

FRONT AVENUE PROJECT SUMMARY OF ENGINEERING RECOMMENDATIONS

Front Avenue Bicycle Lanes

Report prepared: 6/1/2015

Open House: 5/7/2015

Public Hearing: 6/17/2015

PROJECT

Implementation of bicycle lanes on Front Avenue from Lexington Parkway to Dale Street.

Improvements to include the installation of dedicated bicycle lanes, pavement markings, signage, and other elements as described below.

PURPOSE

The purpose of this project is to provide an improved east-west bicycle facility on Front Avenue, improving the bicycling environment as it relates to safety, accessibility, and connectivity.

I. INITIATING ACTION

Ramsey County is planning a mill and overlay of Front Avenue between Lexington Parkway and Dale Street in the summer of 2015. To take advantage of the efficiencies associated with implementing bicycle facilities with existing maintenance projects, Saint Paul Public Works is proposing that Ramsey County implement bicycle lanes on Front Avenue as a component of their scheduled mill and overlay project.

Chapter 9 of the Saint Paul Bicycle Plan identifies incorporating bicycle facilities into larger construction or maintenance projects as the most fiscally efficient way to implement bicycle facilities, and makes the recommendation to “Incorporate implementation of bikeways with routine maintenance projects whenever possible.” Incorporating bicycle facilities into Ramsey County’s mill and overlay of Front will leverage a low-cost, high-benefit improvement, and maximize cost effectiveness through efficiencies.

The Bicycle Plan identifies Front Avenue as part of the planned bicycle network, and recommends an off-street path within the project limits. Saint Paul Department of Public Works is proposing that Ramsey County implement bicycle lanes, but is not proposing to implement an off-street path. Utilizing Ramsey County’s planned resurfacing to Implement bicycle lanes is the best opportunity to leverage a low-cost, high-benefit bicycle facility at this time.

II. PROPOSED IMPROVEMENTS

Front Avenue between Lexington Parkway and Dale Street is classified as an urban minor arterial roadway and a County State Aid Highway (CSAH-32). The ADT on the roadway ranges from 6,825 to 15,075 vehicles per day, and 85th percentile speeds of 39 mph were recorded (2009, 2011, & 2013 data). The posted speed limit is 30 mph. The Saint Paul Bicycle Plan identifies this

segment of Front as a component of the planned bicycle network, and identifies “off-street trail” as the recommended facility type.

Elements proposed for implementation are:

- Restriping the roadway to add 5’ bicycle lanes
- Narrowing of existing vehicular travel lanes from 12’ to 11’
- Installation of directional and destination signage
- Removal of on-street parking on the south side of Front between Churchill Avenue and Dale Street

III. ALTERNATIVES

Implementing an off-street path along Front Avenue as recommended in the Bicycle Plan was examined, but constructing it as part of the County’s mill and overlay was not considered viable at this time. Whereas implementing bicycle lanes with a mill and overlay project yields significant cost savings, the work required to construct an off-street path generally falls beyond the scope of work performed during a mill and overlay, and would not leverage similar cost efficiencies. Since implementing an off-street path a) would not leverage cost saving opportunities, b) would be much more expensive to implement than painted bicycle facilities, and c) would need to be designed and constructed within a very narrow project timeline, it was decided to pursue an off-street path at a later date.

Removing parking from the north side of Front Avenue instead of the south side was examined as an alternative, but was ultimately rejected due to adjacent land use and associated parking demand. Calvary Cemetery on the south side of Front generates less parking demand than the residential and business uses on the north side (nine parking counts conducted on Front Avenue tabulated a total of 142 parked cars on the north side and 84 parked cars on the south side).

IV. POSITIVE BENEFITS

The City’s Comprehensive Plan and Bicycle Plan strongly support the development of a multi-modal transportation system. Both plans recommend employing a complete streets approach to planning the transportation system, and promote the development of a complete and connected network of bicycle facilities thorough the city.

The project as proposed promotes multi-modal utilization of the roadway, providing a dedicated space for people using bicycles along Front Avenue while allowing for important connections to existing and planned bicycle facilities on Lexington Parkway, Como Avenue, and Dale Street.

