National Transportation Safety Board
Office of Railroad, Pipeline and Hazardous Materials Investigations
Human Performance and Survival Factors Division
Washington, D.C. 20594

SURVIVAL FACTORS GROUP CHAIRMAN'S FACTUAL REPORT

Emergency Response

January 30, 2009

A. Accident Information

Train:	Metrolink train 111
Train:	Union Pacific train LOF 65-12
Location:	Los Angeles, California
Date:	September 12, 2008
Time:	1623 PDT[1]
Number:	DCA-08-MR-009

B. Survival Factors Group Members

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[1] All times are pacific daylight saving times and based on the 24-hour clock unless otherwise noted.

C. Accident Synopsis

On Friday, September 12, 2008, at approximately 1623 pacific daylight time, westbound Metrolink passenger train No. 111 and Union Pacific freight train No. LOF6512 collided head-on while operating in a 6 degree curve on Metrolink's Ventura Subdivision between control point Topanga and tunnel No. 28 near Chatsworth, California. The Metrolink train derailed its locomotive and lead passenger car; the Union Pacfic train derailed two locomotives and 10 cars. As a result of the collision, the Metrolink locomotive was shoved about 50 feet into the lead passenger car. Emergency response agencies reported that 102 injured persons were transported to local hospitals. There were 25 fatalities.

Damage is estimated at $10.6 million. Environmental conditions were daylight, clear skies, haze, calm winds and a temperature of 73 degrees F with visibility of four miles.

D. Investigation

The following account of the emergency response was compiled from interviews conducted by the survival factors group. Individual interview transcripts are identified at the end of the sections.

Los Angeles (City) Fire Department Operations Control Dispatch

The first 911 call about the accident was received at 1623 from an address on Heather Lee Lane. The dispatch was initially categorized as a "vehic" incident (a physical rescue assignment) and was immediately upgraded to a "derail" incident[2]. A derail assignment doubles the resources and sends an assistant chief. Helicopters were also added to the assignment.

A captain was assigned to respond to the operations command to coordinate patient transport to the region's hospitals. A second captain was assigned to the operations control dispatch to coordinate with the captain assigned to the operations command.

According to the battalion chief on duty at the operations control dispatch, he requested resources from Ventura County Fire Department, Los Angeles County Fire Department, Culver City Fire Department, and Beverly Hills Fire Department. Los Angeles County Fire Department sent two urban search and rescue teams and helicopters. Ventura County Fire Department sent advanced life support rescues and two squads. Beverly Hills Fire Department and Culver City Fire Department rescue squads.

From within the fire department, the department psychologist, critical response teams, safety officers, and incident management teams were dispatched. The critical response teams

[2] The derail incident was created after the Glendale train collision so that additional resources are assigned immediately.

provide family assistance. The incident management teams include fire department officers on special duty such as a rail liaison officer[3].

The fire department's operations command was opened. Their function was to coordinate with the emergency operations center. The general manager of the emergency management division coordinated with different department of the city to provide long term logistics such as lighting, food, and water.

See Appendix A for the interview transcript for Battalion Chief Norman Greengard.

Command, Organization, and Resources

The first responding companies were initially dispatched to Heather Lee Lane. This street is located in a residential area located near the railroad.

Photo 1. An aerial view of the accident area. The Metrolink train is circled. North is toward the top of the photo. (Courtesy: Metrolink)

[3] The Los Angeles Fire Department (city) has two rail liaison officers. These officers work full time with the Los Angeles County Metropolitan Transportation Authority (Metro).

Photo 2. A view of the accident area from Heather Lee Lane. (Courtesy: LAFD)

The first on-scene captain (with Task Force 96) was the first officer in charge of the incident and assigned fire suppression, extrication, and medical tasks. Battalion Chief 15 then assumed command when he arrived on scene. On arrival, an assistant chief assumed command and became the incident commander until the arrival of the deputy chief.

The assistant chief responded to the accident site (21523 Rinaldi Street) and initially established a command post in an adjacent school parking lot. A grassy field next the command post was determined to be the best place for the landing zone. Because of the closeness of these two areas, the command post was relocated to a parking lot further away from the landing zone. Two command vehicles were used during the response.

During the course of the response, the assistant chief established a fire suppression group led by Battalion Chief 12; an extrication group led by Battalion Chief 14; and a medical group led by Battalion Chief 17. Battalion Chief 18 and Battalion Chief 9 assisted the medical group. Battalion Chief 11 was assigned as the safety officer, and Battalion Chief 5 was assigned as the liaison officer. Engine 106 was assigned as the staging manager. A deputy chief was assigned to logistics. Rehab and critical incident stress debriefing operations were established.

