At approximately 11:30 am, Rockland Coaches, Inc. (RC) bus #RC185, after picking up a passenger in the bus stop at Shopper’s Haven Mall, made a left turn onto the exit-entrance ramp of the parking lot and continued straight. There was significant pedestrian traffic at this location. At that time a female pedestrian, walking to the mall from the South Parking Lot and holding a cell phone in her right hand, stepped off a raised median and continued across the roadway in the front of the bus, from the bus driver’s left to right. In an attempt to prevent a collision the bus driver applied the brakes and swerved to the right, however, the pedestrian was struck by the front of the bus and fell to the pavement. The pedestrian was dragged forward and slightly to the right by the right front wheel for 9.8 feet. The bus stopped with the right front tire wedging the upper body of the pedestrian against the pavement. The local police and ambulance responded to the accident. The injured pedestrian was transported to a local hospital where she was pronounced DOA. The bus sustained slight damage and was impounded by police.

In the vicinity of the accident site, the mall contains a North Parking Lot and a South Parking Lot divided by a 30.3 foot wide entrance-exit ramp. The ramp is straight, asphalt paved, and it has a 3% upgrade in the western direction. At the time of the accident it was daylight and the weather was dry and clear.

Bus #RC185 is a 2004 Gillig transit type with a seating capacity of 32 passengers. A review of the bus records indicated that Preventive Maintenance Inspections (PMI) at RC are performed at regular 4,000 mile intervals and the most recent was completed on June 20, 2007. The bus had traveled 3,436 miles at the time of the accident. There were no safety or recurring defects noted in the 45 days prior to the accident. A post accident inspection of bus #RC185 was conducted by the Public Transportation Safety Board (PTSB) staff on July 23, 2007 and no defects were found that would be considered causative factors in this accident. Decelerometer tests were performed on the braking systems and showed stopping distances that met the standards for passenger vehicles of NYS DOT Regulations (Title 17 of NYCRR, Article 3, Part 720).

The bus driver was hired by Rockland Coaches on February 16, 2006, and completed the company’s bus operator training program. A review of the bus driver’s Department of Motor Vehicles records showed no violations or suspensions. New York State Vehicle & Traffic Law, Article 19-A records were complete and up-to-date. A review of the driver’s Rockland Coaches records revealed no collision accidents from the time since he was hired. A post accident drug and alcohol test administered to the bus driver 6 hours and 2 minutes after the accident was negative. The delay in administering the drug and alcohol test was due to the bus driver being detained at the scene for the purpose of investigation.
In an interview with the PTSB staff, the bus driver indicated that after entering the first stop, he picked up a female passenger. Then he checked the left and right sides. After that the bus driver checked the mirrors, turned on the left directional signal and started the left turn onto the exit ramp. The driver stated that the pedestrian suddenly appeared in front of the bus and made contact with the left front of the bus. When he was questioned if the pedestrian was walking or running he answered that he did not know. The driver initially stated that the pedestrian was facing left to right in front of the bus, however he said he had some doubts about the exact location of the point of impact or where the pedestrian came from.

In an interview with the police officer, the bus driver stated that it was his first pick-up at 11:30 am at the Shopper’s Haven in Monsey. It was clear and sunny. He loaded a female passenger, closed the passenger door of the bus, and signaled to make a left turn. He indicated that after checking his right and left he started to turn and the woman appeared in front of his bus. He said he slammed on the brakes. After he realized what happened, he exited the bus and saw the victim underneath the right front of the bus. He got back into the bus and backed it up. Then he reported the accident to the company’s dispatch office.

A witness who was walking in the opposite direction to the bus (eastbound) stated that he saw the female pedestrian getting out from her auto and walking in the direction to the store, talking on her cell phone. She stepped off the curb and entered the path of the moving bus from the bus driver’s left to right. The witness also stated that the left front of the bus struck the female pedestrian.

Another witness, who was driving his auto in the opposite direction to the bus stated that he saw a white and green bus traveling west, out of the lot and a female pedestrian crossing the road with her cell in her right hand and keys in her left hand with a black purse. She got hit by the front of the bus more to the right side of the front of the bus. She fell down and it looked as if the driver backed up. He stated he ran up to her and asked if she was ok, but heard no answer. At that time EMS had arrived and medical personnel started CPR.

A third witness who was driving her auto in the opposite direction of the bus indicated that the bus was turning left towards her. After the bus turned, the female pedestrian started to cross the street toward the right parking lot (southern field- from the driver’s right to left). She stated that the bus hit the pedestrian and she fell to the ground and the bus went over her. The bus hit her moving somewhat slowly and the witness was surprised when she fell to the ground. The driver then backed up and immediately got off the bus to see what happened.

The investigation revealed that according to the final rest location of the bus, the final rest location and position of the pedestrian, the injuries sustained by the victim, the bus’s skid mark and other debris, the bus driver’s and witnesses’ statements, that the bus was traveling at a minimum initial speed of 13 mph. It is also most likely that the pedestrian attempted to cross over the exit-entrance ramp from the bus driver’s left to right, while holding her cell phone in her right hand, when she was struck by the front of the bus. The pedestrian was knocked to the pavement and at the same time the bus driver applied the brakes and swerved to the right, however, the bus continued forward and the pedestrian became wedged between the right front wheel and the pavement. Subsequently, the victim was dragged by the bus for a distance of 9.8 feet to the final rest position. The investigation revealed that the bus driver should have been able to observe the female pedestrian walking from the left side of the roadway to the point of impact with the bus for more than 4 seconds.
Further investigation showed that it would take the bus approximately 2.4 seconds to stop (considering 1.5 seconds for perception-reaction time at that speed). Staff concluded that the bus driver would have been able to prevent the collision if he had been driving at a reasonable speed and identified the pedestrian as a hazard when she stepped off the left curb. Given the actual speed, if the driver identified the pedestrian approaching the roadway as a hazard and braked, the bus driver had an additional time of 1.9 seconds to stop the bus before colliding with the pedestrian. After hitting the pedestrian the bus traveled an additional 7 feet more before wedging the victim between the right front wheel and the pavement. The physical evidence in the roadway indicated that the bus moved forward and to the right during the time the pedestrian was wedged under the bus right front tire.

The Public Transportation Safety Board finds that the most probable cause of the accident was the failure of the pedestrian to yield the right of way to the bus (an eminent hazard), while crossing the roadway.

Contributing to the accident was the failure of the bus driver to comply with his training and scan the roadway properly to observe the pedestrian in the roadway in a reasonable time frame. Additionally, the speed of the bus, determined to be 13 mph, is considered excessive for a bus completing a left turn maneuver (industry recommended standard for a left turn is 3-5 mph) resulting in the driver having less time to react and slow or stop as necessary in an emergency situation, as was presented to the driver in this instance.

The Rockland Coaches, Inc. reviewed the accident on August 20, 2008, and found it to be preventable. The bus driver was retrained, his performance was evaluated as satisfactory, and he was returned to passenger service. Shortly afterwards the driver resigned from his duties.

Based on the action taking by Rockland Coaches, Inc. regarding this accident, the Public Transportation Safety Board staff makes no recommendations.

**INVESTIGATOR: Mikhail Palanker**

______________________________  _______________________
**CHIEF, ACCIDENT INVESTIGATION SECTION**  **DATE**

______________________________  _______________________
**DIRECTOR, PCSB, NYS DOT**  **DATE**