



Maine Medical Center

West End Neighborhood Traffic Evaluation – 2018



Study Goals

- Assess existing transportation conditions for the West End neighborhood that abuts the MMC Bramhall Campus.
- Evaluate alternatives to improve access, circulation, efficiency, and pedestrian/bicycle safety including:
 - Reduce hospital vehicle trips on neighborhood streets
 - Improve intersection safety at key locations
 - Improve pedestrian crossing safety along Bramhall Street
 - Provide improved bicycle accommodations
 - Improve hospital wayfinding
- Determine and assess future conditions with each alternative

Site Context & Study Area Map

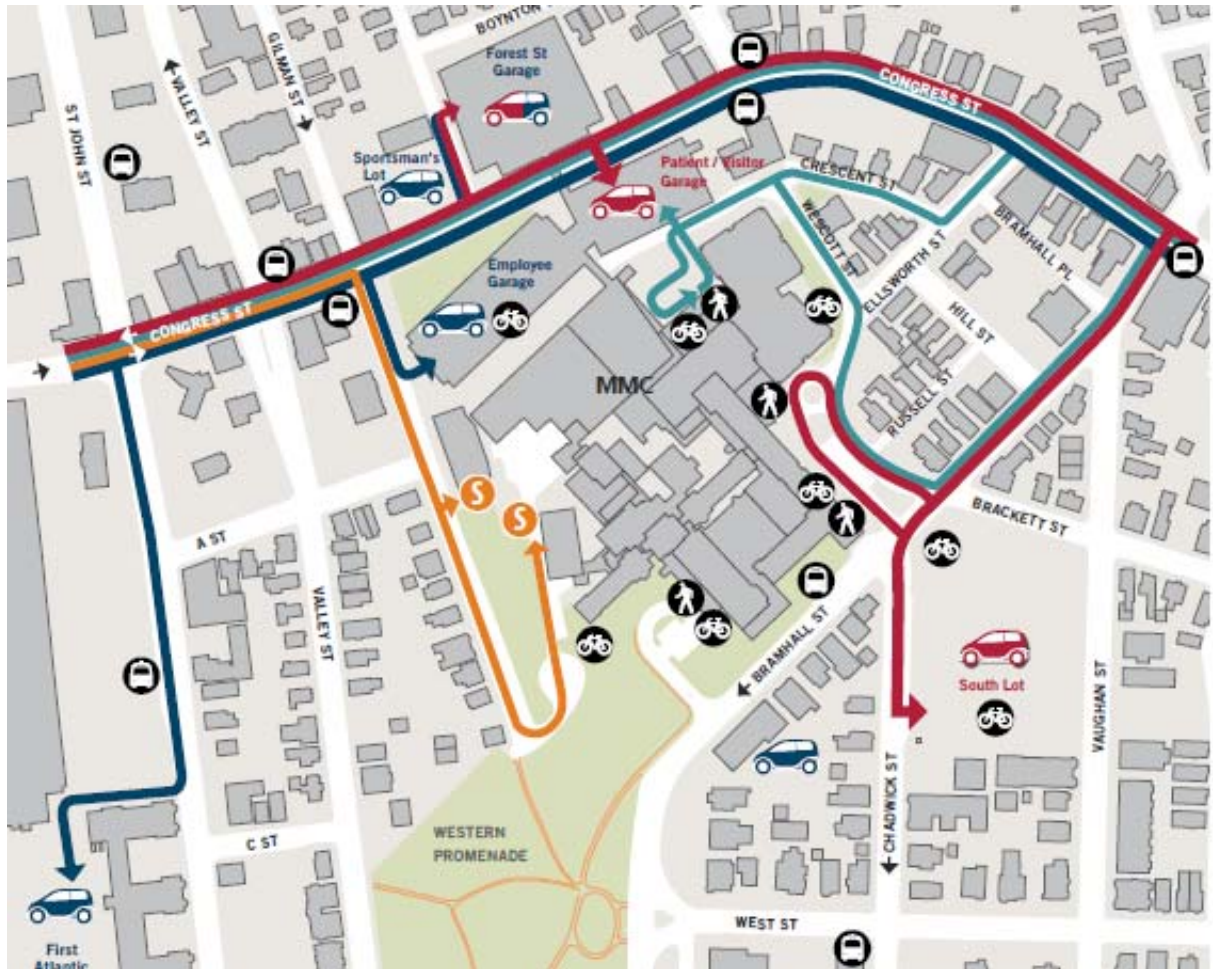


- Major Route to/from MMC
- MMC Institutional Overlay Zone
- Study Area
- South Lot
- Western Promenade



Existing Conditions

Circulation Routes and Access Points



Parking

- Patients / Visitors (including parking after emergency drop-off)
- Staff Parking
- Limited Parking for Service Vehicles / Service Staff

Key Vehicular Circulation Routes

- Patients / Visitors
- Emergency Drop-off / Ambulance
- Staff
- Service

- Bicycle Rack Locations
 - Main Pedestrian Entrances
 - Bus Stops
- 0 100 300 FT

Source: Maine Medical Center Institutional Development Plan



Existing Conditions

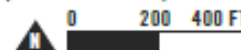
Transit Routes and Stops



- M1 Congress St**
To Portland Transportation Center (PTC), Downtown, Munjoy Hill and Eastern Promenade
- M5 Jetport/Maine Mall**
To Downtown, Hannaford Plaza, Maine Mall, and Portland Jetport
- M8 Peninsula Loop**
To Downtown, Franklin Towers, Whole Food Plaza and Hannaford Plaza
- 9A/B North Deering via Stevens Avenue**
To MMC Brighton campus, Highlands, Rosemont, and North Deering
- BRZ Metro Breez Express (BRZ)**
To PTC, Downtown, Falmouth, Yarmouth, and Freeport
- ZM ZOOM Turnpike Express (ZM)**
To Biddeford and Saco

