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## Notes of 2/15 MMC Site Plan Review Meeting (CMP/Detours)

1 message

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Jean Fraser <jf@portlandmaine.gov>

Thu, Feb 22, 2018 at 1:05 PM

To: "Errico, Thomas" <thomas.errico@tylin.com>, "Bartlett, Jeremiah" <jbartlett@portlandmaine.gov>, "Hyman, Bruce" <bhyman@portlandmaine.gov>, Keith Gray <kgray@portlandmaine.gov>, "Peverada, John" <jbp@portlandmaine.gov>, "Zazzara, Rhonda" <rjz@portlandmaine.gov>, Robert Thompson <rmt@portlandmaine.gov>, James Sweatt <jjs@portlandmaine.gov>, Eric Nevins <ericn@portlandmaine.gov>, Aaron Pepin <aaronp@portlandmaine.gov>, "Barhydt, Barbara" <bab@portlandmaine.gov>, "O'Brien, Stuart" <sgo@portlandmaine.gov>, "Donaldson, Helen" <hcd@portlandmaine.gov>  
Cc: "DiPierro, Philip" <pd@portlandmaine.gov>, "Gautreau, Keith" <kng@portlandmaine.gov>

Hello all

Key points from the 2/15/18 Site Plan Review meeting with MMC:

*(Please let me know if I have missed anything important; note that these are intended as an "aid de memoir" and not as formal minutes)*

### **Congress Street Closure and associated detours/emergency access (based on the revised docs and plans attached to this e-mail from Gorrill-Palmer)**

Updates from Gorrill-Palmer re traffic detours and associated signage and signals, assuming no alternative to a Congress Street closure (see below- third item):

- RD of GP had developed the option with Boynton one-way inbound, based on feedback from earlier meeting
- Outlined the "three-layer" approach:
  - Signage via variable message signs outside central Portland to encourage different routes into the City
  - Barricades at Congress/St Johns and at Weymouth/Congress to re-route the bulk of traffic
  - Local traffic may use Forest/Boynton inbound
- Outlined the changes needed for each of these (see plans) eg signal at Weymouth/Park (actuated); removal of parking in addition to signage; change ped to concurrent crossing in some places (but RD thought signal timing otherwise OK)
- Key concerns (need more analysis and discussion):
  - Police particularly concerned re the safety of retaining central lane at Congress/St John - rather see it removed even though a number of cars going straight ahead

- Need for information/maps to MMC patients and visitors and employees
  - suggest use online data providers to flag closures
- Need to look closely at impact on peds at signals, especially during ball games and other events
- Consider impacts on residents and businesses of some routes and semi-closures
  - Introduce Boynton as one-way working a couple of weeks in advance
- Access to visitors garage during Congress closure (see plan)
  - Via employee garage, channeled and flaggers as needed
  - 200 employees moving out of the employee garage to make up for loss of 2 levels in visitor garage during construction
- Emergency Routes (see plan)
  - Clarified that access via Gilman only secondary and only when the "green" route is closed
  - Attendees stressed need for communication and decision-making chart
  - Agreed that from now on there would be smaller follow up meetings as necessary to resolve details
  - Agreed there needed to be monitoring and heavy contractor presence during first few weeks and may need to tweak these plans
- METRO - MMC to meet with them once plan firmed up
- DPW noted that the condition of the streets being used for deliveries and detours may require some action in advance eg partial paving - DPW to advise MMC re this after a more detailed site visit - need to avoid delays to the proposed schedule

**CMP - East Tower and Visitor Garage (based on revised CMP as attached from Turners)**

- Congress St closure anticipated May 7 to June 28 for the installation of precast beams for overbuild of the visitors garage - weather biggest factor
- Turner summarized the revisions to CMP, which included facilitating the ambulance access, adding delivery routes
- Reviewers questioned the proposal to route steel deliveries (from North, June 4 to June 28, starting at 5am) along Washington Ave and Congress
  - City staff advised route should avoid Washington completely due to planned construction work
  - Route must avoid downtown Portland and Congress
  - Keep delivery vehicles on I295 longer - maybe I295 to Forest /Park ? Deering; maybe Fore River Parkway
  - Turners will speak to the trucking company again and get back to us
- Police stressed need for ongoing monitoring and process for making changes to delivery and detour routes after closure starts
- Concern re pedestrian route along Congress by construction area
  - Need ADA ramp
  - Need 9ft for crossing
  - Ensure entire sidewalk available

- Look at conflicts for peds crossing Weymouth at Congress - need to address
  - Gilman crosswalk needs to be ADA compliant
- Timetable (based on SO (Tuck) discussions with MMC and City Communication Directors)
  - - Need for early completion of telephone tree communication structure/contacts to be circulated within about 2 weeks and to be tested ahead by local and regional responders
  - - In week after 2/27 PB meeting need schedule that includes lead time and actions
  - - Early prep of handouts for employees and visitors plus early website info important

### **Third Part Review of Constructability**

- Kleinfelders consultancy (Jim Wentworth) has been engaged by city to provide independent review of the constructability issues for the East Tower and Visitors Garage, as there was concern regarding the closure of Congress Street (for at least 8 weeks) and whether that closure was essential in view of its impacts
- JW outlined what had gone into the review and amplified on the review Memo (see FINAL REVIEW MEMO attached for details) outlining the pros and cons of a range of construction options
- JW noted that public safety was a key factor as was the need to use this size of crane which requires a long straight area for assembly
- Kleinfelders professional view was that their analysis supported the choice of the proposed option, though they recommended penalties and other disincentives in the contract for going beyond the identified closure time
- Discussion regarding the work schedule for the garage - potentially possible to increase from 5 days/week to 6 or 7- but then the noise etc from construction would also be for more days
- A 6 day working week with a later start on Saturday may be best compromise and potentially could shorten the closure by a few days depending on weather

*Next Meeting:*

### **NO MEETING FEBRUARY 22**

**March 1 Meeting:** am holding a meeting slot and room 209 is reserved (and all following thursdays at 9am) but no agenda yet- will in part depend on issues raised at the PB Workshop on Feb 27th

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*Jean Fraser, Planner  
City of Portland*

874 8728

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*Jean Fraser, Planner*  
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**3 attachments**



**GP Traffic Analysis of detours & traffic management 2.14.18.pdf**  
4469K



**CM Plan February 13.pdf**  
10844K



**Kleinfelder MMC -Constructability Review Memo 2-21-2018.pdf**  
144K

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## MMC meeting 2/8/18 Brief notes/action

1 message

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Jean Fraser <jf@portlandmaine.gov>

Mon, Feb 12, 2018 at 4:22 PM

To: "Alexander M. Green" <AGreen@mmc.org>, Keri Ouellette <kouellette@portlandmaine.gov>, "Cameron, Caitlin" <ccameron@portlandmaine.gov>, "O'Brien, Stuart" <sgo@portlandmaine.gov>

Hello all

Below please find my brief "action" notes of the 2/8 MMC meetings- pl let me know if your "take way" was different:

**Permitting and Inspections re building permits** (relates to the three most urgent permits eg for retail space (under VG), ET and VG; later ones will be CUP cooling tower on roof & chiller; new St John garage; demo existing garage; new hospital building)

- Retail fit up for Turners - MMC to liaise with KO to resolve re use and move forward on the permit
- ET and VG - urgent re ET roof and Tuck to follow up; otherwise MMC to initiate pre-app discussions with SAFEBUILD and keep KO and JF in the loop
- Submission of permit applications to be direct to Permitting and Inspections Department and pay full fees for now
- ET and VG permits will need State Fire Marshall and City Fire Dept reviews

**Design** (Purpose of meeting was to consider the staff and PB comments and how to address)

- JK from Perkins & Will showed more detailed rendering of ET and clarified where there was "white" on the existing buildings that relate; consider white best for a number of reasons; not done a rendering with silver nor with white cladding brought down
- Discussion of whether white of the new will match existing- not feasible to reclad existing white; MMC explained had looked at options for tone of upper cladding
- Discussion of how ET overbuild will integrate with new hospital building and agreed rendering of latter to show Board
- Discussion of VG and question of adding visual interest (viewed new renderings of proposal from Congress); MMC had considered options but not revised proposals due to constraints
- VG Retail space being fitted out for Turners with long term use in mind- CC suggested this be clarified to Board

- CC and JF suggested that MMC needs to address Board comments on both buildings in some way and to explain what other options have been considered prior to finalizing current option
- MMC clarified glass specs for both ET new windows and VG tower at E end
- CC asked for info re the following and to be submitted for Board:
  - glass specs
  - all materials
  - shades to be used inside ET rooms

