

METRO/CSX TRAINS VS. HOT WIRES

Incident #10-0084377

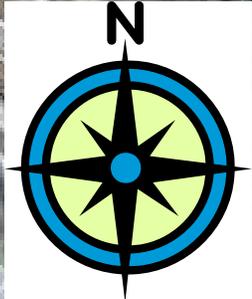
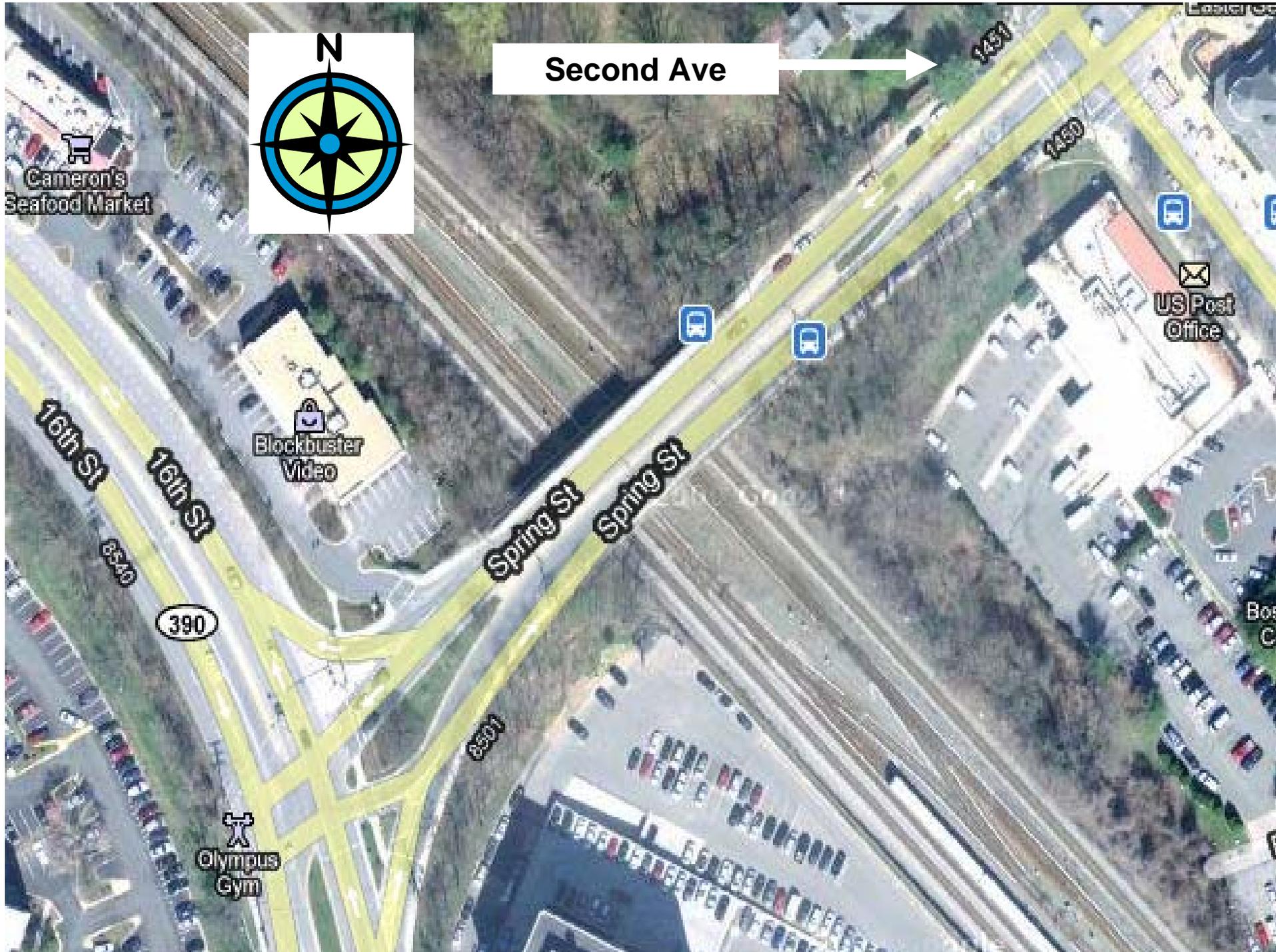
Spring St/Second Ave, Silver Spring, MD

July 29th, 2010

Captain R. Blinkhorn, Rail Liaison Officer, Fire Station 1 "A" Shift

DISPATCH

- 1530hrs: E701 dispatched for a transformer at the intersection of Spring St/ Second Ave.
- E701 AOS to find a wire down on the Spring St bridge, draped over the bridges northern fence



