



NATIONAL TRANSPORTATION SAFETY BOARD
Investigative Hearing

Washington Metropolitan Area Transit Authority Metrorail train 302 that encountered heavy smoke in the tunnel between the L'Enfant Plaza Station and the Potomac River Bridge on January 12, 2015

GROUP	H
EXHIBIT	
36	

Agency / Organization

Washington Metropolitan Area Transit Authority

Title

Rail Operations Control Center
Emergency Shutdown Playbook

ROCC SHUTDOWN PLAYBOOK A02 TO B35

July 11 – July 12 2015



Total Shutdown: Farragut North to NoMa Gallaudet U.

Beginning on Saturday July 11th 2015 0000 until Sunday July 12th 2015 0600, Metro Rail Stations will shut down between Farragut North and NoMa/Gallaudet U. stations. Shuttle bus service will be in effect to facilitate customer movement between the affected stations. There are no units scheduled to support this shutdown. The Mobile Command will be located at JGB, operating on OPS-12, 202-617-3500. A test train is required from Brentwood Yard (B99) at 0300 on July 12th.

NOTE: ROCC shall inform the B99 Interlocking Operator at the beginning of the Shutdown that all instructions pertaining to moving track equipment shall come from ROCC and not the Mobile Command Center.

Red line trains will operate in two segments from Shady Grove to Farragut North on a 10 minute headway with a destination code 05 dialed in and Farragut North to Shady Grove on a 10 minute headway with a destination code 12 dialed in. Red line trains will operate from Glenmont to NoMa/Gallaudet U. on a 10 minute headway with a destination code 06 dialed in and NoMa Gallaudet U. to Glenmont on a 10 minute headway with a destination code 13 dialed in.

Shuttle Bus Service

Farragut North to NoMa Gallaudet U.

Station Closures

Metro Center (A01)

Gallery Place (B01)

Judiciary Square (B02)

Union Station (B03)

Remove Automatic Signaling

All A02 signals, B99 06 & B99 46

Prohibit exits

B35 06/08/02/04, B02 06/08/02/04 & A02 52/46

Safety triangles

- Tracks 1 Farragut North at the turn back signal on the Metro Center end.
- Tracks 2 Farragut North, 60 feet from A02 52 signal on the Metro Center end.
- Tracks 1&2 NoMa/Gallaudet U. 10 feet from the platform on the Union Station end.

De-Railers:

A1-003+65 & B1-089+68

A2-004+73 & B2-089+68

Fan Configuration

Friday night last through train:

Red Line: Southbound: Departing from Shady Grove at 11:13PM, leaving Noma-Gallaudet U at 11:53PM, and arriving at Glenmont at 12:14AM. **Northbound:** Departing from Glenmont at 11:20PM, leaving Farragut North at 11:49PM, and arriving at Shady Grove at 12:21AM.

Red Line Last Train Information:

On Friday and Saturday:

Last Southbound: Departing from Shady Grove at 2:12AM (18 minutes earlier than normal), leaving Farragut North at 2:44AM, leaving Noma-Gallaudet U at 3:36AM, and arriving at Glenmont at 3:57AM. **Northbound:** Departing Glenmont at 2:11AM (26 minutes earlier than normal), leaving Noma-Gallaudet U at 2:32AM, Farragut North at 3:24AM, arriving at Shady Grove at 3:56AM.

Total Shutdown:

Red Line: between Farragut North and Noma-Gallaudet U

- Station Closing: Metro Center (upper level), Gallery Place (upper level), Judiciary Sq., Union Station
- Proposed Service Plan: Red Line trains will operate in two segments between Shady Grove and Farragut North, and Noma-Gallaudet U and Glenmont stations on a 10 minute headway during the day time on Saturday. Free shuttle will operate between Farragut North and Noma-Gallaudet U stations. Regular service will resume on Sunday.