Thank you  
Jean

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*Jean Fraser, Planner*  
*City of Portland*  
*874 8728*

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## MMC SP Review Mtg Feb 1, 2018 - MEETING NOTES

1 message

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Jean Fraser <jf@portlandmaine.gov>

Tue, Feb 6, 2018 at 12:10 PM

To: "Errico, Thomas" <thomas.errico@tylin.com>, "Bartlett, Jeremiah" <jbartlett@portlandmaine.gov>, "Hyman, Bruce" <bhyman@portlandmaine.gov>, "Peeverada, John" <jbp@portlandmaine.gov>, James Sweatt <jjs@portlandmaine.gov>, Aaron Pepin <aaronp@portlandmaine.gov>, Eric Nevins <ericn@portlandmaine.gov>, Robert Thompson <rmt@portlandmaine.gov>, Keith Gray <kgray@portlandmaine.gov>, "Zazzara, Rhonda" <rjz@portlandmaine.gov>, "Barhydt, Barbara" <bab@portlandmaine.gov>, "O'Brien, Stuart" <sgo@portlandmaine.gov>, "Donaldson, Helen" <hcd@portlandmaine.gov>, "Alexander M. Green" <AGreen@mmc.org>, Dominic Gagnon <Dominic.Gagnon@colliers.com>, gscholler@tcco.com  
Cc: "DiPierro, Philip" <pd@portlandmaine.gov>, "Ryan T. Wingard" <ryan.wingard@wright-pierce.com>, "Michael A. Guethle" <michael.guethle@wright-pierce.com>, Will Conway <wconway@sebagotechnics.com>, Jim Wentworth <JWentworth@kleinfelder.com>, "Cameron, Caitlin" <ccameron@portlandmaine.gov>, "driley@sebagotechnics.com" <driley@sebagotechnics.com>, "Gautreau, Keith" <kng@portlandmaine.gov>

Hello all

Key points from the Site Plan Review meeting with MMC held last **Thursday, February 1, 2018** plus (at end) future meeting agendas:

### **A. CMP with focus on analysis of detour options for any Congress Street closure - meeting was seeking to find consensus as to the best option**

***Updates re detour options from Gorrill-Palmer (circulated summary plans and narrative that included analysis of levels of service at intersections which was sent by e-mail the evening before- this is attached):***

- Outlined two "local" (using Forest & Boynton) options: (A) two-way and (B) one-way on Boynton
- Outline option (C) using St John/Park/Weymouth
- Outlined wider add-on option (E) that diverted inbound vehicles further out in the system eg leaving I295 at different exits
- Acknowledged option (D) to make Park two-way but this was not analysed as it entailed a lot of changes to be completed in a short time and not recommended
- Subject to some further information and discussion, the Boynton one-way (B) combined with the add-on option (E) to divert inbound vehicles seemed to be worth considering further

### ***METRO***

- MMC had met with METRO who would work with them once final plan in place

- METRO had noted that they would probably need additional drivers and buses to maintain headways

***Implications of detours - attendees highlighted concerns and Bruce Hyman offered to provide a coordinated note regarding key areas of additional info requested [this is below] and Gorrill-Palmer will provide updated and expanded info on these as "final package" for next discussion (2/15)***

- Need to remove dedicated ped phase at St John/Congress
- Issues re access and parking for residents on Boynton
- Need for signal modifications eg timing, peds
- Note increase in traffic April-June (+20% - from Police)
- Suggestions for signage, including variable messaging VB and moving MMC sign(s) on I295
- Physical condition of Weymouth and need for emergency service access
- City does not recommend adding traffic to Deering
- See Bruce Hyman's note at end of e-mail

### ***Timeframes/contingencies:***

- Concern that the June 28th end date is crucial
- What penalties if this is not met?
- Question of whether can be shorter but keep some buffer (which might have impacts on neighbors)
- Timing of deliveries and where staged crucial to minimize impacts
- Turner to prepare communications info between contractor/MMC security/City re decisions needed if issues arise
- Police suggest have flaggers during the first week

### **B. Stormwater Review of Site Plan (note that W-P had previously provided review comments and Sebago had responded, so discussion focused on outstanding issues and questions)**

- Wright-Pierce (W-P) attended on behalf of City; Sebago Technics (ST) attended on behalf of MMC
- ST explained existing situation:
  - ET sewer goes to Congress combined system; ER stormwater goes to A Street separated system
  - VG has treatment of stormwater on roof which then goes to Congress combined
  - Density of utilities prevents connection so ST consider only way to get stormwater to A street from VG and new hospital building is to pump
- New hospital building on Congress will have subsurface system along Congress to detain, and green roof- ultimately discharge to Congress combined system
- Other items raised by W-P and DPW for MMC to address:
  - Increase storage at visitor garage
  - Reduce disturbance & introduce erosion control etc at construction sites
  - Submit capacity letters

### **C. TDM- MMC had submitted TDM Plan and City had sent comments recently**



- Discussion monitoring- methods of monitoring parking demand - questions
- City expects the TDM to include specific strategies and associated details, and then monitor and review in a year
- TDM needs to go one step beyond IDP
- Planning had seen good examples and will forward these (WEX; Thompsons Point)
- Discussion re bicycle by-ways and how these should be integrated with TDM for MMC - question of whether they would facilitate cycling by MMC staff

## **D. NEXT MEETINGS**

### **THURS FEB 8 (most do not need to attend)**

- **9:30am- 10:00 MMC building permits process**
- **10ish TO 11:00: Design with Jeff K of Perkins & Will**

PLANNING CONFERENCE ROOM (this meeting only)

**THURS FEB 15 9AM - final discussion CMP and associated traffic/detours/signage/signals etc (based on a final package from MMC to be circ 2/13/18) in Room 209**

### Coordinated Note from Bruce:

Here are the consolidated comments from last Thursday's preliminary review of the MMC draft Congress Street detour analysis dated 1/31/18.

The following additional information is requested:

- More documentation of the actual morning and afternoon peak hours that are being referenced as part of the detour planning. It is not stated in the document itself and the Synchro printouts have the same START-STOP times for both the AM-PM analysis period. (It looks like 7AM-8AM are the AM peak hour from the printouts but it should be documented in the narrative and in the tables.)
- More documentation of the peak hour(s) for the detour analysis: do one or both of the actual peak traffic hours change to a different time period based on the amount of traffic that is deducted-credited based on the amount of traffic heading to the Gilman lot and MOB parking and the actual amount of traffic that remains?
- The configuration and specific type of temporary traffic signal equipment proposed for the Weymouth Street/Park Avenue intersection and the means of traffic signal coordination/communication with nearby traffic signals
- All traffic volume information that was used in the analysis to better understand the analysis' assumptions for traffic volumes on Congress Street between St. John and Brahmall. A review by the city of the actual Synchro models is also suggested.
- The specific location, placement and wording of detour signage associated with the proposed detour concept
- The specific recommended deployment of personnel (e.g., flaggers, police officers, etc) at the initiation of the proposed Congress Street detour to actively manage traffic associated with the detour and and coordinated with construction activities/the CMP.

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*Jean Fraser, Planner*  
*City of Portland*  
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**Congress St Detour 1-31-18 - reduced.pdf**  
3051K

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## Notes of todays meeitng

1 message

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Jean Fraser <jf@portlandmaine.gov>

Thu, Jan 25, 2018 at 6:10 PM

To: "Alexander M. Green" <AGreen@mmc.org>

Cc: Mark Harris <HARRIM6@mainehealth.org>, "O'Brien, Stuart" <sgo@portlandmaine.gov>

AI

This (below) is what I have sent around internally, as mentioned in earlier e-mail to help keep reviewers in the loop.

thanks  
Jean

Key points from todays Site Plan Review meeting with MMC:

### **East Tower CMP - meeting was seeking to find consensus**

#### *Updates from Turner:*

- Ambulances will be allowed to use ambulance portal as existing
- Explained penalties if workers park on nearby streets
- Have checked out feasibility of trucks using Ellsworth
- Truck deliveries of steel with be June, July and most of August
- Probably remove bump out in Crescent

#### *Discussion of Access routes:*

- A number of alternatives were discussed, looking at pros and cons (eg access from Gilman) as Turner proposals problematic Ellsworth to Congress and reservations over 2-way in Crescent
- MMC noted secondary access via employee garage for cars going to Visitors Garage
- Concluded:
  - Take out bumpout in Crescent to help larger emergency vehicles
  - Best option for exiting trucks is Bramhall via Charles to 295
  - Keep Crescent 2-way (MMC contacting residents long here re need to remove parking)
  - Gilman could be back up access option and arranged if necessary

