

MINNESOTA STREETCAR MUSEUM

TRANSPORTATION DEPARTMENT

Sequence of Operation – Excelsior Streetcar Line
TCRT No. 1239

Revised – May 1, 2015

General

Foreman must adhere to the Excelsior Streetcar Line Foreman's checklist for general procedures to prepare the streetcars at the beginning of the day's operations and when the car is put away at the end of the day's operations. Checklist is posted in ESL Barn on the Operations bulletin board by the N. W. Entry Door

At the beginning of each operating season the Passenger Traffic Manager publishes instructions and information regarding general passenger operations in the annual General Procedures Memorandum.

Foreman should arrive at the ESL car barn at least 30 minutes prior to start of scheduled operations to pump up the air on the streetcar and to prepare trip sheet, coin changer etc.

This sequence of operations will assume that:

(1) A typical ESL round trip starts at the Water Street Platform, travels east to the Old Excelsior Boulevard platform and then returns to the Water Street Platform with a 5-10 minute stop at the ESL car barn for a short car barn tour; and,

(2) In the Yard the Foreman will control the operation of the car and the operator will assist as requested. Once the car is on the main line the Foreman and Operator will then assume the Motorman and Conductor positions as directed by the shift Foreman.

At the Beginning of the Day's Operations

This sequence begins after the Foreman has brought the car out of the barn and performed all the start of shift actions as listed in the ESL Foreman's checklist. The crew is present and ready to start day's operation. The streetcar is ready to leave the yard to approach the mainline switch.

Move from Car barn to Water Street Platform

Location	Foreman's Actions	Operator's Actions
From front of carbarn through yard switches to mainline switch	<ul style="list-style-type: none"> • Move car slowly through yard switches making sure trolley wheel properly tracks through overhead wire frogs • Check points of all switches to ensure they are set for the route the car is supposed to take • After car has entered onto the main line and stopped, align the switch for main line running and lock the switch. • Move trolley pole from car barn lead wire to main line wire 	<ul style="list-style-type: none"> • Assist Foreman as requested • Observe trolley wheel as it passes through overhead wire frogs
From mainline switch to Old Excelsior Blvd. (At Start of Day's operation)	<ul style="list-style-type: none"> • Set air brake transfer lever to rear movement position; set controller direction key to reverse; and, place controller in 1st notch • Answer Conductor's request to proceed using the bell signal, providing it is safe to do so (3 Bells) • Advance controller one notch at a time following standard procedure until Conductor shuts off power at the yellow tie • When Conductor shuts off power, shut off controller 	<ul style="list-style-type: none"> • Request permission to move car (3 bell signal) • When it is safe to move car, proceed to Old Excelsior Blvd.
Arrival and departure at Old Excelsior Blvd.	<ul style="list-style-type: none"> • Assist Conductor with sign placement if necessary. 	<ul style="list-style-type: none"> • Signal the Motorman to open the gates (one bell ring) • Set Sandwich Board Sign on sidewalk

Move from Car barn to Water Street Platform – Continued

Location	Motorman' Actions	Conductor's Action
Departing Old Excelsior Blvd	<ul style="list-style-type: none"> • When ready to move to Water Street, set air brake transfer lever to forward movement position; ring for permission to move car (2 bell ring) • When permission to move car is received from Conductor, place controller direction key to forward position • When is safe to move car release the brake and move controller to first notch • Before reaching line up of the boats just before Morse Avenue, stop car to be sure there is clearance for car to pass. • When the car arrives at the Morse Avenue crossing, follow normal sequence of operation. 	<ul style="list-style-type: none"> • Signal Motorman to close gates. • When request for permission to proceed is received from Motorman, fold-up brake handle and give Motorman permission to proceed (2 bell ring) if it is safe to move car
Arrival at Water Street	<ul style="list-style-type: none"> • Stop car so gates are centered on cement platform • Move controller key to neutral position • Open gates on signal from conductor (1 Bell) • Do not switch controls until Conductor asks for permission to move car 	<ul style="list-style-type: none"> • After car is stopped at Water Street Platform signal Motorman to open gate (1 Bell) • Supervise loading of passengers and collect fares