MMC Main Pedestrian Entrance
 Bicycle Rack Locations
 Existing Bus Stops around Campus

Source: Maine Medical Center Institutional Development Plan



**Figure 1 – MMC Employee Parking Garage | Inbound Shuttle Routes, June 22, 2018
Garage to Hospital**



Inbound Routes

Congress ———


Bramhall ———

Figure 2 – MMC Employee Parking Garage | Outbound Shuttle Routes, June 22, 2018
Hospital to Garage



Outbound Routes

Congress 

Bramhall 

Portland Bikeway and Pedestrian Network Existing Infrastructure and Planned Improvements

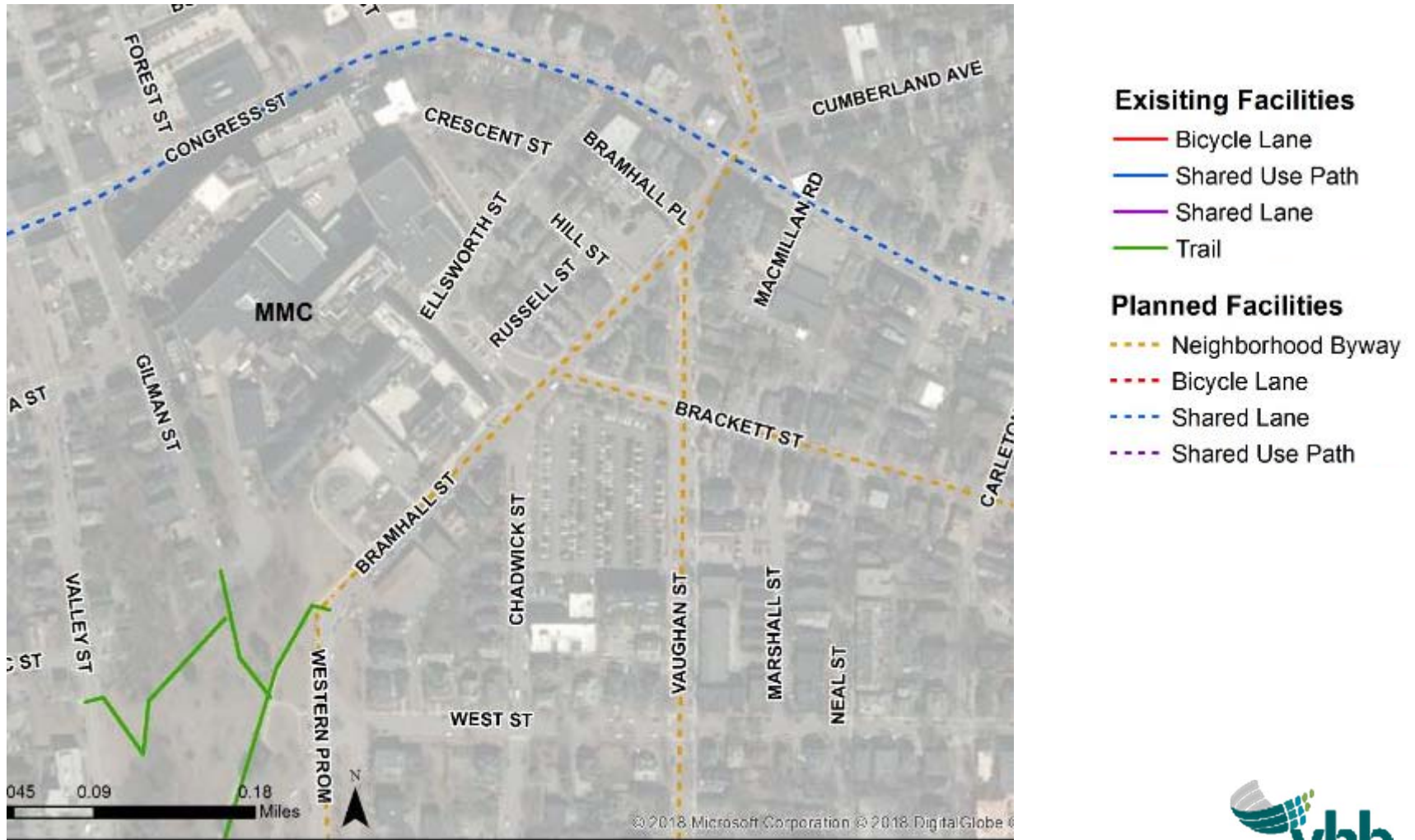


Source: Maine Medical Center Institutional Development Plan & City of Portland



Portland Bikeway and Pedestrian Network

Existing Infrastructure and Planned Improvements

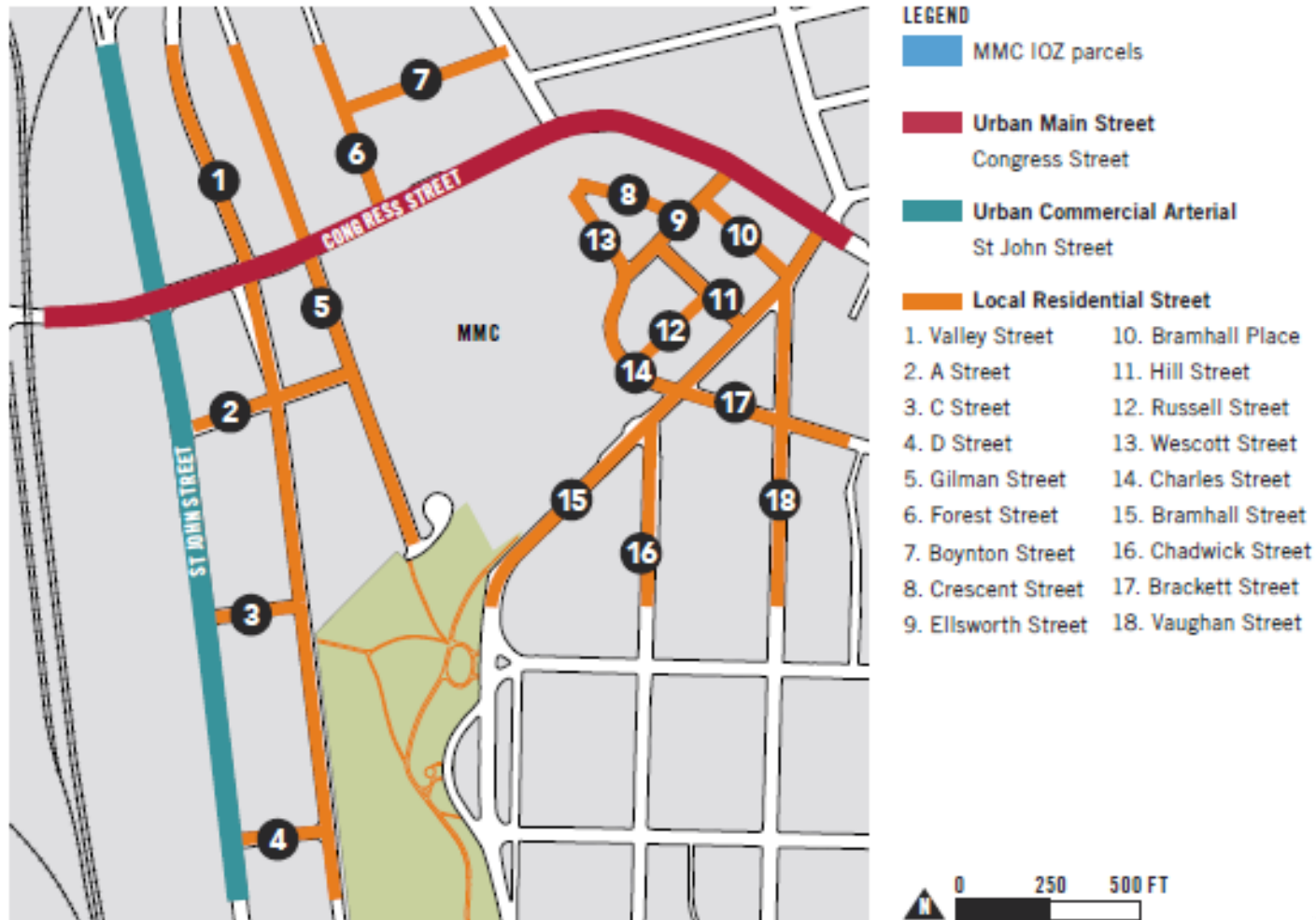


Source: Maine Medical Center Institutional Development Plan & City of Portland



Existing Conditions

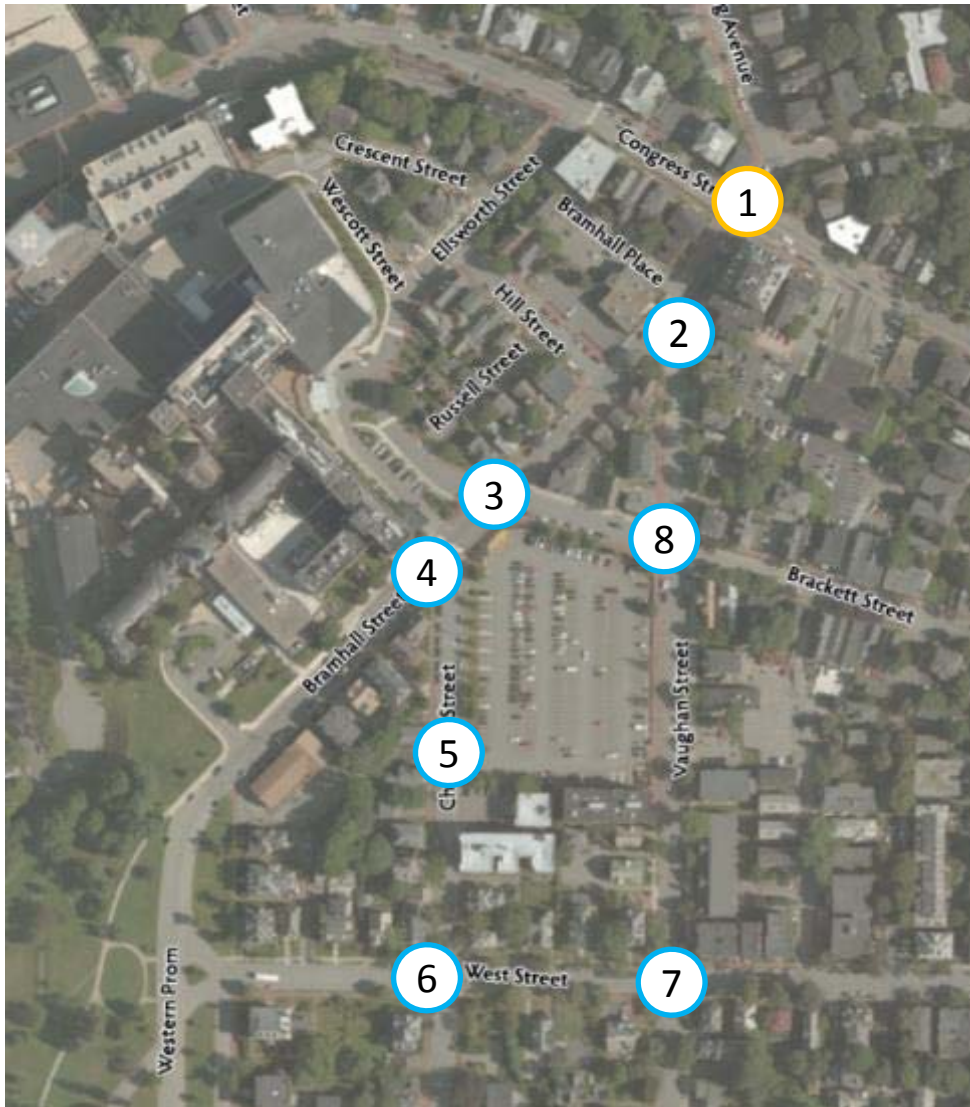