A unified command system was established with responding agencies. The Los Angeles Police Department was in charge of security and perimeter control. Additional responding agencies were: Los Angeles County Sheriff's Department, Los Angeles County Fire Department, Ventura County Fire Department, Metrolink, Union Pacific, California Office of Emergency Services, the Los Angeles County Coroner, three private ambulance services, and the Red Cross. Los Angeles city agencies that responded were the Department of Transportation, the Department of Public Works, and the Unified School District.

A captain from the Devonshire Division of the Los Angeles Police Department was first in charge of the police department resources until the arrival of a police deputy chief. In route to the accident, he declared a citywide tactical alert for the police department. The alert kept police officer on duty in the event that additional resources were needed. He also immediately requested 40 police officers. On his arrival, he could see that there were already many fire personnel on scene, and helicopters were beginning to land at the site. Additionally, there were several Los Angeles County Deputy Sheriffs and Los Angeles Police Department officers from the Devonshire Division and the Valley Traffic Division at the scene.

The captain consulted with a fire department battalion chief and asked what was needed from the police department. At that time, the battalion chief asked them to provide security for the accident area. He assigned his sergeants to form teams to secure the site and to coordinate with and assist the fire department.

When the police deputy chief arrived on scene, the captain provided a briefing and was assigned to the police operations group. The police department's command post was located at Canoga Avenue and Rinaldi Street. All police department personnel checked in at the area and received their assignments such as security and logistics. Detectives worked to identify victims and assist family members. Members of a community volunteer group for the police department responded to assist the police officers.

On arrival, Metrolink's security coordinator reported to the police department's command post located at Canoga Avenue and Rinaldi Street. Metrolink's chief of safety and security was in charge of Metrolink's response to the accident.

The first responding fire companies - Engine 96, Light Force[4] 96, Light Force 28, and Engine 107 - established a water supply and suppressed the fire. Two foam carriers were requested and responded. The extrication group was established with Squad 87, Engine 87, Light Force 87, Light Force 88, Urban Search and Rescue 88, Light Force 89, Engine 70, and Engine 8. Additional urban search and rescue companies from Los Angeles County Fire Department and Ventura County Fire Department were added to the group as the incident response progressed.

A fence between the school and the railroad was opened to provide access between the trains and the command area. Medical operations for triage and transportation were established in the field next to this fence. The medical group was first established with Light Force 105, Light Force 73, Engine 88, and Engine 89. As the incident response progressed, additional

[4] An aerial pumper.

battalion chiefs and companies were assigned to the medical group. The medical group later included Rescue 808, Rescue 89, Rescue 889, Rescue 87, Rescue 104, Rescue 103, Rescue 70, Rescue 93, Rescue 75, Rescue 93, Rescue 88, Rescue 881, Rescue 844, Rescue 35, Rescue 27, Rescue 20, Light Force 75, Engine 103, Engine 105, Light Force 93, EMS 15, EMS 10, EMS 17, and EMS 12.

Because of the number of patients, private ambulances were requested and responded to supplement 28 fire department ambulances. Five air ambulances from Los Angeles Fire Department, the Los Angeles County Fire Department, and the Los Angeles County Sheriff's Department responded. According to the assistant chief, 26 air ambulance flights were conducted. The fire department's medical director responded to the scene. Two medical caches – trailers stocked with medical supplies – were used at the scene.

Photo 3. Companies responding next to the accident area. (Courtesy: LAFD)

For passengers that were not transported to hospitals, a reunification area was established with the Los Angeles Police Department at Chatsworth High School. Metrolink's manager of passenger services responded to the high school. Later in the evening, the county sheriff and a commander responded to the high school to speak to family members who were waiting for

information. Additional sheriff's deputies took the names of the families and went to the hospitals to locate passengers.

Six canine teams also responded to the accident. The teams were used to search around the train, confined spaces, and the hills surrounding the accident area in the event that someone could have been ejected from the train.[5]

A hazmat group was established with Task Force[6] 4 and Squad 4. This group was tasked with obtaining the consist and confirming the content of the freight cars.

During the first 8 hours of the response, the fire department resources were: 42 fire companies, 25 ambulances, 8 chief officers, 7 emergency medical services captains, 3 urban search and rescue teams, 5 helicopters, 2 command post units, and 2 communications support units. In total, 350 firefighters (from all fire departments), 150 Sheriff's Department deputies, and 440 Los Angeles Police Department officers responded.