Second Ave →

Cameron's Seafood Market

Blockbuster Video

US Post Office

Olympus Gym

390

Second Ave

16th St

16th St

Spring St

Spring St

145th St

145th St

6540

6501

Bos C



**WIRE FOUND DOWN UPON
ARRIVAL OF E701**

INITIAL ACTIONS

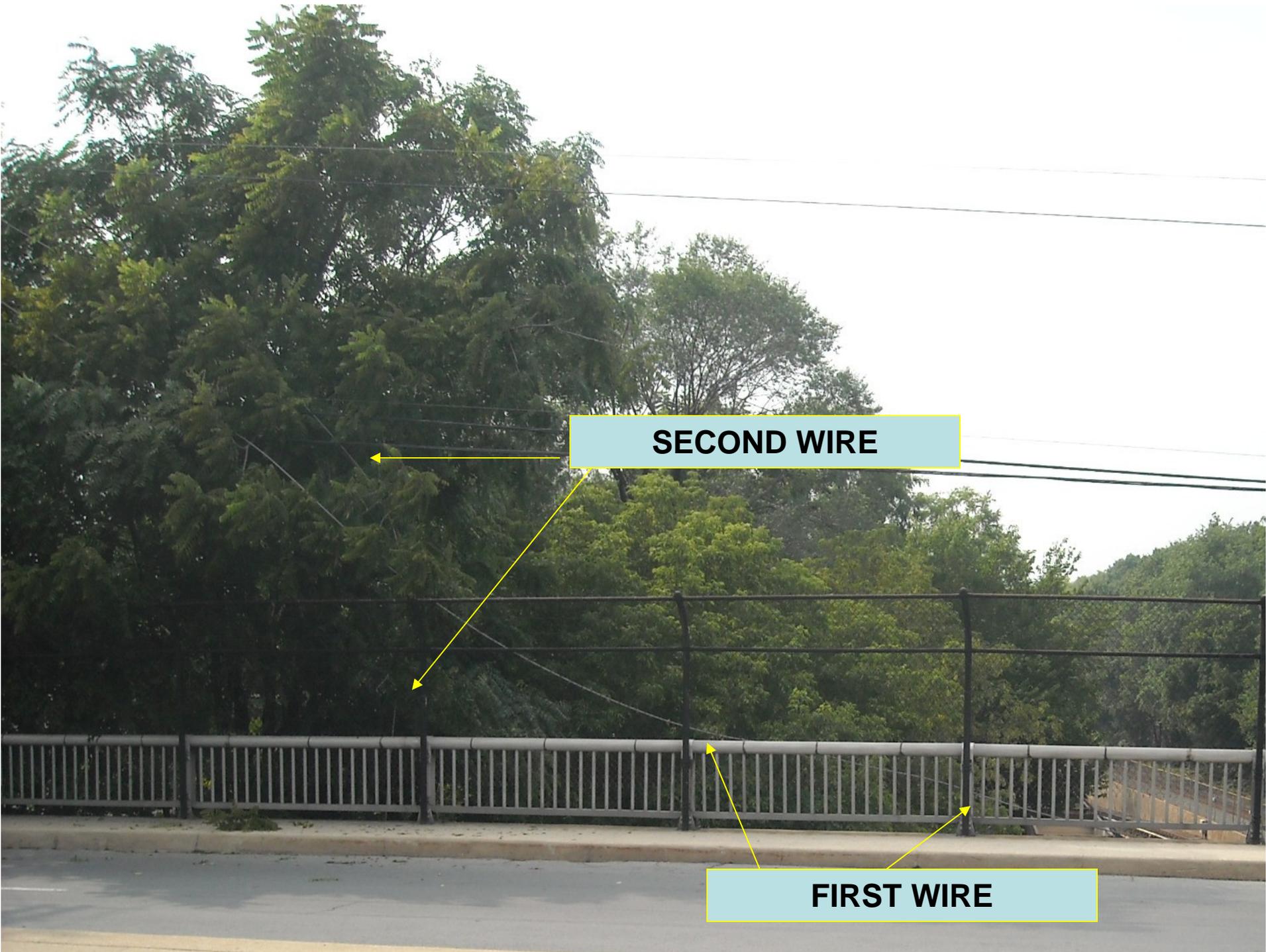
- E701 provides pole number and requests PEPCO and MCP for wire down on bridge
- All pedestrian and WB vehicle traffic stopped
- Safe Area established around downed wire
- Personnel staged at both ends and on southern side of bridge to control traffic while awaiting requested resources

SECOND WIRE

- While controlling traffic second wire begins to arc and burn in tree at eastern side of bridge
- Wire burns through and falls clear of bridge and onto tracks below
- SB (Inbound) METRO train exiting portal strikes falling wire simultaneously