Single-Tracking:

Orange Line: none

- Proposed Service Plan: Modified regular headway all weekend

Silver Line: none

- Proposed Service Plan: Modified regular headway all weekend

Blue Line: between Pentagon City and Arlington Cemetery

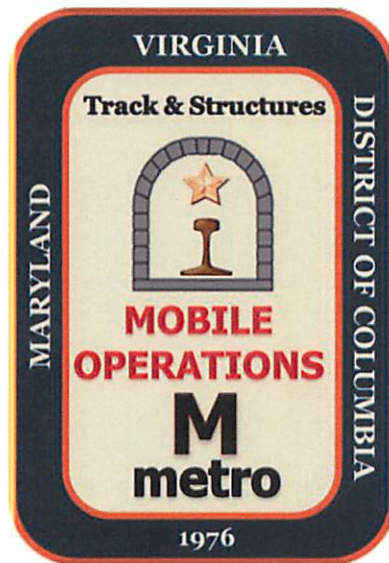
- Proposed Service Plan: 20 minute headway all weekend.

Yellow Line: between Pentagon City and L'Enfant Plaza

- Proposed Service Plan: 20 minute headway all weekend.

Green Line: between Naylor Road and Branch Ave.

- Proposed Service Plan: 20 minute headway all weekend.



**Mobile Operations
Shutdown Coordination Work Plan**

A02 to B35

Farragut North to NoMA/Gallaudet U.

Red Line

July 11 to July 12, 2015

OPS-12

202-617-3500

Distribution:

OPER

SAFE

ROCC

TAMC

MOPC

Shutdown Work Zone Parameters

Shutdown Start: 07/11/2015 at 0000 Hours

Shutdown Conclusion: 07/12/2015 at 0600 Hours

Protected Limits: Track 1: A1 003+65 to B1 089+68
Track 2: A2 004+73 to B2 089+68

Derailer: Track 1: A1 003+65 and B1 089+68
Track 2: A2 004+73 and B2 089+68

Actual Work Limits: Track 1: A1 003+16 to B1 089+18
Track 2: A2 004+23 to B2 089+18

Type of Protection: Inaccessible Track

Each work gang shall establish individual work zones within the actual work zone in accordance with the RWPM. Lanterns/flags must be used.

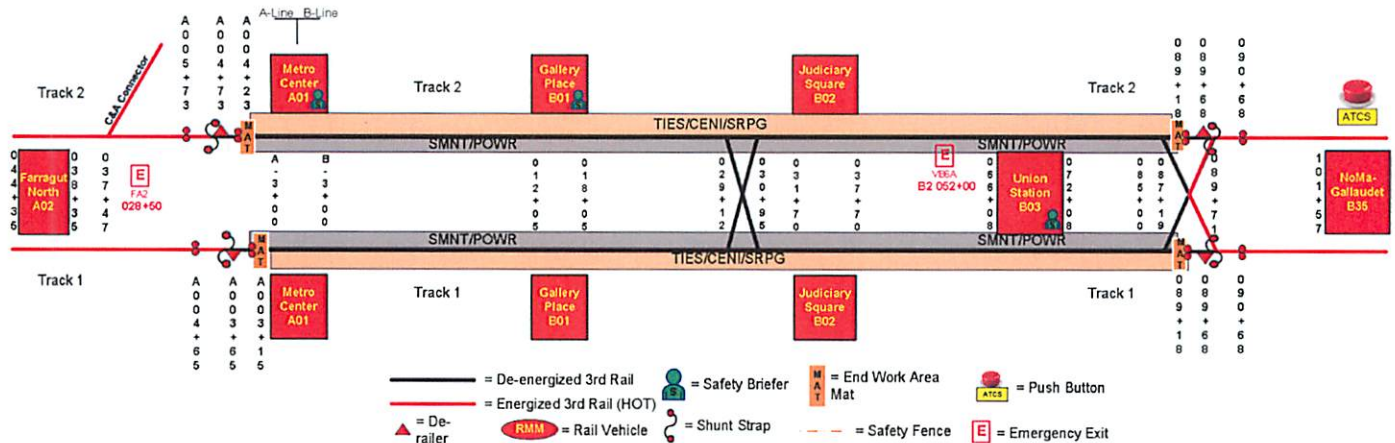
Power Outage Required: Yes

Track 1: A1 003+65 to B1 089+68
Track 2: A2 004+73 to B2 089+68

Lock out Tag out: Yes

LV/Control Voltage LOTO: No

The Mobile Command Center shall hold all keys used for lock out tag.



