City of Cambridge
Community Development Department

Pedestrian Committee Meeting

October 22, 2020
Meeting Agenda

1. Zoom meeting protocols, minutes
2. Snow Operations (DPW)
3. Public Comment
4. Project Updates
5. Development Projects
   1. MIT Volpe Redevelopment
6. Public Comment
7. Subcommittees
8. Other Announcements

Minute taker: Angie Meltsner
Committee Member Instructions

• Committee members may speak and show webcam video
  • Use "Raise Hand" button to help manage discussion
  • *9 to Raise Hand by phone

• Please stay muted unless speaking
  • *6 to mute/unmute by phone
Public Comment Instructions

• Members of the public are muted and cannot show webcam video

• Public can write questions or ask for assistance in Q&A window at any time
  • Questions may be submitted at any time and will be addressed as time allows, during discussion/comment periods

• During the Public Comment period, use the "Raise Hand" button to signal you have a question/comment. A staff member will then enable you to unmute yourself.
  • *9 to Raise Hand by phone
  • *6 to Mute/Unmute by phone

• Please be respectful! Participants will be removed for inappropriate behavior
Snow Operations

Brian McLane, Dept. of Public Works
Winter Operations
Agenda

• Historic data
• This Years and Past Numbers
• Storm Coordination
• Safety/Accessibility
  o Parking bans
  o School Access
  o Public Transportation
  o Snow Hauling
• Challenges
  o Continuity of Services
  o Dead Ends
  o One-way Streets
  o Handicap Parking
  o Space savers
  o Future snow removal
• Questions
### Historical Data

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Making a Prediction

• Siberian snow cover (has started to increase already)
• Gulf of Alaska water temperatures
• Arctic Oscillation
• North Atlantic Oscillation
• La Nina/El Nino
• Madden Julian Oscillation (MJO)
The Basics

- Maintain over 210 lane miles of roadway, 23 miles of sidewalks and 2.5 miles of bike lanes
- Fleet consists of
  - 12 Large Salters (5 YD)
  - 2 Large Brine Trucks
  - 1 Small Brine Truck
  - 5 small Salters (2 YD)
  - 8 Holder Tractors
  - 1 Mini Salter (Colorado)
  - 50 Snow Plows
  - 125 Contractor Pieces

Salt Usage
- Use approximately
- 4-8,000 tons of salt a season
- City using treated salt this year
- Salt Brine
  Brine Usage (estimated.)
  - 100,000 gallons brine
  - 25,000 gallons of carb.
Brine VS. Salt

**Brine**
- Salt Brine is a mixture of water and salt. The mixture has a salinity of 23.3%
- Brine lowers the freezing point of water.
- Chemical reaction is all ready taking place to breakdown snow and ice.
- Additives can be used to further lower freezing point
- Sticks and coats roadway prior to an event.
- Quicker Melting in a pre-wetting application

**Salt**
- Typically a granular product that can be treated with an additive
- Chemical reaction can not take place until liquid touches the salt granular.
- Bounces off roadway during pretreatment-post storm activities.
  - A study in Germany found that only 20% of dry material for pre-treatment stayed on the roadway after 100 vehicles passed
  - Nearly 30% of dry material bounced off roadway
- Can be used with brine to achieve less waste from bouncing.
- Uses a top down approach to melt snow pack
  - De-icing can result in a 60-90% increase in Chloride loading in waterways

Trivia - What state was the first to use salt, and what year.
New Hampshire-1941
Prior to that sand and cinders were primarily used.
Using additives such as MgCl₂ or CaCl₂, or carbohydrates will further decrease the freezing point of the brine.
Storm Coordination

- Public Works
- City Managers Office
- Traffic Parking & Transportation
- Police
- School Department
- Human Services
- Water
- Fire/Emergency Management
- Electrical
- Inspectional Services
- Emergency Communications
Snow Operation

- 210 lane miles
- 2.5 miles of protected bike lanes
- 23 miles of City-Cleared Sidewalks/ Curb Ramps
- Abutting schools, public buildings, public open space
- City-owned parking lots and garages
- Residential exemption program
Approximately 1200 Cambridge vehicles utilized these parking facilities through the month of February.
School Accessibility
Snow Hauling
Challenges

- Continuity of Services
- Dead Ends
- One-way Streets
- Handicap Parking
- Space savers
- Future snow removal
Winter 2015
110”

MAJOR EVENTS

- Jan 27-Jan 28 - 24.6”
- Feb 2 –Feb 3 - 16.2”
- Feb 7-Feb 10 - 18.3”
- Feb 14-Feb 15 -16.2”

Almost 75” in a 3 week period

4 Emergency Parking Bans
6 No school days
Overtime/Comp Hours worked specific to snow this season: 26,307.75 Hrs

Average Temperature in Jan – 26°
Average Temperature in Feb – 19°

There were 34 Storms in total that DPW responded to this season
Questions?
Public Comment Instructions

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Development Projects
Public comment
Public Comment Instructions

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Subcommittee Work
Other Announcements
Thank You