NCDOT 2011 Roadway Review

Summary Report

Submitted to

The North Carolina Department of Transportation

etc Institute

ITRE

Technical Report Documentation Page

1. Report No. **FHWA/NC/2011-18**	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle **NCDOT 2011 Roadway Review – Summary Report**		5. Report Date **April 20, 2012**	
		6. Performing Organization Code	
7. Author(s) **Chris Tatham, Aaron Hekele, Christopher M. Cunningham, Daniel Findley, Jeff Chang, Chris Vaughan, James Martin**		8. Performing Organization Report No.	
9. Performing Organization Name and Address **North Carolina State University Institute for Transportation Research and Education 909 Capability Drive Raleigh, NC 27695-8601**		10. Work Unit No. (TRAIS)	
		11. Contract or Grant No.	
12. Sponsoring Agency Name and Address **North Carolina Department of Transportation Research and Analysis Group 104 Fayetteville Street Raleigh, North Carolina 27601**		13. Type of Report and Period Covered **Final Report April 2011 to February 2012**	
		14. Sponsoring Agency Code **2011-18**	
Supplementary Notes:			

16. Abstract

During October 2011, the North Carolina Department of Transportation (NCDOT) conducted a "Roadway Review" with a randomly recruited sample of North Carolina residents and community leaders. Over 300 persons from 61 different communities participated in Roadway Reviews that were held in six locations: Wilmington, Charlotte, Rocky Mount, Burlington, Asheville, and Jonesville. The Reviews were completed during both daytime and nighttime hours.

The purpose of the Roadway Review was two-fold: (1) to determine expectations for the condition of North Carolina highways and (2) to identify features that North Carolinians think are most important on different types of highways. Results of the survey are provided about each of the roadway features evaluated.

17. Key Words **Maintenance, Survey, Roadway, Pavement, Public Opinion, Asphalt**	18. Distribution Statement		
19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages 167	22. Price

Form DOT F 1700.7 (8-72)   **Reproduction of completed page authorized**

DISCLAIMER

The contents of this report reflect the views of the authors and not necessarily the views of the North Carolina State University. The authors are responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the North Carolina Department of Transportation or the Federal Highway Administration at the time of publication. This report does not constitute a standard, specification, or regulation.

ACKNOWLEDEMENTS

Contents

Executive Summary

During October 2011, the North Carolina Department of Transportation (NCDOT) conducted a "Roadway Review" with a randomly recruited sample of North Carolina residents and community leaders. Over 300 persons from 61 different communities participated in Roadway Reviews that were held in six locations: Wilmington, Charlotte, Rocky Mount, Burlington, Asheville, and Jonesville. The Reviews were completed during both daytime and nighttime hours.

The purpose of the Roadway Review was two-fold: (1) to determine expectations for the condition of North Carolina highways and (2) to identify features that North Carolinians think are most important on different types of highways.

Condition of Highways. Overall, residents were generally satisfied with the condition of major (interstate and primary) highways. They were less satisfied with the condition of minor (secondary) highways.   The mean rating for overall condition of all highways that were included in the study was 3.13 on a 5-point scale, where 5 means "greatly exceeds expectations" and 1 means "fails to meet expectations."   The mean rating for the overall condition of major highways (generally Interstates and other primary highways on the National Highway System) was 3.45 for Interstates and 3.15 for primary highways. The mean rating for minor highways (generally secondary, lower volume 2-lane routes and those not on the National Highway System) was 2.95.

Among all highways that were rated, the best rated highway features were:
- Traffic flow (note: most of the Roadway Review meetings were not conducted during peak hour)
- Condition of signage
- Visibility of signage

The lowest rated features were:
- Width of outside (right) shoulders
- Lighting along highways*
- Mowing and trimming of along guard rails

  *Note most of the Roadway Review segments did not have lighting.

Features that Most Influence Perceptions of Highway Condition. After traveling on a specific type of highway, Roadway Review participants were asked to identify the highway features that had the greatest impact on their perception of the overall condition of the highway. The highway features that were considered most important were:

- Physical condition of the road surface
- Width of lanes
- Smoothness of the road surface

Predicting Overall Condition with <u>Interstate Highways</u>. With the overall condition rating set as the dependent variable and physical condition of the road surface, cleanliness, and roadway markings set as independent variables, the regression model for interstate highways predicted the observed value for the overall condition rating 77.4% of the time. The regression model predicted the observed value for the overall condition rating within +/- 1 of the observed value more than 96.1% of the time. The findings of the regression analysis suggest that NCDOT can manage overall satisfaction with the condition of interstate highways by managing (1) physical condition of the road surface, (2) cleanliness, and (3) roadway markings as shown in the regression equation in the table below.

Predicting Overall Condition with <u>Primary Highways</u>. With the overall condition rating set as the dependent variable and smoothness of the road surface, cleanliness, and roadway markings set as independent variables, the regression model for primary highways predicted the observed value for the overall condition rating 73.1% of the time. The regression model predicted the observed value for the overall condition rating within +/- 1 of the observed value more than 95.2% of the time. The findings of the regression analysis suggest that NCDOT can manage overall satisfaction with the condition of primary highways by managing (1) smoothness of the road surface, (2) cleanliness, and (3) roadway markings as shown in the regression equation in the table below.

Predicting Overall Condition with <u>Secondary Highways</u>. With the overall condition rating set as the dependent variable and smoothness of the road surface, roadway markings, and the physical condition of the road surface set as the independent variables, the regression model for secondary highways predicted the observed value for the overall condition rating 75.3% of the time. The regression model predicted the observed value for the overall condition rating within +/- 1 of the observed value more than 96.8% of the time. The findings of the regression analysis suggest that NCDOT can manage overall satisfaction with the condition of secondary highways by managing (1) smoothness of the road surface, (2) roadway markings, and (3) physical condition of the road surface as shown in the regression equation in the table below.

<u>**Determining Acceptable Conditions for Various Highway Features**</u>.
NCDOT gathered technical data for each of the sections of highways that were rated. The technical data was added to the Roadway Review database to allow the condition ratings that were given by Roadway Review participants to be analyzed in the context of the actual conditions for each section of highway in order to determine what acceptable conditions are for each of the highway features that were rated. Standards that generally met the expectations of the participants in the Roadway Review for (1) lane width, (2) outside shoulder width, (3) type of shoulder, and the (4) mowing of grass along highways are listed below.

- *Lane Width:* Interstates (12 feet); Primary and Secondary Highways (11 feet)
- *Shoulder Width:* All Highways (10 feet)
- *Shoulder Type:* All Highways (Paved)
- *Mowing (Grass Height):* All Highways (less than 10 inches)

NCDOT Roadway Review
Summary Report

Overview

During October 2011, the North Carolina Department of Transportation (NCDOT) conducted a "Roadway Review" with a randomly recruited sample of North Carolina residents and community leaders. Over 300 persons from 61 different communities participated in Roadway Reviews that were held in six locations: Wilmington, Charlotte, Rocky Mount, Burlington, Asheville, and Jonesville. Reviews were completed during both daytime and nighttime hours.

Upon arrival, participants were given an overview of the course and directions on how to complete the survey. Those attending were then divided into small groups of approximately 5-7 persons each. The groups then boarded 15-passenger vans. A professional moderator, positioned in the backseat of the van, accompanied each of the groups during the course to facilitate the administration of the survey to ensure consistent interpretation of the questions. The driver of each van was used to traverse the course. Each of the six courses consisted of at least 15 different sections of highway (Interstates, Primary Highways, and Secondary Highways). The routes were designed to ensure that participants would be exposed to a wide range of highways with regard to key variations in condition (i.e. smoothness of pavement, shoulder width, etc.). Each of the sections were approximately 1-3 miles in length. The average course was about 60 miles long and took an hour to complete.

Purpose

The purpose of the Roadway Review was two-fold: (1) to determine expectations for the condition of North Carolina highways and (2) to identify features that North Carolinians think are most important on different types of highways.

Determining Expectations: Each of the participants rated the condition of the following 18 features on each section of highway:

- Width of lanes
- Smoothness
- Physical condition of the road surface
- Type of shoulder
- Traffic flow
- Roadway markings
- Visibility of signs

- Cleanliness
- Condition of signs
- Mowing & trimming along guard rails
- Mowing & trimming along all other areas
- Reflective markers
- Overall condition of the highway

- Overall appearance of the highway
- The feeling of safety on the highway
- Width of outside shoulders
- Width of inside shoulders*
- Lighting*

Note inside shoulders were only rated on sections of highways that had a median and most of the Roadway Review segments did not have lighting.

The condition ratings were based on a 5-point scale, where "3" indicated that the condition of a feature met the participant's expectation. A rating of "1" or "2" indicated that the condition of the feature did not meet the participant's expectation. A rating of "4" or "5" indicated that the condition of the feature exceeded the participant's expectation. For example, if roadway lighting was not present participants gave a rating of "3" indicating that for that section they did not expect to see any lighting. At the end of each section, participants also rated the overall condition of the highway using the same scale. The survey was designed so that condition ratings given by participants could be compared to the technical ratings for the same highway features. For example, the rating participants gave for the width of lanes on each section of highway was compared to the actual lane widths for the same sections of highway. By comparing the condition ratings given by participants with technical ratings for the same sections of highway, expectations that North Carolina residents have for the condition of the State's highway system could be identified for several highway features.

Assessing the Importance of Highway Features: In addition to gathering feedback about expectations for the State's highway system, the Roadway Review survey was also designed to identify which features are most important on different types of highways. At the end of each type of highway that was evaluated, participants were asked to identify which three features they thought were most important with regard to (1) condition, (2) safety and (3) appearance. For example, after traveling on a series on interstate highways, participants rated the importance of various highway features with regard to their experience on Interstate highways. Similarly, after traveling on a series of rural 2-lane highways, participants rated the importance of features with regard to their experience on rural 2-lane highways. The importance ratings should be interpreted with regard to the perceived priority that participants placed on each of the highway features that were assessed. The importance ratings do not necessarily relate to perceptions about the overall condition of a highway.

Recruitment Methodology

A total of 315 people participated in the Roadway Review. Participants were recruited at random so that the results of the survey would be statistically valid. The recruitment methodology for each of the subgroups is provided below.

Residents: Fifty residents were recruited at random by phone from each of the counties where the Roadway Reviews were held. Attendance at the Roadway Reviews

significantly exceeded expectations. Of the 300 residents who were recruited, 164 (or 55%) attended. The goal was to achieve a 50% attendance rate. As a token of appreciation for attending the Roadway Reviews, residents received $30 cash for their contributions to the study.

__Community Leaders:__ Thirty community leaders were recruited by phone to attend each of the six Roadway Reviews. Those invited were selected at random from a list of organizations that influence transportation decisions in the State of North Carolina, including: city and county governments, regional planning organizations, metropolitan planning organizations, chambers of commerce, industry and trade organizations, environmental groups, local civic leaders, and economic development agencies. Stakeholders from the western part of the state were invited to the Roadway Review in Asheville. Stakeholders from the northwestern part of the state were invited to the Roadway Review in Jonesville. Stakeholders from the southeastern part of the state were invited to the Roadway Review in Wilmington. Stakeholders from the eastern part of the state were invited to the Roadway Review in Rocky Mount, and stakeholders from the central part of the state were invited to the Roadway Review in Burlington or Charlotte. Of the 180 stakeholders who were recruited, 151 (or 84%) attended. The goal was to achieve a 60% attendance rate.

Level of Confidence and Precision of the Data Collected

Altogether, useable data was gathered for 121 sections of highway across the State of North Carolina. The highways that were included in the study were selected to expose participants to a representative cross section of highways with regard to the type and condition of highways that can be found in communities across the State of North Carolina.   Since each of the 315 participants rated between 15 and 23 different sections of highway, there were a total of 6,524 observations (ratings) for each highway feature in the sample. The overall results for the sample have a 95% level of confidence with a precision of at least +/-1.3%.

Each section of highway was categorized into one of three types: Interstate Highways (National Interstate System routes), Primary Highways (National and State Highway System routes), and Secondary Highways (all other routes).   A detailed description of the routes and the exact location of the sections of highway that were rated is provided in Appendix D. A breakdown of the number of observations, level of confidence, and precision of the results is provided below and on the following page:

__ALL HIGHWAYS__	__Number of Observations__
Asheville	988
Burlington	1,122
Charlotte	880
Jonesville	1,104
Rocky Mount	750
Wilmington	1,680
Total	6,524
Level of Confidence	95%
Precision	+/-1.3%

INTERSTATES	Number
Asheville	208
Burlington	255
Charlotte	132
Jonesville	144
Rocky Mount	100
Wilmington	210
Total	1,049
Level of Confidence	95%
Precision	+/- 3.0%

PRIMARY HIGHWAYS	Number
Asheville	468
Burlington	408
Charlotte	396
Jonesville	480
Rocky Mount	450
Wilmington	980
Total	3,182
Level of Confidence	95%
Precision	+/- 1.8%

SECONDARY HIGHWAYS	Number
Asheville	312
Burlington	459
Charlotte	352
Jonesville	480
Rocky Mount	200
Wilmington	490
Total	2,293
Level of Confidence	95%
Precision	+/- 2.1%

Condition Ratings

The mean condition ratings for highway features are listed below for each of the three types of highways that were rated. A rating of 3.00 indicates that Roadway Review participants generally thought the condition of the corresponding highway feature met their expectations. If the rating is greater than 3.00, participants generally thought the condition of the feature exceeded their expectations. If the rating is less than 3.00, participants generally thought the condition of the feature did not meet their expectations. Interestingly, the overall ratings for **interstate highways** exceeded expectations (mean rating > 3.00) for all of the features that were rated on interstate highways. The overall ratings for **primary highways** exceeded expectations (mean rating > 3.00) for all but six of the features that were rated on primary highways. However, the overall ratings for **minor highways** did not meet expectations (mean rating < 3.00) for 12 of the features that were rated.

Mean Rating - ALL Highways (3.00=meet expectations)

3.29	How well traffic flows
3.26	Condition of signs
3.24	Visibility of signs
3.18	Cleanliness
3.15	Overall appearance
3.14	Roadway markings
3.13	**Overall condition**
3.13	Feeling of safety
3.10	Width of lanes
3.05	Physical condition of road surface
3.03	Reflectivity markers
3.02	Smoothness of road surface
2.91	Type of shoulder (gravel-pavement)
2.89	Mowing and trimming of all other areas
2.88	Width of inside (left) shoulders
2.87	Mowing and trimming along guard rails
2.82	Lighting
2.81	Width of outside (right) shoulders

Mean Rating – INTERSTATE Highways (3.00=meet expectations)

3.57	How well traffic flows
3.49	Condition of signs
3.48	Visibility of signs
3.48	Feeling of safety
3.45	**Overall condition**
3.44	Width of outside (right) shoulders
3.44	Overall appearance
3.43	Width of lanes
3.39	Roadway markings
3.38	Physical condition of road surface
3.36	Smoothness of road surface
3.36	Type of shoulder (gravel-pavement)
3.32	Cleanliness
3.31	Reflectivity markers
3.15	Width of inside (left) shoulders
3.14	Lighting
3.11	Mowing and trimming of all other areas
3.09	Mowing and trimming along guard rails

Mean Rating – PRIMARY Highways (3.00=meet expectations)

3.33	How well traffic flows
3.29	Condition of signs
3.27	Visibility of signs
3.18	Roadway markings
3.18	Width of lanes
3.18	Feeling of safety
3.17	Cleanliness
3.15	**Overall condition**
3.15	Overall appearance
3.10	Reflectivity markers
3.05	Physical condition of road surface
3.03	Smoothness of road surface
2.92	Type of shoulder (gravel-pavement)
2.90	Width of inside (left) shoulders
2.88	Mowing and trimming of all other areas
2.84	Lighting
2.81	Mowing and trimming along guard rails
2.79	Width of outside (right) shoulders

Mean Rating – SECONDARY Highways (3.00=meet expectations)

3.14	Cleanliness
3.12	How well traffic flows
3.10	Condition of signs
3.08	Visibility of signs
3.02	Overall appearance
2.96	Roadway markings
2.95	**Overall condition**
2.91	Feeling of safety
2.89	Physical condition of road surface
2.86	Smoothness of road surface
2.85	Width of lanes
2.85	Mowing and trimming along guard rails
2.81	Mowing and trimming of all other areas
2.74	Reflectivity markers
2.68	Type of shoulder (gravel-pavement)
2.60	Lighting
2.50	Width of outside (right) shoulders
N/A	Width of inside (left) shoulders (No inside shoulders exist for this type of highway)

Features that Most Influence Perceptions of <u>Highway Condition</u>

After traveling on a specific type of highway, Roadway Review participants were asked to identify the three highway features that had the greatest impact on their perception of highway condition. The highway features that were considered most important with regard to perceptions of condition are listed below for each of the three types of highways that were rated. The ratings reflect the sum of the top three choices given by participants.

ALL Highways
58%   Physical condition of the road surface
53%   Width of lanes
44%   Smoothness of the road surface
21%   Roadway markings
18%   Width of outside (right) shoulders

INTERSTATE Highways
64%   Physical condition of the road
53%   Width of lanes
48%   Smoothness of the road surface
24%   How well traffic flows
19%   Roadway markings

PRIMARY Highways
57%   Physical condition of the road
52%   Width of lanes
44%   Smoothness of the road surface
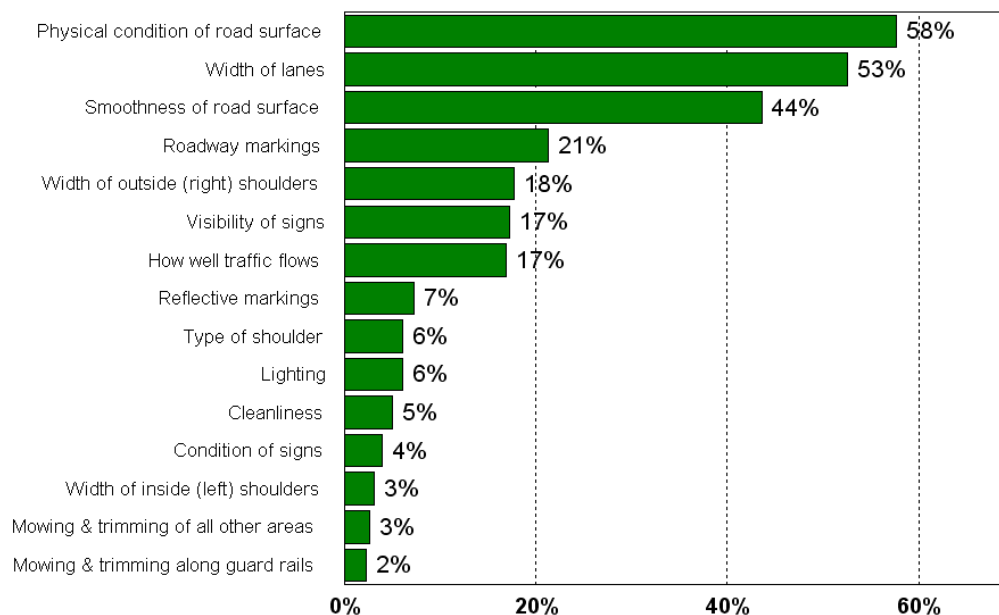21%   Roadway markings
18%   Width of outside (right) shoulders

SECONDARY Highways
55%   Physical condition of the road
53%   Width of lanes
40%   Smoothness of the road surface
23%   Roadway markings
21%   Width of outside (right) shoulders

The graphs on the following pages show the relative importance of all features with regard to perceptions of condition for each type of highway.

Features That Most Influence Perceptions of Highway Condition on *ALL HIGHWAYS*
percentage reflects the sum of the 3 most important features selected by respondents

Feature	Percentage
Physical condition of road surface	58%
Width of lanes	53%
Smoothness of road surface	44%
Roadway markings	21%
Width of outside (right) shoulders	18%
Visibility of signs	17%
How well traffic flows	17%
Reflective markings	7%
Type of shoulder	6%
Lighting	6%
Cleanliness	5%
Condition of signs	4%
Width of inside (left) shoulders	3%
Mowing & trimming of all other areas	3%
Mowing & trimming along guard rails	2%

Source: ETC Institute (2012)

Features That Most Influence Perceptions of Highway Condition on *INTERSTATE HIGHWAYS*
percentage reflects the sum of the 3 most important features selected by respondents

Feature	Percentage
Physical condition of road surface	64%
Width of lanes	53%
Smoothness of road surface	48%
How well traffic flows	24%
Roadway markings	19%
Visibility of signs	18%
Width of outside (right) shoulders	11%
Lighting	7%
Cleanliness	6%
Reflective markings	5%
Condition of signs	5%
Type of shoulder	4%
Width of inside (left) shoulders	4%
Mowing & trimming along guard rails	3%
Mowing & trimming of all other areas	2%
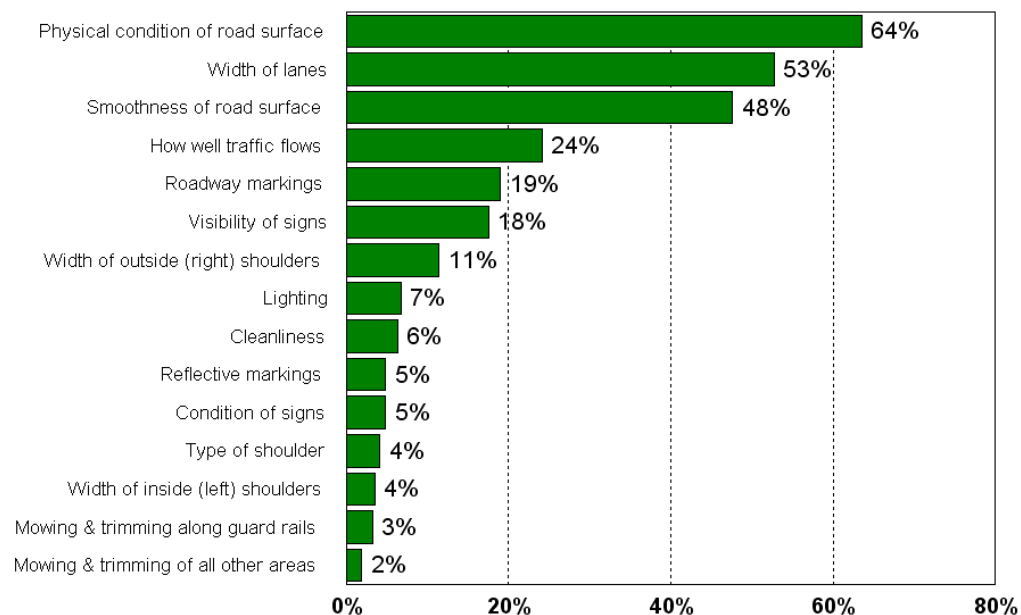
Source: ETC Institute (2012)

Features That Most Influence Perceptions of Highway Condition on *PRIMARY HIGHWAYS*

percentage reflects the sum of the 3 most important features selected by respondents

Feature	Percentage
Physical condition of road surface	57%
Width of lanes	52%
Smoothness of road surface	44%
Roadway markings	21%
Width of outside (right) shoulders	18%
How well traffic flows	17%
Visibility of signs	17%
Reflective markings	8%
Type of shoulder	6%
Cleanliness	6%
Lighting	5%
Condition of signs	3%
Width of inside (left) shoulders	2%
Mowing & trimming along guard rails	2%
Mowing & trimming of all other areas	2%
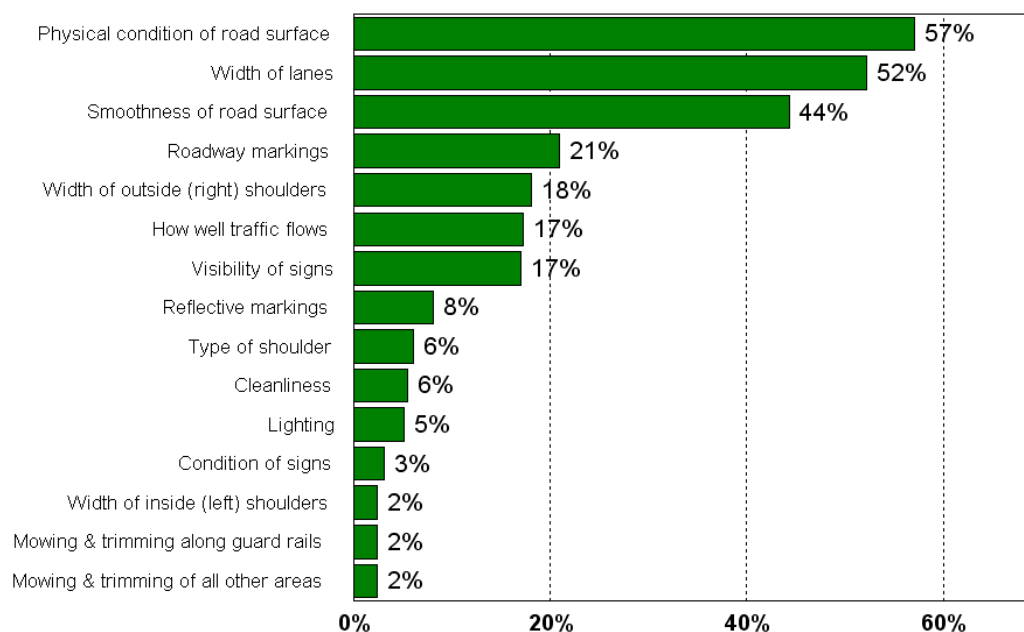
Source: ETC Institute (2012)

Features That Most Influence Perceptions of Highway Condition on *SECONDARY HIGHWAYS*

percentage reflects the sum of the 3 most important features selected by respondents

Feature	Percentage
Physical condition of road surface	55%
Width of lanes	53%
Smoothness of road surface	40%
Roadway markings	23%
Width of outside (right) shoulders	21%
Visibility of signs	17%
How well traffic flows	12%
Type of shoulder	7%
Reflective markings	7%
Lighting	7%
Condition of signs	5%
Cleanliness	4%
Mowing & trimming of all other areas	3%
Mowing & trimming along guard rails	1%
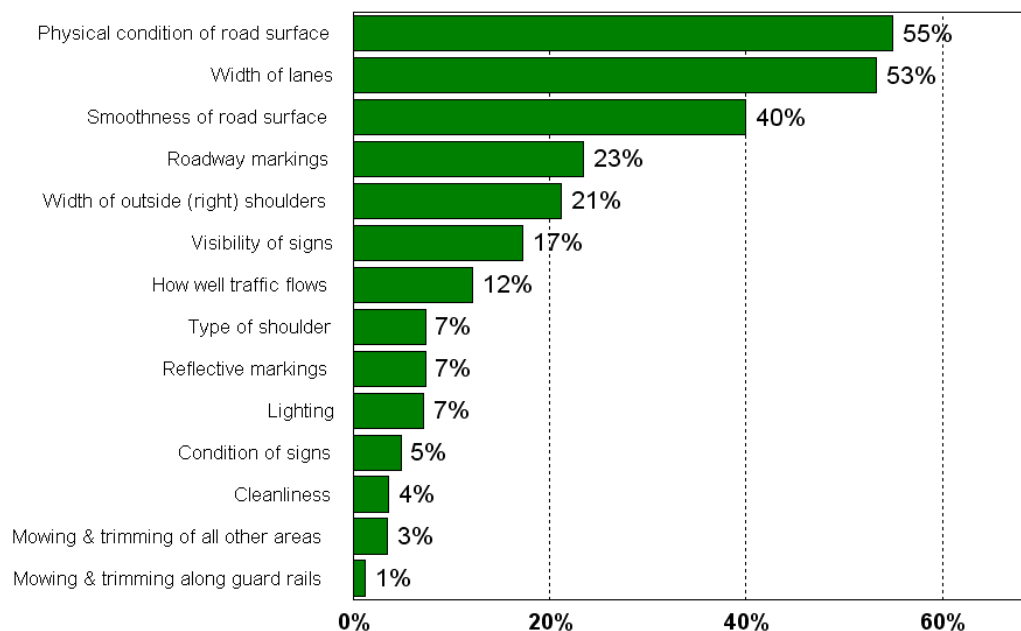
Source: ETC Institute (2012)

Features that Most Influence Perceptions of <u>Safety</u>

Roadway Review participants were also asked to identify the three highway features that had the greatest impact on their perception of safety. The highway features that were considered most important with regard to perceptions of safety are listed below for each type of highway. The rating reflects the sum of the top three choices given by participants.

