



**Federal Railroad
Administration**

Rail Trespasser Fatalities

Developing Demographic Profiles



always expect a train

March 2008

NOTE:

This report has been prepared at the direction of the Federal Railroad Administration (FRA) for the purpose of reducing trespasser-train incidents, which contribute significantly to total annual rail-related deaths and injuries in the United States. As part of FRA's continuing program to diminish trespassing on railroad rights-of-way and associated fatalities and injuries, this study is intended to provide a basis on which to build outreach and educational programs and law enforcement initiatives focused on those who are most likely to be at risk.

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Developing Demographic Profiles

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Executive Summary

This study is part of a continuing program to reduce trespassing on railroad rights-of-way and the grievous toll of resulting deaths and injuries. Approximately 500 individuals die annually in the United States while trespassing on railroad rights-of-way. The ultimate goal of this study is to establish a foundation upon which to build an outreach or public education program and create law enforcement efforts focused on those most at risk.

A three-phase process is envisaged: First, gather information regarding fatalities, including home addresses of the decedents; Second, conduct a demographic analysis of the decedents and do a market analysis of the households and neighborhoods from which they came (based on the addresses) in order to develop a generic profile of those at risk; Third, develop a public awareness program targeting those who may take such risks in the future. This report addresses the first two steps in this process.

Survey forms, one for each 2002-2004 trespass fatality, were mailed to the chief medical examiner (CME) or coroner in whose jurisdiction the incident was reported to have occurred. Forms for 1,524 fatalities were sent to 471 jurisdictions. Subsequently, 279 jurisdictions (59 percent) returned 1,056 reports (69 percent). Of the forms returned, 935 contained some useful information (at least gender), but only 740 provided usable address information. As less than half of the forms were returned with usable address information, the market analysis must be carefully assessed.

As such, the following findings are predicated on responses to the survey and necessarily exclude those fatalities that occurred in the jurisdictions that did not respond. See Map 4 and Appendix F. Further, if one extends the findings of these analyses to all rail trespassers, one assumes that this subset, those who died while trespassing on rail rights-of-way in responding jurisdictions, is representative of all rail trespassers. This may not be the case.

That said, we have learned from the returned forms that trespassers who die are, on average, 38 years old and most often Caucasian males. Approximately two-thirds were under the influence of alcohol and/or drugs. There is considerable regional variation. The gender split is 13 percent female, and 16 percent have Hispanic ethnicities. Trespasser fatalities are racially diverse, i.e., 78 percent White, 16 percent Black, 5 percent Native American, and 1 percent Asian.

Coroners used the words “suicide” or “intentional” in describing 18 percent of the incidents. In reviewing their descriptions, an additional 5 percent have been classified as probable suicides. The Federal Railroad Administration (FRA) regulations do not require railroads to report suicides (See Title 49 Code of Federal Regulations CFR Section 225.15), so reported suicides inflate the trespass problem.

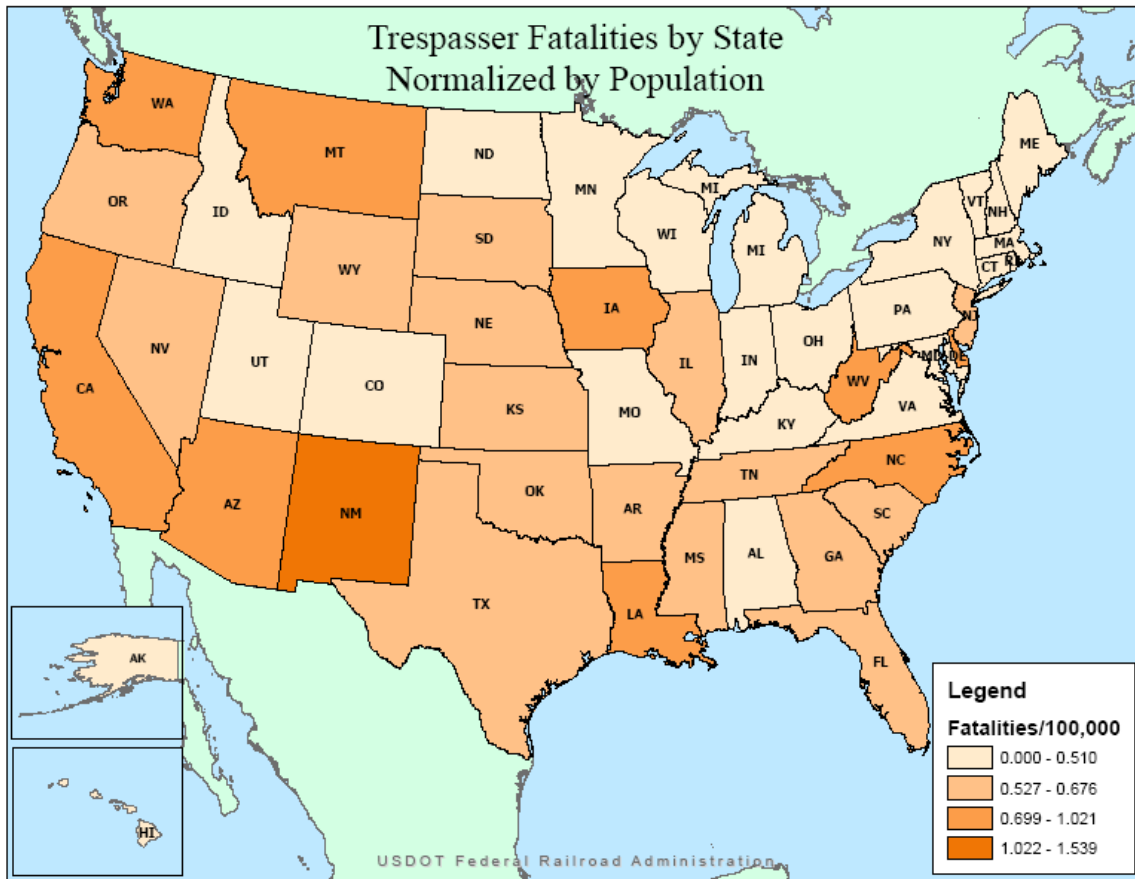
The households and neighborhoods isolated by the market analysis of addresses are compatible with the demographic data developed regarding trespasser fatalities (with the exception of gender and age). The market analysis has defined a target group and

described the types of households and neighborhoods that could be targeted most effectively. These are largely urban or suburban, relatively low-income and ethnically, culturally, and racially mixed neighborhoods with older, single-family housing units occupied by families slightly larger, but younger, than the general population.

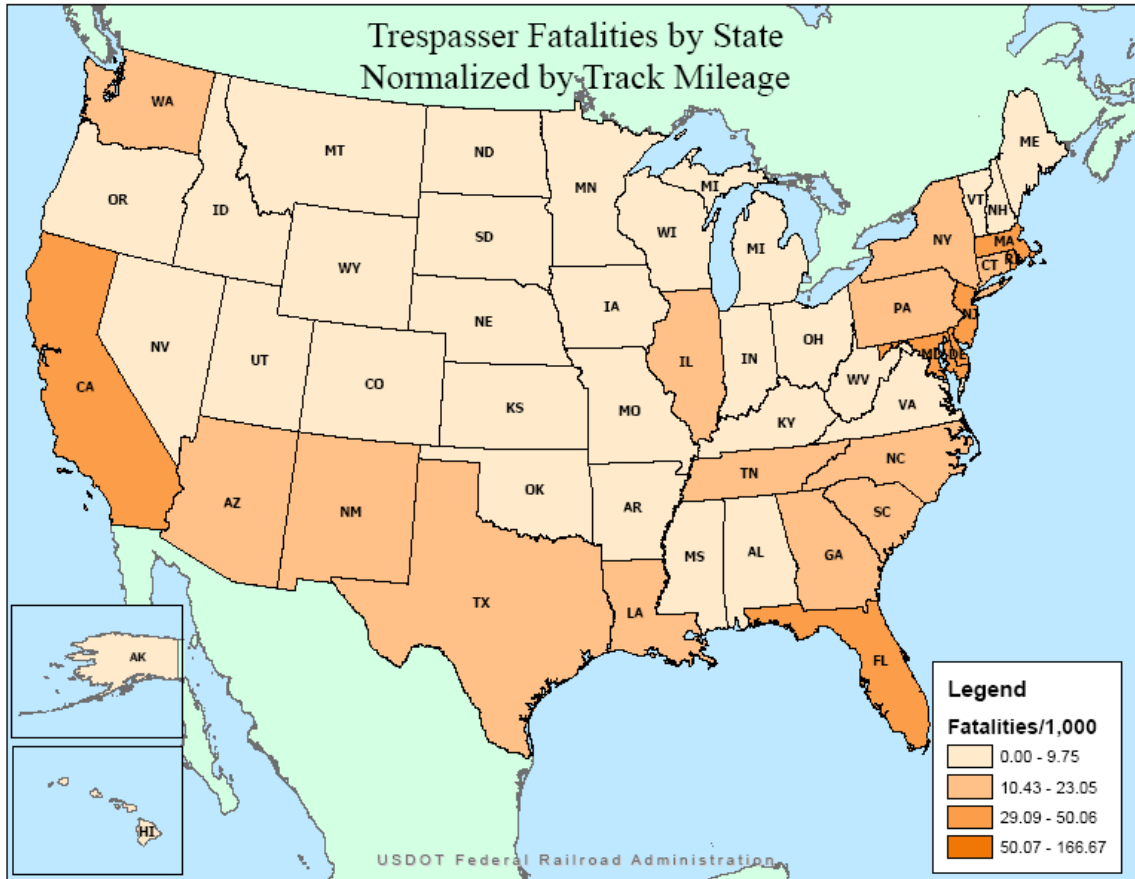
As part of its program to reduce trespassing on railroad rights-of-way, Cadle Creek Consulting (CCC) recommends that FRA 1) investigate alternatives for completing the survey, 2) use the foregoing demographic data and work with railroads to confirm (or refute) the assumption that those who die while trespassing are representative of all trespassers, 3) require reporting of all deaths among trespassers, including suicides, 4) work with suicide prevention interest groups to develop a response kit for distribution to local media outlets following railroad suicide incidents, 5) convene a meeting of principal stakeholders to present the report's findings and discuss outreach options, and 6) in addition to publishing this report, post a downloadable version on the FRA Web site and allow CCC to distribute the report.

1.2 Concept

In order for the railroad industry, governments (Federal, State and local), and other stakeholders to address this serious issue, they must know more about the individuals who trespass. With such knowledge, specific educational programs, materials, and messages regarding the hazards and consequences of trespassing on railroad property may be developed and effectively distributed. Law enforcement efforts can be targeted more efficiently and constructively. Developing summaries and generic profiles for trespassers and trespass incidents could provide valuable information regarding those most at risk, i.e., the precise audience to be targeted with educational and enforcement efforts. However, market analyses require demographic details, e.g., gender and home address. (Knowledge of the home address facilitates the use of commercially available marketing databases, which are used to generate generic information regarding lifestyles, entertainment, and media preferences of customers, or in this case, trespassers.)



Map 2: Trespasser Fatalities by State, Normalized by Population.



Map 3: Trespasser Fatalities by State, Normalized by Track Mileage.

Potential sources of additional data are county coroner and State CME death reports.² State CMEs and county coroners receive, and/or prepare, and retain reports of deaths, particularly those considered to be from other than natural causes, e.g., resulting from severe trauma, such as an incident with a train. Such reports should include personal information regarding the deceased, e.g., home address, age, gender, ethnicity, as well as the date/time, type and location of the incident. In some States, such information is centralized. In others, the information is retained at the county or district level.

Due to privacy concerns, access to such data often is limited to family members, police investigators, and those involved in relevant legal actions. Before access can be granted to other parties, assurances must be made that data will be made public only in summary fashion and will not be attributable to any specific incident or individual. Success in guaranteeing the confidentiality of specific data from public scrutiny is crucial to obtaining access to it.

² Those who die while trespassing on rail rights-of-way are only a small subset of those who trespass. This effort assumes that they are a representative subset.

1.3 Objectives

The overall goal of this study is to prevent trespassing on rail rights-of-way, thus reducing the number of deaths and injuries among trespassers. Developing summaries and generic demographic profiles describing the decedents in fatal trespass incidents should provide information regarding the at-risk audience to be targeted. For best results, a nationwide market analysis should begin with a database of at least 1,000 individuals. This study was a one-time effort, consisting of a mailed survey to collect and analyze the data provided by CMEs and coroners. This report includes statistical summaries describing, in general demographic terms, individuals who died while trespassing or as a result of trespassing on railroad property.

2. Methodology

2.1 Letters and Forms

All surveys require an introduction and a means for responding. A mailed survey requires a letter of introduction, a form for responding, and a return envelope. For this survey, two letters were included: one was an individualized letter of transmittal from Cadle Creek Consulting (CCC)³ to the county coroner or CME in whose jurisdiction one or more trespasser fatalities occurred; the second was a letter of introduction and project endorsement addressed to “Our Nation’s Chief Medical Examiners and Coroners” from the FRA Administrator, requesting assistance in providing the data. See Appendixes B and C.

Both letters sought to provide assurances that privacy would be protected and that data would be released in summary form only, to wit:

The additional data that you provide ... will be used only by Cadle Creek Consulting to compile generalized, statistical, summary reports. ... Cadle Creek Consulting will not release the raw data that you provide to FRA. We intend to maintain the confidentiality of this requested information. [Cadle Creek Consulting]

After gathering and processing the data, Cadle Creek Consulting will release to FRA only generalized, statistical, summary reports. [FRA Administrator]

The response form, FRA F 6180.117 (5/04), as a data collection form, required approval from the Office of Management and Budget (OMB). Approval was received in June 2005, and OMB No. 2130-0563 was assigned.⁴

The one-page response form (Report of Railroad Trespasser Death) is divided into two parts, top and bottom. See Appendix D. The top portion contains preprinted information from FRA’s files regarding a specific trespasser fatality. Location (State and county), date and time, reporting railroad, circumstance of the incident, and the age of the decedent—all as reported to FRA by the railroad—are included. The bottom portion of the form provides space for CMEs or coroners to complete information regarding the decedent and the incident, i.e., gender, ethnicity, race, home address, whether alcohol and/or drugs were a factor, and a brief description of the incident.

The average time to complete the form (based on actual experience of CCC’s trial gathering of data from Maryland’s CME) was 5 minutes, once a file was located.

³ CCC conducted this survey and compiled and analyzed the data.

⁴ See 70 FR 36463 (June 23, 2005).

2.2 Compilation of CME/Coroner List

Starting with FRA's data for 2002-2004, a list was compiled of States and counties in which railroad-related trespass fatalities occurred. This list was used to search the Web for names and addresses of CMEs and coroners. Principal sources included the Web pages of the Federal Government's Centers for Disease Control and of the National Association of County Officials. Though both were extremely useful, names and addresses had to be confirmed from other sources, often by phone. Many were found to be outdated or to be involved in multijurisdictional arrangements. Ultimately, an address list with 471 jurisdictions was compiled.

2.3 Mailings and Followups

Packages were mailed first class and contained:⁵

- A letter from CCC (Appendix B) addressed by name to the specific CME or coroner, tailored to his/her jurisdiction;
- A generic letter of endorsement from FRA's Administrator (Appendix C);
- A preprinted Report of Railroad Trespasser Death form(s), one for each railroad trespass fatality in the subject jurisdiction between 2002 and 2004, inclusive. (Appendix D); and
- An addressed envelope with first-class postage for returning completed forms.

Subsequent contacts usually were made by the CMEs or coroner's office seeking the name(s) of the decedents (or a case number), as files in many jurisdictions are retained by name. However, FRA's files do not contain names, and names were not available to CCC. Given that most jurisdictions have an entry or receiving log that is maintained chronologically, it was suggested to such callers that names and/or case numbers might be found in these logs based on the date of the incident. This proved to be true in many, but not all, jurisdictions. (In several instances, names were located via the Internet by searching for accounts of the incident in local newspapers.)

After completing the mailings, starting in April 2006, CCC called unresponsive jurisdictions, focusing on those with 10 or more incidents. This resulted in the re-issuance of some mailings, at times to different individuals and/or addresses. This proved to be productive in only a few cases. Often, privacy concerns were cited as permitting only partial, if any, response. Particular concern was expressed about the request for home addresses. In some cases, a compromise was reached where the CME/coroner would provide a zip code, but not a complete address.

Also, reservations were expressed about responding to the form's request concerning whether or not alcohol and/or drugs were a factor. One coroner noted that he could attest

⁵ Mailings began October 3, 2005. The last mailing was March 29, 2006.

whether alcohol and/or drugs were present or detectable, but he could not definitively say whether they were a factor in the incident. The same coroner also wanted to know how he could determine the ethnicity of the decedent, since ethnicity is predicated on language and culture. For the U.S. Census, respondents answer such questions, but this may not be possible for a coroner even if he/she relies on appearance and/or surname. For a coroner to respond to the question of ethnicity requires a measure of subjective judgment.

In the same vein, many respondents overlooked or confused race and ethnicity. Many indicated ethnicity as Hispanic and then skipped the question regarding race. This ignores the possibility of different racial subgroups within the ethnic Hispanic culture, e.g., a Black or Native American Hispanic. As the U.S. Census Bureau indicates in its definition of “ethnic origin:” “It should be noted that people of Hispanic origin may be of any race.”⁶

2.4 Responses

After only 5 days, Utah returned nine reports on October 9, 2005. The last reports were received on April 24, 2006, from Calcasieu, LA (6) and Isanti, MN (1). Materials to both had been mailed 94 days earlier. The average response time was 24 days. (Two additional forms were received in December 2006, too late for inclusion in the following analyses.)

Some jurisdictions requested compensation before they would reply to the survey. No funds were included in the contract for paying CMEs and/or coroners for providing the requested data. After explaining the “public” purpose of the effort and that whole files were not wanted, just the information indicated on the response form, a few jurisdictions reconsidered. Three allowed an outsider access to their files (the State of Maryland, Florida’s 10th District, and Riverside County, California).⁷ Two jurisdictions, the State of New Jersey and Los Angeles County, provided computer-generated listings by e-mail. The State of North Carolina received the most request forms (57 forms). All but five of the forms were completed and returned. (North Carolina had no record of four, and the fifth appeared to be a duplicate.)

Some jurisdictions did not fill out the form(s), but instead sent complete autopsy reports of the decedents involved. In these instances, CCC completed the forms based on the autopsy reports. Similarly, CCC filled out forms for both the State of New Jersey and Los Angeles County after cross-checking the computer printouts of railroad-related fatalities provided by the jurisdictions with the incident records in the FRA database.

⁶ Population Division, U.S. Census Bureau, *Current Population Survey (CPS) - Definitions and Explanations*, January 2004, available on the net a/o 2 August, 2006, from <http://www.census.gov/population/www/cps/cpsdef.html>.

⁷ CCC went to Maryland’s CME; an Operation Lifesaver volunteer visited Riverside County; and we were unable to arrange for a volunteer to visit Florida’s 10th District.

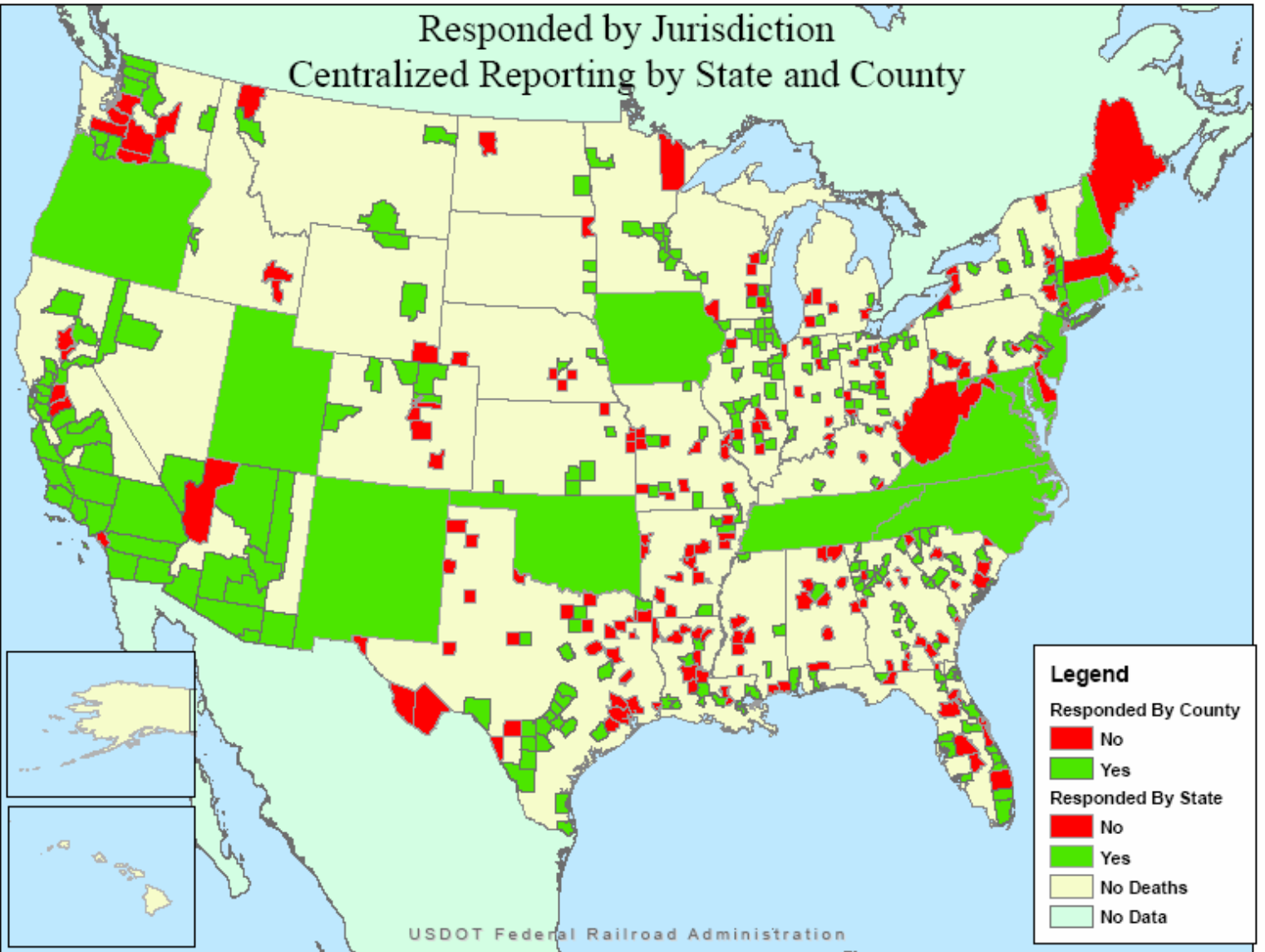
Forms related to 1,056 incidents (69 percent) were returned by 279 jurisdictions (59 percent). Of these, 106 (10 percent of responses) indicated that the CME/coroner could find no record of the incident.