Connecting to Energy Park Drive on the west, Front Avenue facilitates east-west travel from Saint Paul’s western limits to the North End. Given the industrial land use, railroad corridors, and disjointed street grid north of Pierce Butler, Front Avenue is a critical link for facilitating bicycle, pedestrian, and vehicular access across the area’s challenging built environment. When paired with existing and planned bicycle facilities, the improvements proposed establish the

foundation for a complete and connected bikeway system, and allow for bicycling to exist as a practical and feasible means of transportation in Saint Paul.

While the posted speed limit on this segment of Front Avenue is 30 MPH, a speed study performed within the project limits recorded 85th percentile speeds of 39 mph. Narrowing vehicular travel lane widths as proposed in this project will encourage slower speeds, fostering a safer and more accessible roadway for all users of the roadway. With high 85th percentile speeds and ADT between 6, 825 and 15,075, in-street separated lanes will substantially increase the safety of people bicycling on Front Avenue.

V. ADVERSE EFFECTS

Normal issues relative to implementing infrastructure improvement projects will be present. Those issues include, but may not be necessarily limited to, noise, dust, and general disruptions to vehicular traffic. Ramsey County is estimating a construction period of ten days.

To accommodate the installation of dedicated bicycle lanes, existing on-street parking must be removed on the south side of Front Avenue between Churchill Avenue and Dale Street. The removal of parking lanes is required to meet minimum state aid standards for bicycle and travel lane widths.

To capture demonstrative parking demand, Public works conducted 9 parking occupancy counts at representative time periods along Front Avenue (weekday early morning, midday, evening, and Saturday midday and evening). Existing legal parking capacity on Front between Lexington Parkway and Dale Street is estimated at 319 spaces, and capacity following the implementation of bicycle lanes is estimated to be 135 spaces. The highest observed parking utilization measured 38-parked vehicles (Saturday evening, 6- 8 pm), with a mean parking utilization of 27.1 vehicles across 9 counting periods. It is anticipated that parking supply following the implementation of bicycle lanes is sufficient to meet existing demand. The parking occupancy data is presented for review in the **Appendix** attached to this document.

VI. TIME SCHEDULE

It is anticipated that the bicycle improvements as proposed will be installed concurrent with Ramsey County's planned mill and overlay on Front Avenue, scheduled for Summer 2015. This process is anticipated to last approximately ten days.

VII. COST ESTIMATE

Implementation of bicycle lanes and lane reconfiguration within the limits of Ramsey County's mill and overlay will incur little additional cost beyond the amount already budgeted by the County for resurfacing.

VIII. SOURCE OF ADDITIONAL INFORMATION

For additional information, please contact:

Paul St. Martin, Assistant City Engineer
Email: Paul.st.martin@ci.stpaul.mn.us

IX. SUMMARY AND RECOMMENDATIONS

The Department of Public Works believes the project submitted herein to be necessary and feasible. The Department's Engineering Recommendation is for approval of the project.