### **Congress Street Closure and associated detours/emergency access (this discussion to continue longer; includes third party review of construction plan)**

#### *Updates from Turner:*

- Current plan is for 8 week closure based on normal working practices, so May 7 to June 28 envisaged
- Compression of time means more trucks in area per day

*Updates from Gorrill-Palmer re options for detours:*

- Local - Forest/Boynton/Weymouth (for small cars)
- One way system probaly Boynton inbound and park outbound
- Park between Fore River Pkway and St Johns to be two way
- Comparison/analysis to be completed/circulated early next week and discussed at Feb 1 mtg

*Discussion of detour options:*

- Need to get people out of system further out - need signage
- Police suggest closures on Congress at St John, and Park
- Many felt should avoid pushing traffic to Weymouth
- Deering another option - G-P to include in analysis
- Park 2-way offers benefits but big questions re intersection modifications and signals

*Next Meeting:*

**THURS FEB 1 9am- 10:30** (reviewers attend for their topics within this time)  
**ROOM 209**

- Focus on Congress Closure & detour option
- Some time on TDM
- Some time on Stormwater/Wastewater

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*Jean Fraser, Planner*  
*City of Portland*  
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**EXTRACT FROM SITE PLAN ORDINANCE**

*Water Quality, Stormwater Management and Erosion Control:*

a. All development must demonstrate that the proposed site improvements are designed to minimize the amount of stormwater leaving the site. This must include consideration of the design and location of improvements to minimize the total area of impervious surface on the site and stormwater management techniques to minimize both the volume and rate of runoff from the lot. The stormwater management plan must demonstrate the following:

(i) Any stormwater draining onto or across the lot in its pre-improvement state will not be impeded or re-directed so as to create ponding on, or flooding of, adjacent lots;

(ii) Any increase in volume or rate of stormwater draining from the lot onto an adjacent lot following the improvement can be handled on the adjacent lot without creating ponding, flooding or other drainage problems and that the owner of the lot being improved has the legal right to increase the flow of stormwater onto the adjacent lot;

(iii) Any increase in volume or rate of stormwater draining from the lot onto City property following the improvement can be handled without creating ponding, flooding or other drainage problems and that the owner of the lot being improved has the legal right to increase the flow of stormwater onto the City's property; and

(iv) Any increase in volume or rate of stormwater draining from the lot into the City's separate storm sewer system can be accommodated in the system without creating

downstream problems or exceeding the capacity of the storm sewer system.

b. All development, except Level I minor residential development, shall comply with the standards of Section 5 of the Technical Manual including basic, general and flooding standards, as applicable, to prevent and control the release of pollutants to waterbodies, watercourses, wetlands and groundwater, and reduce adverse impacts associated with increases or changes in flow, soil erosion and sedimentation.

c. All development, except Level I minor residential development, that are located within the watershed of an Urban Impaired Stream shall comply with the Urban Impaired Stream standards pursuant to Maine DEP Chapter 500 Stormwater Management Rules, as described in Section 5 of the Technical Manual.

d. Level I: minor residential development shall comply with basic erosion control standards, as described in Section 6 of the City of Portland Technical Manual.

e. Development shall not pose a risk of groundwater contamination either during or post-construction, as described in Sections 5 and 9 of the Technical Manual.

f. Development shall provide for adequate and sanitary disposal of sewage as described in Section 2 of the Technical Manual.

(c) *Public Infrastructure and Community Safety Standards.*

1. *Consistency with City Master Plans:*

a. All developments shall be designed so as to be consistent with City Council approved master plans and facilities plans and with off-premises infrastructure, including but not limited to sewer and stormwater, streets, trails, pedestrian and bicycle network, environmental management or other public facilities (see Section 15 of the Technical Manual).

b. The site plan shall include suitable easements, rights and improvements to connect or continue off-premises public infrastructure as may be required by the reviewing authority.

2. *Public Safety and Fire Prevention:* **[excluded from this extract]**

3. *Availability and Adequate Capacity of Public Utilities:*

a. The development shall not overburden sanitary sewers and storm drains, water lines, or other public infrastructure and utilities. Development shall provide adequate utility capacity and distribution network on-site and in connection to surrounding locations and facilities.

b. Electrical service shall be underground unless otherwise specified for industrial uses, or if it is determined to be unfeasible due to extreme cost, the need to retrofit properties not owned by the applicant or complexity of revising existing overhead facilities.

c. Installation of new or upgrades to existing sanitary sewers, storm drains, water lines or other utilities shall meet the provisions outlined in Section 2 and Section 9 of the Technical Manual.

d. All development within 200 feet of a public sanitary collection and treatment system shall connect sanitary sewer lines into the nearest available public sewer. If a public sanitary collection and treatment system is not available, a private wastewater system may be used according to the requirements of Chapter 24 of the City Code and Section 2 of the Technical Manual.

e. All sanitary sewer and stormwater utilities proposed as part of the development shall be designed to City standards as specified in Section 2 and Section 4, Chapter 500 Stormwater Management Standards, of the Technical Manual.

f. All residential development of 20 units or more, commercial development and industrial development shall provide for the temporary storage and timely removal of all trash and recyclable materials including, at a minimum, paper, corrugated cardboard, plastics and metals. Storage containers for recyclable materials shall be separated from trash containers. All exterior storage of trash and recyclables shall be screened from view from public sidewalks, streets and adjacent properties.

4. Reserved.



## MMC TDM PLAN | City Review Comments 1/24/18 (Tom Errico, Bruce Hyman, Nell Donaldson)

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### General

- Add date to title page.

### Context

#### *Transit:*

- Provide information on #9/#1/Breez/Zoom. These all run on Congress and will provide service to future front door.

### Current Travel Behavior

#### *Existing Mode Share:*

- Include absolute numbers on graphs (i.e. ~860 people are taking shuttle, 100 carpooling, 88 walking, etc.)
- Commuting survey should be completed annually.

#### *Geospatial Analysis:*

- Include absolute figures (e.g. ~1080 MMC employees live within a 3 mile radius, 320 live within a mile).
- Is there data on usage of UCar Share?

### Program Goals

- This section begins with a discussion on peak parking demand, but the goal/metric is framed as a 'trip reduction.' This section should be consistent re goals and metrics.
- Baseline should also be more clearly identified (e.g. if there are ~2700 MMC employees driving alone to work every day (based on the survey), this = X SOV trips. Target (2%) of these trips = X. A table may be helpful to show this information.
- Plan should be clear on how the metric will be monitored. If metric is trips, MMC will need to monitor trips. If parking demand, same. What method is proposed? Counts or surveys? Traffic or parked vehicles.
- The shift of 65 employees over five years seems under-achieving.
- Monitoring should be annual.

### Parking & TDM Strategies

#### *Current GOB Strategies:*

- Figure 6 should include both the existing and proposed bike network (see attached markup).
- The TDM plan notes that vanpool and carpool vehicles will get preferential parking spaces in the new employee garage. The location of the new garage may actually be a barrier for increased carpooling. We would suggest identifying spaces on-campus.
- The 'pay for parking' section is in the future tense. This should be in the future strategies section.
- The plan should also clarify the cost for parking – is it \$3 per week or bi-weekly? Paying for parking (and allowing cash out) is potentially one of the most significant things the hospital could do to shift mode share. Fees could/should be increased significantly.

#### *Enhanced (Future?) Strategies:*

- In the bike discussion, note that many of the proposed bike network connections serve MMC.
- Explain how enhanced transit subsidies will work. How will MMC administer the program?
- Also, are there METRO system/operational enhancements that could influence MMC employee use?
- Provide incentives for those who walk or bike.

#### *New Program Elements:*

- Narrative states that MMC 'is currently exploring the following options.' MMC needs to commit to strategies in the TDM plan.
- Short-term strategies should be 1-2 years to align with the short-term goals.
- The short-term strategies include improving data collection capabilities with a reference to the long-term strategies. This should be fleshed out in the short-term if it is included as a short-term action.
- The plan should also include mid-term actions (3-5 year). Otherwise there is a gap between short & long-term.

- There are only two long-term strategies identified. Are there other, more targeted strategies that MMC could pursue in the future?

#### *Education and Marketing Strategies*

- Include a timeframe for these strategies.
- What about challenges/incentives outside of GoMaine? MMC could provide their own.
- What about connections to HR/employee health programs?

