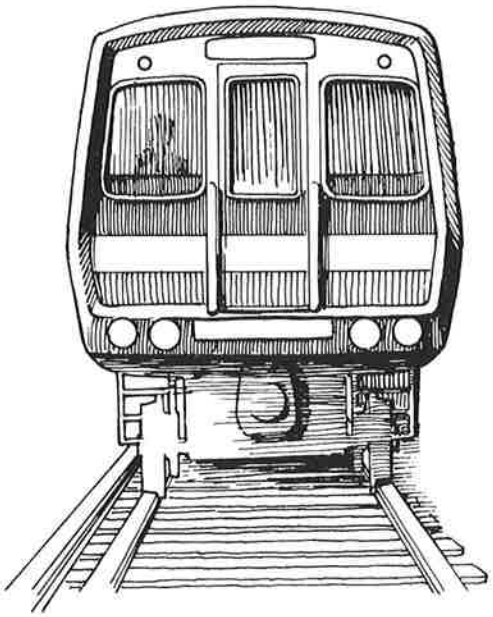
UMTA-MA-06-0152-86-1
DOT-TSC-UMTA-86-5

U.S. Department
of Transportation
**Urban Mass
Transportation
Administration**

Safety Information Reporting and Analysis System (SIRAS)

INSTRUCTION MANUAL

For Heavy Rapid Rail Transit (RRT) Reporting Forms



Office of Technical Assistance
Washington DC 20590

January 1986

Prepared by
Research and Special Programs
Administration
Transportation Systems Center
Cambridge MA 02142

TABLE OF CONTENTS

The transmittal letter form (page A-9) has been designed so that all applicable SIRAS reports can be sent under the same cover letter each month. A space is provided for the current month in which the reports are made.

The Chief Executive Officer of each property is to sign the letter to certify the accuracy of the data contained in the reports that are being submitted.

I. RRT TRAIN ACCIDENT REPORT INSTRUCTIONS

I. RRT Train Accident Report Instructions: Form UMTA F6600.1

The RRT Train Accident Report form has been designed for reporting all types of rapid rail transit (RRT) train accidents. The criteria for what constitutes a reportable train accident, however, is defined in other Safety Information Reporting and Analysis System (SIRAS) program documentation.

The form consists of five pages, with the first three pages filled out for all reported train accidents. Pages four and/or five may be filled out, depending on the type of train accident being reported. Once sufficient experience has been gained by the reporter, the forms will be found to contain enough information to fill them out without reference to this Instruction Manual.

The following pages give detailed instructions for each question of the RRT Train Accident Report form. Opposite each page of instructions are two "RRT Train Accident" examples that demonstrate application of the instructions to filling out the corresponding section of the form.

REPORT NUMBER: Enter the same Report Number in the upper right hand corner of each of the five pages of the RRT Train Accident Report. The Report Number consists of three parts: property, year and sequence number. Above the word "property" enter up to five letters identifying your transit property. If you use fewer than five letters, enter them so that the last letter fills the right-most space. Above the word "year" enter a two-digit number for the year of the month the accident occurred. Above the "sequence number" enter the next seven digit number in the series of reported train accidents of the year where the first was 0000001, the second 0000002 and so forth to 9999999.

REPORT NUMBER

property year sequence number

AUTHORIZED SIGNATURE:

PRINTED NAME AND TITLE: Print on the line provided the name and title of the transit property official authorized to approve the report.

SIGNATURE: Enter the signature of the person who approves the report.

ORIGINAL/REVISION: Indicate, in one of the two boxes provided, whether the report being submitted is an original entry or a revision of a previous train accident entry.

DATE SIGNED: Also enter the date the report was approved in the space provided.

AUTHORIZED SIGNATURE

PRINTED NAME AND TITLE | SIGNATURE | ☐ ORIGINAL ☐ REVISION | DATE SIGNED

CHANGE/ADDITION PROCEDURE: Once an RRT Train Accident Report has been submitted, it can be changed or added to in subsequent months using the following procedure. Number all five pages of an RRT Train Accident Report form with the Report Number of the previously submitted report which requires change/addition. To institute change, write new data in those spaces anywhere on the five pages (of the otherwise blank form) corresponding to spaces on the original form that you want changed. To institute additions, write new data in those spaces corresponding to spaces that were blank on the original submission. To change previous entries to blanks, enter X's. Enter the authorized signature, date signed and check the "Revision" box at the bottom of Page 1. Submit Page 1 and only those pages of the five page set that have a change/addition entry. If there are further changes/additions to the same report number in subsequent months, they will be interpreted as cumulative in the sequence dictated by the "date signed" entry.

TRAIN ACCIDENT REPORT EXAMPLES

EXAMPLE 1

Based on the file of previously reported train accidents for the year, the next unused sequence number was found to be 0000068. The name and title of the person authorized to approve the RRT Train Accident Report at NATA is Mr. Paul J. Smith, Manager of Safety. The finished report was signed on March 18, 1983.

REPORT NUMBER

N A T A 8 3 0 0 0 0 6 8

property year sequence number

AUTHORIZED SIGNATURE

Paul J. Smith, Manager of Safety	Paul J. Smith	☒ ORIGINAL ☐ REVISION	March 18, 1983
PRINTED NAME AND TITLE	SIGNATURE		DATE SIGNED

EXAMPLE 2

Based on the file of previously reported RRT train accidents for the year, the next unused sequence number was found to be 0000162. The name and title of the person authorized to approve the RRT Train Accident Report at NATA is Mr. Paul J. Smith, Manager of Safety. The finished report was signed on November 27, 1983.

REPORT NUMBER

N A T A 8 3 0 0 0 1 6 2

property year sequence number

AUTHORIZED SIGNATURE

Paul J. Smith, Manager of Safety	Paul J. Smith	☒ ORIGINAL ☐ REVISION	November 27, 1983
PRINTED NAME AND TITLE	SIGNATURE		DATE SIGNED

IDENTIFICATION

The IDENTIFICATION section asks when the train accident occurred, where it happened, and what sort of accident it was.

1. **DATE:** Enter the date of the train accident, using two-digit numbers for the month, the day and the year.

1. DATE

month day year

2. **TIME:** Enter the time of the train accident, using 24 hour notation.

2. TIME

(24 hour)

3. **RUN/TRAIN NUMBER:** Enter the run/train number of the striking train (or only train) involved in the train accident.

3. RUN/TRAIN NUMBER

4. **LINE/ROUTE:** Enter the line/route on which the train accident occurred.

4. LINE/ROUTE

5. **TRACK NUMBER:** Enter the track number for the track occupied by the striking train (or only train) at the time of the train accident.

5. TRACK NUMBER

6. **LOCATION:** Enter the distance (in feet) from the train accident site to the nearest station or rail-highway crossing.

6. LOCATION

7. **STRIKING TRAIN (or only train):** Enter the one-digit code from the list printed on the form that best describes the striking train (or only train) involved in the train accident.

7. STRIKING TRAIN *(or only train)*

1—revenue in service
2—revenue not in service
3—non-revenue

TRAIN ACCIDENT REPORT EXAMPLES (CONTINUED)

EXAMPLE 1 (CONTINUED)

On February 12, 1983, at 10:08 p.m., a NATA train (#0042) in revenue service was involved in a train accident. The location was on the South Shore Extension of the Red Line, track #1, 20 feet short of Wassalton Station.

1. DATE: 0 2 | 1 2 | 8 3 (month | day | year)
2. TIME: 2 2 0 8 (24 hour)
3. RUN/TRAIN NUMBER: 0 0 4 2
4. LINE/ROUTE: *Red Line/ So. Shore Extension*
5. TRACK NUMBER: *1*
6. LOCATION: *20 feet short of Wassalton Station*
7. STRIKING TRAIN (or only train): 1
   1—revenue in service
   2—revenue not in service
   3—non-revenue

EXAMPLE 2 (CONTINUED)

On October 15, 1983 at 5:36 p.m., a NATA train (#8036) in revenue service was involved in a rail-highway crossing accident. The accident took place on the Yellow Line's Sullivan Street Branch, route number 0737, on track number 1. Upon impact with the other vehicle, the NATA train was 53 feet short of Main St. Station.

1. DATE: 1 0 | 1 5 | 8 3 (month | day | year)
2. TIME: 1 7 3 6 (24 hour)
3. RUN/TRAIN NUMBER: 8 0 3 6
4. LINE/ROUTE: *Yellow Line/ Sullivan St. Branch*
5. TRACK NUMBER: *1*
6. LOCATION: *53 feet short of Main St. Station*
7. STRIKING TRAIN (or only train): 1
   1—revenue in service
   2—revenue not in service
   3—non-revenue

8. **STRIKING TRAIN EVENT**: From the coded listed printed on the form, select up to four choices, in order of occurrence, which describe what the striking train (or only train) did or what was done to the striking train (or only train). If the code for "other" is entered, write in a brief description of that other choice.

9. **OTHER OBJECT**: Select the code, from the list printed on the form, which best describes what the striking train (or only train) struck or was struck by. If the code for "other" is entered, write in a brief description of that other choice.

8. STRIKING TRAIN EVENT
(enter up to 4 in order of occurrence)

⌊_⌊_⌊_⌊_⌋

1—struck
2—was struck by
3—caught fire
4—exploded
5—derailed
9—other_____

9. OTHER OBJECT

⌊_⌋

1—revenue train in service
2—revenue train not in service
3—non-revenue train
4—bus
5—highway vehicle
6—obstruction
7—person
8—not applicable
9—other _____

TRAIN ACCIDENT REPORT EXAMPLES (CONTINUED)

EXAMPLE 1 (CONTINUED)

The revenue service train struck a snow blower train and derailed.

8. STRIKING TRAIN EVENT
(enter up to 4 in order of occurrence)

1 5

1—struck
2—was struck by
3—caught fire
4—exploded
5—derailed
9—other_____

9. OTHER OBJECT

3

1—revenue train in service
2—revenue train not in service
3—non-revenue train
4—bus
5—highway vehicle
6—obstruction
7—person
8—not applicable
9—other _____

EXAMPLE 2 (CONTINUED)

The NATA train was struck by an automobile travelling perpendicular to the train.

8. STRIKING TRAIN EVENT
(enter up to 4 in order of occurrence)

2

1—struck
2—was struck by
3—caught fire
4—exploded
5—derailed
9—other_____

9. OTHER OBJECT

5

1—revenue train in service
2—revenue train not in service
3—non-revenue train
4—bus
5—highway vehicle
6—obstruction
7—person
8—not applicable
9—other _____

DAMAGE ESTIMATE AND EFFECTS

This section tabulates the dollar damage estimate and other effects of the train accident.

10. **TRAIN DAMAGE ESTIMATE**: Enter the dollar damage, including labor and all other costs, for repair or replacement in kind for all damage to the striking train (or only train) and the other train involved in the train accident.

10. TRAIN DAMAGE ESTIMATE

$ _____

11. **OTHER TRANSIT DAMAGE ESTIMATE**: The dollar figure entered in this item should account for all damage to signals, track, track structures, etc., including labor costs and all other costs for repair or replacement in kind for all transit items not included in TRAIN DAMAGE ESTIMATE.

11. OTHER TRANSIT DAMAGE ESTIMATE

$ _____

12. **NON-TRANSIT DAMAGE ESTIMATE**: Enter the dollar damage, including labor and all other costs, for repair or replacement in kind for all damage to property not belonging to the transit property. For example, if a train strikes (or is struck by) an automobile, the cost of damage to the automobile should be included in this item.

12. NON-TRANSIT DAMAGE ESTIMATE

$ _____

13. **OTHER EFFECTS**: On the line provided, note any other significant effects or damage resulting from the accident not included in Items 10-12..

13. OTHER EFFECTS *(evacuation, panic, smoke, delay, etc.)* _____

EXAMPLE 1 (CONTINUED)

Damage to the two trains amounted to $45,000. $5,000 damage was done to the track. No other property damage occurred. The train was evacuated and the uninjured passengers were taken to Wassalton and Quinly Center Stations by bus; normal RRT service was restored in two hours.

10. TRAIN DAMAGE ESTIMATE	11. OTHER TRANSIT DAMAGE ESTIMATE	12. NON-TRANSIT DAMAGE ESTIMATE
$ 45,000	$ 5,000	$ 0

13. OTHER EFFECTS *(evacuation, panic, smoke, delay, etc.)* ***Train evacuated, two-hour service delay***

EXAMPLE 2 (CONTINUED)

Dollar damage to the revenue service train totaled $1,650. Dollar damage to the automobile that struck the train was $6,528. Due to the accident, there was a thirty minute delay in service on the Yellow Line's Sullivan Street Branch.