ALL Highways
50%   Width of lanes
37%   Physical condition of the road surface
30%   Visibility of signs
28%   Roadway markings
22%   How well traffic flows

INTERSTATE Highways
50%   Width of lanes
40%   Physical condition of the road surface
31%   How well traffic flows
28%   Visibility of signs
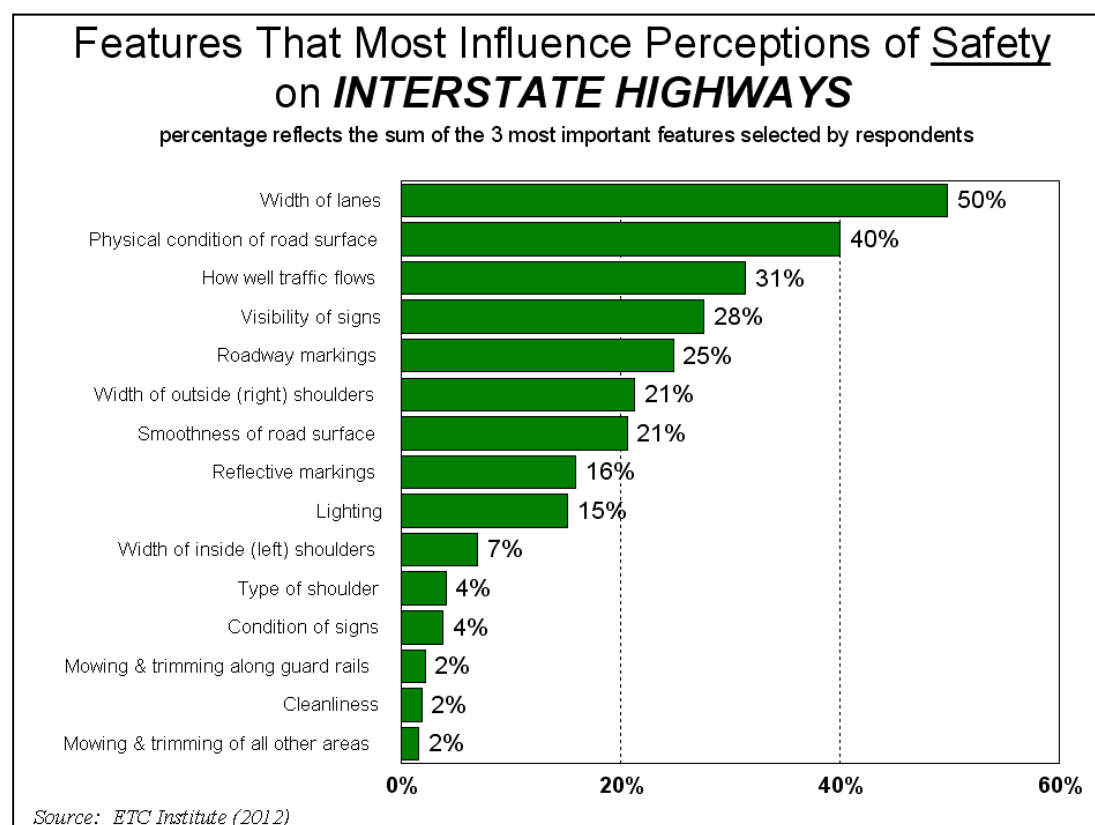25%   Roadway markings

PRIMARY Highways
49%   Width of lanes
40%   Physical condition of the road
31%   Visibility of signs
28%   Roadway markings
22%   How well traffic flows

SECONDARY Highways
51%   Width of lanes
33%   Physical condition of the road
30%   Roadway markings
30%   Visibility of signs
23%   Width of outside (right) shoulders

The graphs on the following pages show the relative importance of all features with regard to perceptions of safety for each type of highway.

Features That Most Influence Perceptions of <u>Safety</u> on *ALL HIGHWAYS*

percentage reflects the sum of the 3 most important features selected by respondents

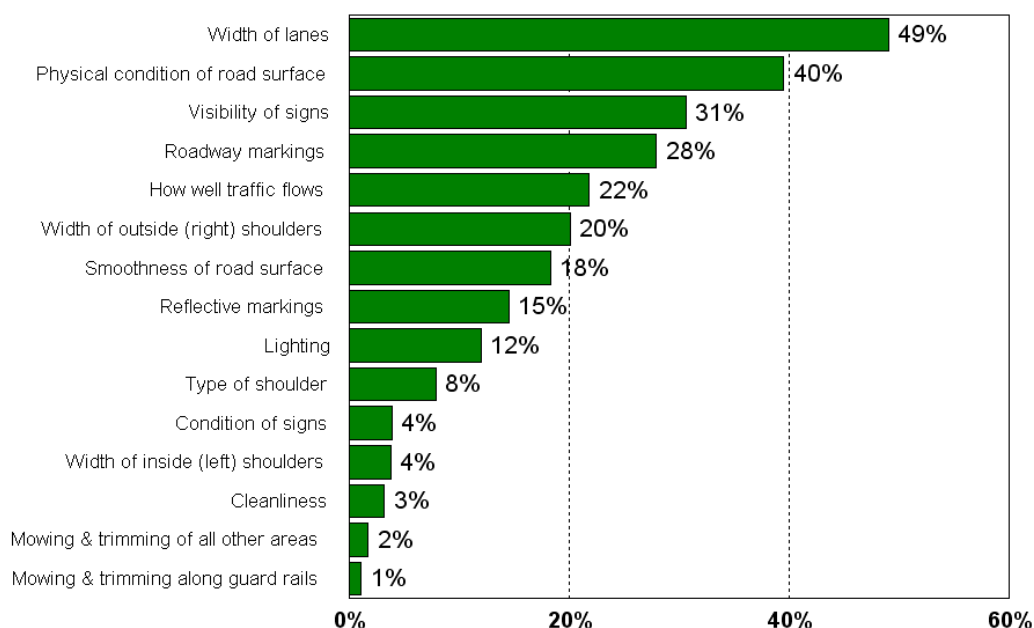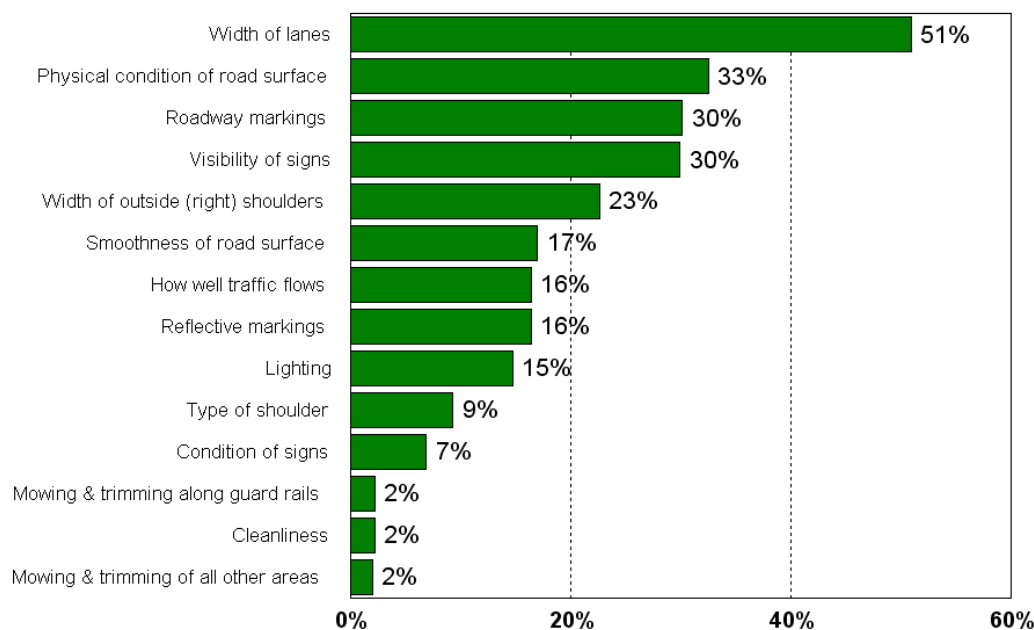| Feature	Percentage
Width of lanes	50%
Physical condition of road surface	37%
Visibility of signs	30%
Roadway markings	28%
How well traffic flows	22%
Width of outside (right) shoulders	21%
Smoothness of road surface	18%
Reflective markings	15%
Lighting	14%
Type of shoulder	8%
Condition of signs	5%
Width of inside (left) shoulders	4%
Cleanliness	3%
Mowing & trimming of all other areas	2%
Mowing & trimming along guard rails	2%

Source: ETC Institute (2012)

Features That Most Influence Perceptions of <u>Safety</u> on *INTERSTATE HIGHWAYS*

percentage reflects the sum of the 3 most important features selected by respondents

Feature	Percentage
Width of lanes	50%
Physical condition of road surface	40%
How well traffic flows	31%
Visibility of signs	28%
Roadway markings	25%
Width of outside (right) shoulders	21%
Smoothness of road surface	21%
Reflective markings	16%
Lighting	15%
Width of inside (left) shoulders	7%
Type of shoulder	4%
Condition of signs	4%
Mowing & trimming along guard rails	2%
Cleanliness	2%
Mowing & trimming of all other areas	2%

Source: ETC Institute (2012)

Features That Most Influence Perceptions of <u>Safety</u> on *PRIMARY HIGHWAYS*

percentage reflects the sum of the 3 most important features selected by respondents

Feature	Percentage
Width of lanes	49%
Physical condition of road surface	40%
Visibility of signs	31%
Roadway markings	28%
How well traffic flows	22%
Width of outside (right) shoulders	20%
Smoothness of road surface	18%
Reflective markings	15%
Lighting	12%
Type of shoulder	8%
Condition of signs	4%
Width of inside (left) shoulders	4%
Cleanliness	3%
Mowing & trimming of all other areas	2%
Mowing & trimming along guard rails	1%

Source: ETC Institute (2012)

Features That Most Influence Perceptions of <u>Safety</u> on *SECONDARY HIGHWAYS*

percentage reflects the sum of the 3 most important features selected by respondents

Feature	Percentage
Width of lanes	51%
Physical condition of road surface	33%
Roadway markings	30%
Visibility of signs	30%
Width of outside (right) shoulders	23%
Smoothness of road surface	17%
How well traffic flows	16%
Reflective markings	16%
Lighting	15%
Type of shoulder	9%
Condition of signs	7%
Mowing & trimming along guard rails	2%
Cleanliness	2%
Mowing & trimming of all other areas	2%

Source: ETC Institute (2012)

Features that Most Influence Perceptions of <u>Appearance</u>

Roadway Review participants identified the three highway features that had the greatest impact on their perception of appearance. The highway features that were considered most important with regard to perceptions of appearance are listed below for each of the types of highways that were rated. The rating reflects the sum of the top three choices given by participants.

ALL Highways
39%   Cleanliness
34%   Physical condition of the road surface
32%   Mowing and trimming of all other areas
23%   Mowing and trimming along guard rails
20%   Roadway markings

INTERSTATE Highways
47%   Cleanliness
36%   Physical condition of the road surface
30%   Mowing and trimming of all other areas
27%   Mowing and trimming along guard rails
19%   Smoothness of the road surface

PRIMARY Highways
37%   Cleanliness
34%   Physical condition of the road surface
31%   Mowing and trimming of all other areas
23%   Mowing and trimming along guard rails
19%   Roadway markings

SECONDARY Highways
38%   Cleanliness
35%   Mowing and trimming of all other areas
32%   Physical condition of the road surface
23%   Roadway markings
22%   Width of lanes

The graphs on the following pages show the relative importance of all features with regard to perceptions of appearance for each type of highway.

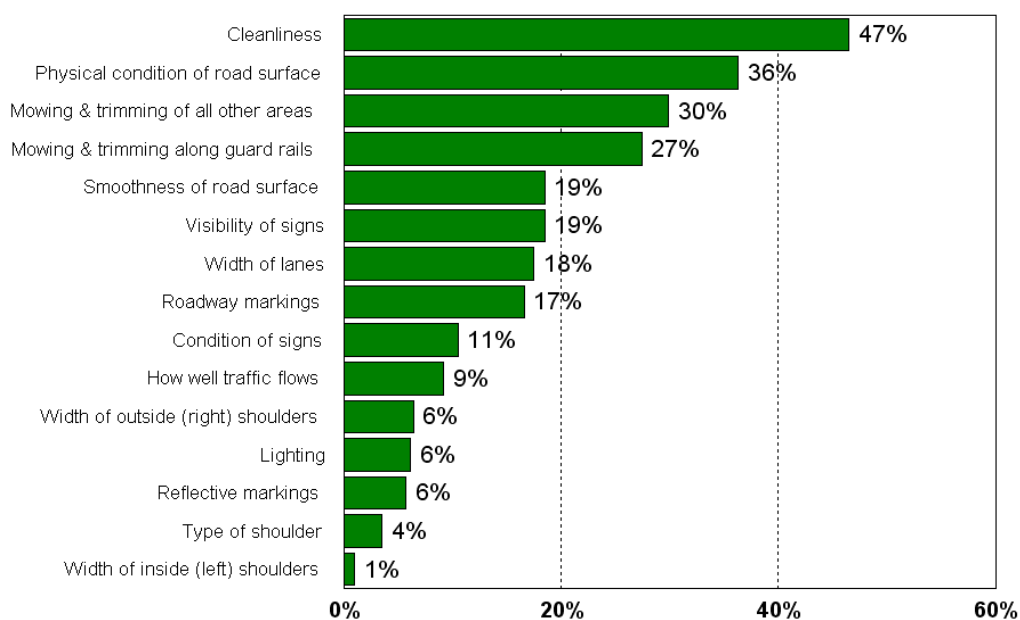## Features That Most Influence Perceptions of <u>Appearance</u> on *ALL HIGHWAYS*

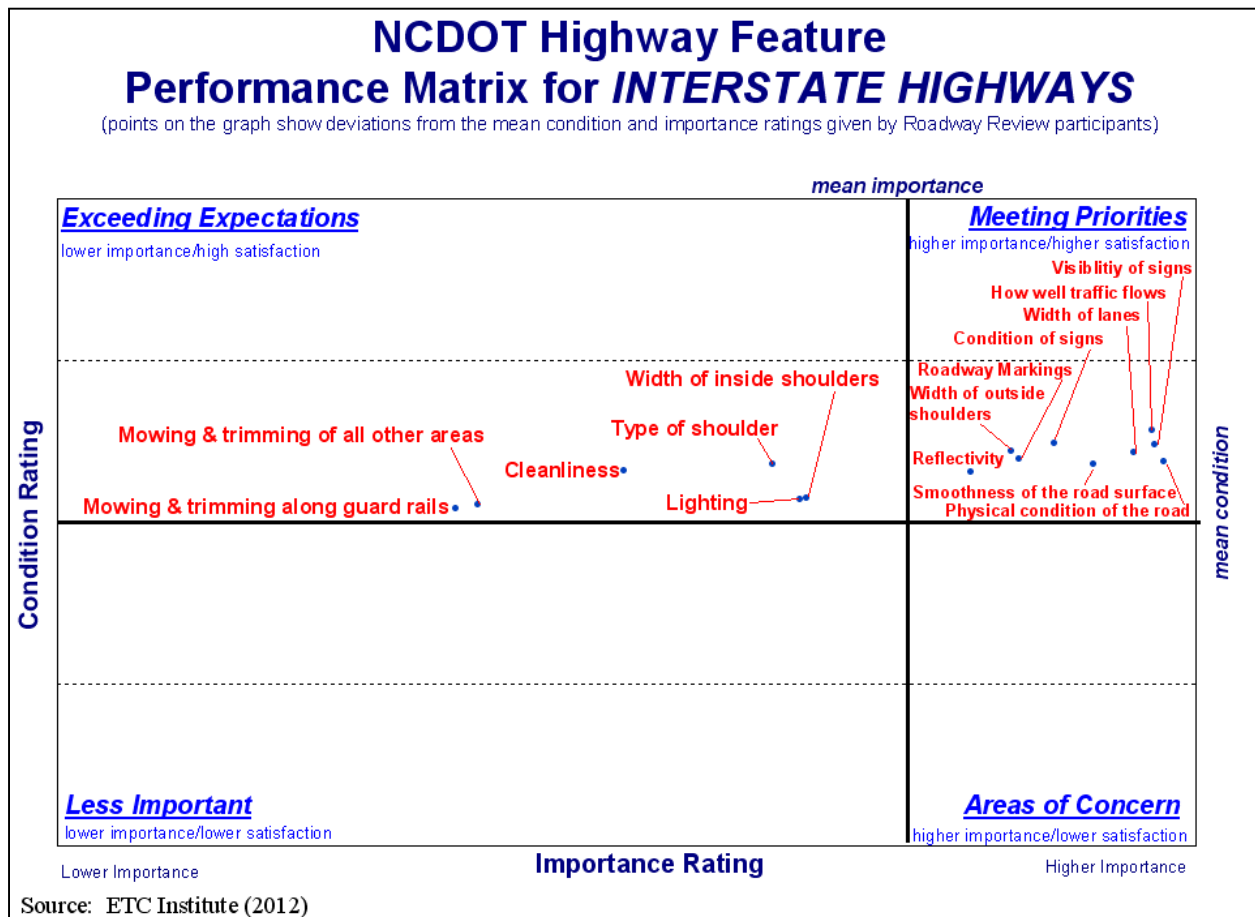percentage reflects the sum of the 3 most important features selected by respondents

Feature	Percentage
Cleanliness	39%
Physical condition of road surface	34%
Mowing & trimming of all other areas	32%
Mowing & trimming along guard rails	23%
Roadway markings	20%
Width of lanes	19%
Smoothness of road surface	18%
Visibility of signs	16%
Condition of signs	9%
Reflective markings	8%
Width of outside (right) shoulders	7%
Lighting	7%
How well traffic flows	7%
Type of shoulder	6%
Width of inside (left) shoulders	1%
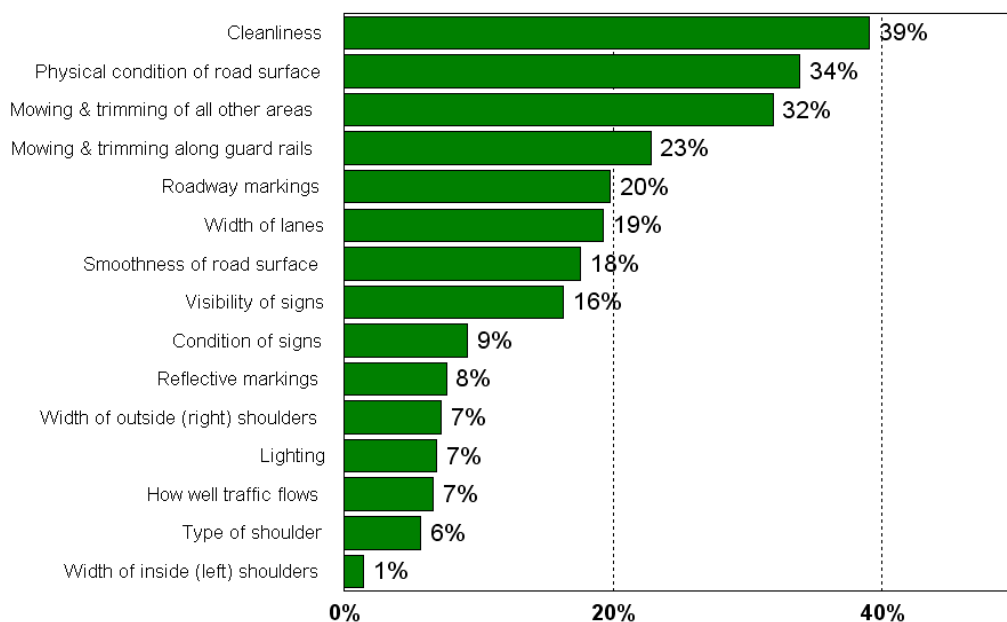
Source: ETC Institute (2012)

Features That Most Influence Perceptions of <u>Appearance</u> on *INTERSTATE HIGHWAYS*

percentage reflects the sum of the 3 most important features selected by respondents

Feature	Percentage
Cleanliness	47%
Physical condition of road surface	36%
Mowing & trimming of all other areas	30%
Mowing & trimming along guard rails	27%
Smoothness of road surface	19%
Visibility of signs	19%
Width of lanes	18%
Roadway markings	17%
Condition of signs	11%
How well traffic flows	9%
Width of outside (right) shoulders	6%
Lighting	6%
Reflective markings	6%
Type of shoulder	4%
Width of inside (left) shoulders	1%

Source: ETC Institute (2012)

Features That Most Influence Perceptions of <u>Appearance</u> on *PRIMARY HIGHWAYS*

percentage reflects the sum of the 3 most important features selected by respondents

Feature	Percentage
Cleanliness	37%
Physical condition of road surface	34%
Mowing & trimming of all other areas	31%
Mowing & trimming along guard rails	23%
Roadway markings	19%
Width of lanes	19%
Smoothness of road surface	17%
Visibility of signs	16%
Condition of signs	9%
Reflective markings	8%
Width of outside (right) shoulders	7%
How well traffic flows	7%
Lighting	7%
Type of shoulder	6%
Width of inside (left) shoulders	2%
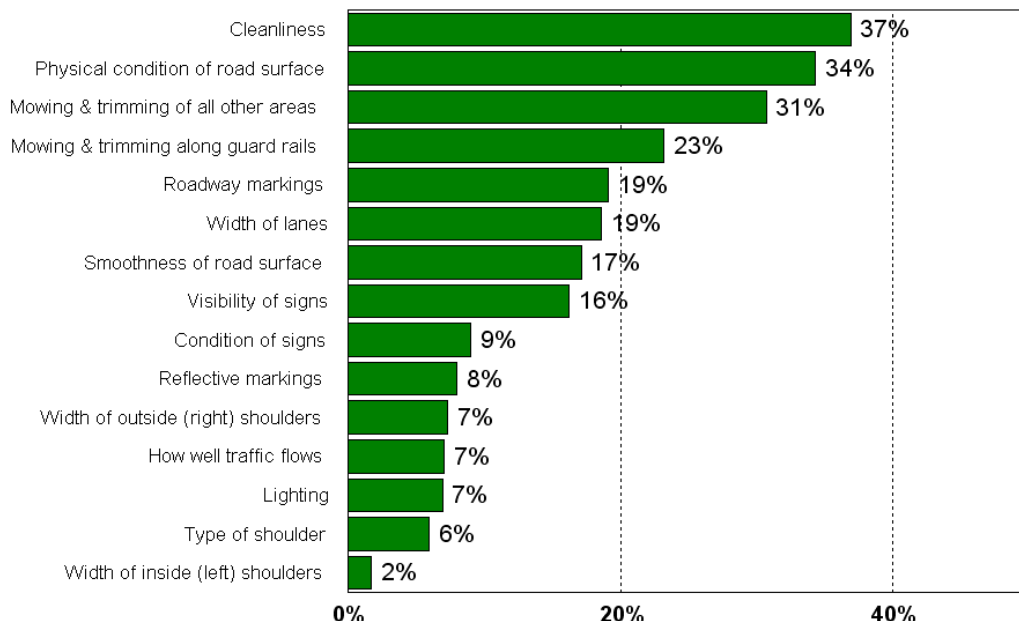
Source: ETC Institute (2012)

Features That Most Influence Perceptions of <u>Appearance</u> on *SECONDARY HIGHWAYS*

percentage reflects the sum of the 3 most important features selected by respondents

Feature	Percentage
Cleanliness	38%
Mowing & trimming of all other areas	35%
Physical condition of road surface	32%
Roadway markings	23%
Width of lanes	22%
Mowing & trimming along guard rails	19%
Smoothness of road surface	18%
Visibility of signs	15%
Condition of signs	9%
Reflective markings	8%
Width of outside (right) shoulders	8%
Lighting	8%
Type of shoulder	7%
How well traffic flows	4%
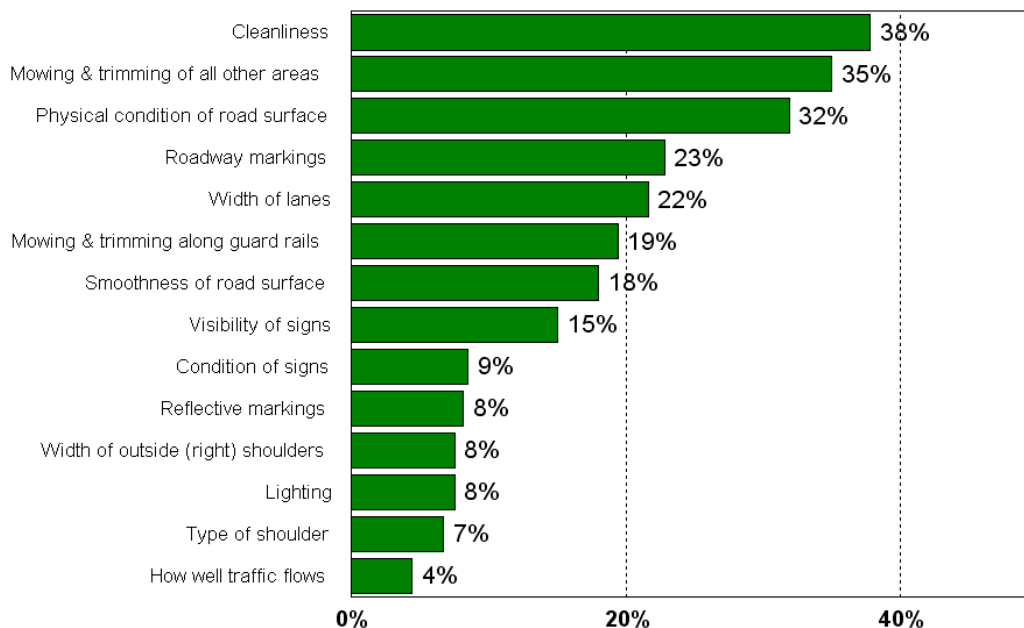
Source: ETC Institute (2012)

Importance/Condition Matrix

One method for identifying priorities for state highway features involves plotting the importance and condition ratings on a four-quadrant matrix where the horizontal axis shows the relative importance of each feature with regard to the overall quality of a highway and the vertical axis shows the relative condition ratings for each feature. The four quadrants are defined as follows.