Typologies of Public Streets



Source: Maine Medical Center Institutional Development Plan



Study Area Intersections



Signalized # Unsignalized

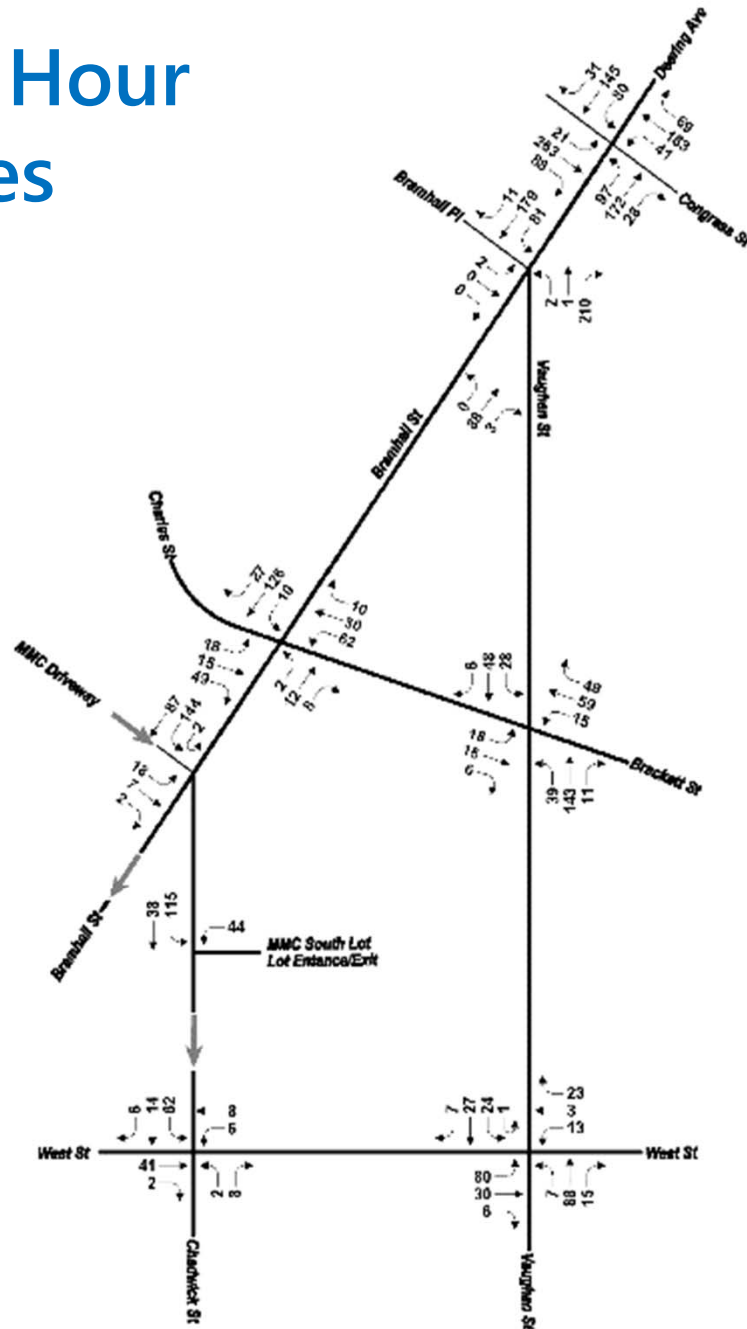
- 1 Congress St / Deering Ave / Bramhall St
- 2 Bramhall St / Vaughan St / Bramhall Pl
- 3 Bramhall St / Brackett St
- 4 Bramhall St / Chadwick St / MMC Driveway
- 5 Chadwick St / MMC South Lot Driveway
- 6 Chadwick St / West St
- 7 Vaughan St / West St
- 8 Vaughan St / Brackett St