10. TRAIN DAMAGE ESTIMATE	11. OTHER TRANSIT DAMAGE ESTIMATE	12. NON-TRANSIT DAMAGE ESTIMATE
$ 1,650	$ 0	$ 6,528

13. OTHER EFFECTS *(evacuation, panic, smoke, delay, etc.)* ***Thirty minute delay in service***

DESCRIPTION OF ACCIDENT AND CORRECTIVE ACTION

This section requires that information not requested elsewhere in the report pertaining to the train accident be entered in handwritten form.

14. **NARRATIVE**: Write a brief description of the train accident and all relevant events that led up to it. Also include in your narrative, all subsequent emergency actions in the sequence of their occurrence. Please put particular emphasis on description of factors that are not covered elsewhere in this report.

14.NARRATIVE *(brief description of accident, sequence of events leading to accident, and subsequent emergency and non-emergency actions with emphasis on details not otherwise included in this report)*

15. **CORRECTIVE ACTION**: Describe any corrective actions that were taken or are planned for as a result of the train accident.

15.CORRECTIVE ACTION *(describe corrective action taken or planned to prevent occurrences similar to this accident)*

TRAIN ACCIDENT REPORT EXAMPLES (CONTINUED)

EXAMPLE 1 (CONTINUED)

The transit property determined that it would lower the speed limit in occupied blocks from 10 mph to safe stopping distance under action conditions. Operators were trained in this new procedure.

14.NARRATIVE *(Brief description of accident, sequence of events leading to accident, and subsequent emergency and non-emergency actions with emphasis on details not otherwise included in this report)*

The other train was a snow blower train. Uninjured passengers were taken to Wassalton and Quinly Center Stations by bus. The striking train received permission from Central Control for radio ATP bypass and close-up on snow blower train in proceeding block because operator believed it would be difficult to restart his train due to ice build up after extended stop and stay behind snow blower. Operator didn't see stopped snow blower train until too late to safely stop behind it. Operator of snow blower train did not report to Central Control that he was stalled due to a malfunction.

15.CORRECTIVE ACTION *(describe corrective action taken or planned to prevent occurrences similar to this accident)*

Changed procedure number 1234, lowering speed limit in occupied block from 10 mph to safe stopping distance under action conditions. Operators were trained in this new procedure.

EXAMPLE 2 (CONTINUED)

---

14. NARRATIVE *(Brief description of accident, sequence of events leading to accident, and subsequent emergency and non-emergency actions with emphasis on details not otherwise included in this report)*

An automobile driving at an excessive speed crashed through the lowered gates and struck the side of the train which was moving through the rail-highway crossing.

---

15. CORRECTIVE ACTION *(describe corrective action taken or planned to prevent occurrences similar to this accident)*

No corrective action was found to be necessary.

TRAIN FACTORS

16. **CAR DATA**: This question requests information for both the striking train (or only train) and the other train. Under each heading (STRIKING TRAIN (or only train) and OTHER TRAIN), there are spaces to enter three sets of data for up to ten cars in each train. Enter the car number for each car in each train in order of its position as shown on the form under "a". Position 1 is the lead car of the train in the direction of its motion or keyed direction if stopped. Using the code lists printed on the face of the form, enter under column "b" the code that best describes the harmful event to the car that was listed in column "a". Similar information is also requested for column "c". If there were more than ten cars in either of the trains involved in the train accident, use additional copies of Page 2 to list these cars. The first car listed on the additional copy of Page 2 would be the eleventh car in the train and should be so marked for completeness.

16. CAR DATA

a. Enter car number after its position in train. If car number is unknown, enter vehicle type code.

b. Enter 1—car derailed
2—car burned/exploded
3—car derailed and burned/exploded
4—none of the above

c. Enter 1—car damaged
2—car not damaged
3—unknown

STRIKING TRAIN *(or only train)*				OTHER TRAIN *(if applicable)*			
Position		a.	b. c.	Position		a.	b. c.
1				1			
2				2			
3				3			
4				4			
5				5			
6				6			
7				7			
8				8			
9				9			
10				10			

(For more than 10 cars, enter data on an additional Page 2)

EXAMPLE 1 (CONTINUED)

The first car in the striking train, car #1620, was derailed and damaged. The second car, car #1621, was not damaged. In the work train, the second car, #0749, was damaged. The jet blower car, #4326, was leading the train, and was undamaged.

16. CAR DATA

a. Enter car number after its position in train. If car number is unknown, enter vehicle type code.

b. Enter 1—car derailed
2—car burned/exploded
3—car derailed and burned/exploded
4—none of the above

c. Enter 1—car damaged
2—car not damaged
3—unknown

Position	STRIKING TRAIN (or only train) a.	b.	c.	Position	OTHER TRAIN (if applicable) a.	b.	c.
1	1620	1	1	1	4326	4	2
2	1621	4	2	2	0749	4	1
3				3			
4				4			
5				5			
6				6			
7				7			
8				8			
9				9			
10				10			

(For more than 10 cars, enter data on an additional Page 2)

EXAMPLE 2 (CONTINUED)

Three of the four cars from the train (#3246, #3247, #5013) were unblemished as a result of the accident. One car, the third of four, was damaged (#5011).

16. CAR DATA

a. Enter car number after its position in train. If car number is unknown, enter vehicle type code.

b. Enter 1—car derailed
2—car burned/exploded
3—car derailed and burned/exploded
4—none of the above

c. Enter 1—car damaged
2—car not damaged
3—unknown

Position	STRIKING TRAIN (or only train) a.	b.	c.	Position	OTHER TRAIN (if applicable) a.	b.	c.
1	3246	4	2	1			
2	3247	4	2	2			
3	5011	4	1	3			
4	5013	4	2	4			
5				5			
6				6			
7				7			
8				8			
9				9			
10				10			

(For more than 10 cars, enter data on an additional Page 2)

METHOD OF TRAIN PROTECTION (AT TIME OF ACCIDENT)

This section is designed to collect information regarding the train protection of the train(s) at the time of the train accident. Features of the automatic train protection system in operation as well as the block method and its display, in addition to the rules used at the time of the train accident, are required for this section to be completed.

17. **TRAIN CONTROL AT TIME OF ACCIDENT:** Two separate entries are required to complete this question. Under "a. HARDWARE", enter up to four train control hardware alternatives in use for each train at the time of the train accident. Under "b. PROCEDURE", enter up to four train control procedures in use for each train at the time of the train accident.

17. TRAIN CONTROL AT TIME OF ACCIDENT

	a. Hardware *(enter up to 4)*	b. Procedure *(enter up to 4)*
a. STRIKING TRAIN *(or only train)*	⌊_⌊_⌊_⌊_⌋	⌊_⌊_⌊_⌊_⌋
b. OTHER TRAIN *(if applicable)*	⌊_⌊_⌊_⌊_⌋	⌊_⌊_⌊_⌊_⌋

1—wayside, automatic block
2—wayside, interlocking
3—cab signal
4—automatic train stop
5—automatic speed control
6—automatic train operation
7—none
9—other_____

1—manual block with verbal orders
2—manual block with written orders
3—on-sight
4—not applicable
9—other_____

18. **ATP BYPASS SEALED AT TIME OF ACCIDENT:** Indicate whether the automatic train protection bypass was sealed on each train at the time of the train accident.

18. ATP BY-PASS SEALED AT TIME OF ACCIDENT

⌊_⌋
⌊_⌋

1—yes
2—no
3—none exists
8—unknown

TRAIN ACCIDENT REPORT EXAMPLES (CONTINUED)

EXAMPLE 1 (CONTINUED)

At the time of the train accident, the striking train was being operated manually without signal display under on-sight rules. The other train was also operating manually, with a cab signal display and on-sight rules.

METHOD OF TRAIN PROTECTION *(at time of accident)*

	17. TRAIN CONTROL AT TIME OF ACCIDENT		18. ATP BY-PASS SEALED AT TIME OF ACCIDENT
	a. Hardware *(enter up to 4)*	b. Procedure *(enter up to 4)*	
a. STRIKING TRAIN *(or only train)*	7	3	3
b. OTHER TRAIN *(if applicable)*	3	3	3

1—wayside, automatic block
2—wayside, interlocking
3—cab signal
4—automatic train stop
5—automatic speed control
6—automatic train operation
7—none
9—other_____

1—manual block with verbal orders
2—manual block with written orders
3—on-sight
4—not applicable
9—other_____

1—yes
2—no
3—none exists
8—unknown

EXAMPLE 2 (CONTINUED)

At the time of the train accident, the train was operating in automatic mode with automatic blocks and automatic train operation. The ATP bypass was sealed at the time of the accident. The displays available to the operator of the train were cab and wayside. The operator was using on-sight rules at the time of the train accident.

METHOD OF TRAIN PROTECTION *(at time of accident)*

	17. TRAIN CONTROL AT TIME OF ACCIDENT		18. ATP BY-PASS SEALED AT TIME OF ACCIDENT
	a. Hardware *(enter up to 4)*	b. Procedure *(enter up to 4)*	
a. STRIKING TRAIN *(or only train)*	1 3 6	3	1
b. OTHER TRAIN *(if applicable)*			

1—wayside, automatic block
2—wayside, interlocking
3—cab signal
4—automatic train stop
5—automatic speed control
6—automatic train operation
7—none
9—other_____

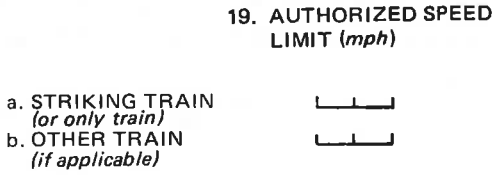
1—manual block with verbal orders
2—manual block with written orders
3—on-sight
4—not applicable
9—other_____

1—yes
2—no
3—none exists
8—unknown

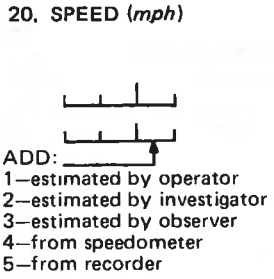
OPERATIONAL FACTORS

As in the preceding section, spaces are provided for two trains. Line "a" is for the striking train (or only train), while line "b" is for the other train.

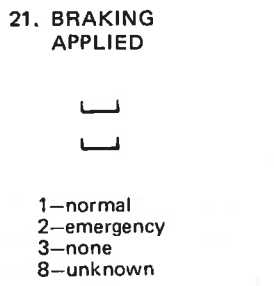
19. **AUTHORIZED SPEED LIMIT**: In the spaces provided, enter the speed limit in miles per hour (mph) at the time and location of the train accident.



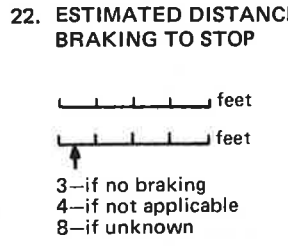
20. **SPEED**: Enter, in the two left-most spaces, the actual speed in miles per hour (mph) of each train at the train accident location. In the right-most space, enter the code from the list printed on the face of the form that best describes how the speed was determined.



21. **BRAKING APPLIED**: Enter from the coded list printed on the face of the form, the maximum braking situation at the time of the train accident.



22. **ESTIMATED DISTANCE: BRAKING TO STOP**: Enter the estimated distance in feet the the train traveled after the brakes were applied. Enter "3" in the first space under this question if no braking was used. Enter "4" in the first space under this question if the question is not applicable. Enter "8" in the first space under this question if the information is unknown.



TRAIN ACCIDENT REPORT EXAMPLES (CONTINUED)

EXAMPLE 1 (CONTINUED)

The speed recorder showed that the striking train was travelling at 10 mph, which was the authorized speed limit for manual bypass operation. The operator applied emergency braking when he saw the other train, but was unable to stop in time on the icy rails. The train travelled 50 feet after he applied the brakes and before collision occurred at about 3 mph. The other train was standing in a block whose authorized speed limit had been reduced, because of snow, to 30 mph.

OPERATIONAL FACTORS

	19. AUTHORIZED SPEED LIMIT *(mph)*	20. SPEED *(mph)*	21. BRAKING APPLIED	22. ESTIMATED DISTANCE: BRAKING TO STOP
a. STRIKING TRAIN *(or only train)*	10	035	2	50 feet
b. OTHER TRAIN *(if applicable)*	30	01	3	4 feet

ADD: ↑

1—estimated by operator
2—estimated by investigator
3—estimated by observer
4—from speedometer
5—from recorder

1—normal
2—emergency
3—none
8—unknown

3—if no braking
4—if not applicable
8—if unknown

EXAMPLE 2 (CONTINUED)

The speed recorder showed that the train was travelling at 15 mph, which was also the authorized speed limit. The operator was not aware of the train accident before it occurred. Therefore, no braking was used at the time of the accident.