2.5 “No Record” Responses

Some of the factors contributing to “No Record” responses include:

- The railroad may have misreported the location of the incident;
- The decedent may have been transported to another jurisdiction before the official pronouncement of death;
- The CME/coroner file may have been misplaced;
- The CME/coroner may not have been notified of the incident; or
- The coroner receiving the survey was not the coroner at the time of the incident. (Many coroners are in elected positions and archived records are not necessarily centralized.)

Lists of the “No Record” reports, one by State and the other by railroad, are included in Appendices E1 and E2. It is important to note that these jurisdictions are not considered nonresponsive. They did respond to the survey, but had no records of the incidents.



Map 4: Responses by Jurisdiction

3. Analyses

3.1 The Data

Though 1,056 forms were returned, not all contained useful information. The most frequently completed data element was gender (935). Appendix F notes the percentage of useful responses (i.e., those that provided at least gender) from each State, from 100 percent in six states (New Hampshire (1), Oklahoma (20), Oregon (19), Rhode Island (3), Utah (9), and Virginia (19)) and the District of Columbia (4), to 0 percent in four states (Delaware (8), Massachusetts (32), Maine (3), and West Virginia (15)). This information is important to note, as the analyses that follow are based on the responses from the participating jurisdictions and necessarily exclude deaths from the nonresponding jurisdictions.

This study's objective of building a database for market analysis *with at least 1,000 addresses* was not achieved. Of the reports received, 653 had complete addresses. An additional 90 had a zip code only. Many records were provided without a zip code. CCC used the USPS Zip Code Lookup on the Internet to complete these entries.⁸ Fifteen forms were returned with foreign addresses,⁹ and 87 listed the individual's address as "unknown," "homeless," "transient," or of "no fixed address" and did not provide an address. Many responses omitted the address, citing State law or that the information was "privileged." A database of only 743 addresses and/or zip codes reduces the value of the resulting market analysis. In discussions with a marketing analysis firm, it was concluded that some value might be realized on a national basis, but that attempts to reach conclusions for regions or individual States should be avoided.

⁸ See <http://zip4.usps.com/zip4/welcome.jsp>

⁹ Foreign addresses included 14 in Mexico and 1 in Canada. Other responses, received without addresses, indicated one individual was from Jamaica and another from Taiwan.

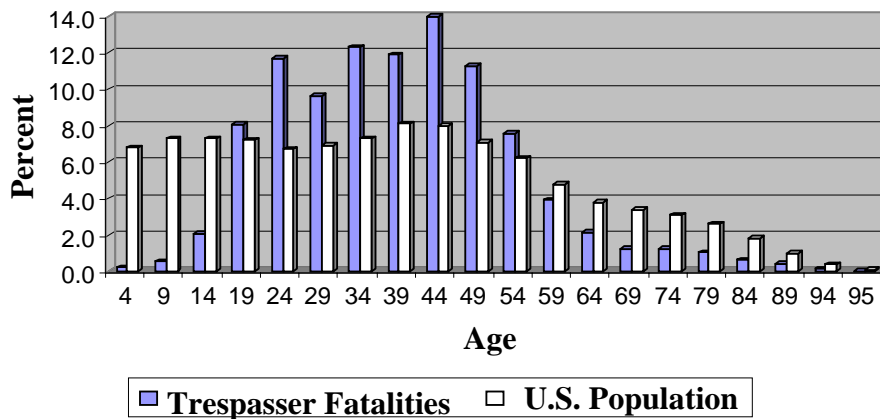
4. Response Analyses

Caveats: In considering the analyses that follow, two caveats must be kept in mind:

First, these analyses are predicated on responses to the survey and necessarily exclude those jurisdictions that did not respond and the deaths that occurred in those jurisdictions. See Map 4 and Appendix F.

Second, if one extends the findings of these analyses to all rail trespassers, one is assuming that this subset, those who died while trespassing on rail rights-of-way in responding jurisdictions, is representative of all rail trespassers. This may or may not be the case.

Chart 1. Age: Trespasser Fatalities vs. U.S. Population



Source of U.S. Census Data: Julie Meyer, *Age: 2000, Census 2000 Brief*, (U.S. Census Bureau, October 2001), p. 4.

4.1 Age

The age of the decedent is one data element that appears in both FRA's database and on the response form. CMEs/coroners corrected the preprinted age from FRA's database 138 times, and provided an age where FRA had none on 81 forms, a total of 219 changes. However, the impact on the mean age of all trespasser fatalities was minimal. The corrected mean age was 37.5 versus 37.3 from FRA's raw data from the railroads. As of 2004, the mean age of the U.S. population was 36. Therefore, the mean age of those who die while trespassing on railroad rights-of-way reflects the mean age of the U.S. population.¹⁰ However, as Chart 1 indicates, 51 percent of trespasser fatalities are between the ages of 30 and 49. This compares to 30.5 percent of the U.S. population in the same 20-year cohort.

¹⁰ These numbers include all decedents, even those for which no response was received from CMEs or coroners.

4.2 Gender

The data element most consistently provided by the CMEs and coroners was gender. Of 935 forms with this data element completed, 811 (87 percent) indicated “Male” and 124 (13 percent) indicated “Female.” The 2004 U.S. population was divided 50.8 percent “Female” versus 49.2 percent “Male.” See Chart 2.

4.3 Gender versus Age

Based on the 922 forms in which both age and gender were provided, the average age of female decedents was 38.3 years, versus 37.4 years for male decedents. The average age of all 922 decedents, after applying corrections provided by CMEs and coroners, was 37.5 years.

Statistically, the distributions of male and female ages are nearly identical. Comparing these distributions as percentages (to put them on a comparative footing, but keep in mind that males outnumber females nearly 7:1) reveals some variations. The largest is a spike among female decedents in the cohort 35-39. More than 18 percent (18.2 percent) of women decedents fall in this cohort, versus 11 percent of men. See Chart 3. That is more than twice the proportion of this cohort in the U.S. female population (8.1 percent).

Male and female trespassers share an additional spike, though not as pronounced, in the cohort 40-44, each more than 15 percent (15.5 percent and 15.7 percent, respectively). For males, this is the largest cohort. As a percentage, female trespasser deaths first exceed the population percentage in the 15-19 cohort, but male trespasser deaths do not exceed the population percentage until the next cohort, 20-24. By the 5-year cohort, deaths among male trespassers do not drop to or below the population percentage again until the 55-59 cohort. After the 15-19 cohort, deaths among female trespassers stay at or near the population percentage for the next two cohorts, not exceeding the population percentage until the 30-34 cohort. Charts 4 and 5 provide percentage comparisons of trespasser fatalities to the U.S. population by gender and age.

Chart 2. Fatalities by Gender

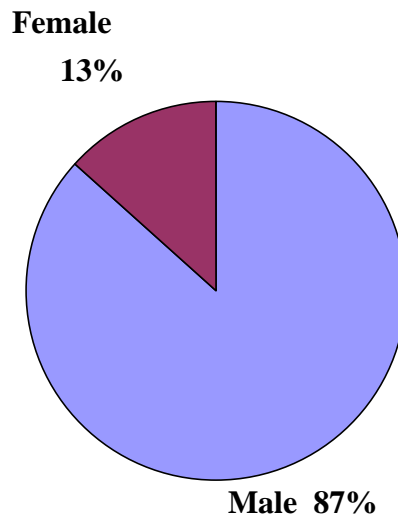


Chart 3. Fatalities by Gender and Age

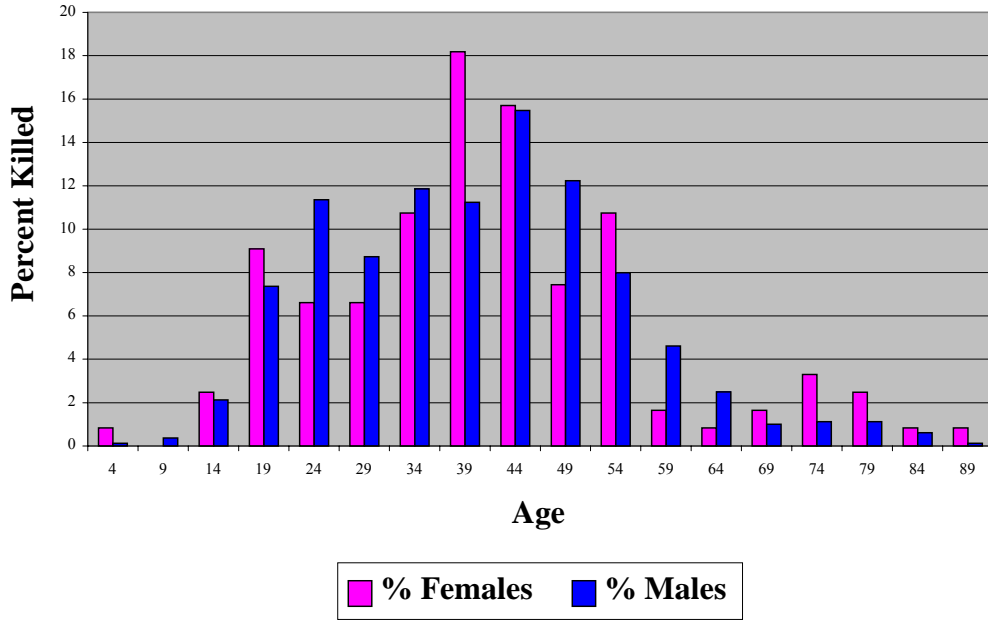


Chart 4. Male Trespassers vs. U.S. Population

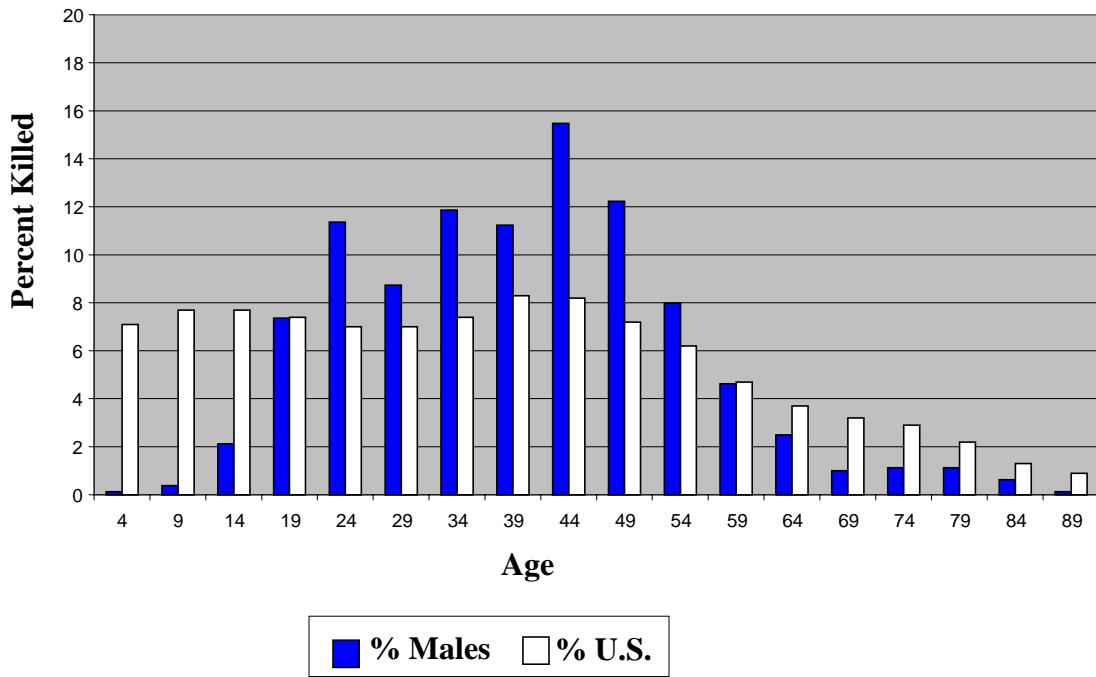
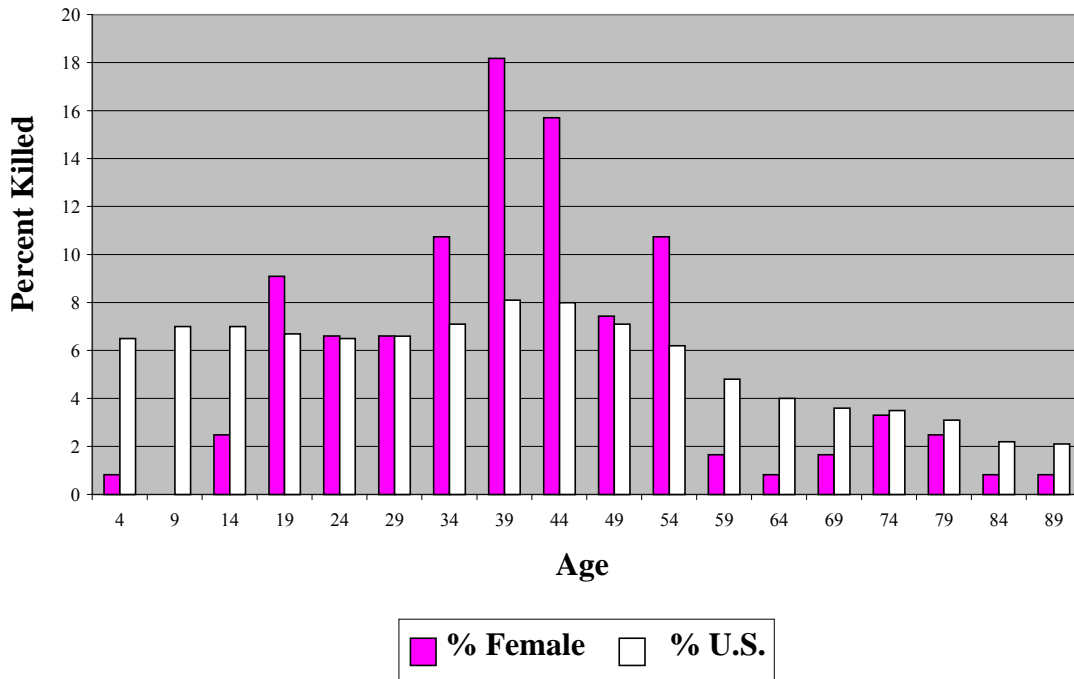


Chart 5. Female Trespassers vs. U.S. Population



4.4 Ethnicity

Hispanics or Latinos are the principal ethnic entity in the United States. This group is characterized by use or knowledge of the Spanish language and self-identification with a Latin culture. It is a self-proclaimed classification or description. (Hence, the difficulty cited above for a CME or coroner in responding to this question.)

On the form, “Ethnicity” is a yes or no question (i.e., “Hispanic or Latino, (Ethnic/language group), Y/N.”) See Appendix D. This question was only answered on 846 forms, 152 with “Yes” (18 percent) and 694 with “No” (82 percent). Hispanics represented 13 percent of the United States population as of 2004. Compared to the United States population as a whole, Hispanics are overrepresented among the 846 deaths for which CMEs and coroners provided responses.

It is important to note that the U.S. Census Bureau reports 44.2 percent of Hispanics live in the West (defined by the Census Bureau as Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming) where Hispanics represent 24.3 percent of the population.¹¹ Jurisdictions in these States returned 74.9 percent of the reporting forms, 13.5 percent above the national average. See Appendix F. If only FRA’s Region 7 (Arizona, California, Nevada, and Utah) is considered, this dichotomy is even more pronounced. The States in Region 7

¹¹ Roberto R. Ramirez and G. Patricia de la Cruz, *The Hispanic Population in the United States: March 2002*, Current Population Reports, p. 20-545 (U.S. Census Bureau, Washington, DC, June 2003).

provided useful data on 78.9 percent of the forms sent. Of these, 29.5 percent indicated that the decedents were Hispanic. The Hispanic population of these four States is 29.7 percent. This level of reporting from States with high proportions of Hispanics more than likely biases the national finding noted above. The data indicates that some effort directed specifically at individuals of Hispanic background is reasonable.

4.5 Race

The U.S. Census Bureau divides our Nation's population into seven racial groups.¹² While the study follows the Census Bureau's lead, the forms sent to CMEs and coroners only provided coding for five of the groups, omitting the subsets, "Other" and "Two or more," which accounts for 7.9 percent of the U.S. population. Eliminating the two groups from the possible responses on the questionnaire could account for some of the numbers in the other categories being inflated. The form also made provision for seven subgroups within the "Asian" classification. Codes were taken from the Census data collection form. See Appendix D.

Table 1. Fatalities by Race vs. U.S. Population

Race	Forms Returned	Percent of Forms	U.S. Population (x 1000)*	Percent
Native American	37	4.5	2,476	0.9
Black	129	15.8	34,658	12.3
White	638	78.2	211,461	75.1
Asian	12	1.5	10,243	3.6
Native Hawaiian	0	0	399	0.1
Other	0	0	15,359	5.5
Two or more	0	0	6,826	2.4
TOTAL	816	100	281,422	100

*Census 2000

Data regarding race was provided on 816 returned forms.¹³ The responses reported data for four of the five racial groups listed on the forms sent to the CMEs. Within the Asian category, five different subgroups¹⁴ were noted, but the numbers are not large enough to merit separate consideration of each subgroup. A statistical Chi-squared test confirms with 99.9 percent confidence that the racial distribution of the returned

¹² White, Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, Some other race, and Two or more races. See Census 2000 PHC-T-6, "Population by Race and Hispanic or Latino Origin for the United States, Regions, Divisions, States, Puerto Rico, and Places of 100,000 or More Population," available on the net a/o 14 August 2006 from <http://www.census.gov/population/cen2000/phc-t6/tab01.pdf>.

¹³ On 109 forms, the CME/coroner responded to the question regarding ethnicity (5 non-Hispanic, 1 unknown, and 103 Hispanic), but not race. These CMEs and coroners probably thought that answering the question regarding ethnicity obviated the need to answer the question regarding race. The 109 forms with ethnicity but without race are not included in the following analysis regarding race. On the flip side, CMEs/coroners provided race 78 times when they did not provide ethnicity. These are included in the following analysis.

¹⁴ Asian Indian, 2; Chinese, 1; Filipino, 2; Japanese, 1; Other Asian, 6.

forms is different from the U.S. population, i.e., that such a distribution would not have been realized while taking a random sample of 816 individuals from the U.S. population. See Appendix G. Some targeting of the Native American and Black racial groups may be merited when developing public educational materials regarding trespassing.

4.6 Gender versus Race (and Ethnicity)

A breakdown of gender by race shows some variation between the races. Native American and Asian women are overrepresented when compared to the other categories. The number of men greatly exceeds the number of females among Hispanics. However, the numbers are small, especially for Asians and Native Americans, which makes conclusions regarding the differences suspect. The following table applies.

Table 2. Gender vs. Race (and Ethnicity)

	Native American	Black	White	Asian	Hispanic*
Female	7	15	85	3	15
Male	30	114	553	9	137
TOTAL	37	129	638	12	152
RATIO (M/F)	4.3	7.6	6.5	3	9.1

*Hispanics may be included in the racial divisions as well.