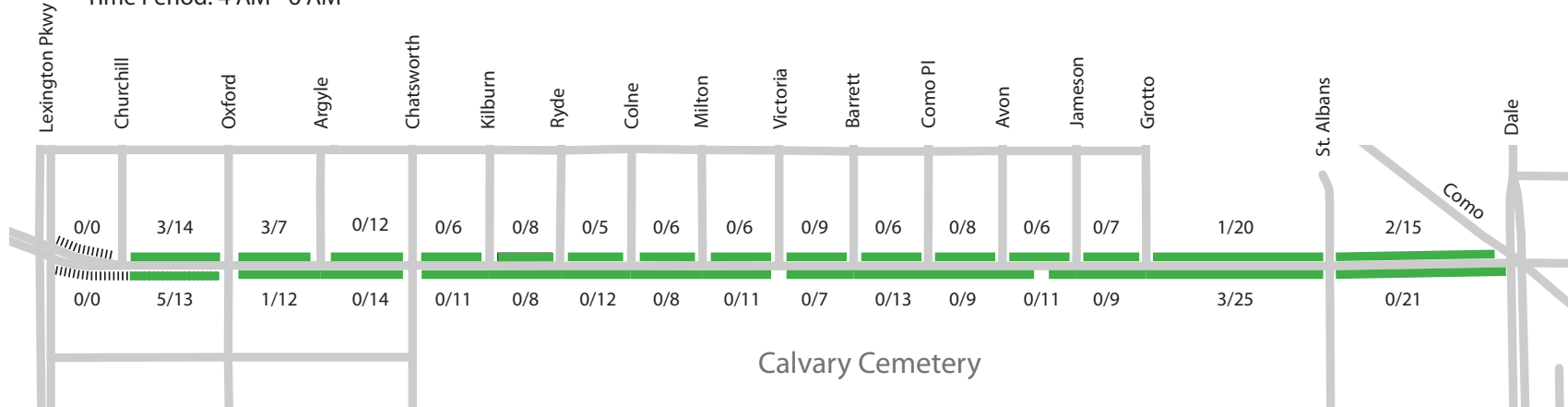
APPENDIX

Attached:

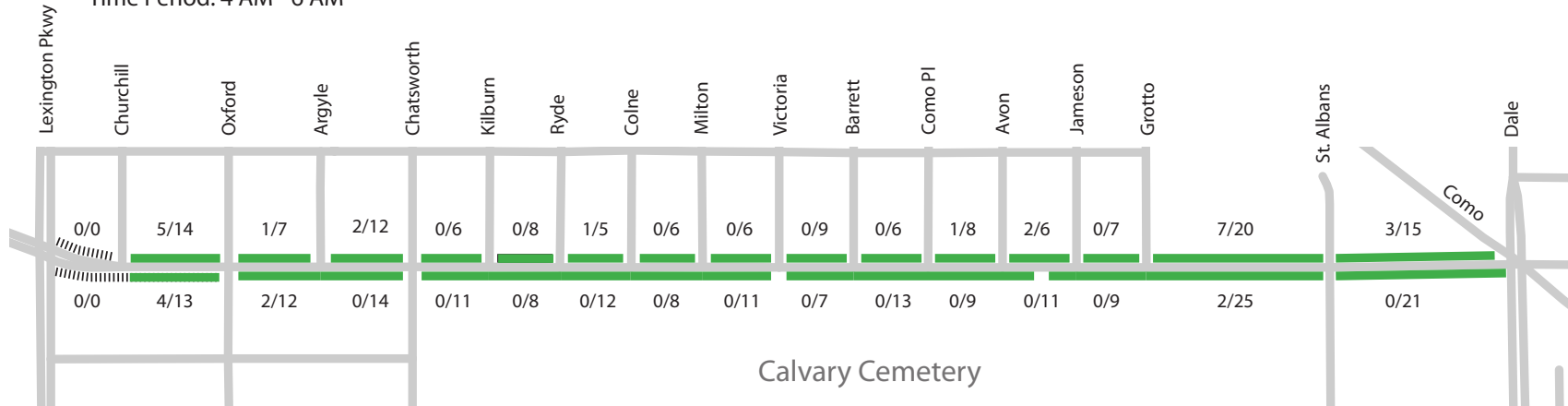
Front Avenue Parking Occupancy Count Results

Front Ave Parking Counts Weekday Early Morning (4 AM - 6 AM)

