



**SURVIVAL FACTORS – HIGHWAY GROUP CHAIRMAN’S
FACTUAL REPORT**

ADDENDUM

Valhalla, NY

DCA15MR006

(7 pages)

**NATIONAL TRANSPORTATION SAFETY BOARD
OFFICE OF HIGHWAY SAFETY
WASHINGTON, D.C.**

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A. CRASH INFORMATION

Location: Commerce Street Grade Crossing on the Metro-North Harlem Line,
Valhalla, Westchester County, New York

Vehicle #1: 2011 Mercedes ML350

Vehicle #2: Metro-North passenger train 659

Operator #2: Metro-North Railroad

Date: February 3, 2015

Time: Approximately 06:26 p.m. EST

NTSB #: **DCA15MR006**

B. SURVIVAL FACTORS – HIGHWAY ADDENDUM

The addendum provides additional factual information pertinent to the emergency response to the crash. Sections 1 and 2 provide reference information concerning the qualifications for responders and major national associations that provide guidance or resources for responders and pre-hospital care professionals. Section 3 documents the oversight structure for fire and Emergency Medical Services (EMS) in the state of New York. Section 4 provides additional details of the EMS response timeline for this crash. Sections 5 and 6 provide background information about the primary fire and EMS responding agencies.

1. National EMS Credentialing Structure and Educational Curriculum

The National Highway Traffic Safety Administration (NHTSA) Office of Emergency Medical Services (EMS) administers the United States Department of Transportation (US DOT) National EMS Education Standards and Instructional Guidelines and the National Standard Curriculum (NSC). Each individual state is responsible for adopting a version and certifying and registering EMS responders. The NSC is currently being transformed to an educational systems approach that provides less rigid standards and supports a more diverse implementation and more frequent content updates. This approach follows initiatives established in 1996 and described in more detail in the following paragraphs. The current NSC EMS responder certification levels are:

- First Responder
- Emergency Medical Technician-Basic (EMT-Basic)
- Emergency Medical Technician (EMT-Intermediate)
- Emergency Medical Technician-Paramedic (EMT-Paramedic)

The NSC for First Responder through EMT-Intermediate provides background information on the National EMS system, but does not include incident command instruction. Incident command instructional material is included at the EMT-Paramedic level, with Medical Incident Command training in the Operations section. The EMT Paramedic level requires 2 hours minimum didactic training and 2 hours minimum practical laboratory training.

The NSC transition to a systems approach started with a consensus document published in 1996 and then updated in 2000 by the Health Resources and Services Administration (HSRA). The consensus document was titled The Emergency Medical Services Education Agenda for the Future, A Systems Approach.¹ Guidelines were developed according to this approach by the US DOT Department of Health and Human Services National Council of State EMS Training Coordinators (NCSEMSTC). This approach was documented in the State Implementation Guide Revised EMT-Intermediate and EMT-Paramedic National Standard Curricula in 2000.² The approach established 3 components maintained by the NHTSA Office of EMS:

- National EMS Core Content
- National EMS Scope of Practice Model
- National EMS Education Standards

As part of the transition, the EMS responder certification levels were revised to:

- Emergency Medical Responder (EMR)
- Emergency Medical Technician (EMT)
- Advanced Emergency Medical Technician (AEMT)
- Paramedic

The core content includes Mass Casualty Incident (MCI) knowledge as a component of the practice of EMS in Appendix 7. The education standard provides levels of knowledge required for each EMS responder certification level. The knowledge is specified in terms of depth (how much detail) and breadth (how much material). The depth is from simple, then fundamental and finally complex. The breadth is from simple, then foundational and finally comprehensive. Knowledge for Incident Management (IM) Multiple Casualty Incidents (MultCI) and MCI are required at all levels, but with different degrees, as shown in Table 1.