Rail Equipment Staging Location: There are no units scheduled for the shutdown at this time.

Transfer of Rail Equipment: If units are utilized, ROCC shall bring units up to clear B03-02 or B03-06 Signal, (as specified in the line-up), and instruct the operators to switch to OPS-12 and contact the Mobile Command Center. MCC shall be responsible for the movement of rail vehicles after they enter the work zone at CM: B1/B2 089+66.

Test Train: Required, 07/12/2015, 0200 Hours

COORDINATED WORK PLAN

The following is a description of work to be performed on the "A and B" Lines July 11 – 12, 2015 between Farragut North and NoMA/ Gallaudet U. commencing at 0000 Hours on July 11, 2015. There will be one TRST Mobile Command Center located at JGB: responsible for the protected limits A1 003+65 to B1 089+68 and A2 004+73 to B2 089+68 and will be governed by MOPC OAP (Draft). The Mobile Command Center will provide overall rail operations for the complete shutdown. There are three (3) points of entry into the work zone; Metro Center, Gallery Place and Union Station. All personnel entering the work zone shall have the proper PPE as stated below and shall participate in a toolbox/job safety briefing at the entry point before entering the roadway or commencing their work.

The Mobile Command Center shall:

1. Establish and control a protected zone to ensure, promote and enhance Roadway Worker Protection by using Inaccessible Track (IT) Protection, Sec. 1, pp. 36-38 of the 2014 RWPM-Rev 2.0.
2. Monitor, supervise, facilitate and direct all rail vehicle movement within the established actual work zone.
3. Monitor, facilitate and direct all personnel within the established actual work zone.
4. Review, Organize, facilitate and implement resolution to conflicts between work gangs within the protected work zone
5. Monitor and correct any potential safety issue which may arise during the duration of the shutdown and/or will direct such to SAFE as appropriate.
6. Provide appropriate updates as necessary.
7. Coordinate with and advise ROCC, MTPD, OEM, and the Office of Safety as appropriate
8. Mobile Command Center shall operate on **OPS-12** to communicate with all equipment and personnel within the working limits.
9. Mobile Command Center will be the holder of the RED TAG
10. The red tag shall be transferred at the end of each shift to the oncoming lead supervisor

TIES/CENI/SRPG shall:

1. Cut over the new ETS system and disconnect the old system, including ETS boxes, blue lights and COMM room wiring. The work area will be from CM: A1 003+15 to B1 089+18 and A2 004+23 to B2 089+18. **TIES/CENI/SRPG will be restoring power to test the ETS system at 1700hrs on Saturday, July 11. MCC will maintain the protected area until 0600hrs on Sunday, July 12.**

ATC shall:

1. Support TIES/CENI/SRPG personnel.

POWER shall:

1. Support TIES/CENI/SRPG personnel.

TASS/FACP/POWER shall:

2. Perform NTSB recommended repairs to the traction power stub-up cables, conduits and boots on both tracks from CM: TBD. Power will have to clear the roadway at 16:00hrs on Saturday, July 11.

CTEM shall:

1. Provide support for repairs of rail maintenance Machines throughout the entire shutdown

Safety:

1. May provide consultation on safety related issues
2. May inspect the work zone for proper set up
3. May inspect work zone for compliance of PPE usage
4. Shall notify Mobile Command Center when a problem, finding or hazard is identified.

QAAW:

1. May perform audits on WMATA and contractor workers to confirm compliance with WMATA policy and approved documentation.
2. May inspect the work zone for proper set up and compliance of PPE usage.
3. Shall notify the Mobile Command Center when a problem, finding or concern is identified.
4. Shall contact the Mobile Command Center any time entering or exiting the Roadway.