- **Meeting priorities**: Features in the upper right corner of the matrix are those that are more important than average and have a condition rating that exceeds expectations (>3.00). The current level of emphasis for features in this area should be maintained or increased.

- **Exceeding Expectations**: Features in the upper left hand corner of the matrix are those that are less important than average and have a condition rating that exceeds expectations (>3.00). The current level of emphasis for features in this area should be maintained or reduced.

- **Less Important**: Features in the lower left corner of the matrix are those that are less important than average and have a condition rating that does not meet expectations (<3.00). The current level of emphasis for features in this area should be maintained.

- **Areas of Concern**: Features in the lower right hand corner of the matrix are those that are more important than average and have a condition rating that does not meet expectations (<3.00). The current level of emphasis for features in this area should be greatly increased.

NO ITEMS were identified as "areas of concern" in the lower right corner of the matrix for _Interstate Highways_. This indicates that NCDOT is doing a good job allocating resources to meet expectations that residents have for Interstate highways.

NCDOT Highway Feature
Performance Matrix for _INTERSTATE HIGHWAYS_
(points on the graph show deviations from the mean condition and importance ratings given by Roadway Review participants)

Source: ETC Institute (2012)

In order to increase overall satisfaction with <u>Primary Highways</u>, NCDOT should pursue strategies that emphasize improvements to the "Width of outside shoulders" as that feature was identified as an "area of concern" in the lower right corner of the matrix provided below.

NCDOT Highway Feature
Performance Matrix for *PRIMARY HIGHWAYS*
(points on the graph show deviations from the mean condition and importance ratings given by Road Rally participants)

mean importance

Condition Rating

mean condition

Exceeding Expectations
lower importance/high satisfaction

Meeting Priorities
higher importance/higher satisfaction

Visiblitiy of signs
Width of lanes
Physical condition of the road
Roadway Markings
How well traffic flows
Condition of signs
Reflectivity markers
Smoothness of the road surface

• Cleanliness

Mowing & trimming along guard rails•
Type of shoulder
Lighting
•Width of outside shoulders
Mowing & trimming of all other areas
Width of inside shoulders

Less Important
lower importance/lower satisfaction

Areas of Concern
higher importance/lower satisfaction

Lower Importance

Importance Rating

Higher Importance

Source: ETC Institute (2012)

In order to increase overall satisfaction with <u>Secondary Highways</u>, NCDOT should pursue strategies that emphasize improvements to those features identified as "areas of concern" in the lower right corner of the matrix provided below.

NCDOT Highway Feature
Performance Matrix for *SECONDARY HIGHWAYS*
(points on the graph show deviations from the mean condition and importance ratings given by Road Rally participants)

mean importance

Exceeding Expectations
lower importance/high satisfaction

Meeting Priorities
higher importance/higher satisfaction

How well traffic flows

Visibility of signs

Condition of signs

• Cleanliness

Condition Rating

mean condition

Mowing & trimming• along guard rails

Type of shoulder

Lighting

Roadway markings

Mowing & trimming of all other areas

Width of inside shoulders

Width of outside shoulders

Smoothness of the road surface

Reflectivity markers

Physical condition of the road

Width of lanes

Less Important
lower importance/lower satisfaction

Areas of Concern
higher importance/lower satisfaction

Lower Importance

Importance Rating

Higher Importance

Source: ETC Institute (2012)

Predicting Satisfaction with Highways

Since overall satisfaction with a highway is likely to be a function of more than one highway feature and can vary by highway type, the research team conducted regression analysis of the survey data for each type of highway to identify which highway features were the best predictors of:(1) overall satisfaction with condition (2) overall satisfaction with appearance, and (3) feeling of safety. The individual ratings for each of the 15 highway features that were evaluated were used as independent variables. The regression analysis was then conducted three separate times for each type of highway using the following ratings as the dependent variables: (1) overall satisfaction with condition (2) satisfaction with appearance, and (3) feeling of safety.

The goal was to develop a regression model that would predict overall satisfaction with condition, overall satisfaction with appearance, and feeling of safety with: **Interstates**, **Primary**, and **Secondary** highways a high percentage of the time using the condition ratings from a minimum of three highway features as the independent variables.

The results of this analysis are provided in more detail in Appendix F of this report.

The table of the following page identifies the factors that contribute most to overall satisfaction with the (1) overall condition (2) appearance, and (3) feeling of safety on each of the following types of highways: interstate highways, primary highways (mostly non-interstate expressways and high volume 2-lane highways, and secondary highways (generally lower volume 2-lane highways).

Among the 15 items that were evaluated on each section of highway, the three factors that contributed most to the respondents satisfaction with the overall condition of the highway, the feeling of safety on the highway, and the appearance of the highway are listed below by type of highway. For example, the three factors that have the most impact on overall satisfaction with the feeling of safety on secondary highways are: the width of lanes, visibility of signs, and traffic flow.

Factors That Are Most Likely to Predict Overall Satisfaction

Based on the Results of the Regression Analysis

Overall Rating	Type of Highway	Factors that Influence the Overall Rating in This Area Most
Overall Condition of the Highway	Interstates	Physical Condition of the roadway surface
		Cleanliness
		Roadway Markings
	Primary Highways	Smoothness
		Cleanliness
		Roadway Markings
	Secondary Highways	Smoothness
		Roadway Markings
		Physical Condition of the roadway surface
Feeling of Safety	Interstates	Traffic Flow
		Condition of Signs
		Physical Condition of the roadway surface
	Primary Highways	Roadway Markings
		Visibility of Signs
		Width of Lanes
	Secondary Highways	Width of Lanes
		Visibility of Signs
		Traffic Flow
Appearance of the Highway	Interstates	Cleanliness
		Mowing and Trimming
		Smoothness
	Primary Highways	Cleanliness
		Condition of Signs
		Physical Condition of the roadway surface
	Secondary Highways	Cleanliness
		Roadway Markings
		Smoothness

Determining Acceptable Conditions for Various Highway Features

NCDOT gathered technical data for each of the sections of highways that were rated. The technical data was added to the Roadway Review database to allow the condition ratings that were given by Roadway Review participants to be analyzed in the context of the actual conditions for each section of highway in order to determine what acceptable conditions are for each of the following features: (1) lane width, (2) outside shoulder width, (3) type of shoulder, and the (4) mowing of grass along highways. While data was available for other features, such as roadway markings, litter, and signage, the variability of the data during each section made it difficult to objectively assess these features.

Since a condition rating of 3 indicated that Roadway Review participants generally thought the condition of the corresponding highway feature met their basic expectations; a mean rating of 3.00 or higher was established as the threshold for determining the acceptability of various conditions. Since there were not significant differences between the ratings given by residents and community leaders, the data for both groups was analyzed collectively.

**Width of Lanes**. The actual width of the lanes (in feet) was used as the technical measurement to assess the acceptability of lane width on highways. The mean rating for lane width was calculated for 9, 10, 11, and 12 foot lanes.

- All **interstate** highways in the sample had lane widths of 12 feet. The mean rating for the width of lanes on these highways was 3.4, which was acceptable to most residents.

- **Primary** highways with lane widths of both 11 and 12 feet were acceptable to most residents with mean ratings of 3.1 and 3.4, respectively. Lane widths of 10 feet or less generally did not meet expectations.

- **Secondary** highways with lane widths of both 11 and 12 feet were acceptable to most residents with mean ratings of 3.0 and 3.4, respectively. Lane widths of 10 feet or less generally did not meet expectations.

The acceptability of various lane widths for interstate, primary, and secondary highways are shown on the graphs on the following page.

Mean Ratings for Lane Width on **INTERSTATE HIGHWAYS**

Mean Ratings for Lane Width on **PRIMARY HIGHWAYS**

Mean Ratings for Lane Width on SECONDARY HIGHWAYS

Meets Expectations 3.0

Doed Not Meet Expectations <3.0   Exceed Expectations >3.0

Width

12 feet	3.4
11 feet	3.0
10 feet	2.8
9 feet	2.7

1.5   1.8   2.1   2.4   2.7   3.0   3.3   3.6   3.9

Mean condition rating given by participants

Source: ETC Institute
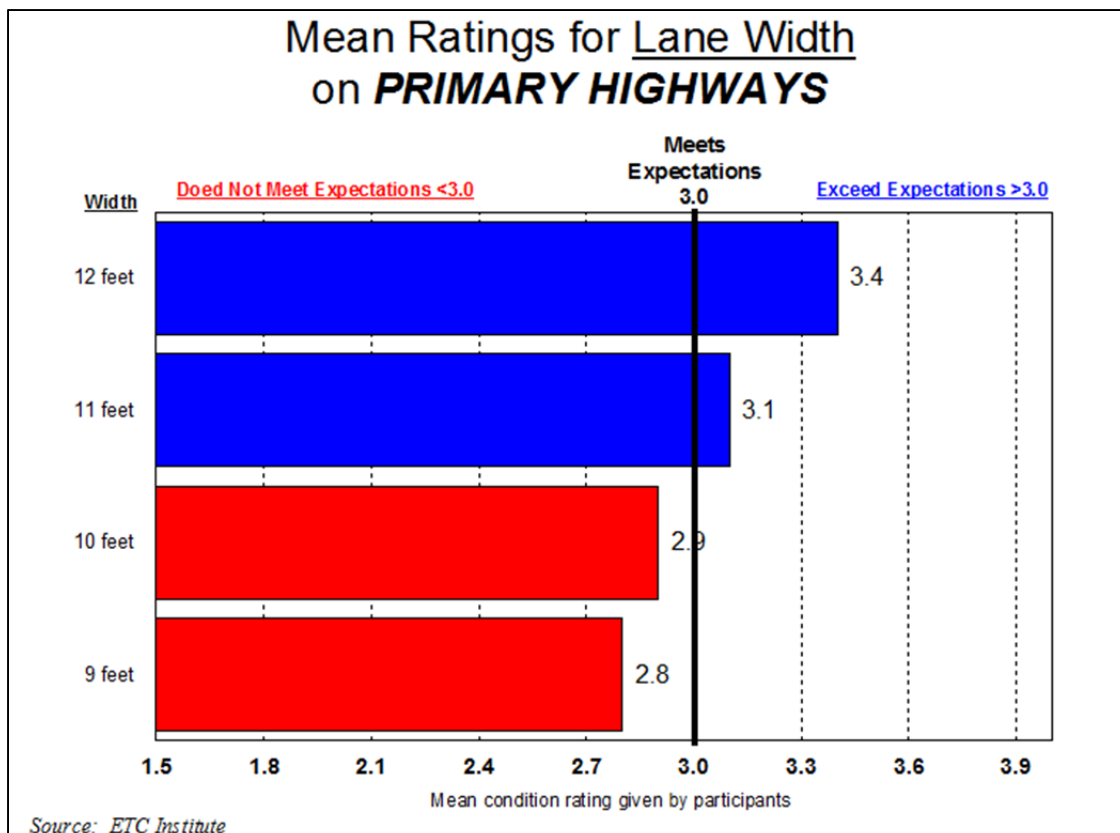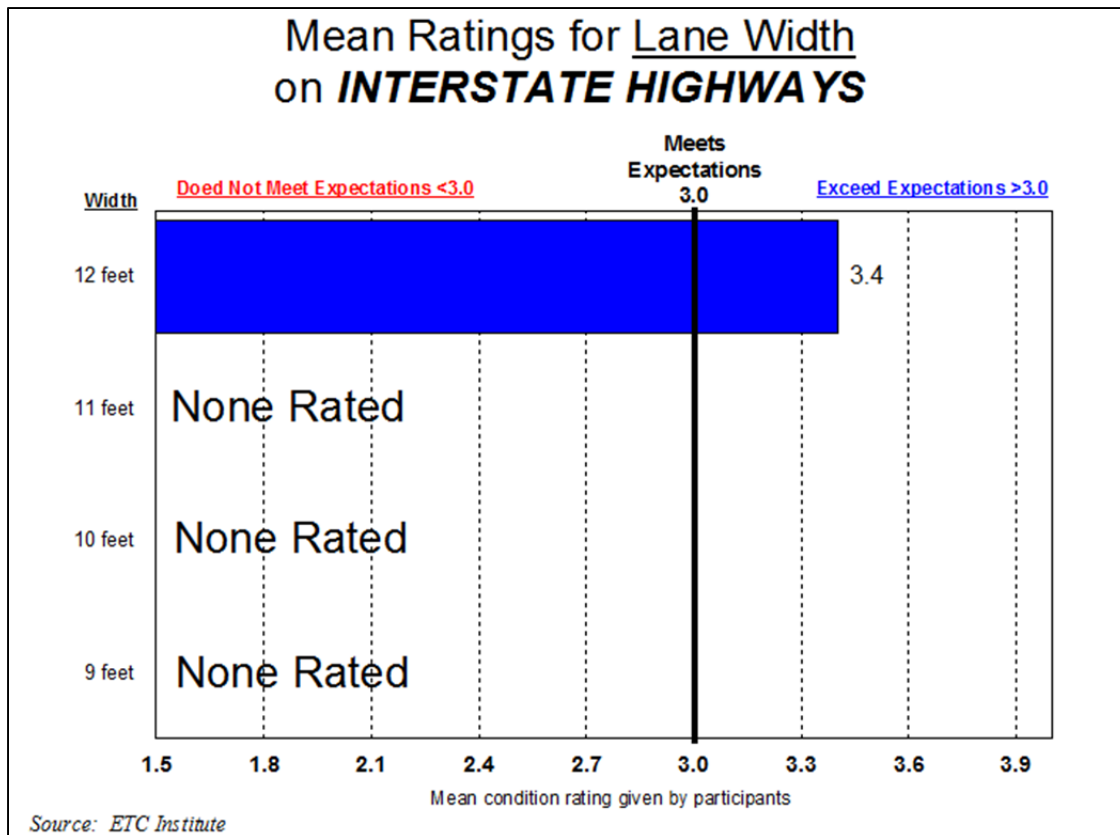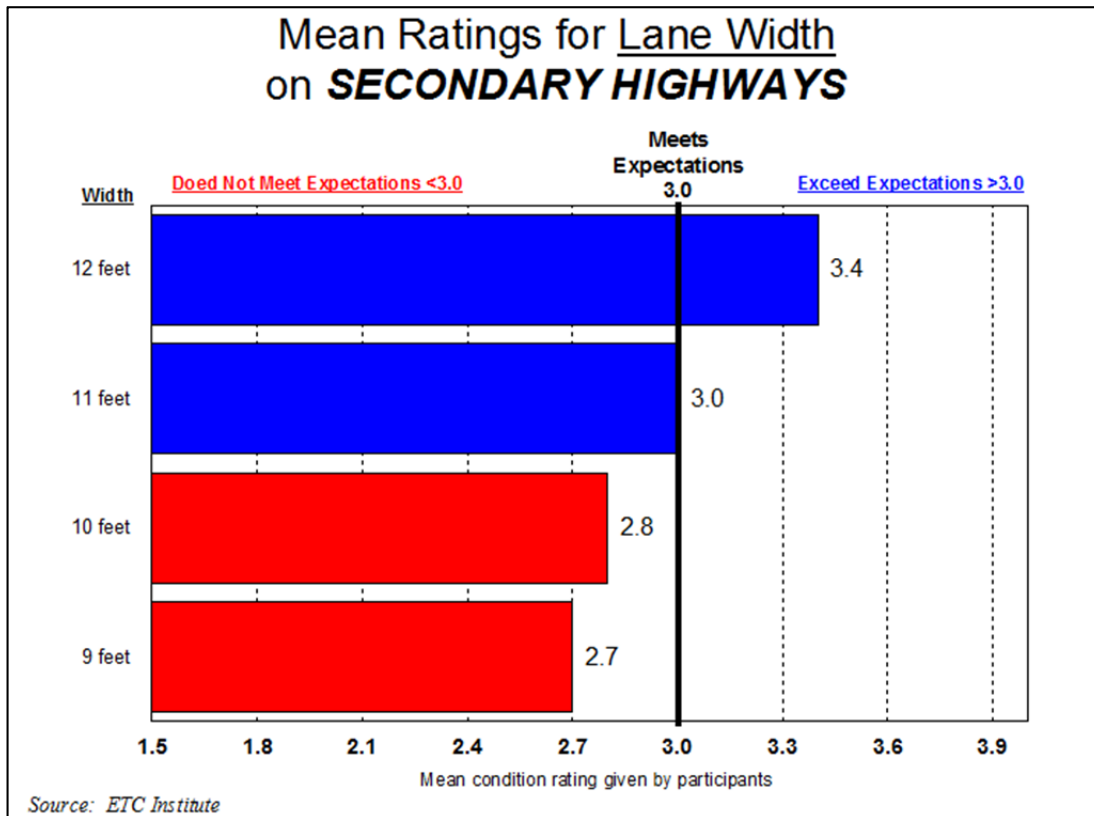
Width of Outside Shoulders. The actual width of the outside shoulder (in feet) was used as the technical measurement to assess the acceptability of outside shoulder width on highways. The mean rating for outside shoulder width was calculated for shoulder widths of 10 feet or more, 7-9 feet, 5-6 feet, and 4 feet or less.

- All **interstate** highways in the sample had outside shoulder widths of 10 feet or more. The mean rating for the width of the outside shoulder on these highways was 3.4, which was acceptable to most residents.

- **Primary** highways with outside shoulder widths of 10 feet or more were acceptable to most residents with a mean rating of 3.2. Outside shoulder widths of less than 10 feet generally did not meet expectations.

- **Secondary** highways with outside shoulder widths of 10 feet or more were acceptable to most residents with a mean rating of 3.4. Outside shoulder widths of less than 10 feet generally did not meet expectations.

The acceptability of various outside shoulder widths for interstate, primary, and secondary highways are shown on the graphs on the following page.   Several participants indicated that they thought outside shoulders should be wide enough for people to completely remove their car from the lane of traffic on all types of highways. This may be the reason that outside shoulders that were less than 10 feet wide did not meet the expectations of most participants.

Mean Ratings for Outside Shoulder Width on INTERSTATE HIGHWAYS

Mean Ratings for Outside Shoulder Width on PRIMARY HIGHWAYS

Mean Ratings for Outside Shoulder Width on SECONDARY HIGHWAYS

Source: ETC Institute
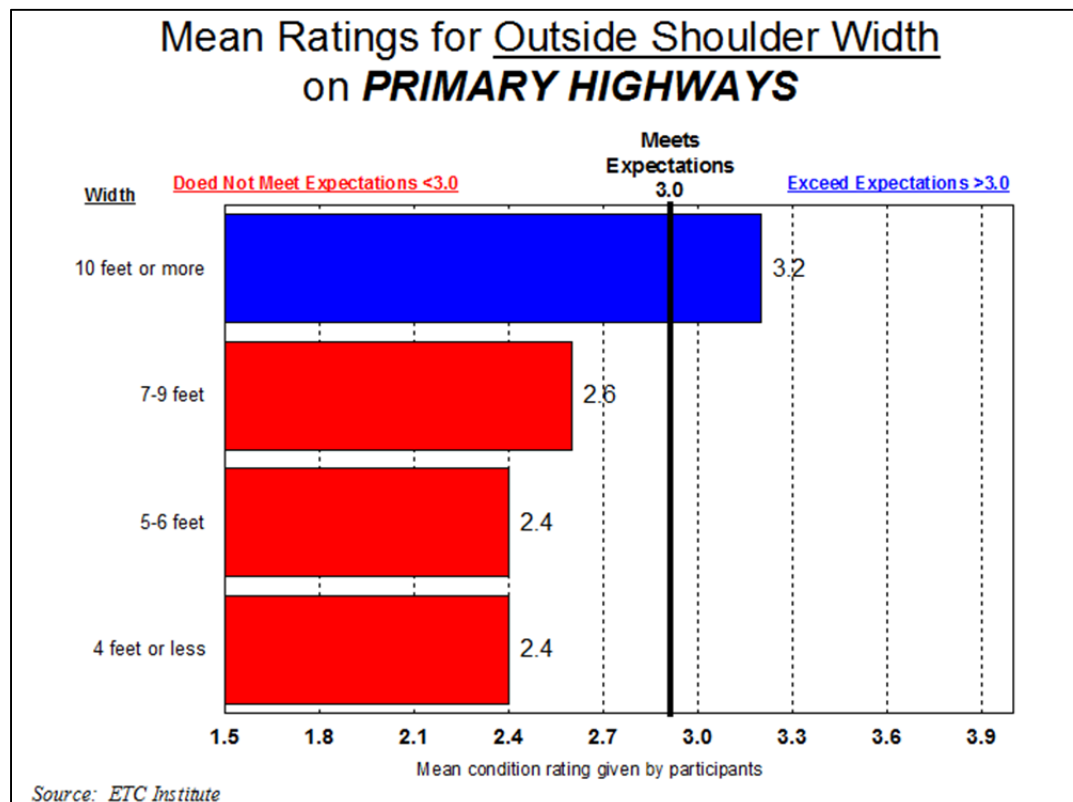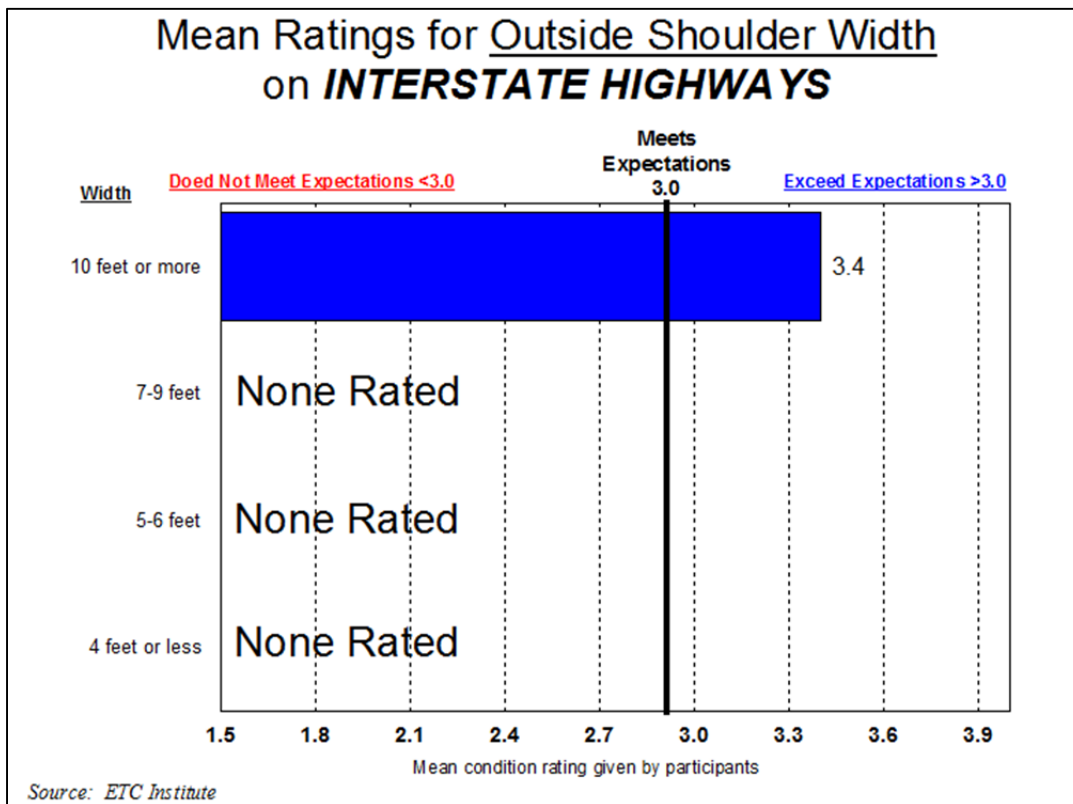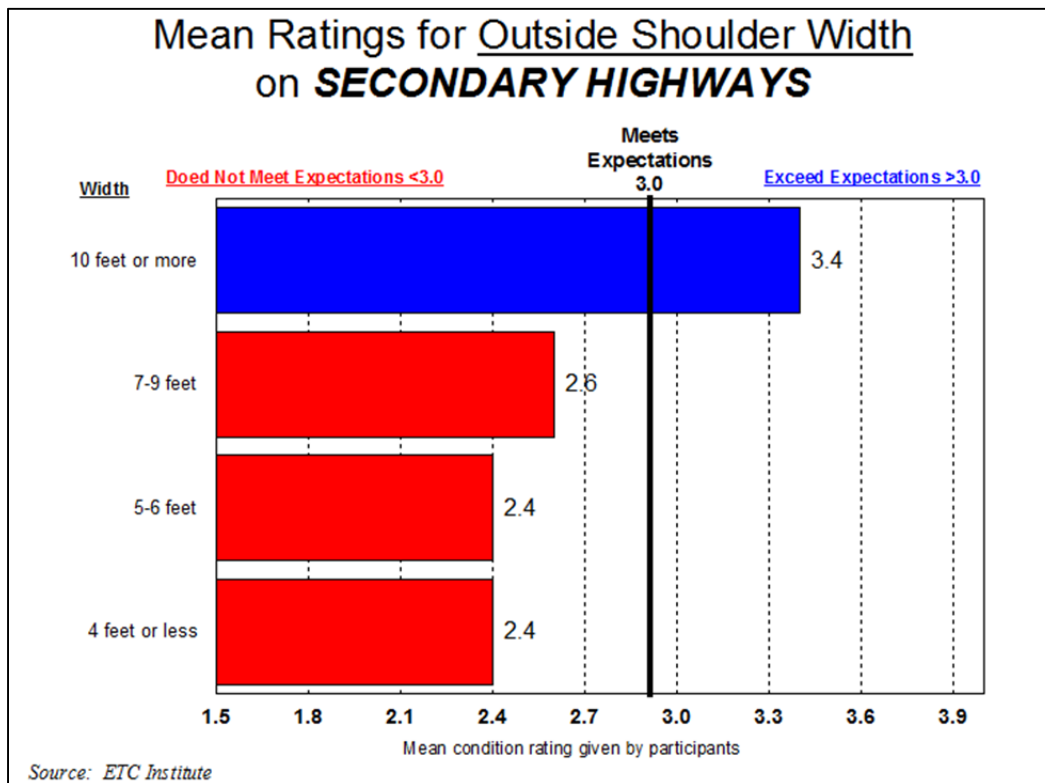
Shoulder Type. The acceptability of three types shoulders were assessed on the survey: paved shoulders, grass shoulders, shoulders that were a combination of pavement and grass. Since the rating for the width of shoulders was related to the rating for the type of shoulder, the analysis of shoulder type was done for all highways rather than by types of highways. For example, the width of shoulders on secondary highways was generally less than the width of shoulders on interstate and primary highways, which is was one of the reasons the rating on all types of shoulders was generally lower on secondary highways than other types of highways. In order to minimize the impact that shoulder width had on the rating for shoulder type, all types of highways were analyzed together and described below.