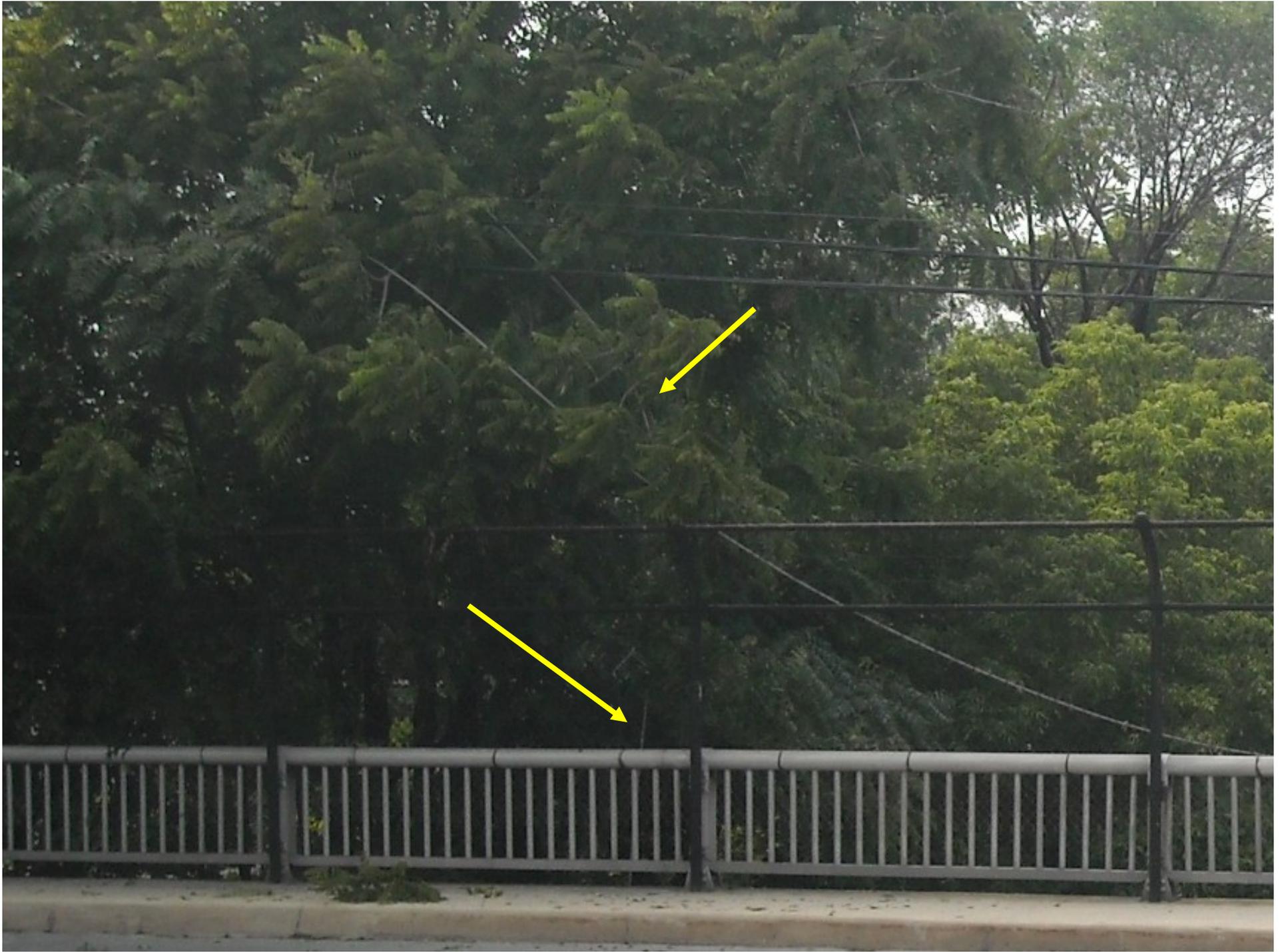






SECOND WIRE

FIRST WIRE



- Violent arcing heard and visually witnessed from undercarriage of front two cars of METRO train
- Train comes to an immediate stop underneath Spring St bridge



**SILVER SPRING
STATION**





ACTIONS

- E701 OIC requests an alternate TG with PSCC and is given 7K
- PSCC advised of live wires on train and instructed to make emergency call to METRO to stop all train movement
- Chain marker adjacent to incident scene provided
- Additional 2 Engines and 1 Truck requested to assist
- Assigned 7C as operating talkgroup

EVENTS

- Seconds after requesting additional resources and switching to 7C, smoke becomes visible from the undercarriage of the front METRO train car.
- A request to fill the entire METRO Box is made
- A MARC passenger train is seen departing the Silver Spring station, traveling north towards incident scene