Applicable to all Departments and personnel involved with this shutdown and within the work zone:

1. Comply with the RWPM at all times
2. The work zone begins at the authorized entry point(s).
3. No person shall be authorized to enter the roadway without the consent of the Mobile Command Center
4. Ensure each member of your work team has all their PPE
5. Attend designated safety briefing to enter this work zone
6. Attend all job specific safety briefings that pertain to the work you are about to perform
7. Contact Mobile Command Center (MCC) when entering and exiting the work zone
8. Contact the Mobile Command Center, via radio, anytime the Gang leader or escort changes; providing the name, radio number and cell phone number of the oncoming Gang leader or escort
9. Notify the Mobile Command Center immediately if you discover an unsafe act, situation or incident.
10. Notify the Mobile Command Center immediately for any injury, regardless how minor.

Additional safety equipment for the A02-B35 shutdown:

1. The lower level of A01, Metro Center will remain in service. The 11th and G St. entrance and the 13th and G St. entrance to the stations will be closed. The 12th and F St. entrance and 12th and G St. entrance will remain open for public use. Temporary fencing will be installed on the A01 Red Line platform to isolate the Red Line platform from the escalator/stair access to the lower levels.
2. The lower level of B01, Gallery Place will remain in service. The 9th St entrance will be closed to the public. The 7th St. and H St. Entrances will remain open for public use. Temporary fencing will be installed on the Red Line platform to isolate the Red Line platform from the escalator/stair access to the lower levels.
3. At B03, Union Station will be out of service, but access to the Mall and Amtrak must be maintained. Temporary fencing will be installed to isolate the Red Line platform from the Mall and Amtrak access on the First St. entrance.

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SAFETY PLAN

In the event of an Emergency, SOP #1A will be followed; modified to ensure smooth transition between MCC and ROCC. It shall be the Responsibility of Each Supervisor to ensure that all personnel are accounted for in the event of an Emergency Evacuation. Any individual missing during an evacuation shall immediately be brought to the attention of the Mobile Command Center: 202-617-3500

PPE Requirements for this shutdown

Hard Hats, safety glasses, Class 2 or 3 safety vest or WMATA approved class 3 apparel or approved, Safety approved shoes, Working Flashlights are mandatory to enter this work zone. Dust masks and hearing protection as necessary. Harnesses and life lines will be used for lifts as appropriate and required. Hard Hats are required at all times while on the roadway and in places where there are possible dangers to the head from impact, falling objects or electrical shock and burns. Hard Hats will not be required on the platform and mezzanine areas if designated as a place of safety by the RWIC or Gang Leader.

Worker Protection

Inaccessible Track Protection

This Coordinated work plan will consist of (4) derailleurs, (4) shunt straps, (12) pairs of red lights and (4) reflective End of work area limit mats. A derailer is to be placed on each end of the protected work area on each track with a shunt strap and pair of red lights at the derailer. Advance red warning lights/flags will be placed in between running rail 100 feet in advance of the **PROTECTED** work limits. The work mats and red lights will be placed in between the running rail 50 feet after the derailer, facing so it is readable from the actual work zone. WASAD'S and other devices will be installed in accordance with all prescribed safety procedures. **Each work gang shall be responsible for, install and utilize WASAD's in accordance with SOP #28. Failure to comply can result in your work being stopped and personnel removed from the roadway. Each work gang within the protected work zone must install safety equipment in accordance with the Piggybacking section of the 2014 RWPM-Rev2.0, pp. 49-51. Any additional derailleurs is solely up to the discretion of the individual gang leaders providing that authorization for installation is obtained from the Mobile Command center before any such derailer is actually installed.**

Derailleurs

The use and installation of derailleurs in this shutdown shall comply with MSRPH, SOP#28, Section 28.5.13 and in accordance with 2014 RWPM-Rev 2.0, p.82. The Command Center will notify ROCC when the derailleurs are installed by location and chain markers after installation. At the beginning of each shift change the Supervisor-in-charge of the Command Center will verify that the derailleurs are in place at each location and that the red lanterns are lit.

DERAILER LOCATIONS

Track 1: A1 003+65 and B1 089+68

Track 2: A2 004+73 and B2 089+68

Contractors may elect to have WMATA qualified personnel to install derailleurs within their work zone. As contractor completes work, these derailleurs will be removed by WMATA personnel, however, the overall work zone derailleurs will remain until the conclusion of the shutdown.