OPERATIONAL FACTORS

	19. AUTHORIZED SPEED LIMIT *(mph)*	20. SPEED *(mph)*	21. BRAKING APPLIED	22. ESTIMATED DISTANCE: BRAKING TO STOP
a. STRIKING TRAIN *(or only train)*	15	155	3	3 feet
b. OTHER TRAIN *(if applicable)*				feet

ADD: ↑

1—estimated by operator
2—estimated by investigator
3—estimated by observer
4—from speedometer
5—from recorder

1—normal
2—emergency
3—none
8—unknown

3—if no braking
4—if not applicable
8—if unknown

ENVIRONMENTAL FACTORS

In the ENVIRONMENTAL FACTORS section, record information about weather and visibility conditions that may have affected the train or train crew.

23. **WEATHER**: Select, from the list of alternatives printed on the face of the form, the alternative which most closely describes the weather conditions at the time and location of the train accident. Enter the one-digit code of this alternative in the left-hand space. In the right-hand space, enter the appropriate one-digit modifier code from the "ADD" list printed on the face of the form. If the weather is "clear", no modifier is needed and the right-hand space should be left blank.

23. WEATHER

1—clear
2—cloudy
3—snow
4—rain
5—sleet/hail
6—fog/smoke
7—other (tunnel)

ADD:
7—light
8—moderate
9—heavy

24. **TEMPERATURE**: Enter, in the three right-hand spaces, the temperature in degrees Fahrenheit at the time and location of the train accident. If the temperature is below zero, enter a minus sign (–) in the first space to the left.

24. TEMPERATURE (F°)

ADD: "–" *(minus)* if below 0°

25. **VISIBILITY RESTRICTED TO**: Enter, in feet, the range of visibility at the time of the train accident. This item is concerned with restrictions to visibility caused by atmospheric or light conditions, such as fog, smoke, light to dark tunnel portal situations, etc. Do NOT use this item to record restrictions to visibility caused by obstructions.

25. VISIBILITY RESTRICTED TO

feet

(9999-if not restricted)

26. **LINE OF SIGHT**: Enter, in feet, the MAXIMUM line of sight to the train accident location.

26. LINE OF SIGHT

feet

(9999-if not restricted)

27. **CONDITION OF TRACK**: From the coded list printed on the face of the form, choose up to three alternatives that describe the condition of the track at the location and time of the train accident. Enter one, two, or three one-digit codes to indicate the alternatives you have chosen. If the code for "other" is entered, write in a brief description of that other choice.

27. CONDITION OF TRACK *(enter up to 3)*

1—wet
2—dry
3—muddy
4—under repair
5—greasy
6—snowy, icy
7—obstructed
9—other _____

28. **ARTIFICIAL LIGHT**: From the coded list printed on the face of the form, select the alternative which best describes the availability of artificial light at the location and time of the train accident. Enter the one-digit code of this alternative in the space provided.

28. ARTIFICIAL LIGHT

1—none
2—present, off
3—present, on
8—unknown

EXAMPLE 1 (CONTINUED)

It was snowing heavily and the temperature was 20°F at the time of the train accident. Gusts of snow occasionally reduced visibility to 40 feet. The line of sight measured on the following day was not restricted by any obstacles, structures, or vehicles until 3,250 feet prior to the train accident location. The track was snowy and icy. The track lights were turned on but were of little help because of the blowing snow.

ENVIRONMENTAL FACTORS

23. WEATHER	24. TEMPERATURE (F°)	25. VISIBILITY RESTRICTED TO	26. LINE OF SIGHT	27. CONDITION OF TRACK *(enter up to 3)*	28. ARTIFICIAL LIGHT
3 9	2 0	4 0 feet	3 2 5 0 feet	6	3
1—clear 5—sleet/hail 2—cloudy 6—fog/smoke 3—snow 7—other (tunnel) 4—rain ADD: 7—light 9—heavy 8—moderate	ADD: "-" *(minus)* if below 0°	*(9999-if not restricted)*	*(9999-if not restricted)*	1—wet 5—greasy 2—dry 6—snowy, icy 3—muddy 7—obstructed 4—under repair 9—other _____	1—none 2—present, off 3—present, on 8—unknown

EXAMPLE 2 (CONTINUED)

Heavy clouds covered the accident location with a temperature of 47°F. The heavy clouds restricted the operator's visibility to 500 feet. Since the automobile struck the side of the train, the operator therefore had no line of sight between himself and the train accident location. The dry track was well lit by the street lights at the accident site.

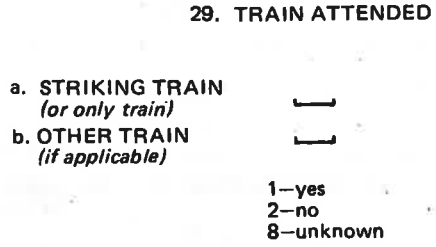
ENVIRONMENTAL FACTORS

23. WEATHER	24. TEMPERATURE (F°)	25. VISIBILITY RESTRICTED TO	26. LINE OF SIGHT	27. CONDITION OF TRACK *(enter up to 3)*	28. ARTIFICIAL LIGHT
2 9	4 7	5 0 0 feet	0 feet	2	3
1—clear 5—sleet/hail 2—cloudy 6—fog/smoke 3—snow 7—other (tunnel) 4—rain ADD: 7—light 9—heavy 8—moderate	ADD: "-" *(minus)* if below 0°	*(9999-if not restricted)*	*(9999-if not restricted)*	1—wet 5—greasy 2—dry 6—snowy, icy 3—muddy 7—obstructed 4—under repair 9—other _____	1—none 2—present, off 3—present, on 8—unknown

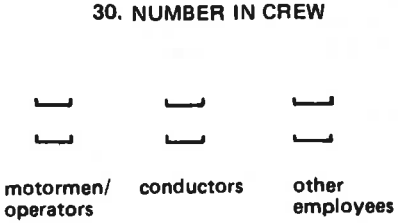
HUMAN FACTORS

Complete Items 29 through 31 in the HUMAN FACTORS section in the same manner as the TRAIN FACTORS, METHOD OF TRAIN PROTECTION, and OPERATIONAL FACTORS section. Line "a" is for information about the striking train (or only train), while line "b" is for information about the other train.

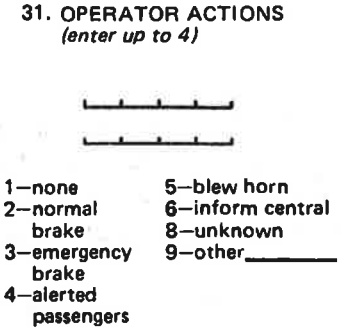
29. **TRAIN ATTENDED**: Enter, from the coded list printed on the face of the form, the one-digit code which indicates whether the accident happened to an attended train.



30. **NUMBER IN CREW**: Enter the number of crew members in each of the three categories of employee printed on the face of the form.



31. **OPERATOR ACTIONS**: From the coded list printed on the face of the form, enter the one-digit code of up to four actions which took place between the time the operator became aware of the impending train accident and the time the train accident actually occurred. If the operator was not aware of the impending train accident, or if he did nothing about it, enter the code for "none". If the code for "other" is entered, write in a brief description of that other choice.



TRAIN ACCIDENT REPORT EXAMPLES (CONTINUED)

EXAMPLE 1 (CONTINUED)

The striking train was manned by the usual crew of one operator and one conductor. Its operator reacted to the impending accident by applying the emergency brakes. The other train, in addition to an operator and a conductor, carried a car repairman and trackman to deal with any snow-related emergencies. This crew was unable to take any action to avoid the accident.

HUMAN FACTORS

	29. TRAIN ATTENDED	30. NUMBER IN CREW			31. OPERATOR ACTIONS *(enter up to 4)*
		motormen/ operators	conductors	other employees	
a. STRIKING TRAIN *(or only train)*	1	1	1	0	3
b. OTHER TRAIN *(if applicable)*	1	1	1	2	1

1—yes
2—no
8—unknown

1—none
2—normal brake
3—emergency brake
4—alerted passengers
5—blew horn
6—inform central
8—unknown
9—other_____

EXAMPLE 2 (CONTINUED)

The only train involved in the accident was attended by two employee crew members: an operator and a transportation supervisor. Since the operator was not aware of the accident before it occurred, he did not take any actions prior to the accident.

HUMAN FACTORS

	29. TRAIN ATTENDED	30. NUMBER IN CREW			31. OPERATOR ACTIONS *(enter up to 4)*
		motormen/ operators	conductors	other employees	
a. STRIKING TRAIN *(or only train)*	1	1	0	1	1
b. OTHER TRAIN *(if applicable)*					

1—yes
2—no
8—unknown

1—none
2—normal brake
3—emergency brake
4—alerted passengers
5—blew horn
6—inform central
8—unknown
9—other_____

HUMAN FACTORS (CONTINUED)

Use Items 32 through 38 to enter information about up to three transit property employees who were involved in the train accident. If it is necessary to enter information on more than three employees, attach an additional copy or copies of Page 3 to the RRT Train Accident Report. EACH COLUMN (1, 2, or 3) SHOULD CONTAIN INFORMATION ABOUT ONE EMPLOYEE ONLY. The specific instructions that follow tell how to fill out Items 32 through 38 for a single employee (Column 1); to record information about other employees, complete additional columns.

32. **EMPLOYEE LOCATION:** Use the coded list printed on the face of the form to identify where the employee was at the time of the train accident: on the striking train, on the other train, or not on a train.

33. **EMPLOYEE JOB CODE:** Enter, from the list printed on the face of the form, the one-digit code which identifies the employee's regularly assigned duty. If the employee is qualified for and has performed more than one duty, enter the job code for the duty to which he was principally assigned during the period preceding the accident.

	EMPLOYEE INVOLVED		
32. EMPLOYEE LOCATION 1—on striking train 2—on other train 3—not on train	1. ⌊_⌋	2. ⌊_⌋	3. ⌊_⌋
33. EMPLOYEE JOB CODE 1—motorman, train operator 2—conductor 9—other personnel	⌊_⌋	⌊_⌋	⌊_⌋

TRAIN ACCIDENT REPORT EXAMPLES (CONTINUED)

EXAMPLE 1 (CONTINUED)

The transit employees involved in the train accident were the operator of the striking train, the operator of the other train, and the central controller.

omplete a column for each motorman/operator, conductor, or other employee involved in the accident. Use additional Page 3 if more than 3 employees are volved)

	EMPLOYEE INVOLVED		
	1.	2.	3.
32. EMPLOYEE LOCATION 1—on striking train 2—on other train 3—not on train	1	2	3
33. EMPLOYEE JOB CODE 1—motorman, train operator 2—conductor 9—other personnel	1	1	9

EXAMPLE 2 (CONTINUED)

The transit employees involved in the train accident were the operator of the train and the transportation supervisor.

Complete a column for each motorman/operator, conductor, or other employee involved in the accident. Use additional Page 3 if more than 3 employees are volved)

	EMPLOYEE INVOLVED		
	1.	2.	3.
32. EMPLOYEE LOCATION 1—on striking train 2—on other train 3—not on train	1	1	
33. EMPLOYEE JOB CODE 1—motorman, train operator 2—conductor 9—other personnel	1	9	

34. **JOB CODE FOR DUTIES PERFORMED AT TIME OF ACCIDENT**: Again enter the appropriate one-digit code from the list printed on the face of the form. This entry may differ from the entry in Item 33, EMPLOYEE JOB CODE, if at the exact time of the train accident, the employee is performing a duty other than the duty to which he is regularly assigned.

34. JOB CODE FOR DUTIES PERFORMED AT TIME OF ACCIDENT
1—motorman, train operator
2—conductor
9—other personnel ⌊_⌋ ⌊_⌋ ⌊_⌋

35. **YEARS OF SERVICE:** Enter the number of years the employee has worked, in any capacity, for the transit property. Include years worked for the present transit property's predecessor organization (if any). Years of service are normally reported as of the most recent anniversary of the employee's hiring.

35. YEARS OF SERVICE ⌊_⌋⌊_⌋ ⌊_⌋⌊_⌋ ⌊_⌋⌊_⌋

36. **WAS CHECK-IN PROCEDURE FOLLOWED AT START OF SHIFT:** Enter the one-digit code that best answers this question from the alternatives printed on the face of the form.

36. WAS CHECK-IN PROCEDURE FOLLOWED AT START OF SHIFT 1—yes; 2—no; 3—not applicable ⌊_⌋ ⌊_⌋ ⌊_⌋

37. **HOURS OF DUTY SINCE START OF SHIFT:** This item requires that the hours on duty be rounded to the nearest hour and entered in the spaces provided.

37. HOURS OF DUTY SINCE START OF SHIFT ⌊_⌋⌊_⌋ ⌊_⌋⌊_⌋ ⌊_⌋⌊_⌋

38. **AGE:** Enter the employee's age as of his last birthday.

38. AGE ⌊_⌋⌊_⌋ ⌊_⌋⌊_⌋ ⌊_⌋⌊_⌋

38.1 **NUMBER OF PASSENGER FATALITIES;** : Enter the number of people who died as a result of this accident

38.1 Number of Passenger Fatalities ⌊_⌋⌊_⌋

38.2 **NUMBER OF PASSENGER INJURIES**: Enter the number of people who were injured as a result of this accident.