EVENTS

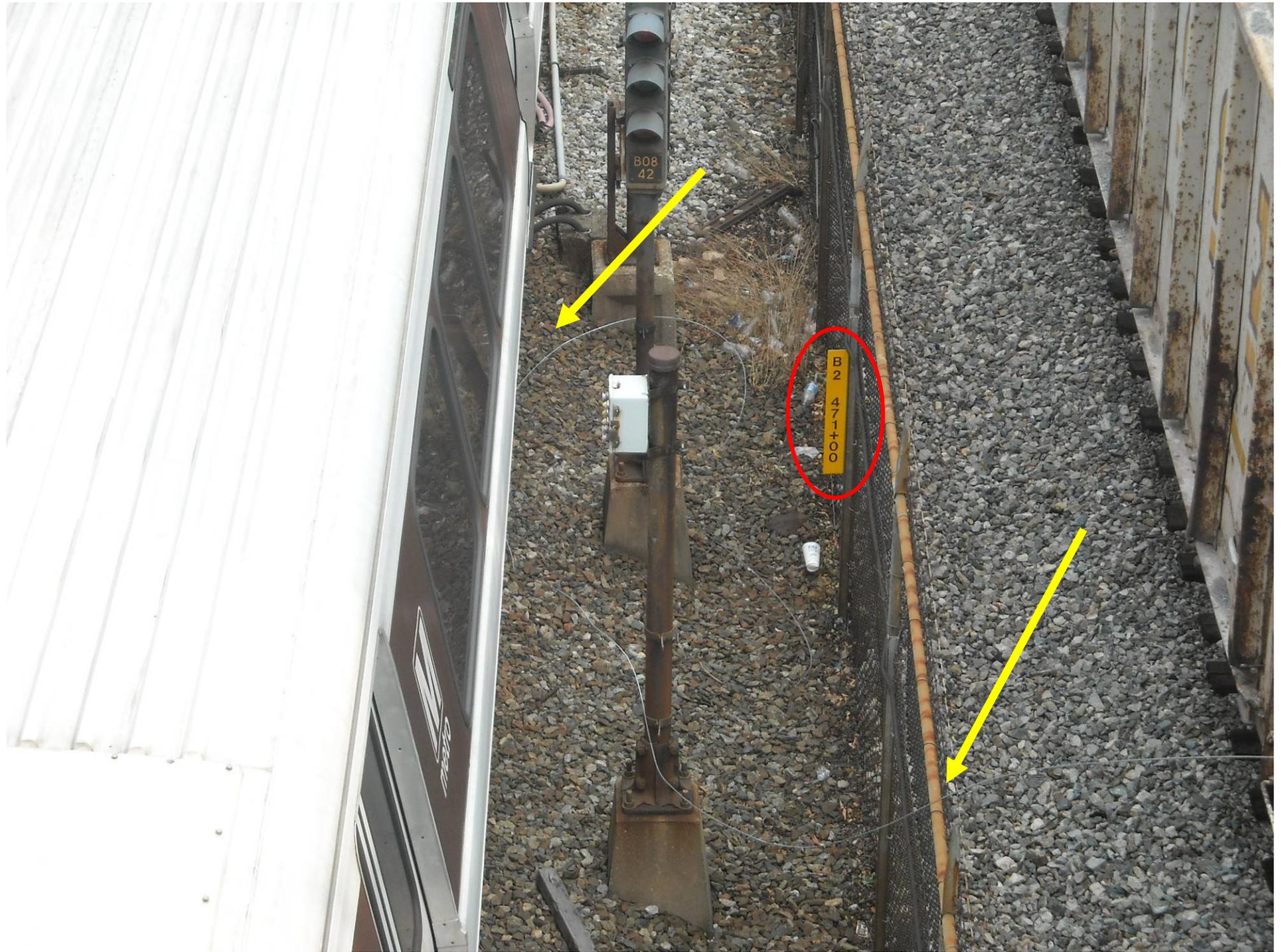
- Crew of E701 position on bridge and begin manual flagging techniques from atop bridge
- Train slows and comes to stop prior to incident scene
- MARC train engineer exits locomotive and begins to walk tracks towards scene
- Engineer is advised of hot wires, acknowledges, and returns to locomotive

ACTIONS

- E701 instructs PSCC to contact CSX and have all heavy rail traffic stopped
- Command is established on 7C
- PSCC advises of wires possibly on CSX train already in area
- Recon begins

**Downed wire over freight train,
fence, and under METRO train**





OBSTACLES

- Live wire in ROW, in contact with:
 - CSX Train
 - ROW fence
 - METRO train
 - Running rails
 - Possibly 3rd rail
- Smoking, occupied train
- Poor access to entire section between the Silver Spring Station and portal

ACTIONS

- Command advised PSCC to contact and have METRO prepare a rescue train from the Forest Glen Station
- BC701 AOS
- Face-to-face briefing and assumption of command



OPERATIONS

- PEPCO 45-60 minute ETA
- 3rd Rail power; A/C for passengers
- Multiple agencies involved
- METRO employees in ROW



COMMAND STAFF

- B/C McNeel (BC701)- Command
- A/C Goldstein (Special Ops)
 - Coordinated via cell phone with OCC
- A/C Donahue (Duty Chief)
- A/C Nelson (Safety/Rail)
 - Coordinated with CSX
- B/C Gallo (BC702)
- R. Hartung (HVFD)- Command Aide

INCIDENT ACTION PLAN

- Restrict access to ROW
- Utilize Rescue Train from North end of incident
 - Passengers were moved to rear (North end) of train due to smoking cars at front of train during early stages of incident
- F/R personnel sent to Forest Glen Station to board Rescue Train
- Rescue Train required use of 3rd rail
- PEPCO refused to work on downed wires while 3rd rail was energized
- 3rd rail continued to provide A/C for passengers

RESCUE TRAIN

STEPS:

1. Rescue Train moves into position while 3rd rail is energized, providing A/C for passengers; Operator instructed to inspect track for wires and not couple trains
2. 3rd rail power is removed from incident scene
3. METRO personnel in ROW confirm 3rd rail de-energized
4. PEPCO isolates and grounds downed wires
5. Passengers transfer to Rescue Train
6. PEPCO removes grounds from downed wires
7. 3rd rail is energized and Rescue Train departs scene
8. 3rd rail de-energized and PEPCO prepares to enter ROW