Date: Thursday, March 26th
Time Period: 4 AM - 6 AM



Date: Tuesday, March 31st
Time Period: 4 AM - 6 AM



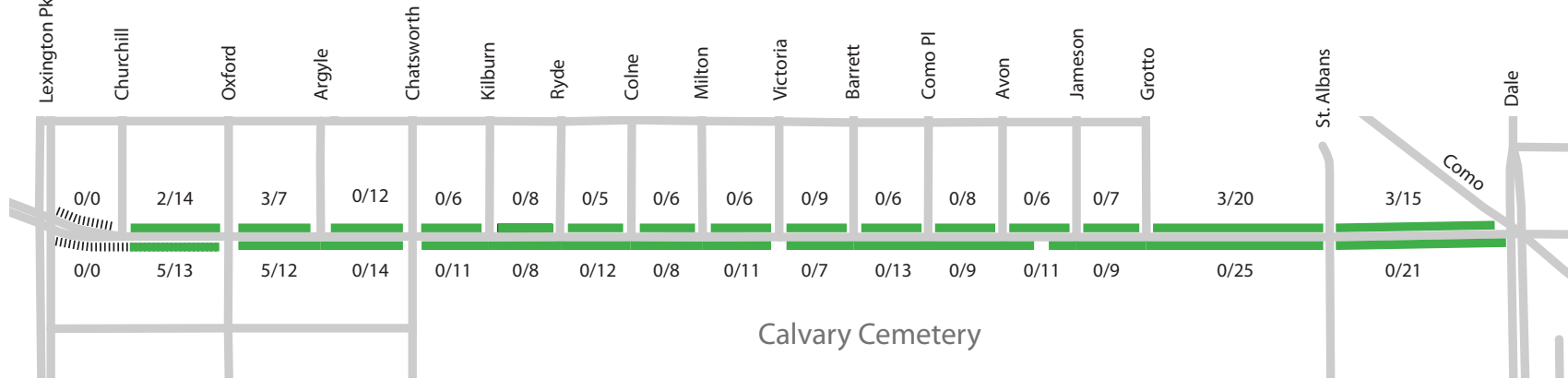
Legend

Observed Parking Utilization

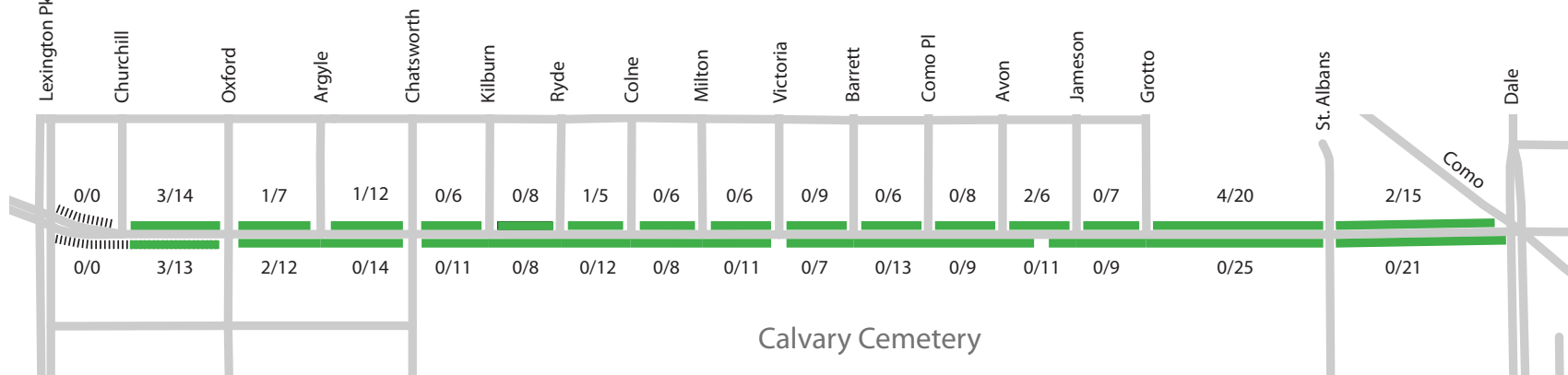
- Signed "No Parking" Example: 8/11 =
- 0 - 69% Observed Pk'd Cars /
- 70 - 84% Estimated Legal Parking Capacity
- 85 - 100+% (Observed parking utilization may exceed estimated legal capacity)

Front Ave Parking Counts Weekday Midday (11 AM - 1 PM)

Date: Wednesday, March 25th
Time Period: 11 AM - 1 PM



Date: Tuesday, March 31st
Time Period: 11 AM - 1 PM



Legend

Observed Parking Utilization



Signed "No Parking"