The assistant chief stated:

> If there's some success, it's truly the first responders and the due diligence of all the young firefighters and captains…where the rubber meets the road…these guys did a heck of a job.

The assistance chief further stated:

> I have zero constructive criticism of my observation of the railroads. I found everybody that responded…to be more than helpful and more than professional and knew their business.

See Appendix B for the interview transcript for Assistant Chief Scott Mottram.
See Appendix C for the interview transcript for Captain Steven Ruiz.

Fire Suppression and Extrication Operations

The earliest responders accessed the accident site from the rear yard of a house on Heather Lee Lane. One of the first sheriff's deputies on scene arrived at the same time as the first responding fire department companies. At about the same time, a police officer with the Los Angeles Police Department and a deputy probation officer from Los Angeles County Probation Office arrived on scene and used their bolt cutters to cut through the fence for access to the accident site. The responders jumped through the fence and to the ground and over a trench about three or four feet below.

On arrival, Task Force 96 engine company's captain immediately requested three additional task forces and five paramedic rescue ambulances. The ranking officer – the truck

[5] No victims were found away from the train in this search.
[6] A Light Force plus an engine.

company's captain - doubled this request. After the first battalion chief arrived on scene, one captain was assigned to fire suppression, and one captain was assigned to medical operations. While Task Force 96 approached the accident site from the south side, Task Force 87 approached the accident site from the north side.

Photo 4. The locomotives, the first passenger car, and the post-accident fire. (Courtesy: LAFD)

The ranking captain of Task Force 96 stated:

> I went back to the north side of the train where [it] connects with the locomotive normally, and there was some surface fire going down. Engine 107 was there with me and we decided to pull a line and attack it, and looked inside the train…and my light force was already inside…were inside with some of the patients.

He described the fuel spill as "probably about maybe an inch to an inch and a half saturation, and over time, the earth started absorbing it, and it started leaching into the earth." Engine 107 has foam capability, and foam was used to blanket the area to prevent a second ignition.

On arrival, Battalion Chief 12 was initially assigned to supervise the ongoing fire suppression and extrication efforts. During the course of the response, he was later assigned as the deputy chief of the operations section. When he first arrived, he saw about 30 or 40 injured people that already had exited the train. He was told that there were people trapped in the trains. He could see that the fire was still burning, and his first priority was suppressing the fire.

The ranking captain of Task Force 96 said that they were able to knock down the fire and prevent it from extending into the first passenger car. He estimated that this occurred about 10 minutes after he arrived on scene. After the fire was extinguished, he said that he saw passengers exiting the first passenger car from the rear door.

Lead Locomotive Occupants Rescue

The Union Pacific train was led by two locomotives. The crew consisted of an engineer, a conductor, and a brakeman. At the time of the accident, the brakeman was in the second unit. After the collision, the second unit remained upright. The brakeman was able to exit the locomotive unassisted through the rear cab door. The conductor was in the lead unit with the engineer. After the collision, the lead unit fell onto its left side.

A captain and his company were assigned to the extrication group. The fire was being fed by fuel leaking from the fuel tank that separated from the Metrolink locomotive. The fuel tank came to rest next to the occupied cab of the lead Union Pacific locomotive. While fire suppression was continuing, firefighters thought they heard some pounding coming from the lead Union Pacific locomotive. When they looked inside through the cab windows, they saw that the crew was trapped inside of the cab. Firefighters tried to break the windshield and cut a front window. The window still could not be removed. As they continued working, they were able to remove the rubber strip from around the window. When they removed the window, they saw that the cab was filled with smoke.