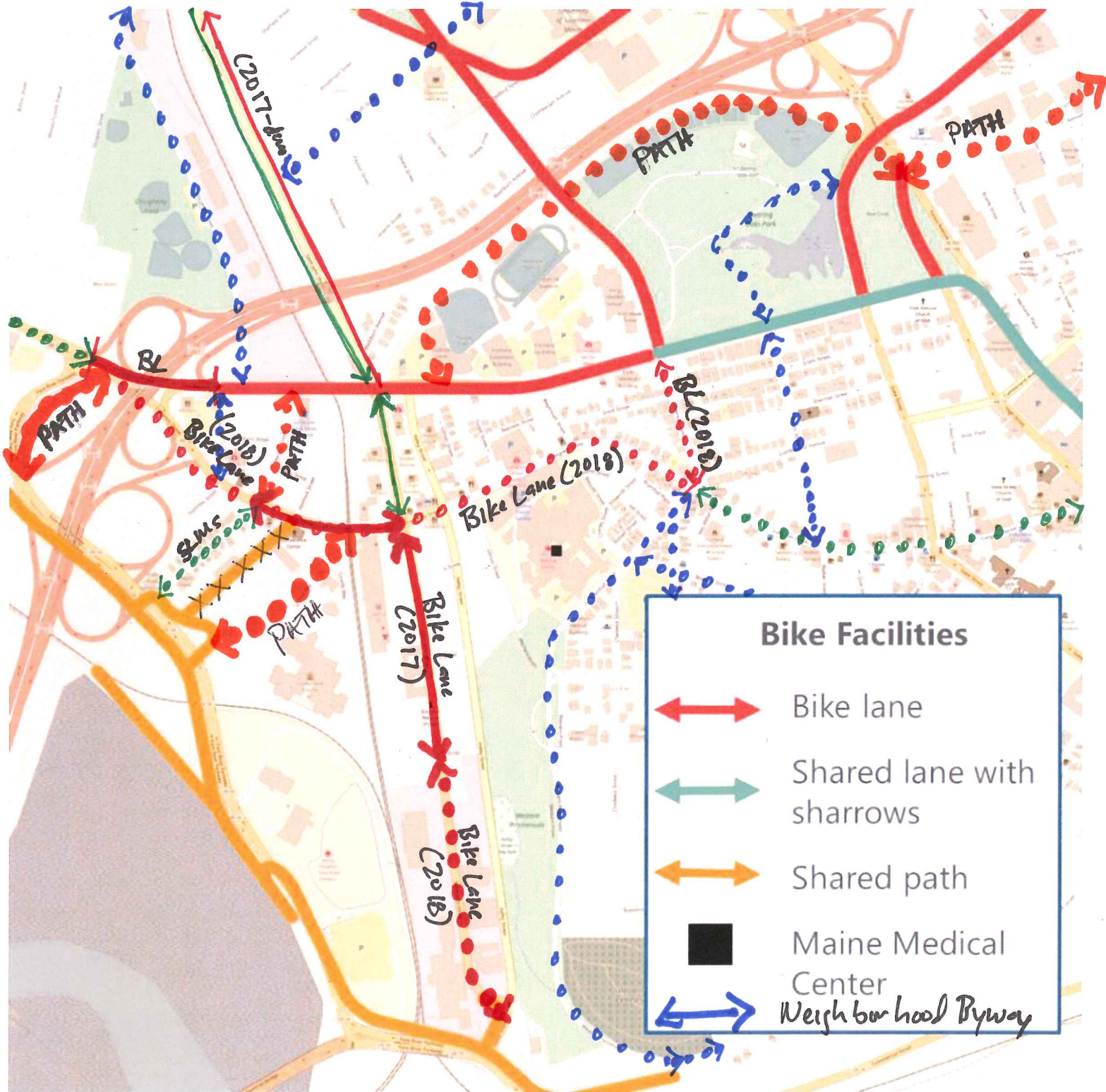
#### **Comprehensive Data and Goal Monitoring**

- As above, data collection and monitoring should be annual at the least (as per the IOZ). Monitoring reports should be submitted to the city's Planning Division and include a summary of progress toward plan targets.
- Establishing a strong data collection system is critical. We strongly suggest that MMC incorporate technologies that will provide useful and accurate information for assessing transportation data.

# UPDATED EXISTING + FUTURE BIKEWAY NETWORK

FIGURE 6

Bicycle Network Surrounding MMC



1/16/18  
BAH/P4UD.

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<b>TO:</b>	Jean Fraser, Planner	<b>DATE:</b>	1/25/2018
<b>FROM:</b>	Michael Guethle, PE; Ryan Wingard, PE	<b>PROJECT NO.:</b>	13982A
<b>SUBJECT:</b>	Bramhall St. - 22; MMC East Tower and Visiting Parking (PEZ.2017.289)		

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Wright-Pierce has reviewed the Level III Site Plan Application information provided for the East Tower and Visiting Parking redevelopment proposed at 22 Bramhall Street. The project will include adding three levels of parking to the existing parking garage, relocating the heliport to the East Tower, and adding 2 floors to the East Tower. The work will add 0 square feet of new impervious surfaces, will add 0 square feet of new building surfaces, will add 225 parking spaces, and will add 137,961 square feet of building floor area.

**Documents Reviewed by Wright-Pierce:**

- Level III Site Plan application, dated (most recent) January 8, 2018.
- Engineering Permitting Plans, dated (most recent) January 8, 2018.

**Comments:**

- 1) Level III Site Plan applications with the City of Portland must submit a stormwater plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules. This includes conformance with the Basic, General, and Flooding Standards (Ref: Technical Manual, Section 5. II. Applicability in Portland. C. a.; and Ref: City of Portland Code of Ordinances Sec. 14-526. Site Plan Standards, (b). 3. b.)
  - a. Basic Standard: Project Plans and Application should be provided to address erosion and sedimentation requirements, inspection and maintenance requirements, and good housekeeping practices in accordance with MaineDEP Chapter 500, Appendix A, B, and C. The applicant has provided information that the project will have no disturbance. The applicant shall provide information confirming proposed construction practices for concrete installation, including location of concrete washout, and protection for down-gradient storm drain inlets. Construction

Management Plan submitted includes mention of sweeping sidewalks to remove trash and debris; storm drain inlets shall be protected in sidewalk locations adjacent to the project. The applicant shall provide information relative to the control of construction equipment mud tracking.

- b. General Standard: no additional impervious surfaces are being added to the facility. Applicant shall submit statement and reasoning for the facility not being subject to the General Standard, or report on how the project meets the terms and conditions of the General Standard.
  - c. Flooding Standard: No additional impervious surfaces are being added to the facility. Applicant shall submit statement and reasoning for the facility not being subject to the Flooding Standard, or report on how the project meets the terms and conditions of the Flooding Standard.
- 2) Connection to Existing System:
- a. The existing facility currently discharges to a combined sewer system. The applicant shall provide the following:
    - i. For floor drains not exposed to roof runoff, an oil-water separator connected to the sanitary sewer. Locations of oil-water separator shall be confirmed on the engineering permitting plans, and detailed.
    - ii. For floor drains exposed to roof runoff, a proposed connection to the separated storm sewer system on A Street shall be evaluated.
    - iii. The applicant shall address the potential to separate existing combined sanitary and stormwater flows in the East Tower to help reduce the impact of storm drainage on the existing combined sewer system.
    - iv. It is understood that the sewers adjacent to the facility are near capacity to serve new development. Applicant shall demonstrate opportunity to offset proposed new sewer flows.
    - v. Proposed and existing connections to the sewer and stormwater system shall be indicated on the proposed engineering permitting plans.
    - vi. Details of connections, pipes, structures shall be provided.

Memo To: Jean Fraser, Planner

1/25/2018

Page 3 of 3

- 3) Confirmation of adherence to the Technical Manual and Site Plan Standards regarding storm drain and sewer shall be provided.

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<b>TO:</b>	Jean Fraser, Planner	<b>DATE:</b>	2/7/2018
<b>FROM:</b>	Michael Guethle, PE; Ryan Wingard, PE	<b>PROJECT NO.:</b>	13982A
<b>SUBJECT:</b>	Bramhall St. - 22; MMC East Tower and Visiting Parking (PEZ.2017.289)		

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Wright-Pierce has reviewed the Level III Site Plan Application information provided for the East Tower and Visiting Parking redevelopment proposed at 22 Bramhall Street, including the updated plans and response to comments received. The project will include adding three levels of parking to the existing parking garage, relocating the heliport to the East Tower, and adding 2 floors to the East Tower. The work will add 0 square feet of new impervious surfaces, will add 0 square feet of new building surfaces, will add 225 parking spaces, and will add 137,961 square feet of building floor area.