**RESCUE TRAIN MOVING INTO
POSTION**

07/29/2010 5:57 pm

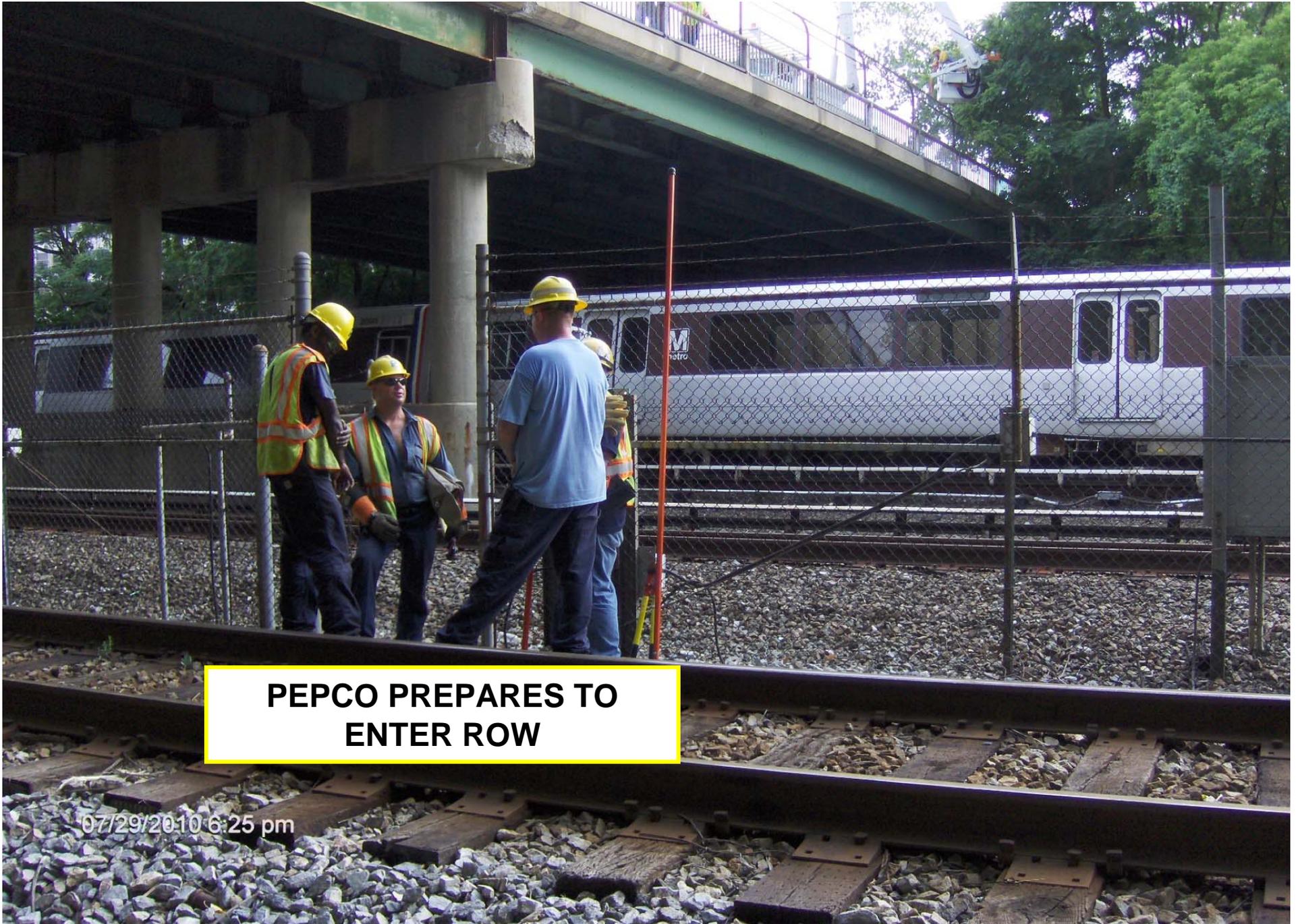
**PEPCO PREPARES TO
GROUND DOWNED WIRES**





**RESCUE TRAIN DEPARTS
FOR FOREST GLEN**

07/29/2010 5:56 pm



**PEPCO PREPARES TO
ENTER ROW**

07/29/2010 6:25 pm

LESSONS LEARNED

- Always anticipate that burning wires may fall and determine where they will fall
- Request appropriate resources early
- Appropriate deployment of responding resources
- Thorough recon to determine downed wires status
- Early contact with METRO OCC and CSX

LESSONS LEARNED

- Proper scene management
 - Crews cut access hole through same ROW fence downed wire was in contact with
 - Crews attempted to walk in between freight cars of same train wire was in contact with
 - Numerous METRO employees throughout ROW during entire incident
- Single point of contact with METRO OCC
 - Consider use of Command Conf. Line

LESSONS LEARNED

- Rescue Train needs separate IAP for transfer of passengers
 - Mad rush from involved train onto Rescue Train
 - Transfer of passengers caused only injury
- Extended Incident
 - Expand ICS when necessary

THOUGHTS

- Can a grounded train be “energized”?
- Was the arching witnessed from the METRO train caused by a “hot” wire, or by the downed wire being dragged across the 3rd rail by the moving train?
- Would a diesel powered Rescue Train worked in this scenario? Does METRO have the capability?
- Had a train evacuation been necessary, were there enough WSAD’s on the scene to support the amount of 3rd rail surrounding the incident scene?