38.2 Number of Passenger Injuries ⌊_⌋⌊_⌋

TRAIN ACCIDENT REPORT EXAMPLES (CONTINUED)

EXAMPLE 1 (CONTINUED)

All three employees were performing their regularly assigned duties at the time of the train accident. The operator of the striking train had worked for two years as a NATA train operator. The operator of the other train had worked for NATA for a total of ten years, and the central controller for three and a half years.

34. JOB CODE FOR DUTIES PERFORMED AT TIME OF ACCIDENT 1—motorman, train operator 2—conductor 9—other personnel	1	1	9
35. YEARS OF SERVICE	02	10	03

EXAMPLE 2 (CONTINUED)

The operator, with 3 years of service at NATA, and the transportation supervisor, with 9 years of service, were performing their regularly assigned duties at the time of the train accident.

34. JOB CODE FOR DUTIES PERFORMED AT TIME OF ACCIDENT 1—motorman, train operator 2—conductor 9—other personnel	1	9	
35. YEARS OF SERVICE	03	09	

EXAMPLE 1 (CONTINUED)

All employees followed normal check-in procedure when beginning their shifts. The operator of the striking train, age 31, and other train, age 42, had each been on duty for 12 hours. The central controller, 24, had been on duty for only one hour.

36. WAS CHECK-IN PROCEDURE FOLLOWED AT START OF SHIFT 1—yes; 2—no; 3—not applicable	1	1	1
37. HOURS OF DUTY SINCE START OF SHIFT	12	12	01
38. AGE	31	42	24

EXAMPLE 2 (CONTINUED)

The train operator, 33 years old, had been working on his current shift for 6 hours before the train accident occurred and the transportation supervisor, 46, 3 hours. Both employees had followed the check-in procedures for NATA at the beginning of their shifts.

36. WAS CHECK-IN PROCEDURE FOLLOWED AT START OF SHIFT 1—yes; 2—no; 3—not applicable	1	1	
37. HOURS OF DUTY SINCE START OF SHIFT	06	03	
38. AGE	33	46	

TRAIN ACCIDENT REPORT EXAMPLES (CONTINUED)

EXAMPLE 1 (CONTINUED)

As the train was moving into the station, a man leaned forward into the path of the train. The front of the train made contact with the man, and passenger sustained a fatal injury.

38.1 Number of passenger fatalities. 0 1

EXAMPLE 2 (CONTINUED)

Revenue in service train derailed after operating over a foreign object on the running rails. Train was evacuated and injured passengers were transported to a local medical facility. Forty-five passengers were injured.

38.2 Number of passenger injuries. 4 5

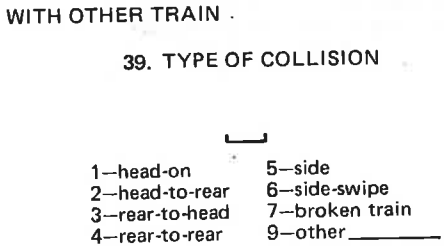
TRAIN COLLISION SECTION

Use the TRAIN COLLISION SECTION if the train accident involved collision with another train; collision with an obstacle on, over, or beside the track (excepting vehicles or pedestrians at rail-highway crossings) or a person (not at a rail-highway crossing). Complete as many of the following three subsections as are required to report the details of the collision.

WITH OTHER TRAIN

If the train accident involved a collision with another train, use the WITH OTHER TRAIN subsection to report details of the collision.

39. **TYPE OF COLLISION**: Enter, from the coded list printed on the face of the form, the one-digit code which most accurately classifies the collision. If the code for "other" is entered, write in a brief description of that other choice.



TRAIN ACCIDENT REPORT EXAMPLES (CONTINUED)

EXAMPLE 1 (CONTINUED)

The head end of the striking train collided with the rear of the other train.

TRAIN COLLISION SECTION

WITH OTHER TRAIN

39. TYPE OF COLLISION

[2]

1—head-on	5—side
2—head-to-rear	6—side-swipe
3—rear-to-head	7—broken train
4—rear-to-rear	9—other_____

EXAMPLE 2 (CONTINUED)

Since this example is a train collision with a motor vehicle at a rail-highway crossing, this section of the form is left blank as not applicable.

TRAIN COLLISION SECTION

WITH OTHER TRAIN

39. TYPE OF COLLISION

[ ]

1—head-on	5—side
2—head-to-rear	6—side-swipe
3—rear-to-head	7—broken train
4—rear-to-rear	9—other_____

WITH OBSTACLE ON, OVER, OR BESIDE THE TRACK

If the train accident involved a collision with an obstacle other than a person or another train, use the WITH OBSTACLE ON, OVER, OR BESIDE THE TRACK subsection to identify the obstacle and tell how it became an obstacle.

Note: Do NOT complete this subsection if the collision is with a vehicle or pedestrian at a rail-highway crossing. Instead, complete Page 5.

40. **TYPE OF OBSTACLE:** Enter, from the coded list printed on the face of the form, the one-digit code that best classifies the obstacle involved in the collision. If the code for "other" is entered, write in a brief description of that other choice.

40. TYPE OF OBSTACLE

└─┘

1—transit equipment from vehicle
2—transit equipment not from vehicle
3—non-transit equipment
4—bumping post
5—wayside structure
8—unknown
9—other _____

41. **DESCRIBE OBJECT AND HOW IT BECAME AN OBSTACLE:** In the space provided, write in a brief narrative description of the obstacle and how it became an obstacle at the train accident location.

41. DESCRIBE OBJECT AND HOW IT BECAME AN OBSTACLE

_____

_____

_____

_____

TRAIN ACCIDENT REPORT EXAMPLES (CONTINUED)

EXAMPLE 1 (CONTINUED)

Since this example is a head to rear collision with a snow blower train, this section of the form is left blank as not applicable.

WITH OBSTACLE ON, OVER, OR BESIDE THE TRACK *(excluding vehicle or pedestrian at rail-highway crossings)*

40. TYPE OF OBSTACLE

41. DESCRIBE OBJECT AND HOW IT BECAME AN OBSTACLE

1—transit equipment from vehicle
2—transit equipment not from vehicle
3—non-transit equipment
4—bumping structure
5—wayside structure
8—unknown
9—other

EXAMPLE 2 (CONTINUED)

Since this example is a train collision with a motor vehicle at a rail-highway crossing, this section of the form is left blank as not applicable.

WITH OBSTACLE ON, OVER, OR BESIDE THE TRACK *(excluding vehicle or pedestrian at rail-highway crossings)*

40. TYPE OF OBSTACLE

41. DESCRIBE OBJECT AND HOW IT BECAME AN OBSTACLE

1—transit equipment from vehicle
2—transit equipment not from vehicle
3—non-transit equipment
4—bumping structure
5—wayside structure
8—unknown
9—other

TRAIN COLLISION SECTION (CONTINUED)

WITH PERSON

If the train accident involved a collision with a person, complete the WITH PERSON subsection to provide details about the person's presence on or near the track.

Note: Do NOT use this subsection if the collision with a person took place at a rail-highway crossing. Instead, complete Page 5.

42. **HOW DID PERSON GET NEAR TRAIN:** Enter, from the coded list printed on the face of the form, the one-digit code which best describes how the person got near the train. If the code for "other" is entered, write in a brief description of that other choice.

42. HOW DID PERSON GET NEAR TRAIN

____

1—from station	5—from emergency exit
2—over fence	6—dropped from platform
3—thru fence	7—leaned over platform edge
4—from rail-highway crossing	8—unknown
	9—other _____

43. **DESCRIBE TYPE OF FENCE OR BARRIER AT AREA FROM WHICH PERSON ENTERED RIGHT OF WAY:** Write a brief narrative description of the fence or barrier in the space provided.

43. DESCRIBE TYPE OF FENCE OR BARRIER AT AREA FROM WHICH PERSON ENTERED RIGHT OF WAY

_____

_____

_____

_____

_____

TRAIN ACCIDENT REPORT EXAMPLES (CONTINUED)

EXAMPLE 1 (CONTINUED)

Since this example is a head to rear collision with a snow blower train, this section of the form is left blank as not applicable.

WITH PERSON *(not at a rail-highway crossing)*

42. HOW DID PERSON GET NEAR TRAIN

[ ]

1—from station
2—over fence
3—thru fence
4—from rail-highway crossing
5—from emergency exit
6—dropped from platform
7—leaned over platform edge
8—unknown
9—other _____

43. DESCRIBE TYPE OF FENCE OR BARRIER AT AREA FROM WHICH PERSON ENTERED RIGHT OF WAY

_____
_____
_____
_____
_____

EXAMPLE 2 (CONTINUED)

Since this example is a train collision with a motor vehicle at a rail-highway crossing, this section of the form is left blank as not applicable.

WITH PERSON *(not at a rail-highway crossing)*

42. HOW DID PERSON GET NEAR TRAIN

[ ]

1—from station
2—over fence
3—thru fence
4—from rail-highway crossing
5—from emergency exit
6—dropped from platform
7—leaned over platform edge
8—unknown
9—other _____

43. DESCRIBE TYPE OF FENCE OR BARRIER AT AREA FROM WHICH PERSON ENTERED RIGHT OF WAY

_____
_____
_____
_____
_____

PARTIAL EXAMPLE 3: COLLISION WITH PERSON

As a train operator was braking his platform-length rush hour train for a normal station stop, about one quarter of the way into the station, a man jumped from among a cluster of people near the platform edge into the path of the train and was struck by the train as the operator applied emergency braking.

WITH PERSON *(not at a rail-highway crossing)*

42. HOW DID PERSON GET NEAR TRAIN

[6]

1—from station
2—over fence
3—thru fence
4—from rail-highway crossing
5—from emergency exit
6—dropped from platform
7—leaned over platform edge
8—unknown
9—other _____

43. DESCRIBE TYPE OF FENCE OR BARRIER AT AREA FROM WHICH PERSON ENTERED RIGHT OF WAY

Subway station platform edge about one
quarter of the way from the approach end
of the platform.

DERAILMENT SECTION

If the train accident involved a derailment, use the DERAILMENT SECTION to record information about the derailment and the trackwork on which it occurred.

44. **TYPE OF TRACK AT DERAILMENT LOCATION**: Enter, from the coded list printed on the face of the form, the one-digit code that best describes the type of trackwork where the derailment occurred (not necessarily where the train came to rest). If the code for "other" is entered, write in a brief description of that other choice.

44. TYPE OF TRACK AT DERAILMENT LOCATION

⌊_⌋

1—tangent
2—curved
3—facing switch
4—trailing switch
5—crossing
6—derailer
9—other _____

45. **ESTIMATED DISTANCE TRAVELED AFTER DERAILMENT**: Enter, in feet, the estimated distance the train traveled between the point where it derailed and its stopping point.

45. ESTIMATED DISTANCE TRAVELED AFTER DERAILMENT

⌊_____⌋ feet

46. **SWITCH TYPE**: If the derailment occurred at a switch, select, from the coded list printed on the face of the form, up to two alternatives which identify the type of switch. Enter the one-digit switch type code(s) in the spaces provided. If the code for "other" is entered, write in a brief description of that other choice.

46. SWITCH TYPE
(enter up to 2)

⌊_⌋⌊_⌋

1—manual
2—automatic
3—spring & stay
4—spring & return
5—not applicable
9—other _____

47. **SWITCH PROPERLY ALIGNED AND LOCKED.** Enter, from the coded list printed on the face of the form, the one-digit code that tells whether the switch was properly aligned and locked for the train movement at the time of the derailment.

47. SWITCH PROPERLY ALIGNED AND LOCKED

⌊_⌋

1—yes
2—no
3—not applicable
8—unknown

TRAIN ACCIDENT REPORT EXAMPLES (CONTINUED)

EXAMPLE 1 (CONTINUED)

The lead truck of car 1620 derailed upon impact. The striking train continued to move for about 15 feet before it came to rest. The derailment took place on a portion of tangent track without switches or other special trackwork.

DERAILMENT SECTION

44. TYPE OF TRACK AT DERAILMENT LOCATION	45. ESTIMATED DISTANCE TRAVELED AFTER DERAILMENT	46. SWITCH TYPE *(enter up to 2)*	47. SWITCH PROPERLY ALIGNED AND LOCKED
1	15 feet	5	3
1—tangent 2—curved 3—facing switch 4—trailing switch 5—crossing 6—derailer 9—other _____		1—manual 2—automatic 3—spring & stay 4—spring & return 5—not applicable 9—other _____	1—yes 2—no 3—not applicable 8—unknown

EXAMPLE 2 (CONTINUED)

Since this example is a train collision with a motor vehicle at a rail-highway crossing, and no derailment occurred, this section of the form is left blank as not applicable.

