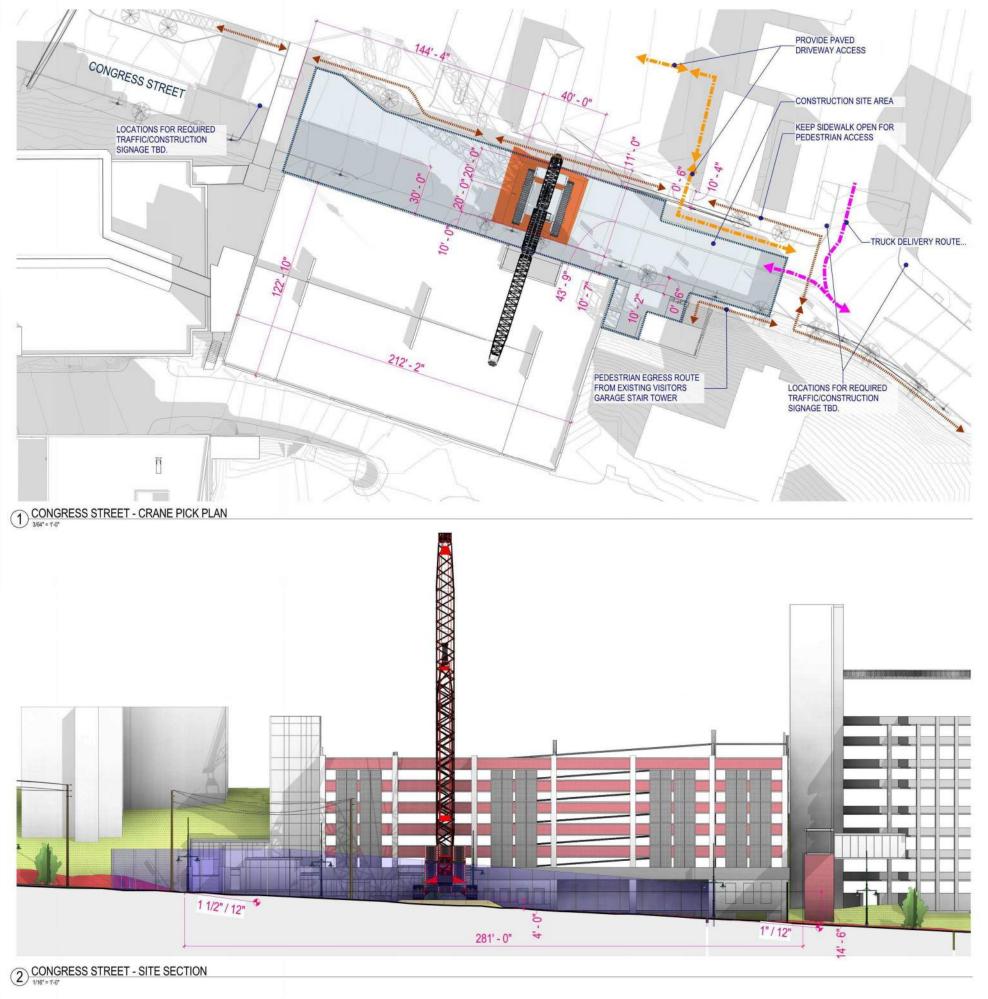


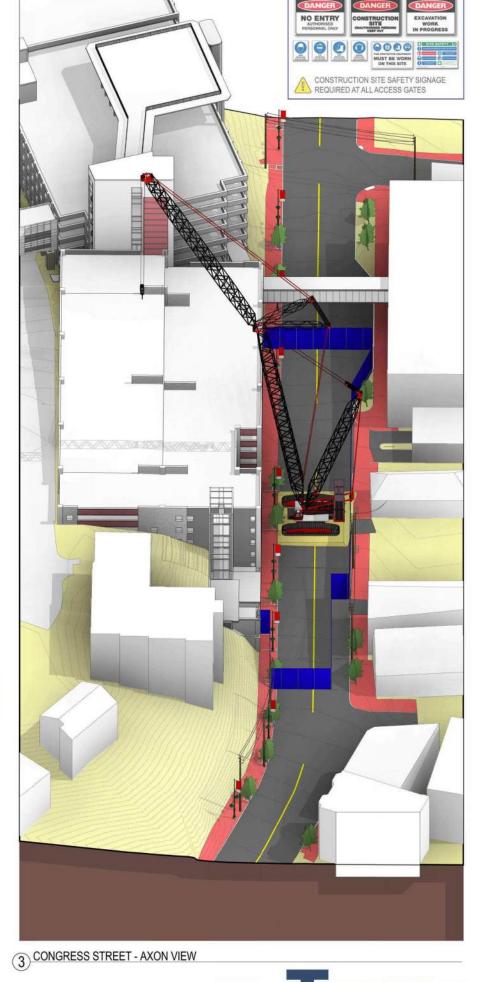














Maine Medical Center, Portland Maine Additions and Renovations [Congress Street Crane Location 2]