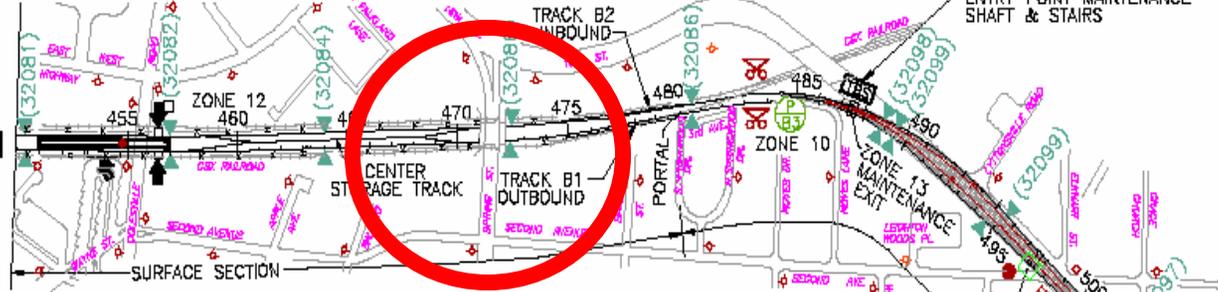


**8 SEPERATE SECTIONS OF
3RD RAIL IN THIS PICTURE
ALONE**

OTHER VIEWS FROM THE SCENE

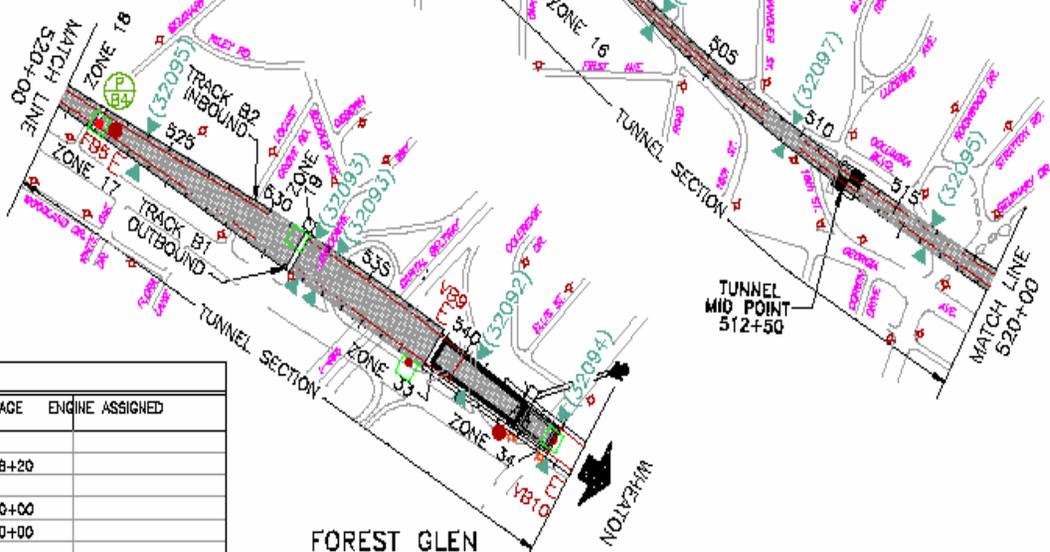


SILVER SPRING



OCC FIRE AREA	KIOSK FIRE ZONE	SILVER SPRING KIOSK
21	10	DRAINAGE PUMPING STATION B-3 STA. 484+91
03	12	TRACTION POWER SUBSTATION 1403 EAST WEST HWY.
06	13	TIE BREAKER STATION-1723 NOYES LANE STA. 487+50

OCC FIRE AREA	KIOSK FIRE ZONE	FOREST GLEN KIOSK
01	33	VENT SHAFT S. ANCHILL AREA VB-9
	34	VENT SHAFT S. ANCHILL AREA VB-10
2B	16	EMERGENCY EXIT SHAFT STA. 487+30 SECOND AVE. (EE-B1)
11	17	FAN SHAFT FB-B5 SEMINARY PLACE STA. 521+25
21	18	DRAINAGE PUMP STATION STA. 521+25 SEMINARY PLACE
03	19	TRACTION POWER SUBSTATION LANSDOWNE WAY STA. 531+80