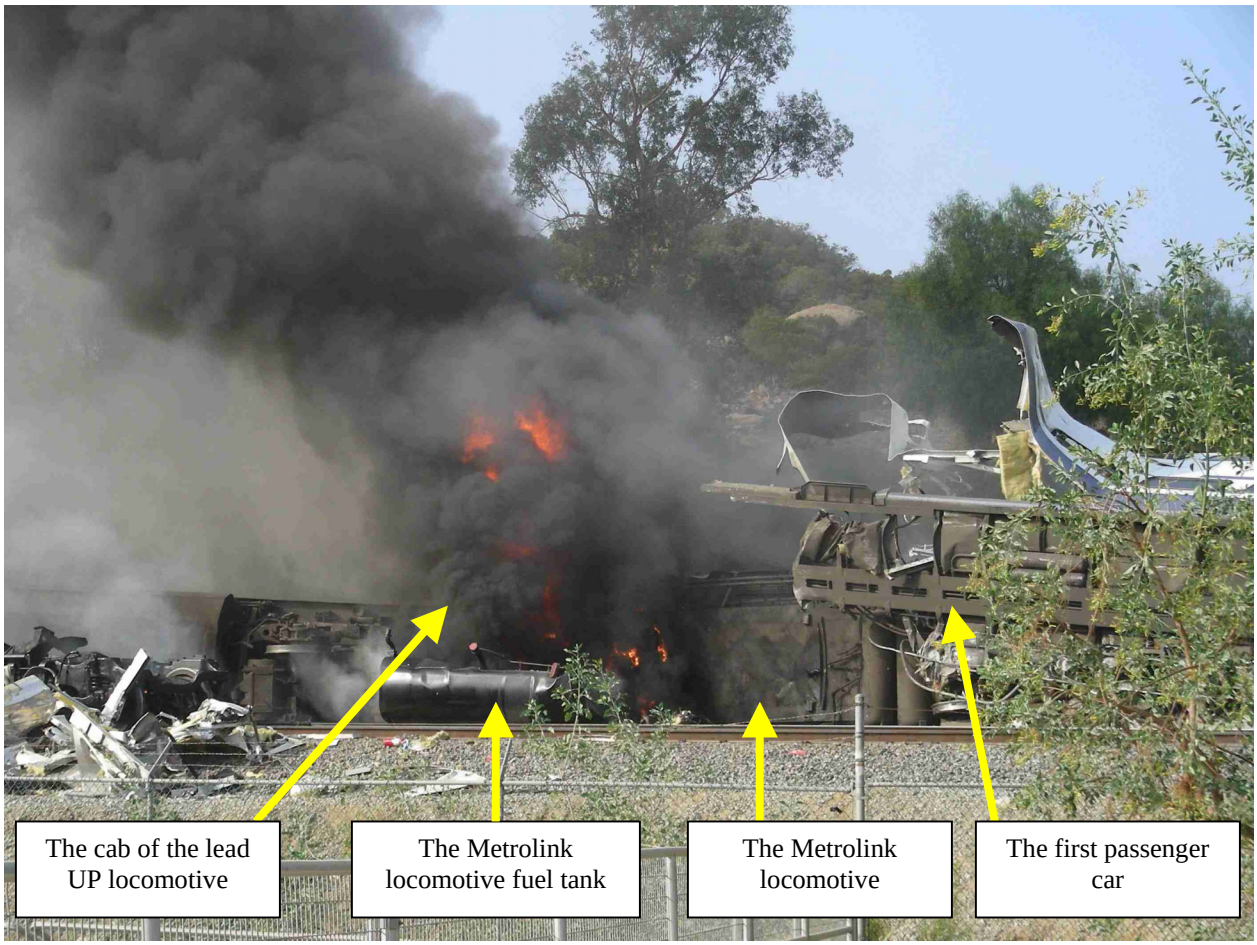

Photo 5. A closer view of the lead Union Pacific locomotive, the Metrolink locomotive, and the first passenger car. (Courtesy: LAFD)

According to the captain, one crewmember exited the cab and had severe injuries to his back. The captain assisted him to the triage area. The second crewmember was not able to move and could not exit the cab without assistance. Two firefighters went into the cab and carried him over to the triage area.

Passenger Train Rescue Operations

On arrival at the accident site, a sergeant from the sheriff's department evacuated soccer players from the field next to the area. (This area would later become the triage area). She assigned a deputy to locate fire department chiefs and coordinate their efforts within the unified command system.

The sheriff's deputy (the deputy who arrived with the fire department) went to the rear door of the first car and found a passenger who was trying to exit the car. The deputy helped to pull the passenger from the car. The deputy later crawled into the rear door. Firefighters were also in the car trying to extricate passengers. At this time, additional deputies and officers from

the California Highway Patrol were arriving on scene. Firefighters working deeper in the car were handing debris to the deputies and officers who then removed the debris from the car. As victims were extricated, they were placed on backboards and carried from the car by a line of deputies and officers. The deputies and officers continued to work with the fire department at the first passenger car for about 3 to 4 hours.