4.7 Alcohol and/or Drugs

The form sought information regarding whether alcohol and/or drugs were a factor in the incident. One coroner qualified his reply by noting that he could state whether alcohol and/or drugs were present, but he could not say whether they were a factor. Information regarding alcohol and/or drugs was provided on 935 forms. CMEs and coroners responded to each question with “Yes,” “No,” or “Unknown” (or Not Tested or Privileged). When there was no response, or a response other than Yes or No was entered by the CME/coroner, Unknown was assumed.

Table 3. Alcohol and/or Drugs

	Yes	No
Alcohol	357	99
Both	96	274
Drugs	77	294
Total	530	

Applying that interpretation, we can state definitely that alcohol and/or drugs were present in at least 56.7 percent (530) of the decedents. Less than a third of the decedents (274, or 29.3 percent) were reported to be free of both alcohol and drugs. See Table 3.

No data was available for 131 decedents. (This number is confirmed by subtracting 530 (the number of decedents who tested positive for alcohol and/or drugs) and 274 (the number of decedents who tested clean) from 935 (the number of useful forms returned).) If we speculate and distribute the 131 decedents for whom no data was entered with respect to alcohol and/or drugs in the same ratios as those for whom data was reported, we raise these two numbers to 66 percent and 34 percent, respectively, i.e., about two-thirds of those who die while trespassing are involved with alcohol and/or drugs. See Table 4.

Table 4. Alcohol and/or Drugs (Speculative)

	Yes	No	Total
Alcohol	415	90	505
Both	111	319	430
Drugs	90	415	505
Totals	616		935

4.8 Type of Incident

The last question on the survey form read, “What was deceased doing or trying to do, e.g., getting on or off train, sleeping, walking, on a trail, hunting, riding ATV, etc?” A 4-inch blank line was provided for entering an answer. All of the 935 forms have been categorized into one of a dozen different categories based on the entries provided by the CMEs or coroners. In many instances, this required a subjective judgment on the part of CCC. Appendix H provides a complete list of all 935 entries. The reader may review these and re-categorize some of the entries and/or establish additional categories. See Table 5.

Table 5. Type of Incident

Category	Explanation	Number
Across	Walking or running across track(s)	62
ATV	ATV, dirt bike, snowmobile, etc.	18
Bridge	Involved a bridge or trestle	13
Foul Play	Foul play suspected	4
Other	Insufficient information to categorize	128
Outside	Appeared to be walking or standing outside track gauge	20
Riding	Riding or getting on or off train	46
Sleeping	Sleeping, lying, reclining, lounging, sitting on track or in gauge	186
Suicide	CME or coroner used the word "suicide" or "intentional" in describing incident	167
Probable	Probable suicide, but not so indicated by CME or coroner	49
Vehicle	Involved a truck or automobile	24
Walking	Walking, standing on track	218

4.9 Suicides

CMEs and coroners used the words “suicide” or “intentional” in describing 167 incidents (17.9 percent). See Table 5 and Appendix H. Railroads need not report to FRA suicides that have been confirmed “by a coroner or other public authority.” See 49 CFR 225.15. The fact that railroads are reporting some suicides inflates the trespass problem. It

confirms, but does not quantify what has been anecdotally known. Appendix I contains a list of railroads reporting suicides.

4.10 Probable Suicides

Compounding the suicide issue are rather compelling descriptions of trespassers’ activities that culminated in their demise, which indicate that suicide may have been their intent. CCC has noted 49 such incidents, even though this classification is largely subjective. These descriptions can be reviewed individually in Appendix H in the “Probable” category. Given CCC’s classifications, suicides and probable suicides together account for 23 percent of all trespasser deaths. See Chart 6.

Chart 6. Suicides

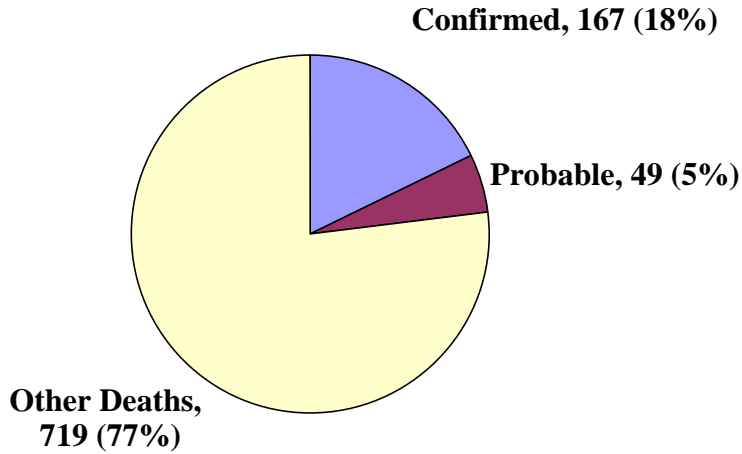
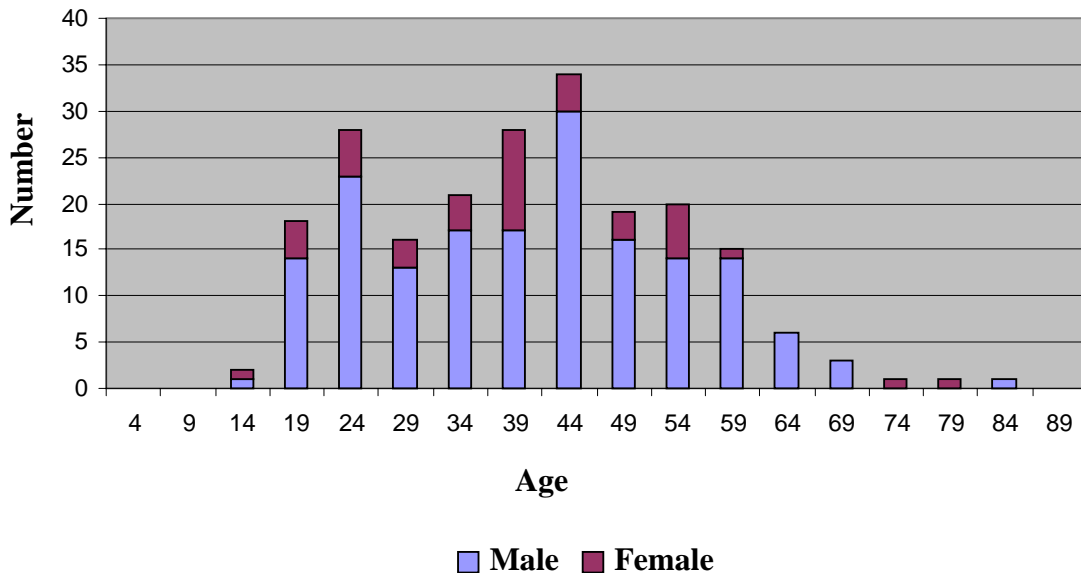


Chart 7 provides a graphic display of 213 confirmed and probable suicides by age and gender (169 male, 44 female—3 males reported without age are not included).

Chart 7. Suicides by Age and Gender



4.11 Drugs and Alcohol as a Factor Among Suicides

A lower incidence of drugs and/or alcohol among suicides was found when compared to all the trespass decedents. Of the 216 suicides and probable suicides, 62 tested positive for alcohol only, 23 for drugs only, and 15 for both, for a total of 100, or 46 percent. Seventy-nine (37 percent) tested negative for both drugs and alcohol. These numbers compare to 57 percent who tested positive for drugs, alcohol or both among all trespass decedents, including suicides. Almost 30 percent of all screened trespass decedents tested clean. As such, there was a lower percentage of alcohol and drugs and a higher percentage of “clean” tests among the suicides and probable suicides versus all trespass decedents. (Drug and alcohol data was not provided for 37 of these decedents.)

4.12 Proximity

A comparison of the county and State where the incident occurred (according to the railroads’ reports to FRA) and the home address information returned on 780 forms found that the incident occurred in the decedent’s home State 93 percent of the time. Seventy-eight percent of the incidents occurred in the decedent’s home county.

4.13 FRA Regions

Most of the foregoing data regarding forms sent and received, gender, ethnicity, race, alcohol and/or drugs, and activities are provided for each of FRA’s eight regions in Appendix J.

5. Market Analysis ¹⁵

Caveats: In considering the market analysis that follows, it is imperative that the following two caveats be kept in mind:

First, this analysis is predicated on responses to the survey and necessarily excludes the nonresponsive jurisdictions and the deaths that occurred in them. No input was provided from Delaware (8 fatalities), Maine (3 fatalities), Massachusetts (32 fatalities), or West Virginia (15 fatalities). Fewer than half of the fatalities in Indiana (48 percent), Washington (42 percent), Louisiana (41 percent), Michigan (41 percent), Nebraska (40 percent), Mississippi (28 percent), Texas (27 percent), Alabama (26 percent), and Arkansas (18 percent) are included. See Map 4 and Appendix F.

Second, if one extends the findings of this analysis to all rail trespassers, one must assume that the trespasser fatalities analyzed in this report are representative of all rail trespassers. This may or may not be the case.

The market analysis was performed by ESRI Business Information Solutions¹⁶ (ESRI) on behalf of CCC. Of the 763 records submitted for the market analysis, 740 were determined to have information that contributed to the analysis, i.e., contained usable address elements. Of the 740 records with usable address elements, ESRI software was able to match 565 addresses (74 percent) to an actual address or at least to its ZIP+4 location.¹⁷ An additional 175 (23 percent) were matched to the dominant (or only) census tract within the specified zip code.

In presenting the findings of the analysis, it is important to note that, unlike the foregoing analyses regarding individuals and individual incidents, the market analysis describes the lifestyles and life stages of the target group based on its households and/or neighborhoods identified through the addresses and/or zip codes found in the submitted database. The market analysis defines the target group by describing collectively its households and neighborhoods, not individuals. ESRI did not have access to the age, ethnic, or racial information that CCC culled from the individual forms. CCC only provided address information to ESRI. However, the market analysis provided by ESRI describes the age, ethnic, and racial information of the target group.

¹⁵ See Appendix K for some background for understanding market analysis in this context.

¹⁶ For further information about ESRI, see www.esribis.com. Total cost to CCC for this analysis was \$1,496.25. Reports and an appended database were returned October 27-31, 2006.

¹⁷ ZIP+4 is “the nine-digit numeric code, established in 1981, composed of two parts: (a) The initial code: the first five digits that identify the sectional center facility and delivery area associated with the address, followed by a hyphen; and (b) the four-digit expanded code: the first two additional digits designate the sector (a geographic area) and the last two digits designate the segment (a building, floor, etc.). ZIP+4 is a USPS trademark.” Source: *Glossary of Postal Terms Q-Z* available on the net a/o 12/23/2006 at http://www.usps.com/cpim/ftp/pubs/pub32/pub32q_z.html

5.1 Demographic Results¹⁸

5.1.1 Age

The age distribution within the target group tracks well with the U.S. population. The age anomalies of trespassers noted above are not reflected among the households and neighborhoods of the target group. The ages associated with trespasser fatalities begin to diverge from the national and target group norms in the late teens and are most pronounced among those of middle age, 25-44, when compared to either the target group or the U.S. population. The median age of those in the target group is 34.4, younger than the median age of 37 among trespasser fatalities.

Table 6. Comparison of Age Distribution

Age Cohort	U.S. Population Percentage a/o 2000	Trespasser Fatality Percentage 2002-2004	Target Group Percentage a/o 2006
0-4	6.8	0.2	7.3
5-14	14.6	2.7	13.7
15-19	7.2	8.1	7.5
20-24	6.7	11.7	8.0
25-44	30.3	47.8	29.6
45-64	21.9	24.9	23.3
65-84	10.9	4.0	9.2
>84	1.5	0.5	1.5

Source of U.S. Census Data: Julie Meyer, *Age: 2000, Census 2000 Brief*, (U.S. Census Bureau, October 2001), p. 4.

5.1.2 Racial and Ethnic Diversity

The racial and ethnic diversity among trespasser fatalities is confirmed in the target group defined by the market analysis. Native Americans, Blacks, and Hispanics are overrepresented in the target group (versus the U.S. population) as they are among trespasser fatalities. The target group contains a number of Asian households commensurate with the U.S. population, but which exceed the actual percentage of Asian trespasser fatalities. (The small number of Asians among trespasser fatalities combined with the small database submitted for analysis may have been insufficient to reduce the number of Asians in the resulting target group.) The proportion of Whites in the target group is lower than found in both the U.S. population and among trespasser fatalities. (The target group contains 14 percent of “Some Other Race Alone” and “Population of 2+ Races” categories the response form did not allow for, and which comprise 7.9 percent of the U.S. population.)

Table 7. Racial (and Ethnic) Diversity

	Native American	Black	White	Asian	Other	Hispanic
Target Group	3.1	16.1	63.2	3.6	14.0	22.0
U.S. Population	.9	12.3	75.1	3.7	7.9	13.0
Trespasser Fatalities	4.5	15.8	78.2	1.5	N/A	18.0

¹⁸Unless specifically noted otherwise, data is based on the U.S. Census Bureau, *2000 Census of Population and Housing*. Data noted as 2006 are ESRI forecasts. The ESRI *Customer Demographic Profile* is included as Appendix L.

5.1.3 Families and Households

Over a quarter (25.9 percent) of the target group households are single-person households, only slightly at variance from the U.S. norm of 25.8 percent. Nearly half (48.1 percent) are married couples with no children living at home, versus the national percentage of 51.7. Another 23.1 percent are comprised of married couples with their own children less than 18 years of age living at home (versus 23.5 percent nationally). The average household size of the target group as of 2006 is 2.7 (versus 2.59 nationally). More than four-fifths (82.2 percent) of these households are in urban settings. The remainder are rural. Housing units are nearly three-fifths (57.8 percent) owner-occupied (versus 66.2 percent nationally) with a 2006 value estimated at \$158,065, versus a national median of \$119,600 in 2000. Renter-occupied housing units (33.4 percent versus 33.8 percent nationally) drew a median rent of \$455, versus \$602 nationally. Nearly three-fifths (58.9 percent) of the households are in detached, single-unit structures. The national figure was 60.3 percent. More than half of the housing units occupied by the target group were built before 1969.

5.1.4 Socioeconomic Characteristics

In 2000, 15.3 percent of the trespasser households with income were below the poverty level, versus a national average of 12.4 percent. In that same year, 27.6 percent of the women in the target group were in the labor force, versus 57 percent nationally.

Six years later, the unemployment rate among the target group was 10 percent. The 2006 median household disposable income, i.e., income after taxes, was \$36,006 per annum. The ratio of college graduates over 25 years of age in the target group when compared to the ratio of graduates in the U.S. was 0.737. Said another way, individuals in the target group are 26.3 percent less likely to have graduated from college when compared to the general population. Over a quarter (25.4 percent) did not graduate from high school compared to 80 percent of the U.S. population that did. Only 18 percent finished college, whereas 24 percent of the general population has at least a bachelor's degree.

Table 8. 2006 Employment within the Target Group, Age 16+ (Percent)

Management	10.6
Professional	17.6
Services	18.4
Sales/Related	11.1
Office/Administrative Support	14.2
Farming/Fishing/Forestry	1.2
Construction/Extraction	7.8
Installation/Maintenance/Repair	4.0
Production	7.4
Transportation/Material Moving	7.7

Table 9. 2006 Household Income within the Target Group (Percent)

<\$15K	15.7
\$15-24,999K	12.2
\$25-34,999K	11.9
\$35-49,999K	15.7
\$50-74,999K	19.2
\$75-99,999K	10.6
\$100-249,999K	13.1
\$250-499,999K	1.2
\$500K+	0.4
Median Household Income	\$44,349

The average travel time to work for those in the target group who were employed was 25.8 minutes.

5.2 Tapestry Profile

5.2.1 Segments

ESRI has divided U.S. neighborhoods into 65 groups (segments). The neighborhoods in each group have common attributes such as “income, employment, home value, housing type, education, household composition, age, and other key determinants of consumer behavior.” The ESRI software has assigned each of the 740 trespass fatalities (those with usable address information) to one of these segments. By looking at these segments collectively, we can develop insights to the lifestyles and life stages of the neighborhoods where the trespasser fatalities originated (at least, where they called home) and thus define the segment(s) that should probably be targeted.

Only one of the 740 trespass fatalities could not be assigned to a specific segment. Conversely, only 1 of the 65 segments (high rise renters) is not represented among the remaining 739 trespass fatalities. However, trespass fatalities were far from being evenly divided among the remaining 64 segments. Half (340) of the trespass fatalities were assigned to 15 segments. These 15 segments represent 32 percent of U.S. households. This provides a “Tapestry Index” of 156 for the neighborhoods from which 50 percent of the trespass fatalities originated.¹⁹ The following table contains the 15 segments within which the most trespass fatalities were identified, as well as the additional 19 segments that had a Tapestry Index above 100.

Table 10. Top Tapestry Segments and those with an Index Exceeding 100

Tapestry Descriptor*	Trespass Fatalities	%	U.S. Households	%	Index
53 Home Town	34	4.6	1,710,407	1.5	306
26 Midland Crowd	28	3.8	4,135,120	3.6	104
38 Industrious Urban Fringe	28	3.8	1,717,958	1.5	251
32 Rustbelt Traditions	25	3.4	3,276,608	2.9	118
48 Great Expectations	25	3.4	2,023,160	1.8	190
42 Southern Satellites	23	3.1	3,149,400	2.8	113
6 Sophisticated Squires	22	3.0	3,050,339	2.7	111
41 Crossroads	21	2.8	1,690,615	1.5	191
12 Up and Coming Families	21	2.8	3,656,024	3.2	89
59 Southwestern Families	20	2.7	1,093,848	1.0	282
62 Modest Income Homes	20	2.7	1,197,756	1.1	257
24 Main Street, USA	20	2.7	2,981,883	2.6	103
50 Heartland Communities	19	2.6	2,510,750	2.2	117
28 Aspiring Young Families	17	2.3	2,686,945	2.4	98

¹⁹ “The Tapestry Index measures the proportion of ... customers in a particular market relative to the proportion of base households in the market.” (Annotated *Customer Tapestry Profile* (ESRI, 10/31/2006), pg. 1.) In this instance, a Tapestry Index of 156 reflects a high concentration of the type of households (32 percent of all households) from which half of the trespass fatalities originated. In other words, trespass fatalities are 1.56 times as likely to be from one of the household types found within these 15 segments than from the average U.S. household.

Tapestry Descriptor*	Trespass Fatalities	%	U.S. Households	%	Index
57 Simple Living	17	2.3	1,653,259	1.4	158
36 Old and Newcomers	16	2.2	2,251,955	2.0	110
52 Inner City Tenants	16	2.2	1,756,688	1.5	140
35 International Marketplace	16	2.2	1,505,776	1.3	164
56 Rural Bypasses	15	2.0	1,771,372	1.6	131
60 City Dimensions	14	1.9	1,016,814	0.9	212
64 City Commons	14	1.9	790,737	0.7	273
21 Urban Villages	14	1.9	893,159	0.8	242
23 Trendsetters	11	1.5	1,217,911	1.1	139
45 City Strivers	11	1.5	851,624	0.7	199
3 Connoisseurs	11	1.5	1,594,248	1.4	106
34 Family Foundations	10	1.4	977,969	0.9	158
9 Urban Chic	10	1.4	1,528,609	1.3	101
58 Newest Residents	10	1.4	1,032,563	0.9	149
49 Senior Sun Seekers	9	1.2	1,343,256	1.2	103
55 College Towns	7	0.9	921,179	0.8	117
54 Urban Rows	7	0.9	402,205	0.4	268
47 Las Casas	7	0.9	870,381	0.8	124
65 Social Security Set	5	0.7	749,029	0.7	103
40 Military Proximity	2	0.3	239,516	0.2	129

*Note: For complete and detailed descriptions of each Tapestry Segment, see *Community Tapestry Handbook* (ESRI BIS – Environmental Systems Research Institute Business Information Systems, 2004) available from ESRI. Call 1-800-292-2224.

5.2.2 Observation 1: Home Town

By concentrating on the *Home Town* segment, one can address the greatest number of trespasser fatalities accumulated in a single segment (34) as well as the segment with the highest Tapestry Index, 306. The *Home Town* segment is described as follows:²⁰

Demographic

Young single-person households, married couples, and single-parent families hold the median age for *Home Town* residents to 34 years. This figure is slightly younger than the U.S. median; however, 24 percent of householders are over 65 years of age. Many families have two generations that have lived and worked in the community and children who plan to do the same. *Home Town* neighborhoods are predominantly white with some black population.

Socioeconomic

The median household income for *Home Town* residents is \$28,800; their net worth is \$48,800. With slightly more than 70 percent of their income derived from wages and salaries, they also rely on Supplemental Security Income and public assistance for support. Retirees draw Social Security benefits. Some draw retirement income, but very few have invested in the stock market. In educational attainment, 34 percent have not graduated from high school, compared to 20 percent nationally. Only 7 percent hold a bachelor's or graduate degree, compared to 25 percent nationally. Although unemployment is fairly high, most of the employed find service or skilled labor jobs.

²⁰ *Community Tapestry Handbook* (ESRI BIS, 2004), p. 77.

The manufacturing, retail trade, construction, transportation, and support services industries are the primary sources of employment for these residents.

