

Transportation Committee

For the Metropolitan Council meeting of October 24, 2018

Subject: Electric Bus MOU and Charging Infrastructure Agreement

Proposed Action

That the Metropolitan Council authorizes the Regional Administrator to negotiate and execute the Memorandum of Understanding (MOU) regarding Bus Electrification Strategy (18M122A), the Metro Transit Electric Buses and Charging Infrastructure Agreement (18M122B) between the Metropolitan Council and Xcel Energy (dba Northern States Power Company), and any necessary future similar Charging Infrastructure Agreements to provide power at additional locations or for additional electric buses.

Summary of Committee Discussion/Questions

Pat Jones introduced Carrie Desmond and then both presented this item. McCarthy asked how long the overhead chargers took to charge. Desmond responded that buses will charge for approximately 10 minutes during layover, but the overhead chargers will be used for topping off the bus battery, not providing a full charge. Munt asked how long the C Line buses will be out on the street, to which Brian Lamb answered that the blocks are currently 15 – 20 hours.

Motion by Schreiber, seconded by Munt. Motion carried.

Transportation Committee

Meeting date: October 17, 2018

For the Metropolitan Council meeting of October 24, 2018

Subject: Electric Bus MOU and Charging Infrastructure Agreement

District(s), Member(s): District 7, Gary L. Cunningham, District 2, Lona Schreiber

Policy/Legal Reference: Council Expenditure Policy 3-3, Procurement of Goods and Services, Council Sustainability Policy 1-2; Governor's EO 17-12

Staff Prepared/Presented: Brian Lamb, General Manager, 612-349-7510
Marilyn Porter, Director, E&F, 612-349-7689
Pat Jones, Assistant Director, E&F, 612-349-7606
Robert Rimstad, Lead Project Manager, E&F, 612-349-7768
Carrie Desmond, Principal Engineer, E&F, 612-349-7798

Division/Department: Metro Transit Engineering & Facilities

Proposed Action

That the Metropolitan Council authorizes the Regional Administrator to negotiate and execute the Memorandum of Understanding (MOU) regarding Bus Electrification Strategy (18M122A), the Metro Transit Electric Buses and Charging Infrastructure Agreement (18M122B) between the Metropolitan Council and Xcel Energy (dba Northern States Power Company), and any necessary future similar Charging Infrastructure Agreements to provide power at additional locations or for additional electric buses.

Background

On January 24th, 2018 (Business Item 2018-29 SW), the Metropolitan Council authorized the purchase of eight (8) electric 60-foot buses and six (6) chargers for use on the C-line Bus Rapid Transit (BRT) corridor. On June 13, 2018 (Business Item 2018-150) The Metropolitan Council Authorized execution of a Memorandum of Understanding (MOU) with Xcel Energy providing a pathway to 100% clean electricity for Council accounts and supporting electrification of vehicles, including buses. As part of partnership, Xcel Energy has proposed a pilot to advance the electrification of transit in 2018 which will include providing, owning, and maintaining charging infrastructure at no cost to the Metropolitan Council.

When installing electrical infrastructure, Xcel's work typically ends at the transformer and meter location. For this pilot program, Xcel Energy will contract, pay for, and install the switchgear, conduit, and wiring all the way into Metropolitan Council property to the base of the chargers at the Fred T. Heywood Garage and Brooklyn Center Transit Center. The work by Xcel will reduce the cost for our agency to install the infrastructure. This Pilot Project will help Xcel Energy evaluate distribution system impacts and customer service considerations by studying costs to provide charging infrastructure, peak demand, feeder voltage dynamics, charging behaviors and load profiles. The chargers for the buses have been procured with the purchase of the buses.

The Memorandum of Understanding for Bus Electrification Strategy lays the ground work for the Pilot Project as well as future opportunities for Xcel Energy to provide infrastructure on future projects. The Charging Infrastructure Agreement will be negotiated and executed to assign roles and responsibilities for both parties for the work at Fred

T. Heywood Garage and Brooklyn Center Transit Center. The MOU, Charging Infrastructure Agreement, and any future agreements are intended to ensure power to the buses for their useful life of up to 14 years of service.

Rationale

The Governor's Executive Order (EO 17-12) and Thrive MSP 2040 asks us to do more to mitigate greenhouse gas emissions. Transportation has become the largest greenhouse gas polluting sector of the economy. Metro Transit is the largest diesel fuel purchaser in the state. The Council's partnership with Xcel will assist us in the electrification of the transit vehicles.