Photo 6. Law enforcement officers and firefighters responding to the rear of the first passenger car. (Courtesy: LAFD)

During this time, the police officer and deputy probation officer became part of teams that searched the second and third passenger cars. When the police officer entered the second passenger car, he saw that most passengers had exited the train. He recalled that about six people that were still in the car and could not move. Three were on the first level, and three were on the second level. Firefighters from the Los Angeles County Fire Department also arrived at these cars and began triaging the passengers. There were also about four or five people in the third passenger car that received assistance. The police officer recalled that there was at least one person on the second level, and the deputy probation officer recalled that there were two people on the first level. The police officer reported that he opened an emergency window on the upper level of the second car for ventilation. The deputy probation officer reported that there

was no smoke in either the second or third passenger cars. They assisted passengers who could walk to the triage area and carried others who could not exit the train on backboards.

Photo 7. A police officer responding to the third passenger car. (Courtesy: LAFD)

During the ongoing response, Battalion Chief 12 requested additional chief officers. After being assigned three chief officers, he established an urban search and rescue group, an extrication group, and a safety officer. The urban search and rescue group searched all the cars for victims.

Battalion Chief 12 and fire department personnel working on extrication determined that the best access into the crushed area of the passenger car was through the top of the car. (Because the car was on its side, the "top" of the car was actually the left side of the car) Although there was some access to the car through the rear door, the path into the crushed area of the car was blocked. Firefighters raised ladders the top of the car and began using saws to remove the car body panels.

The captain who was working with the extrication group for the Union Pacific locomotive later worked at the first passenger car. He stated:

We had six people that were alive but were entangled in the car. So we went to work with the jaws, trying to spread and get them freed up so we could get them out. We laddered that same car, and we had a crew that went up on the top part, which was actually the left side of the car, and started extracting patients from the top part of the car. Altogether we probably…took probably 8 to 10 people out that were alive at that point. We had a few fatalities that we had to remove to access some of the patients that were still alive. We worked for probably three hours non-stop there, and we were getting people out of the train and then transporting them over to the care area.

Photo 8 Firefighters during daytime operations at the first passenger car. (Courtesy: LAFD)

The captain further stated:

We ended up using saws to cut through some of the metal rather than the shears. We have shears that will cut through metal, but it -- some of it was so hard, it wouldn't cut it. And we had spreaders that push,

> but it seemed like the metal in that train had such a high strength and a memory that we would stretch, push it out of the way, and as soon as we'd retract the spreader, it would come right back about halfway.

As victims were recovered, there was a void in the car where firefighters were able to enter the car to continue to search for survivors. Inside of this void, car components were crushed and compressed. Car components had to be cut and spread to reach any possible survivors.

Battalion Chief 12 explained:

> We cut, cut, cut, we spread, and [the carbody] doesn't spread the way we thought. So we have to do another plan and then, and then in the process of spreading and cutting, then we start shoring. We start bringing blocks in there because once we spread it with the spreaders, and then we remove [a victim] and we take this tool out to go put it in another place, then metal comes back. So it's just a -- and it was in a truly horrific environment. It was probably an area that was maybe 10 x 10 [feet].

As surviving victims were removed from all of the cars, they were first taken to a patient holding area on the north side of the train. As the patient numbers increased, they were moved to a patient collection area further away from the train. Law enforcement officers assisted with carrying the backboards and baskets to move patients to the patient collection area. Chaplains began arriving on scene and also assisted the captain and fire department personnel. A temporary morgue was established on the side of the train. Law enforcement officers secured this area.

Battalion Chief 12 reported that while these extrication efforts continued:

> I was constantly checking back the status of all the other patients that were on the road, and we were slowly whittling away with the help of the law enforcement people, that 40 people that were on the road were now down to about half of that and they were -- I had some medics back there that were actually triaging the more significantly injured patients so that we could prioritize them and get them to the treatment areas.

Because firefighters were involved with extricating patients from the car, Battalion Chief 12 requested and received the assistance of additional law enforcement officers to help move patients from the train to the triage area.

Battalion Chief 12 stated:

> I can't tell you how beneficial they were because I looked and I saw police officers carrying people that were bloody and hurt and carrying them to the treatment areas, and it really saved us at that point.

Firefighters were sent to walk the Union Pacific train to check the train's contents. The firefighters reported that they did not find anything of concern. A Union Pacific representative had said where the consist was located. The fire department's manpower could not be taken away from rescue efforts to search the locomotive's crushed cab. Battalion Chief 12 reported that when he went to the command post, the incident commander had a copy of the consist.[7]

Battalion Chief 12 said about the cooperation of the railroads:

> In the old days, they probably would have started moving cars without talking to anybody. Now people came up to the incident command post, talked to the operations section chief, and said: here's what we want to do. Will this help you? Here's how it's going to affect you, and then again, we allowed all of that technical expertise to ultimate vet out into a viable objective, and that's what that whole unified command structure is about.