- **Paved Shoulders**. The mean rating for the type of shoulder on highways with paved shoulders was 3.2, which was acceptable to most residents.

- **Grass Shoulders**. The mean rating for the type of shoulder on highways with grass shoulders was 2.9, which was just below expectations.

- **Combination of Pavement and Grass**. Interestingly, the mean rating for shoulders that were partially paved and partially grass was 2.8, which was less than the rating for shoulders that were only grass. Some of the Roadway Review participants indicated that they were dissatisfied with shoulders than were a

mixture of pavement and grass because they were afraid their tires might get caught on the edge of the pavement when the re-entered the highway. Other participants indicated that they did not like to have their car resting on two different types of surfaces when they pulled over to the side of the road.

The acceptability of each type of shoulder is shown on the graph below.

Source: ETC Institute
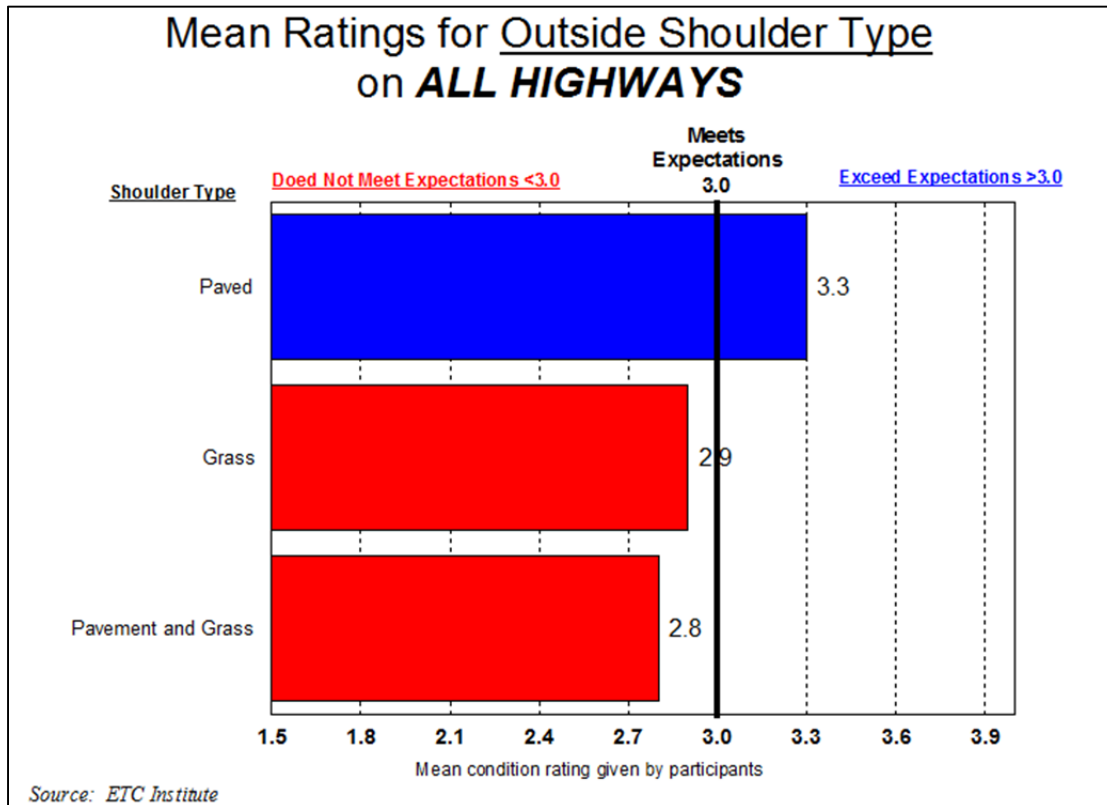
Mowing. The actual height of the grass along highways(in inches) was used as the technical measurement to assess the acceptability of mowing along the sides of highways. The mean rating for mowing was calculated for grass heights of more than 12inches, 10-12 inches feet, 6-9 inches, and 6 inches or less.

- **Interstate** highways with grass heights of less than 6 inches and 6-9 inches were acceptable to most residents with a mean rating of 3.3 and 3.1 respectively. Grass heights of 10 inches or more generally did not meet expectations.

- **Primary** highways with grass heights of less than 6 inches and 6-9 inches were also acceptable to most residents with a mean rating of 3.3 and 3.1 respectively. Grass heights of 10 inches or more generally did not meet expectations.

- **Secondary** highways with grass heights of less than 6 inches and 6-9 inches were acceptable to most residents with a mean rating of 3.2 and 3.0 respectively. Grass heights of 10 inches or more generally did not meet expectations.

The acceptability of various outside grass heights for interstate, primary, and secondary highways are shown on the graphs on the following page.

Mean Ratings for Grass Height on **INTERSTATE HIGHWAYS**

Source: ETC Institute

Mean Ratings for Grass Height on **PRIMARY HIGHWAYS**

Doed Not Meet Expectations <3.0   Meets Expectations 3.0   Exceed Expectations >3.0

Height

Height	Mean condition rating given by participants
less than 6 inches	3.3
6-9 inches	3.1
10-12 inches	2.7
More than 12 inches	2.1

1.5 1.8 2.1 2.4 2.7 3.0 3.3 3.6 3.9
Mean condition rating given by participants

Source: ETC Institute

Mean Ratings for Grass Height on **SECONDARY HIGHWAYS**

Doed Not Meet Expectations <3.0   Meets Expectations 3.0   Exceed Expectations >3.0

Height

Height	Mean condition rating given by participants
less than 6 inches	3.2
6-9 inches	3.0
10-12 inches	2.6
More than 12 inches	2.5

1.5 1.8 2.1 2.4 2.7 3.0 3.3 3.6 3.9
Mean condition rating given by participants

Source: ETC Institute

Appendix A:
Crosstabular Data by Highway Type

Overall Satisfaction With Various Highway Features by Type of Highway

| | Type | | | Total |
	Primary P	Secondary S	Interstate I	
Total	48.8%	35.1%	16.1%	100.0%
A Width of lanes				
Greatly exceeds expectations	6.3%	3.1%	12.1%	6.1%
Exceeds expectations	17.8%	9.2%	21.2%	15.3%
Meets basic expectations	64.4%	60.2%	64.5%	63.0%
Below expectations	10.5%	24.3%	1.9%	13.9%
Far below expectations	1.0%	3.2%	0.3%	1.7%
B Smoothness of road surface				
Greatly exceeds expectations	6.2%	3.8%	12.0%	6.3%
Exceeds expectations	16.5%	13.6%	23.7%	16.7%
Meets basic expectations	53.8%	51.0%	53.2%	52.7%
Below expectations	20.8%	27.9%	10.7%	21.7%
Far below expectations	2.6%	3.7%	0.4%	2.6%

Overall Satisfaction With Various Highway Features by Type of Highway

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.8%	35.1%	16.1%	100.0%

C Physical condition of road surface

Greatly exceeds expectations	5.5%	3.7%	11.8%	5.9%
Exceeds expectations	17.2%	13.7%	24.2%	17.1%
Meets basic expectations	56.6%	54.2%	54.4%	55.4%
Below expectations	18.5%	25.0%	9.4%	19.3%
Far below expectations	2.2%	3.4%	0.2%	2.3%

D Width of outside (right) shoulders

Greatly exceeds expectations	4.2%	1.9%	11.1%	4.6%
Exceeds expectations	13.3%	5.6%	27.1%	13.1%
Meets basic expectations	46.5%	43.1%	57.2%	47.2%
Below expectations	29.5%	39.5%	4.4%	28.5%
Far below expectations	6.5%	9.9%	0.2%	6.6%

Overall Satisfaction With Various Highway Features by Type of Highway

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.8%	35.1%	16.1%	100.0%

E Width of inside (left) shoulders

	Primary P	Secondary S	Interstate I	Total
Greatly exceeds expectations	5.1%	2.0%	8.5%	5.2%
Exceeds expectations	13.5%	6.6%	20.1%	13.5%
Meets basic expectations	52.9%	45.8%	50.8%	50.7%
Below expectations	23.8%	36.1%	18.8%	25.5%
Far below expectations	4.7%	9.5%	1.8%	5.2%

F Type of shoulder (gravel-pavement)

	Primary P	Secondary S	Interstate I	Total
Greatly exceeds expectations	3.7%	1.6%	9.1%	4.0%
Exceeds expectations	11.5%	6.6%	21.9%	11.6%
Meets basic expectations	62.0%	57.0%	65.2%	60.9%
Below expectations	18.5%	27.2%	3.7%	18.9%
Far below expectations	4.2%	7.5%	0.1%	4.7%

Overall Satisfaction With Various Highway Features by Type of Highway

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.8%	35.1%	16.1%	100.0%
G How well traffic flows				
Greatly exceeds expectations	8.6%	4.5%	15.1%	8.2%
Exceeds expectations	23.5%	15.2%	29.1%	21.5%
Meets basic expectations	61.2%	69.4%	53.5%	62.8%
Below expectations	5.5%	9.7%	2.1%	6.4%
Far below expectations	1.3%	1.2%	0.1%	1.1%
H Roadway markings				
Greatly exceeds expectations	7.0%	3.8%	11.3%	6.6%
Exceeds expectations	19.8%	14.2%	23.9%	18.5%
Meets basic expectations	58.7%	59.9%	58.1%	59.0%
Below expectations	13.2%	19.1%	6.3%	14.1%
Far below expectations	1.2%	3.1%	0.4%	1.8%

Overall Satisfaction With Various Highway Features by Type of Highway

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.8%	35.1%	16.1%	100.0%
I Reflectivity markers				
Greatly exceeds expectations	6.8%	3.5%	10.6%	6.4%
Exceeds expectations	17.7%	11.7%	19.4%	16.2%
Meets basic expectations	57.9%	50.6%	61.6%	56.3%
Below expectations	14.1%	23.5%	7.7%	15.8%
Far below expectations	3.5%	10.7%	0.8%	5.2%
J Lighting				
Greatly exceeds expectations	6.2%	3.7%	9.0%	5.9%
Exceeds expectations	12.1%	7.2%	16.8%	11.3%
Meets basic expectations	49.8%	47.5%	56.3%	50.2%
Below expectations	23.6%	29.2%	14.9%	23.9%
Far below expectations	8.3%	12.5%	3.0%	8.7%

Overall Satisfaction With Various Highway Features by Type of Highway

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.8%	35.1%	16.1%	100.0%

K Mowing & trimming along guard rails

Greatly exceeds expectations	3.8%	2.6%	6.0%	3.9%
Exceeds expectations	11.8%	11.8%	18.8%	13.1%
Meets basic expectations	51.1%	59.4%	54.8%	54.2%
Below expectations	27.8%	20.8%	18.9%	24.1%
Far below expectations	5.5%	5.4%	1.5%	4.7%

L Mowing & trimming of all other areas

Greatly exceeds expectations	3.8%	1.8%	6.2%	3.5%
Exceeds expectations	12.0%	10.4%	18.2%	12.5%
Meets basic expectations	57.1%	59.2%	57.0%	57.8%
Below expectations	22.4%	24.3%	17.6%	22.3%
Far below expectations	4.6%	4.2%	1.1%	3.9%

Overall Satisfaction With Various Highway Features by Type of Highway

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.8%	35.1%	16.1%	100.0%
M Cleanliness				
Greatly exceeds expectations	6.0%	4.1%	9.7%	5.9%
Exceeds expectations	19.3%	18.3%	22.7%	19.5%
Meets basic expectations	61.8%	66.2%	57.5%	62.6%
Below expectations	11.8%	10.6%	10.2%	11.1%
Far below expectations	1.2%	0.9%	0.0%	0.9%
N Visibility of signs				
Greatly exceeds expectations	8.0%	4.0%	11.7%	7.2%
Exceeds expectations	19.4%	14.5%	26.9%	18.9%
Meets basic expectations	65.1%	68.2%	59.5%	65.3%
Below expectations	6.9%	11.3%	1.8%	7.6%
Far below expectations	0.6%	1.9%	0.0%	1.0%

Overall Satisfaction With Various Highway Features by Type of Highway

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.8%	35.1%	16.1%	100.0%
O Condition of signs				
Greatly exceeds expectations	7.9%	4.1%	11.8%	7.3%
Exceeds expectations	19.1%	13.8%	26.7%	18.5%
Meets basic expectations	67.7%	71.6%	60.4%	67.9%
Below expectations	4.7%	9.0%	0.9%	5.6%
Far below expectations	0.6%	1.5%	0.1%	0.8%
X Overall condition				
Greatly exceeds expectations	5.3%	2.9%	10.8%	5.3%
Exceeds expectations	18.6%	13.9%	27.8%	18.4%
Meets basic expectations	63.3%	61.0%	57.2%	61.5%
Below expectations	11.6%	20.2%	4.0%	13.4%
Far below expectations	1.2%	2.0%	0.2%	1.3%

Overall Satisfaction With Various Highway Features by Type of Highway

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.8%	35.1%	16.1%	100.0%
Y Overall appearance				
Greatly exceeds expectations	6.0%	3.0%	10.2%	5.6%
Exceeds expectations	18.4%	15.4%	28.5%	19.0%
Meets basic expectations	61.2%	64.2%	56.7%	61.5%
Below expectations	13.4%	15.5%	4.5%	12.7%
Far below expectations	1.0%	1.9%	0.1%	1.2%
Z Feeling of safety				
Greatly exceeds expectations	8.1%	3.9%	11.6%	7.2%
Exceeds expectations	17.9%	11.9%	28.0%	17.4%
Meets basic expectations	59.5%	58.8%	57.6%	59.0%
Below expectations	12.7%	21.7%	2.7%	14.3%
Far below expectations	1.8%	3.6%	0.1%	2.2%

Overall Importance With Various Highway Features by Type of Highway

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.8%	35.1%	16.1%	100.0%

Imp A Width of lanes

Extremely important	27.4%	23.0%	38.2%	28.2%
Very Important	44.2%	42.0%	42.2%	43.1%
Important	26.3%	31.2%	18.2%	26.3%
Less important	1.9%	3.8%	1.4%	2.4%
Not important	0.1%	0.0%	0.0%	0.1%

Imp B Smoothness of road surface

Extremely important	17.5%	15.6%	25.3%	18.5%
Very Important	46.1%	42.2%	52.0%	46.1%
Important	32.1%	36.6%	20.6%	31.2%
Less important	3.7%	4.7%	2.0%	3.7%
Not important	0.6%	0.9%	0.0%	0.5%

Overall Importance With Various Highway Features by Type of Highway

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.8%	35.1%	16.1%	100.0%

Imp C Physical condition of road surface

Extremely important	24.9%	21.7%	33.8%	25.7%
Very Important	46.6%	44.3%	48.8%	46.3%
Important	25.6%	30.2%	16.0%	25.1%
Less important	2.4%	3.3%	1.4%	2.5%
Not important	0.4%	0.7%	0.0%	0.4%

Imp D Width of outside (right) shoulders

Extremely important	18.1%	17.0%	25.3%	19.3%
Very Important	40.1%	32.9%	45.9%	39.1%
Important	34.2%	38.0%	26.7%	33.8%
Less important	7.4%	11.4%	2.1%	7.5%
Not important	0.3%	0.7%	0.0%	0.4%

Overall Importance With Various Highway Features by Type of Highway

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.8%	35.1%	16.1%	100.0%
Imp E Width of inside (left) shoulders				
Extremely important	13.9%	10.7%	16.8%	13.9%
Very Important	30.5%	29.2%	39.1%	32.5%
Important	40.8%	39.9%	36.2%	39.3%
Less important	12.3%	15.8%	7.9%	12.0%
Not important	2.4%	4.3%	0.0%	2.2%
Imp F Type of shoulder				
Extremely important	11.6%	9.8%	17.2%	12.2%
Very Important	28.6%	29.7%	36.2%	30.5%
Important	45.6%	43.7%	36.9%	43.3%
Less important	13.3%	14.7%	8.6%	12.8%
Not important	0.9%	2.1%	1.1%	1.3%

Overall Importance With Various Highway Features by Type of Highway

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.8%	35.1%	16.1%	100.0%
Imp G How well traffic flows				
Extremely important	24.3%	16.7%	34.9%	24.1%
Very Important	43.1%	37.9%	46.8%	42.3%
Important	29.9%	39.1%	16.9%	30.1%
Less important	2.3%	5.4%	1.0%	3.0%
Not important	0.4%	0.9%	0.3%	0.6%
Imp H Roadway markings				
Extremely important	26.4%	26.1%	31.0%	27.3%
Very Important	42.0%	41.0%	40.8%	41.4%
Important	28.9%	30.4%	27.2%	29.0%
Less important	2.4%	2.3%	1.0%	2.1%
Not important	0.3%	0.2%	0.0%	0.2%

Overall Importance With Various Highway Features by Type of Highway

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.8%	35.1%	16.1%	100.0%
Imp I Reflective markers				
Extremely important	25.8%	25.0%	28.6%	26.2%
Very Important	38.1%	34.1%	39.6%	37.2%
Important	31.0%	31.6%	29.4%	30.8%
Less important	4.5%	8.5%	1.6%	5.1%
Not important	0.7%	0.8%	0.8%	0.7%
Imp J Lighting				
Extremely important	27.1%	25.0%	25.7%	26.2%
Very Important	26.7%	25.0%	29.8%	26.8%
Important	33.6%	32.7%	36.6%	34.0%
Less important	10.5%	14.7%	6.3%	10.9%
Not important	2.1%	2.6%	1.6%	2.2%

<u>Overall Importance With Various Highway Features by Type of Highway</u>

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.8%	35.1%	16.1%	100.0%

<u>Imp K Mowing & trimming along guard rail</u>

Extremely important	6.4%	6.9%	9.8%	7.3%
Very Important	19.9%	17.2%	19.9%	19.1%
Important	48.3%	51.4%	45.1%	48.5%
Less important	23.3%	21.6%	24.1%	23.0%
Not important	2.1%	2.8%	1.0%	2.1%

<u>Imp L Mowing & trimming all other areas</u>

Extremely important	6.8%	6.0%	9.3%	7.0%
Very Important	21.6%	19.7%	22.1%	21.1%
Important	48.0%	51.2%	45.9%	48.6%
Less important	22.0%	20.6%	21.4%	21.4%
Not important	1.7%	2.5%	1.4%	1.9%

Overall Importance With Various Highway Features by Type of Highway

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.8%	35.1%	16.1%	100.0%
Imp M Cleanliness				
Extremely important	8.9%	7.4%	15.5%	9.7%
Very Important	27.4%	25.1%	26.8%	26.6%
Important	52.4%	54.8%	46.4%	51.9%
Less important	10.1%	11.6%	11.0%	10.8%
Not important	1.1%	1.1%	0.3%	1.0%
Imp N Visibility of signs				
Extremely important	30.2%	26.6%	39.2%	30.9%
Very Important	43.6%	43.0%	42.7%	43.2%
Important	24.9%	28.2%	16.7%	24.3%
Less important	1.0%	1.5%	1.0%	1.2%
Not important	0.4%	0.7%	0.3%	0.5%

Overall Importance With Various Highway Features by Type of Highway

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.8%	35.1%	16.1%	100.0%
Imp O Condition of signs				
Extremely important	24.5%	20.6%	32.4%	24.9%
Very Important	41.2%	41.4%	42.0%	41.4%
Important	32.1%	33.7%	23.5%	30.9%
Less important	2.0%	3.3%	1.7%	2.3%
1=Not important	0.3%	1.1%	0.3%	0.5%
Imp X Overall condition				
Extremely important	20.2%	18.6%	32.4%	22.1%
Very Important	42.7%	37.9%	42.9%	41.3%
Important	33.9%	38.8%	23.7%	33.4%
Less important	3.1%	4.7%	1.0%	3.2%
Not important	0.1%	0.0%	0.0%	0.1%

Overall Importance With Various Highway Features by Type of Highway

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.8%	35.1%	16.1%	100.0%
Imp Y Overall appearance				
Extremely important	12.5%	10.4%	20.4%	13.4%
Very Important	35.8%	33.3%	41.9%	36.3%
Important	46.8%	48.4%	35.6%	45.1%
Less important	4.7%	7.7%	2.1%	5.1%
Not important	0.1%	0.2%	0.0%	0.1%
Imp Z Feeling of safety				
Extremely important	31.5%	29.3%	36.6%	31.8%
Very Important	35.6%	32.7%	42.3%	36.0%
Important	28.8%	31.3%	19.0%	27.6%
Less important	3.5%	5.9%	2.1%	4.0%
Not important	0.6%	0.9%	0.0%	0.6%

**MOST IMPORTANT FACTORS FOR OVERALL CONDITION by Type of Highway
(TOP 3 CHOICES COMBINED)**

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.9%	31.4%	19.6%	100.0%
Most important feature				
Width of lanes	52.2%	53.3%	52.7%	52.6%
Smoothness of road surface	44.3%	40.0%	47.6%	43.6%
Physical condition of road surface	57.1%	55.0%	63.5%	57.7%
Width of outside (right) shoulders	18.1%	21.2%	11.4%	17.7%
Width of inside (left) shoulders	2.4%	4.0%	3.5%	3.1%
Type of shoulder	6.1%	7.3%	4.1%	6.1%
How well traffic flows	17.2%	12.1%	24.1%	16.9%
Roadway markings	20.9%	23.4%	19.0%	21.3%
Reflective markings	8.1%	7.3%	4.8%	7.2%
Lighting	5.1%	7.1%	6.7%	6.0%
Mowing & trimming along guard rails	2.4%	1.2%	3.2%	2.2%
Mowing & trimming of all other areas	2.4%	3.4%	1.9%	2.6%
Cleanliness	5.5%	3.6%	6.3%	5.0%

MOST IMPORTANT FACTORS FOR OVERALL CONDITION by Type of Highway (TOP 3 CHOICES COMBINED)

	Type			Total
	Primary P	Secondary S	Interstate I	
Most important feature				
Visibility of signs	17.0%	17.2%	17.5%	17.2%
Condition of signs	3.1%	4.8%	4.8%	3.9%
Overall condition of this highway	4.8%	5.7%	5.7%	5.3%
Overall appearance of this highway	0.9%	0.6%	1.0%	0.8%
Feeling of safety on this highway	6.0%	7.5%	6.3%	6.5%
None chosen	20.7%	15.8%	8.3%	16.7%