**Documents Reviewed by Wright-Pierce:**

- Level III Site Plan application, dated (most recent) February 5, 2018.
- Engineering Permitting Plans, dated (most recent) February 5, 2018.
- Construction Management Plan, dated (most recent) February 1, 2018

**Comments:**

- 1) Level III Site Plan applications with the City of Portland must submit a stormwater plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules. This includes conformance with the Basic, General, and Flooding Standards (Ref: Technical Manual, Section 5. II. Applicability in Portland. C. a.; and Ref: City of Portland Code of Ordinances Sec. 14-526. Site Plan Standards, (b). 3. b.)
  - a. Basic Standard: The applicant has confirmed that no additional impervious surfaces are being added to the facility, the proposed work is not causing a change of use, and no site disturbance is proposed. As such, the project is not subject to the requirements of the Basic Standard. Information provided in the updated

Construction Management Plan indicates that downstream catch basin inlets will be protected.

- b. General Standard: The applicant has provided information that no additional impervious surfaces are being added to the facility and that the proposed work is not causing a change of use. As such, the project is not subject to the requirements of the General Standard.
  - c. Flooding Standard: The applicant has provided information that no additional impervious surfaces or changes of use are occurring as part of the proposed development. As such, the project is not subject to the requirements of the Flooding Standard.
- 2) East Tower Expansion Connections:
- a. The applicant has provided information confirming that the East Tower storm runoff currently discharges to a separated storm sewer system, and that the proposed construction will also discharge to the separated storm sewer system. The roof connections are internal to the facility and no additional information regarding the East Tower Expansion is requested at this time.
  - b. It is understood that the sewers adjacent to the facility are near capacity to serve new development. The applicant has indicated that increases to dry-weather sanitary flows are minimal, and has submitted a Wastewater Capacity Application for review by the Department of Public Works.
- 3) Visitor Garage Expansion
- a. The existing facility currently discharges to a combined sewer system within Congress Avenue. The applicant has provided a Stormwater Management Report from 2004, indicating stormwater rates to the separate storm sewer in the A-Street corridor.
    - i. The information provided indicates that the separate storm drain within the A-street corridor is at or near capacity during the modeled 10-year, 24-hour rain event, but that capacity may be available for lower interval rain events.



- ii. Plan 2D Boundary Survey indicates a connection or stub connection leading from the catch basin on the south side of the Visitor Garage that may allow for connection from the Visitor Garage roof drain into the separate storm drain system. The applicant shall provide the following:
    1. An updated boundary survey in the vicinity of “Plan 2D Boundary Survey” with utility elevations, pipe sizes, and pipe materials in accordance with the City’s Chapter 14 and Technical Manual requirements for a Boundary Survey. Anecdotal information regarding the difficulty for construction in this corridor was discussed in the February 1 meeting. However, a sewer pipe crossing currently exists in this corridor, as does a storm drain or storm drain stub. City staff need additional information regarding existing utilities to confirm if a connection to the separate storm drain will be feasible or not.
    2. If a connection from the Visitor Garage roof to the separate storm drain that conveys flows to the A Street corridor is feasible, then the applicant shall provide:
      - a. A connection that allows for a 1” rain event to be conveyed to the separate storm drain on A Street, consistent with the City’s Long-Term CSO Control Plan.
      - b. An overflow connection that conveys larger interval storm events towards the combined sewer on Congress Avenue.
  - iii. For floor drains not exposed to roof runoff, flows shall be conveyed to an oil-water separator connected to the combined sewer. Locations of oil-water separator shall be confirmed on the engineering permitting plans, and detailed.
- 4) If new connections to the municipal system are constructed, then confirmation of adherence to the Technical Manual and Site Plan Standards regarding storm drain, sewer, and connections to the existing system shall be provided.

5) General Comments:

- a. Ability to Serve letters from affected utilities are required as part of the Level III Application process. Ability to Serve Letter from Central Maine Power has been provided.
- b. The plans should note a location for snow storage or provide a written snow storage plan. The proposed conditions are very similar to the existing conditions. If all snow is removed from the site in the existing conditions, then a statement from the applicant indicating method of removal and that snow removal protocol will not be changed will suffice for this item. If snow is stored on site, snow storage locations shall be indicated.



Caitlin Cameron &lt;ccameron@portlandmaine.gov&gt;

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**Re: MMC Design review**

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Caitlin Cameron <ccameron@portlandmaine.gov>  
To: "Fraser, Jean" <jf@portlandmaine.gov>

Thu, Feb 15, 2018 at 2:27 PM

**1) Design submission for Planning Board workshop 2/27** - Staff suggest the PB workshop submission include at least a written narrative addressing the design points below which may also include some visual examples of past design iterations. The PB workshop presentation should definitely include visual responses to some of these points as we discussed in the meeting last week.

The following comments/questions from the Planning Board should be addressed regarding design:

- Mixed feelings about use of white panels - too sterile or stark contrast, not recessive enough?
  1. Provide renderings showing options for material choices, grey or silver were specifically mentioned
  2. Respond to question about re-cladding existing white on building
- Address request for integration:
  1. Integration of existing building elements and new - looks like an addition
  2. Clarify integration of East Tower proposal related to future campus design
  3. Integration into neighborhood (especially at the edges, entrances, blank walls, retail)
- Long-term plan for Congress Street retail facade improvements
- How will streetscape at South Entrance change when new entrance is added on Congress Street?
- Screening of mechanicals on garage
- Concerns with parking garage design - rooftop fence quality, facade improvements

**2) Design Comments** - Based on the design meeting last week, staff continue to have the following comments/questions on the current proposal:

- **East Tower:** Staff, aligned with PB comment, continue to have some concern about the facade integration of the new and existing - especially in overall facade composition, proportion, and articulation. The existing building has a high level of articulation while the proposed new is much more minimal. Please clarify where new metal panel is proposed and where existing to remain and the strategy around getting those to match or blend. Staff suggest you consider articulation strategies in the new section that address these integration concerns whether that is a horizontal band, dimensional elements, color or other strategies.
- **Garage:** There are two opportunities to update or improve the design character of the garage - the fall protection fence, especially on the top level, and the metal screens.

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Caitlin Cameron, AICP, Associate AIA, LEED AP  
Urban Designer  
Planning & Urban Development Department  
389 Congress Street  
Portland, ME 04101  
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**MEMORANDUM**

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**To:** FILE  
**From:** Jean Fraser  
**Subject:** Application ID: 2017-289  
**Date:** 2/21/2018

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**1/17/2018**

Circulation--The ambulance emergency room entrance should remain open to one way traffic. The area can be difficult to maneuver in its current design. Making the patient delivery area a two way drop off doesn't seem achievable.

2/21/2018 The plan has been changed to accommodate one way traffic through the ambulance bay at MMC. Some additional landscaping will be done to allow the ambulance approach from Crescent Street. An alternative ambulance route for ambulances will be via Gilman Street.

**1/17/2018**

2/21/2018 Congress Street will be closed for several weeks. Ambulances destined for the hospital will follow the same detour as other traffic. Fire apparatus responding from the peninsula will make route adjustments when responding West of Deering Avenue.

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## PEZ 2017-289: MMC East Tower and Visitor Parking Garage - Site Plan Requirements

1 message

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**Bruce Hyman** <bhyman@portlandmaine.gov>

Fri, Feb 23, 2018 at 11:42 AM

To: Jean Fraser <jf@portlandmaine.gov>

Cc: Barbara Barhydt <bab@portlandmaine.gov>, Jeremiah Bartlett <jbartlett@portlandmaine.gov>, Tom Errico <thomas.errico@tylin.com>, Caitlin Cameron <ccameron@portlandmaine.gov>, Keith Gray <kgray@portlandmaine.gov>, Stuart O'Brien <sgo@portlandmaine.gov>

Good morning Jean,

The following are my review comments and recommendations on the Site Plan application for the MMC East Tower and Visitor Parking Garage components, touching upon: Bicycle Parking; ADA-Compliance at both locations; and, Street Lighting on Congress Street.

### Bicycle Parking

Based on the information submitted in Submission S-2 Bicycle Parking, the total quantities of parking appear to be sufficient to meet the bicycle parking requirements for the MMC campus.

The type of bicycle parking provided, based upon images supplied in the latest Draft TDM Plan (Feb. 13th, 2018) is in some cases deficient per the Technical Manual to securely park bicycles and encourage bicycle commuting. Some of the bicycle racks secure the front wheel only and do not provide the required two points of contact between the bicycle frame and bicycle rack. This is shown in the photograph in the TDM plan where users are securing their bicycles to the ends of the racks, not in the mid-portion where they are intended by this design. See below.