Rail Vehicle Movement within the Work Zone

All Equipment movement throughout the work area is restricted to **5 MPH**. The use of Watchman/Lookouts is mandatory anytime there is any rail vehicle movement within the working limits. This is without exception. The Command Center shall control all rail movement within the work limits however the Command Center may delegate this authority to the Gang Leader of an affected work group for movement within a specific limit of that work zone. However, the authority granted to one gang leader is NOT transferable to another gang leader. Each gang leader who wishes to move their rail vehicles must get permission from the Mobile Command Center to do so. ROCC shall control rail vehicle movement within the work zone only when Mobile Operations transfers authority to move such vehicle back to ROCC.

Safety Briefing

There are three (3) points of entry for this shutdown: The briefing locations at the station will be at the safety fence at A01, B01 and B03. The lower levels of A01, Metro Center and B01, Gallery Place will remain in service. Temporary fences will be installed at the escalators on both platforms to isolate the Red Line platform from the mezzanines. B03, Union Station will also have a temporary fence at the entry gates on the First Street entrance to isolate the platform from Mall/Amtrak patrons. You must attend a briefing to obtain your wrist bands for entry into the work zone.

Manholes

For this shutdown, Manholes on WMATA property are designed to be joint power and telecommunication manholes. Qualified personnel requiring entry into these manholes fall under OSHA 1910.268. Before entry and in conjunction with or in addition to 1910.268:

1. All personnel entering manholes must have current Confined Space Protection Certification.
2. Each manhole shall be tested for harmful gasses, fumes and oxygen levels
3. A physical inspection of the interior of the manhole shall be made to observe any potential hazard
4. Entry and exit shall only be performed with ladders
5. Rescue equipment shall be available, on site, if such equipment is needed
6. All Personnel are governed by WMATA Confined Space Protection. Personnel entering any manhole shall wear the appropriate harness but is not required to be attached to a tripod.

Cell Phone Usage within this work zone

Cell phones are **STRICTLY PROHIBITED** while operating any vehicle (rail, road or riding) or while operating any mechanical, electrical or electro-mechanical equipment. Cell phone usage is **ONLY** permitted in the performance of your duties with authorization by your supervisor or Gang leader and **ONLY** if it is safe to do so from a place of safety. Standing between the rails, near the third rail or while performing your work on the roadway are examples of areas that are **NOT** considered a place of safety. **Move to a safe place; out of the dynamic envelope of any rail vehicle. Personal cell phone usage is PROHIBITED**

ALL EMPLOYEES USING A RADIO MUST PERFORM A RADIO CHECK WITH THE MOBILE COMMAND CENTER AT THE BEGINNING OF EACH SHIFT. THE CORRECT RADIO CHANNEL FOR THIS SHUTDOWN IS: OPS-12

Emergency Phone Numbers

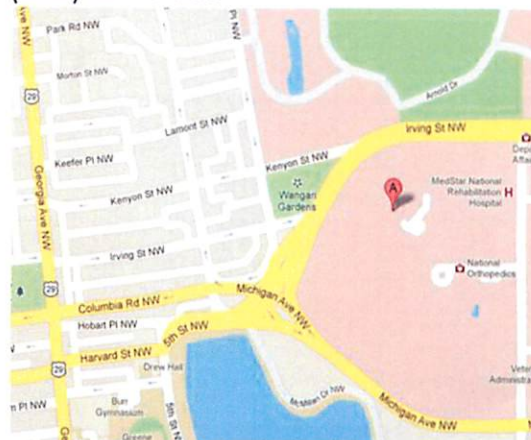
Mobile Command Center	MOPS	(202) 617-3500 - OPS-12
Central Control	Assistant Superintendent ROCC	(202) 962-1652
	ROCC	(202) 962-1546 - OPS-1
Transit Police	MTPD	(202) 962-2121
Ambulance	ROCC, (ROIC)	(202) 962-1970
Fire	ROCC, (ROIC)	(202) 962-1970

Local Hospitals

George Washington University Hospital
 900 23rd Street, NW
 Washington D.C. 20037
 (202) 715-4000