An assistant chief from the Los Angeles County Fire Department reported there was difficulty bringing in additional heavy equipment such as bulldozers and railroad equipment. The assistant chief suggested that the bulldozers could come in from a bridge next to the accident area and cut a pathway to the trains. He further suggested that the bulldozers could be used to pull parts of the cars apart for better access. This plan was implemented and conducted later in the evening as suggested.

These rescue efforts continued until about 0100 on September 13. At about this time, rescue operations transitioned into recovery operations.

Battalion Chief 12 stated:

> I don't think I've ever seen an incident in the 30 years where we had that synergy between the two disciplines (the fire and law enforcement departments), and that was such a -- they (the law enforcement departments) provided such a vital service.

See Appendix D for the interview transcript for Battalion Chief Joseph Castro.
See Appendix E for the interview transcript for Captain Christopher Cooper.
See Appendix F for the interview transcript for Captain Bill Bugg.
See Appendix G for the interview transcript for Deputy Barry Ryan.
See Appendix H for the interview transcript for Deputy Bill Lynch and Deputy Brad Johnson.

[7] As previously mentioned, the Union Pacific crew was injured and extricated from the locomotive. The consist was not removed from the cab at that time.

See Appendix I for the interview transcript for Officer Jose Valle.

See Appendix J for the interview transcript for Officer Timothy Wolleck and Officer Richard Moberg.

See Appendix K for the interview transcript for Officer Samuel Hong and Deputy Probation Officer Percy Sanders.

Triage, Treatment, and Transportation

Battalion Chief 17 was in charge of the medical group. In route to the accident, he called dispatch to confirm that helicopters had been dispatched. On his arrival, one helicopter was already on scene. Two additional helicopters arrived shortly after. His staff on arrival was two EMS captains and Light Force 28.

A battalion chief assigned to the Emergency Medical Services Section (EMSS) arrived shortly before 1700. He was first assigned to assist the medical group and lead the treatment unit.[8] Triage tarps were already set out in the field between the school and the railroad tracks. One EMS captain was assigned to conduct a preliminary triage near the fence between the railroad and triage area.

The battalion chief with EMSS stated:

> I think if there was one thing that really added to the success of patient care, it was having that guard position there to really make sure that our triage areas got the patients as close to as accurately triaged as possible.

Battalion Chief 17 saw 25 police officers led by a lieutenant or sergeant. He told the officers that they needed assistance and asked that the police officers go to the train and move as many people as possible to the triage area.

The battalion chief with EMSS stated:

> The majority of that was all uniformed LAPD officers, who were a huge help to this incident because they had such a robust response.

A second EMS captain was assigned to the "immediate" area.[9] The next on scene EMS captain was assigned to the "delayed" area.[10] At this time, law enforcement officers were still transporting patients from the accident area to the triage area. On his arrival, the fire department's medical director worked in the triage area.

Battalion Chief 17 stated:

[8] He was later assigned to lead the Urban Search and Rescue Group.

[9] This area is also known as a "red" area where patients with critical injuries are taken and treated.

[10] This area is also known as a "yellow" area where patients with moderate injuries are taken and treated.

> It just seemed like a couple of seconds later, I was just overrun with just catastrophically injured patients, the full spectrum of minor all the way to people that were, you know, I didn't even think we're going to make it.

As rescue ambulances arrived, they circled continuously into and out of the treatment area. They drove through the parking lot directly into the treatment area in the field, looped around a dirt road along the railroad, and exited out of a fence and onto a road. Using this configuration, patients were loaded directly from the triage tarps into the rescue ambulances. As additional fire department resources arrived, an officer was placed in charge of ambulance staging.

Photo 9. An aerial view of the accident area. The triage area is circled. (Courtesy: Metrolink)

Five helicopters transported patients to hospitals. The battalion chief with EMSS stated:

> I again would say that having the helicopters land and transport from where they transported probably was one of the things that made this thing go as smoothly as it did from our response…
>
> …Between helicopters landing and taking off, there probably wasn't more than maybe a one to two minute lag time between a ship leaving

> and the next ambulance coming in, extremely, extremely useful the way we had that rotation there.