**MOST IMPORTANT FACTORS FOR FEELING OF SAFETY by Type of Highway
(TOP 3 CHOICES COMBINED)**

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.9%	31.5%	19.6%	100.0%
Most important feature				
Width of lanes	49.0%	50.9%	49.8%	49.8%
Smoothness of road surface	18.3%	17.0%	20.6%	18.4%
Physical condition of road surface	39.5%	32.5%	40.0%	37.4%
Width of outside (right) shoulders	20.1%	22.6%	21.3%	21.1%
Width of inside (left) shoulders	3.8%	3.8%	7.0%	4.4%
Type of shoulder	7.9%	9.3%	4.1%	7.6%
How well traffic flows	21.8%	16.4%	31.4%	22.0%
Roadway markings	27.9%	30.1%	24.8%	28.0%
Reflective markings	14.5%	16.4%	15.9%	15.4%
Lighting	12.0%	14.7%	15.2%	13.5%
Mowing & trimming along guard rails	1.1%	2.2%	2.2%	1.7%
Mowing & trimming of all other areas	1.7%	2.0%	1.6%	1.7%
Cleanliness	3.2%	2.2%	1.9%	2.6%

MOST IMPORTANT FACTORS FOR <u>FEELING OF SAFETY</u> by Type of Highway (TOP 3 CHOICES COMBINED)

	Type			Total
	Primary P	Secondary S	Interstate I	
Most important feature				
Visibility of signs	30.6%	29.9%	27.6%	29.8%
Condition of signs	3.9%	6.9%	3.8%	4.9%
Overall condition of this highway	6.5%	5.9%	6.0%	6.2%
Overall appearance of this highway	1.1%	1.4%	2.5%	1.5%
Feeling of safety on this highway	7.4%	8.3%	5.4%	7.3%
None chosen	22.7%	17.2%	12.1%	18.9%

MOST IMPORTANT FACTORS FOR APPEARANCE by Type of Highway (TOP 3 CHOICES COMBINED)

	Type			Total
	Primary P	Secondary S	Interstate I	
Total	48.9%	31.5%	19.6%	100.0%
Most important feature				
Width of lanes	18.6%	21.6%	17.5%	19.3%
Smoothness of road surface	17.1%	18.0%	18.5%	17.6%
Physical condition of road surface	34.3%	31.9%	36.3%	33.9%
Width of outside (right) shoulders	7.3%	7.5%	6.4%	7.2%
Width of inside (left) shoulders	1.7%	1.2%	1.0%	1.4%
Type of shoulder	5.9%	6.7%	3.5%	5.7%
How well traffic flows	7.0%	4.4%	9.2%	6.6%
Roadway markings	19.1%	22.8%	16.6%	19.8%
Reflective markings	8.0%	8.1%	5.7%	7.6%
Lighting	6.9%	7.5%	6.1%	6.9%
Mowing & trimming along guard rails	23.2%	19.4%	27.4%	22.8%
Mowing & trimming of all other areas	30.7%	35.0%	29.9%	31.9%
Cleanliness	36.9%	37.8%	46.5%	39.1%

MOST IMPORTANT FACTORS FOR APPEARANCE by Type of Highway (TOP 3 CHOICES COMBINED)

	Primary P	Secondary S	Interstate I	Total
Most important feature				
Visibility of signs	16.2%	15.0%	18.5%	16.3%
Condition of signs	9.0%	8.5%	10.5%	9.2%
Overall condition of this highway	8.0%	8.3%	7.3%	8.0%
Overall appearance of this highway	6.1%	5.1%	5.1%	5.6%
Feeling of safety on this highway	7.3%	4.8%	6.4%	6.3%
None chosen	28.9%	20.4%	18.8%	24.3%

Appendix B:
Crosstabular Data by Survey Location

Overall Satisfaction With Various Highway Features by Survey Location

	Location						Total
	Asheville A	Burlington B	Charlotte C	Jonesville J	Rocky Mount R	Wilmington W	
Total	15.1%	17.2%	13.5%	16.9%	11.5%	25.8%	100.0%
A Width of lanes							
Greatly exceeds expectations	2.4%	5.8%	4.7%	3.6%	8.3%	10.0%	6.1%
Exceeds expectations	11.6%	17.0%	12.1%	14.3%	17.0%	18.1%	15.3%
Meets basic expectations	69.7%	64.7%	64.6%	62.3%	61.3%	58.2%	63.0%
Below expectations	15.4%	10.6%	17.5%	17.3%	10.2%	12.6%	13.9%
Far below expectations	0.8%	1.8%	1.1%	2.5%	3.2%	1.1%	1.7%
B Smoothness of road surface							
Greatly exceeds expectations	3.2%	6.7%	3.4%	3.5%	8.7%	10.3%	6.3%
Exceeds expectations	14.9%	20.1%	12.9%	14.8%	18.0%	18.2%	16.7%
Meets basic expectations	62.7%	63.4%	50.9%	52.8%	49.7%	41.8%	52.7%
Below expectations	17.6%	9.0%	28.0%	27.0%	21.5%	25.7%	21.7%
Far below expectations	1.7%	0.8%	4.8%	1.9%	2.1%	4.0%	2.6%

Overall Satisfaction With Various Highway Features by Survey Location

	Location						Total
	Asheville A	Burlington B	Charlotte C	Jonesville J	Rocky Mount R	Wilmington W	
Total	15.1%	17.2%	13.5%	16.9%	11.5%	25.8%	100.0%
C Physical condition of road surface							
Greatly exceeds expectations	3.5%	6.2%	3.2%	2.6%	9.9%	8.9%	5.9%
Exceeds expectations	13.9%	20.4%	12.8%	15.1%	22.3%	18.2%	17.1%
Meets basic expectations	63.9%	64.1%	55.7%	59.5%	48.5%	44.6%	55.4%
Below expectations	17.1%	8.4%	25.5%	21.5%	17.1%	24.0%	19.3%
Far below expectations	1.6%	0.8%	2.8%	1.2%	2.1%	4.3%	2.3%
D Width of outside (right) shoulders							
Greatly exceeds expectations	1.2%	4.9%	3.9%	2.7%	7.8%	6.5%	4.6%
Exceeds expectations	9.8%	12.1%	10.8%	12.6%	13.4%	16.8%	13.1%
Meets basic expectations	50.5%	44.2%	44.6%	52.4%	45.0%	46.2%	47.2%
Below expectations	31.6%	30.2%	34.1%	28.2%	27.5%	23.7%	28.5%
Far below expectations	6.9%	8.6%	6.5%	4.1%	6.4%	6.9%	6.6%

Overall Satisfaction With Various Highway Features by Survey Location

	Location						Total
	Asheville A	Burlington B	Charlotte C	Jonesville J	Rocky Mount R	Wilmington W	
Total	15.1%	17.2%	13.5%	16.9%	11.5%	25.8%	100.0%
E Width of inside (left) shoulders							
Greatly exceeds expectations	0.7%	6.9%	3.4%	4.0%	8.9%	6.3%	5.2%
Exceeds expectations	7.5%	12.5%	11.0%	14.4%	14.6%	16.2%	13.5%
Meets basic expectations	60.3%	42.6%	53.4%	52.5%	44.2%	50.4%	50.7%
Below expectations	27.3%	33.3%	29.1%	25.5%	25.6%	20.4%	25.5%
Far below expectations	4.2%	4.7%	3.0%	3.6%	6.6%	6.8%	5.2%
F Type of shoulder (gravel-pavement)							
Greatly exceeds expectations	0.6%	3.4%	2.7%	2.7%	8.0%	6.0%	4.0%
Exceeds expectations	8.2%	10.4%	9.5%	11.6%	13.2%	14.8%	11.6%
Meets basic expectations	62.8%	60.9%	60.1%	62.7%	57.8%	60.2%	60.9%
Below expectations	21.9%	19.8%	22.7%	17.4%	17.4%	16.4%	18.9%
Far below expectations	6.5%	5.4%	5.1%	5.6%	3.6%	2.7%	4.7%

Overall Satisfaction With Various Highway Features by Survey Location

	Location						Total
	Asheville A	Burlington B	Charlotte C	Jonesville J	Rocky Mount R	Wilmington W	
Total	15.1%	17.2%	13.5%	16.9%	11.5%	25.8%	100.0%
G How well traffic flows							
Greatly exceeds expectations	2.9%	5.0%	6.0%	4.7%	14.6%	14.2%	8.2%
Exceeds expectations	16.1%	19.3%	18.2%	19.7%	26.4%	27.1%	21.5%
Meets basic expectations	73.7%	70.8%	63.2%	67.4%	53.6%	51.9%	62.8%
Below expectations	6.1%	4.3%	11.0%	7.2%	3.9%	6.1%	6.4%
Far below expectations	1.2%	0.7%	1.7%	0.9%	1.6%	0.8%	1.1%
H Roadway markings							
Greatly exceeds expectations	1.9%	7.3%	3.7%	3.6%	12.0%	10.2%	6.6%
Exceeds expectations	15.4%	20.8%	13.0%	17.3%	20.3%	21.8%	18.5%
Meets basic expectations	65.0%	59.9%	67.2%	60.4%	48.2%	54.0%	59.0%
Below expectations	15.6%	10.8%	15.3%	16.2%	16.6%	12.4%	14.1%
Far below expectations	2.1%	1.1%	0.7%	2.5%	3.0%	1.6%	1.8%

Overall Satisfaction With Various Highway Features by Survey Location

	Location						Total
	Asheville A	Burlington B	Charlotte C	Jonesville J	Rocky Mount R	Wilmington W	
Total	15.1%	17.2%	13.5%	16.9%	11.5%	25.8%	100.0%
I Reflectivity markers							
Greatly exceeds expectations	1.2%	7.7%	3.2%	3.3%	13.0%	9.9%	6.4%
Exceeds expectations	10.0%	18.8%	13.8%	18.7%	14.7%	17.7%	16.2%
Meets basic expectations	67.1%	53.5%	62.0%	63.0%	42.1%	50.2%	56.3%
Below expectations	17.8%	16.2%	18.4%	9.0%	19.6%	16.2%	15.8%
Far below expectations	3.9%	3.8%	2.6%	6.0%	10.8%	6.0%	5.2%
J Lighting							
Greatly exceeds expectations	0.6%	8.9%	3.4%	2.6%	9.7%	8.2%	5.9%
Exceeds expectations	4.4%	9.8%	8.0%	16.3%	12.8%	14.2%	11.3%
Meets basic expectations	77.9%	42.6%	53.5%	54.4%	42.7%	40.8%	50.2%
Below expectations	14.0%	25.8%	31.4%	24.6%	19.9%	24.2%	23.9%
Far below expectations	3.2%	12.9%	3.6%	2.1%	15.0%	12.7%	8.7%

Overall Satisfaction With Various Highway Features by Survey Location

	Location						Total
	Asheville A	Burlington B	Charlotte C	Jonesville J	Rocky Mount R	Wilmington W	
Total	15.1%	17.2%	13.5%	16.9%	11.5%	25.8%	100.0%
K Mowing & trimming along guard rails							
Greatly exceeds expectations	0.9%	4.2%	4.2%	1.4%	7.2%	5.5%	3.9%
Exceeds expectations	11.0%	14.7%	15.8%	10.5%	11.4%	14.4%	13.1%
Meets basic expectations	63.1%	68.1%	61.2%	51.9%	39.8%	43.7%	54.2%
Below expectations	23.1%	12.3%	14.6%	31.2%	31.1%	29.7%	24.1%
Far below expectations	1.9%	0.8%	4.2%	5.0%	10.6%	6.7%	4.7%
L Mowing & trimming of all other Locations							
Greatly exceeds expectations	0.7%	3.2%	3.9%	1.3%	6.3%	5.4%	3.5%
Exceeds expectations	10.9%	12.5%	15.6%	10.2%	11.7%	13.5%	12.5%
Meets basic expectations	66.0%	70.0%	60.9%	54.9%	41.3%	52.1%	57.8%
Below expectations	21.2%	13.5%	15.8%	28.4%	32.0%	24.2%	22.3%
Far below expectations	1.2%	0.8%	3.9%	5.2%	8.7%	4.7%	3.9%

Overall Satisfaction With Various Highway Features by Survey Location

	Location						Total
	Asheville A	Burlington B	Charlotte C	Jonesville J	Rocky Mount R	Wilmington W	
Total	15.1%	17.2%	13.5%	16.9%	11.5%	25.8%	100.0%
M Cleanliness							
Greatly exceeds expectations	2.2%	5.0%	3.8%	2.0%	13.3%	9.4%	5.9%
Exceeds expectations	15.7%	17.1%	17.8%	21.8%	23.5%	20.9%	19.5%
Meets basic expectations	70.6%	69.1%	64.3%	66.6%	53.6%	53.9%	62.6%
Below expectations	10.8%	8.7%	12.6%	9.3%	8.4%	14.5%	11.1%
Far below expectations	0.8%	0.1%	1.4%	0.4%	1.3%	1.3%	0.9%
N Visibility of signs							
Greatly exceeds expectations	1.4%	7.6%	4.2%	2.5%	15.0%	11.8%	7.2%
Exceeds expectations	12.8%	20.4%	17.0%	21.1%	21.5%	19.9%	18.9%
Meets basic expectations	75.2%	66.7%	69.8%	69.2%	55.8%	57.5%	65.3%
Below expectations	10.0%	5.0%	8.4%	6.1%	6.5%	9.2%	7.6%
Far below expectations	0.7%	0.3%	0.6%	1.2%	1.2%	1.5%	1.0%

Overall Satisfaction With Various Highway Features by Survey Location

	Location						Total
	Asheville A	Burlington B	Charlotte C	Jonesville J	Rocky Mount R	Wilmington W	
Total	15.1%	17.2%	13.5%	16.9%	11.5%	25.8%	100.0%
O Condition of signs							
Greatly exceeds expectations	1.1%	8.3%	3.5%	2.7%	14.8%	12.0%	7.3%
Exceeds expectations	12.3%	18.6%	17.7%	21.0%	20.0%	20.1%	18.5%
Meets basic expectations	82.6%	68.9%	73.1%	68.9%	57.9%	59.3%	67.9%
Below expectations	3.4%	4.2%	4.9%	6.6%	5.7%	7.4%	5.6%
Far below expectations	0.6%	0.0%	0.7%	0.9%	1.6%	1.2%	0.8%
X Overall condition							
Greatly exceeds expectations	1.8%	4.5%	3.5%	2.3%	8.9%	9.4%	5.3%
Exceeds expectations	15.2%	18.4%	15.8%	18.0%	23.5%	20.0%	18.4%
Meets basic expectations	70.0%	70.9%	63.0%	63.8%	53.8%	51.2%	61.5%
Below expectations	12.1%	5.9%	16.2%	15.4%	12.2%	16.8%	13.4%
Far below expectations	1.0%	0.4%	1.5%	0.5%	1.5%	2.5%	1.3%

Overall Satisfaction With Various Highway Features by Survey Location

	Location						Total
	Asheville A	Burlington B	Charlotte C	Jonesville J	Rocky Mount R	Wilmington W	
Total	15.1%	17.2%	13.5%	16.9%	11.5%	25.8%	100.0%
Y Overall appearance							
Greatly exceeds expectations	2.1%	4.8%	3.7%	2.5%	8.1%	10.2%	5.6%
Exceeds expectations	16.4%	18.7%	17.0%	20.1%	24.1%	18.9%	19.0%
Meets basic expectations	70.0%	70.9%	64.4%	65.2%	50.9%	50.6%	61.5%
Below expectations	11.0%	5.3%	13.9%	12.0%	15.2%	17.7%	12.7%
Far below expectations	0.6%	0.3%	1.1%	0.3%	1.7%	2.6%	1.2%
Z Feeling of safety							
Greatly exceeds expectations	1.6%	6.2%	5.1%	3.2%	11.5%	13.1%	7.2%
Exceeds expectations	12.9%	15.1%	15.5%	18.8%	22.0%	19.6%	17.4%
Meets basic expectations	64.8%	64.9%	61.0%	62.2%	53.1%	50.8%	59.0%
Below expectations	19.4%	10.6%	16.7%	15.0%	10.6%	13.6%	14.3%
Far below expectations	1.2%	3.1%	1.7%	0.8%	2.9%	2.9%	2.2%

Overall Importance With Various Highway Features by Survey Location

	Location						Total
	Asheville A	Burlington B	Charlotte C	Jonesville J	Rocky Mount R	Wilmington W	
Total	15.1%	17.2%	13.5%	16.9%	11.5%	25.8%	100.0%
Imp A Width of lanes							
Extremely important	27.9%	29.8%	19.6%	22.1%	29.4%	40.6%	28.2%
Very Important	41.4%	37.0%	54.8%	45.7%	40.3%	38.7%	43.1%
Important	28.3%	29.4%	25.2%	27.9%	29.4%	18.0%	26.3%
Less important	2.5%	3.8%	0.4%	4.3%	0.4%	2.7%	2.4%
Not important	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.1%
Imp B Smoothness of road surface							
Extremely important	19.6%	14.4%	16.3%	10.5%	24.3%	26.3%	18.5%
Very Important	40.8%	41.0%	55.0%	48.4%	41.7%	48.2%	46.1%
Important	37.6%	41.5%	23.9%	33.8%	29.6%	22.0%	31.2%
Less important	2.0%	1.3%	4.8%	6.2%	3.9%	3.5%	3.7%
Not important	0.0%	1.7%	0.0%	1.1%	0.4%	0.0%	0.5%

Overall Importance With Various Highway Features by Survey Location

	Location						Total
	Asheville A	Burlington B	Charlotte C	Jonesville J	Rocky Mount R	Wilmington W	
Total	15.1%	17.2%	13.5%	16.9%	11.5%	25.8%	100.0%
Imp C Physical condition of road surface							
Extremely important	26.0%	23.1%	21.1%	16.5%	30.7%	37.5%	25.7%
Very Important	45.0%	40.9%	56.5%	51.1%	38.2%	44.6%	46.3%
Important	24.8%	33.3%	20.7%	28.7%	28.1%	15.9%	25.1%
Less important	4.1%	1.8%	1.6%	2.6%	2.6%	2.0%	2.5%
Not important	0.0%	0.9%	0.0%	1.1%	0.4%	0.0%	0.4%
Imp D Width of outside (right) shoulders							
Extremely important	15.8%	25.5%	14.9%	14.2%	19.9%	26.0%	19.3%
Very Important	36.7%	42.0%	40.9%	39.8%	33.9%	40.8%	39.1%
Important	38.0%	25.0%	36.2%	39.1%	38.0%	26.0%	33.8%
Less important	9.0%	7.5%	8.1%	6.1%	7.2%	7.2%	7.5%
Not important	0.5%	0.0%	0.0%	0.8%	0.9%	0.0%	0.4%

Overall Importance With Various Highway Features by Survey Location

	Location						Total
	Asheville A	Burlington B	Charlotte C	Jonesville J	Rocky Mount R	Wilmington W	
Total	15.1%	17.2%	13.5%	16.9%	11.5%	25.8%	100.0%
Imp E Width of inside (left) shoulders							
Extremely important	7.6%	21.1%	8.3%	17.0%	17.9%	14.0%	13.9%
Very Important	27.4%	36.7%	32.6%	37.6%	31.3%	31.4%	32.5%
Important	44.6%	25.7%	45.3%	37.6%	39.1%	39.0%	39.3%
2=Less important	15.9%	11.0%	12.2%	6.7%	10.1%	14.8%	12.0%
1=Not important	4.5%	5.5%	1.7%	1.2%	1.7%	0.8%	2.2%
Imp F Type of shoulder							
Extremely important	7.6%	17.1%	8.9%	10.7%	17.3%	12.5%	12.2%
Very Important	26.5%	33.7%	36.2%	27.6%	27.1%	32.1%	30.5%
Important	44.8%	38.5%	40.9%	49.8%	40.7%	43.3%	43.3%
Less important	18.4%	9.8%	13.2%	11.1%	13.6%	10.8%	12.8%
Not important	2.7%	1.0%	0.9%	0.8%	1.4%	1.3%	1.3%

Overall Importance With Various Highway Features by Survey Location

	Location						Total
	Asheville A	Burlington B	Charlotte C	Jonesville J	Rocky Mount R	Wilmington W	
Total	15.1%	17.2%	13.5%	16.9%	11.5%	25.8%	100.0%
Imp G How well traffic flows							
Extremely important	17.7%	17.9%	28.7%	16.9%	27.8%	35.5%	24.1%
Very Important	45.1%	33.0%	44.3%	43.0%	46.5%	40.7%	42.3%
Important	32.1%	42.9%	25.4%	36.4%	23.0%	21.4%	30.1%
Less important	4.6%	5.2%	1.6%	3.3%	2.2%	1.2%	3.0%
Not important	0.4%	0.9%	0.0%	0.4%	0.4%	1.2%	0.6%
Imp H Roadway markings							
Extremely important	27.0%	29.0%	19.9%	21.3%	32.7%	34.5%	27.3%
Very Important	38.8%	42.9%	49.4%	39.3%	39.5%	39.0%	41.4%
Important	30.8%	25.8%	28.6%	37.8%	25.0%	24.5%	29.0%
Less important	3.4%	1.8%	2.1%	1.5%	1.8%	2.0%	2.1%
Not important	0.0%	0.5%	0.0%	0.0%	0.9%	0.0%	0.2%

<u>Overall Importance With Various Highway Features by Survey Location</u>

	Location						Total
	Asheville A	Burlington B	Charlotte C	Jonesville J	Rocky Mount R	Wilmington W	
Total	15.1%	17.2%	13.5%	16.9%	11.5%	25.8%	100.0%
<u>Imp I Reflective markers</u>							
Extremely important	17.5%	31.2%	17.6%	22.1%	32.8%	37.1%	26.2%
Very Important	35.4%	39.2%	43.4%	37.7%	33.3%	33.3%	37.2%
Important	38.6%	26.5%	32.6%	35.5%	26.8%	24.3%	30.8%
Less important	7.4%	3.2%	6.3%	3.9%	5.5%	4.3%	5.1%
Not important	1.1%	0.0%	0.0%	0.9%	1.6%	1.0%	0.7%
<u>Imp J Lighting</u>							
Extremely important	15.3%	35.4%	16.1%	17.7%	30.4%	41.3%	26.2%
Very Important	23.7%	24.4%	25.9%	43.1%	23.6%	22.5%	26.8%
Important	50.4%	32.3%	39.7%	26.9%	28.6%	26.9%	34.0%
Less important	9.2%	6.3%	17.2%	10.8%	12.4%	7.5%	10.9%
Not important	1.5%	1.6%	1.1%	1.5%	5.0%	1.9%	2.2%

Overall Importance With Various Highway Features by Survey Location

	Location						Total
	Asheville A	Burlington B	Charlotte C	Jonesville J	Rocky Mount R	Wilmington W	
Total	15.1%	17.2%	13.5%	16.9%	11.5%	25.8%	100.0%

Imp K Mowing & trimming along guard rail

Extremely important	3.4%	7.4%	7.0%	4.1%	10.6%	11.3%	7.3%
Very Important	19.2%	14.7%	21.6%	15.6%	25.0%	18.9%	19.1%
Important	44.9%	51.5%	54.5%	52.7%	43.5%	44.5%	48.5%
Less important	31.6%	22.5%	16.9%	24.7%	16.7%	24.4%	23.0%
Not important	0.9%	3.9%	0.0%	2.9%	4.2%	0.8%	2.1%

Imp L Mowing & trimming all other Locations

Extremely important	3.3%	7.8%	6.1%	3.0%	11.3%	11.3%	7.0%
Very Important	21.3%	17.5%	23.8%	19.8%	25.2%	19.0%	21.1%
Important	45.4%	47.9%	54.1%	51.7%	44.1%	47.4%	48.6%
Less important	29.6%	23.0%	16.0%	23.6%	14.4%	21.5%	21.4%
Not important	0.4%	3.7%	0.0%	1.9%	5.0%	0.8%	1.9%

Overall Importance With Various Highway Features by Survey Location

	Location						Total
	Asheville	Burlington	Charlotte	Jonesville	Rocky Mount	Wilmington	
	A	B	C	J	R	W	
Total	15.1%	17.2%	13.5%	16.9%	11.5%	25.8%	100.0%
Imp M Cleanliness							
Extremely important	6.8%	8.3%	6.6%	3.7%	17.0%	16.7%	9.7%
Very Important	25.4%	19.4%	28.3%	24.7%	31.7%	29.5%	26.6%
Important	53.8%	57.9%	55.7%	56.9%	44.6%	42.6%	51.9%
Less important	14.0%	13.0%	9.4%	12.7%	5.4%	10.0%	10.8%
Not important	0.0%	1.4%	0.0%	1.9%	1.3%	1.2%	1.0%
Imp N Visibility of signs							
Extremely important	23.6%	32.2%	20.0%	23.8%	39.5%	47.2%	30.9%
Very Important	45.9%	36.6%	49.4%	47.6%	42.5%	36.5%	43.2%
Important	28.9%	28.6%	30.2%	26.7%	16.7%	14.3%	24.3%
Less important	1.2%	1.3%	0.4%	1.1%	0.9%	2.0%	1.2%
Not important	0.4%	1.3%	0.0%	0.7%	0.4%	0.0%	0.5%

Overall Importance With Various Highway Features by Survey Location

	Location						Total
	Asheville	Burlington	Charlotte	Jonesville	Rocky Mount	Wilmington	
	A	B	C	J	R	W	
Total	15.1%	17.2%	13.5%	16.9%	11.5%	25.8%	100.0%
Imp O Condition of signs							
Extremely important	14.9%	23.9%	16.1%	19.8%	31.4%	43.1%	24.9%
Very Important	41.5%	35.0%	46.3%	46.2%	42.4%	36.4%	41.4%
Important	41.9%	36.3%	35.1%	32.2%	21.8%	18.2%	30.9%
Less important	1.7%	3.5%	2.1%	1.1%	3.9%	2.0%	2.3%
Not important	0.0%	1.3%	0.4%	0.7%	0.4%	0.4%	0.5%
Imp X Overall condition							
Extremely important	18.3%	21.9%	16.0%	16.9%	24.2%	35.6%	22.1%
Very Important	38.6%	29.8%	54.0%	40.1%	47.1%	37.6%	41.3%
Important	40.2%	43.3%	27.8%	38.6%	26.4%	24.0%	33.4%
Less important	2.9%	5.1%	2.1%	4.4%	1.8%	2.8%	3.2%
Not important	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.1%