STANDPIPE LOCATIONS			
STANDPIPE DESIGNATION	STANDPIPE SIAMESE CONNECTION LOCATION	CHAIN MARKER COVERAGE BY STATION	ENGINE ASSIGNED
	SILVER SPRING STATION		
EB1	8915 16 TH. STREET	486+30 TO 508+20	
	TUNNEL MIDPOINT	512+50	
FBS	1901 SEMINARY PLACE	510+20 TO 530+00	
VB9	9720 GEORGIA AVE.	532+00 TO 540+00	
	FOREST GLEN STATION		
VB10	NORTH VENT AT STATION	546+50 TO 554+00	

LEGEND

EMERGENCY TRIP STATION (PHONE NUMBER)	EMERGENCY EXIT	ROW FENCE & GATE	TIE BREAKER SUBSTATION
DRAINAGE PUMPING STATION	SIAMESE CONNECTION	DISTANCE MARKER	CROSSOVER
FAN/VENT SHAFT	FIRE HYDRANT	STATION ENTRANCE	NO ACCESS BETWEEN TRACKS
	EMERGENCY TUNNEL EVACUATION CART (ETEC)	TRACTION POWER SUBSTATION	ACCESS BETWEEN TRACKS

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

METRO RAIL EMERGENCY RESPONSE MAP

RED LINE

457+00 TO 540+20

SILVER SPRING TO FOREST GLEN

MAP B08.b

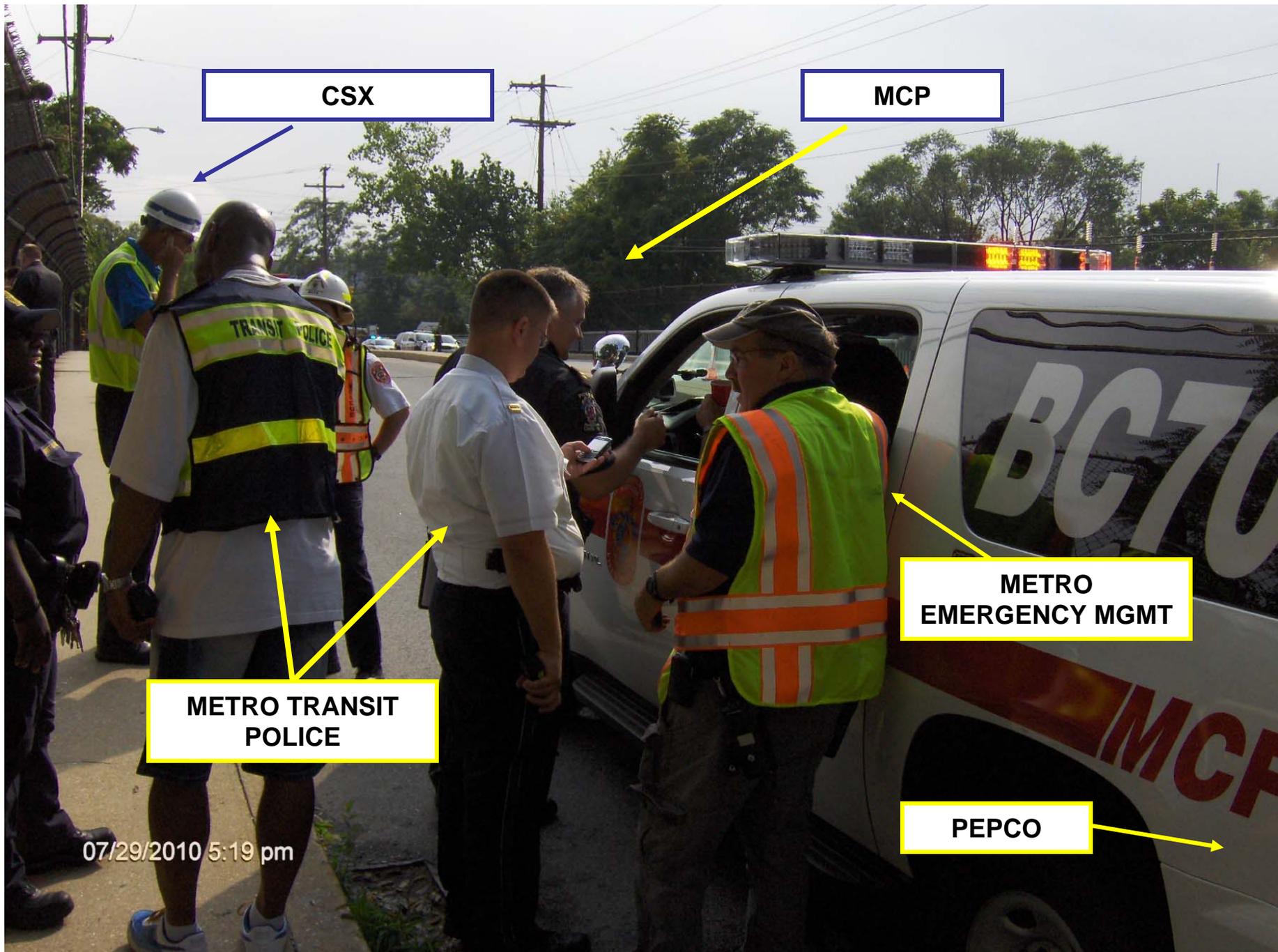
SHEET 41 JULY 1997







**INCIDENT COMMAND
POST**



CSX

MCP

METRO TRANSIT POLICE

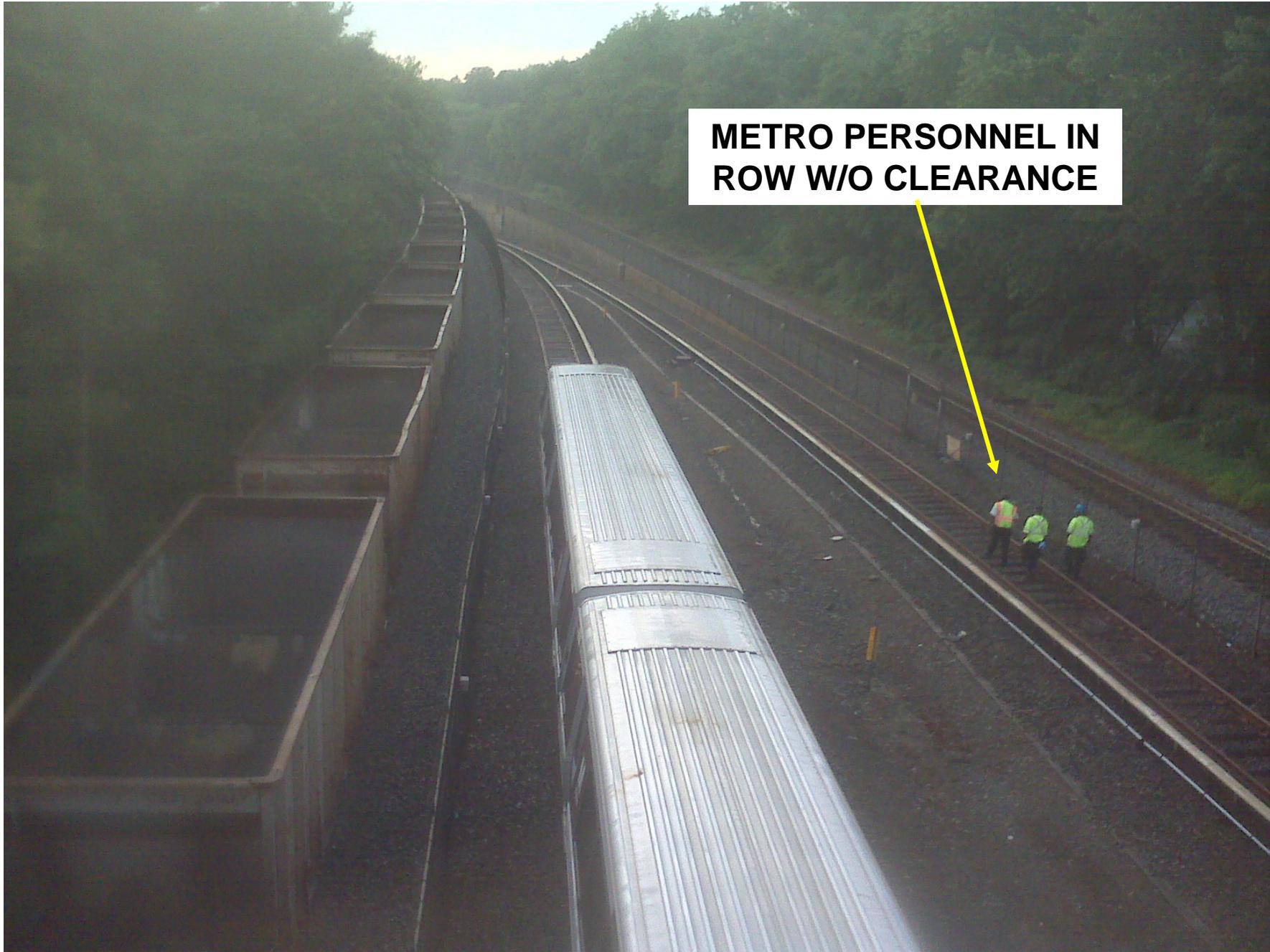
METRO EMERGENCY MGMT

PEPCO

07/29/2010 5:19 pm



**METRO PERSONNEL IN
ROW W/O CLEARANCE**



Command

Perspective and Lessons Learned

Command

- Establish Unified Command
 - Get all the players in the ICP
 - Establish goals
 - Keep UC's in the ICP
 - Establish lines of communication
 - Determine best UC to get information
 - Multiple people talking to OCC at one time
 - Conflicting information

Command

- Resources
 - Ensure proper resources are on the scene or enroute
 - Clear direction/ instructions
 - Divide incident early by establishing:
 - Branches
 - Groups / Divisions

Command

- Lessons learned
 - One person communicating with OCC
 - SOC and Transit Police both communicating at the same time
 - Establish Operation Branch
 - IC was very busy with Unified Command meetings, understanding every ones process
 - Divide Incident and Name groups / divisions
 - Done late, Recon should have been established
 - Control rescue train until needed – get proper resources onboard prior to leaving station – Water, Rescuers, Security