Regular Round-Trip Operations

Location	Motorman's Actions	Conductor's Actions
Depart Water Street Platform	<ul style="list-style-type: none"> • Close gates on signal from Conductor (2 bells) • After request to proceed bell signal from Conductor is received, set air brake transfer lever to rear movement position; set controller direction key to reverse; and, place controller in 1st notch • Answer Conductor's request to proceed using the bell signal, providing it is safe to do so (3 Bells) • Once the car is proceeding and after the front end of the car has passed the west end of the old M&StL depot, watch the voltmeter and ammeter and when current drops to approximately 70 amps, advance the controller one notch at a time 2 to 3 seconds between each notch until it is at the 5th notch 	<ul style="list-style-type: none"> • Record passenger count on trip Sheet • Signal Motorman to close gates (2 bells) • Make announcement to passengers to remain seated while the streetcar is in motion and to keep body parts inside the streetcar • Fold down rear brake handle and put in full apply position • Request permission from Motorman to proceed using bell signal (3 Bells) • After permission is granted, check front and sides for passengers and obstructions, release air brake and flip the start button to apply power to motors
Approaching Lyman Lumber Company Office Building and bike path crossing	<ul style="list-style-type: none"> • Shut off controller and move it to first notch when conductor shuts power off • Watch right side bike path for pedestrians as car approaches bike path crossing • Signal Conductor to stop if needed 	<ul style="list-style-type: none"> • Shut off power when car passes yellow painted tie. • Watch for bicyclists, joggers/pedestrians as car approaches bike path crossing
Lyman Lumber Company Office Building Area	<ul style="list-style-type: none"> • Leave controller in 1st notch • Be watchful for bikers and pedestrians 	<ul style="list-style-type: none"> • Coast through this area at speed not to exceed 5 MPH • Watch for and be prepared to stop for pedestrians and bicyclists

Regular Round-Trip Operations – Continued

Location	Motorman's Actions	Conductor's Actions
Morse Avenue	<ul style="list-style-type: none"> • Shut off controller when car stops • After conductor rings for permission to proceed (3 bells), put controller in 1st notch • Answer Conductor's bell signal if it is OK to proceed • After car has moved across Morse Ave. watch the ammeter and when current drops to approximately 70 amps advance the controller up one notch at a time until it is at the 5th notch 	<ul style="list-style-type: none"> • Make complete stop at Morse Avenue • When traffic on Morse Avenue is clear, request permission from Motorman to proceed (3 bells) • When permission is received, release brake and flip start button to on
Approaching Division Street Bridge	<ul style="list-style-type: none"> • Shut off controller when conductor cuts power at yellow tie • Move controller to 1st notch 	<ul style="list-style-type: none"> • Cut power when car passes yellow tie • Coast downhill to car barn switch • Apply brakes to slow car to 5 MPH as it passes through the car barn switch
Passed Carbarn Switch	<ul style="list-style-type: none"> • Leave controller in first notch in preparation for stop at car barn 	<ul style="list-style-type: none"> • Turn power on after car clears car barn yard switch • As you approach carbarn prepare to stop at the platform by the west end of car barn
Carbarn	<ul style="list-style-type: none"> • When Conductor has stopped car at carbarn platform, turn controller off and move key to neutral position • Announce the carbarn tour • Take reverse key if Motorman leaves the car 	<ul style="list-style-type: none"> • Shut off power and coast to stop at carbarn platform, aligning middle of gates on the middle of platform on gate side of car • Conduct carbarn tour