Overall Importance With Various Highway Features by Survey Location

	Location						Total
	Asheville	Burlington	Charlotte	Jonesville	Rocky Mount	Wilmington	
	A	B	C	J	R	W	
Total	15.1%	17.2%	13.5%	16.9%	11.5%	25.8%	100.0%
Imp Y Overall appearance							
Extremely important	7.0%	14.6%	9.3%	9.2%	20.6%	20.7%	13.4%
Very Important	33.9%	26.4%	44.9%	35.7%	35.9%	39.8%	36.3%
Important	52.9%	52.4%	41.9%	47.4%	40.4%	35.8%	45.1%
Less important	6.2%	6.1%	3.8%	7.7%	2.7%	3.7%	5.1%
Not important	0.0%	0.5%	0.0%	0.0%	0.4%	0.0%	0.1%
Imp Z Feeling of safety							
Extremely important	24.2%	32.7%	26.0%	23.2%	40.0%	46.2%	31.8%
Very Important	38.3%	26.6%	48.9%	36.4%	33.3%	31.6%	36.0%
Important	31.3%	35.0%	22.6%	34.9%	24.4%	17.4%	27.6%
Less important	5.4%	4.7%	2.6%	5.1%	1.3%	4.5%	4.0%
Not important	0.8%	0.9%	0.0%	0.4%	0.9%	0.4%	0.6%

MOST IMPORTANT FACTORS FOR OVERALL CONDITION by Survey Location (TOP 3 CHOICES COMBINED)

	Location						Total
	Asheville	Burlington	Charlotte	Jonesville	Rocky Mount	Wilmington	
	A	B	C	J	R	W	
Total	16.2%	16.3%	16.4%	17.9%	15.8%	17.4%	100.0%
Most important feature							
Width of lanes	47.3%	59.8%	50.6%	57.6%	43.7%	55.7%	52.6%
Smoothness of road surface	47.3%	46.7%	46.4%	38.2%	40.6%	42.9%	43.6%
Physical condition of road surface	63.8%	51.0%	65.8%	50.3%	52.8%	62.9%	57.7%
Width of outside (right) shoulders	15.0%	26.8%	16.0%	19.8%	15.7%	13.2%	17.7%
Width of inside (left) shoulders	2.3%	2.3%	1.9%	3.8%	2.8%	5.4%	3.1%
Type of shoulder	6.5%	8.0%	5.3%	6.6%	5.9%	4.3%	6.1%
How well traffic flows	16.9%	11.5%	20.2%	18.1%	13.4%	21.1%	16.9%
Roadway markings	22.3%	21.8%	16.3%	23.3%	28.0%	16.4%	21.3%

MOST IMPORTANT FACTORS FOR OVERALL CONDITION by Survey Location
(TOP 3 CHOICES COMBINED)

	Location						Total
	Asheville	Burlington	Charlotte	Jonesville	Rocky Mount	Wilmington	
	A	B	C	J	R	W	
Most important feature							
Reflective markings	5.0%	10.7%	3.4%	8.0%	6.7%	9.3%	7.2%
Lighting	2.7%	8.0%	8.7%	1.7%	7.1%	8.2%	6.0%
Mowing & trimming along guard rails	0.8%	1.1%	0.8%	5.9%	3.1%	1.1%	2.2%
Mowing & trimming of all other Locations	3.1%	1.1%	1.9%	3.5%	3.5%	2.5%	2.6%
Cleanliness	6.9%	2.7%	4.2%	3.8%	7.1%	5.7%	5.0%
Visibility of signs	12.7%	14.9%	13.3%	19.1%	18.1%	24.3%	17.2%
Condition of signs	2.3%	2.7%	3.0%	4.9%	5.1%	5.4%	3.9%
Overall condition of this highway	6.5%	3.1%	9.1%	4.9%	3.9%	4.3%	5.3%
Overall appearance of this highway	0.4%	1.1%	0.4%	1.4%	0.8%	0.7%	0.8%
Feeling of safety on this highway	3.1%	8.4%	7.6%	6.9%	5.9%	7.1%	6.5%
None chosen	35.0%	8.4%	10.6%	6.3%	35.8%	6.8%	16.7%

MOST IMPORTANT FACTORS FOR FEELING OF SAFETY by Survey Location
(TOP 3 CHOICES COMBINED)

	Location						Total
	Asheville	Burlington	Charlotte	Jonesville	Rocky Mount	Wilmington	
	A	B	C	J	R	W	
Total	16.2%	16.3%	16.3%	17.9%	15.8%	17.4%	100.0%
Most important feature							
Width of lanes	52.3%	53.6%	50.0%	51.4%	43.7%	47.5%	49.8%
Smoothness of road surface	16.9%	16.5%	19.5%	17.0%	22.4%	18.2%	18.4%
Physical condition of road surface	43.8%	29.1%	37.4%	34.0%	33.5%	46.1%	37.4%
Width of outside (right) shoulders	18.1%	31.8%	20.6%	21.9%	16.9%	17.5%	21.1%
Width of inside (left) shoulders	2.3%	4.2%	3.4%	4.5%	5.9%	6.1%	4.4%
Type of shoulder	9.2%	9.6%	6.5%	10.8%	4.7%	4.6%	7.6%
How well traffic flows	24.6%	13.4%	25.2%	23.3%	22.4%	22.9%	22.0%
Roadway markings	34.2%	25.7%	26.0%	27.1%	30.3%	25.0%	28.0%

MOST IMPORTANT FACTORS FOR FEELING OF SAFETY by Survey Location (TOP 3 CHOICES COMBINED)

	Location						Total
	Asheville	Burlington	Charlotte	Jonesville	Rocky Mount	Wilmington	
	A	B	C	J	R	W	
Most important feature							
Reflective markings	11.2%	19.2%	16.4%	16.7%	12.2%	16.4%	15.4%
Lighting	7.7%	19.2%	18.3%	7.3%	12.6%	16.1%	13.5%
Mowing & trimming along guard rails	0.8%	1.1%	1.5%	2.8%	2.0%	1.8%	1.7%
Mowing & trimming of all other Locations	0.4%	1.5%	2.7%	1.7%	3.1%	1.1%	1.7%
Cleanliness	3.5%	0.4%	1.1%	1.7%	6.3%	2.9%	2.6%
Visibility of signs	25.0%	36.0%	19.5%	38.2%	25.6%	33.2%	29.8%
Condition of signs	1.9%	4.6%	5.0%	6.6%	5.1%	5.7%	4.9%
Overall condition of this highway	7.3%	5.0%	7.6%	4.5%	4.7%	8.2%	6.2%
Overall appearance of this highway	0.4%	0.8%	1.9%	1.7%	2.0%	2.1%	1.5%
Feeling of safety on this highway	5.8%	9.6%	10.3%	3.8%	5.9%	8.6%	7.3%
None chosen	34.6%	8.4%	12.6%	7.3%	40.6%	12.1%	18.9%

MOST IMPORTANT FACTORS FOR APPEARANCE by Survey Location (TOP 3 CHOICES COMBINED)

	Location						Total
	Asheville A	Burlington B	Charlotte C	Jonesville J	Rocky Mount R	Wilmington W	
Total	16.2%	16.3%	16.3%	18.0%	15.8%	17.5%	100.0%
Most important feature							
Width of lanes	15.4%	29.1%	9.6%	24.7%	19.3%	17.5%	19.3%
Smoothness of road surface	19.2%	19.9%	8.8%	16.3%	21.7%	20.0%	17.6%
Physical condition of road surface	39.6%	36.8%	30.3%	26.4%	33.1%	37.9%	33.9%
Width of outside (right) shoulders	6.2%	12.6%	5.4%	6.9%	5.5%	6.4%	7.2%
Width of inside (left) shoulders	0.4%	1.5%	1.5%	1.4%	1.6%	1.8%	1.4%
Type of shoulder	5.0%	4.2%	8.4%	5.9%	5.1%	5.4%	5.7%
How well traffic flows	4.6%	5.7%	6.5%	5.9%	9.8%	7.1%	6.6%
Roadway markings	24.2%	22.2%	15.3%	21.9%	21.3%	13.9%	19.8%

MOST IMPORTANT FACTORS FOR APPEARANCE by Survey Location (TOP 3 CHOICES COMBINED)

	Location						Total
	Asheville	Burlington	Charlotte	Jonesville	Rocky Mount	Wilmington	
	A	B	C	J	R	W	
Most important feature							
Reflective markings	5.4%	9.6%	8.8%	6.9%	7.5%	7.5%	7.6%
Lighting	2.7%	9.6%	5.7%	4.9%	8.7%	10.0%	6.9%
Mowing & trimming along guard rails	23.1%	17.6%	26.4%	24.7%	19.3%	25.4%	22.8%
Mowing & trimming of all other Locations	30.0%	27.2%	45.2%	33.3%	26.8%	28.9%	31.9%
Cleanliness	39.6%	37.5%	48.3%	36.5%	31.9%	40.7%	39.1%
Visibility of signs	16.5%	17.6%	10.3%	20.1%	17.7%	15.0%	16.3%
Condition of signs	6.9%	8.4%	8.8%	11.8%	8.3%	10.4%	9.2%
Overall condition of this highway	7.3%	3.4%	10.3%	10.4%	7.5%	8.6%	8.0%
Overall appearance of this highway	3.8%	3.8%	8.8%	6.3%	3.5%	7.1%	5.6%
Feeling of safety on this highway	3.5%	8.4%	5.4%	5.6%	5.9%	8.9%	6.3%
None chosen	46.5%	10.3%	16.5%	8.3%	45.7%	20.7%	24.3%

Appendix C:
Mean Satisfaction and Importance Ratings

Overall Satisfaction With Various Highway Features - ALL HIGHWAYS

	Greatly exceeds expectations	Exceeds expectations	Meets basic expectations	Below expectations	Far below expectations
Width of lanes	6.1%	15.3%	63.0%	13.9%	1.7%
Smoothness of road surface	6.3%	16.7%	52.7%	21.7%	2.6%
Physical condition of road surface	5.9%	17.1%	55.4%	19.3%	2.3%
Width of outside (right) shoulders	4.6%	13.1%	47.2%	28.5%	6.6%
Width of inside (left) shoulders	5.2%	13.5%	50.7%	25.5%	5.2%
Type of shoulder (gravel-pavement)	4.0%	11.6%	60.9%	18.9%	4.7%
How well traffic flows	8.2%	21.5%	62.8%	6.4%	1.1%
Roadway markings	6.6%	18.5%	59.0%	14.1%	1.8%
Reflectivity markers	6.4%	16.2%	56.3%	15.8%	5.2%
Lighting	5.9%	11.3%	50.2%	23.9%	8.7%
Mowing & trimming along guard rails	3.9%	13.1%	54.2%	24.1%	4.7%
Mowing & trimming of all other areas	3.5%	12.5%	57.8%	22.3%	3.9%
Cleanliness	5.9%	19.5%	62.6%	11.1%	0.9%
Visibility of signs	7.2%	18.9%	65.3%	7.6%	1.0%
Condition of signs	7.3%	18.5%	67.9%	5.6%	0.8%
Overall condition	5.3%	18.4%	61.5%	13.4%	1.3%
Overall appearance	5.6%	19.0%	61.5%	12.7%	1.2%
Feeling of safety	7.2%	17.4%	59.0%	14.3%	2.2%

Overall Satisfaction With Various Highway Features - INTERSTATE Highways

	Greatly exceeds expectations	Exceeds expectations	Meets basic expectations	Below expectations	Far below expectations
Width of lanes	12.1%	21.2%	64.5%	1.9%	0.3%
Smoothness of road surface	12.0%	23.7%	53.2%	10.7%	0.4%
Physical condition of road surface	11.8%	24.2%	54.4%	9.4%	0.2%
Width of outside (right) shoulders	11.1%	27.1%	57.2%	4.4%	0.2%
Width of inside (left) shoulders	8.5%	20.1%	50.8%	18.8%	1.8%
Type of shoulder (gravel-pavement)	9.1%	21.9%	65.2%	3.7%	0.1%
How well traffic flows	15.1%	29.1%	53.5%	2.1%	0.1%
Roadway markings	11.3%	23.9%	58.1%	6.3%	0.4%
Reflectivity markers	10.6%	19.4%	61.6%	7.7%	0.8%
Lighting	9.0%	16.8%	56.3%	14.9%	3.0%
Mowing & trimming along guard rails	6.0%	18.8%	54.8%	18.9%	1.5%
Mowing & trimming of all other areas	6.2%	18.2%	57.0%	17.6%	1.1%
Cleanliness	9.7%	22.7%	57.5%	10.2%	0.0%
Visibility of signs	11.7%	26.9%	59.5%	1.8%	0.0%
Condition of signs	11.8%	26.7%	60.4%	0.9%	0.1%
Overall condition	10.8%	27.8%	57.2%	4.0%	0.2%
Overall appearance	10.2%	28.5%	56.7%	4.5%	0.1%
Feeling of safety	11.6%	28.0%	57.6%	2.7%	0.1%

Overall Satisfaction With Various Highway Features - PRIMARY Highways

	Greatly exceeds expectations	Exceeds expectations	Meets basic expectations	Below expectations	Far below expectations
Width of lanes	6.3%	17.8%	64.4%	10.5%	1.0%
Smoothness of road surface	6.2%	16.5%	53.8%	20.8%	2.6%
Physical condition of road surface	5.5%	17.2%	56.6%	18.5%	2.2%
Width of outside (right) shoulders	4.2%	13.3%	46.5%	29.5%	6.5%
Width of inside (left) shoulders	5.1%	13.5%	52.9%	23.8%	4.7%
Type of shoulder (gravel-pavement)	3.7%	11.5%	62.0%	18.5%	4.2%
How well traffic flows	8.6%	23.5%	61.2%	5.5%	1.3%
Roadway markings	7.0%	19.8%	58.7%	13.2%	1.2%
Reflectivity markers	6.8%	17.7%	57.9%	14.1%	3.5%
Lighting	6.2%	12.1%	49.8%	23.6%	8.3%
Mowing & trimming along guard rails	3.8%	11.8%	51.1%	27.8%	5.5%
Mowing & trimming of all other areas	3.8%	12.0%	57.1%	22.4%	4.6%
Cleanliness	6.0%	19.3%	61.8%	11.8%	1.2%
Visibility of signs	8.0%	19.4%	65.1%	6.9%	0.6%
Condition of signs	7.9%	19.1%	67.7%	4.7%	0.6%
Overall condition	5.3%	18.6%	63.3%	11.6%	1.2%
Overall appearance	6.0%	18.4%	61.2%	13.4%	1.0%
Feeling of safety	8.1%	17.9%	59.5%	12.7%	1.8%

Overall Satisfaction With Various Highway Features - SECONDARY Highways

	Greatly exceeds expectations	Exceeds expectations	Meets basic expectations	Below expectations	Far below expectations
Width of lanes	3.1%	9.2%	60.2%	24.3%	3.2%
Smoothness of road surface	3.8%	13.6%	51.0%	27.9%	3.7%
Physical condition of road surface	3.7%	13.7%	54.2%	25.0%	3.4%
Width of outside (right) shoulders	1.9%	5.6%	43.1%	39.5%	9.9%
Width of inside (left) shoulders	2.0%	6.6%	45.8%	36.1%	9.5%
Type of shoulder (gravel-pavement)	1.6%	6.6%	57.0%	27.2%	7.5%
How well traffic flows	4.5%	15.2%	69.4%	9.7%	1.2%
Roadway markings	3.8%	14.2%	59.9%	19.1%	3.1%
Reflectivity markers	3.5%	11.7%	50.6%	23.5%	10.7%
Lighting	3.7%	7.2%	47.5%	29.2%	12.5%
Mowing & trimming along guard rails	2.6%	11.8%	59.4%	20.8%	5.4%
Mowing & trimming of all other areas	1.8%	10.4%	59.2%	24.3%	4.2%
Cleanliness	4.1%	18.3%	66.2%	10.6%	0.9%
Visibility of signs	4.0%	14.5%	68.2%	11.3%	1.9%
Condition of signs	4.1%	13.8%	71.6%	9.0%	1.5%
Overall condition	2.9%	13.9%	61.0%	20.2%	2.0%
Overall appearance	3.0%	15.4%	64.2%	15.5%	1.9%
Feeling of safety	3.9%	11.9%	58.8%	21.7%	3.6%

Mean Satisfaction Rating - ALL HIGHWAYS

	Mean	SD	Median	Total
Width of lanes	3.10	0.77	3	6291
Smoothness of road surface	3.02	0.86	3	6253
Physical condition of road surface	3.05	0.83	3	6130
Width of outside (right) shoulders	2.81	0.91	3	5780
Width of inside (left) shoulders	2.88	0.89	3	3727
Type of shoulder (gravel-pavement)	2.91	0.80	3	5569
How well traffic flows	3.29	0.75	3	6036
Roadway markings	3.14	0.80	3	5875
Reflectivity markers	3.03	0.89	3	4300
Lighting	2.82	0.95	3	2665
Mowing & trimming along guard rails	2.87	0.84	3	4802
Mowing & trimming of all other areas	2.89	0.80	3	5824
Cleanliness	3.18	0.74	3	5925
Visibility of signs	3.24	0.73	3	5998
Condition of signs	3.26	0.70	3	5962
Overall condition	3.13	0.75	3	6096
Overall appearance	3.15	0.75	3	6074
Feeling of safety	3.13	0.82	3	6078

Mean Satisfaction Rating - INTERSTATE Highways

	Mean	SD	Median	Total
Width of lanes	3.43	0.74	3	1021
Smoothness of road surface	3.36	0.84	3	1013
Physical condition of road surface	3.38	0.82	3	1003
Width of outside (right) shoulders	3.44	0.75	3	1001
Width of inside (left) shoulders	3.15	0.88	3	946
Type of shoulder (gravel-pavement)	3.36	0.70	3	951
How well traffic flows	3.57	0.77	3	992
Roadway markings	3.39	0.78	3	950
Reflectivity markers	3.31	0.79	3	784
Lighting	3.14	0.88	3	469
Mowing & trimming along guard rails	3.09	0.82	3	921
Mowing & trimming of all other areas	3.11	0.80	3	940
Cleanliness	3.32	0.78	3	953
Visibility of signs	3.48	0.72	3	976
Condition of signs	3.49	0.72	3	980
Overall condition	3.45	0.75	3	982
Overall appearance	3.44	0.74	3	976
Feeling of safety	3.48	0.74	3	983

Mean Satisfaction Rating - PRIMARY Highways

	Mean	SD	Median	Total
Width of lanes	3.18	0.74	3	3075
Smoothness of road surface	3.03	0.85	3	3060
Physical condition of road surface	3.05	0.81	3	2996
Width of outside (right) shoulders	2.79	0.90	3	2828
Width of inside (left) shoulders	2.90	0.87	3	1877
Type of shoulder (gravel-pavement)	2.92	0.78	3	2730
How well traffic flows	3.33	0.76	3	2955
Roadway markings	3.18	0.79	3	2900
Reflectivity markers	3.10	0.85	3	2190
Lighting	2.84	0.96	3	1332
Mowing & trimming along guard rails	2.81	0.86	3	2491
Mowing & trimming of all other areas	2.88	0.82	3	2851
Cleanliness	3.17	0.75	3	2902
Visibility of signs	3.27	0.73	3	2923
Condition of signs	3.29	0.70	3	2907
Overall condition	3.15	0.73	3	2963
Overall appearance	3.15	0.76	3	2955
Feeling of safety	3.18	0.82	3	2957

Mean Satisfaction Rating - SECONDARY Highways

	Mean	SD	Median	Total
Width of lanes	2.85	0.75	3	2195
Smoothness of road surface	2.86	0.83	3	2180
Physical condition of road surface	2.89	0.81	3	2131
Width of outside (right) shoulders	2.50	0.82	3	1951
Width of inside (left) shoulders	2.56	0.83	3	904
Type of shoulder (gravel-pavement)	2.68	0.77	3	1888
How well traffic flows	3.12	0.68	3	2089
Roadway markings	2.96	0.78	3	2025
Reflectivity markers	2.74	0.92	3	1326
Lighting	2.60	0.93	3	864
Mowing & trimming along guard rails	2.85	0.79	3	1390
Mowing & trimming of all other areas	2.81	0.74	3	2033
Cleanliness	3.14	0.68	3	2070
Visibility of signs	3.08	0.70	3	2099
Condition of signs	3.10	0.67	3	2075
Overall condition	2.95	0.73	3	2151
Overall appearance	3.02	0.71	3	2143
Feeling of safety	2.91	0.79	3	2138

Overall Importance With Various Highway Features - ALL HIGHWAYS

	Extremely important	Very Important	Important	Less important	Not important
Width of lanes	28.2%	43.1%	26.3%	2.4%	0.1%
Smoothness of road surface	18.5%	46.1%	31.2%	3.7%	0.5%
Physical condition of road surface	25.7%	46.3%	25.1%	2.5%	0.4%
Width of outside (right) shoulders	19.3%	39.1%	33.8%	7.5%	0.4%
Width of inside (left) shoulders	13.9%	32.5%	39.3%	12.0%	2.2%
Type of shoulder	12.2%	30.5%	43.3%	12.8%	1.3%
How well traffic flows	24.1%	42.3%	30.1%	3.0%	0.6%
Roadway markings	27.3%	41.4%	29.0%	2.1%	0.2%
Reflective markers	26.2%	37.2%	30.8%	5.1%	0.7%
Lighting	26.2%	26.8%	34.0%	10.9%	2.2%
Mowing & trimming along guard rail	7.3%	19.1%	48.5%	23.0%	2.1%
Mowing & trimming all other areas	7.0%	21.1%	48.6%	21.4%	1.9%
Cleanliness	9.7%	26.6%	51.9%	10.8%	1.0%
Visibility of signs	30.9%	43.2%	24.3%	1.2%	0.5%
Condition of signs	24.9%	41.4%	30.9%	2.3%	0.5%
Overall condition	22.1%	41.3%	33.4%	3.2%	0.1%
Overall appearance	13.4%	36.3%	45.1%	5.1%	0.1%
Feeling of safety	31.8%	36.0%	27.6%	4.0%	0.6%

Overall Importance With Various Highway Features - INTERSTATE Highways

	Extremely important	Very Important	Important	Less important	Not important
Width of lanes	38.2%	42.2%	18.2%	1.4%	0.0%
Smoothness of road surface	25.3%	52.0%	20.6%	2.0%	0.0%
Physical condition of road surface	33.8%	48.8%	16.0%	1.4%	0.0%
Width of outside (right) shoulders	25.3%	45.9%	26.7%	2.1%	0.0%
Width of inside (left) shoulders	16.8%	39.1%	36.2%	7.9%	0.0%
Type of shoulder	17.2%	36.2%	36.9%	8.6%	1.1%
How well traffic flows	34.9%	46.8%	16.9%	1.0%	0.3%
Roadway markings	31.0%	40.8%	27.2%	1.0%	0.0%
Reflective markers	28.6%	39.6%	29.4%	1.6%	0.8%
Lighting	25.7%	29.8%	36.6%	6.3%	1.6%
Mowing & trimming along guard rail	9.8%	19.9%	45.1%	24.1%	1.0%
Mowing & trimming all other areas	9.3%	22.1%	45.9%	21.4%	1.4%
Cleanliness	15.5%	26.8%	46.4%	11.0%	0.3%
Visibility of signs	39.2%	42.7%	16.7%	1.0%	0.3%
Condition of signs	32.4%	42.0%	23.5%	1.7%	0.3%
Overall condition	32.4%	42.9%	23.7%	1.0%	0.0%
Overall appearance	20.4%	41.9%	35.6%	2.1%	0.0%
Feeling of safety	36.6%	42.3%	19.0%	2.1%	0.0%

<u>Overall Importance With Various Highway Features - PRIMARY Highways</u>

	Extremely important	Very Important	Important	Less important	Not important
Width of lanes	27.4%	44.2%	26.3%	1.9%	0.1%
Smoothness of road surface	17.5%	46.1%	32.1%	3.7%	0.6%
Physical condition of road surface	24.9%	46.6%	25.6%	2.4%	0.4%
Width of outside (right) shoulders	18.1%	40.1%	34.2%	7.4%	0.3%
Width of inside (left) shoulders	13.9%	30.5%	40.8%	12.3%	2.4%
Type of shoulder	11.6%	28.6%	45.6%	13.3%	0.9%
How well traffic flows	24.3%	43.1%	29.9%	2.3%	0.4%
Roadway markings	26.4%	42.0%	28.9%	2.4%	0.3%
Reflective markers	25.8%	38.1%	31.0%	4.5%	0.7%
Lighting	27.1%	26.7%	33.6%	10.5%	2.1%
Mowing & trimming along guard rail	6.4%	19.9%	48.3%	23.3%	2.1%
Mowing & trimming all other areas	6.8%	21.6%	48.0%	22.0%	1.7%
Cleanliness	8.9%	27.4%	52.4%	10.1%	1.1%
Visibility of signs	30.2%	43.6%	24.9%	1.0%	0.4%
Condition of signs	24.5%	41.2%	32.1%	2.0%	0.3%
Overall condition	20.2%	42.7%	33.9%	3.1%	0.1%
Overall appearance	12.5%	35.8%	46.8%	4.7%	0.1%
Feeling of safety	31.5%	35.6%	28.8%	3.5%	0.6%