DERAILMENT SECTION

44. TYPE OF TRACK AT DERAILMENT LOCATION	45. ESTIMATED DISTANCE TRAVELED AFTER DERAILMENT	46. SWITCH TYPE *(enter up to 2)*	47. SWITCH PROPERLY ALIGNED AND LOCKED
	feet		
1—tangent 2—curved 3—facing switch 4—trailing switch 5—crossing 6—derailer 9—other _____		1—manual 2—automatic 3—spring & stay 4—spring & return 5—not applicable 9—other _____	1—yes 2—no 3—not applicable 8—unknown

FIRE/EXPLOSION SECTION

If the train accident involved a fire/explosion, use the FIRE/EXPLOSION SECTION to record information about the fire/explosion and its effects.

48. **SOURCE OF FIRE/EXPLOSION**: Enter, from the coded list printed on the face of the form the one-digit code that best describes the source of the fire/explosion. If the code for "other" is entered, write in a brief description of that other choice.

48. SOURCE OF FIRE/ EXPLOSION

1—in transit vehicle
2—under transit vehicle
3—3rd rail
4—catenary
5—other transit system
6—passenger brought on board
8—unknown
9—other _____

49. **CAR INTERIOR BURNED**: If any portion of the car interior burned, enter up to five one-digit codes from the list printed on the face of the form to indicate which portions of the interior burned. If no portion of the car interior burned, enter a "1" in the first space.

49. CAR INTERIOR BURNED
(enter up to 5)

1—no
2—seats
3—flooring
4—paint/surfacing
5—electrical wiring
6—other interior

EXAMPLE 1 (CONTINUED)

Since this example is a head to rear collision with a snow blower train which had no subsequent fire/explosion, this section of the form is left blank as not applicable.

FIRE/EXPLOSION SECTION

48. SOURCE OF FIRE/ EXPLOSION

1—in transit vehicle
2—under transit vehicle
3—3rd rail
4—catenary
5—other transit system
6—passenger brought on board
8—unknown
9—other

49. CAR INTERIOR BURNED
(enter up to 5)

1—no
2—seats
3—flooring
4—paint/surfacing
5—electrical wiring
6—other interior

EXAMPLE 2 (CONTINUED)

Since this example is a train collision with a motor vehicle at a rail-highway crossing, with no subsequent fire/explosion, this section of the form is left blank as not applicable.

PARTIAL EXAMPLE 4: FIRE/EXPLOSION

A passenger saw a vandal start a scrap newspaper on fire with a butane lighter just before getting off the train. The passenger got off the train and alerted the conductor who grabbed the fire extinguisher from his duty station and put out the blaze. As a result of the fire, some seats and a section of the floor on the train were burned.

FIRE/EXPLOSION SECTION

48. SOURCE OF FIRE/ EXPLOSION

6

1—in transit vehicle
2—under transit vehicle
3—3rd rail
4—catenary
5—other transit system
6—passenger brought on board
8—unknown
9—other

49. CAR INTERIOR BURNED
(enter up to 5)

2 3

1—no
2—seats
3—flooring
4—paint/surfacing
5—electrical wiring
6—other interior

RAIL-HIGHWAY CROSSING ACCIDENT SECTION

50. **CROSSING WARNING**: Notice that this item classifies up to four kinds of crossing warning devices (lines 1, 2, 3, and 4) at the rail-highway crossing according to type (column "a"), location (column "b"), condition (column "c") and relation to track circuit (column "d"). From the coded list printed at the left-hand side of Item 51, select the alternative that identifies the first type of crossing warning device that was installed at the rail-highway crossing. (Note: It does not matter which type is identified as "first type," "second type," etc. as long as all the information about any one type of crossing warning device is entered ON THE SAME LINE.) Enter the two-digit code for the first type of crossing warning device in the spaces located on line 1 and under column "a". If the code for "other" is entered, write in a brief description of that other choice in the appropriate space provided. Then, using the coded list printed under column "b", select the alternative which tells on which side or sides of the track the first type of crossing warning device was located. Enter the one-digit code for this location in the space on line 1 and under column "b". From the coded list printed under column "c", select the alternative which tells whether the first type of crossing warning device was working properly at the time of the rail-highway crossing accident. Enter the one-digit code of this alternative in the space on line 1 and under column "c". Finally, from the coded list printed under column "d", select the alternative which tells whether the first type of crossing warning device was interconnected to the track circuit. Enter the one-digit code of this alternative in the space on line 1 and under column "d". All entries for the first type of crossing warning device have now been completed. If a second type of crossing warning device was also installed at the rail-highway crossing, enter the information about it in a similar manner, but using line 2. Use lines 3 and 4 to enter information about any additional types of crossing warning devices that were installed at the rail-highway crossing. If it is necessary to enter information on more than 4 crossing warning types installed, attach an additional Page 5 to the RRT Train Accident Report.

50. CROSSING WARNING

ENTER UP TO 4 OF THE FOLLOWING IN COLUMN a. TYPE
(for more than 4 crossing warning types, enter data on additional Page 5)

01—none
10—highway traffic signal
11—highway flashing red signal
12—highway flashing yellow signal
13—highway stop sign
19—highway sign, other_____
20—flashing light, standard
21—flashing light, cantilevered
22—audible signal
23—advance RR warning
24—wigwags
30—gates, automatic, full
31—gates, automatic, half
39—gates, other_____
40—crew, flagging
41—police, patrolman
49—human protection, other_____
99—other_____

	a. TYPE	b. LOCATION	c. OPERATING	d. INTERCONNECTED TO TRACK CIRCUIT
1.	⌊⌋⌊⌋	⌊⌋	⌊⌋	⌊⌋
2.	⌊⌋⌊⌋	⌊⌋	⌊⌋	⌊⌋
3.	⌊⌋⌊⌋	⌊⌋	⌊⌋	⌊⌋
4.	⌊⌋⌊⌋	⌊⌋	⌊⌋	⌊⌋

1—approach side
2—other side
3—both sides

ACTIVE
1—yes
2—no
3—unknown

PASSIVE
4—legible
5—not legible
6—not visible

1—yes
2—no
3—unknown

EXAMPLE 1 (CONTINUED)

Since this is a head to rear collision example that did not occur at a rail-highway crossing, the Rail-Highway Crossing Accident Section (Page 5 of 5) of the RRT Train Accident Report would be blank and therefore need not be submitted.

RAIL-HIGHWAY CROSSING ACCIDENT SECTION

50. CROSSING WARNING

ENTER UP TO 4 OF THE FOLLOWING IN COLUMN a. TYPE
(for more than 4 crossing warning types, enter data on additional Page 5)

01—none
10—highway traffic signal
11—highway flashing red signal
12—highway flashing yellow signal
13—highway stop sign
19—highway sign, other_____
20—flashing light, standard
21—flashing light, cantilevered
22—audible signal
23—advance RR warning
24—wigwags
30—gates, automatic, full
31—gates, automatic, half
39—gates, other_____
40—crew, flagging
41—police, patrolman
49—human protection, other_____
99—other_____

	a. TYPE	b. LOCATION	c. OPERATING	d. INTERCONNECTED TO TRACK CIRCUIT
1.				
2.				
3.				
4.				

ACTIVE
1—approach side
2—other side
3—both sides

ACTIVE
1—yes
2—no
3—unknown

ACTIVE
1—yes
2—no
3—unknown

PASSIVE
4—legible
5—not legible
6—not visible

EXAMPLE 2 (CONTINUED)

Three types of crossing warnings were installed at the grade crossing at the time of the accident: highway flashing red signal, advance RR warning and full automatic gates. All three crossing warning devices were located on both sides of the grade crossing and were in operating condition at the time of the train accident. The flashing red signal and the automatic gates were connected to the track circuit at the time of the grade crossing accident.

RAIL-HIGHWAY CROSSING ACCIDENT SECTION

50. CROSSING WARNING

ENTER UP TO 4 OF THE FOLLOWING IN COLUMN a. TYPE
(for more than 4 crossing warning types, enter data on additional Page 5)

01—none
10—highway traffic signal
11—highway flashing red signal
12—highway flashing yellow signal
13—highway stop sign
19—highway sign, other_____
20—flashing light, standard
21—flashing light, cantilevered
22—audible signal
23—advance RR warning
24—wigwags
30—gates, automatic, full
31—gates, automatic, half
39—gates, other_____
40—crew, flagging
41—police, patrolman
49—human protection, other_____
99—other_____

	a. TYPE	b. LOCATION	c. OPERATING	d. INTERCONNECTED TO TRACK CIRCUIT
1.	1 1	3	1	1
2.	2 3	3	4	2
3.	3 0	3	1	1
4.				

1—approach side
2—other side
3—both sides

ACTIVE
1—yes
2—no
3—unknown

ACTIVE
1—yes
2—no
3—unknown

PASSIVE
4—legible
5—not legible
6—not visible

51. **MINIMUM TIME FROM CIRCUIT ACTIVATION TO TRAIN ENTERING CROSSING:** If the crossing warning device was operating properly, enter the minimum time, in seconds, that normally elapsed between the moment the control circuit was activated and the moment the train entered the crossing. If the control circuit malfunctioned, enter "997". If the crossing warning device itself malfunctioned, enter "998". If the rail-highway crossing was not protected by a crossing warning device of the type which is activated by a control circuit, enter "999".

51. MINIMUM TIME FROM CIRCUIT ACTIVATION TO TRAIN ENTERING CROSSING

└┴┴┘ seconds

Enter: 997—if circuit malfunctioned
998—if warning device malfunctioned
999—not applicable

52. **VISIBILITY AT CROSSING WAS OBSCURED BY:** This item allows information to be entered about up to three factors which obscured the train operator's and the other vehicle's visibility in the area of the rail-highway crossing. Each two-digit obscuring factor is to be identified both by its type (one digit from first coded list) and its location (one digit from second coded list). From the first coded list, printed at the left-hand side of Item 53, select an obscuring factor that was present at the rail-highway crossing and enter its one-digit code in the left-hand half of the first of three, two-digit spaces. If the code for "other" is entered, write in a brief description of that other choice in the space at the end of the coded list. Then, from the second coded list, printed at the right-hand side of Item 53, select the alternative that identifies the location of the obscuring factor and enter its one-digit code in the right-hand half of the first of three, two-digit spaces. If there was a second obscuring factor, select the codes for its type and location in a similar manner, but enter them in the left- and right-hand halves of the second two-digit space. If a third obscuring factor was present, enter its codes, in a similar manner in the left- and right-hand halves of the third two-digit space. Complete this question for both the train and other vehicle involved in the rail-highway crossing accident.

52. VISIBILITY AT CROSSING WAS OBSCURED BY *(enter up to 3, 2-digit codes)*

a. TRAIN └┴┘ └┴┘ └┴┘

b. OTHER VEHICLE └┴┘ └┴┘ └┴┘

1—permanent structure
2—standing transit equipment
3—passing train
4—topography
5—vegetation
6—highway vehicle
7—fog, blowing snow, etc.
8—not obscured
9—other _____

ADD after each entry:
1—on transit right of way
2—along highway
3—on other property
4—not applicable

53. **CROSSING ILLUMINATION:** Enter, from the coded list printed on the face of the form, the one-digit code that identifies the type of illumination in use at the time of the rail-highway crossing accident.

53. CROSSING ILLUMINATION

└┘

1—none
2—daylight
3—street lights on
4—special lights on

54. **LEGAL HIGHWAY SPEED:** Enter in miles-per-hour, the legal speed of the highway where the rail-highway grade crossing accident occurred. Enter "999" if the rail-highway crossing accident involved a pedestrian rather than a highway vehicle.

54. LEGAL HIGHWAY SPEED *(mph)*

└┴┴┘

(enter 999 if a pedestrian)

EXAMPLE 2 (CONTINUED)

It took the train 15 seconds to enter the grade crossing once the active warning devices began operating. Visibility at the crossing was not obscured for either vehicle at the time of the accident. A legal highway speed of 15 mph was posted at the very well lit crossing.

51. MINIMUM TIME FROM CIRCUIT ACTIVATION TO TRAIN ENTERING CROSSING

15 seconds

Enter: 997—if circuit malfunctioned
998—if warning device malfunctioned
999—not applicable

52. VISIBILITY AT CROSSING WAS OBSCURED BY *(enter up to 3, 2-digit codes)*

a. TRAIN 84

b. OTHER VEHICLE 84

1—permanent structure
2—standing transit equipment
3—passing train
4—topography
5—vegetation
6—highway vehicle
7—fog, blowing snow, etc.
8—not obscured
9—other _____

ADD after each entry:
1—on transit right of way
2—along highway
3—on other property
4—not applicable

53. CROSSING ILLUMINATION

3

1—none
2—daylight
3—street lights on
4—special lights on

54. LEGAL HIGHWAY SPEED *(mph)*

15

(enter 999 if a pedestrian)

HIGHWAY USER FACTORS

Questions 56-60 are to be completed for the highway user involved in the rail-highway crossing accident, and not for the train involved.