¹ <http://www.nhtsa.gov/people/injury/ems/EdAgenda/final/index.html>

² <http://www.ems.gov/educationstandards.htm>

Table 1. EMS Responder IM and MCI Knowledge Levels

Responder Level	Incident Level	Knowledge Level
EMR	IM	simple depth and simple breadth of IM (establish and work within the system) and triage principals and resource management
	MultCI	same as above
	MCI	simple depth, simple breadth including risks and responsibilities of operating on the scene of a natural or man made disaster
EMT	IM	fundamental depth, foundational breadth
	MultCI	simple depth, foundational breadth, with the addition of performing triage, re-triage, destination decisions, post traumatic and cumulative stress
	MCI	same as EMR
AEMT	IM	same as EMT
	MultCI	same as EMT
	MCI	same as EMT
Paramedic	IM	complex depth, comprehensive breadth
	MultCI	same as AEMT
	MCI	same as AEMT

2. National EMS Associations

A wide range of EMS associations were found that focus on different aspects of the EMS profession. The following paragraphs provide a short description.

The National Association of State EMS Officials (NASEMSO) is a nationwide network of state, regional and local EMS and emergency care systems officials who develop and set EMS policy.³ The NASEMSO website indicates that they are concerned with the development of effective, integrated, community based, universal and consistent EMS systems. NASEMSO has an Educational & Professional Standards Council that formulates recommendations and policies for EMS training and education. This council meets regularly at the NASEMSO annual and mid-year meetings.

The National Association of EMS Physicians (NAEMSP) was created in 1984 to create a peer group organization of EMS professionals responsible for medical care in the out-of-hospital setting.⁴ The NAEMSP has access to the out-of-hospital emergency medical care community, and can help promote active MCI drills and encourage members of their organizations to attend these events.

³ <https://www.nasemso.org/About/>

⁴ <http://www.naemsp.org/Pages/Board.aspx>

National Association of EMT's (NAEMT) was formed in 1975 and has more than 50,000 members from all professions in pre-hospital emergency medicine.⁵ The organization is active in advocacy and education.

National EMS Management Association (NESMA) was formed to promote competent management of pre-hospital clinical providers.⁶ The organization has strived to set clear goals, objectives, and competencies for levels of leadership in the EMS profession.

National Association of EMS Educators (NAEMSE) holds an annual symposium and administers educational courses, including courses for EMS Instructors.⁷ The organization also provides liaisons with various educational accreditation and credentialing organizations.

3. New York State Department of Health

The Bureau of Emergency Medical Services (BEMS) is part of the New York State Department of Health (DOH), Office of Health Systems Management, and is responsible for the general oversight of the EMS system across the state. This oversight includes support and coordination of state regional EMS councils; contracting with EMS Program Agencies; certification and training of Emergency Medical Technicians (EMT) and administers and maintains pre-hospital care data systems and the trauma system. The BEMS is also responsible for issuing certifications and inspections of ambulance services. The Westchester County Department of Emergency Services (DES) is one of the 19 EMS Program Agencies under the NY DOH BEMS. Westchester County DES has four divisions: Communications, EMS, Fire Services, and the Office of Emergency Management. These divisions work with the New York DOH and police, fire, and EMS agencies.

4. Westchester County New York

The Westchester County DES has four divisions: the Fire Division, the Communications Division, the EMS Division, and the Office of Emergency Management. The general mission of the Westchester County DES is to support local fire and EMS responders through training and support of mutual aid incidents by providing coordinators, dispatch services, and first responder communications. Dispatch Services are performed by the Communications division, referred to as "60 Control", also referred to as the Westchester County DES Public Service Answering Point (PSAP). The Westchester County DES also facilitates county government disaster planning and coordination. Additional background information is available in their annual reports.⁸

The Westchester DES facilitated the creation of a disaster family assistance task force on the morning following the accident. This activated the Emergency Operations Centers (EOC) managed by Metro North and Westchester Medical Center. The investigation followed up with the Westchester DES in September of 2015. The Westchester DES responded and in regards to the Family Assistance Center:

"Although not presently identified as a requirement, Westchester County DES/Emergency Management has worked with Metro North, Red Cross and regional

⁵ <http://www.naemt.org/>

⁶ <https://www.nemsma.org/>

⁷ <http://naemse.org/>

⁸ <http://emergencyservices.westchestergov.com/annual-report>

partners to identify promising practices and existing resources for establishing and operating a FAC. The county continues this coordination with the intent to develop and distribute guidance to assist local and county agencies in establishing, operating and/or supporting an FAC.”