These bicycle racks do not meet the functional requirements of the Technical Manual, Section 1.15, so-called "wheel-benders". Photo Source: MMC Draft TDM Plan, dated February 13, 2018.

Bicycle parking requirements are outlined in the Technical Manual in Section 1.15. It states, in part:

"Bicycle parking shall:

- Provide secure, durable racks that maintain bicycles in an upright position and to which bicycles can be affixed with customary lock and cable mechanisms. Fence-type ("wheel bender") racks designed to secure the front wheel only are prohibited. (emphasis added, excerpt)"

The other types of bicycle racks illustrated in the Draft TDM Plan (and other types) do meet the functional requirements for bicycle parking. See below.



These bicycle racks do meet the functional requirements of the Technical Manual, Section 1.15. Photo Source: MMC Draft TDM Plan, dated February 13, 2018.

The applicant is to inventory the type and number of bicycle parking spaces within the MMC Campus at each location to ensure that, at a minimum, 1) the total number of racks that meet the parking standards equals the number required and 2) also meets the standard that bicycle racks are adequately distributed within the MMC Campus at main building entrances, also as required by the Technical Manual.

#### East Tower ADA-Compliance/Accessibility

The sidewalks and curb ramps serving crosswalks along the frontage of the East Tower appear to meet ADA-accessibility requirements. The curb ramps on the opposite side of the street do not appear to meet ADA due to what appear to be worn detectable warning panels (being comprised of concrete pavers). The applicant is to assess the condition of the detectable warning panels at each crosswalk serving the East Tower site and replace those that are not compliant due to their condition with cast iron detectable warning panels.



Source: Google Streetview, Aug. 2017.

### Visitor Garage ADA-Accessibility

The applicant is to confirm that the driveway on Congress Street for the Visitor Garage (for both the entrance and exit) is ADA-compliant for a pedestrian access route for a minimum width of 5' where it meets the back of sidewalk. The maximum allowable cross-slope is 2%.

The applicant is to also confirm that the sidewalk grades on the approaches to the driveway are ADA-compliant for their cross-slope (also 2% maximum for a minimum of 5' clear width) and running slope (it may not exceed specific slopes for different distances and in some instances may not exceed the running slope of the adjacent street).

The applicant is to correct any noted ADA-accessibility issues along the Visitor Garage frontage on Congress Street.



The current driveway at the Visitor Garage. Source: Google Streetview, Aug. 2017.

### Pedestrian/Street Scale Lighting on Congress Street



The current pedestrian scale lighting provided along the frontage of the Visitor Garage (and Employee garage to be demolished in Ph III) is not of the same scale as the remainder of Congress Street (where it has both pedestrian and street scale lighting) where it has been implemented within the Downtown Lighting District within the Municipal Street Lighting Standards.

Along the Visitor Garage frontage, the applicant is to replace the existing pedestrian-scale luminaires and add the street lighting luminaire/lamp (3000K, LED) with top bracket to the existing assembly to create street lighting consistent with this vicinity to be activated as the principal visitor entrance with the completion of Phase III.



The current pedestrian-only scale lighting along the Congress Street frontage.  
Source: Google Streetview, Aug. 2017.



The current standard for pedestrian and street-scale lighting on Congress Street.  
Source: Google Streetview, Aug. 2017.

Please do not hesitate to contact me if you or the applicant has any questions on the above

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Bruce Hyman  
Transportation Program Manager  
Transportation Division

Department of Planning & Urban Development  
389 Congress Street  
Portland, Maine 04101  
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<http://www.portlandmaine.gov/1363/Transportation-Division>  
*Yes! Transportation's Good Here ....*

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## Fwd: MMC CMP and detours- to PB Workshop on 2/27

1 message

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**Jean Fraser** <jf@portlandmaine.gov>  
To: "Fraser, Jean" <jf@portlandmaine.gov>

Fri, Feb 23, 2018 at 11:32 AM

From: **James Sweatt** <jjs@portlandmaine.gov>  
Date: Fri, Feb 23, 2018 at 9:50 AM  
Subject: Re: MMC CMP and detours- to PB Workshop on 2/27  
To: Jean Fraser <jf@portlandmaine.gov>  
Cc: "O'Brien, Stuart" <sgo@portlandmaine.gov>, "Barhydt, Barbara" <bab@portlandmaine.gov>

Hello Jean,

The Police Department have taken great effort to evaluate the proposed construction at Maine Medical Center to include the closure of Congress St. The material presented by several city departments, and the MMC staff have determined the safest way to build the parking garage further is to close Congress St. We are obviously concerned with the impact to the neighborhood and greater Portland community.

We have read, and was present during Kleinfelder's presentation of the engineering data and crane placement recommendations. It appears it will be necessary to close Congress St for the 8 week period that Turner construction has projected. It will be imperative that Turner keep to this schedule and we would recommend incentives to open Congress St sooner and substantive penalties for delays beyond 8 weeks. It will be crucial that the closure of Congress Street not extend past June 29th to avoid conflict with the highest summer traffic flow.

We have presented recommendations and participated in the construction detour plan. With the available details and traffic projections, the plan presented at the 2/15/18 meeting appears to be the best option during the road closure and construction of the East Tower and garage over-build. Having said that, we believe the detour has to be monitored throughout the closure to insure it meets the needs of the area. Changes may be necessary after traffic patterns develop around the detour.

It is our experience that traffic changes are unpredictable even with thorough planning. We believe Maine Medical Center must educate it's employees and the many visitors on the best ways to access the hospital to reduce confusion with motorists. MMC must stay engaged with the community and be thoughtful to continue to address the community needs as they change through the construction project. MMC must communicate to the community on numerous platforms to keep the community informed. MMC must have

a robust staff dedicated to work with day to day complaints this extensive project will produce. Project staff must maintain direct communication with city departments throughout the project using prearranged communication channels.

Turner construction must also manage the delivery of concrete casts to Congress St and steel to East Tower in a manner to avoid large vehicles with heavy loads moving during morning commuter hours (0700-1000) and afternoon hours (1500-1800). We continue to recommend the delivery and staging of large vehicles before and after normal commuting hours to reduce the impact on traffic and pedestrians.

A parking plan for construction workers has been developed and Turner has expressed a commitment to hold those workers and contractors accountable. We believe this needs to be followed through on to minimize some of the negative impacts on the neighborhood.

There are still many details that have to be resolved. We look forward to further meetings with city staff and MMC partners to formalize the details as we proceed through this process. MMC and their partners seem to be willing to accept suggestions that are being presented. We would suspect a written document would memorialize the traffic expectations for the MMC project.

Overall the Police Department would prefer a construction options that did not involve the closure of Congress Street, however the proposed plan seems to be the best option short of that.

Thank you.



# Memorandum

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## Portland Public Works - Engineering

**To:** Jean Fraser, Planner  
**From:** Keith Gray, PE – City Engineer, Jeremiah Bartlett, PE - Transportation Systems Engineer and Water Resources  
**Date:** 2-23-19  
**Subject:** 22 Bramhall Street\_MMC East Tower & Visiting Parking (2017-289)

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The following comments/concerns are in regards to the Level III Site Application prepared by Sebago Technics, on behalf of the applicant, Maine Medical Center, with last plan revision submitted on February 22, 2018. Please feel free to contact me with questions.

### **Construction Management Plan:**

The applicant has proposed to close Congress Street for an eight (8) duration for the vertical expansion construction of the existing visitor parking garage. As presented today, the Department of Public Works, along with Kleinfelder, has reviewed the constructability options and determined that the closure is the best approach to mitigate long term community and safety impacts. It should be noted that we have reflected that this closure may well have been avoided with strategic planning from the applicant prior to Site Plan submission but that time has passed and we are moving forward with the closure.

We have reviewed the draft MMC detour plan associated with the Congress Street closure and offer the following comments:

- 1.) Weymouth Street is in poor condition, and with the significant increase in traffic, including heavy vehicles, the infrastructure is not capable of accommodating additional traffic. In order to maintain a tight construction schedule, the applicant shall pursue a two-step course of action.
  - a. First, a short-term paving/patching project shall be considered to stabilize Weymouth during the course of the detour project.
  - b. Second, a more comprehensive outcome shall be constructed post detour, which would ideally address the unusual crown of the road. As with any paving project done in Portland, ADA considerations shall be part of the outcomes.
- 2.) Paving conditions for Forest and Boynton Streets shall also be investigated and any interventions/mitigation identified for those streets included in outcomes.
- 3.) More detail needs to be provided on the temporary traffic signal to be located at Weymouth Street and Park Ave. The signal shall meet all state and federal requirements for operation, and accommodation of pedestrians. Details shall be provided on timing and potential time of day or direct coordination with adjacent signals at St. John Street and Deering Ave. The location shall be monitored to determine operation and a count completed after two weeks to determine if the location is

operating as intended. Consideration shall be given to whether this location would likely make a more permanent signal location candidate.