Ground ambulances transported at least two patients at a time. Air ambulances transported as many patients as possible. The Los Angeles County Sheriff's helicopter, the helicopter with the largest patient capacity, could transport 5 to 6 patients at a time.

Battalion Chief 17 stated:

> We were really transporting anybody [by air] just because we saturated the medical system so badly; we needed to keep going further out to hospitals. So we were really transporting anybody we could get into the helicopter.

A firefighter documented patients that were transported by ground ambulance. Regarding patient transport documentation, Battalion Chief 17 stated:

> We normally in a perfect world monitor every patient that comes into treatment and goes out into an ambulance or helicopter as far as the tags, but this incident was at such a high level of amount of casualties, it broke down a little bit. It could have been better, but we did to the best of our ability maintain documentation as far as with the patients.

In summary, Battalion Chief 17 said:

> For any other small department, this would be just catastrophic. I mean we are a 3300 person organization, and we were challenged.

See Appendix L for the interview transcript for Battalion Chief Timothy Ernst.
See Appendix M for the interview transcript for Battalion Chief Mark Jones.

Overnight Urban Search and Rescue

At about 2000 to 2100 hours, the battalion chief with EMSS was assigned to the urban search and rescue group. At that time, Los Angeles County Fire Department had two urban search and rescue engines and a battalion chief on scene. Ventura County also had a search and rescue team on scene.

The battalion chief with EMSS described these efforts:

> I described it as if you've ever seen a bale of metal recycling, how tightly packed that is…so our normal urban search and rescue tools and techniques, you know, which really rely on being able to pry off something solid or cut something that's going to give you some sort of a sizable release that you can then make entry through, that impact

> area was packed in so tight that none of those traditional methods worked, and basically we were clipping, you know, with different machines. We were clipping little pieces of that compacted debris…So in a regular rescue it may have taken a third of the time, it was extremely slow going because of having to take small little pieces of metal off, you know, at a time, cut them off and that metal then was twisted in different directions.

At about 2100 to 2200 hours, a 30- to 40-foot long piece of the carbody side (on the "top" of the car) was hanging over the side of the car. This piece needed to be removed from the car. The fire departments began to plan for safely removing this piece and addressing any structural hazards that could result during the removal. A Metrolink employee assisted with this effort and provided the fire department with information about safely removing this piece. This employee remained at the site to provide the fire department additional information about structure of the car.

A large personnel shift occurred at about midnight to relieve rescuers who had been on scene throughout the evening. At about 0030 to 0100 on September 13, a briefing was held at the command post to plan for continuing operations. At this time, it was decided to release resources from mutual aid fire departments. Additional city fire department resources including urban search and rescue, medical, and rapid intervention resources[11] were brought to the scene.

[11] Rapid Intervention Teams (RIT's) are fire department resources dedicated to immediately respond to firefighter emergencies.

Photo 10. Firefighters during nighttime operations at the first passenger car. (Courtesy: LAFD)

Fire department resources and railroad resources were coordinated through a battalion chief that is a rail liaison officer with the city fire department and Metrolink personnel. Overnight, Metrolink's Security Coordinator was placed in charge of the railroad's response. Metrolink had staged heavy equipment about a half mile away from the accident site. A Union Pacific representative also coordinated bringing in heavy equipment and equipment operators.

The battalion chief with EMSS said:

> At that incident, I think the biggest benefit we had was having [the rail liaison officer] there because he has really the established relationships with a lot of [the railroad] people. If we didn't have [him] there, I think it would have been a little bit tougher to start to make those contacts.

The battalion chief (the rail liaison officer) stated:

> I was very impressed by the cooperation between the fire department and the two rail services.

Periodically, meetings were conducted with battalion chiefs, the urban search and rescue teams, and the railroads to plan operations. The heavy equipment was brought into the area

using a dirt road that was cleared by the county fire department's tractor unit. The freight rail cars were removed from the accident area starting at about midnight during the personnel shift change so that fire department operations would not be affected. To remove the cars, cutting and welding the track was being conducted. During these operations, a second fire started. It was estimated that the fire was suppressed in about 45 minutes.

The fire department and railroads also began planning to lift and shore the Metrolink locomotive. The locomotive needed to be shored so that firefighters could safely work in this area to recover the locomotive engineer. Two front loaders were used to lift the locomotive up. The railroad brought in some heavy timbers. Firefighters used the timbers to construct box cribbing underneath the locomotive.

The Metrolink locomotive was pulled out from the first passenger car at about 0800 on September 13. Recovery operations continued throughout the morning. The final victim was recovered at about 1400.