Thrive Lens Analysis

Livability is impacted as this partnership would create reductions in air pollutants, odor and noise. Environmental sustainability is clearly advanced through a transition away from fossil-fuel based electricity. Equity and Public Health is improved by reducing exposure to emissions released by diesel powered buses.

Funding

The Memorandum of Understanding for Bus Electrification Strategy and Metro Transit Electric Buses and Charging Infrastructure Agreement is a no cost agreement.

Known Support / Opposition

There is no known opposition to this project.

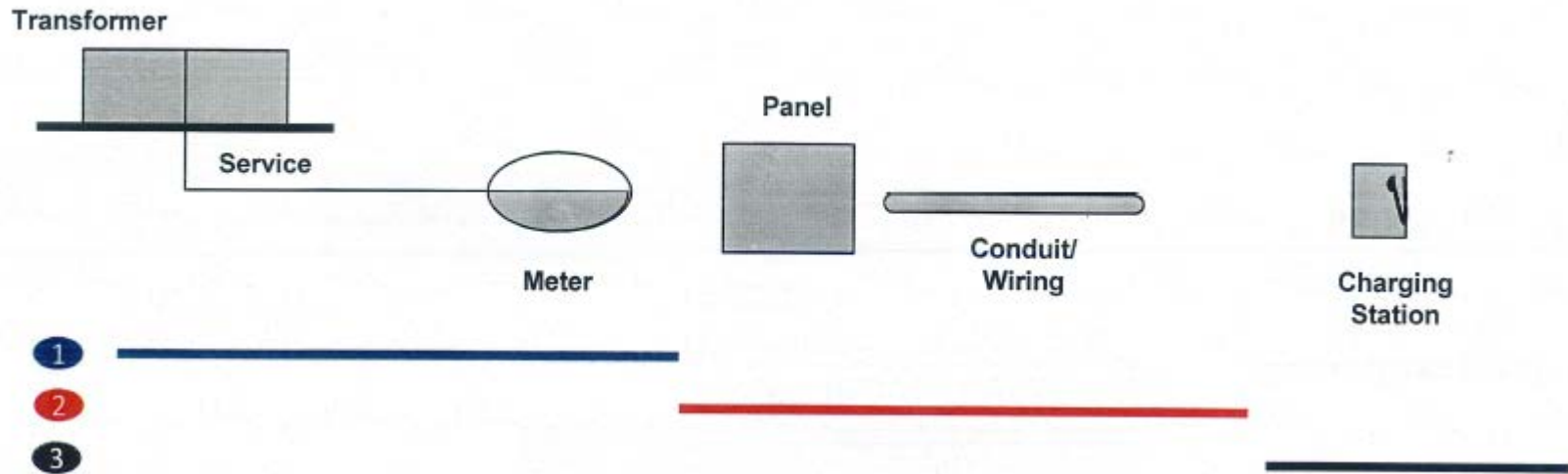
Electric Bus MOU and Charging Infrastructure Agreement