**Combined Sewer Overflow Comments:**

The City's ordinance does require the Department of Public Works approval prior to stormwater discharge connections into a storm sewer, combined sewer or natural outlet. The Department, through the development review process, has historically requested that new developments and redevelopments make connections to the separated storm drain systems when they are present or at a minimum provide separate service lines to the street when a combined system exists. There is a separated storm drain available in Gilman Street and we would request that the applicant tie into the storm drain due to the City's ongoing requirements and efforts to mitigate CSO activity. The City's Chapter 24 Sewer ordinance states:

*"(c) Stormwater shall be discharged to such sewers as are specifically designated as combined sewers or storm sewers, or to a natural outlet approved by the Department of Public Works. Industrial cooling water or unpolluted process waters may be discharged, on approval of the Department of Public Works, to a storm sewer, combined sewer or a natural outlet. (Ord. No. 263-96, 5-20-96; Ord. 129-14/15, 1-21-2015, Effective 1-1-2016)"*

The applicant's visitor parking garage facility drains into a combined sewer. This combined sewer is tributary to the City's most active CSO, CSO location #17, which overflows at the intersection of Marginal Way and Preble Street. The City is under an EPA mandated Long Term Control Plan to mitigate CSO activity around the City. The City's current CSO permit focuses on reducing CSO activity in the Back Cove South sewer service area. The CSO # 17 is located in this target service area.

It should be noted that the City is currently in the process of conducting a City wide sewer inflow and infiltration study as required by the EPA. One of the outcomes of this study could result in the City to look at changing the City Ordinance to require private property owners to separate stormwater flows out of the combined sewers when a separated storm drain is available in the street, regardless of development.

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## Helicopter Pad Relocation Noise Studies

1 message

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**Jean Fraser** <jf@portlandmaine.gov>

Fri, Feb 16, 2018 at 4:40 PM

To: "Alexander M. Green" <AGreen@mmc.org>, Will Conway  
<wconway@sebagotechnics.com>

Cc: "O'Brien, Stuart" <sgo@portlandmaine.gov>, "Barhydt, Barbara"  
<bab@portlandmaine.gov>

AI

I appreciate that the recent Memo (attached 1-2-18) summarizes the outcome of the recent noise studies, but as noted in the PB Memo we would like to document the data comparing helicopter sound levels currently at a given location compared to what they are predicted to be (at the same location) with the relocated helipad, especially given the likely increase in the numbers of flights.

While I appreciate that the Russell Acoustics, LLC May 2017 sound study (attached) used the same locations as the original study, it does not include this data for all of these locations.

Could you please send the recent data that shows the ambient, helicopter sound (based on the current helicopter pad location), and predicted helicopter sound (new location, main pad) for each of the nine CP locations so that we can see the data that underpins the submitted summary. Could you please send that data in a table linked to the plan of the locations.

Also I have a couple questions having looked at the studies conducted in 2004/2005 and the associated reviewer comments:

- The original study conducted by consultants for MMC in 2004 (by Resource Systems Engineering) noted that the location of the helipad on the top of the employee garage was beneficial regarding noise as this location would "...enable the existing and proposed buildings to block sound propagation to noise sensitive areas to the west and south." Could you ask your consultants to advise as to whether relocation of the helipad (albeit higher) out from "behind" those buildings will increase sound levels in different community locations than were studied in 2004.
- The City's sound consultant at that time (2004) noted that the direction the helicopter was facing when on the pad could make a significant difference in the sound levels nearby. Could you please confirm that the orientation of the helicopter on the relocated pad will be the same as for the current pad.



## MEMORANDUM

TO: City of Portland – Planning Board  
 FROM: Jim D. Wentworth, P.E.  
 DATE : February 21st, 2018  
 SUBJECT: Maine Medical Center – Constructability Review

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Kleinfelder was tasked by the City of Portland’s Planning Department to assist in the constructability review for the vertical expansion of Maine Medical Center’s existing visitors parking garage.

Maine Medical Center along with Turner Construction have submitted a construction option matrix to the City of Portland with five construction options outlined which have been investigated as part of this project’s development.

These options were the starting points for Kleinfelder’s review; and ultimately upon review were the *clear choice options* that this type of project and site would warrant. In order to develop a project of this magnitude, it is necessary to vet out construction options from each side of the parking garage (North, South, and East, and West, as well as from within the garage, as is shown in the Cast in Place Option 1. An additional Option 6 was added which investigated the construction from the East end of the visitor garage.

As you will see further in this memo, Option 4 is the recommended option by Kleinfelder and is also the favored option of Maine Medical Center. This memo summarizes the review by Kleinfelder of the five options presented, but also investigates some additional pertinent data Kleinfelder has associated with these options.

This site poses a challenging and congested construction site, and many factors such as overall public safety (*general public, hospital staff, and contractor staff*), traffic movements, construction type (*parking garage*), construction equipment and capacities (*crane*), and duration (*schedule*) all play a role in a successful project.

Documents that have been reviewed as part of this effort include:

- Visitor Garage Construction Option Comparison (Matrix)
- Maine Medical Center Construction Management Plan -Traffic and Road Closure studies: January 2<sup>nd</sup>, 2018
- Maine Medical Center Construction Management Plan - Logistics Plans and Studies-East Towers and Visitors Garage, Central Utility Plant: Last update February 9<sup>th</sup>, 2018, pages 1-29





- Maine Medical Center/Turner – Construction Management Plan-East Tower, Visitor Garage, Central Utility Plant. Last Updated February 13<sup>th</sup>, 2018 for PB February 27<sup>th</sup>, 2018
- 440 Ton Leibherr Crane Chart and Boom/Jib Configuration: February 5<sup>th</sup>, 2018
- Email from Dominic Gagnon with data assumptions for Option 1: CIP, and Option 2: South side retaining walls: February 9<sup>th</sup>, 2018
- Submitted Congress Street Cross Section with Crane Layout: February 12<sup>th</sup>, 2018

The following are each option listed with constructability comments and recommendation:

### Option 1- Cast in Place (CIP)

- Cast in Place (CIP) concrete is not a preferred nor typical construction technique used in parking garage construction due to concrete quality control, longevity of structure, time/schedule, and overall increased cost. The existing MMC employee garage is a cast in place structure and has these maintenance and longevity issues. (i.e. efflorescence, concrete spalling, resistance to deicing chemicals)
- SGH Engineering has determined that the overall structure was designed to handle an additional 3 stories at approximately 80-85 lbs. per square foot. Kleinfelder was not tasked to perform independent calculations to verify these loading parameters. However, in our engineering judgement, a CIP structure could likely weigh more than a precast structure based on additional reinforcing steel needed for post tensioning along with additional concrete in the post tensioning anchorage zones. This is solely based on engineering judgement and not calculations.
- For a CIP structure, the existing visitor garage interior and exterior support columns and walls would most likely also need to be reinforced in order to handle any additional weight that a CIP structure and the support formwork/falsework would pose to the structure.
- Without performing and bearing capacity calculations, it is likely that the existing foundation and support soil that exists under the building would need reinforcement to hold a CIP type structure.
- Based on overall constructability for these long Double Tee beams the following are factors that would add cost and duration into a CIP type structure:
  - Forming, concrete placement, concrete curing for Double Tee type beams would be labor intensive which would add cost and affect duration of project schedule.
  - ***A crane would still be needed to perform the work for lifting formwork materials, steel tendons, concrete, and other various construction materials, therefore impacts to traffic to Congress Street would still occur frequently. It is our opinion, without fully developing a full construction schedule for a CIP type structure that the duration and temporary impacts to traffic, associated with CIP construction, would cumulatively be more than the 8 weeks of associated shutdown currently proposed with Option 4. Due to CIP concrete curing and forming this type of project could take up to 4-6 months to complete.***
  - Post tensioning the tendons, grouting, and equipment/ jacks to perform this post tensioning in place would be needed. A post tensioning procedure would be very difficult to perform with accuracy in this type of location and environment. (i.e. Staging of post tensioning jacking equipment, worker falsework)



- There is a high probability that the entire parking garage would need to be empty during this type of construction operations based on temporary falsework and shoring needs to cast the concrete in place would be from a bottom up approach. (All floors to be braced from ground up).