Photo 11. An exterior view of the first passenger car during operations on September 13. (Courtesy: FBI)

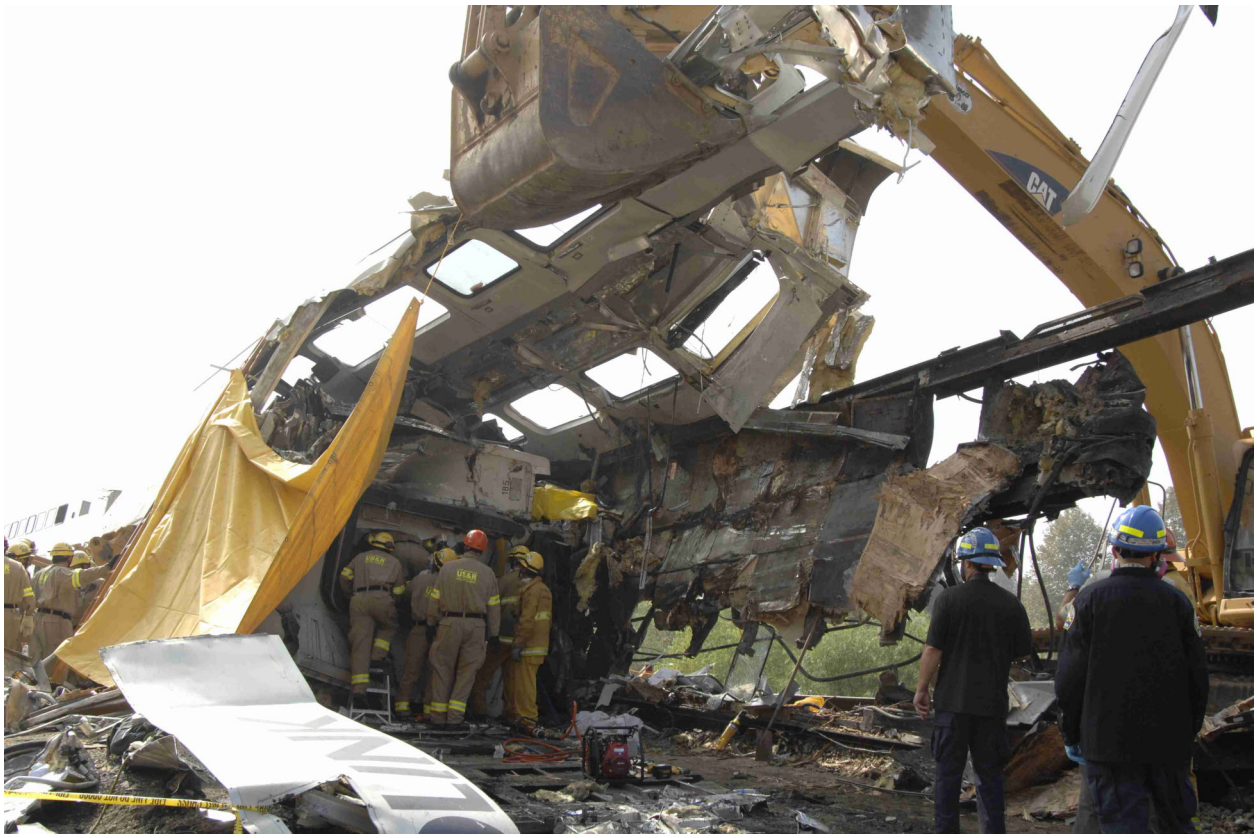

Photo 12. An interior view of the first passenger car on September 13. (Courtesy: FBI)

See Appendix N for the interview transcript for Sergeant Nina Sutter, Battalion Chief John Quintanar, and Jesus Ojeda.

Appendices

Compiled by: _____//s//_____ Date: January 30, 2009
Dana Sanzo
Survival Factors Investigator

Approved by: _____//s//_____ Date: January 30, 2009
Dr. Gerald D. Weeks
Chief, Human Performance and Survival Factors Division

I participated as a member of the survival factors group in the accident investigation for the collision of Metrolink train 111 and Union Pacific train LOF 65-12 in Los Angeles, California, on September 12, 2008.

____ (a) I have no comments or corrections.

____ (b) My comments or corrections are enclosed.

Group member signature

Organization Date

Please submit this certificate and any comments by **January 21, 2009**. If no comments are received, the group chairman will presume that group members are in complete agreement with the factual information contained in the report.