Residential

These low-density, settled neighborhoods in the Midwest and South rarely change. *Home Town* residents may move from one house to another, but they seldom cross the county line. More than 70 percent live in single-family detached homes; another 12 percent live in two- to four-unit structures. More than half of the homes are owner-occupied with a median value of \$58,900. Many of those who rent live in multi-unit structures, paying very reasonable rates of less than \$500 per month. With population declining in these neighborhoods, new construction is scarce. Homes are slightly run down; many housing units are vacant. Most homes were built before 1970.

Preferences

Home Town residents savor their quasi-country lifestyle by spending time outdoors, gardening, fishing, swimming, and walking and, when indoors, reading and playing cards. Many are pet owners who purchase prepackaged dry pet foods over moist foods. They make the most of their urban locations, enjoying nightclubs, bars, movies, museums, and zoos. They use the internet primarily for e-mail and games, either at home, work, or the local library. Their primary means of communication is still the telephone, and the majority of calls are local. To keep up with current events, *Home Town* households subscribe to daily and Sunday newspapers and tune in to news and informational channels such as CNN, Fox News, and the Discovery Channel. Movie channels are also popular.

They shop for groceries at discount stores such as Wal-Mart; Kroger and Aldi are also favorites. Perhaps hindered by lack of choice, *Home Town* shoppers buy apparel at discount stores or small local malls; however, they are gaining confidence in internet and mail-order shopping. Residents do not dine out very often, but Applebee's, Cracker Barrel, and Golden Corral are their restaurants of choice.

5.2.3 Observation 2

By concentrating on neighborhood segments with an index between 200 and 300 (in this instance, 6.4 percent of U.S. households), one potentially could reach the households of 15.8 percent of trespasser fatalities. This subgroup of seven segments is highly urbanized:

38 Industrious Urban Fringe	Urban, concentrated in CA, TX, AZ, FL
59 Southwestern Families	Suburban, especially in SW, 80 percent Hispanic
62 Modest Income Families	Older suburbs, family oriented, Black culture
60 City Dimensions	High density, ethnically diverse, older urban
64 City Commons	Apartment dwellers, mostly Black, metropolitan
21 Urban Villages	Multicultural, mostly Hispanic, especially CA
54 Urban Rows	Cities, especially mid-Atlantic, 70 percent Black

Note: The first caveat detailed at the start of this market analysis must be kept in mind, i.e., that this analysis is predicated on survey responses, not on the universe of trespasser fatalities. Any geographic conclusions must be carefully considered.

Groups

ESRI provides two categorizations of the Tapestry Segments. One is called the LifeMode Group and the second is the Urbanization Group. The LifeMode Group divides the 65 segments into 12 categories and the Urbanization Group into 11 categories. Each of the 65 segments is placed in one LifeMode Group and in one Urbanization Group. For example, the *Home Town* segment is included in LifeMode Group L11—*Factories and Farms*, and in the Urbanization Group U8—*Suburban Periphery II*. Segments assigned to a LifeMode Group “share an experience, such as being born in the same time period, or a trait such as affluence.” Urbanization Groups “share a locale, from the urban canyons of the largest cities to the rural lanes of villages or farms.”

Ranked by the number of trespass fatalities, most to least, the 12 LifeMode Groups are:

Table 11. LifeMode Groups

Group Descriptor*	Trespass Fatalities	%	U.S. Households	%	Index
L8 Global Roots	92	12.4	9,442,681	8.3	150
L11 Factories & Farms	89	12.0	10,950,099	9.6	125
L9 Family Portrait	78	10.5	8,603,242	7.5	140
L5 Senior Styles	71	9.6	14,231,658	12.5	77
L2 Upscale Avenues	71	9.6	15,733,421	13.8	70
L12 American Quilt	69	9.3	10,448,687	9.2	102
L10 Traditional Living	65	8.8	10,086,731	8.8	99
L1 High Society	59	8.0	14,253,275	12.5	64
L3 Metropolis	49	6.6	6,110,287	5.4	124
L7 High Hopes	42	5.7	4,710,105	4.1	137
L4 Solo Acts	42	5.7	7,797,510	6.8	83
L6 Scholars & Patriots	12	1.6	1,679,196	1.5	110

*Note: For complete and detailed descriptions of each LifeMode Group, see *Community Tapestry Handbook* (ESRI BIS, 2004) available from ESRI. Call 1-800-292-2224 or download from: <http://www.esri.com/library/brochures/pdfs/community-tapestry-handbook.pdf>.

Ranked by the number of trespass fatalities, most to least, the 11 Urbanization Groups are:

Table 12. Urbanization Groups

Group Descriptor*	Trespass Fatalities	%	U.S. Households	%	Index
U5 Urban Outskirts I	105	14.2	12,461,013	10.9	130
U4 Metro Cities II	85	11.5	12,538,134	11.0	104
U7 Suburban Periphery I	76	10.3	17,444,254	15.3	67
U8 Suburban Periphery II	74	10.0	11,145,615	9.8	102
U6 Urban Outskirts II	69	9.3	5,967,902	5.2	178
U10 Rural I	65	8.8	12,662,714	11.1	79
U3 Metro Cities I	55	7.4	12,929,151	11.3	66
U1 Principal Urban Centers I	55	7.4	9,007,266	7.9	94
U2 Principal Urban Centers II	54	7.3	5,463,844	4.8	152
U11 Rural II	52	7.0	8,882,378	7.8	90
U9 Small Towns	49	6.6	5,544,621	4.9	136

*Note: For complete and detailed descriptions of each Urbanization Group, see *Community Tapestry Handbook* (ESRI BIS, 2004) available from ESRI. Call 1-800-292-2224 or download from <http://www.esri.com/library/brochures/pdfs/community-tapestry-handbook.pdf>.

5.2.4 Observation 3

The *Home Town* segment (53) noted in Observation 1 above is found in the *Factories and Farms* LifeMode Group and in the *Suburban Periphery II* Urbanization Group. By addressing the *Home Town* segment, some spillover benefits could be expected in the remainder of these two Groups. More than 22 percent of the trespasser fatalities (163 of 739) came from neighborhoods and households within these two Groups. These two groups are described as follows:

Urbanization Group: U8 Suburban Periphery II

Segments: 18, 29, 33, 40, 43, 53

Suburban Periphery II represents the highest percentage of population in urban clusters (twice the U.S. median) living in metropolitan areas, in older housing, with the shortest commute to work. Owned, single-family homes and military quarters dominate. Households are a mix. Half are married couple families, and almost one-third are householders living alone. Median household income and home value are below the U.S. median, yet median net worth is slightly higher. This group is older. They prefer Maxwell House coffee, enjoy gambling, watch QVC, and frequent family restaurants and steak houses such as Chi-Chi's and Perkins.²¹

LifeMode Group: L11 Factories and Farms

Segment Codes: 25, 37, 42, 53, 56

Some might say that life has passed by the segments in the *Factories and Farms* summary group. Employment in manufacturing and agricultural industries is typical in these small, settled communities across America's breadbasket. The rural South and Rustbelt areas change very little over time, creating a climate with few employment opportunities, which hinders growth. Many households include married couples or married couples with children; median household incomes are approximately \$37,000. Most own their homes.²²

5.2.5 Observation 4

The highest index among the LifeMode Groups is the first one, *Global Roots*. Though two-thirds of the LifeMode Groups have indexes above 100, none are higher than *Global Roots*. Within the Urbanization Group, three other groups have indexes higher than the top group, *Urban Outskirts I*, and two of these groups also have indexes that are higher than *Global Roots*' index. Both of these groups, along with *Urban Outskirts I* and *Global Roots*, have a significant urban and/or suburban component. The two top groups are described as follows:

Urbanization Group: U5 Urban Outskirts I

Segments: 04, 24, 32, 38, 48

The segments in *Urban Outskirts I* reside in higher density suburban neighborhoods spread across metropolitan areas. Many of these neighborhoods are part of the main hub of social, cultural, and economic activity within the metro area. The proximity of higher

²¹ Ibid., ESRI, pg. 20.

²² Ibid., ESRI, pg. 16.

density suburban areas to places of employment and entertainment venues combines the convenience of access with the advantage of affordable suburban living. The median household income of *Urban Outskirts I* is \$49,000, on par with the national median, although the population is slightly younger with a median age of 34 (compared to the national median of 36 years). Like established suburban communities, the housing stock is dominated by single-family dwellings but includes rental apartments to accommodate younger households with growing incomes. “Do-it-yourself” (DIY) projects are popular here, with owners tackling home improvement basics such as patios, fencing, flooring, and, naturally, lawn care. Residents enjoy an active life that includes a variety of sports, even roller blading. The media of choice is television, with as many as four television sets in many homes.²³

LifeMode Group: L8 Global Roots

Segment Codes: 35, 38, 44, 47, 52, 58, 60, 61

The common thread among the segments in *Global Roots* is ethnic diversity. *Las Casas* and *NeWest Residents* represent the strong Hispanic influence in this group in addition to a broad mix of racial diversity found in *Urban Melting Pot* and *High Rise Renters*. In general, these households are young with modest incomes and tend to rent in multiunit dwellings. The youth of this group reflects recent immigration trends; half of all households have immigrated to the United States within the past 10 years. The households range from married couples, typically with children, to single parents to individuals who live by themselves. Most of these recent arrivals strive to provide a better future for their children, find better jobs, and achieve the dream of home ownership.²⁴

5.2.6 Observation 5

The top LifeMode Group, *Global Roots*, and the top Urbanization Group, *Urban Outskirts I*, have only one segment in common, *Industrious Urban Fringe*. This segment accounts for only 28 of the trespass fatalities in both groups. However, the index for the *Industrious Urban Fringe* segment is 251. A focus on this segment in the development of programs, materials, and outreach probably would spill over to the remainder of both the *Urban Outskirts* and *Global Roots* Groups. This has potential to reach the households of 22.9 percent of trespass fatalities (169 fatalities). The *Industrious Urban Fringe* segment is described as follows:²⁵

Demographic

Family is central to most *Industrious Urban Fringe* households. More than half of these households have children, primarily in married-couple households and secondarily in single-parent families. Multigenerational households are relatively popular. The comparatively low median age of 29 years reflects the high proportion of children. Hispanics make up 57 percent of the residents. One-quarter of *Industrious Urban Fringe* residents are foreign born, bringing rich and diverse cultures to these urban outskirt neighborhoods.

²³ Ibid., ESRI, pg. 20.

²⁴ Ibid., ESRI, pg. 16.

²⁵ Ibid., ESRI, pg. 62.

Socioeconomic

The median household income of *Industrious Urban Fringe* residents is \$39,000, and median net worth is \$64,000. With a large household size, their discretionary income is low compared with market segments of similar median income. Settled on the fringe of metropolitan cities, these households take advantage of their proximity to metropolitan cities for employment opportunities. These diverse families rely mainly on skilled and administrative work in the service and manufacturing industries for their livelihood. The education level is less than the U.S. average, and unemployment is higher.

Residential

Two-thirds of *Industrious Urban Fringe* householders own their homes. Most live in single-family homes. The median home value of \$105,000 is about 25 percent less than the U.S. median. Living further out from urban centers allows many households to find the space to raise a family and have an affordable home. The majority of these neighborhoods are located in California, Texas, Arizona, and Florida.

Preferences

Industrious Urban Fringe households balance their budgets carefully. Mortgage payments take priority. They shop at Wal-Mart, Kmart, Target, and other major discount stores for baby and children's products. They dine out less often than average households. Many have no financial investments or retirement savings other than their homes and are less likely to carry health insurance than average.

Keeping in touch is important to these residents. They often have a second phone line at home and various phone services. Having pets, particularly dogs, is an integral part of their family lifestyle. They enjoy watching movies, both at theaters and at home. Multiple visits to movie theaters in a month are quite common.

Newspapers and magazines are not the best media to reach the *Industrious Urban Fringe* households. Television and radio are most effective. They watch television just as much as the average U.S. households but with a lower subscription rate to cable. They are heavy radio listeners. Contemporary hit and Hispanic stations dominate the radio dials.

Construction of an 11-by-12 matrix (11 cells for the Urbanization Groups and 12 cells for the LifeMode Groups) highlights 11 cells (out of 43) for which both of the intersecting groups have indexes greater than 100 and the cell itself has an index of 100 or more. (Though an 11-by-12 matrix has 132 cells, in this application only 43 had values, or segments, assigned.) The other 32 cells were either in groups with indexes less than 100 or themselves had indexes less than 100. The 11 cells are as follows:

Table 13. Result of Group Matrix, Cells with Index ≥ 100

Intersecting Groups	Common Segments	Trespass Fatalities	Index
L3 Metropolis U2 Principal Urban Centers II	45, 54	18	218
L3 Metropolis U6 Urban Outskirts II	51, 62	25	162
L6 Scholars and Patriots U6 Urban Outskirts II	55	7	117
L6 Scholars and Patriots U8 Suburban Periphery II	40	2	129
L7 High Hopes U5 Urban Outskirts I	48	25	190
L8 Global Roots U4 Metro Cities II	52, 60	30	171
L8 Global Roots U5 Urban Outskirts I	38	28	251
L9 Family Portrait U2 Principal Urban Centers II	64	14	273
L9 Family Portrait U6 Urban Outskirts II	59	20	282
L11 Factories and Farms U8 Suburban Periphery II	53	34	306
L12 American Quilt U9 Small Towns	41	21	191

5.2.7 Observation 6

A focus on any of the above group combinations with an emphasis on the common segment(s) should prove beneficial. Effectiveness would vary based on available resources, the number of households in the segment(s), the geographic concentration of the households/neighborhoods, the demographic diversity within the segment(s), etc. Two of these combinations, highlighted in red, already have been addressed in the preceding discussion.

A complete copy of the Customer Tapestry Profile as provided by ESRI is attached as Appendix M.

ESRI’s Customer Geographic Summary has not been included, as its value has been significantly diminished to a degree that it would be misleading because of the numerous jurisdictions that did not respond to the survey.

6. Findings

Following is a summary of this study's 10 principal findings regarding those killed while trespassing on railroad rights-of-way.

1. The typical trespasser fatality on a railroad's right-of-way is an inebriated, 38-year-old white male. However, there is wide variation.
2. The presence of alcohol and/or drugs is pervasive. Fifty-seven percent of decedents tested positive for alcohol and/or drugs, while only 29.3 percent tested negative for these substances. The remaining decedents were not tested, but if distributed in the same ratios, the numbers indicate that two-thirds were influenced by alcohol and/or drugs and about one-third were not.
3. Of those in this study who died trespassing on railroad rights-of-way, 13 percent were female and 87 percent were male.
4. Eighteen percent of the decedents were Hispanic. This varies dramatically across FRA's regions. See Appendix J. Nationally, 18 percent is slightly above the 13 percent that Hispanics represent in the U.S. population, but because of the incomplete reporting (which also varied by region), it is difficult to say with certainty that Hispanics are overrepresented.
5. Four major racial groups were identified. Asians, at 1.5 percent, were underrepresented, as Asians comprise 3.6 percent of the U.S. population. Native Americans were overrepresented by almost five times the actual number, 4.5 percent versus 0.9 percent of the U.S. population. Blacks were overrepresented at 15.8 percent versus 12.3 percent of the U.S. population. This varied regionally and would be subject to the same qualification stated above regarding Hispanics. The remainder, 78.2 percent, was White. (This last figure may be somewhat inflated. The U.S. population includes two racial components that the survey form did not accommodate, i.e., "Some Other Race Alone" and "Population of 2+ Races." According to census data, these two categories comprise 7.9 percent of the U.S. population. It is likely that some individuals were reported as White due to either the inability to determine race or the missing categories on the survey form.)
6. CMEs and coroners described the activity of more than 43 percent of the decedents as walking, standing, sleeping, lying, reclining, lounging or sitting on the track or in the gauge, i.e., between the rails. Seven percent were walking or running across the track. Other activities included riding a recreational vehicle (ATV, dirt bike, snowmobile, etc.), standing outside the gauge but obviously too close, riding or getting on or off a train, driving a highway vehicle, or being on a bridge or trestle. Tunnels were not mentioned. Nearly 14 percent of reports did not provide sufficient information to categorize. See Table 5 and Appendix H.

7. The presence of a large number of suicides in the database (18 percent) was unexpected. Railroads are not required to report suicides to FRA. In reviewing CME and coroner comments, it appears an additional 5 percent of the decedents were probable suicides. Because the FRA does not require the railroads to report suicides, these numbers represent only the minimum number of suicides for the sample period.
8. The market analysis used the decedents' individual addresses to identify and categorize the addresses into their respective neighborhood and household subsets. These subsets should facilitate the development of educational and law enforcement outreach programs and materials focused on the "target group." Here are some attributes of the target group: It is younger than the general population of the United States; Native Americans, Blacks, and Hispanics are overrepresented; It is largely urban or suburban (82.2 percent); Unemployment in 2006 was 10 percent, and, of those households with income, 15.3 percent were below the poverty level, versus 12.4 percent nationally; Only 74.6 percent have graduated from high school and 18 percent from college, versus 80 percent and 24 percent, respectively, in the general population.
9. By concentrating on the 1.7 million households (1.5 percent of the Nation's total households) the market analysis refers to as *Home Town*, the outreach would directly address 4.6 percent of potential trespasser fatalities as well as an additional 18.7 million households that are closely aligned with the *Home Town* group. These households account for more than 22 percent of all trespasser fatalities.
10. Another group to which the market analysis refers as the *Industrious Urban Fringe* (also 1.7 million households) has similar potential. This group is the source of 3.8 percent of all trespasser fatalities, and is closely aligned with groups that account for an additional 19.1 percent of these fatalities, yielding the potential to reach 22.9 percent of all trespasser fatalities.

7. Recommendations

As part of its program to reduce trespassing on railroad rights-of-way, CCC recommends that FRA address each of the following six suggestions. CCC would welcome the opportunity to contractually participate with or support FRA in pursuit of any or all of these suggestions.

1. Investigate alternatives for completing this survey. For example, ask the involved railroads to complete the forms for those incidents for which CMEs or coroners could not or did not complete, or request access to the railroads records in order to complete the form(s). Request assistance from the Association of American Railroads (AAR) and the American Short Line and Regional Railroad Association (ASLRRA) to assist with this one-time effort. Once the survey has been completed, rerun the market analysis.
2. Using the foregoing demographic data, work with railroads to confirm (or refute) the assumption that those who die while trespassing are representative of all trespassers.
3. Require reporting of all deaths among trespassers, including suicides. (This would necessitate railroad reporting officers to check with the CME or coroner in the jurisdiction where the death occurred to determine how the death is being classified. Railroad claims officers may already be doing this.) Suicides should be reported as suicides. The current situation, whereby some suicides are included in the trespass database, inflates the trespass numbers while providing little insight as to the actual extent of suicides by rail.
4. Work with suicide prevention interest groups to develop a response kit for distribution by railroad and Government information officers to local media outlets following railroad suicide incidents. This would address the possibility of copycat incidents suggested by anecdotal information.
5. Convene a meeting of principal stakeholders to present these findings and discuss outreach options, e.g., Operation Lifesaver, American Association of Suicidology, rail labor organizations, AAR, ASLRRA, the Rails-to-Trails Conservancy, as well as FRA, the Federal Highway Administration, the National Highway Traffic Safety Administration, and the U.S. Department of Transportation. Invite the Ad Council to participate.
6. In addition to publishing this report, post a downloadable version on the FRA Web site. Allow CCC to distribute the report.

Appendices

Appendix A: Trespasser Fatalities by State (2002-2004)

State	Fatalities	Fatality Rate per 100,000 population	Fatality Rate per 1,000 miles of track
Alabama	19	0.427	5.82
Arizona	41	0.799	23.05
Arkansas	17	0.636	6.45
California	261	0.771	45.53
Colorado	11	0.256	4.00
Connecticut	7	0.206	12.84
Delaware	8	1.021	35.09
District of Columbia	4	0.699	166.67
Florida	87	0.544	30.46
Georgia	54	0.660	11.47
Idaho	4	0.309	2.50
Illinois	84	0.676	11.52
Indiana	29	0.477	6.84
Iowa	25	0.854	6.31
Kansas	15	0.558	3.01
Kentucky	17	0.421	6.36
Louisiana	34	0.761	11.44
Maine	3	0.235	2.61
Maryland	27	0.510	35.43
Massachusetts	32	0.504	29.09
Michigan	17	0.171	4.58
Minnesota	15	0.305	3.24
Mississippi	18	0.633	7.08
Missouri	24	0.429	5.87
Montana	7	0.776	2.14
Nebraska	10	0.584	2.89
Nevada	11	0.551	9.17
New Hampshire	1	0.081	2.35
New Jersey	46	0.547	50.06
New Mexico	28	1.539	14.42
New York	56	0.295	15.54
North Carolina	57	0.708	17.52
North Dakota	3	0.467	0.83
Ohio	51	0.449	9.75
Oklahoma	20	0.580	6.18
Oregon	19	0.555	7.67
Pennsylvania	55	0.448	10.82
Rhode Island	3	0.286	29.41
South Carolina	24	0.598	10.43
South Dakota	4	0.530	2.18

State	Fatalities	Fatality Rate per 100,000 population	Fatality Rate per 1,000 miles of track
Tennessee	30	0.527	11.50
Texas	136	0.652	13.13
Utah	9	0.403	6.31
Vermont	0	0.000	0.00
Virginia	19	0.268	5.84
Washington	45	0.764	14.18
West Virginia	15	0.830	6.71
Wisconsin	19	0.354	5.51
Wyoming	3	0.608	1.61
National Total	1,524	0.542	10.80

Appendix B: Letter of Transmittal from Cadle Creek Consulting



Xxxxxx nn, 2005

Dr. /Mr. _____
Chief Medical Examiner/Coroner
State/County of _____
Street Address _____
City, State Zip _____

Dear Dr./Mr. _____ :

Federal Railroad Administration (FRA) records indicate there have been **number** fatalities involving railroad trespassers in **State/County** during the past three years (2002-2004). I have been contracted by FRA to conduct a nationwide demographic study of railroad **trespasser** fatalities. Railroad trespassers are individuals who enter railroad rights-of-way, tracks or other property without permission. This study will enable FRA to develop public outreach programs targeted to those populations determined to be most at risk.