*Based on the information provided and reviewed, **Option 1 is not recommended.***

## Option 2- South Side Approach

- Overall Safety of Area: The location of the Emergency room entrance/exit is located on the South side of the visitor parking garage and therefore general *public safety and emergency access* of this public service would be extremely limited if this option was chosen.
- Two retaining walls exists along the South side of the existing parking garage. Kleinfelder did not have access to as built plans of these two retaining walls nor was scoped to perform any structural check calculations on these two walls.
  - Based on the design loadings, per email of Dominic Gagnon February 9<sup>th</sup>, 2018 per SGH Engineering; the retaining walls as designed assumed a vertical surcharge pressure in the order of 500 pounds per square foot for the wall. It is reasonable to state that the 440 T Liebherr crane as proposed, with a frame weight of approximately 94,800 lbs. and allowable counterweight of 341,800 lbs. distributed over a total track area of 240 square feet (3'11"x30'8" each track), without accounting for the boom and precast units, has the ability to produce in excess of 1800 lbs. per square foot of surcharge.
  - A slightly smaller crane than the 440T Liebherr could be used from this South side of the garage; however surcharge pressures of 1500-1800 lbs. per square foot would not be unreasonable to experience for the crane size needed to lift the 30 ton precast units.
  - MMC and Turner investigated a 600 Ton hydraulic crane for this option, also this crane was also ruled out due to wall surcharge capacity and overall site logistics.
- Temporary shoring of these two retaining walls is not a feasible option based on their location. Any type of shoring such a sheet pile type wall, soldier pile wall, or pile platform would need crane access to perform the temporary work as well. It is not known, but assumed, that there are buried utilities in this section of roadway which would complicate any pile driving or shoring processes.
- There is limited *safe area* to operate any type of crane swing radius on this South side of the building. This area is terraced with a retaining wall. The total area is approximately 120 ± feet by 100 ± feet. A safe area for a crane to operate would be a minimum 60± feet by 60± feet which is not available.
- Overall staging of materials in the area on the South side would be limited.
- Delivery and access of precast units (85' long truck) to the South side would be limited based on turning movements associated with street configurations, on street parking, and utility pole locations around the area.

*Based on the information provided and reviewed, **Option 2 is not recommended.***



### Option 3- North Side Approach, One lane

- Congress Street is approximately 43'9"± curb to curb based on cross section provided by Turner.
- The sidewalk abutting the visitor garage is approximately 10'6"± in width.
- The sidewalk on the North side of Congress is approximately 11' ±in width.
- The proposed 440 Ton Liebherr Crane is approximately 45 feet in length from front of track to back of counterweight. This crane configuration takes up the majority of the roadway and overhanging 2-3± feet of the sidewalk.
- The Main boom on the crane cannot operate totally vertical and will use all of the available 10'6"± sidewalk area to face the garage.
- There is no available *safe width* for emergency or passengers vehicles to travel through the area based on the crane operating parameters.
- There is limited available width (7-8 feet ±) for protected pedestrian traffic along the North sidewalk.

*Based on the information provided and reviewed, Option 3 is not feasible or recommended.*

### Option 4- North Side Approach, Two lane (Road Closure)

- Safety-All work is completed in closed section of road, there will be no vehicular traffic present in the area. Overall this option is the safest for general public and contractor based on constructability.
- This option has similar site and crane parameters as Option 3, but calls for a shutdown Congress Street for 8 weeks.
- The 440 T Liebherr crane configuration is needed to reach up and over existing parking garage for lifting and reach capacity reasons to install the 30 Ton precast Double tee beams.
- Two other type of cranes where investigated: Mobile Hydraulic, and Tower Crane.
  - Each crane has limitations:
    - A Tower Crane, which is typically used in building construction, does not have the 30 Ton capacity for the distance needed to lift the precast beams and set them into place.
    - A mobile crane does not have the 30 Ton capacity to reach up and over the building.
- The 440 T Liebherr crane will have two sections of crane boom: Main Boom-161 feet, Jib-161 feet. (320 ± feet).
- A 300 foot length of Congress from pedestrian skybridge to Weymouth is necessary to assemble the crane along with its boom and jib.
- A single phase power utility line exists at corner of Congress and Weymouth which will not affect boom assembly.
- There is no additional street or sidewalk width with this crane configuration to safely use this option with emergency vehicular traffic.
- Delivery of the 85 foot long precast units for this option from Weymouth to Congress is feasible.



Based on the information provided and reviewed, **Option 4 is recommended.**

**Incentive/disincentives for allowable closure days (User cost/day), liquidated damages for end dates (Cost/day), traffic detours and signage, are all parameters that can be employed by the City to minimize the closure efforts with Option 4.**

### Option 5- Crane Placed in vacant Employee parking garage area

- This option poses construction scheduling delays and logistics, based on current schedule of additions onto visitor garage complete (2018), and new East Tower heliport complete (2019).
- The new employee parking garage on St. John would need to be constructed (2019) prior to demolition of existing employee garage.
- A crane with 480 ± lineal feet of boom/jib would be needed to reach up and over elevator/stairwell that currently exists between two parking garages.
  - This is an additional **160 lineal feet** of boom/jib added to the current 440T crane configuration proposed.
- Safety of general public working over **LIVE** stairwell needs to be taken into consideration.
- Crane assembly along Congress has limitations on South side of pedestrian skybridge:
  - Approximate 500 ± feet would be needed from pedestrian skybridge into Valley Street to assemble crane, boom and jib (480 ± feet from bullet above)
  - Closure of Congress to assemble crane.
  - Utility line interferences and needed utility relocations: Three phase power lines at Congress and Forest, Congress and Gilman, Congress and Valley.
  - Hospital main electrical feed from Gilman

Based on the information provided and reviewed, **Option 5 is not recommended.**

### Option 6- Crane Placed on East side of Visitor garage

- The existing medical building that was constructed within the last 10 years and is located on this East side of the visitor parking garage would need to be demolished and rebuilt with this option. This would have substantial costs with no value added.
- This option also would pose construction scheduling delays and logistics, based on current schedule of additions onto visitor garage complete (2018), and new East Tower heliport complete (2019).
- The steep slope in this location would case a need for temporary retaining wall to be built to support Crescent Street.
- A similar size Crane as the Liebherr 440 Ton crane would be needed as in Option 5 to construct the addition.



- Impacts to traffic on Congress Street would still occur due to building demolition, crane assembly/disassembly, and delivery of precast units, which would in cumulative duration would account for more than the eight weeks for Option 4.

*Based on this information, Option 6 is not recommended.*

## Schedule Overview

The overall construction schedule of an 8 week closure of Congress Street was reviewed and is listed below as *Schedule 1*. This schedule allows for 8 precast pieces set per day. It is realistic that 10 precast pieces may be set a day or even 12 pieces. It is also realistic that construction delays such as deliveries and/or adverse weather conditions may cause delays and allow only 6 pieces to be set per day.

Two other schedule scenarios were investigated based on 8 pieces per day.

*Schedule 2* assumes a 6 days a week schedule and resulted in a 7 week closure.

*Schedule 3* assumes a 7 days a week schedule and resulted in a 6 week closure.

***It is recommended that the 8 week schedule be allowed, but set with allowable penalties for not opening on time.***

It is not recommended to go to a 7 day work week as shown in Schedule 3. Consideration needs to be given in any schedule that as days get added to the work week there exists safety concerns with rested employees, decreased efficiency, a work area increase for complacency, as well as increase in cost premiums.

- *Schedule 1*
  - 8 week -5 day/week-8 pieces (assumed) per day-proposed
- *Schedule 2*
  - 7 week -6 day/week-8 pieces per day- Open by June 18<sup>th</sup>-19<sup>th</sup>
- *Schedule 3*
  - 6 week-7 day plus holiday-Open by June 8<sup>th</sup>-9<sup>th</sup>

In conclusion, taking all the project parameters into consideration:

- Safety to the overall general public
- Existing building and wall capacities
- Crane capacities and locations
- Schedule duration
- Impacts to Congress Street

Closing Congress Street for an 8 week duration is the recommendation that Kleinfelder fully supports and would have proposed if developing this type of project independently for a client. It is recommended that the City work with Maine Medical Center to tighten up the schedule, as previously mentioned in this memo, with the use of incentive/disincentives, liquated damages associated with possible street damage, proper detour signing, and proper public outreach campaign.