Overall Importance With Various Highway Features - SECONDARY Highways

	Extremely important	Very Important	Important	Less important	Not important
Width of lanes	23.0%	42.0%	31.2%	3.8%	0.0%
Smoothness of road surface	15.6%	42.2%	36.6%	4.7%	0.9%
Physical condition of road surface	21.7%	44.3%	30.2%	3.3%	0.7%
Width of outside (right) shoulders	17.0%	32.9%	38.0%	11.4%	0.7%
Width of inside (left) shoulders	10.7%	29.2%	39.9%	15.8%	4.3%
Type of shoulder	9.8%	29.7%	43.7%	14.7%	2.1%
How well traffic flows	16.7%	37.9%	39.1%	5.4%	0.9%
Roadway markings	26.1%	41.0%	30.4%	2.3%	0.2%
Reflective markers	25.0%	34.1%	31.6%	8.5%	0.8%
Lighting	25.0%	25.0%	32.7%	14.7%	2.6%
Mowing & trimming along guard rail	6.9%	17.2%	51.4%	21.6%	2.8%
Mowing & trimming all other areas	6.0%	19.7%	51.2%	20.6%	2.5%
Cleanliness	7.4%	25.1%	54.8%	11.6%	1.1%
Visibility of signs	26.6%	43.0%	28.2%	1.5%	0.7%
Condition of signs	20.6%	41.4%	33.7%	3.3%	1.1%
Overall condition	18.6%	37.9%	38.8%	4.7%	0.0%
Overall appearance	10.4%	33.3%	48.4%	7.7%	0.2%
Feeling of safety	29.3%	32.7%	31.3%	5.9%	0.9%

Mean Importance Rating - ALL HIGHWAYS

	Mean	SD	Median	Total
Width of lanes	3.97	0.80	4	1492
Smoothness of road surface	3.78	0.80	4	1485
Physical condition of road surface	3.94	0.80	4	1464
Width of outside (right) shoulders	3.69	0.88	4	1400
Width of inside (left) shoulders	3.44	0.95	3	1027
Type of shoulder	3.39	0.90	3	1378
How well traffic flows	3.86	0.83	4	1443
Roadway markings	3.93	0.81	4	1431
Reflective markers	3.83	0.90	4	1223
Lighting	3.64	1.05	4	883
Mowing & trimming along guard rail	3.07	0.89	3	1348
Mowing & trimming all other areas	3.10	0.88	3	1433
Cleanliness	3.33	0.83	3	1438
Visibility of signs	4.03	0.80	4	1467
Condition of signs	3.88	0.83	4	1464
Overall condition	3.82	0.81	4	1442
Overall appearance	3.58	0.79	3	1431
Feeling of safety	3.95	0.90	4	1433

Mean Importance Rating - PRIMARY Highways

	Mean	SD	Median	Total
Width of lanes	3.38	1.27	3	3182
Smoothness of road surface	3.26	1.42	3	3182
Physical condition of road surface	3.40	1.60	3	3182
Width of outside (right) shoulders	3.48	2.13	3	3182
Width of inside (left) shoulders	5.40	3.07	4	3182
Type of shoulder (gravel-pavement)	3.78	2.24	3	3182
How well traffic flows	3.73	1.63	3	3182
Roadway markings	3.70	1.82	3	3182
Reflectivity markers	4.94	2.82	3	3182
Lighting	6.42	3.10	9	3182
Mowing & trimming along guard rails	4.15	2.66	3	3182
Mowing & trimming of all other areas	3.52	2.02	3	3182
Cleanliness	3.68	1.80	3	3182
Visibility of signs	3.74	1.72	3	3182
Condition of signs	3.78	1.74	3	3182
Overall condition	3.56	1.64	3	3182
Overall appearance	3.57	1.67	3	3182
Feeling of safety	3.59	1.69	3	3182

Mean Importance Rating - SECONDARY Highways

	Mean	SD	Median	Total
Width of lanes	3.84	0.82	4	474
Smoothness of road surface	3.67	0.83	4	467
Physical condition of road surface	3.83	0.82	4	461
Width of outside (right) shoulders	3.54	0.93	3	429
Width of inside (left) shoulders	3.26	0.99	3	253
Type of shoulder	3.30	0.91	3	428
How well traffic flows	3.64	0.85	4	448
Roadway markings	3.91	0.82	4	444
Reflective markers	3.74	0.96	4	364
Lighting	3.55	1.10	3.50	272
Mowing & trimming along guard rail	3.04	0.88	3	389
Mowing & trimming all other areas	3.06	0.86	3	447
Cleanliness	3.26	0.80	3	447
Visibility of signs	3.93	0.82	4	458
Condition of signs	3.77	0.85	4	457
Overall condition	3.70	0.82	4	446
Overall appearance	3.46	0.79	3	444
Feeling of safety	3.84	0.95	4	444

MOST IMPORTANT FACTORS FOR OVERALL CONDITION - ALL HIGHWAYS

Most important feature (all three choices combined)	Number	Percent
Physical condition of road surface	927	57.7 %
Width of lanes	845	52.6 %
Smoothness of road surface	700	43.6 %
Roadway markings	342	21.3 %
Width of outside (right) shoulders	285	17.7 %
Visibility of signs	276	17.2 %
How well traffic flows	272	16.9 %
None chosen	269	16.7 %
Reflective markings	116	7.2 %
Feeling of safety on this highway	105	6.5 %
Type of shoulder	98	6.1 %
Lighting	97	6.0 %
Overall condition of this highway	85	5.3 %
Cleanliness	81	5.0 %
Condition of signs	63	3.9 %
Width of inside (left) shoulders	50	3.1 %
Mowing & trimming of all other areas	42	2.6 %
Mowing & trimming along guard rails	35	2.2 %
Overall appearance of this highway	13	0.8 %
Total	4701	

MOST IMPORTANT FACTORS FOR FEELING OF SAFETY - ALL HIGHWAYS

Most important feature (all three choices combined)	Number	Percent
Width of lanes	799	49.8 %
Physical condition of road surface	600	37.4 %
Visibility of signs	478	29.8 %
Roadway markings	449	28.0 %
How well traffic flows	353	22.0 %
Width of outside (right) shoulders	339	21.1 %
None chosen	303	18.9 %
Smoothness of road surface	295	18.4 %
Reflective markings	247	15.4 %
Lighting	216	13.5 %
Type of shoulder	122	7.6 %
Feeling of safety on this highway	117	7.3 %
Overall condition of this highway	100	6.2 %
Condition of signs	78	4.9 %
Width of inside (left) shoulders	71	4.4 %
Cleanliness	42	2.6 %
Mowing & trimming of all other areas	28	1.7 %
Mowing & trimming along guard rails	27	1.7 %
Overall appearance of this highway	24	1.5 %
Total	4688	

MOST IMPORTANT FACTORS FOR APPEARANCE - ALL HIGHWAYS

Most important feature (all three choices combined)	Number	Percent
Cleanliness	627	39.1 %
Physical condition of road surface	544	33.9 %
Mowing & trimming of all other areas	512	31.9 %
None chosen	389	24.3 %
Mowing & trimming along guard rails	366	22.8 %
Roadway markings	317	19.8 %
Width of lanes	310	19.3 %
Smoothness of road surface	283	17.6 %
Visibility of signs	261	16.3 %
Condition of signs	147	9.2 %
Overall condition of this highway	128	8.0 %
Reflective markings	122	7.6 %
Width of outside (right) shoulders	115	7.2 %
Lighting	111	6.9 %
How well traffic flows	106	6.6 %
Feeling of safety on this highway	101	6.3 %
Type of shoulder	91	5.7 %
Overall appearance of this highway	90	5.6 %
Width of inside (left) shoulders	22	1.4 %
Total	4642	

Appendix D:

Course Descriptions and Maps

Jonesville - Oct 4

SECTION	DESCRIPTION	START/END mm		Type of Highway	General Condition
PRACTICE	NC 67; I-77 to Riverside Dr	N/A	N/A	Primary	Good (blues)
1	NC 67; Riverside Dr to Vestal	N/A	N/A	Primary	Good (blues)
2	NC 67; Vestal to Bryant Dr	N/A	N/A	Primary	Good (blues)
3	Wilhelm Rd; NC 67 to Woodruff Rd	N/A	N/A	Secondary	Average (mid range colors)
4	Woodruff Rd; Wilhelm Rd to NC 67	N/A	N/A	Secondary	Good (blues)
NOT RATED	NC 67; Woodruff Rd to US 601				
5	US 601; Marview to Reece Rd	N/A	N/A	Primary	Good (blues)
6	US 601; Reece Rd to Country Club Rd	N/A	N/A	Primary	Good (blues)
7	Country Club Rd; US 601 to Rockford Rd	N/A	N/A	Secondary	Good (blues)
8	Rockford Rd; Country Club Rd to Union Grove Chruch	N/A	N/A	Secondary	Good (blues)
9	Rockford Rd; Union Grove Church to Nebo Rd	N/A	N/A	Secondary	Average (mid range colors)
10	Nebo Rd; Rockford Rd to Larry Rd	N/A	N/A	Secondary	Poor (lowest range colors)
11	Nebo Rd; Larry Rd to Union Grove Church RD	N/A	N/A	Secondary	Poor (lowest range colors)
12	Union Grove Church Rd; Nebo Rd to Sugartown Rd/Rockford Rd	N/A	N/A	Secondary	Average (mid range colors)
13	Sugartown Rd; Rockford Rd to Myers Rd	N/A	N/A	Secondary	Good (blues)
14	Myers Rd; Sugartown Rd to Old US 421	N/A	N/A	Secondary	Average (mid range colors)
NOT RATED	Old US 421; Myers Rd to UNFI Industrial Dr				
15	US 421; Maplewood Dr/UNFI Industrial to US 601 (3 lane section)	256.3	257	Primary	
16	US 421; US 601 to Reavis RD	257.3	259	Primary	Good (blues)
17	US 421; Reavis Rd to mm 261	259	261	Primary	Average (mid range colors)
18	US 421; mm 261 to US 21 (mm 263)	261	263	Primary	Average (mid range colors)
19	US 421; US 21 (mm 263) to I-77	263	265	Primary	Average (mid range colors)
20	I-77; US 421 to mm 76	74	76	Interstate	Good (blues)
NOT RATED	I-77; mm 76 to US 21 mm 79	76	79		
21	I-77; US 21 to Center Rd	79	80	Interstate	Average (mid range colors)
22	I-77; Center Rd to NC 67	80	82	Interstate	Average (mid range colors)
Apprx course time = 1 hr 8 minutes (44 miles)					

Jonesville, NC
Course Time: 1 hr 8 min
Approximate Course Length: 44 miles
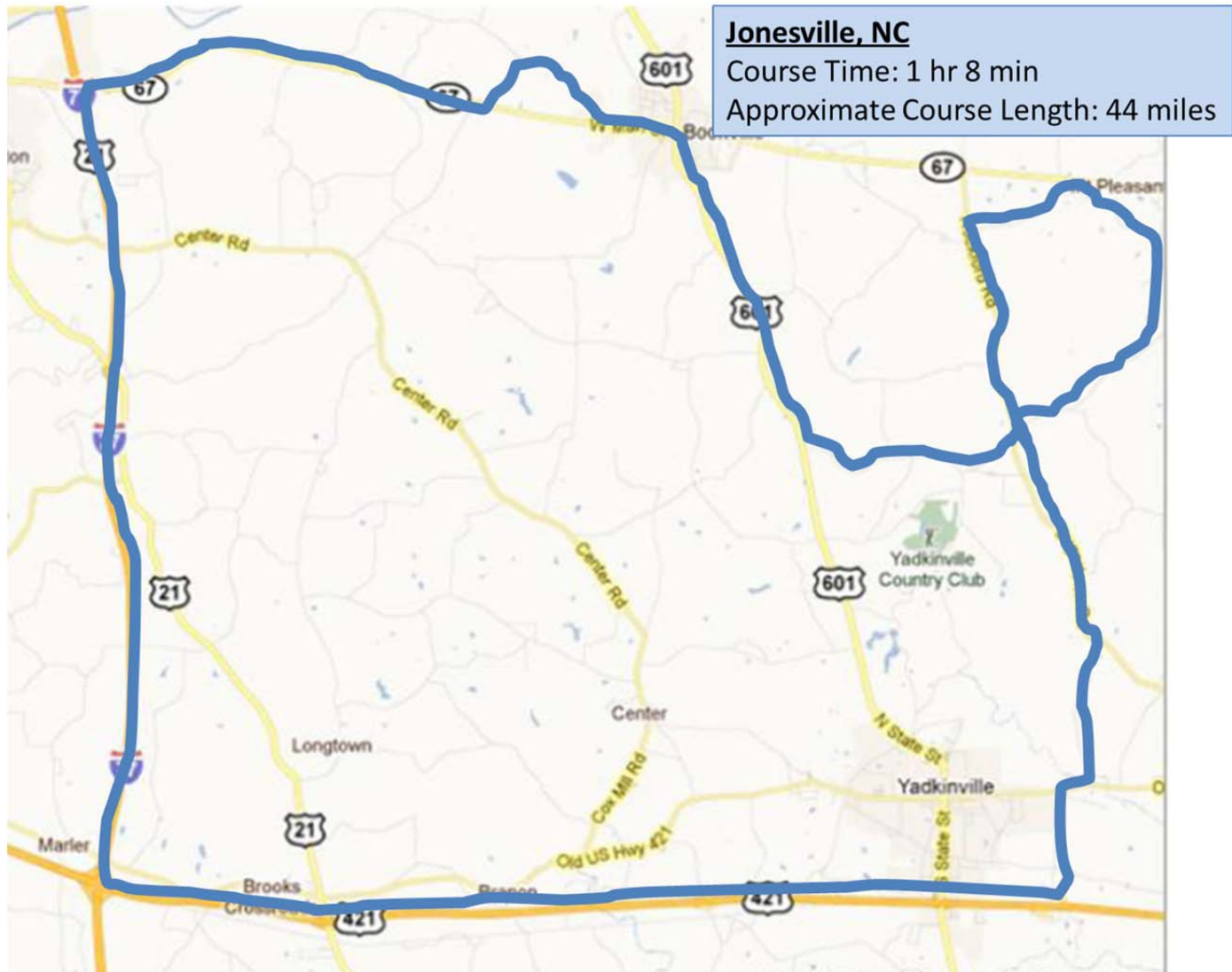
Asheville - Oct 5

SECTION	DESCRIPTION	START/END mm		Type of Highway	General Condition
1	I-240; Tunnel Rd to I-40	7	8.4	Interstate	Good (blues)
2	I-40; I-240 tomm 55	53.5	55	Interstate	Poor (lowest range colors)
3	I-40; mm 55 to mm 57	55	57	Interstate	Good (blues)
4	I-40; mm 57 to mm 59	57	59	Interstate	Good (blues)
5	Patton Cove Rd; .1 miles N of I-40 to US 70	N/A	N/A	Secondary	Good (blues)
6	US 70; Patton Cove Rd to Lytle Cove Rd	N/A	N/A	Primary	Good (blues)
7	US 70; Lytle Cove Rd to Blue Ridge Rd	N/A	N/A	Primary	Good (blues)
8	US 70; Blue Ridge Rd to Cragmont Rd	N/A	N/A	Primary	Good (blues)
9	US 70; Cragmont Rd to NC 9	N/A	N/A	Primary	Average (mid range colors)
NOT RATED	NC 9; US 70 to Blue Ridge Rd				
10	NC 9; Blue Ridge Rd to Old Lakey Gap Rd	N/A	N/A	Primary	Good (blues)
11	NC 9; Old Lakey Gap Rd to Chesnut Hill Rd	N/A	N/A	Primary	Good (blues)
12	Chesnut Hill Rd; just W of NC 9 where surface changes to Wright Loop	N/A	N/A	Secondary	Good (blues)
13	Chesnut Hill Rd; Wright Loop to Echo Lake Dr	N/A	N/A	Secondary	Average (mid range colors)
14	Old Fort Rd; Echo Lake Dr to Weldon Way	N/A	N/A	Secondary	Average (mid range colors)
15	Old Fort Rd; Weldon Way to Wrights Cove	N/A	N/A	Secondary	Average (mid range colors)
16	Old Fort Rd; Wrights Cove Rd to US 74	N/A	N/A	Secondary	Good (blues)
17	US 74; .1 miles N of Old Fort Rd to Old Charlotte Hwy	N/A	N/A	Primary	Average (mid range colors)
18	US 74; Old Charlotte Hwy to .1 miles S of Charles Lytle Ln	N/A	N/A	Primary	Good (blues)
19	US 74; .1 miles S of Charles Lytle Ln to .4 miles South of Hemphill	N/A	N/A	Primary	Good (blues)
NOT RATED	US 74; .4 miles South of Hemphill to I-240 Tunnel Rd				
Apprx course time = 1 hr 4 minutes (37 miles)					
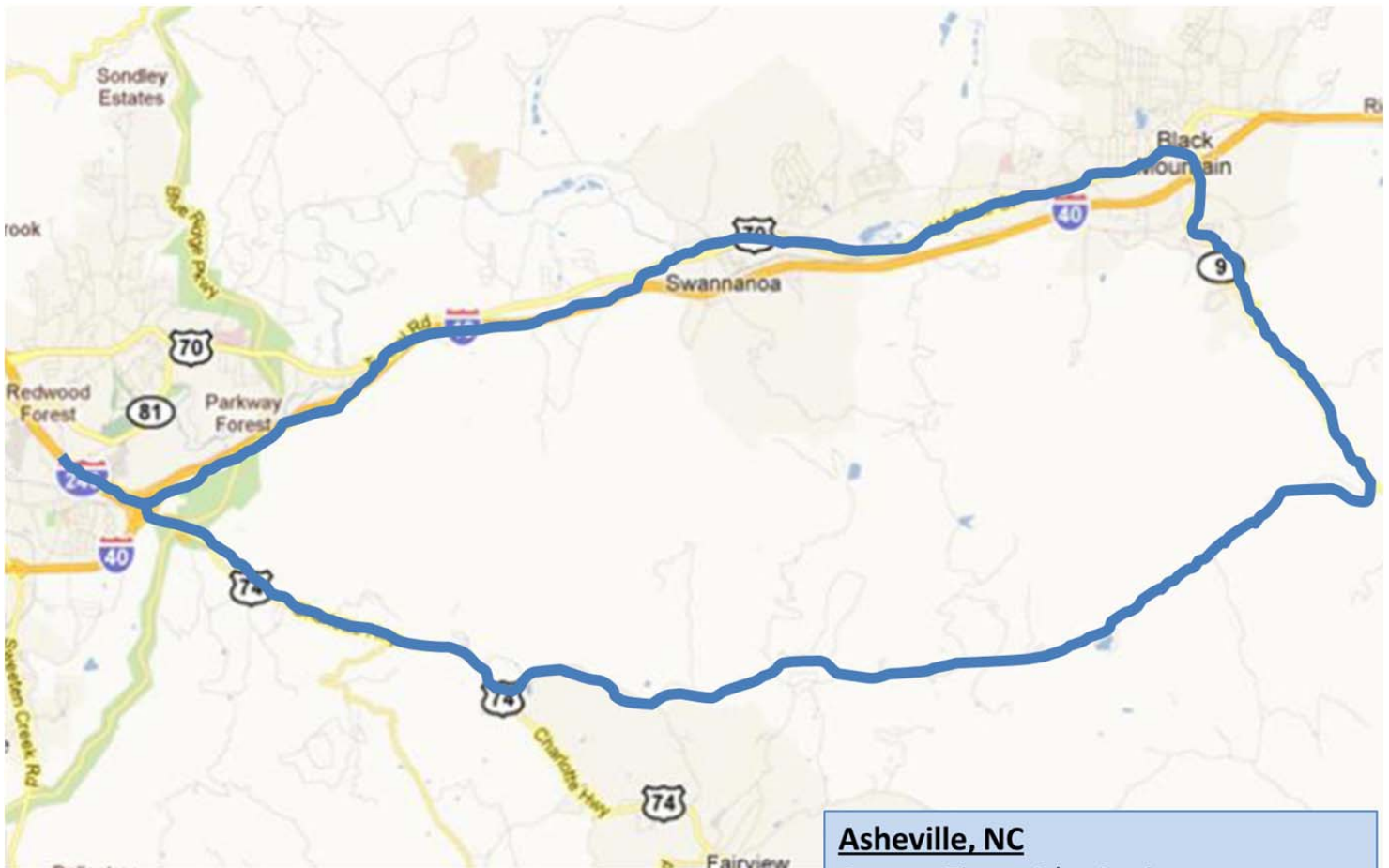
Asheville, NC
Course Time: 1 hr 4 min
Approximate Course Length: 37 miles

Charlotte - Oct 6

SECTION	DESCRIPTION	START/END mm		Type of Highway	General Condition
PRACTICE	US 74; Stallings to Indian Trail Fairview Rd	N/A	N/A	Primary	Good (blues)
2	US 74; Indian Trail Fairview Rd to Sardis Church Rd	N/A	N/A	Primary	Good (blues)
3	US 74; Sardis Church Rd to Rocky River Rd	N/A	N/A	Primary	Good (blues)
5	North Rocky River Rd; US 74 to Old Charlotte Highway	N/A	N/A	Secondary	Average (mid range colors)
6	Old Charlotte Hwy; Rocky River Rd to Ashton	N/A	N/A	Secondary	Average (mid range colors)
NOT RATED	Old Charlotte Hwy; Ashton to MLK				
7	MLK Blvd; .2 miles W of Old Charlotte Hwy to NC 84	N/A	N/A	Secondary	Average (mid range colors)
8	NC 84; MLK blvd to 7 Oaks Dr	N/A	N/A	Primary	Good (blues)
	NC 84; 7 Oaks Dr to S Rocky River Rd	N/A	N/A	Primary	Good (blues)
9	S Rocky River Rd; NC 84 to NC 75	N/A	N/A	Secondary	Average (mid range colors)
10	NC 75; S Rocky River Rd to Mineral Springs City Limit sign (.4 miles east of Potter)	N/A	N/A	Primary	Poor
11	NC 75; Potter Rd to Collins Rd	N/A	N/A	Primary	Poor
	NC 75; Collins Rd to .1 mile East of Old Providence	N/A	N/A	Primary	Poor
NOT RATED	NC 75; Old Providence to NC 16 (Providence RD)				
NOT RATED	NC 16 Broome; NC 75 to Red Oaks				
12	Providence Rd; Red Oaks to . 2 miles South Kensington Dr	N/A	N/A	Secondary	Good (blues)
NOT RATED	Providence Rd; Kensington Dr to Gray Byrum				
13	Providence Rd; Gray Byrum to .1 miles South of Avanti (surface change)	N/A	N/A	Secondary	Good (blues)
NOT RATED	Providence Rd; Avanti to .1 miles N of New Town (surface Change)				
	Providence Rd; .1 mile N of New Town to Chamberleyne	N/A	N/A	Secondary	Good (blues)
14	Providence Rd; Rae Rd to Audrey Kell Rd	N/A	N/A	Secondary	Good (blues)
NOT RATED	Providence Rd; Audrey Kell to I-485				
15	I-485; .8 miles East of Providence Rd to mm 54.8	56	54.8	Interstate	Average (mid range colors)
16	I-485; mm 54.8 to Matthews Exit	54.8	52.4	Interstate	Average (mid range colors)
17	I-485; Matthews Exit to US 74	52.4	51.4	Interstate	Average (mid range colors)
Apprx course time = 1 hr 1 minutes (41 miles)					

Charlotte, NC
Course Time: 1 hr 1 min
Approximate Course Length: 41 miles
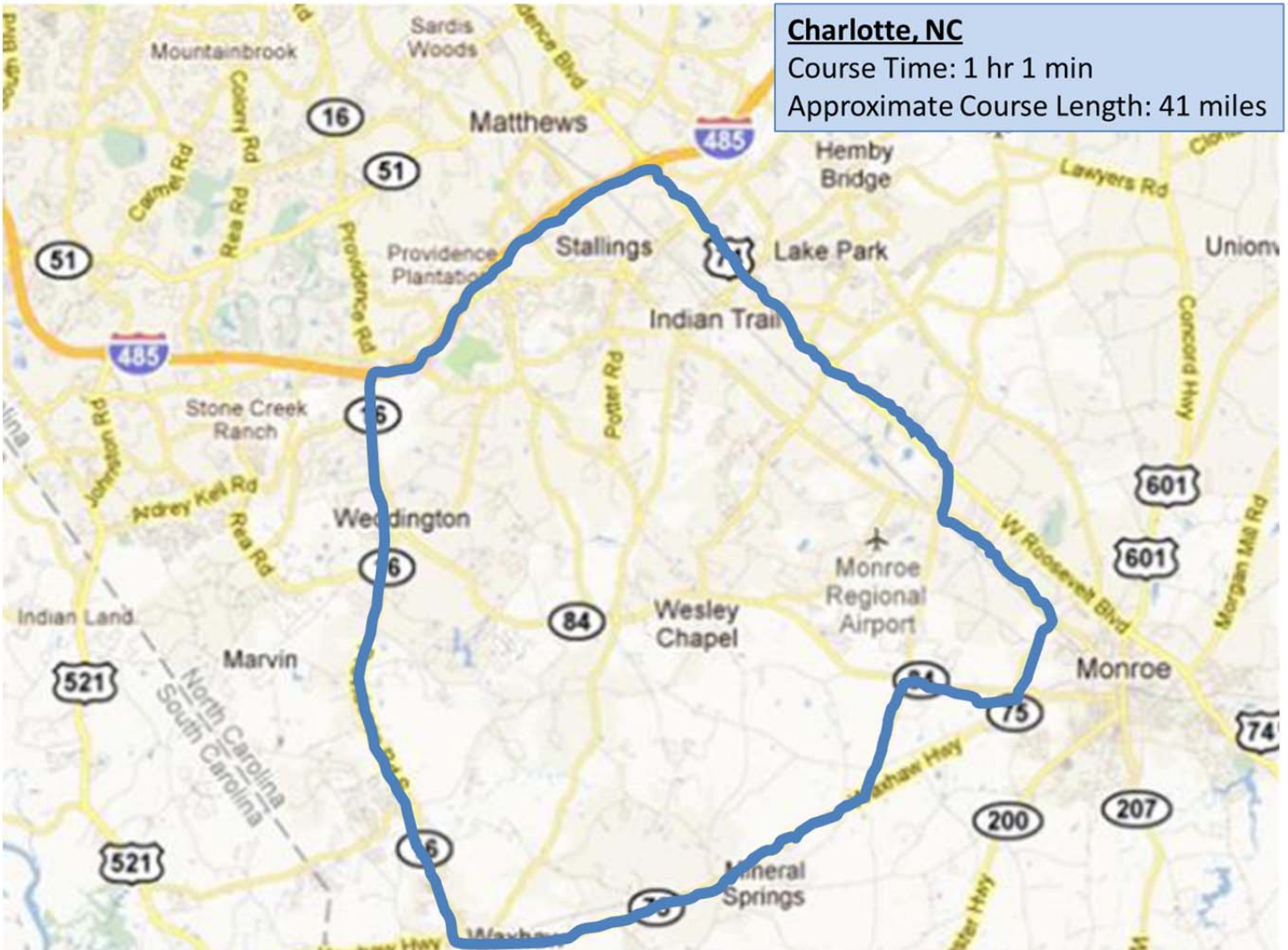
Burlington - Oct 10