Study Conducted in July 2018

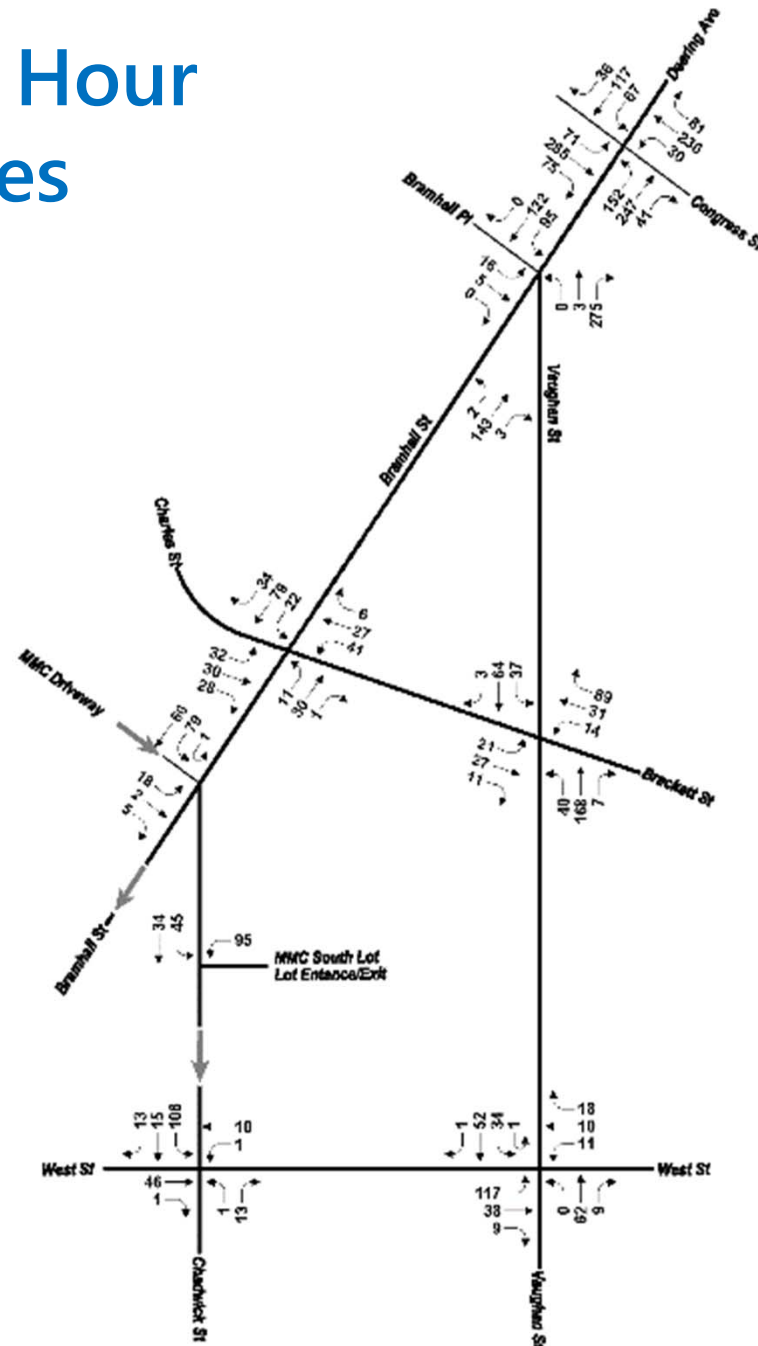


2018 AM Peak Hour Vehicle Volumes

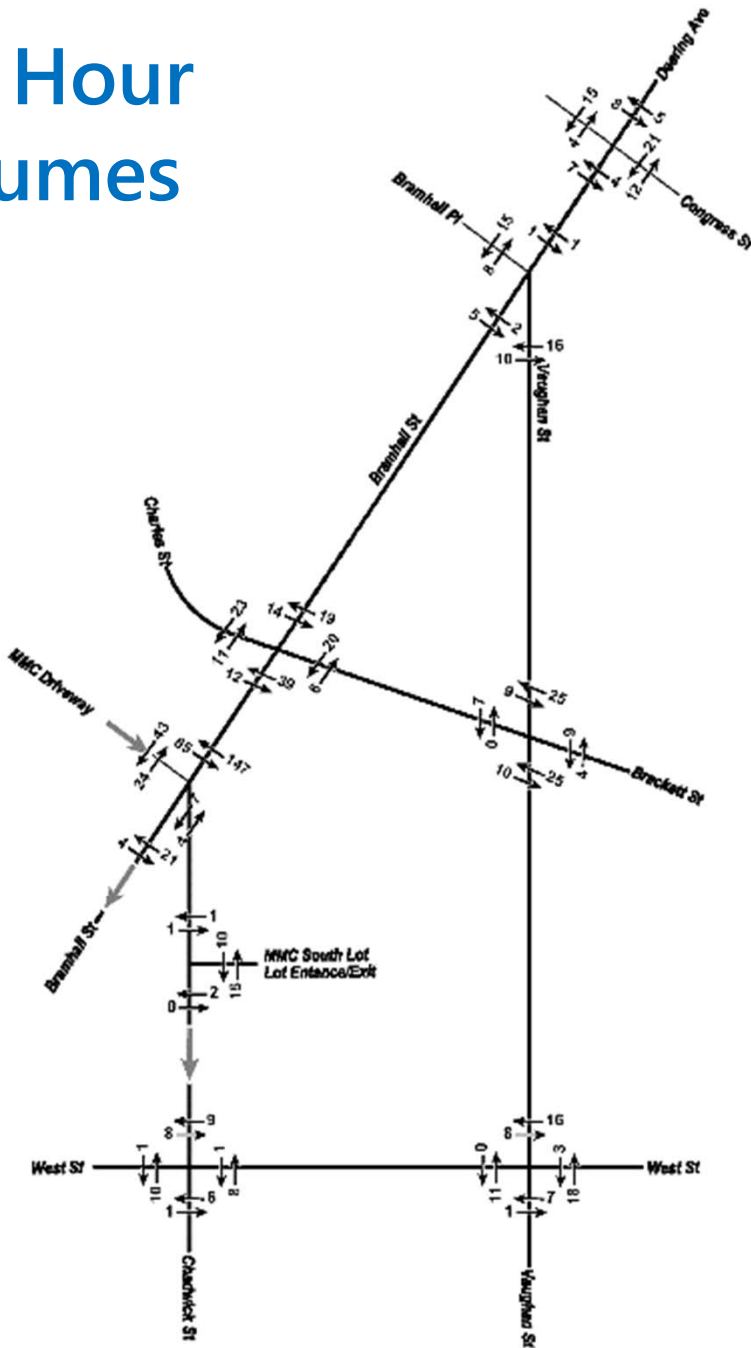
(7:30 – 8:30)