0 - 69%



70 - 84%



85 - 100+%

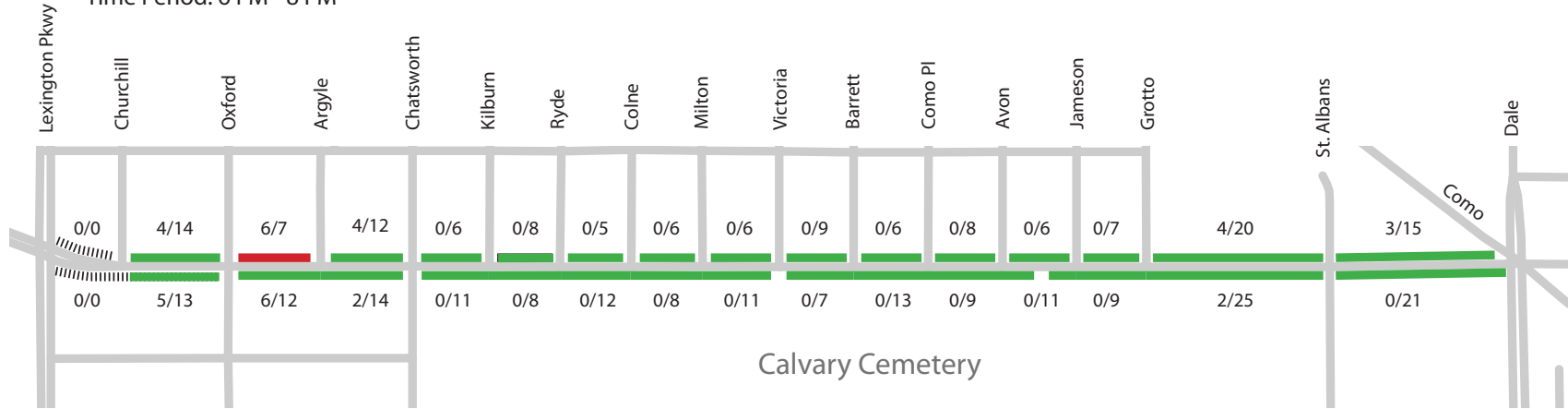
Example: 8/11 =

Observed Pkwd Cars /
Estimated Legal Parking Capacity

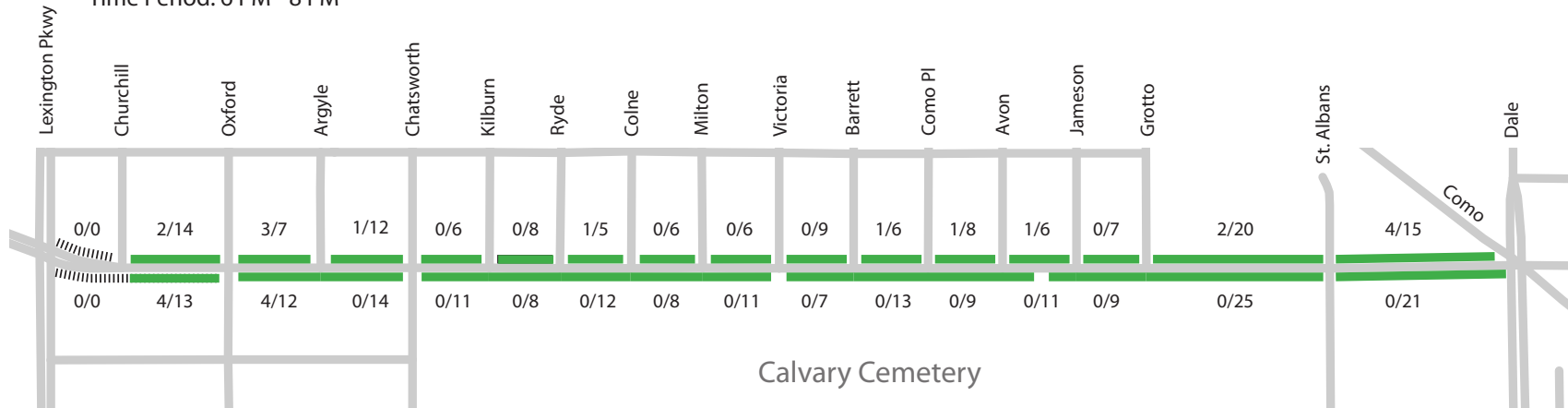
(Observed parking utilization may
exceed estimated legal capacity)