Regular Round-Trip Operations – Continued

Location	Motorman's Actions	Conductor's Actions
Departing Car barn	<ul style="list-style-type: none"> • Check to make sure passengers are seated and it is clear outside car to proceed • When Conductor asks for permission to proceed from car barn, move controller key to reverse position, and move controller to first notch • Respond to conductor's request to proceed (3 Bells) • Advance controller to 5th notch in the usual manner 	<ul style="list-style-type: none"> • Signal Motorman to close gates (2 Bells) • Signal the Motorman for permission to proceed (3 Bells) • When permission to proceed has been received, release the brake and flip start switch on
Passing under old TCRT bridge	<ul style="list-style-type: none"> • Shut off controller when conductor cuts power 	<ul style="list-style-type: none"> • Cut power at yellow painted tie just beyond the old TCRT bridge • Coast up to Old Excelsior Blvd. Platform
Arrival at Old Excelsior Blvd. Platform	<ul style="list-style-type: none"> • Place controller key in neutral position • Open gates when/if conductor signals to do so • Give end of line talk 	<ul style="list-style-type: none"> • Stop car at loading platform • Signal Motorman to open gates if required • Supervise loading and unloading of passengers and collect fares
Depart from Old Excelsior Blvd Platform	<ul style="list-style-type: none"> • Close gates when conductor signals to do so. • Set air brake transfer lever to forward movement position (straight up) • Signal Conductor for permission to proceed forward (2 Bells) • When permission to proceed is received, put controller key into forward position • Release Brake and put controller in first notch 	<ul style="list-style-type: none"> • Signal Motorman to close gates after passengers are unloaded and loaded (2 short buzzes) • After receiving request to proceed signal from Motorman (2 Bells), move brake handle to middle position and put it in folded position • Answer Motorman's bell signal to proceed if it is OK to do so (2 bells) • Observe passengers in main compartment to ensure their safety

Regular Round-Trip Operations – Continued

Location	Motorman's Actions	Conductor's Actions
Approach ESL Car Barn	<ul style="list-style-type: none"> • Proceed slowly past carbarn, ring foot gong when approaching west end of car barn • Cut power when front of car passes parking area crossing in front of car barn • Coast through mainline switch at speed not to exceed 5 MPH • After passing switch, move controller to first notch, and when current drops to approximately 70 amps move controller handle one notch at a time until it is in the 5th notch 	<ul style="list-style-type: none"> • Continue to observe passengers
Morse Avenue	<ul style="list-style-type: none"> • Cut power at yellow tie approximately 3/4ths of way from switch to Morse Avenue • Make complete stop at Morse Avenue • When it is clear to proceed, signal conductor for permission to proceed (2 bells) • When permission from conductor is received and it is safe to proceed release brakes and move controller to first notch 	<ul style="list-style-type: none"> • Check for bikers or pedestrians on right side and auto traffic on left side of car before answering Motorman's signal to proceed.
Lyman Lumber Company Office Building area and bike path crossing	<ul style="list-style-type: none"> • Leave controller in first notch • Be watchful for bikers and pedestrians that might cross in front of car • After car has passed bike path crossing, and current drops to approximately 70 amps, advance controller one notch at a time until it is in the 5th notch 	<ul style="list-style-type: none"> • Watch for and be prepared to signal Motorman to stop if dangerous situation might occur out of Motorman's field of vision to the right

Regular Round-Trip Operations – Continued

Location	Motorman's Actions	Conductor's Actions
Approaching Water Street Platform	<ul style="list-style-type: none"> Shut off power when car passes yellow painted tie; ring foot gong as car starts to pass the old M&StL Depot Approach platform at dead slow speed Come to full stop with gates centered on cement platform 	<ul style="list-style-type: none"> After car comes to complete stop, signal Motorman to open gates Supervise loading and unloading of passengers Collect fares Update trip sheet

At the End of the Day's Operations

This sequence begins after the day's operations are finished. The Conductor will operate the car from the Water Street platform and stop the car approximately 10 feet before the mainline switch. The crew is present and both are ready to move the car in the yard and the car barn.

Move from Water Street platform to car barn

Location	Motorman's Actions	Conductor's Actions
Return to car barn	<ul style="list-style-type: none"> Follow normal sequence of operation to mainline switch into car barn yard 	<ul style="list-style-type: none"> Follow normal sequence of operation Stop Car before mainline switch Signal Motorman to open gates
Location	Foreman's Actions	Operator's Actions
Yard	<ul style="list-style-type: none"> Change switch from mainline to yard. Lock the switch in this position. Move trolley pole to yard wire Move car into yard and through the overhead wire frog Just after the trolley wheel passes through the overhead wire frog, stop car and check to make sure the trolley wheel is on the correct yard wire (when going through the frog it usually puts the wheel on the wrong wire) Stop car about 15 feet from car barn door 	<ul style="list-style-type: none"> Assist Foreman as requested Sweep out car before car is put into car barn Check supply of brochures and replenish the supply in the brochure rack on the car