Transportation Committee
October 17, 2018
Business Item 2018-272

Pat Jones
Assistant Director,
Engineering and Facilities

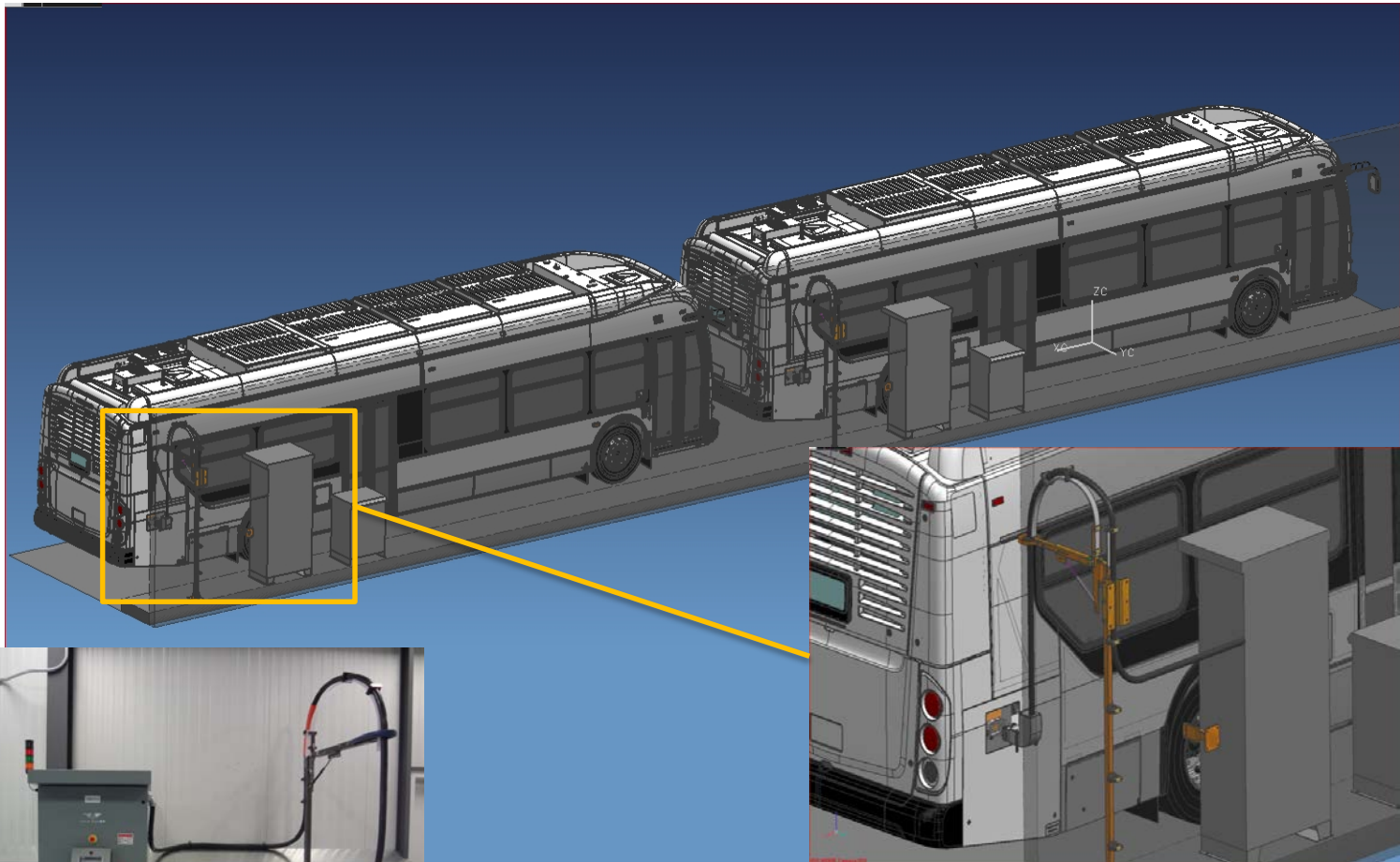
Carrie Desmond
Principal Engineer,
Engineering and Facilities



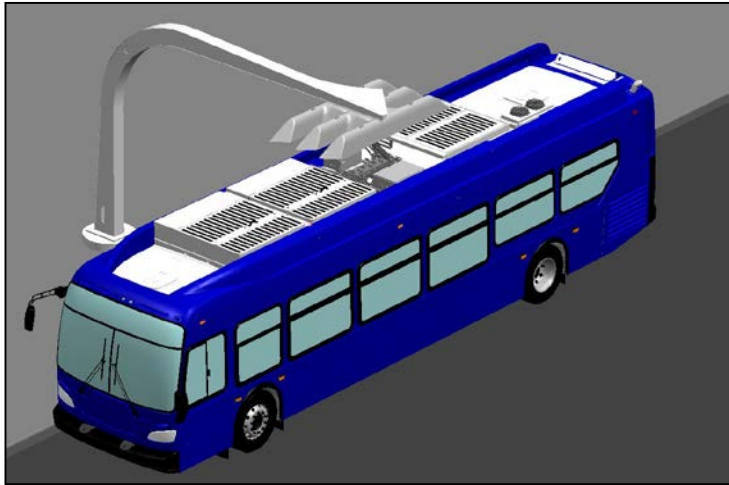
- 1 Xcel typically ends at the Transformer/Meter
- 2 Pilot Project will cover Panel, conduit, and wiring into to base of chargers
- 3 Metro Transit install charging stations

- 2018-29, approved purchase of electric buses and chargers
- 2018-150, approved Green Energy Partnership and proposed Pilot Project
- 2018-272 Electric Bus MOU lays ground work for Pilot Project and future projects
- 2018-272 Charging Infrastructure Agreement provides construction, operations, and maintenance