Front Ave Parking Counts Weekday Evening (6 PM - 8 PM)

Date: Wednesday, March 25th
Time Period: 6 PM - 8 PM



Date: Thursday, March 26th
Time Period: 6 PM - 8 PM



Legend

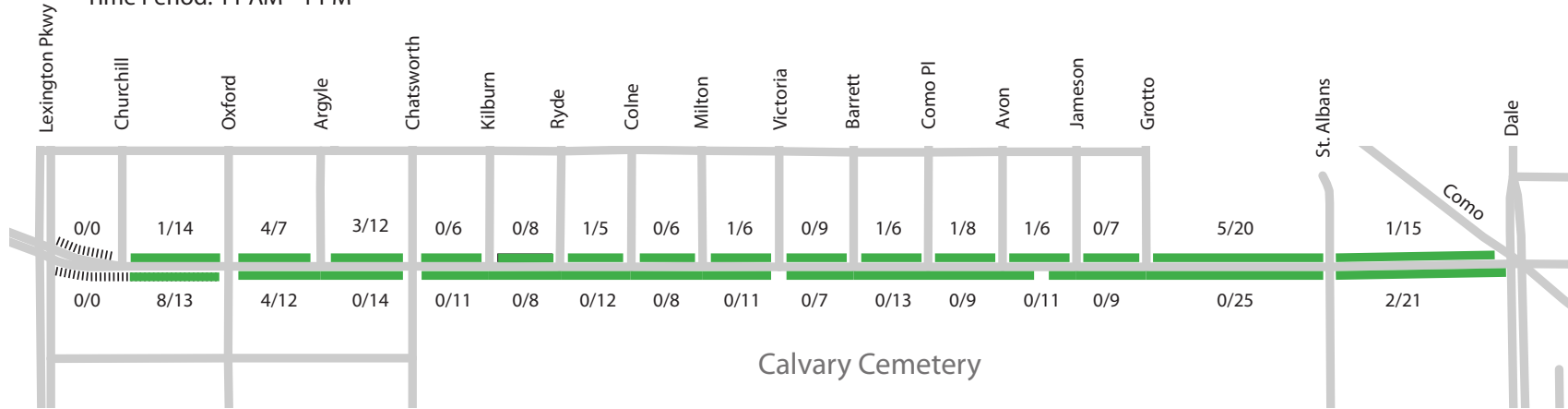
Observed Parking Utilization

- Signed "No Parking"
 - 0 - 69%
 - 70 - 84%
 - 85 - 100+
- Example: 8/11 =
Observed Parked Cars /
Estimated Legal Parking Capacity

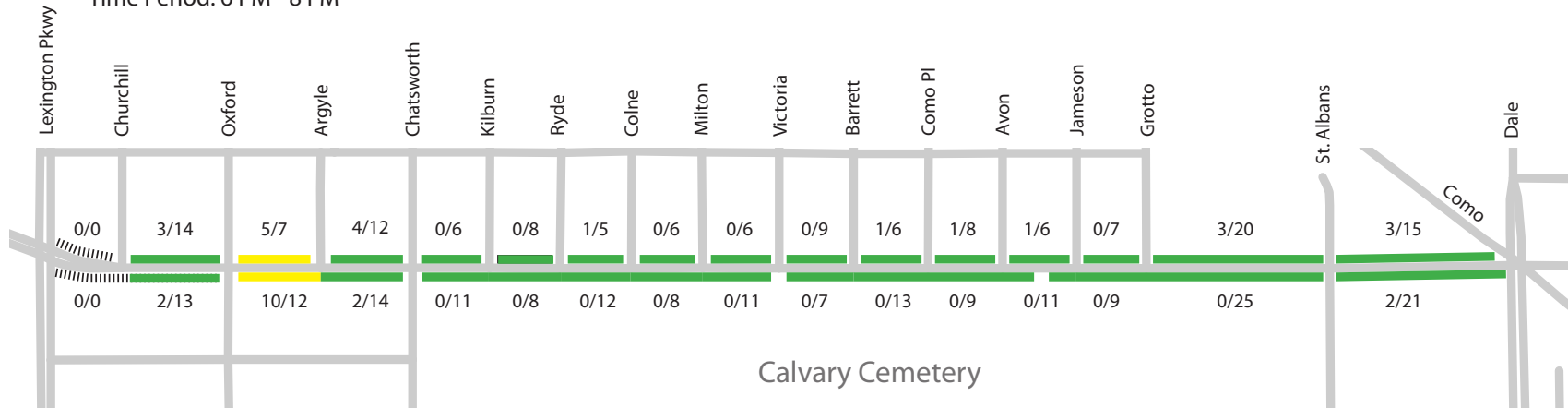
(Observed parking utilization may
exceed estimated legal capacity)