55. **HIGHWAY USER**: Enter, from the coded list printed on the face of the form, the two-digit code that best describes the highway user involved in the rail-highway crossing accident. If the code for "other" is entered, write a brief description of that other choice.

55. HIGHWAY USER

⌊__⌋

01–auto
02–auto with trailer
03–truck
04–tractor-trailer
05–bus
06–school bus
07–taxicab/limousine
08–motorcycle
09–emergency vehicle
10–bicycle
11–animal
50–pedestrian
98–unknown
99–other_____

56. **LOCATION OF HIGHWAY USER**: Enter from the coded list printed on the face of the form, the one-digit code that indicates where the highway vehicles or pedestrian was located at the time of the rail-highway crossing accident.

56. LOCATION OF HIGHWAY USER

⌊_⌋

1–moving through crossing
2–stopped on crossing
3–stalled on crossing
4–abandoned on crossing

57. **VEHICLE DIRECTION**: Enter, from the coded list printed on the face of the form, the one-digit code which identifies the direction in which the highway vehicle or pedestrian was moving (or, if not moving, facing) at the time of the rail-highway crossing accident.

57. VEHICLE DIRECTION

⌊_⌋

1–north
2–east
3–south
4–west

EXAMPLE 2 (CONTINUED)

The automobile involved in the train accident was travelling in a westerly direction as it moved through the crossing.

55. HIGHWAY USER

0 1

01—auto
02—auto with trailer
03—truck
04—tractor-trailer
05—bus
06—school bus
07—taxicab/limousine
08—motorcycle
09—emergency vehicle
10—bicycle
11—animal
50—pedestrian
98—unknown
99—other _____

56. LOCATION OF HIGHWAY USER

1

1—moving through crossing
2—stopped on crossing
3—stalled on crossing
4—abandoned on crossing

57. VEHICLE DIRECTION

4

1—north
2—east
3—south
4—west

58. **OTHER VEHICLE SPEED**: Enter, in miles per hour, the speed of the other vehicle at the time of the rail-highway crossing accident. Enter "777" if the rail-highway crossing accident involved a pedestrian rather than a highway vehicle.

59. **HIGHWAY DRIVER ACTIONS**: From the coded list printed on the face of the form, select up to three actions taken by the driver of the highway vehicle during the approach to the rail-highway crossing. Enter up to three one-digit codes for these actions, in order of their occurrence, in the spaces provided. If the rail-highway crossing accident involved a pedestrian rather than a highway vehicle, leave these spaces blank.

58. OTHER VEHICLE SPEED*

mph

estimated by

1—RRT operator
2—other driver
3—observer
4—RRT investigator
5—police
9—other_____

(if pedestrian enter 777)*

59. HIGHWAY DRIVER ACTIONS
(enter up to 3)

1—none
2—applied brakes
3—accelerated
4—swerved
5—drove around or through gate
6—stopped, proceeded
7—passed standing vehicle
8—drove in front of one train and struck/was struck by second train
9—drove behind one train and struck/was struck by second train

EXAMPLE 2 (CONTINUED)

From eyewitness accounts of the train accident, it was determined that the driver of the automobile was moving at about 35 mph through the lowered gates while neither accelerating nor decelerating.

59. OTHER VEHICLE SPEED*

3 3 5 mph

estimated by

1—RRT operator
2—other driver
3—observer
4—RRT investigator
5—police
9—other_____

(if pedestrian enter 777)*

60. HIGHWAY DRIVER ACTIONS
(enter up to 3)

5

1—none
2—applied brakes
3—accelerated
4—swerved
5—drove around or through gate
6—stopped, proceeded
7—passed standing vehicle
8—drove in front of one train and struck/was struck by second train
9—drove behind one train and struck/was struck by second train

ACCIDENT EFFECTS

Complete the Accident Effects section in part, for the highway user, and in part, for the train involved in the rail-highway crossing accident.

60. **HIGHWAY USER CASUALTIES:** Tabulate the number of highway user casualties that resulted from the rail-highway crossing accident according to the type of casualty (there are separate lines for "Driver", "Other Occupants", and "Pedestrians") and the nature of the casualty (there are separate columns for "Fatalities" and "Injuries"). If there were neither fatalities nor injuries for a particular category of person, leave the appropriate spaces blank. For purposes of this tabulation, any injured person is counted as a single injury even though any one person may have received multiple injuries.

60. HIGHWAY USER CASUALTIES

	Fatalities	Injuries
Driver	⌊__⌋	⌊__⌋
Other Occupants	⌊__⌋	⌊__⌋
Pedestrians	⌊__⌋	⌊__⌋

61. **POINT OF IMPACT**: This item has two entries to be selected from a total of two columns of alternatives. From the coded list printed in both columns select the alternative that identifies the point of impact on the train and enter its two-digit code in the spaces under entry "a" ON TRAIN. From the coded list printed in both columns, select the alternative that identifies the point of impact on the other vehicle and enter its two-digit code in the spaces under entry "b" ON OTHER VEHICLE.If the rail-highway crossing accident involved a pedestrian rather than a highway vehicle, enter "77" in the spaces under entry "b".

61. POINT OF IMPACT

a. ON TRAIN	b. ON OTHER VEHICLE*
⌊__⌋	⌊__⌋
01—left front	07—right rear
02—center front	08—center rear
03—right front	09—left rear
04—front right side	10—rear left side
05—center right side	11—center left side
06—rear right side	12—front left side
	(if pedestrian enter 77)*

62. **OTHER DRIVER CHARGED BY POLICE**: Enter, from the coded list printed on the face of the form, the one-digit code that indicates whether the driver of the other vehicle was charged by police as a result of the rail-highway crossing accident.

62. OTHER DRIVER CHARGED BY POLICE

⌊__⌋

1—yes
2—no
3—not applicable
8—unknown

EXAMPLE 2 (CONTINUED)

The train was struck by the automobile in the middle of the right side of the third car. The automobile hit the train straight on, damaging the center front of the automobile. The sole occupant of the automobile, the driver, was dead on arrival at Northern America General Hospital.

ACCIDENT EFFECTS

60. HIGHWAY USER CASUALTIES

	Fatalities	Injuries
Driver	1	
Other Occupants		
Pedestrians		

61.. POINT OF IMPACT

a. ON TRAIN: 05

b. ON OTHER VEHICLE*: 02

01—left front
02—center front
03—right front
04—front right side
05—center right side
06—rear right side
07—right rear
08—center rear
09—left rear
10—rear left side
11—center left side
12—front left side
(if pedestrian enter 77)*

62. OTHER DRIVER CHARGED BY POLICE: 3

1—yes
2—no
3—not applicable
8—unknown

II. RRT CASUALTY REPORT INSTRUCTIONS

II. RRT Casualty Report Instructions: Form UMTA F6600.2

The RRT Casualty Report Form has been designed for reporting all casualties involving passengers or other personnel (contractor, etc.) which occur on station platforms, on trackways, boarding, alighting and on board trains which result in fatalities or personal injuries, regardless of severity.

CASUALTY REPORT IDENTIFICATION

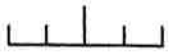
The REPORT IDENTIFICATION section identifies the Transit Property submitting the RRT Casualty Report, the report date and authorized signature.

TRANSIT PROPERTY: Enter up to five letters identifying your transit property. If you use fewer than five letters, enter them so that the last letter fills the right-most space.

TRANSIT PROPERTY

REPORT PERIOD: Enter the two-digit numbers for the month and year which represent the month for which the casualties are being reported.

REPORT PERIOD



Month Year

PRINTED NAME AND TITLE: Print on the line provided the name and title of the transit property official authorized to approve the report.

AUTHORIZED SIGNATURE: Enter the signature of the person who approves the report.

DATE SIGNED: Also enter the date the report was approved in the space provided.

PRINTED NAME AND TITLE AUTHORIZED SIGNATURE DATE SIGNED

CASUALTY REPORTING EXAMPLES

Casualty Reporting consists of nine (9) categories. Each item is listed below with appropriate instructions.

	INJURIES	FATALITIES
ON PLATFORM: Place the total number of casualties which occurred on the station platform in the appropriate space provided adjacent to this item. A casualty which begins on an access point to the platform (stairs, escalators) is not reported. Casualties occurring in train accidents or fire incidents are not reported here.	⌊_⌊_⌊_⌊_⌋	⌊_⌊_⌊_⌊_⌋
ON TRACKWAY: Place the total number of casualties which occurred on the trackway in the appropriate space provided adjacent to this item. Casualties resulting in falls from the platform to the trackway are reported as part of this item. Casualties occurring in train accidents or fire incidents are not reported here.	⌊_⌊_⌊_⌊_⌋	⌊_⌊_⌊_⌊_⌋
ON BOARD TRAIN: Place the total number of casualties which occurred on board a revenue train in the appropriate space provided adjacent to this item. Casualties occurring in train accidents or fire incidents, are not reported here.	⌊_⌊_⌊_⌊_⌋	⌊_⌊_⌊_⌊_⌋
ALIGHTING FROM TRAIN: Place the total number of casualties which occurred while alighting from train in the appropriate space provided adjacent to this item. This includes casualties struck by train doors and gap falls. Casualties occurring in train accidents or fire incidents are not reported here.	⌊_⌊_⌊_⌊_⌋	⌊_⌊_⌊_⌊_⌋
BOARDING TRAIN: Place the total number of casualties which occurred while boarding a train in the appropriate space provided adjacent to this item. This includes casualties struck by train doors and gap falls. Casualties occurring in train accidents or fire incidents are not reported here.	⌊_⌊_⌊_⌊_⌋	⌊_⌊_⌊_⌊_⌋
IN TRAIN INCIDENT: Place the total number of casualties which occurred resulting from a reportable train accident in the appropriate space provided adjacent to this item.	⌊_⌊_⌊_⌊_⌋	⌊_⌊_⌊_⌊_⌋
STATION FIRES: Place the total number of casualties which occurred in reportable station fires in the appropriate space provided for this category.	⌊_⌊_⌊_⌊_⌋	⌊_⌊_⌊_⌊_⌋

CASUALTY REPORTING EXAMPLES (continued)

	INJURIES	FATALITIES
RIGHT-OF-WAY FIRES: Place the total number of casualties which occurred in reportable right-of-way fires in the appropriate space provided for this category.	⌊_⌊_⌊_⌊_⌋	⌊_⌊_⌊_⌊_⌋
REVENUE TRAIN IN SERVICE FIRES: Place the total number of casualties which occurred in reportable revenue train in service fires in the appropriate space provided for this category.	⌊_⌊_⌊_⌊_⌋	⌊_⌊_⌊_⌊_⌋

III. RRT STATISTICAL DATA REPORT INSTRUCTIONS

III. RRT Statistical Data Report Instructions: Form UMTA F6600.3

The RRT Statistical Data Report form has been designed for reporting the total number of car miles and passengers. The conditions under which the RRT Statistical Data Report Forms must be filed is defined in other Safety Information Reporting and Analysis System (SIRAS) program documentation.

The RRT Statistical Data Report consists of a single page with only a few data elements.

The following pages give detailed instructions for each question of the form. Opposite each page of instructions is an example that demonstrates application of the instruction to filling out the corresponding section of the form.

STATISTICAL DATA REPORT IDENTIFICATION

The REPORT IDENTIFICATION section identifies the Transit Property submitting the RRT Statistical Data Report the report period and authorized signature.

1. **TRANSIT PROPERTY**: Enter up to five letters identifying your transit property. If you use fewer than five letters, enter them so that the last letter fills the right-most space.

1. TRANSIT PROPERTY

2. **REPORT PERIOD**: Enter the two-digit numbers for the month and year which represent the month for which the casualties are being reported.

2. REPORT PERIOD

Month Year

STATISTICAL DATA

3. **TOTAL PASSENGERS:** Enter the total number of RRT passengers transported in the month covered by the report.

3. TOTAL PASSENGERS

4. **TOTAL CAR MILES:** Enter the total number of all RRT miles of all RRT cars on the transit property during the month covered by the report. This includes revenue-not-in-service car miles and work train car miles.

4. TOTAL CAR MILES

5. **NO TRAIN ACCIDENT OCCURRENCES TO REPORT THIS PERIOD**. Check this block if there were no train accidents during this period.

5. ☐

6. **NO FIRE OCCURRENCES TO REPORT THIS PERIOD**. Check this block if there were no fires during this period.

6. ☐

7. **NO CASUALTY OCCURRENCES TO REPORT THIS PERIOD**. Check this block if there were no casualties during this period.

7. ☐

8. **INTERIM REPORT**. Check this block if this is not a final report for the reporting period.