FRA has incomplete information regarding these incidents. Its data is limited to the State and county of incident and the age of the victim. FRA is unable to collect gender or other significant demographic descriptors of the individual(s) involved. This deficit hampers efforts to develop and direct an effective public information program to prevent future fatalities. Your records contain information that would assist in targeting such a program.

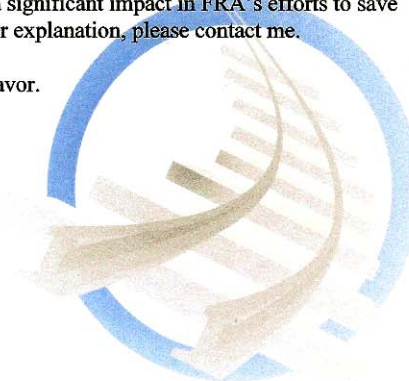
This letter is a request for assistance. The enclosed form, *Report of Railroad Trespasser Death*, has been partially completed utilizing data obtained from FRA regarding each of the railroad trespasser deaths for 2002-2004 that occurred in **State/County**. **The additional data that you provide to Cadle Creek Consulting for this specific investigation will be used only by Cadle Creek Consulting to compile generalized, statistical, summary reports. Only these summary reports will be released to FRA by Cadle Creek Consulting. Cadle Creek Consulting will not release the raw data that you provide to FRA. We intend to maintain the confidentiality of this requested information.**

Your assistance is critical to this study. It will have a significant impact in FRA's efforts to save lives. If you have any questions, or would like further explanation, please contact me.

Thank you for your assistance in this lifesaving endeavor.

Sincerely,

Bruce F. George



Appendix C: Letter of Endorsement from FRA's Administrator



U.S. Department
of Transportation

**Federal Railroad
Administration**

1120 Vermont Ave., N.W.
Washington, D.C. 20590

To: Our Nation's Chief Medical
Examiners and Coroners:

Trespassing is the most significant cause of death attributable to railroad operations in the United States. Nationally, more than 500 such deaths, which are preventable, occur each year. Safety — the prevention of death, injury, and property damage in railroad operations — is of paramount importance to the Federal Railroad Administration (FRA).

The railroad working environment inherently is a hazardous one. Railroad employees receive extensive training, know the current or pending operations and strictly adhere to established safety practices in order to work safely in this environment. Trespassers, individuals on railroad rights-of-way and other property without permission, do not have the benefit of such training and knowledge. As long as they continue to intrude on railroad property, they risk injury and loss of life.

The FRA, in cooperation with Operation Lifesaver, Inc., and State, local and rail transportation officials, is committed to developing a public information program to reduce these fatalities by preventing trespassing on railroad properties. Previous efforts have been hampered by our inability to target appropriate messages to the appropriate audiences. We do not have sufficient demographic data to identify these specific populations. The best source of such demographic data resides with our Nation's medical examiners and coroners.

The FRA has contracted with Cadle Creek Consulting to gather the data, using information available from FRA trespasser fatality reports to be combined with coroner/medical examiner records. The requested information is not extensive, yet will allow us to develop the generic demographic data about trespassers on railroad property. After gathering and processing the data, Cadle Creek Consulting will release to FRA only generalized, statistical, summary reports. With the compiled National data, FRA and its partners will be able to design public outreach programs focused on the individuals, groups and neighborhoods most at risk.

Your cooperation and assistance in addressing this public safety issue are most earnestly sought and deeply appreciated.

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph H. Boardman".

Joseph H. Boardman
Administrator

Enclosures

**Appendix D: Report of Railroad Trespasser Death
FRA F 6180.117 (5/04)
OMB NO. 2130-0563**

OMB NO. 2130-0563

<u>REPORT OF RAILROAD TRESPASSER DEATH</u>			
State: _____	County: _____	Date: _____	Time: _____
Railroad: _____	Location: _____		
Circumstance: _____			
Deceased: _____ Age: _____			
IF ANY OF THE ABOVE INFORMATION IS INCORRECT, PLEASE CROSS OUT AND ENTER CORRECTED DATA.			
INFORMATION BELOW TO BE PROVIDED BY CME OR CORONER			
Please complete the form, providing the requested information. Once completed, return form in enclosed, self-addressed envelope. <u>Do not send this form to FRA.</u> Thank your for your assistance.			
Note: Public reporting burden for this information collection is estimated to average five minutes per response. This estimate includes time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is 2130-0563 .			
Cadle Creek Consulting (CCC) is the only party authorized to view this data. Upon analysis of the data, CCC will provide summary reports to FRA. FRA will not have access to the raw data you submit.			
Gender: _____ (M/F)		Hispanic or Latino: _____ (Ethnic/language group) (Y/N)	
Race (enter code): _____			
AM – American Indian or Alaska Native	BL – Black or African American	Asian	
NH – Native Hawaiian or Other Pacific Islander	WH – White	AI – Asian Indian	KO – Korean
		CH – Chinese	VI – Vietnamese
		FI – Filipino	OA – Other Asian
		JA – Japanese	
Home Address: _____			
Number		Street	
_____		_____	
City		State	Zip
_____		_____	_____
Was alcohol a factor? _____ Yes/No		Were drugs a factor? _____ Yes/No	
Type of Incident (what was deceased doing or trying to do, e.g., getting on or off train, sleeping, walking, on a trail, hunting, riding ATV, etc?): _____			

FRA F 6180.117 (5/04)

Appendix E1: “No Record” Reports by State, County, and Date

ST	COUNTY	DATE	TIME	RR	INCDTNO
AZ	COCONINO	2/11/2004	3:55AM	BNSF	SW0204003
AZ	PINAL	5/7/2004	12:40AM	UP	0504TS008
CA	FRESNO	1/14/2004	10:08AM	ATK	91081
CA	KERN	6/16/2004	3:55AM	BNSF	NC0604106
CA	KERN	10/12/2004	3:16PM	UP	1004RS007
CA	LOS ANGELE	1/24/2002	2:10PM	UP	0102LA040
CA	LOS ANGELE	4/3/2002	3:05PM	SCAX	403021
CA	LOS ANGELE	7/21/2002	12:55AM	ATK	74392
CA	LOS ANGELE	10/5/2003	2:20PM	ATK	80092
CA	MADERA	12/31/2002	1:50AM	BNSF	NC1202010
CA	MERCED	10/9/2004	7:58AM	UP	1004RS008
CA	RIVERSIDE	6/10/2003	11:40PM	BNSF	SC0603018
CA	RIVERSIDE	11/17/2003	7:30PM	BNSF	SC1103008
CA	SACRAMENTO	8/17/2002	11:45AM	UP	0802RS031
CA	SAN BERNAR	4/29/2002	9:50PM	UP	0402LA055
CA	SAN LUIS O	2/22/2002	7:00AM	UP	0202LA027
CA	SANTA BARB	3/28/2003	10:10AM	ATK	77542
CA	SANTA BARB	10/25/2003	12:12PM	ATK	90134
CA	SANTA BARB	7/2/2004	7:30PM	ATK	93083
CA	VENTURA	12/31/2004	1:08PM	ATK	95033
CA	YOLO	12/12/2002	1:05AM	UP	1202RS033
CO	ADAMS	8/16/2002	11:15PM	UP	0802DV007
CT	NEW LONDON	8/9/2002	12:30PM	ATK	74702
FL	BROWARD	10/30/2002	9:55PM	CSX	100220002
FL	HILLSBOROU	9/15/2002	8:07AM	CSX	90220003
GA	COWETA	3/18/2004	3:53PM	CSX	5355
GA	RICHMOND	6/15/2002	2:50AM	CSX	60201026
IA	LINN	6/24/2003	10:54AM	CIC	200304P
IA	LINN	12/4/2003	1:40PM	UP	1203CB002
IA	POTTAWATTA	11/29/2003	11:25PM	UP	1103CB014
IA	TAMA	7/7/2003	12:20AM	UP	0703CB007
IA	WOODBURY	1/10/2004	12:31PM	UP	0104CB004
IL	COOK	3/12/2002	5:38PM	ATK	72550
IL	COOK	8/29/2002	10:15PM	CC	158313
IL	COOK	11/22/2002	5:54AM	NIRC	HC005
IL	COOK	2/6/2004	3:01PM	UP	0204PR009
IL	COOK	9/16/2004	5:35AM	NIRC	MR171X
IL	DU PAGE	9/27/2002	11:25PM	BNSF	CH0902027
IL	DU PAGE	10/12/2003	11:55AM	WC	200925
IL	LAKE	4/4/2003	6:11PM	UPME	0403CM001
IL	MACON	6/6/2003	7:07PM	NS	P060316473
IL	MORGAN	4/11/2003	10:00AM	BNSF	CH0403006
IL	PEORIA	6/29/2003	10:00AM	BNSF	CH0603015
IN	ELKHART	3/2/2004	9:20AM	NS	P030417453
KY	JEFFERSON	6/15/2002	12:51AM	PAL	2002JUN01P
LA	LAFAYETTE	7/13/2002	2:50AM	UP	0702LV012
MD	MONTGOMERY	5/23/2004	2:20AM	CSX	4835
MN	STEARNS	8/7/2004	1:25AM	BNSF	TC0804003
NC	ALAMANCE	10/10/2004	7:15PM	ATK	94190
NC	EDGEcombe	7/29/2004	8:25PM	CSX	5474
NC	GUILFORD	7/26/2003	6:15AM	NS	P070316618
NC	YADKIN	7/30/2002	12:45AM	ATK	74522
NJ	ESSEX	8/19/2003	7:12AM	NJTR	200308586
NJ	HUDSON	8/26/2004	2:40AM	CRSH	R080400519
NJ	MERCER	7/10/2002	10:51AM	CRSH	R070200342
NJ	MIDDLESEX	3/13/2003	6:15PM	NJTR	200303227

ST	COUNTY	DATE	TIME	RR	INCDTNO
NJ	MORRIS	10/10/2003	5:31AM	NJTR	200310708
NJ	PASSAIC	11/7/2003	11:10AM	NYSW	200300112
NM	MCKINLEY	1/29/2002	7:00AM	BNSF	SW0102013
NM	MCKINLEY	1/29/2002	7:00AM	BNSF	SW0102013
NM	MCKINLEY	1/29/2002	7:00AM	BNSF	SW0102013
NM	MCKINLEY	1/29/2002	7:00AM	BNSF	SW0102013
NM	MCKINLEY	1/29/2002	7:00AM	BNSF	SW0102013
NM	SANDOVAL	10/12/2002	1:22PM	ATK	75515
NM	VALENCIA	6/2/2004	3:45AM	BNSF	SW0604100
NV	CLARK	10/6/2003	9:45PM	UP	1003UT010
NV	PERSHING	7/17/2003	5:25PM	UP	0703RS033
NY	HERKIMER	4/24/2002	1:10PM	CSX	40230029
NY	ONONDAGA	12/29/2003	5:02PM	ATK	90930
NY	SUFFOLK	1/26/2004	4:30AM	LI	TS20040101
OH	MADISON	3/16/2003	7:45PM	CSX	30307043
PA	BUCKS	6/8/2004	11:15AM	SEPA	Y0406012
PA	LEHIGH	1/2/2004	11:07AM	NS	P010417167
SC	CHARLESTON	4/1/2002	4:55PM	NS	P040215196
TN	JEFFERSON	11/13/2002	6:58PM	NS	P110215874
TN	RHEA	1/28/2003	4:40PM	NS	P010316083
TN	SHELBY	3/2/2002	2:55PM	NS	P030215106
TN	SHELBY	3/6/2004	9:20PM	NS	P030417334
TN	SHELBY	9/12/2004	6:30AM	CSX	7147
TX	BOSQUE	2/1/2004	5:30PM	ATK	91283
TX	BOWIE	1/19/2002	3:14AM	KCS	20119005
TX	CALLAHAN	2/3/2004	1:45PM	UP	0204FW002
TX	CAMERON	8/27/2003	11:55PM	BRG	I072003
TX	CAMERON	9/19/2004	9:10PM	UP	0904SA029
TX	COMAL	5/4/2003	6:00AM	UP	0503SA005
TX	DENTON	10/15/2003	8:30AM	BNSF	TX1003006
TX	FRIO	8/21/2002	11:58AM	UP	0802SA039
TX	FRIO	2/8/2004	12:15AM	UP	0204SA033
TX	GUADALUPE	12/4/2004	2:25AM	UP	1204SA004
TX	KENEDY	6/15/2003	12:14PM	UP	0603SA036
TX	KENEDY	6/15/2003	12:16PM	UP	0603SA035
TX	KENEDY	8/20/2003	2:33AM	UP	0803SA016
TX	LA SALLE	3/25/2004	11:30PM	UP	0304SA033
TX	MEDINA	4/25/2004	12:10AM	UP	0404SA030
TX	TARRANT	2/24/2003	2:05PM	UP	0203FW018
TX	VAL VERDE	2/27/2002	12:08PM	UP	0202SA023
TX	VAL VERDE	9/22/2004	3:48AM	UP	0904SA028
TX	WHARTON	10/12/2002	5:26AM	UP	1002HO010
TX	WHARTON	8/2/2004	6:35PM	UP	0804HO002
TX	WILLIAMSON	9/22/2002	5:45PM	UP	0902SA025
TX	WILLIAMSON	9/22/2002	5:45PM	UP	0902SA025
WA	CLARK	12/14/2002	1:25PM	ATK	76225
WA	COWLITZ	9/4/2003	5:57PM	UP	0903PD001
WA	COWLITZ	5/31/2004	3:30PM	UP	0504PD030
WA	COWLITZ	5/31/2004	3:30PM	UP	0504PD030
WA	SNOHOMISH	2/20/2002	5:50PM	ATK	72343

Appendix E2: “No Record” Reports by Railroad, State, County, and Date

RR	ST	COUNTY	DATE	TIME	INCDTNO
ATK	CA	FRESNO	1/14/2004	10:08AM	91081
ATK	CA	LOS ANGELE	7/21/2002	12:55AM	74392
ATK	CA	LOS ANGELE	10/5/2003	2:20PM	80092
ATK	CA	SANTA BARB	3/28/2003	10:10AM	77542
ATK	CA	SANTA BARB	10/25/2003	12:12PM	90134
ATK	CA	SANTA BARB	7/2/2004	7:30PM	93083
ATK	CA	VENTURA	12/31/2004	1:08PM	95033
ATK	CT	NEW LONDON	8/9/2002	12:30PM	74702
ATK	IL	COOK	3/12/2002	5:38PM	72550
ATK	NC	ALAMANCE	10/10/2004	7:15PM	94190
ATK	NC	YADKIN	7/30/2002	12:45AM	74522
ATK	NM	SANDOVAL	10/12/2002	1:22PM	75515
ATK	NY	ONONDAGA	12/29/2003	5:02PM	90930
ATK	TX	BOSQUE	2/1/2004	5:30PM	91283
ATK	WA	CLARK	12/14/2002	1:25PM	76225
ATK	WA	SNOHOMISH	2/20/2002	5:50PM	72343
BNSF	AZ	COCONINO	2/11/2004	3:55AM	SW0204003
BNSF	CA	KERN	6/16/2004	3:55AM	NC0604106
BNSF	CA	MADERA	12/31/2002	1:50AM	NC1202010
BNSF	CA	RIVERSIDE	6/10/2003	11:40PM	SC0603018
BNSF	CA	RIVERSIDE	11/17/2003	7:30PM	SC1103008
BNSF	IL	DU PAGE	9/27/2002	11:25PM	CH0902027
BNSF	IL	MORGAN	4/11/2003	10:00AM	CH0403006
BNSF	IL	PEORIA	6/29/2003	10:00AM	CH0603015
BNSF	MN	STEARNS	8/7/2004	1:25AM	TC0804003
BNSF	NM	MCKINLEY	1/29/2002	7:00AM	SW0102013
BNSF	NM	MCKINLEY	1/29/2002	7:00AM	SW0102013
BNSF	NM	MCKINLEY	1/29/2002	7:00AM	SW0102013
BNSF	NM	MCKINLEY	1/29/2002	7:00AM	SW0102013
BNSF	NM	MCKINLEY	1/29/2002	7:00AM	SW0102013
BNSF	NM	VALENCIA	6/2/2004	3:45AM	SW0604100
BNSF	TX	DENTON	10/15/2003	8:30AM	TX1003006
BRG	TX	CAMERON	8/27/2003	11:55PM	I072003
CC	IL	COOK	8/29/2002	10:15PM	158313
CIC	IA	LINN	6/24/2003	10:54AM	200304P
CRSH	NJ	HUDSON	8/26/2004	2:40AM	R080400519
CRSH	NJ	MERCER	7/10/2002	10:51AM	R070200342
CSX	FL	BROWARD	10/30/2002	9:55PM	100220002
CSX	FL	HILLSBOROU	9/15/2002	8:07AM	90220003
CSX	GA	COWETA	3/18/2004	3:53PM	5355
CSX	GA	RICHMOND	6/15/2002	2:50AM	60201026
CSX	MD	MONTGOMERY	5/23/2004	2:20AM	4835
CSX	NC	EDGECOMBE	7/29/2004	8:25PM	5474
CSX	NY	HERKIMER	4/24/2002	1:10PM	40230029
CSX	OH	MADISON	3/16/2003	7:45PM	30307043
CSX	TN	SHELBY	9/12/2004	6:30AM	7147
KCS	TX	BOWIE	1/19/2002	3:14AM	20119005
LI	NY	SUFFOLK	1/26/2004	4:30AM	TS20040101
NIRC	IL	COOK	11/22/2002	5:54AM	HC005
NIRC	IL	COOK	9/16/2004	5:35AM	MR171X
NJTR	NJ	ESSEX	8/19/2003	7:12AM	200308586
NJTR	NJ	MIDDLESEX	3/13/2003	6:15PM	200303227
NJTR	NJ	MORRIS	10/10/2003	5:31AM	200310708
NS	IL	MACON	6/6/2003	7:07PM	P060316473
NS	IN	ELKHART	3/2/2004	9:20AM	P030417453

