



MINNESOTA STREETCAR MUSEUM

TRANSPORTATION DEPARTMENT

Sequence of Operation – Excelsior Streetcar Line TCRT No. 1239

Revised – April 2008

General

Refer to Crew Members' Procedures & Sequence of Operations at the Excelsior Streetcar Line (ESL) for general operational instructions and crew duties and responsibilities on regularly scheduled operations at ESL.

Foreman must adhere to the Excelsior Streetcar Line Foreman's checklist dated March 2008 for general procedures to prepare No. 1239 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 **Bulletin Board by 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.

Specific instructions regarding operating controls for streetcar No. 1239 can be found in 2008 Foreman Recertification Document.

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 stopped the car before the mainline switch. The crew is present and both are ready to move car to Water Street.

Move from Car barn to Water Street Platform

Location	Foreman's Actions	Operator's Actions
Yard	<ul style="list-style-type: none"> • Sets switch for movement to main line • After car has cleared the switch, sets it for mainline operation and locks the switch • Moves trolley pole to mainline wire 	<ul style="list-style-type: none"> • At Foreman's request moves car onto the main line, and stops car when it has passed the switch
From mainline switch to Water Street Platform (At Start of Day's operation)	<ul style="list-style-type: none"> • Request clearance to proceed (2 Bells) • Follow normal sequence of operations 	<ul style="list-style-type: none"> • Checks to make sure it is safe to proceed and answers motorman's request (2 bell signal) • Follows normal sequence of operations
Location	Motorman's Actions	Conductor's Actions
Arrival at Water Street Platform	<ul style="list-style-type: none"> • Stop car so motorman's door is centered on black stripe painted on the cement platform • Move controller key to neutral position • Open gates on signal from conductor (1 buzz) • Do not switch controls until car is ready to proceed eastward 	<ul style="list-style-type: none"> • After car is stopped at Water Street Platform signal Motorman to open gates (1 buzz) • Supervise loading of passengers, and collect fares

Normal Sequence of Operation

Location	Motorman's Actions	Conductor's Actions
Depart Water Street Platform	<ul style="list-style-type: none"> • Close gates on signal from Conductor (2) short buzzes. • After bell signal from Conductor is received set brake direction control to rear, 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 amp meter and when current drops to approximately 70 amps bump the control up one notch at a time until it is at 5th notch 	<ul style="list-style-type: none"> • Record passenger count on trip Sheet • Signal Motorman to close gates (2 short buzzes) • Request permission from Motorman to proceed using bell signal (3 Bells). After permission is granted • Fold down rear brake handle and put in full apply position. • After checking 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/bicyclists

Normal Sequence of Operation

Location	Motorman's Actions	Conductor's Actions
Morse Avenue	<ul style="list-style-type: none"> • Shut off controller when car stops • After conductor rings (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 amp meter and when current drops to approximately 70 amps bump the control up one notch at a time until it is at 5th notch 	<ul style="list-style-type: none"> • Make complete stop at Morse Avenue • When traffic on road is clear request clearance from Motorman to proceed (3 bells) • 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 Car Barn 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 car Barn prepare to stop At the platform by the east end of car barn
Car Barn	<ul style="list-style-type: none"> • When Conductor has stopped car at Car Barn Platform Turn Controller off and move key to neutral position • Announce the car barn tour 	<ul style="list-style-type: none"> • Shut off power and coast to stop at Car Barn platform, aligning middle of gates on the black strip painted on platform on gate side of car • Conduct Car Barn Tour

Normal Sequence of Operation

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) 	<ul style="list-style-type: none"> • 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 ROW 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 • 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 Collect fares
Depart from Old Excelsior Blvd Platform	<ul style="list-style-type: none"> • Close gates when conductor signals to do so. • Signal Conductor for permission to proceed forward (2 Bells) • When permission to proceed is received, switch air brake lever to forward position (straight up), 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) • 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 • Observe passengers in main compartment to insure they are not doing anything to jeopardize their safety

Normal Sequence of Operation

Location	Motorman's Actions	Conductor's Actions
Approach ESL Car Barn	<ul style="list-style-type: none"> • Proceed slowly past car barn, ring 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 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 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 • When 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

Normal Sequence of Operation

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 car door centered on black line 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
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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 carbarn.

Move from Water Street platform to carbarn

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 carbarn 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 • Move trolley pole to yard wire • Move car into yard and through the frog • Just after the 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 barn door 	<ul style="list-style-type: none"> • Assist Foreman as requested