The Public Transportation Safety Board (PTSB) staff was notified of this accident at 8:00 am on 12/29/07. At that time it was reported as a pedestrian knockdown and although the injuries sustained by the pedestrian were serious, they were not considered to life threatening. The PTSB staff was informed by the MTA New York City Transit (NYCT) Office of System Safety (OSS) that the pedestrian’s condition was upgraded to critical but stable at 5:15 pm. Due to the law protecting information regarding a person’s medical condition, obtaining accurate information was difficult and the PTSB staff was not actually informed by the MTA NYCT OSS of the pedestrian’s death until that information became available to them at 2:15 pm on 12/30/07.

At approximately 6:55 a.m., MTA New York City Transit (NYCT) bus #2506 was turning left from Roosevelt Avenue onto Main Street when, according to a witness, contact was made between the left side of the bus in the area behind the left front wheel and a male pedestrian who was walking left to right in the designated crosswalk on Main Street. The pedestrian was knocked to the pavement where the middle of the bus passed over his body. The bus driver, after hearing a noise coming from under the bus, stopped, and discovered the pedestrian under the bus. The bus driver immediately called for assistance. The pedestrian, who was critically injured, was removed from under the bus and transported to a local hospital where he expired at 10:12 pm.

In the vicinity of the accident site Main Street is a 60 foot wide two-way north/south roadway divided by a double yellow pavement marking into two travel lanes in each direction. Roosevelt Avenue is a 44 foot wide two-way east/west roadway supporting one travel lane in each direction. Parking is permitted at the curbs of both roadways. Both roadways are asphalt paved, straight, level and in generally good condition. The intersection is controlled by standard traffic and pedestrian signals which, at the time of the accident investigation, were functioning as designed. The intersection is illuminated by standard overhead street lights which were also functioning as designed at the time of the accident investigation. At the time of the accident it was dark and the pavement was wet.

Bus #506 is a 1995 Orion V transit bus housed and maintained at the Casey Stengel Depot with a seating capacity of 40 passengers. A review of the bus records showed that Preventive Maintenance Inspections are performed at regular 4,000 mile intervals. The most recent was completed on December 12, 2007 and the bus had traveled 1,139 miles since then. There were no safety or recurring defects noted in the 45 days prior to the accident.
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Physical inspection of the bus took place on November 7, 2007 and found no defects which could be considered a causative factor in the accident. The bus braking systems minimally failed to meet the stopping distances for the MTA NYCT adopted standards for passenger vehicles of NYS DOT Regulations (Title 17 of NYCRR, Article 3, Part 720. Further inspection of the bus braking systems found that the bus brake drums were worn and glazed. Once a four wheel reline was completed, changing both drums and brake shoes, the bus successfully passed the required decelerometer tests. The PTSB staff finds, however, that the brake issue did not contribute to the accident.

The bus driver was hired by the MTA NYCT on January 15, 2001 and completed the New Bus Operator Training Program. A review of the driver’s NYS Department of Motor Vehicles records for the past three years showed one conviction for “Unsafe Lane Change” (01/13/05). NYS Vehicle & Traffic Law, Article 19-A records were reviewed and found to be complete, in-order and up-to-date. A review of the driver’s MTA NYCT accident record for the past three years showed one non-preventable (11/02/06) and one preventable (10/25/06-non major, no discipline) collision accidents. Post accident drug and alcohol tests performed upon his release from the accident scene, 3 hours and 12 minutes from the time of the accident, were negative. The bus driver was also issued a summons by the NYPD for failing to yield the right of way to a pedestrian crossing lawfully within the crosswalk.

The bus driver gave a statement on December 31, 2007 indicating that he was not in service (deadheading) and traveling east on Roosevelt Avenue to the start of his assigned route. The driver said that while turning left onto Main Street, on a green traffic signal, he heard a noise. Believing he may have been involved in an accident, he stopped the bus and observed, by checking the left side travel mirror, the body of a person protruding out from under the left side of the bus and called for assistance. The driver indicated that he had scanned the intersection prior to turning and had not observed anyone in the crosswalk as he began the left turn at a speed of approximately 5 mph.