8. ☐

9. **FINAL REPORT.** Check this block if this is a final report for the reporting period.

9. ☐

PRINTED NAME AND TITLE AUTHORIZED SIGNATURE DATE SIGNED

RRT STATISTICAL DATA REPORT EXAMPLE

For the month of August 1983, the North American Transit Authority; NATA, transported a total of 7,636,215 RRT passengers and operated a total of 1,106,374 RRT car miles with a total 372,147 RRT employee hours in their rapid rail transit service.

IDENTIFICATION

1. TRANSIT PROPERTY

N A T A

2. REPORT DATE

0 8 | 8 3

month year

STATISTICAL DATA

3. TOTAL PASSENGERS

7 6 3 6 2 1 5

4. TOTAL CAR MILES

1 1 0 6 3 7 4

IV. RRT FIRE REPORT INSTRUCTIONS

FIRE REPORT IDENTIFICATION

The REPORT IDENTIFICATION section identifies the Transit Property submitting the RRT Fire Report, the report date and authorized signature.

TRANSIT PROPERTY: Enter up to five letters identifying your transit property. If you use fewer than five letters, enter them so that the last letter fills the right-most space.

TRANSIT PROPERTY

REPORT PERIOD: Enter the two-digit numbers for the month and year which represent the month for which the casualties are being reported.

REPORT PERIOD

Month Year

PRINTED NAME AND TITLE: Print on the line provided the name and title of the transit property official authorized to approve the report.

AUTHORIZED SIGNATURE: Enter the signature of the person who approves the report.

DATE SIGNED: Also enter the date the report was approved in the space provided.

PRINTED NAME AND TITLE AUTHORIZED SIGNATURE DATE SIGNED

FIRE REPORT INSTRUCTIONS

STATIONS

Non-Public Areas - Place the total number of fires in the space provided adjacent to this item. Fires which occur in areas not accessible to patrons in stations (janitor rooms, break rooms) are included as part of the item. ⌊_⌊_⌊_⌊_⌋

Public Areas - Fires which occur in areas accessible to patrons in stations are included in the subcategories listed below this item.

Trash Receptacles - Place the total number of fires which originate in trash receptacles in public areas in the space provided for this sub-category. ⌊_⌊_⌊_⌊_⌋

Concessions - Place the total number of fires which originate in a concession within public areas in the space provided for this sub-category. ⌊_⌊_⌊_⌊_⌋

Other - Place the total number of fires which occur in a public area in a station other than trash receptacles and concession fires in the space provided for this category. ⌊_⌊_⌊_⌊_⌋

REVENUE TRAIN IN SERVICE

Underfloor - Place the total number of fires on revenue trains which originated in the underfloor area of the vehicle in the space provided for this category. ⌊_⌊_⌊_⌊_⌋

Roof - Place the toal number of fires on revenue trains which originated in the roof area of the vehicle in the space provided for this category. ⌊_⌊_⌊_⌊_⌋

Passenger Compartment - Place the total number of fires on revenue trains which originated in the passenger area on the vehicle in the space provided for this category. ⌊_⌊_⌊_⌊_⌋

Operator Compartment - Place the total number of fires on revenue trains which originated in the Operator's Compartment of the vehicle in the space provided for this category. ⌊_⌊_⌊_⌊_⌋

Other - Place the to total number of fires on revenue trains which originated in areas other than those specifically categorized under Revenue Train Fires in the space provided for this category. ⌊_⌊_⌊_⌊_⌋

FIRE REPORT INSTRUCTIONS

RIGHT - OF - WAY
(continued)

Ties, Protection Boards, Walkways (wooden elements) - Place the total number of fires which occur on the right-of-way under this item in the space provided for this category. |_|_|_|_|

Traction Power Distribution - Place the total number of fires on the right-of-way which occur outside the substation area (gap breaker, third rail) in the space provided for this category. |_|_|_|_|

Substation - Place the total number of fires which occur in substations in the space provided for this category. |_|_|_|_|

Signal System - Place the total number of fires on the right-of-way which occur to the signal system (automatic train control equipment) in the space provided for this category. |_|_|_|_|

Grass, Trash, Debris - Place the total number of fires which occurred on the right-of-way under this item in the space provided for this category. |_|_|_|_|

Flammable Intrusion - Place the total number of fires on the right-of-way which occurred due to flammable substances (gas, oil) intruding into the right-of-way in the space provided for this category. |_|_|_|_|

Stored Materials - Place the total number of fires which occurred involving materials stored on the right-of-way in the space provided for this category. |_|_|_|_|

Track Greasers - Place the total number of fires which occurred on the right-of-way under this item in the space provided for this category. |_|_|_|_|

Other - Place the total number of fires which occurred on the right-of-way other than those specifically categorized under Right-of-Way Fires in the space provided for this category. |_|_|_|_|

V. SIRAS DEFINITIONS

V. Safety Information Reporting and Analysis System (SIRAS) Definitions

ATP BYPASS - Mechanism for circumvention of the Automatic Train Protection system.

AUTHORIZED SPEED LIMIT - The speed limit imposed upon a train at the time and location of the train accident by: automatic or manual control system, posted limits, radio instruction or any other device, method, rule or procedure used to limit the speed of the train.

CASUALTY - A fatality or injury in accordance with **SIRAS** thresholds.

CONTROL CAR - The car of a train from which the operator is controlling the propulsion and braking of the train.

FATALITY - A death confirmed within 30 days after an incident which occurs under the train accident, fire and casualty thresholds.

LINE/ROUTE - A mutually exclusive geographic and operational unit into which a transit property is divided for accident reporting purposes.

LINE-OF-SIGHT - The maximum unobstructed straight line distance from the operator's position in the control car of the striking train (or only train) to the other object involved in the train accident that would have existed for sighting a distinguishable part of the other object as the striking train (or only train) approached the train accident location assuming ideal visibility and lighting conditions.

OTHER TRAIN - A train struck by the striking train in a train accident collision.

RAIL-HIGHWAY CROSSING - The intersection of an otherwise exclusive (rail transit) right-of-way and a highway where motor vehicle and pedestrian traffic safety is enhanced by a variety of crossing warning mechanisms.

STATIONING NUMBER - The civil engineering identification of an exact geographic location along a route alignment of a transit property right-of-way usually defined by assigning ascending numbers of feet from a predetermined starting point.

STRIKING TRAIN (or only train) - A train that collides with an obstacle, other train, person or motor vehicle; derails; is struck by a motor vehicle.

TOTAL CAR MILES - The sum of the individual distances traveled by each rail transit car of the transit property in both revenue and non-revenue service during the reporting period. A married pair is two cars.

TRAIN ACCIDENT - An event involving one or more trains resulting in any casualty or property damage in accordance with **SIRAS** thresholds.

TRAIN ACCIDENT LOCATION - The geographic location of a train accident as given by the stationing number or narrative description of the point along a route alignment where collision or derailment first occurs (not usually the resulting state of rest of the striking train).

TRESPASSER - A person who places him/herself in an unauthorized area without authorization.

APPENDIX A

DEPARTMENT OF TRANSPORTATION
URBAN MASS TRANSPORTATION ADMINISTRATION

RAPID RAIL TRANSIT TRAIN ACCIDENT REPORT

FORM APPROVED
OMB NO. 2132-0528
Expiration Date: 7/31/88

REPORT NUMBER ____ property ____ year ____ sequence number

IDENTIFICATION

1. DATE ____ month ____ day ____ year
2. TIME ____ (24 hour)
3. RUN/TRAIN NUMBER ____
4. LINE/ROUTE ____
5. TRACK NUMBER ____
6. LOCATION ____
7. STRIKING TRAIN *(or only train)* ____
   1—revenue in service
   2—revenue not in service
   3—non-revenue
8. STRIKING TRAIN EVENT *(enter up to 4 in order of occurrence)* ____
   1—struck
   2—was struck by
   3—caught fire
   4—exploded
   5—derailed
   9—other ____
9. OTHER OBJECT ____
   1—revenue train in service
   2—revenue train not in service
   3—non-revenue train
   4—bus
   5—highway vehicle
   6—obstruction
   7—person
   8—not applicable
   9—other ____

DAMAGE ESTIMATE AND EFFECTS *(Enter reportable casualties on a Rapid Rail Transit Casualty Report)*

10. TRAIN DAMAGE ESTIMATE $ ____
11. OTHER TRANSIT DAMAGE ESTIMATE $ ____
12. NON-TRANSIT DAMAGE ESTIMATE $ ____
13. OTHER EFFECTS *(evacuation, panic, smoke, delay, etc.)* ____

DESCRIPTION OF ACCIDENT AND CORRECTIVE ACTION

14. NARRATIVE *(brief description of accident, sequence of events leading to accident, and subsequent emergency and non-emergency actions with emphasis on details not otherwise included in this report)*

15. CORRECTIVE ACTION *(describe corrective action taken or planned to prevent occurrences similar to this accident)*

AUTHORIZED SIGNATURE

PRINTED NAME AND TITLE ____ SIGNATURE ____ ☐ ORIGINAL ☐ REVISION ____ DATE SIGNED ____

DEPARTMENT OF TRANSPORTATION
URBAN MASS TRANSPORTATION
ADMINISTRATION

RAPID RAIL TRANSIT TRAIN ACCIDENT REPORT

FORM APPROVED
OMB NO 2132-0528
Expiration Date: 7/31/88

REPORT NUMBER

property year sequence number

TRAIN FACTORS

16. CAR DATA

a. Enter car number after its position in train. If car number is unknown, enter vehicle type code.

b. Enter 1—car derailed
2—car burned/exploded
3—car derailed and burned exploded
4—none of the above

c. Enter 1—car damaged
2—car not damaged
3—unknown

Position	STRIKING TRAIN (or only train) a.	b.	c.	OTHER TRAIN (if applicable) a.	b.	c.
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

(For more than 10 cars, enter data on an additional Page 2)

METHOD OF TRAIN PROTECTION *(at time of accident)*

17. TRAIN CONTROL AT TIME OF ACCIDENT

	a. Hardware (enter up to 4)	b. Procedure (enter up to 4)
a. STRIKING TRAIN (or only train)		
b. OTHER TRAIN (if applicable)		

1—wayside, automatic block
2—wayside, interlocking
3—cab signal
4—automatic train stop
5—automatic speed control
6—automatic train operation
7—none
9—other _____

1—manual block with verbal orders
2—manual block with written orders
3—on-sight
4—not applicable
9—other _____

18. ATP BY-PASS SEALED AT TIME OF ACCIDENT

1—yes
2—no
3—none exists
8—unknown

OPERATIONAL FACTORS

	19. AUTHORIZED SPEED LIMIT *(mph)*	20. SPEED *(mph)*	21. BRAKING APPLIED	22. ESTIMATED DISTANCE: BRAKING TO STOP
a. STRIKING TRAIN (or only train)				feet
b. OTHER TRAIN (if applicable)				feet

ADD:
1—estimated by operator
2—estimated by investigator
3—estimated by observer
4—from speedometer
5—from recorder

1—normal
2—emergency
3—none
8—unknown

3—if no braking
4—if not applicable
8—if unknown

ENVIRONMENTAL FACTORS

23. WEATHER

1—clear
2—cloudy
3—snow
4—rain
5—sleet/hail
6—fog/smoke
7—other (tunnel)

ADD:
7—light
8—moderate
9—heavy

24. TEMPERATURE (F°)

ADD: "-" *(minus)* if below 0°

25. VISIBILITY RESTRICTED TO _____ feet *(9999 if not restricted)*

26. LINE OF SIGHT _____ feet *(9999 if not restricted)*

27. CONDITION OF TRACK *(enter up to 3)*

1—wet
2—dry
3—muddy
4—under repair
5—greasy
6—snowy, icy
7—obstructed
9—other _____

28. ARTIFICIAL LIGHT

1—none
2—present, off
3—present, on
8—unknown

DEPARTMENT OF TRANSPORTATION
URBAN MASS TRANSPORTATION ADMINISTRATION

RAPID RAIL TRANSIT TRAIN ACCIDENT REPORT

FORM APPROVED
OMB NO. 2132-0528
Expiration Date: 7/31/88

REPORT NUMBER
property year sequence number

HUMAN FACTORS

	29. TRAIN ATTENDED	30. NUMBER IN CREW			31. OPERATOR ACTIONS *(enter up to 4)*
		motormen/ operators	conductors	other employees	
a. STRIKING TRAIN *(or only train)*	___	___	___	___	____
b. OTHER TRAIN *(if applicable)*	___	___	___	___	____

1—yes
2—no
8—unknown

1—none
2—normal brake
3—emergency brake
4—alerted passengers
5—blew horn
6—inform central
8—unknown
9—other ____

(Complete a column for each motorman/operator, conductor, or other employee involved in the accident. Use additional Page 3 if more than 3 employees are involved)