Front Ave Parking Counts Saturday Midday (11 AM - 1 PM) & Evening (6 PM - 8 PM)

Date: Saturday, April 4th
Time Period: 11 AM - 1 PM



Date: Saturday, April 4th
Time Period: 6 PM - 8 PM



Legend

Observed Parking Utilization

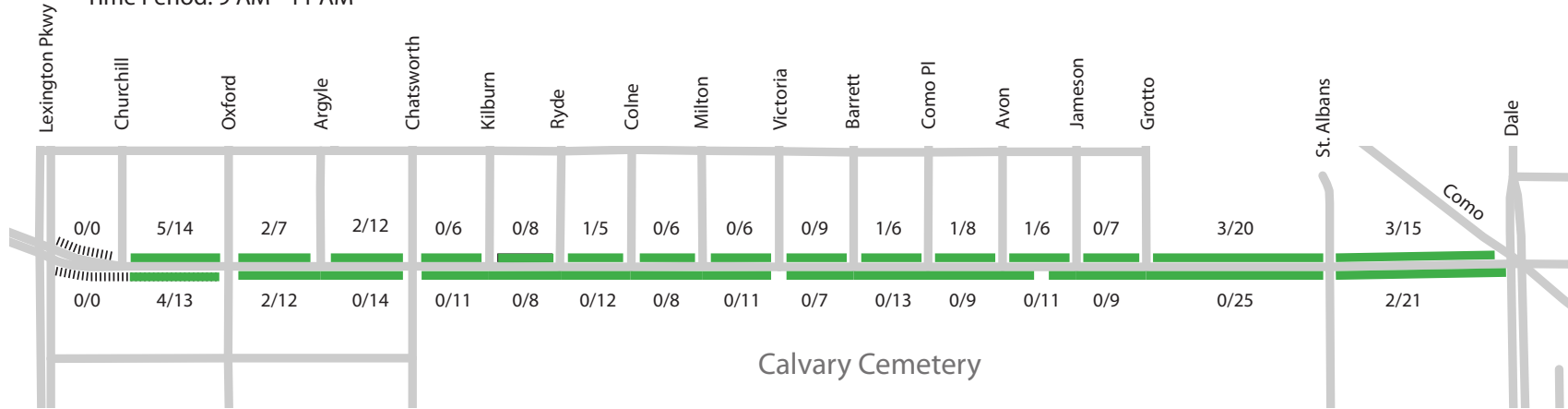
- Signed "No Parking"
- 0 - 69%
- 70 - 84%
- 85 - 100+%

Example: 8/11 =
Observed Pk'd Cars /
Estimated Legal Parking Capacity

(Observed parking utilization may
exceed estimated legal capacity)





Front Ave Parking Counts Sunday Morning (9 AM - 11 AM)

Date: Sunday, April 5th
Time Period: 9 AM - 11 AM



Legend

Observed Parking Utilization

-  Signed "No Parking"
 -  0 - 69%
 -  70 - 84%
 -  85 - 100+%
- Example: 8/11 =
Observed Pkwd Cars /
Estimated Legal Parking Capacity
- (Observed parking utilization may exceed estimated legal capacity)