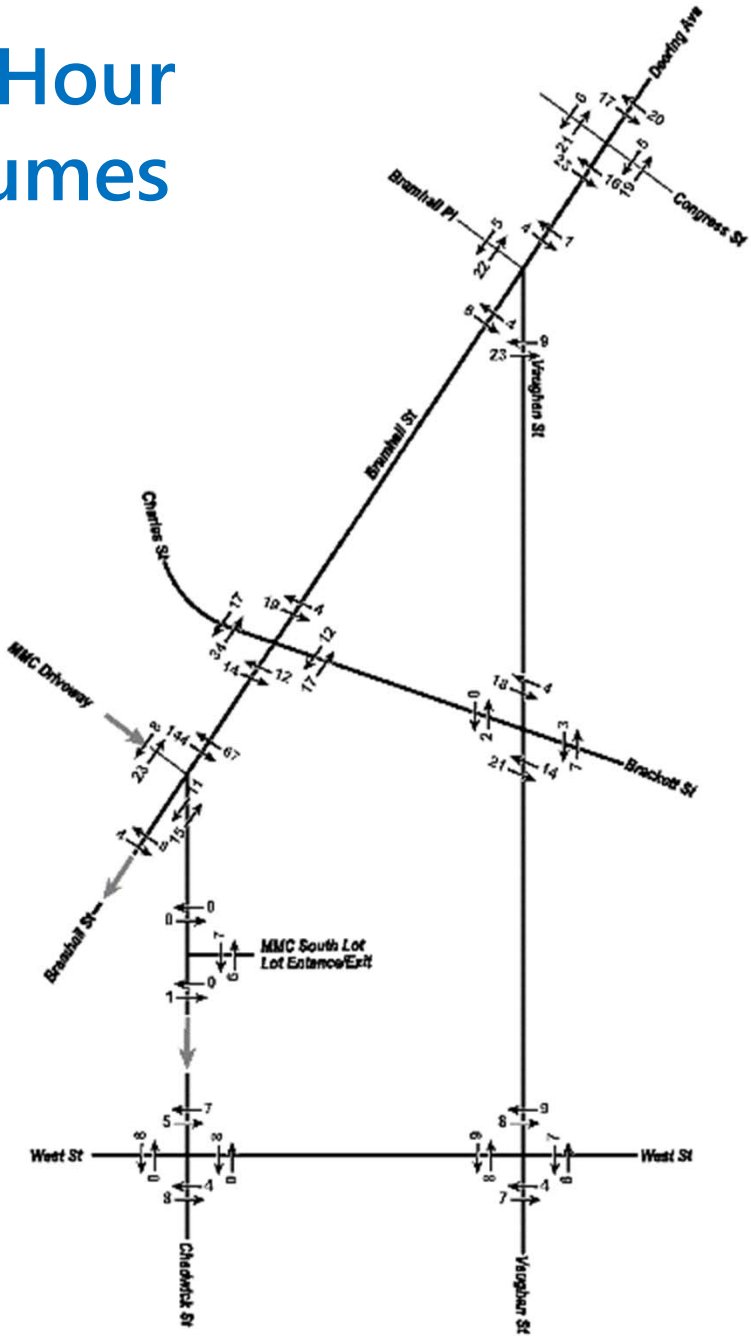
2018 PM Peak Hour Vehicle Volumes (4:00 – 5:00)



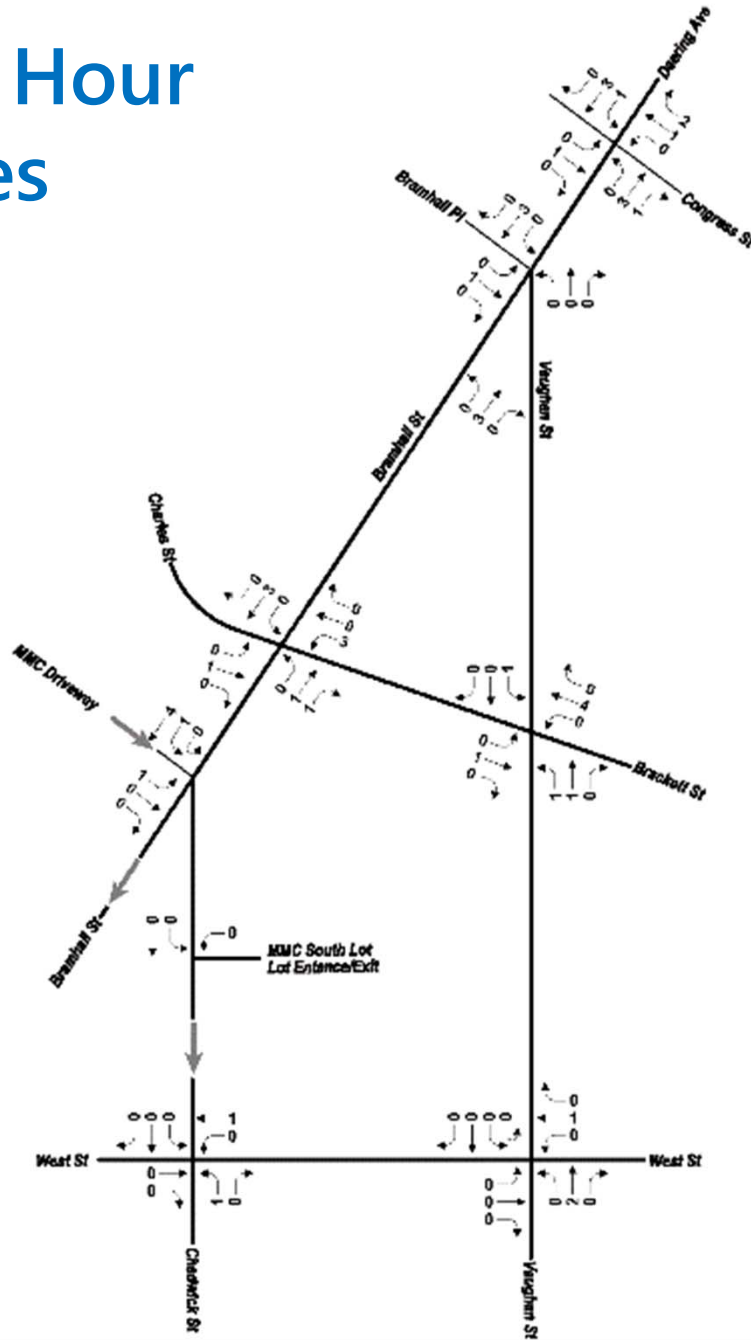
2018 AM Peak Hour Pedestrian Volumes (7:30 – 8:30)