RR	ST	COUNTY	DATE	TIME	INCDTNO
NS	NC	GUILFORD	7/26/2003	6:15AM	P070316618
NS	PA	LEHIGH	1/2/2004	11:07AM	P010417167
NS	SC	CHARLESTON	4/1/2002	4:55PM	P040215196
NS	TN	JEFFERSON	11/13/2002	6:58PM	P110215874
NS	TN	RHEA	1/28/2003	4:40PM	P010316083
NS	TN	SHELBY	3/2/2002	2:55PM	P030215106
NS	TN	SHELBY	3/6/2004	9:20PM	P030417334
NYSW	NJ	PASSAIC	11/7/2003	11:10AM	200300112
PAL	KY	JEFFERSON	6/15/2002	12:51AM	2002JUN01P
SCAX	CA	LOS ANGELE	4/3/2002	3:05PM	403021
SEPA	PA	BUCKS	6/8/2004	11:15AM	Y0406012
UP	AZ	PINAL	5/7/2004	12:40AM	0504TS008
UP	CA	KERN	10/12/2004	3:16PM	1004RS007
UP	CA	LOS ANGELE	1/24/2002	2:10PM	0102LA040
UP	CA	MERCED	10/9/2004	7:58AM	1004RS008
UP	CA	SACRAMENTO	8/17/2002	11:45AM	0802RS031
UP	CA	SAN BERNAR	4/29/2002	9:50PM	0402LA055
UP	CA	SAN LUIS O	2/22/2002	7:00AM	0202LA027
UP	CA	YOLO	12/12/2002	1:05AM	1202RS033
UP	CO	ADAMS	8/16/2002	11:15PM	0802DV007
UP	IA	LINN	12/4/2003	1:40PM	1203CB002
UP	IA	POTTAWATTA	11/29/2003	11:25PM	1103CB014
UP	IA	TAMA	7/7/2003	12:20AM	0703CB007
UP	IA	WOODBURY	1/10/2004	12:31PM	0104CB004
UP	IL	COOK	2/6/2004	3:01PM	0204PR009
UP	LA	LAFAYETTE	7/13/2002	2:50AM	0702LV012
UP	NV	CLARK	10/6/2003	9:45PM	1003UT010
UP	NV	PERSHING	7/17/2003	5:25PM	0703RS033
UP	TX	CALLAHAN	2/3/2004	1:45PM	0204FW002
UP	TX	CAMERON	9/19/2004	9:10PM	0904SA029
UP	TX	COMAL	5/4/2003	6:00AM	0503SA005
UP	TX	FRIO	8/21/2002	11:58AM	0802SA039
UP	TX	FRIO	2/8/2004	12:15AM	0204SA033
UP	TX	GUADALUPE	12/4/2004	2:25AM	1204SA004
UP	TX	KENEDY	6/15/2003	12:14PM	0603SA036
UP	TX	KENEDY	6/15/2003	12:16PM	0603SA035
UP	TX	KENEDY	8/20/2003	2:33AM	0803SA016
UP	TX	LA SALLE	3/25/2004	11:30PM	0304SA033
UP	TX	MEDINA	4/25/2004	12:10AM	0404SA030
UP	TX	TARRANT	2/24/2003	2:05PM	0203FW018
UP	TX	VAL VERDE	2/27/2002	12:08PM	0202SA023
UP	TX	VAL VERDE	9/22/2004	3:48AM	0904SA028
UP	TX	WHARTON	10/12/2002	5:26AM	1002HO010
UP	TX	WHARTON	8/2/2004	6:35PM	0804HO002
UP	TX	WILLIAMSON	9/22/2002	5:45PM	0902SA025
UP	TX	WILLIAMSON	9/22/2002	5:45PM	0902SA025
UP	WA	COWLITZ	9/4/2003	5:57PM	0903PD001
UP	WA	COWLITZ	5/31/2004	3:30PM	0504PD030
UP	WA	COWLITZ	5/31/2004	3:30PM	0504PD030
UPME	IL	LAKE	4/4/2003	6:11PM	0403CM001
WC	IL	DU PAGE	10/12/2003	11:55AM	200925

Appendix F: Useful Returns

ST	Forms Sent	Useful Returns	Percentage	A "Useful Return" is defined as an incident report on which the CME or coroner has provided at least the gender of the decedent.
DC	4	4	100.0%	
NH	1	1	100.0%	
OK	20	20	100.0%	
OR	19	19	100.0%	
RI	3	3	100.0%	
UT	9	9	100.0%	
VA	19	19	100.0%	
MD	27	26	96.3%	
NC	57	52	91.2%	
NJ	46	40	87.0%	
MN	15	13	86.7%	
CT	7	6	85.7%	
MT	7	6	85.7%	
NV	11	9	81.8%	
AZ	41	33	80.5%	
IA	25	20	80.0%	
IL	84	66	78.6%	
CA	261	203	77.8%	
NM	28	21	75.0%	
GA	54	36	66.7%	
ND	3	2	66.7%	
WY	3	2	66.7%	
KY	17	11	64.7%	
WI	19	12	63.2%	
TN	30	18	60.0%	
FL	87	48	55.2%	
CO	11	6	54.5%	
NY	56	30	53.6%	
KS	15	8	53.3%	
OH	51	27	52.9%	
PA	55	29	52.7%	
ID	4	2	50.0%	
MO	24	12	50.0%	
SC	24	12	50.0%	
SD	4	2	50.0%	
IN	29	14	48.3%	
WA	45	19	42.2%	
LA	34	14	41.2%	
MI	17	7	41.2%	
NE	10	4	40.0%	
MS	18	5	27.8%	
TX	136	37	27.2%	
AL	19	5	26.3%	
AR	17	3	17.6%	
DE	8	0	0.0%	
MA	32	0	0.0%	
ME	3	0	0.0%	
WV	15	0	0.0%	
	1,524	935	61.4%	

Appendix G: Chi-Square Test of Racial Diversity Among Trespasser Decedents Compared to Racial Diversity in the U.S. Population

Null Hypothesis (H₀): The racial make-up of the 816 killed while trespassing is the same as the Nation's racial diversity.

Alternate Hypothesis (H_a): The racial make-up of those killed while trespassing is different from the Nation's racial diversity.

	Native American	Black	White	Asian	Native Hawaiian	Total
Observed	37	129	638	12	0	816
Expected	7.794	109.094	665.615	32.242	1.255*	816.000
Population	2,475,956	34,658,190	211,460,626	10,242,998	398,835	259,236,605
(O-E) ² /E	109.451	3.632	1.146	12.708	1.255	128.193
	Native American and Hawaiian*	Black	White	Asian	See Note	Total
Observed	37	129	638	12		816
Expected	9.049	109.094	665.615	32.242	See Note	816.000
Population	2,874,791	34,658,190	211,460,626	10,242,998		259,236,605
(O-E) ² /E	86.337	3.632	1.146	12.708		103.823

Note: A legitimate Chi-square test requires that groups with an expected level of occurrence of less than five be combined with another group, thus Native American and Native Hawaiian groups have been combined for this test.

$X^2 = 103.823$. With three degrees of freedom (number of groups minus one), the Null Hypothesis is to be rejected if $X^2 \geq 16.266$. In this instance, the Null Hypothesis is overwhelmingly rejected.

The Alternate Hypothesis is to be accepted with better than 99.9 percent certainty, i.e., the racial make-up of trespassers killed is different than the Nation's racial diversity.

Appendix H: CME/Coroner Entries—“Type of Incident”

Category	Entry	
Category	Explanation	Number of Entries
Across	Walking or Running Across Track(s)	62
ATV	ATV, Dirt Bike, Snowmobiles, etc.	18
Bridge	Involved a Bridge or Trestle	13
Foul Play	Foul Play suspected	4
Other	Insufficient information to categorize	128
Outside	Appeared to be walking or standing outside track gauge	20
Riding	Riding or getting on or off train	46
Sleeping	Sleeping, laying, reclining, lounging, sitting on track or in gauge	186
Suicide	CME or coroner used the word "suicide" or "intentional" in describing incident	167
Probable	Probable suicide, but not so indicated by CME or coroner	49
Vehicle	Involved a truck or automobile	24
Walking	Walking, Standing on Track	218
Across	Attempting to cross over track to other side	
Across	Attempting to cross tracks	
Across	Attempting to cross tracks ahead of train	
Across	Attempting to cross tracks between cars and train moved.	
Across	crawling under unmoving train when it started to move; severed in half at waist	
Across	Crossed tracks between cars of stopped train; Hit by oncoming train - accident	
Across	crossing R/R track	
Across	Crossing railroad tracks	
Across	Crossing RR track S of milepost 602 Struck by local SEPTA commuter	
Across	Crossing the tracks (ped)	
Across	Crossing the tracks (walking)	
Across	Crossing track (walking)	
Across	Crossing tracks	
Across	Crossing tracks	
Across	Crossing tracks - accident	
Across	Crossing tracks as a shortcut.	
Across	Crossing tracks between cars of slow moving train - accident	
Across	Crossing tracks between train cars or was jumping off train car.	
Across	Crossing tracks on foot	
Across	Crossing Tracks To Get To Port-a-John	
Across	Crossing tracks, stepped in front of west bound train while distracted by east bound train	
Across	deceased was crossing tracks	
Across	Decedent between two stationary box cars and jumped out in front of train	
Across	Decedent was attempting to (walk) cross the railroad track and was struck by eastbound train	
Across	Engineer saw subject exit a box car (part of a standing train) and started to cross track. Engineer blew horn, subject turned to look at train & froze - accident	
Across	Fell or jumped IFO Train	
Across	He was either going to work or leaving. Incident happened at his work site.	
Across	Jumped from stopped train into path of moving train	
Across	Jumped IFO train trying to get out of the way	
Across	Ran across tracks in non-pedestrian section. Waited for one train (east B) to pass then struck by west bound train - accident	
Across	Ran across tracks, unknown reason	
Across	Running across railroad tracks	
Across	Running across tracks	

Category	Entry
Across	Running Across Tracks
Across	Running across tracks
Across	Running across tracks
Across	Running across tracks - struck by train - acute alcoholism
Across	Running from police following a burglary report
Across	seen hobbling towards tracks, moving slowly; not fully on tracks when struck
Across	Stepped onto track
Across	Stepped onto track
Across	Struck by train trying to cross tracks IFO train
Across	Struck by train while attempting to cross tracks & get up onto platform/accident
Across	Trying to cross tracks
Across	Trying to cross tracks to get to CTA platform - accident
Across	Trying to pass between cars
Across	Victim walked in front of train paying no attention to train horn.
Across	Victim was crossing railroad track when his right foot struck the track rail, causing him to fall into path of moving train.
Across	walked across track - hearing loss
Across	Walked around lowered crossing gate.
Across	Walked around pedestrian gate after one train passed on south set of tracks then was struck when crossing next set of tracks - accident
Across	Walking - attempting to cross tracks
Across	Walking Across
Across	Walking across pedestrian walk - stopped as train was stopping. Accident
Across	walking across RR tracks - undetermined
Across	Walking Across Tracks
Across	Walking Across Tracks
Across	walking across tracks
Across	Walking across tracks - accident
Across	Walking across tracks.
Across	walking with friends across RR tracks - train too close
Across	was hit by 1 train while crossing and then 2 nd train seen him lying on tracks (between rails)
ATV	Accident - on bike trying to beat the train
ATV	Bicycle stuck on tracks
ATV	Died on tracks due to motorcycle accident
ATV	Driver of ATV, lost control, riding along tracks
ATV	Fell off ATV onto tracks
ATV	fell off bike, laying on tracks
ATV	Found dead in middle of tracks with bike nearby. Last seen alive 1:30PM 7/2/02
ATV	he was driving a motorcycle that collided with a train
ATV	Jumping over track with ATV
ATV	Lying on track Fell off motorcycle
ATV	Motor cycle (dirt bike) become stuck on track - was trying to remove his motorcycle and was struck s/b train
ATV	Motorcyclist lost control, overturned, driver struck by train, accident
ATV	N/A this was a motorcycle accident - No train/RR involvement
ATV	Riding ATV
ATV	Riding ATV on RR tracks
ATV	Rode bicycle across tracks
ATV	Snowmobile hit by hi-speed train alongside tracks
ATV	Trying to remove stalled ATV from tracks
Bridge	Decedent was hearing impaired, attempted to move off trestle
Bridge	Fishing off railroad bridge
Bridge	Jumped from Dog Creek Trestle into Shasta Lake
Bridge	Knocked off train bridge by train and fell to interstate highway below
Bridge	Sitting on tracks/trestle

Category	Entry
Bridge	Struck on bridge
Bridge	Struck on RR trestle
Bridge	walking across railroad bridge
Bridge	Walking on grated walkway between two sets of tracks on a R.R. bridge - accident
Bridge	Walking on railroad bridge
Bridge	Walking on train bridge Tried to outrun train & struck
Bridge	Walking on trestle and fell when train passed
Bridge	Went on train trestle to cross over Conasauga River
Foul Play	arguing with a man when he pushed her onto tracks
Foul Play	Decedent was lying in a 'funny' position next to the track according to engineer. Decedent had received blunt injuries in unknown manner
Foul Play	Decedent was stabbed by assailants and placed on tracks
Foul Play	Lying face down Foul play suspected
Other	(unknown)
Other	ABT ½ mile E/O Turner Avenue, Ontario, accident
Other	Accident
Other	accident
Other	accident
Other	accident
Other	accident
Other	accident
Other	accident
Other	accident
Other	accident
Other	accident
Other	accident
Other	accident
Other	accident
Other	accident
Other	Alzheimer's
Other	Body lying in middle of tack when found. May have been struck by earlier train
Other	Body Lying on Track - may have been struck by earlier train
Other	collision with train—accident
Other	collision with train—accident
Other	Deaf, was struck by train
Other	disoriented Alzheimer's patient
Other	don't know
Other	fell under wheels of moving train, ran over, accident
Other	Found beside tracks w/extensive trauma. Un-witnessed event
Other	Found between tracks in the embankment. Undetermined
Other	Found laying on tracks
Other	Found laying on tracks
Other	Found on tracks after apparently being struck by a train
Other	Heart attack—body found on tracks
Other	Hit by a train.
Other	Hit by a train.
Other	Hit by freight train.
Other	Hit by train.
Other	Hit by train.
Other	Homeless person hit by train - accident
Other	Hypothermia. No evidence of traumatic injuries. Found next to railroad car
Other	impact with moving train—accident
Other	Intoxicated Fell downstairs in RR Yard
Other	Not hit by train - died of nat'l causes
Other	residence on RR ROW east of stated address

Category Entry

Probable	Bending over on tracks looked up as train approached but did not move
Probable	deceased dove in front of oncoming train
Probable	Deceased had had an argument with ex-wife and sat on the railroad tracks and let train hit him.
Probable	deceased placed head on tracks in front of oncoming train
Probable	deceased ran in front of oncoming train
Probable	deceased stood on track in front of oncoming train
Probable	deceased walked into path of oncoming train
Probable	Deceased was sitting on tracks Waved to conductor before accident
Probable	Decedent did not attempt evasive action. She was struck crossing track and fell beneath the train
Probable	Decedent was seen to have jumped in front of train
Probable	Decedent was sitting on the track with arms folded.
Probable	Decedent was standing in the middle of the tracks, as the train horn sounded decedent turned his back and was struck from behind.
Probable	Dove under RR car
Probable	found DOA; thought to have laid his head on rail while train was stopped; head was crushed when train started to move
Probable	hunched over track so train would hit his head
Probable	in a crouched down position
Probable	Jogged toward tracks after horn sounded
Probable	Jumped in front of train
Probable	Jumped in front of main
Probable	Jumped in front of oncoming train
Probable	jumped in front of train
Probable	Jumped in front of train
Probable	Jumped in front of train
Probable	Jumped into path of train
Probable	Jumped onto the train tracks
Probable	Laid down IFO train
Probable	laying on the tracks holding a beer; did not move
Probable	Leaped onto tracks
Probable	Left Passenger Platform. Started walking down track in front of incoming train
Probable	Lunged into train
Probable	Placed self on train tracks
Probable	Ran in front of moving train
Probable	Running along the tracks and laid on the tracks
Probable	Sat on track facing train
Probable	seated on tracks, facing in, in the "Crash" position; never moved when train horn was blown
Probable	Standing facing train on tracks
Probable	Stepped in front of Acela (120 mph)
Probable	Stepped in front of high speed train at station
Probable	Stepped in front of train
Probable	Subject standing in the center of track - train vs. person
Probable	Walked in front of train & laid across tracks
Probable	Walked onto tracks and laid down on tracks
Probable	Walked onto tracks in front of train & turned back to train
Probable	walked out of bushes then walked in front of tracks/train
Probable	Walking along tracks, seen to lie down on tracks and put hands over head
Probable	walking near tracks, stepped onto tracks
Probable	Walking on tracks, stopped and waited for train to strike him.
Probable	Walking then stopped, stood on tracks and was hit head on by train. (Accident)
Probable	Walking, did not move out of way
Riding	Attempted to jump on train
Riding	Believe he fell from train w/sleeping bag
Riding	Climbing on train
Riding	Crawled under a stopped train. Foot got hung up on the tracks. Train started moving, rolling over

Category Entry

	decedent's leg.
Riding	Falling from train/jumping onto
Riding	Fell from high-speed train
Riding	Fell from moving train, struck ground (rock surface), accident
Riding	Found alongside rails of a side track with rt. Leg amputated above the knee. Accident. No blood on track at site. Speculate may have tried to hop onto train or break into box car.
Riding	get on the train
Riding	getting on train
Riding	Jumped at train
Riding	Jumped on Train, Fell off when train crossed rough patch, Run over
Riding	Getting off train?
Riding	lost balance while walking on open, moving train "car"
Riding	riding atop a car, struck by low bridge
Riding	riding in car full of rebar, which shifted, crushing him
Riding	Riding in coal car. Car was dumped into pit. Body found when pit was cleaned.
Riding	Riding train, sleeping, fell off
Riding	sleeping/resting in train "car"
Riding	sleeping/resting in train "car"
Riding	sleeping/resting in train "car"
Riding	sleeping/resting in train "car"
Riding	Smuggled immigrants
Riding	Smuggled immigrants found dead in railcar
Riding	Smuggled immigrants found dead in railcar
Riding	Smuggled immigrants found dead in railcar
Riding	Smuggled immigrants found dead in railcar
Riding	Smuggled immigrants found dead in railcar
Riding	Smuggled immigrants found dead in railcar
Riding	Smuggled immigrants found dead in railcar
Riding	Smuggled immigrants found dead in railcar
Riding	Smuggled immigrants found dead in railcar
Riding	Smuggled immigrants found dead in railcar
Riding	Struck while attempting to board moving train
Riding	Subject jumped from moving train, accident
Riding	Subject while grabbing onto moving train, tripped and was pulled under wheels. No reason to do so and was told to back away.
Riding	The decedent fell off of the train.
Riding	The decedent was jumping off of the train.
Riding	Tried to hop onto moving train
Riding	trying to either get on or off when hit
Riding	trying to get on train, slipped, severed in two at collar bone
Riding	Trying to jump onto a moving train
Riding	unsuccessfully attempted to board moving train
Riding	Vic. Fell either getting on or off train & struck his head
Riding	was trying to jump onto the train & ride it for a little ways
Sleeping	(undetermined) Sleeping on tracks
Sleeping	?sleeping/passed out on tracks due to high alcohol level
Sleeping	Accident - lying near track
Sleeping	Accident - Seated between rails facing sideways - Train blew horn, victim moved forward as if to get off track, but was hit by trains
Sleeping	Accident - sleeping on catwalk
Sleeping	Accident (Sleeping on Tracks)
Sleeping	Address is a shelter—Lying on track.
Sleeping	Apparently sat down to rest, fell asleep or passed out with back to train
Sleeping	apparently sleeping

Category	Entry
Sleeping	Appeared to be unconscious or sleeping on tracks. (Accidental)
Sleeping	Attempting to get up, off of tracks
Sleeping	deaf - lying unresponsive on tracks
Sleeping	deceased laid down across railroad tracks
Sleeping	Deceased laying on tracks
Sleeping	deceased sat down on train tracks
Sleeping	Decedent and boyfriend had been consuming alcohol since early morning. They were sitting on railroad tracks arguing.
Sleeping	Decedent lying face down between rails of main track. Decedent suffered from Alzheimer's disease.
Sleeping	Decedent purchased alcohol and carried it to railroad track. He appeared to be lying on the tracks non-responsive
Sleeping	Decedent was lying on tracks. Just as the train approached him he got up and tried to get off the track.
Sleeping	decedent was seen sitting in the middle of tracks
Sleeping	Decedent was sitting in middle of south railroad tracks. It appeared decedent tried to get up just before he was struck
Sleeping	Decedent was sitting on the railroad tracks.
Sleeping	Either sitting or lying on tracks drinking
Sleeping	Found unresponsive lying on tracks.
Sleeping	frequently walked on the tracks to a friend's house, was laying on the tracks (believed to be) when this occurred - may have been sleeping
Sleeping	Had fallen or was lying on the tracks
Sleeping	He was lying? Asleep on the tracks
Sleeping	intoxicated and passed out on tracks
Sleeping	Intoxicated Vic. Sitting on tracks could not move before train hit him
Sleeping	Kneeling or Sitting on tracks
Sleeping	Laid down on railroad tracks, was run over by a train.
Sleeping	Laid down on tracks
Sleeping	Laid head down on tracks
Sleeping	lay across tracks - struck by train - undetermined
Sleeping	Laid down on tracks while walking home
Sleeping	Laying across R/R tracks
Sleeping	Laying across tracks
Sleeping	laying across tracks - undetermined
Sleeping	Laying between tracks
Sleeping	Laying Down
Sleeping	Laying on his back across train tracks
Sleeping	Laying on side of tracks
Sleeping	Laying on tracks
Sleeping	Laying on tracks
Sleeping	Laying on tracks
Sleeping	Laying on tracks
Sleeping	Laying on tracks
Sleeping	laying on tracks
Sleeping	Laying on tracks - accident
Sleeping	Laying on tracks - accident
Sleeping	Laying on tracks (possibly sleeping)
Sleeping	Laying on tracks, possibly sleeping
Sleeping	Laying on tracks. (Accidental)
Sleeping	laying on tracks; didn't move when horn was blown
Sleeping	Leaning with Back Against Track. Had Previously Been Struck By Train.
Sleeping	Lounging on train tracks
Sleeping	Lying across railroad tracks
Sleeping	lying across track
Sleeping	Lying across tracks
Sleeping	Lying across tracks when train struck him
Sleeping	Lying beside track w/head on rail, did not respond to horn