The PTSB staff was unable to contact the only witness, but from a file copy of a telephonic interview given to the MTA NYCT, this witness indicated that he was standing in the bus stop on the northeast corner of Main Street and Roosevelt Avenue when he observed a pedestrian walking in the crosswalk (toward him). The witness said that he observed the left side of bus #506 strike the pedestrian while turning left from Roosevelt Avenue onto Main Street, knocking the pedestrian to the pavement and go under the bus. The witness further indicated that he ran into the front of the bus waving his arms to stop the bus. The witness said that the bus stopped with the left rear wheels about five feet from the body of the pedestrian.

A report from an MTA NYCT DOB supervisor indicated he had been informed by hospital personnel that the pedestrian had suffered various head injuries and a broken leg. The supervisor informed the MTA NYCT Command Center that the injuries were not considered life threatening. Given this information, neither the MTA NYCT OSS nor PTSB staffs responded to the accident scene.
The autopsy report indicated that the pedestrian’s cause of death was blunt impact head injuries (fractured skull with epidural hemorrhage beneath the fracture and hemorrhage over the brain) and well as blunt impact to the extremities (contusions, abrasions, lacerations and fractures to the tibia and fibula).

The down load of the bus Electronic Control Module (ECM) showed that the bus had accelerated from a stop to a speed of 9.5 mph at the time of contact with the pedestrian, in the process of traveling a distance of approximately 122 feet. The ECM data also showed that it took the bus five seconds to stop after impact, traveling an additional distance of approximately 28 feet.

As a result of numerous conversations with the MTA NYCT OSS investigator, the PTSB staff, by analyzing the physical and electronic data, using the witness and bus driver’s statements, and using accepted accident reconstruction calculations reached the following conclusions:

- The pedestrian was crossing the street within the designated crosswalk and with the appropriate “Walk” crossing signal
- The pedestrian had traversed approximately 40 feet of the crosswalk before being struck by the bus
- The bus moved from a stop and turned left on a green traffic signal, moving approximately 122 feet before colliding with the pedestrian
- By using accepted reconstruction investigation walking speeds for pedestrians and the data from the bus ECM it was determined that the bus and the pedestrian had entered the intersection at the same time and it took approximately 10 seconds for the bus and pedestrian to reach the point of contact
- The bus driver had adequate time to observe the pedestrian in the crosswalk

The MTA NYCT DOB Training Center produced in January 2007, as a result of the high number of fatal pedestrian accidents in calendar year 2006, a video entitled “Fatality Case Study” and made viewing it a mandatory part of all bus driver’s training/retraining. Part of the video emphasizes techniques for searching for and observing pedestrians in the roadway while making left turns. It addresses view obstructions on the left side of a bus caused by mirror design. The bus driver involved in this accident had previously viewed this video as part of his training on April 6, 2007.

The MTA NYCT trains all bus drivers in defensive driving techniques for safely approaching and traversing intersections, statistically one of the most hazardous points in a driver’s route. These techniques include, but are not limited to, reducing speed, scanning for hazards, indentifying and anticipating potential hazards – such as pedestrians. Additionally bus drivers are trained to make all turns at a speed not to exceed 5 mph and to have the brake covered during the turn to ensure that the bus can be quickly stopped in the event of an emergency.

Public Transportation Safety Board staff finds that the most probable cause of this accident was the failure of the bus driver to yield right of way to the pedestrian. Further, the bus driver failed to provide a proper lookout and observe the pedestrian in the crosswalk. Contributing to the accident was the failure of the bus driver to adhere to his training by performing a left turn with the brake covered.
In a hearing on May 20, 2008 the MTA NYCT Department of Buses, after reviewing the facts concerning the accident found the accident to be preventable and dismissed the bus driver, a decision that was appealed. On June 17, 2008 the bus driver accepted a permanent demotion to a non-safety sensitive position of bus cleaner.

Based on the action taken by the MTA New York City Transit regarding this accident, the Public Transportation Safety Board staff makes no recommendation in this case.

INVESTIGATOR: Harry W. Gerham

CHIEF, ACCIDENT INVESTIGATION SECTION

DIRECTOR, PCSB, NYSDOT