2018 PM Peak Hour Pedestrian Volumes (4:00 – 5:00)



2018 AM Peak Hour Bicycle Volumes (7:30 – 8:30)



Study Area Issues, Challenges, Opportunities

1. Inefficient Traffic Circulation
2. Traffic Control Driver Non-Compliance
3. Intersection Safety
4. Pedestrian Accommodations/ Safety
5. Bicycle Accommodations/ Safety
6. Wayfinding



- Major Route to/from MMC
- MMC Institutional Overlay Zone
- Study Area
- - - South Lot
- Western Promenade



Study Area Issues, Challenges, Opportunities

1. Traffic Circulation



1. Traffic Circulation

- Vehicles exiting South Lot
- Vehicles lost on campus or searching for parking

Hospital traffic circulates West End due to Chadwick St and Bramhall St being one-way.

Percent of total Chadwick St traffic attributed to South Lot egress:

- 53% during AM Peak Hour
- 74% during PM Peak Hour

Percentage of total Vaughan St NB traffic attributed to South Lot egress:

- 42% during AM Peak Hour
- 86% during PM Peak Hour

Additional hospital-related traffic may park on-street or circulate in the West End due to lack of clear signage



Study Area Issues, Challenges, Opportunities

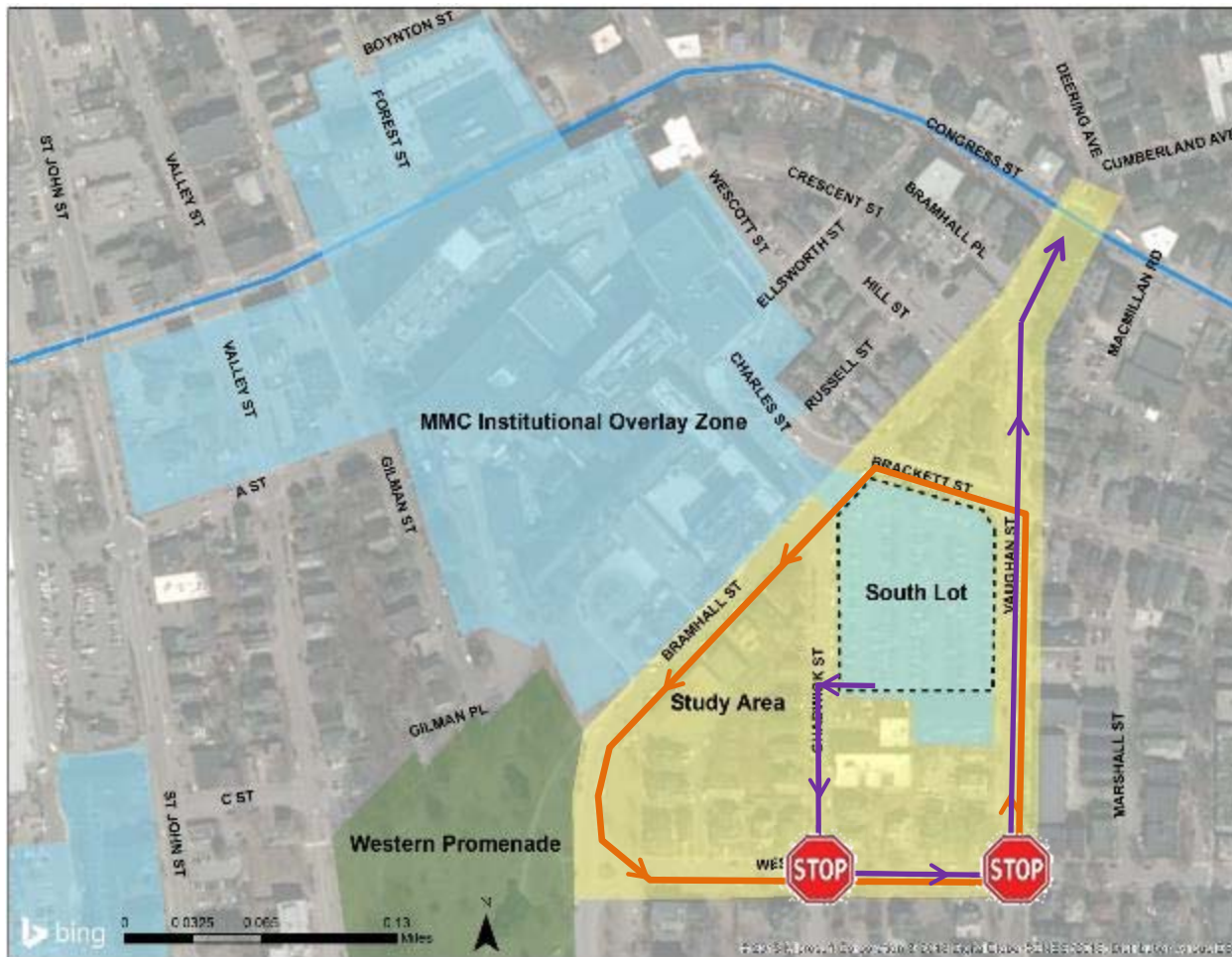
2. Traffic Control: Driver Non-Compliance