	EMPLOYEE INVOLVED 1.	2.	3.
32. EMPLOYEE LOCATION 1—on striking train 2—on other train 3—not on train	___	___	___
33. EMPLOYEE JOB CODE 1—motorman, train operator 2—conductor 9 other personnel	___	___	___
34. JOB CODE FOR DUTIES PERFORMED AT TIME OF ACCIDENT 1—motorman, train operator 2—conductor 9—other personnel	___	___	___

	EMPLOYEE INVOLVED *(continued)* 1.	2.	3.
35. YEARS OF SERVICE	____	____	____
36. WAS CHECK-IN PROCEDURE FOLLOWED AT START OF SHIFT 1—yes; 2—no; 3—not applicable	___	___	___
37. HOURS OF DUTY SINCE START OF SHIFT	____	____	____
38. AGE	____	____	____

INJURIES INCURRED

38.1 Number of Passenger Fatalities ____

38.2 Number of Passenger Injuries ____

DEPARTMENT OF TRANSPORTATION
URBAN MASS TRANSPORTATION
ADMINISTRATION

RAPID RAIL TRANSIT
TRAIN ACCIDENT REPORT

FORM APPROVED
OMB NO. 2132-0528
Expiration Date: 7/31/88

REPORT NUMBER

property | year | sequence number

TRAIN COLLISION SECTION

WITH OTHER TRAIN

39. TYPE OF COLLISION

1—head-on
2—head-to-rear
3—rear-to-head
4—rear-to-rear
5—side
6—side-swipe
7—broken train
9—other_____

WITH OBSTACLE ON, OVER, OR BESIDE THE TRACK *(excluding vehicle or pedestrian at rail-highway crossings)*

40. TYPE OF OBSTACLE

1—transit equipment from vehicle
2—transit equipment not from vehicle
3—non-transit equipment
4—bumping post
5—wayside structure
8—unknown
9—other _____

41. DESCRIBE OBJECT AND HOW IT BECAME AN OBSTACLE

WITH PERSON *(not at a rail-highway crossing)*

42. HOW DID PERSON GET NEAR TRAIN

1—from station
2—over fence
3—thru fence
4—from rail-highway crossing
5—from emergency exit
6—dropped from platform
7—leaned over platform edge
8—unknown
9—other _____

43. DESCRIBE TYPE OF FENCE OR BARRIER AT AREA FROM WHICH PERSON ENTERED RIGHT OF WAY

DERAILMENT SECTION

44. TYPE OF TRACK AT DERAILMENT LOCATION

1—tangent
2—curved
3—facing switch
4—trailing switch
5—crossing
6—derailer
9—other _____

45. ESTIMATED DISTANCE TRAVELED AFTER DERAILMENT

_____ feet

46. SWITCH TYPE *(enter up to 2)*

1—manual
2—automatic
3—spring & stay
4—spring & return
5—not applicable
9—other_____

47. SWITCH PROPERLY ALIGNED AND LOCKED

1—yes
2—no
3—not applicable
8—unknown

FIRE/EXPLOSION SECTION

48. SOURCE OF FIRE/ EXPLOSION

1—in transit vehicle
2—under transit vehicle
3—3rd rail
4—catenary
5—other transit system
6—passenger brought on board
8—unknown
9—other_____

49. CAR INTERIOR BURNED *(enter up to 5)*

1—no
2—seats
3—flooring
4—paint/surfacing
5—electrical wiring
6—other interior

DEPARTMENT OF TRANSPORTATION
URBAN MASS TRANSPORTATION ADMINISTRATION

RAPID RAIL TRANSIT TRAIN ACCIDENT REPORT

FORM APPROVED
OMB NO. 2132-0528
Expiration Date: 7/31/88

REPORT NUMBER

property | year | sequence number

RAIL-HIGHWAY CROSSING ACCIDENT SECTION

50. CROSSING WARNING

ENTER UP TO 4 OF THE FOLLOWING IN COLUMN a. TYPE
(for more than 4 crossing warning types, enter data on additional Page 5)

01—none
10—highway traffic signal
11—highway flashing red signal
12—highway flashing yellow signal
13—highway stop sign
19—highway sign, other ______
20—flashing light, standard
21—flashing light, cantilevered
22—audible signal
23—advance RR warning
24—wigwags
30—gates, automatic, full
31—gates, automatic, half
39—gates, other ______
40—crew, flagging
41—police, patrolman
49—human protection, other ______
99—other ______

a. TYPE	b. LOCATION	c. OPERATING	d. INTERCONNECTED TO TRACK CIRCUIT
1.			
2.			
3.			
4.			

b. LOCATION: 1—approach side; 2—other side; 3—both sides

c. OPERATING:
ACTIVE: 1—yes; 2—no; 3—unknown
PASSIVE: 4—legible; 5—not legible; 6—not visible

d. INTERCONNECTED: 1—yes; 2—no; 3—unknown

51. MINIMUM TIME FROM CIRCUIT ACTIVATION TO TRAIN ENTERING CROSSING

______ seconds

Enter: 997—if circuit malfunctioned
998—if warning device malfunctioned
999—not applicable

52. VISIBILITY AT CROSSING WAS OBSCURED BY *(enter up to 3, 2-digit codes)*

a. TRAIN ______ ______ ______

b. OTHER VEHICLE ______ ______ ______

1—permanent structure
2—standing transit equipment
3—passing train
4—topography
5—vegetation
6—highway vehicle
7—fog, blowing snow, etc.
8—not obscured
9—other ______

ADD after each entry:
1—on transit right of way
2—along highway
3—on other property
4—not applicable

53. CROSSING ILLUMINATION

1—none
2—daylight
3—street lights on
4—special lights on

54. LEGAL HIGHWAY SPEED *(mph)*

(enter 999 if a pedestrian)

HIGHWAY USER FACTORS

55. HIGHWAY USER

01—auto
02—auto with trailer
03—truck
04—tractor-trailer
05—bus
06—school bus
07—taxicab/limousine
08—motorcycle
09—emergency vehicle
10—bicycle
11—animal
50—pedestrian
98—unknown
99—other ______

56. LOCATION OF HIGHWAY USER

1—moving through crossing
2—stopped on crossing
3—stalled on crossing
4—abandoned on crossing

57. VEHICLE DIRECTION

1—north
2—east
3—south
4—west

58. OTHER VEHICLE SPEED*

______ mph
estimated by

1—RRT operator
2—other driver
3—observer
4—RRT investigator
5—police
9—other ______

(if pedestrian enter 777)*

59. HIGHWAY DRIVER ACTIONS *(enter up to 3)*

1—none
2—applied brakes
3—accelerated
4—swerved
5—drove around or through gate
6—stopped, proceeded
7—passed standing vehicle
8—drove in front of one train and struck/was struck by second train
9—drove behind one train and struck/was struck by second train

ACCIDENT EFFECTS

60. HIGHWAY USER CASUALTIES

	Fatalities	Injuries
Driver		
Other Occupants		
Pedestrians		

61. POINT OF IMPACT

a. ON TRAIN

b. ON OTHER VEHICLE*

01—left front
02—center front
03—right front
04—front right side
05—center right side
06—rear right side
07—right rear
08—center rear
09—left rear
10—rear left side
11—center left side
12—front left side
(if pedestrian enter 77)*

62. OTHER DRIVER CHARGED BY POLICE

1—yes
2—no
3—not applicable
8—unknown

DEPARTMENT OF TRANSPORTATION
URBAN MASS TRANSPORTATION
ADMINISTRATION

RAPID RAIL TRANSIT

CASUALTY REPORT

FORM APPROVED
OMB NO. 2132-0528
Expiration Date: 7/31/88

IDENTIFICATION

1. TRANSIT PROPERTY

2. REPORT PERIOD

CASUALTY REPORT

CATEGORY OF CASUALTY

	NUMBER OF INJURIES	NUMBER OF FATALITIES
3. TOTAL PASSENGERS		
ON PLATFORM		
ON TRACKWAY		
ON-BOARD TRAIN		
ALIGHTING FROM TRAIN		
BOARDING TRAIN		
IN TRAIN ACCIDENT		
STATION FIRES		
RIGHT-OF-WAY FIRES		
TRAIN FIRES (IN REVENUE SERVICE)		

AUTHORIZED SIGNATURE

PRINTED NAME AND TITLE | SIGNATURE | DATE SIGNED

DEPARTMENT OF TRANSPORTATION
URBAN MASS TRANSPORTATION
ADMINISTRATION

RAPID RAIL TRANSIT

STATISTICAL DATA REPORT

FORM APPROVED
OMB NO. 2132-0528
Expiration Date: 7/31/88

IDENTIFICATION

1. TRANSIT PROPERTY

2. REPORT PERIOD

STATISTICAL DATA

3. TOTAL PASSENGERS

4. TOTAL CAR MILES

5. ☐ No Train Accident occurrences to report this period.

6. ☐ No Fire occurrences to report this period.

7. ☐ No Casualty occurrences to report this period.

8. ☐ Interim Report

9. ☐ Final Report

AUTHORIZED SIGNATURE

PRINTED NAME AND TITLE

SIGNATURE

DATE SIGNED

DEPARTMENT OF TRANSPORTATION
URBAN MASS TRANSPORTATION
ADMINISTRATION

RAPID RAIL TRANSIT

FIRE REPORT

FORM APPROVED
OMB NO. 2132-0528
Expiration Date: 7/31/88

IDENTIFICATION

1. TRANSIT PROPERTY

2. REPORT PERIOD

FIRE REPORT

3. STATION FIRES	NUMBER OF INCIDENTS
Non-Public Areas	
Public Areas	
- Trash Receptacle	
- Concessions	
- Other	

4. TRAIN FIRES (IN REVENUE SERVICE)	NUMBER OF INCIDENTS
Underfloor	
Roof	
Passenger Compartment	
Operator Compartment	
Other	

5. RIGHT-OF-WAY FIRES	NUMBER OF INCIDENTS
Ties, protection boards, walkways (wooden elements)	
Traction Power distribution	
Substation	
Signal system	
Grass, trash, debris	
Flammable intrusion	
Stored materials	
Track greasers	
Other	

AUTHORIZED SIGNATURE

PRINTED NAME AND TITLE

SIGNATURE

DATE SIGNED

Mr. James A. O'Connor
Director, Safety and Security Office
URT-6
Urban Mass Transportation Administration
400 Seventh Street, S.W.
Washington, DC 20590

Dear Mr. O'Connor:

Subject: SIRAS REPORT

Attached please find the SIRAS Report for the month of _____ 19_____.

I hereby certify to the accuracy of the enclosed data.

Sincerely,

_____
General Manager

APPENDIX B

TRAIN ACCIDENT REPORTING THRESHOLDS

A ***"reportable train accident"*** is any accident which satisfies the following threshold levels:

A. TRAIN COLLISIONS

1. All collisions of trains in revenue service involving other rail transit equipment (such as revenue or non-revenue trains, work trains or work equipment), persons and/or rail highway crossings are to be reported.

2. Collisions between trains in revenue service and other obstacles (end of track barriers, shopping carts, foreign objects, etc.) which result in $5,000 or greater property damage or casualties are to be reported.

   "Property Damage" refers to the estimated cost to repair or replace damaged property (vehicles, equipment, right-of-way, etc.) to a state equivalent to that which existed prior to the accident. Property damage does not include the cost of clearing wreckage.

B. TRAIN DERAILMENTS

1. All derailments of trains in revenue service regardless of severity.

C. EXCLUSIONS

1. Accidents (collisions or derailments) occurring in yards and non-revenue service areas which do not involve trains in revenue service are excluded.

2. Accidents (collisions or derailments) which involve only work trains and servicing equipment are excluded.

3. Collisions between train cars resulting from coupling operations which do not involve passenger casualties are excluded.

CASUALTY REPORTING THRESHOLDS

A ***"reportable casualty"*** is any casualty which satisfies one or more of the following threshold levels:

A. PASSENGER AND OTHER CASUALTIES

Reportable casualties are casualties involving passengers or other personnel (contractors, etc.) which occur on station platforms, on trackways, boarding, alighting and/or on-board trains which result in fatalities or personal injuries, regardless of severity.

B. EXCLUSIONS

1. Assaults.
2. Attempted suicides.
3. Suicides and injury resulting from illness.
4. Trespassers.

FIRE REPORTING THRESHOLDS

Reportable fires are all fires in stations, on trains in revenue service or on the right-of-way when the fire requires extinguishment by fire suppression system or person.

Each fire is reported regardless of damage.

USER RECOMMENDATIONS/SUGGESTIONS

If you have recommendations or suggestions with regard to SIRAS (instruction manual, reporting forms, reporting thresholds, etc.), please submit them on this form to:

Director, Office of Safety and Security, URT-6
Urban Mass Transportation Administration
400 Seventh Street. S.W.
Washington, DC 20590