Garage Charger - Heywood Garage



Opportunity Charger BCTC



Brooklyn Center Transit Center

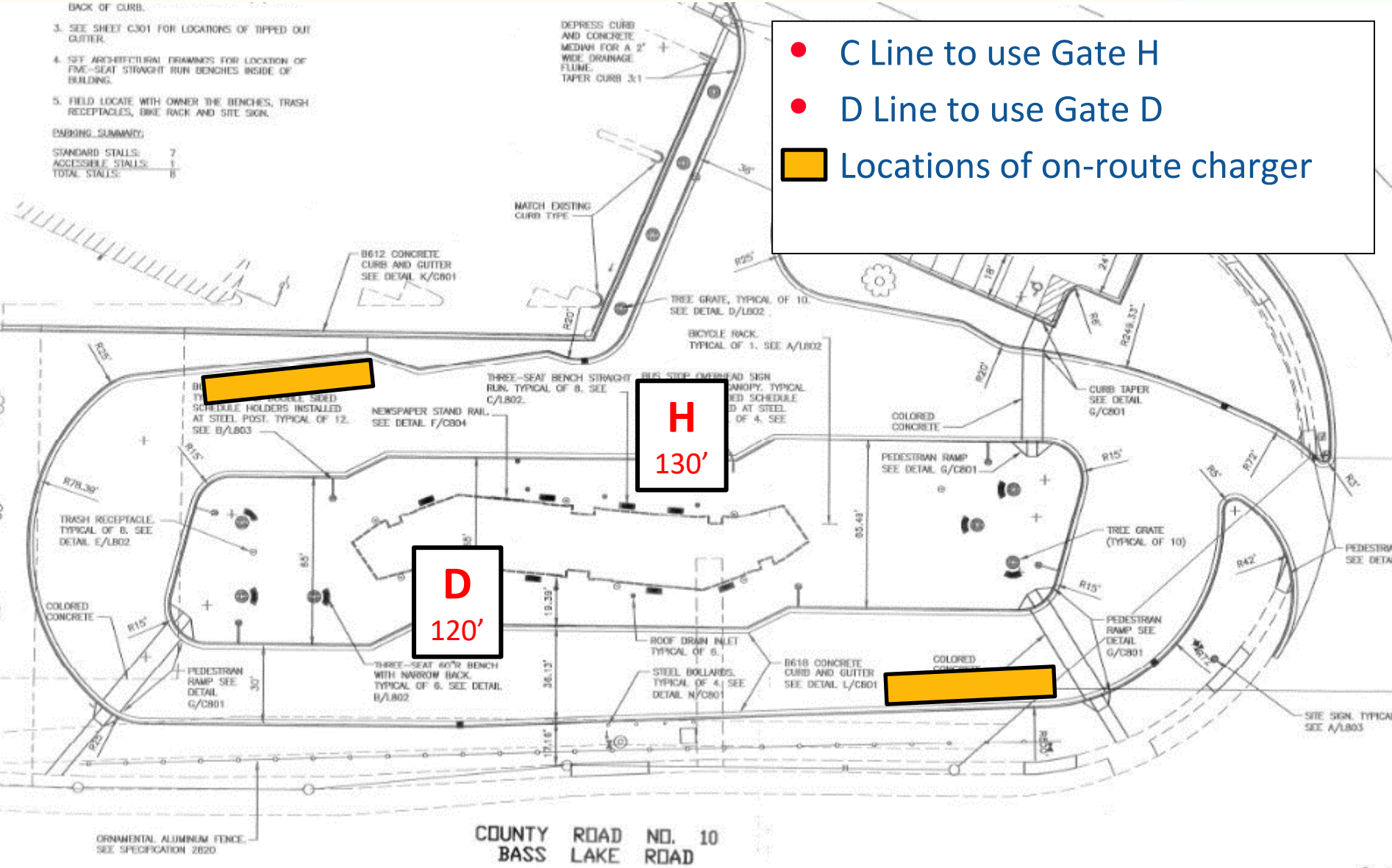


- BACK OF CURB.
- SEE SHEET C301 FOR LOCATIONS OF TIPPED OUT CUTTER.
 - SET ARCHITECTURAL DRAWINGS FOR LOCATION OF FIVE-SEAT STRAIGHT RUN BENCHES INSIDE OF BUILDING.
 - FIELD LOCATE WITH OWNER THE BENCHES, TRASH RECEPTACLES, BIKE RACK AND SITE SIGN.