1. Traffic Circulation

- Vehicles exiting South Lot
- Vehicles lost on campus or searching for parking

2. Traffic Control: Driver Non-Compliance

Neighborhood concern regarding hospital related drivers not complying with STOP control at the intersection of Chadwick Street / West Street

Study Area Issues, Challenges, Opportunities

3. Intersection Safety: Vaughan St at Bramhall St



1. Traffic Circulation
 - Vehicles exiting South Lot
 - Vehicles lost on campus or searching for parking
2. Traffic Control: Driver Non-Compliance

3. Intersection Safety: Vaughan Street at Bramhall Street

- Stop control on Bramhall Street northbound but not Vaughan Street
- Sight distance issues
- Difficult for pedestrians and cyclists to travel through (70-foot crossing on Vaughan Street)

Study Area Issues, Challenges, Opportunities

4. Pedestrian Accommodations/Safety



1. Traffic Circulation
 - Vehicles exiting South Lot
 - Vehicles lost on campus or searching for parking
2. Traffic Control: Driver Non-Compliance
 - STOP
3. Intersection Safety: Vaughan Street at Bramhall Street
 -

4. Pedestrian Accommodations/Safety

- Faded or non-existent crosswalk and lane markings
- Wide Crossings
- Missing Tactile Warning Strip on key corner of hospital to cross to patient parking lot

Bramhall Street crossing

- 50-feet across
- 232 pedestrians during AM Peak

Chadwick Street crossing

- 75-feet across
- 26 pedestrians during AM Peak



Study Area Issues, Challenges, Opportunities

5. Bicycle Accommodations/Safety



1. Traffic Circulation
 - Vehicles exiting South Lot
 - Vehicles lost on campus or searching for parking
2. Traffic Control: Driver Non-Compliance
 -
3. Intersection Safety: Vaughan Street at Bramhall Street
 -
4. Pedestrian Accommodations/Safety
 -
5. **Bicycle Accommodations/Safety**
 - Planned On Road Bikeway
 - Planned Neighborhood Byway

No in-road bicycle accommodations; all still planned



Study Area Issues, Challenges, Opportunities


6. Wayfinding



1. Traffic Circulation
 - Vehicles exiting South Lot
 - Vehicles lost on campus or searching for parking
2. Traffic Control: Driver Non-Compliance
3. Intersection Safety: Vaughan Street at Bramhall Street
4. Pedestrian Accommodations/Safety
5. Bicycle Accommodations/Safety
 - Planned On Road Bikeway
 - Planned Neighborhood Byway
- H 6. Wayfinding**
 - Lack of clear signage for patients/visitors accessing drop-off and parking
 - Congress Street signage not close enough to indicate where to turn
 - No signage at Vaughan Street from Bramhall Street
 - Unclear South Lot parking signage



Study Area Issues, Challenges, Opportunities Summary

- 1. Traffic Circulation
 -  Vehicles exiting South Lot
 -  Vehicles lost on campus or searching for parking
- 2. Traffic Control: Driver Non-Compliance
 - 
- 3. Intersection Safety: Vaughan Street at Bramhall Street
 - 
- 4. Pedestrian Accommodations/Safety
 - 
- 5. Bicycle Accommodations/Safety
 - 
 -  Planned On Road Bikeway
 -  Planned Neighborhood Byway
- 6. Wayfinding
 - 



Potential Improvement Actions to Consider

Conceptual Plan:

- Traffic Circulation
 - Make Chadwick Street two-way between West Street and Bramhall Street.
- Pedestrian and Bicycle Safety
 - Provide curb extensions along Bramhall St after/before edge of parking at intersections to extend pedestrian area and shorten crossing distance at Bramhall Street/Chadwick Street, Bramhall Street/Brackett Street.
 - Restripe pedestrian crosswalks so they are fresh and more visible.
 - Install tactile warning strip at key hospital crossing across Bramhall Street.
 - Add sharrows and bike lanes on Bramhall Street, Vaughan Street and Brackett Street where they fit. Consistent with City's neighborhood byway plan.
 - Remove perpendicular on-street handicapped parking at intersection of Bramhall and Chadwick Street.
 - Improve bus stop on Bramhall Street.
- Intersection Safety: Bramhall Street at Vaughan Street
 - Change geometry of Bramhall Street and Vaughan Street by adding curb extensions to improve safety for pedestrians and shorten crossing distance.
 - Restripe pedestrian crosswalks so they are fresh and more visible.
 - Consider Vaughan Street stop control instead of Bramhall St northeast bound due to poor sight distance and re-routed South Lot traffic.
 - Install LED flashing STOP signs and add stop bars.
- Improve Wayfinding
- Increased Patient/Visitor Parking
 - Will help reduce hospital related visitors from circulating looking for parking or getting lost trying to find South Lot



Questions/Next Steps