Category Entry

Sleeping	Seen attempting to move from a sitting position on tracks as train approached
Sleeping	seen lying across tracks
Sleeping	seen lying between rails in fetal position, back to the train when struck
Sleeping	Seen passed out on train track minutes prior death.
Sleeping	Seen sitting on R/R tracks @ impact
Sleeping	Seizure Fell Struck Head, Lying on tracks
Sleeping	Sitting/Lying on Tracks
Sleeping	Sitting along side tracks
Sleeping	sitting on edge of tracks
Sleeping	Sitting on or bending over tracks - undetermined
Sleeping	Sitting on Rail
Sleeping	Sitting on Railroad Tracks
Sleeping	Sitting on RR Tracks
Sleeping	Sitting on RR tracks drinking & was struck by a train.
Sleeping	Sitting on RR tracks with friends
Sleeping	Sitting on the rail
Sleeping	Sitting on the rail tracks with his feet to the inside.
Sleeping	Sitting on track
Sleeping	Sitting on track
Sleeping	Sitting on track
Sleeping	Sitting on track appeared to be asleep
Sleeping	Sitting on track, attempts to move
Sleeping	sitting on tracks
Sleeping	Sitting on tracks
Sleeping	sitting on tracks
Sleeping	Sitting on tracks
Sleeping	sitting on tracks
Sleeping	sitting on tracks
Sleeping	sitting on tracks
Sleeping	Sitting on Tracks
Sleeping	Sitting on Tracks
Sleeping	sitting on tracks
Sleeping	sitting on tracks
Sleeping	Sitting on tracks
Sleeping	Sitting on tracks
Sleeping	Sitting on tracks, intoxicated, listening to headphones
Sleeping	Sitting on tracks. (Accidental)
Sleeping	Sitting on tracks; playing game of "chicken"
Sleeping	sitting on tracks; started to get up when struck
Sleeping	sitting on train tracks
Sleeping	sleeping
Sleeping	sleeping
Sleeping	sleeping
Sleeping	sleeping
Sleeping	Sleeping between rails
Sleeping	Sleeping near RR Tracks
Sleeping	sleeping on/fall track
Sleeping	Sleeping on RR track, probably "stoned" from drugs.
Sleeping	Sleeping on track
Sleeping	sleeping on tracks
Sleeping	Sleeping on tracks
Sleeping	Sleeping on Tracks
Sleeping	Sleeping on tracks
Sleeping	Sleeping on tracks

Category	Entry
Sleeping	Sleeping, drunk
Sleeping	Slept or passed out on tracks
Sleeping	Squatting on tracks talking to someone on other side of train
Sleeping	Struck by a train when he apparently laid down on railroad tracks
Sleeping	Struck by train while sitting on tracks
Sleeping	Struck commercial train while lying on the tracks.
Sleeping	subject laying on tracks, burglary tools found nearby
Sleeping	Subject lying on tracks for unknown reason
Sleeping	Subject sitting between tracks
Sleeping	Subject was laying on train tracks and failed to move as train approached.
Sleeping	The decedent fell asleep on the tracks.
Sleeping	The decedent was lying on the tracks.
Sleeping	Undetermined Manner of death - Laying on tracks, struck by train
Sleeping	Unknown, was said to be lying motionless on the center track
Sleeping	Unknown - ? Sleeping or passed out from alcohol use
Sleeping	Vic. Was sitting on train tracks & struck by oncoming train
Sleeping	Walking home after bar time. Sat cross legged on tracks to ?gaze at full moon!
Sleeping	was intoxicate and lying on tracks
Sleeping	Was spray painting (tagging) by the tracks. Conductor saw decedent sitting on tracks, tried to get up, stumbled few times & hit by train
Suicide	(Suicide) placed self in path of train
Suicide	(Suicide) Walking on tracks
Suicide	*Suicide*
Suicide	Appeared to deliberately get out of his car and lay on RR tracks in path of the oncoming train. (Suicide)
Suicide	Attempting to commit suicide The body was so badly destroyed, there were no body fluids to get toxicology on
Suicide	Bilateral double amputee crawled onto tracks from a wheelchair - suicide
Suicide	commit suicide
Suicide	committing suicide by being run over
Suicide	Crossed tracks from west side platform to eastside platform at train station. Coroner's rpt - suicide
Suicide	Decedent laid on railroad track, struck by train, suicide
Suicide	Dove head first into the front of the train. (Suicide)
Suicide	Dove in front of train—suicide
Suicide	Engineer saw subject lying on track with head on rail. Area inaccessible to pedestrians. Suicide
Suicide	he jumped between 2 train cars; suicide
Suicide	he sat in front of an on-coming train; suicide
Suicide	head, lying on RR tracks - suicide
Suicide	Hiding behind a building, waiting for a train. Jumped out and laid across the tracks - Suicide
Suicide	hit by a train while standing on the tracks—suicide
Suicide	Intentionally jumped from viaduct onto tracks and struck by train
Suicide	intentionally laid head on RR tracks
Suicide	Intentionally laid self in path of oncoming train
Suicide	Intentionally lay down on tracks and run over by slow moving train
Suicide	intentionally laying on tracks
Suicide	intentionally moved into the path of the train
Suicide	intentionally placed head in path of train—suicide
Suicide	Intentionally stepped in front of moving train
Suicide	Intentionally stepped in front of moving train
Suicide	Investigation determined that this death was a suicide and coroner's jury ruled it as a suicide
Suicide	Jumped in front of train - suicide
Suicide	Jumped in front of train—suicide
Suicide	Jumped in front of train from train platform and faced train - suicide - known schizophrenia past suicide attempts
Suicide	Jumped in front of a moving train—suicide

Category	Entry
Suicide	Suicide, Laying on Tracks
Suicide	Suicide, sitting on tracks drinking beer
Suicide	Suicide, walked into oncoming train
Suicide	Suicide: Jumped in front of train
Suicide	Suicide: Stood in front of train
Suicide	Suicide: Walking on Tracks
Suicide	This was ruled a suicide
Suicide	threw self in front of train (Suicide)
Suicide	Trains backing up - suicide
Suicide	Unknown, perhaps a half-hearted attempt @ suicide
Suicide	Vic. Committed suicide by train
Suicide	Waling on tracks - suicidal
Suicide	Walked into oncoming train - suicide
Suicide	Walked into path of train—Suicide
Suicide	Walked on to tracks - suicide
Suicide	walked on to tracks - suicide
Suicide	Walked on to tracks, suicide
Suicide	Walked on tracks into oncoming train - suicide
Suicide	Walked onto tracks, suicide note left
Suicide	Walked up to track and laid down on track - intentional
Suicide	Walking—suicide
Suicide	Walking along tracks - suicide
Suicide	Walking in path of train, suicide
Suicide	Walking on RR Track; COD: Suicide
Suicide	Walking on track, suicide
Suicide	Walking on tracks - suicide
Suicide	Walking on Tracks (Suicide)
Suicide	Was committing suicide - Jumped in front of train Advised girlfriend of his intentions
Vehicle	Auto Crossing Tracks
Vehicle	Car accident.
Vehicle	Car was struck by train
Vehicle	crossing tracks driver's door struck by train
Vehicle	Drive across railroad tracks, but front tire became stuck over track.
Vehicle	Driver of semi, pulled into path of train
Vehicle	Driver of Tractor Trailer went down embankment
Vehicle	Driver of vehicle that struck train
Vehicle	Driving - Road dead ends into R/R embankment - driver crashed into embankment & landed on R/R tracks
Vehicle	Driving vehicle
Vehicle	driving vehicle
Vehicle	Drove onto rails from dead-end street
Vehicle	Drove vehicle onto tracks and became stuck
Vehicle	Motor vehicle accident, vehicle struck RR property
Vehicle	Parked car on tracks, disoriented, standing next to car when struck
Vehicle	Parked on tracks. He had Alzheimer's & dementia
Vehicle	Passenger in single vehicle rollover near train tracks
Vehicle	Passenger in vehicle
Vehicle	Passenger in vehicle lost control and flipped and came to rest on CSX train tracks
Vehicle	Solo SUV rollover onto railroad tracks, later struck by Union Pacific freight train, ejected, accident
Vehicle	Solo SUV rollover onto railroad tracks, later struck by westbound Union Pacific freight train, occupant of SUV not ejected, accident
Vehicle	There were no signal lights or crossing guards at the tracks, only a stop sign. Decedent was traveling too fast to stop and was struck by the train, according to the report.
Vehicle	vehicle attempted to cross under construction crossing
Vehicle	Vehicle turned east onto railroad rails into path of westbound train

Category	Entry
Walking	"Staggering" on Tracks
Walking	(accident) walking
Walking	(accident) walking
Walking	Alzheimer Patient Walking along tracks to his nearby home
Walking	Alzheimer's patient, wandered away from care facility. Struck by train. Unwitnessed event
Walking	Collecting aluminum cans along RoW, did not respond to horn
Walking	collecting recyclables
Walking	Deaf victim. Walking on tracks was hit by oncoming train
Walking	Deceased and two other companions were ice fishing and apparently walking back to their vehicles
Walking	Men were West bound on railroad tracks on the East side of R.R. tracks when deceased was struck by train
Walking	deceased was standing on #2 track
Walking	deceased was walking on tracks
Walking	deceased was walking on tracks
Walking	Decedent walking in the middle of the train track. He heard horn, turned facing train and attempted to exit track area
Walking	Decedent walking on train track. He was hit from behind by the train
Walking	Decedent was struck by a train while standing on the tracks located on Main St in East Point
Walking	Decedent was walking eastbound on north railroad track. Conductor honked horn, but decedent kept walking
Walking	Downs Syndrome - Walked away from group home
Walking	fell on loose stone while walking dog
Walking	fell on tracks
Walking	Had previous stroke. Possibly fell and unable to get up before being struck by train. Known to walk along tracks
Walking	He was walking on tracks
Walking	Hit by train while stealing diesel fly wheels - accident
Walking	Jogging along tracks - reached up and grabbed high tension power wire
Walking	Jumping up & down on the tracks
Walking	Just walking along side of the RR track
Walking	Mad & running from boy friend, foot was trapped in tracks.
Walking	On property to retrieve his ball. As he was walking up an incline he lost his balance and grabbed onto a railroad telegraph wire. Victim was wet because he had been swimming.
Walking	On tracks
Walking	Pedestrian hit by train unknown circumstances
Walking	Pedestrian on train tracks struck by oncoming train.
Walking	Pedestrian on/around train tracks and struck by engine of train.
Walking	Pedestrian struck by CSX train
Walking	pedestrian struck by train
Walking	Pedestrian struck by train—accident
Walking	Pedestrian struck by train—accident
Walking	Pedestrian struck by train—accident
Walking	Pedestrian struck by train, accident
Walking	Pedestrian struck by train, accident
Walking	Pedestrian vs. train
Walking	Pedestrian vs. Train unknown circumstances
Walking	Pedestrian walking RR track and struck by train/accident
Walking	Pedestrian walking RR track, struck by train
Walking	Picking flowers near tracks, fell on tracks
Walking	Picking up aluminum cans
Walking	Playing chicken, seeing who could stand in front of train the longest.
Walking	Playing chicken, seeing who could stand in front of train the longest.
Walking	Playing on tracks
Walking	playing on tracks
Walking	Playing on tracks with other children

Category	Entry
Walking	Possibly walking dog along train tracks - accident
Walking	Reportedly chasing dog
Walking	Running down middle of CSX track, attempting to outrun train. Pedestrian struck and overrun by train.
Walking	sleep walking
Walking	Standing next to or on tracks at R.R. station - accident
Walking	standing on rails
Walking	standing on rails
Walking	Standing on tracks
Walking	Standing on tracks
Walking	Standing on tracks
Walking	Standing on tracks, appeared to challenge on-coming train, then tried to jump clear before struck by train
Walking	Stealing wires—electrocuted
Walking	Struck by ... train while walking on railroad tracks
Walking	Struck by train after wandering off playground
Walking	Struck by train while playing on the railroad tracks.
Walking	Struck by train while walking across RR tracks
Walking	Struck by train while walking near tracks
Walking	Struggling with dog on tracks trying to remove
Walking	Subject walking along tracks
Walking	Subject walking between RR Tracks in train yard - accident
Walking	subject walking on tracks, struck from behind by S.B. train
Walking	Subject was walking down track, struck by train
Walking	train—pedestrian accident
Walking	Train ran over body, walking along tracks
Walking	Train vs. ped. Collision
Walking	Train vs. pedestrian
Walking	train vs. pedestrian collision—accident
Walking	train vs. pedestrian collision, drowning
Walking	Train/Pedestrian Accident
Walking	train/pedestrian accident
Walking	Transient walking on tracks
Walking	Trying to remove friend from tracks
Walking	Trying to rescue dog, both dog and decedent struck
Walking	unknown - probably walking
Walking	Unknown - Was known to walk along tracks
Walking	Unknown why dec'd was on tracks, but he was trying to jump up to the platform.
Walking	Vic walking along tracks wearing headphones, hit by train
Walking	Vic walking in middle of tracks did not respond to horn & was struck
Walking	Vic was walking along tracks was hit by oncoming train
Walking	Vic. Was struck by train while walking along tracks.
Walking	Walked along tracks - walked into path of train
Walking	Walked in Front of the train
Walking	Walked in front of train
Walking	walked into tracks/possibly was collecting cans
Walking	walked on the elevated track when struck by train - accident
Walking	Walked on to tracks, alcoholism and hearing deficit
Walking	Walking
Walking	Walking
Walking	Walking
Walking	Walking
Walking	Walking
Walking	Walking
Walking	Walking
Walking	Walking

Category	Entry
Walking	Walking
Walking	Walking
Walking	Walking
Walking	Walking
Walking	Walking
Walking	Walking
Walking	Walking
Walking	Walking
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Walking	Walking
Walking	Walking
Walking	Walking
Walking	Walking
Walking	Walking
Walking	Walking
Walking	Walking
Walking	Walking
Walking	Walking - Alzheimer's patient
Walking	Walking/passed out on tracks - accident
Walking	Walking/Standing on tracks
Walking	Walking along railroad tracks
Walking	walking along the tracks
Walking	walking along tracks
Walking	Walking along tracks
Walking	Walking along tracks
Walking	Walking along tracks flipping off w/b train, then struck by e/b train. Apparently not hearing e/b coming because of w/b approaching. Horns were used.
Walking	Walking along tracks struck from behind by CSX train
Walking	Walking along tracks with 2 others, all struck - 2 died, 1 injured
Walking	Walking along tracks with 2 others, all struck - 2 died, 1 injured
Walking	Walking along tracks, struck from behind, horn was blown ½ mile before impact
Walking	Walking along tracks, train stuck him & threw him in the air
Walking	Walking along tracks.
Walking	Walking and drinking (ETOH) on train tracks when he was struck by locomotive.
Walking	Walking beside track
Walking	Walking between railroad tracks
Walking	Walking between tracks
Walking	Walking down railroad track on cross ties
Walking	walking down tracks
Walking	Walking Down Tracks with Another Person
Walking	Walking Down Tracks with Another Person
Walking	Walking from a party
Walking	Walking from grocery to residence
Walking	Walking home along tracks
Walking	walking home from a bar
Walking	Walking home from bar while intoxicated. The route decedent traveled was parallel to the RR tracks. It was the most direct route between the bar and his home (about 6 city blocks). It is also possible the decedent was depressed over a recent separation from girl friend.
Walking	Walking in center of Tracks
Walking	Walking in Railroad Tracks
Walking	Walking Near Railroad Tracks
Walking	Walking on R/R tracks
Walking	Walking on R/R tracks
Walking	Walking on railroad track
Walking	Walking on railroad track

Category	Entry
Walking	Walking on RR ties on west side of southbound tracks - accident
Walking	Walking on RR Track returning from a Store.
Walking	Walking on the tracks
Walking	Walking on the tracks
Walking	Walking on track
Walking	Walking on track
Walking	walking on track
Walking	Walking on track
Walking	Walking on track away from approaching train
Walking	Walking on track bed
Walking	Walking on track, struck by train Headphones, listening to music
Walking	Walking on track. Heard train whistle. Friend left track, decedent stayed on. Faced train. Might have tried to jump last minute. Hit by train.
Walking	walking on tracks
Walking	Walking on tracks
Walking	Walking on tracks
Walking	Walking on tracks
Walking	Walking on tracks
Walking	Walking on tracks
Walking	Walking on tracks
Walking	Walking on tracks
Walking	Walking on tracks
Walking	Walking on tracks
Walking	Walking on tracks
Walking	Walking on tracks
Walking	Walking on Tracks
Walking	Walking on Tracks
Walking	Walking on Tracks
Walking	Walking on Tracks
Walking	Walking on Tracks
Walking	Walking on Tracks
Walking	Walking on tracks
Walking	walking on tracks
Walking	Walking on tracks
Walking	Walking on tracks
Walking	walking on tracks
Walking	walking on tracks
Walking	Walking on tracks
Walking	walking on tracks
Walking	Walking on tracks
Walking	walking on tracks
Walking	Walking on tracks
Walking	Walking on tracks in High Transient/Drug use area. Stooped to pick up an unknown item (2x) when struck. Train sounded horn.
Walking	Walking on tracks wearing CD player—hit from behind
Walking	Walking on tracks with friend
Walking	Walking on tracks with friend
Walking	Walking on tracks, wearing walkman
Walking	Walking on tracks. (Undetermined)
Walking	Walking on tracks; probably passed out intoxicated - accident
Walking	Walking on train tracks
Walking	Walking on train tracks Struck by train
Walking	walking or laying on tracks

Category	Entry
Walking	Walking or lying on tracks.
Walking	Walking to work
Walking	Walking toward the train
Walking	Walking with friends struck by CSX train
Walking	Walking/hunting on RR track. Deaf.
Walking	Wandered onto Tracks
Walking	Was resident of Maple Shades Care Home. Went out to smoke and walked onto tracks of oncoming train
Walking	Was walking on tracks, tried to jump off tracks but jacket got caught causing him to get killed
Walking	Were on a set of RR tracks throwing rocks at a train (westbound) & were struck by an oncoming eastbound Union Pacific train.
Walking	Were on a set of RR tracks throwing rocks at a train (westbound) & were struck by an oncoming eastbound Union Pacific train.

Appendix I: Railroads Reporting Suicides

Railroad	Confirmed	Probable*
ATK	45	10
BNSF	31	9
BNSO	2	0
CSX	9	5
FEC	0	1
GTW	1	0
IC	1	2
LI	2	0
NIRC	3	0
NJTR	2	0
NS	13	5
PCMZ	5	3
SCAX	1	0
SDNX	5	2
SOO	0	2
UP	45	10
UPME	2	0
TOTAL	167	49

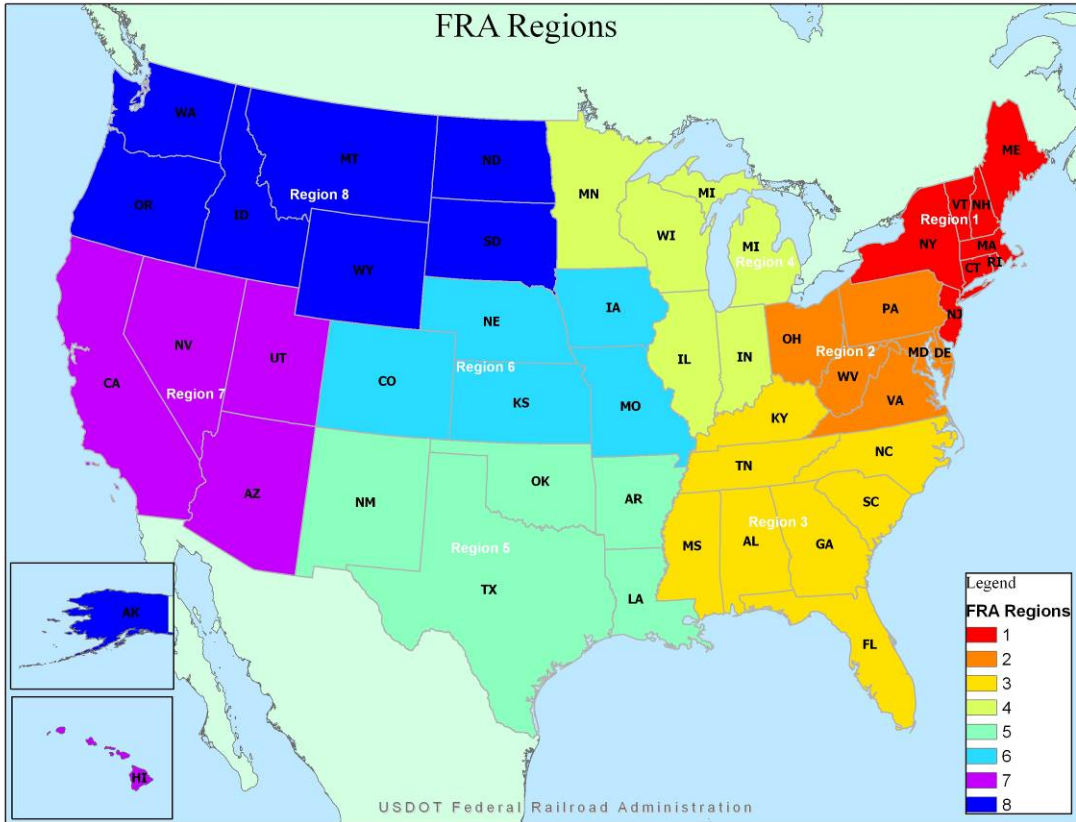
Note: Per 49 CFR 225.15, railroads must report trespasser deaths unless "a coroner or other public authority" has declared the decedent a suicide. This may not have been the case for those incidents classified as Probable.