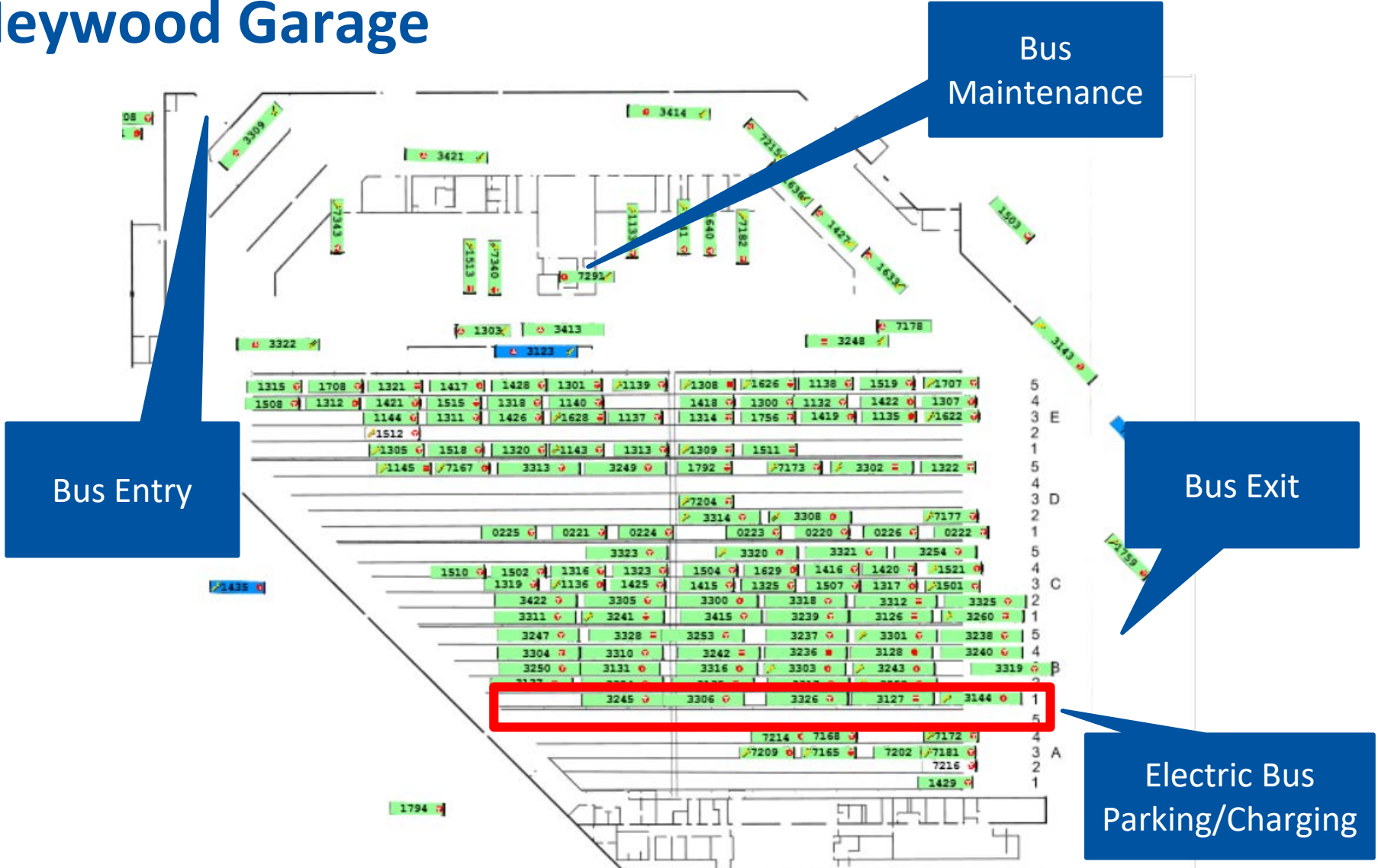
EMBARING SUMMARY:

STANDARD STALLS:	7
ACCESSIBLE STALLS:	1
TOTAL STALLS:	8

- C Line to use Gate H
- D Line to use Gate D
- Locations of on-route charger



Heywood Garage



Electric Bus/Bus Charger Project Schedule

	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	June 2019
Bus Delivery				First Bus	Two Buses	Four Buses	Final Bus		
Engineering / Section 106	100% Complete								
Charger Infrastructure Construction	Bid	NTP	Construct	Construct	Construct	Complete			
Charger Installation			Temp Charger Delivered	Factory Accept. Testing		Perm. Chargers Delivered	Installed Programed		
Commissioning and Training	New Flyer Contract Issued			Maintenance Training			Test, Train Begin	Testing, Training Finish	

Proposed Action

- Authorize the Regional Administrator to negotiate and execute:
 - Memorandum of Understanding (MOU) Bus Electrification Strategy
 - Metro Transit Electric Buses and Charging Infrastructure Agreement



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