MedStar Washington Hospital Center
 110 Irving Street, NW
 Washington, DC 20010
 (202) 877-7000

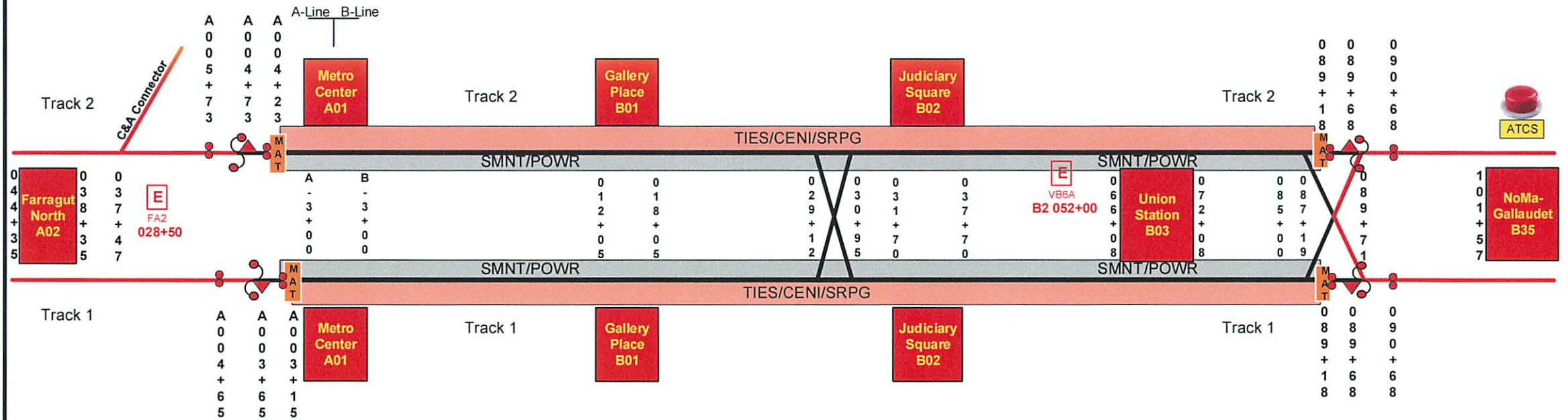


Shutdown Facts

- Shut-down will commence on July 11th, 2015 at 0000hrs.
- TIES/CENI/SRPG is the Prime for this shut-down.
- This will be a RED TAG, LOTO outage.
- The Mobile Command Center will be located JGB
- Station Closed: Metro Center (upper level), Gallery Place (upper level), Judiciary Square and Union Station
- Radio Channel: OPS 12

- Phone #'s: 202-617-3500, In-house 73500
- Safety Briefers at: TBD
- Clearing time for this Shut-down is 0200 hrs on July 12th
- Red Tag turned in at 0230 hrs on July 12th
- Test Train at 0300 hrs on July 12th
- Hot Spots:**
 - B1 020+00 – 025+00, Curve: Restricted View
 - B1/B2 029+00 – 031+00, Crossover: Caution
 - B1/B2 040+00 to 045+00, Curve: Restricted View

- Hot Spots: (cont'd)**
 - B1/B2 055+00 to 060+00, Curve: Restricted View
 - B1/B2 075+00 to 085+00, Portal
 - B1/B2 087+00 to 090+00, Crossover: Caution
 - B1/B2 091+00 to 093+00, No Clearance
- Emergency Exits:**
 - FA2 at A 028+20, 1616 H St., NW
 - VB6A at B2 052+00, 25 D St., NW



Washington Metropolitan Area Transit Authority

Last Updated
07/07/2015 6:36 AM

Drawn: Initials Date
DR 06/10/2015

Approved: XXX



- = De-energized 3rd Rail
- = Energized 3rd Rail (HOT)
- = De-railer
- = Rail Vehicle
- = Safety Briefer
- = End Work Area Mat
- = Safety Fence
- = Shunt Strap
- = Push Button
- = Emergency Exit

Track and Structures
Mobile Operations
Shutdown Map

July 11-12, 2015
A and B Line
Farragut North to
NoMa/ Gallaudet U.