In addition to the selected event times provided in the Survival Factors- Highway Group Chairman’s report, a more detailed summary of the incident log event chronology is provided in Table 2.

Table 2. Summary of Selected 60 Control Log Entries

Time	Description / Notes
6:28:08 pm	first cell phone call received
by 6:29 pm	primary fire and EMS services assigned
by 6:34 pm	several fire and EMS units dispatched and enroute
6:34:24 pm	Valhalla Volunteer Fire Department Chief arrived
6:35:25 pm	first Basic Life Support (BLS) arrived (Hawthorne 63B1)
by 6:36 pm	more EMS agencies assigned (Greenburgh, Empress, White Plains)
6:37:28 pm	Valhalla Volunteer Ambulance Corps (VVAC) unit 82B2 enroute
by 6:39 pm	more fire agencies dispatched (Elmsford, N. White Plains, Thornwood)
by 6:46 pm	more EMS units enroute (40A9, 59B4, 59M2, 59M3)
6:47:11 pm	report of 12 patients needing care
by 6:48 pm	several fire units arrived
6:53:55 pm	event location updated / clarified
6:54:54 pm	County DES Commissioner (CC1) arrived
by 6:57 pm	EMS 40A9 arrived and more EMS enroute (36M1, 37M2)
by 7:00 pm	several fire units arrived
by 7:05 pm	more EMS arrived (36M1, 37M2, 31B2, EMS11), and 76B3 enroute
7:05:52 pm	Fire IC (2481)
7:06:06 pm	County EMS Zone Coordinator (EMS11)
by 7:10 pm	EMS arrived (76B3, 76B1)
7:11:21 pm	EMS11 reported that 3 patients have been transported
By 7:16 pm	EMS arrived (59B4, 82B2, 59M3)
7:17:09 pm	buses requested
7:17:53 pm	command post location specified
by 7:19 pm	more patients transported (31B2, 40A9)
by 7:22 pm	more EMS arrived (63B1) and medivac paramedics help (90A1)
7:32:10 pm	EMS transporting (40A1)
7:38:10 pm	Westchester DES EMS supervisor arrived (EMS1 / CC5)
by 7:47 pm	more EMS dispatched (30B2, 31A1) and arrived (40A9)
7:56:06 pm	EMS arrived (31B2)
By 8:01 pm	EMS transporting (63B1, 59B4, 76B1)
By 8:11 pm	more EMS transporting (82B3, 40A9, M39)
8:14:10 pm	all patients transported
8:14:59 pm	fire darkened down, secondary search initiated
**Note that the times reported reflect the time of communications between the responding agencies and dispatch, and may not reflect the actual time of the specified event.	

5. Valhalla Volunteer Fire Department

The Valhalla Volunteer Fire Department (VVFD) was the primary fire services agency that responded. The VVFD website provides a list of the apparatus and other information.⁹ The call volumes posted on the VVFD website were that they responded to 23 calls in January 2015 and 52 calls in February 2015. The website provides information about Valhalla Board of Fire Commissioners meetings, which occur monthly.

6. Valhalla Volunteer Ambulance Corps

The Valhalla Volunteer Ambulance Corps (VVAC) was the primary EMS agency that responded. The VVAC is a member of the Westchester Regional Emergency Medical Services Council.¹⁰ The VVAC website posts information about the agency and training, which included a January 10 and 11th 2015 event for continuing education.¹¹ The VVAC posted a call volume of 58 calls in January 2015, 83 in February 2015, and 47 in March 2015.

END OF REPORT

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⁹ <http://valhallafd.org>

¹⁰ <http://www.wremsco.org/>

¹¹ <http://valhallavac.com/>