Appendix J: FRA Regional Numbers

FRA Region*									
	I	II	III	IV	V	VI	VII	VIII	Total
Forms Sent	148	179	306	164	235	85	322	85	1,524
Useful Returns	54.1%	58.7%	61.1%	68.3%	40.4%	58.8%	78.9%	61.2%	61.4%
Gender									
Male	65	94	165	102	81	38	222	44	811
Female	15	11	22	10	14	12	32	8	124
Useful Addresses									
At least Zip Code	29	92	159	106	80	35	197	45	743
Ethnicity									
Hispanic	11	5	16	5	20	15	75	5	152
Race									
Native American	--	--	1	2	9	--	16	9	37
Black	13	21	51	17	12	--	14	1	129
White	54	79	121	90	61	36	161	36	638
Asian	2	1	--	1	--	--	8	--	12
Alcohol/Drugs									
Alcohol	34	48	107	55	54	19	109	27	453
Drugs	22	18	27	23	13	6	62	2	173
Both	13	11	19	14	6	4	29	--	96
Clean	25	40	47	35	20	25	66	16	274
Activity**									
Across	3	4	15	8	14	1	15	2	62
ATV	2	2	3	1	3	1	6	--	18
Bridge	1	1	5	2	--	--	3	1	13
Foul Play	--	--	--	--	4	--	--	--	4
Other	24	25	22	12	7	5	29	4	128
Outside	1	1	5	2	1	--	10	--	20
Probable	1	5	6	11	8	--	16	2	49
Riding	--	--	8	1	6	11	18	2	46
Sleeping	3	21	56	24	26	6	37	13	186
Suicide	17	14	16	27	11	12	62	8	167
Vehicle	1	3	4	3	4	2	6	1	24
Walking	27	29	53	21	11	12	52	13	218

*Note: FRA Regions are defined on the next page.

**Note: Category definitions are provided in Table 5.



<p>Region I</p> <p>Connecticut Maine Massachusetts New Hampshire New Jersey New York Rhode Island Vermont</p>	<p>Region II</p> <p>Delaware Washington, D.C. Maryland Ohio Pennsylvania Virginia West Virginia</p>	<p>Region III</p> <p>Alabama Florida Georgia Kentucky Mississippi North Carolina South Carolina Tennessee</p>	<p>Region IV</p> <p>Illinois Indiana Michigan Minnesota Wisconsin</p>
<p>Region V</p> <p>Arkansas Louisiana New Mexico Oklahoma Texas</p>	<p>Region VI</p> <p>Colorado Iowa Kansas Missouri Nebraska</p>	<p>Region VII</p> <p>Arizona California Nevada Utah Hawaii</p>	<p>Region VIII</p> <p>Alaska Idaho Montana North Dakota South Dakota Oregon Washington Wyoming</p>

Appendix K: Market Analysis Based on “Customer” Addresses

The following is excerpted from the 94-page *Community Tapestry Handbook* (ESRI BIS – Environmental Systems Research Institute Business Information Systems, 2004). As one reads these excerpts and considers the instant application (establishing an outreach to potential trespassers), one should interpret “customers,” “preferred groups” and “prospects” to be those most likely to trespass on rail rights-of-way and thus most at risk, i.e., the “target group.” In this instance, addresses are those of the trespassers (“customers”) in our “customer” database who have died while trespassing. The “marketing approach” will be a public information program regarding the facts and hazards of trespassing with the intention of dissuading potential trespassers in the target group.

For the past 30 years, companies, agencies, and organizations have used segmentation to divide and group their markets to more precisely target only their best customers and prospects. This targeting method is superior to using "scattershot" methods that might attract these preferred groups. Segmentation explains customer diversity, simplifies marketing campaigns, describes lifestyle and life stage, and incorporates a wide range of data.

Segmentation systems operate on the theory that people with similar tastes, lifestyles, and behaviors seek others with the same tastes (hence the phrase, "like seeks like"). These behaviors can be measured, predicted, and targeted. The Community™ Tapestry™ segmentation system combines the *who* of lifestyle demography with the *where* of local neighborhood geography to create a model of various lifestyle classifications or segments of actual neighborhoods with addresses – distinct behavioral market segments.

...

What is Tapestry?

Tapestry represents the fourth generation of market segmentation systems that began 30 years ago. The 65-segment Tapestry system classifies U.S. neighborhoods based on their socioeconomic and demographic composition. The power of Tapestry allows you to profile consumers in a number of ways including

...

- Customer addresses or site locations.

Tapestry's versatility provides several methods of dividing the 65 segments into summary groups for a broader view of U.S. neighborhoods.

- LifeMode: 12 summary groups based on lifestyle and life stage
- Urbanization: 11 summary groups based on geographic and physical features along with income.

...

Tapestry's 65 distinct market segments profile the diversity of the American population and also provide two ways to summarize and simplify these

differences - LifeMode summary groups and Urbanization summary groups. Segments within a LifeMode summary group share an experience, such as being born in the same time period, or a trait such as affluence. Urbanization summary groups share a locale, from the urban canyons of the largest cities to the rural lanes of villages or farms.

Who Should Use Tapestry Segmentation?

All companies, government agencies, and organizations need to understand their consumers/constituents to supply them with the right products and services and to reach them via their preferred media.

...

Customer Profiling

A cornerstone of business success is a thorough knowledge of customers. All companies realize that this knowledge is key to developing effective marketing programs as they mine the information from their customer databases. ... A customer profile can reveal the demographics, lifestyles, and product preferences of a company's customers. If a company knows who its customers are, it can respond to their needs with better messaging, products, and services. Address information in a customer database is necessary to begin the profiling process.

... use ... segmentation and the creation of customer profiles when ...

- Directing advertising with the right message to the right audience
- Targeting direct mail and other promotions to the most responsive recipients

A customer profile illuminates and helps define customer behaviors. The profile will pinpoint your core customer groups as well as groups with opportunity. ... use customer profiling to develop

- Insight into the lifestyle characteristics of your best customers
- A "picture" or map of where these customers live
- Plans to target previously unserved neighborhoods and develop new opportunities
- Strategies that attract customers to stores to purchase your products and services

... targeted special offers to neighborhoods with a density of these potential customers.

... media targeting programs. Knowing what your customers like to read, watch, and listen to is invaluable information. ... The following are some typical media targeting applications:

- Rank media preferences.

...

- Analyze and rank markets based on Tapestry segmentation profiles or demographics targeted by age, income, lifestyle preference, and lifestage.

...

By aligning communication channels with what the customer wants, companies can improve their direct mail and other marketing methods. ... Sending different messages to ... distinctly different audiences

... the more information companies can learn about their customers, the better they can serve them, keep them, and find more like them.



Appendix L: Customer Demographic Profile

File: H:\Projects\Cadle Creek\gEOCODE\MrktgAnaldb2_out.xls

Number of Records: 763

DEMOGRAPHIC CHARACTERISTICS				
Annual Compound Growth Rates			2000 Median Year Householder Move in	1995
	<u>2000-2006</u>	<u>2006-2011</u>	2000 % Population by Place of Birth:	
Population	1.2	1.2	Foreign Born	11.9
Households	1.2	1.3	2006 Average Household Size	2.70
Families	0.9	1.0		
Per Capita Income	4.0	3.6		
		<u>Percent</u>	HOUSING CHARACTERISTICS	
2006 Population by Race/Ethnicity			2000 Housing Units	<u>Percent</u>
White Alone		63.2%	Urban	82.2
Black Alone		16.1%	Rural	17.8
American Indian Alone		3.1%		
Asian or Pacific Islander Alone		3.6%	2000 Specified Owner Occupied Housing Units	
Some Other Race Alone		10.8%	with a Mortgage	68.8
Population of 2+ Races		3.2%		
Hispanic Origin *		22.0%	2006 Housing Units	
Diversity Index **		72.0	Owner-Occupied	57.8
			Renter-Occupied	33.4
2006 Population by Age			2000 Housing Units by Units in Structure	
0-4		7.3	1 Unit - Detached	58.9
5-14		13.7	1 Unit - Attached	5.9
15-19		7.5	2-9 Units	15.2
20-24		8.0	10+ Units	10.6
25-44		29.6	Mobile and Other	9.4
45-64		23.3		
65-84		9.2	2000 Housing Units by Year Structure Built	
85+		1.5	Structure Built 1990 or Later	14.8
Median Age		34.4	Structure Built 1989 or Earlier	85.2
Age Dependency Index ***		46.4	Median Year Structure Built	1968
2000 Household Type			2006 Owner Occupied Housing Units:	
Nonfamily Households: 1-Person	25.9		Median Home Value	\$158,065
Married-couple Families	48.1			
Married-couple Fam. w/Own Children <18	23.1		2000 Specified Renter Occupied Housing Units:	
			Median Contract Rent	\$455
2000 Population 5+ by Residence in 1995:				
Different House - Same County	26.5			
Different County, State, or Country	22.1			

. **Data Note:** Detail may not sum to totals due to rounding.

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing. ESRI forecasts for 2006 and 2011.

* Persons of Hispanic Origin may be of any race.

** The Diversity Index summarizes racial and ethnic diversity. The index shows the likelihood that two persons, chosen at random from the same area, belong to different race or ethnic groups.

*** The Age Dependency Index is the ratio of population age <15 plus age 65+ to the working age population age 15-64, times 100.

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SOCIOECONOMIC CHARACTERISTICS		2000 Pop 25+ by Educational Attainment	
	<u>Percent</u>		
2006 Employed Civilian Pop 16+		Less than High School Graduate	25.4
Management	10.6	High School Grad/Some College	56.6
Professional	17.6	College Grad or More	18.0
Services	18.4	Education Index *	73.7
Sales/Related	11.1	2006 Household Income	
Office/Administrative Support	14.2	<\$15K	15.7
Farming/Fishing/Forestry	1.2	\$15-24,999K	12.2
Construction/Extraction	7.8	\$25-34,999K	11.9
Installation/Maintenance/Repair	4.0	\$35-49,999K	15.7
Production	7.4	\$50-74,999K	19.2
Transportation/Material Moving	7.7	\$75-99,999K	10.6
Unemployment Rate	10.0	\$100-249,999K	13.1
		\$250-499,999K	1.2
2000 Women in Labor Force	27.6	\$500K+	0.4
2000 Women in Labor Force w/Children	2.0	Median Household Income	\$44,349
		Median Disposable Income	\$36,006
2000 Average Travel Time to Work (in minutes)	25.8	2000 Households w/Income < Poverty Level	15.3
		2006 Median Net Worth	\$75,977

Data Note: Income is expressed in current dollars. Detail may not sum to totals due to rounding.

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing. ESRI forecasts for 2006 and 2011.

* The Education Index is the ratio of percent college graduates to the U.S. percent of college graduates, times 100.

Appendix M: Customer Tapestry Profile



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Number of Records: 763

By LifeMode Group

<u>Tapestry Description</u>	<u>Customers</u>			<u>Penetration</u> Per 100	<u>U.S.</u>		
	<u>Number</u>	<u>%</u>			<u>Number</u>	<u>%</u>	<u>Index</u>
L8: Global Roots	92	12.4		0.00	9,442,681	8.3	150
L11: Factories & Farms	89	12.0		0.00	10,950,099	9.6	125
L9: Family Portrait	78	10.5		0.00	8,603,242	7.5	140
L5: Senior Styles	71	9.6		0.00	14,231,658	12.5	77
L2: Upscale Avenues	71	9.6		0.00	15,733,421	13.8	70
L12: American Quilt	69	9.3		0.00	10,448,687	9.2	102
L10: Traditional Living	65	8.8		0.00	10,086,731	8.8	99
L1: High Society	59	8.0		0.00	14,253,275	12.5	64
L3: Metropolis	49	6.6		0.00	6,110,287	5.4	124
L7: High Hopes	42	5.7		0.00	4,710,105	4.1	137
L4: Solo Acts	42	5.7		0.00	7,797,510	6.8	83
L6: Scholars & Patriots	12	1.6		0.00	1,679,196	1.5	110
Total	740	100.0		0.00	114,049,635	100.0	100

Segment 66, Unclassified, is not included in the Summary Table.

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Pages 2-4 of the Customer Tapestry Profile by LifeMode Group have been withdrawn. They are identical to pages 2-4 of the Customer Tapestry Profile by Urbanization Group which follows.



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Number of Records: 763

By Urbanization Group

<u>Tapestry Description</u>	<u>Customers</u>		<u>Penetration</u>	<u>U.S.</u>		<u>Index</u>
	<u>Number</u>	<u>%</u>	<u>Per 100</u>	<u>Number</u>	<u>%</u>	
U5: Urban Outskirts I	105	14.2	0.00	12,461,013	10.9	130
U4: Metro Cities II	85	11.5	0.00	12,538,134	11.0	104
U7: Suburban Periphery I	76	10.3	0.00	17,444,254	15.3	67
U8: Suburban Periphery II	74	10.0	0.00	11,145,615	9.8	102
U6: Urban Outskirts II	69	9.3	0.00	5,967,902	5.2	178
U10: Rural I	65	8.8	0.00	12,662,714	11.1	79
U3: Metro Cities I	55	7.4	0.00	12,929,151	11.3	66
U1: Principal Urban Centers I	55	7.4	0.00	9,007,266	7.9	94
U2: Principal Urban Centers II	54	7.3	0.00	5,463,844	4.8	152
U11: Rural II	52	7.0	0.00	8,882,378	7.8	90
U9: Small Towns	49	6.6	0.00	5,544,621	4.9	136
Total	740	100.0	0.00	114,049,635	100.0	100

Segment 66, Unclassified, is not included in the Summary Table.

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Number of Records: 763

<u>Tapestry Description</u>	Customers		Penetration <u>Per 100</u>	U.S.		<u>Index</u>
	<u>Number</u>	<u>%</u>		<u>Number</u>	<u>%</u>	
53 Home Town	34	4.6	0.00	1,710,407	1.5	306
26 Midland Crowd	28	3.8	0.00	4,135,120	3.6	104
38 Industrious Urban Fringe	28	3.8	0.00	1,717,958	1.5	251
32 Rustbelt Traditions	25	3.4	0.00	3,276,608	2.9	118
48 Great Expectations	25	3.4	0.00	2,023,160	1.8	190
42 Southern Satellites	23	3.1	0.00	3,149,400	2.8	113
6 Sophisticated Squires	22	3.0	0.00	3,050,339	2.7	111
41 Crossroads	21	2.8	0.00	1,690,615	1.5	191
12 Up and Coming Families	21	2.8	0.00	3,656,024	3.2	89
59 Southwestern Families	20	2.7	0.00	1,093,848	1.0	282
62 Modest Income Homes	20	2.7	0.00	1,197,756	1.1	257
24 Main Street, USA	20	2.7	0.00	2,981,883	2.6	103
50 Heartland Communities	19	2.6	0.00	2,510,750	2.2	117
28 Aspiring Young Families	17	2.3	0.00	2,686,945	2.4	98
57 Simple Living	17	2.3	0.00	1,653,259	1.4	158
36 Old and Newcomers	16	2.2	0.00	2,251,955	2.0	110
52 Inner City Tenants	16	2.2	0.00	1,756,688	1.5	140
35 International Marketplace	16	2.2	0.00	1,505,776	1.3	164
25 Salt of the Earth	15	2.0	0.00	3,156,113	2.8	73
18 Cozy and Comfortable	15	2.0	0.00	3,233,637	2.8	71
56 Rural Bypasses	15	2.0	0.00	1,771,372	1.6	131
17 Green Acres	14	1.9	0.00	3,547,328	3.1	61
60 City Dimensions	14	1.9	0.00	1,016,814	0.9	212
64 City Commons	14	1.9	0.00	790,737	0.7	273
21 Urban Villages	14	1.9	0.00	893,159	0.8	242
13 In Style	13	1.8	0.00	2,829,431	2.5	71
46 Rooted Rural	12	1.6	0.00	2,798,799	2.5	66
23 Trendsetters	11	1.5	0.00	1,217,911	1.1	139
45 City Strivers	11	1.5	0.00	851,624	0.7	199
29 Rustbelt Retirees	11	1.5	0.00	2,409,449	2.1	70
3 Connoisseurs	11	1.5	0.00	1,594,248	1.4	106
34 Family Foundations	10	1.4	0.00	977,969	0.9	158
9 Urban Chic	10	1.4	0.00	1,528,609	1.3	101
58 NeWest Residents	10	1.4	0.00	1,032,563	0.9	149
33 Midlife Junction	10	1.4	0.00	2,850,271	2.5	54
16 Enterprising Professionals	9	1.2	0.00	1,907,082	1.7	73
19 Milk and Cookies	9	1.2	0.00	2,169,474	1.9	64
49 Senior Sun Seekers	9	1.2	0.00	1,343,256	1.2	103
31 Rural Resort Dwellers	8	1.1	0.00	1,824,153	1.6	68
7 Exurbanites	8	1.1	0.00	2,791,637	2.4	44

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Tapestry Description	Customers		Penetration		U.S.		Index
	Number	%	Per 100	Number	%		
2 Suburban Splendor	7	0.9	0.00	1,954,442	1.7	55	
4 Boomburbs	7	0.9	0.00	2,461,404	2.2	44	
10 Pleasant-ville	7	0.9	0.00	1,974,932	1.7	55	
55 College Towns	7	0.9	0.00	921,179	0.8	117	
54 Urban Rows	7	0.9	0.00	402,205	0.4	268	
47 Las Casas	7	0.9	0.00	870,381	0.8	124	
39 Young and Restless	6	0.8	0.00	1,628,063	1.4	57	
8 Laptops and Lattes	6	0.8	0.00	1,163,283	1.0	79	
65 Social Security Set	5	0.7	0.00	749,029	0.7	103	
51 Metro City Edge	5	0.7	0.00	1,101,860	1.0	70	
22 Metropolitans	5	0.7	0.00	1,353,601	1.2	57	
30 Retirement Communities	3	0.4	0.00	1,701,199	1.5	27	
5 Wealthy Seaboard Suburbs	3	0.4	0.00	1,604,831	1.4	29	
63 Dorms to Diplomas	3	0.4	0.00	518,501	0.5	89	
27 Metro Renters	3	0.4	0.00	1,536,298	1.3	30	
14 Prosperous Empty Nesters	3	0.4	0.00	2,099,353	1.8	22	
11 Pacific Heights	3	0.4	0.00	712,402	0.6	65	
40 Military Proximity	2	0.3	0.00	239,516	0.2	129	
15 Silver and Gold	2	0.3	0.00	1,063,028	0.9	29	
37 Prairie Living	2	0.3	0.00	1,162,807	1.0	27	
43 The Elders	2	0.3	0.00	702,335	0.6	44	
44 Urban Melting Pot	1	0.1	0.00	775,196	0.7	20	
66 Unclassified	1	0.1	0.04	2,743	0.0	5619	
20 City Lights	1	0.1	0.00	1,203,241	1.1	13	
1 Top Rung	1	0.1	0.00	796,374	0.7	19	
61 High Rise Renters	0	0.0	0.00	767,305	0.7	0	
Total	740	100.0	0.00	114,049,635	100.0	100	

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Number of Records: 763

<u>Rank</u>	<u>Tapestry Description</u>	<u>Customers</u>	<u>U.S.</u>	<u>Index</u>
1	53 Home Town	4.6%	1.5%	306
2	38 Industrious Urban Fringe	3.8%	1.5%	251
3	26 Midland Crowd	3.8%	3.6%	104
4	48 Great Expectations	3.4%	1.8%	190
5	32 Rustbelt Traditions	3.4%	2.9%	118
	Subtotal	18.9%	11.3%	168
6	42 Southern Satellites	3.1%	2.8%	113
7	6 Sophisticated Squires	3.0%	2.7%	111
8	41 Crossroads	2.8%	1.5%	191
9	12 Up and Coming Families	2.8%	3.2%	89
10	59 Southwestern Families	2.7%	1.0%	282
	Subtotal	14.5%	11.1%	130
11	62 Modest Income Homes	2.7%	1.1%	257
12	24 Main Street, USA	2.7%	2.6%	103
13	50 Heartland Communities	2.6%	2.2%	117
14	57 Simple Living	2.3%	1.4%	158
15	28 Aspiring Young Families	2.3%	2.4%	98
	Subtotal	12.6%	9.7%	130
16	35 International Marketplace	2.2%	1.3%	164
17	52 Inner City Tenants	2.2%	1.5%	140
18	36 Old and Newcomers	2.2%	2.0%	110
19	56 Rural Bypasses	2.0%	1.6%	131
20	25 Salt of the Earth	2.0%	2.8%	73
	Subtotal	10.5%	9.2%	115
	Total	56.5%	41.2%	137

Note: Segments with an index higher than 100 are listed in blue.
Subtotals are shown for every 5 classifications.

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