SECTION	DESCRIPTION	START/END mm		Type of Highway	General Condition
PRACTICE	I-40/85; University Dr to mm 139	140	139	Interstate	Good (blues)
1	I-40/85; mm 139 to NC 61	139	137.7	Interstate	Good (blues)
2	I-40/85; NC 61 to Rock Creek Diary Rd	137	135.8	Interstate	Good (blues)
3	I-40/85; Just after Rock Creek Diary Rd to Mt Hope Church Rd	134.7	132.6	Interstate	Poor (lowest range colors)
4	Mt Hope Church Rd; .5 miles S of Millstream (AT&T Dr) to Mc Connell Rd	N/A	N/A	Secondary	Poor (lowest range colors)
5	Mt Hope church Rd; McConnell to Cook Stewart Rd	N/A	N/A	Secondary	Poor (lowest range colors)
6	Mt Hope Church Rd; Cook Stewart Rd to Baseman Rd	N/A	N/A	Secondary	Poor (lowest range colors)
7	Mt Hope Church Rd; Baseman Rd to Holts Store Rd	N/A	N/A	Secondary	Poor (lowest range colors)
8	Holts Store Rd; Mt Hope Church Rd to NC 61	N/A	N/A	Secondary	Poor (lowest range colors)
9	NC 61; Holts Store Rd to Herron Rd	N/A	N/A	Primary	Good (blues)
10	NC 61; Herron Rd to Homeview Rd	N/A	N/A	Primary	Good (blues)
11	NC 61; Homeview Rd to Konica Dr	N/A	N/A	Primary	Good (blues)
NOT RATED	NC 61; Konica Dr to Greeson Rd				
12	NC 61; Greeson Rd to US 70	N/A	N/A	Primary	
13	US 70; NC 61 to Brightwood Church Rd	N/A	N/A	Primary	Average (mid range colors)
14	US 70; Brightwood Church Rd to Golf House Rd East	N/A	N/A	Primary	Average (mid range colors)
NOT RATED	US 70; Gold House Rd East to .4 miles W of Rock Creek Diary Rd				
15	US 70; .4 miles W of Rock Creek Diary Rd to Knox Rd	N/A	N/A	Primary	Average (mid range colors)
NOT RATED	Knox Rd; US 70 to Bethel Church Rd				
16	Bethel Church Rd; Knox Rd to Sedalia Rd	N/A	N/A	Secondary	Good (blues)
17	Bethel Chruch Rd; .2 miles E of Sedalia Rd to St John church Rd	N/A	N/A	Secondary	Good (blues)
18	St Johns Rd; Bethel Church Rd to Carmon Rd	N/A	N/A	Secondary	Good (blues)
19	Carmon Rd; St Johns Church Rd to Falcon Rd	N/A	N/A	Secondary	Good (blues)
NOT RATED	Carmon Rd; Falcon Rd to Whitsett Ave (NC 61/100)				
NOT RATED	NC 100; Minneola Rd to Dew Sharpe Rd				
20	NC 100; Dew Sharpe Rd to US 70	N/A	N/A	Primary	Good (blues)
NOT RATED	US 70 and NC 61; from NC 100 to I-40	N/A	N/A		
21	I-40/85; NC 61 to University Dr	138	140	Interstate	Good (blues)
Apprx course time = 1 hr 8 minutes (44 miles)					

Burlington, NC
Course Time: 1 hr 8 min
Approximate Course Length: 44 miles

Rocky Mount - Oct 11

SECTION	DESCRIPTION	START/END mm		Type of Highway	General Condition
1	US 64; Winstead Ave to I-95	465.3	464.4	Primary	Good (blues)
2	I-95; US 64 to NC 43	139	140.3	Interstate	Average (mid range colors)
3	NC 43; Fluellin to Tharrington	N/A	N/A	Primary	Good (blues)
NOT RATED	**I-95; mm 141 to mm 143**	141	143		
4	I-95; mm 143 to NC 48	143	144.5	Interstate	Good (blues)
5	NC 48; NC 4 to Archibell Rd	N/A	N/A	Primary	Average (mid range colors)
6	NC 48; Archibell Rd to Swift Creek Rd	N/A	N/A	Primary	Average (mid range colors)
7	Swift Creek Rd; NC 48 to Lonesome Pine Rd	N/A	N/A	Secondary	Good (blues)
NOT RATED	**NC 33; NC 48 to I-95**				
8	NC 33; .1 mile east of I-95 to Watson Seed Farm	N/A	N/A	Primary	Good (blues)
9	Watson seed Farm Rd; NC 33 to Bellamy Mill Rd	N/A	N/A	Secondary	Good (blues)
10	Watson seed Farm Rd; Bellamy Mill Rd to Fred Coley	N/A	N/A	Secondary	Good (blues)
NOT RATED	**Watson seed Farm Rd; Fred Coley to US 301**				
11	US 301; Ruffin St to Etheridge St	N/A	N/A	Primary	Good (blues)
NOT RATED	**US 301; Etheridge St to Johnson Rd**				
12	US 301; .2 miles S of Johnston Rd to Ernest St	N/A	N/A	Primary	Average (mid range colors)
NOT RATED	**US 301; Ernest St to NC 4**				
13	US 301; .5 miles South of NC 4 (after merger) to Fenner Rd (where new surface starts)	N/A	N/A	Primary	Good (blues)
NOT RATED	**US 301; Fenner Rd (where new surface starts) to Jeffreys**				
14	Weslyn Blvd; Jeffreys to Tiffanys Blvd	N/A	N/A	Secondary	Good (blues)
NOT RATED	**Weslyn Blvd; Tiffanys Blvd to US 64**				
15	US 64; Weslyn Blvd to Winstead Ave	467.3	465.9	Primary	Good (blues)
Apprx course time = 1 hr 9 minutes (46 miles)					

Rocky Mount, NC
Course Time: 1 hr 9 min
Approximate Course Length: 46 miles
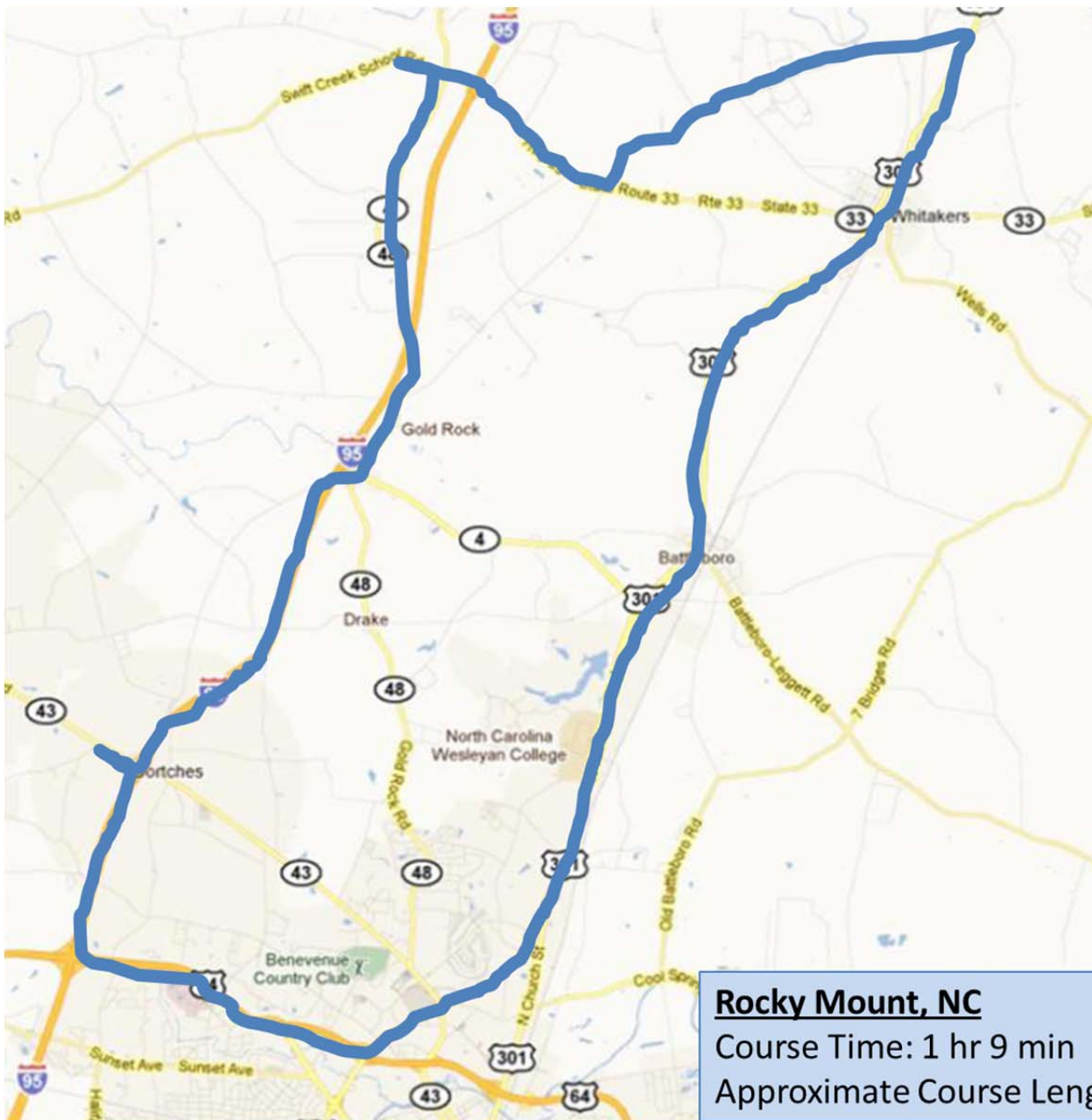
Wilmington - Oct 12

SECTION	DESCRIPTION	START/END mm		Type of Highway	General Condition
PRACTICE	I-140; I-40 to Castle Hayne Rd	20.3	18.3	Interstate	Good (blues)
1	I-140; Castle Hayne Rd to mm 16.7 (surface change)	17.4	16.7	Interstate	Good (blues)
2	I-140; mm 16.7 (surface change) to US 17	16.7	14	Interstate	Good (blues)
3	17 Bypass; Private Rd to mm 50	50.9	50	Primary	Average (mid range colors)
4	17 Bypass ; mm 50 to just before US 76 (mm49)	50	49	Primary	Average (mid range colors)
NOT RATED	over bridge to mm 47				
5	US 17/76/74; 17 Bypass to US 17	47	45	Primary	Good (blues)
6	US 17; US 76 to Collins RD	44	42.5	Primary	Poor (lowest range colors)
7	US 17; Just after Collins Rd to Goodman	42	40.2	Primary	Poor (lowest range colors)
8	US 17/87; Just after Goodman to NC 87	40	41	Primary	Average (mid range colors)
9	NC 87 Maco Rd; US 17 to Grayson Park (turn around Grayson Park)	N/A	N/A	Secondary	Average (mid range colors)
NOT RATED	US 17/87; Maco Rd to Old Towne Creek				
10	Old Towne Creek Rd; US 17 to Tharp (Surface Change)	N/A	N/A	Secondary	Average (mid range colors)
NOT RATED	US17/87; Old Towne Creek to just after Zion Church RD (surface change)				
11	US 17/87; just after Zion Church Rd (surface change) to Governors Rd	38.2	36.6	Primary	Good (blues)
12	Governors Rd; US 17/87 to Gordon Lewis	N/A	N/A	Secondary	Average (mid range colors)
13	Governors Rd; Gordon Lewis to US 17/87	N/A	N/A	Secondary	Average (mid range colors)
14	US 17/87; Governors Rd to Surface change just before Zion Church Rd	36.6	38.2	Primary	Average (mid range colors)
15	US 17/87; Zion Church Rd to Hewett Burton Rd	38.2	40	Primary	Average (mid range colors)
16	US 17/87; Hewett Burton Rd to Lanvale Rd	40	41	Primary	Good (blues)
17	Lanvale Rd; US 17/87 to Kingsbridge Rd	N/A	N/A	Secondary	Average (mid range colors)
18	Lanvale Rd; Kingsbridge Rd to Lights	N/A	N/A	Secondary	Average (mid range colors)
19	Lanvale Rd; Lights to Village (Just before US 74)	N/A	N/A	Secondary	Average (mid range colors)
20	US 74; Lanvale Rd to Bridge	N/A	N/A	Primary	Good (blues)
21	US 74; Bridge to Bolivia Exit US 17/74/76	43	44.2	Primary	Good (blues)
22	US 17/74/76; from .5 E of Bolivia Exit to I40/I140 Exit	44.6	46.8	Primary	Good (blues)
NOT RATED	OVER BRIDGE to just past gas station (mm 49)	47	49		
23	17 Bypass; mm 49 to RR crossing	49	50.7	Primary	Average (mid range colors)
NOT RATED	17 Bypass; RR crossing to I140	50.7	51.4		
NOT RATED	I-140; 17 bypass over bridge to mm16	14	16		
24	I-140; mm 16 just after bridge to mm 17 surface change	16	17	Interstate	Good (blues)
25	I-140; mm 17 just after surface change to mm19	17	19	Interstate	Good (blues)
Apprx course time = 1 hr 16 minutes (56 miles)					

Wilmington, NC
Course Time: 1 hr 14 min
Approximate Course Length: 53 miles

Appendix E:
Survey Instruments

North Carolina
Roadway Review Survey
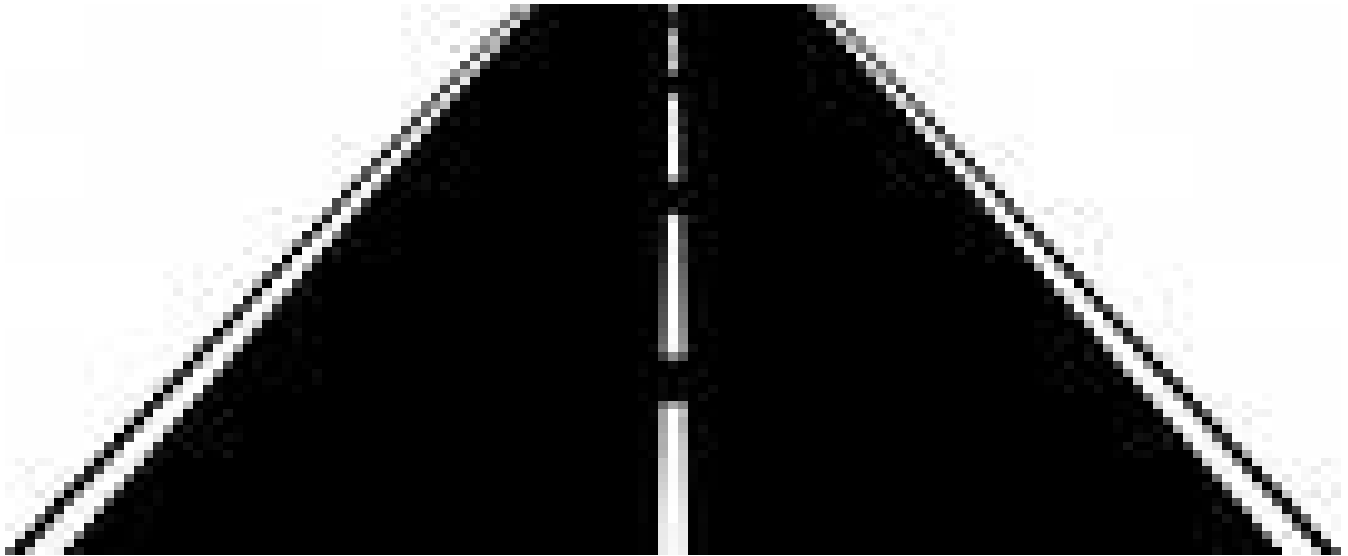
Overview

Condition Rating: Please use the following as a guide when assigning ratings for the condition of various features:

- 5: *Greatly exceeds* your basic expectations
- 4: *Exceeds* your basic expectations
- 3: *Meets* your basic expectations
- 2: *Does not quite meet* your basic expectations
- 1: *Fails to meet* your basic expectations

Importance Ratings: After you complete several sections on a specific type of highway, you will be asked to rate the importance of various highway features. Rate the importance of each of the items with regard to your experience on the section of highway you have just completed.

Please do not discuss your opinions about the condition of any highway during the course. At the end of the course, your moderator will give you an opportunity to make comments and express your opinion about various issues.

- *If you have any questions during the course*, please ask your Moderator.
- *We will stop for a 5-10 minute break halfway through the course*.
- *The course is provided below*.
- **The moderator will announce the start time for each section of the course and will also announce when that section of the course is complete.**

COURSE ROUTE

Burlington

SECTION	DESCRIPTION	START/END mm		Type of Highway
PRACTICE	Mt Hope Church Rd; .5 miles S of Millstream (AT&T Dr) to Mc Connell Rd	N/A	N/A	Secondary
1(1)	Mt Hope church Rd; McConnell to Cook Stewart Rd	N/A	N/A	Secondary
1(2)	Mt Hope Church Rd; Cook Stewart Rd to Baseman Rd	N/A	N/A	Secondary
1(3)	Mt Hope Church Rd; Baseman Rd to Holts Store Rd	N/A	N/A	Secondary
2(1)	Holts Store Rd; Mt Hope Church Rd to NC 61	N/A	N/A	Secondary
3(1)	NC 61; Holts Store Rd to Herron Rd	N/A	N/A	Primary
3(2)	NC 61; Herron Rd to Homeview Rd	N/A	N/A	Primary
3(3)	NC 61; Homeview Rd to Konica Dr	N/A	N/A	Primary
NOT RATED	**NC 61; Konica Dr to Greeson Rd**			
3(4)	NC 61; Greeson Rd to US 70	N/A	N/A	Primary
4(1)	US 70; NC 61 to Brightwood Church Rd	N/A	N/A	Primary
4(2)	US 70; Brightwood Church Rd to Golf House Rd East	N/A	N/A	Primary
NOT RATED	**US 70; Gold House Rd East to .4 miles W of Rock Creek Diary Rd**			
4(3)	US 70; .4 miles W of Rock Creek Diary Rd to Knox Rd	N/A	N/A	Primary
NOT RATED	**Knox Rd; US 70 to Bethel Church Rd**			
5(1)	Bethel Church Rd; Knox Rd to Sedalia Rd	N/A	N/A	Secondary
5(2)	Bethel Chruch Rd; .2 miles E of Sedalia Rd to St John church Rd	N/A	N/A	Secondary
6(1)	St Johns Rd; Bethel Church Rd to Carmon Rd	N/A	N/A	Secondary
7(1)	Carmon Rd; St Johns Church Rd to Falcon Rd	N/A	N/A	Secondary
NOT RATED	**Carmon Rd; Falcon Rd to Whitsett Ave (NC 61/100)**			
NOT RATED	**NC 100; Minneola Rd to Dew Sharpe Rd**			
8(1)	NC 100; Dew Sharpe Rd to US 70	N/A	N/A	Primary
NOT RATED	**US 70 and NC 61; from NC 100 to I-40**	N/A	N/A	
9(1)	I-40/85; NC 61 to University Dr	138	140	Interstate
9(2)	I-40/85; University Dr to mm 139	140	139	Interstate
9(3)	I-40/85; mm 139 to NC 61	139	137.7	Interstate
9(4)	I-40/85; NC 61 to Rock Creek Diary Rd	137	135.8	Interstate
9(5)	I-40/85; Just after Rock Creek Diary Rd to Mt Hope Church Rd	134.7	132.6	Interstate
Apprx course time = 1 hr 8 minutes (44 miles)				

The top sheets of this booklet will be separated from your survey to protect the confidentiality of your answers.

Name: _____

Street Address: _____

City: _____*State:* __North Carolina__ *Zip:* _____

Home or Work Phone: (_____)

E-mail address (if applicable): _____

PART I: CONDITION RATINGS   MILE MARKER

PRACTICE	Mt Hope Church Rd; .5 miles S of Millstream (AT&T Dr) to Mc Connell Rd	N/A	N/A	Secondary

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of <u>outside</u> (right) shoulders*	5	4	3	2	1
(E) *Width of <u>inside</u> (left)shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings* (*centerline and roadside striping*)	5	4	3	2	1
(I) *Reflectivity markers* (*if applicable*)	5	4	3	2	1
(J) *Lighting* (*if applicable*)	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness* (*lack of litter/debris*)	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

Comments: _____

PART I: CONDITION RATINGS   *MILE MARKER*

1(1)	Mt Hope church Rd; McConnell to Cook Stewart Rd	N/A	N/A	Secondary

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) **Width of lanes**	5	4	3	2	1
(B) **Smoothness** of the road surface	5	4	3	2	1
(C) **Physical condition of the road surface** (i.e., number of potholes/cracks)	5	4	3	2	1
(D) **Width of <u>outside</u> (right) shoulders**	5	4	3	2	1
(E) **Width of <u>inside</u> (left) shoulders**	5	4	3	2	1
(F) **Type of shoulder** (gravel, pavement, etc.)	5	4	3	2	1
(G) **How well traffic flows**	5	4	3	2	1
(H) **Roadway markings** (centerline and roadside striping)	5	4	3	2	1
(I) **Reflectivity markers** (if applicable)	5	4	3	2	1
(J) **Lighting** (if applicable)	5	4	3	2	1
(K) **Mowing & trimming along guard rails**	5	4	3	2	1
(L) **Mowing & trimming of all other areas**	5	4	3	2	1
(M) **Cleanliness** (lack of litter/debris)	5	4	3	2	1
(N) **Visibility of signs**	5	4	3	2	1
(O) **Condition of signs**	5	4	3	2	1
(X) **Overall condition** of this highway	5	4	3	2	1
(Y) **Overall appearance** of this highway	5	4	3	2	1
(Z) **Feeling of safety** on this highway	5	4	3	2	1

Comments: _____

PART I: CONDITION RATINGS   *MILE MARKER*

1(2)	Mt Hope Church Rd; Cook Stewart Rd to Baseman Rd	N/A	N/A	Secondary

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) **Width of lanes**	5	4	3	2	1
(B) **Smoothness** of the road surface	5	4	3	2	1
(C) **Physical condition of the road surface** (i.e., number of potholes/cracks)	5	4	3	2	1
(D) **Width of <u>outside (right)</u> shoulders**	5	4	3	2	1
(E) **Width of <u>inside</u> (left)shoulders**	5	4	3	2	1
(F) **Type of shoulder** (gravel, pavement, etc.)	5	4	3	2	1
(G) **How well traffic flows**	5	4	3	2	1
(H) **Roadway markings** (centerline and roadside striping)	5	4	3	2	1
(I) **Reflectivity markers** (if applicable)	5	4	3	2	1
(J) **Lighting** (if applicable)	5	4	3	2	1
(K) **Mowing & trimming along guard rails**	5	4	3	2	1
(L) **Mowing & trimming of all other areas**	5	4	3	2	1
(M) **Cleanliness** (lack of litter/debris)	5	4	3	2	1
(N) **Visibility of signs**	5	4	3	2	1
(O) **Condition of signs**	5	4	3	2	1
(X) **Overall condition** of this highway	5	4	3	2	1
(Y) **Overall appearance** of this highway	5	4	3	2	1
(Z) **Feeling of safety** on this highway	5	4	3	2	1

Comments: _____

PART I: CONDITION RATINGS   MILE MARKER

1(3)	Mt Hope Church Rd; Baseman Rd to Holts Store Rd	N/A	N/A	Secondary

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of <u>outside</u> (right) shoulders*	5	4	3	2	1
(E) *Width of <u>inside</u> (left)shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings* (centerline and roadside striping)	5	4	3	2	1
(I) *Reflectivity markers* (if applicable)	5	4	3	2	1
(J) *Lighting* (if applicable)	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness* (lack of litter/debris)	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

Comments: _____

PART II: IMPORTANCE RATINGS (Highway Type: Secondary)

Using a scale of 1 to 5 where 5 means EXTREMELY IMPORTANT and 1 means NOT IMPORTANT, please rate the importance of the following items when you travel on <u>Highways</u> similar to the one you just finished rating.

Importance

Features	Extremely Important	Very Important	Important	Less Important	Not Important
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of <u>outside</u> (right) shoulders*	5	4	3	2	1
(E) *Width of <u>inside</u> (left) shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings* (centerline and roadside striping)	5	4	3	2	1
(I) *Reflectivity markers* (if applicable)	5	4	3	2	1
(J) *Lighting* (if applicable)	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness* (lack of litter/debris)	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

Comments: _____

---

1. **Which THREE of these items are most important to your perception of the OVERALL <u>CONDITION</u> of <u>highways like the sections of Mt Hope Church Rd you just rated</u>?** [Write in the letters below using the letters from the list above – LIST UP TO 3 items].

    ____   ____   ____

2. **Which THREE of these items are most important to your feeling of <u>SAFETY</u> while traveling on <u>highways like the sections of Mt Hope Church Rd you just rated</u>?** [Write in the letters below using the letters from the list above- LIST UP TO 3 items].

    ____   ____   ____

3. **Which THREE of these items had the MOST impact on your perception of the <u>APPEARANCE</u> of <u>highways like the sections of Mt Hope Church Rd you just rated</u>?** [Write in the letters below using the letters from the list above - LIST UP TO 3 items].

    ____   ____   ____

PART I: CONDITION RATINGS   *MILE MARKER*

2(1)	Holts Store Rd; Mt Hope Church Rd to NC 61	N/A	N/A	Secondary

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) **Width of lanes**	5	4	3	2	1
(B) **Smoothness** of the road surface	5	4	3	2	1
(C) **Physical condition of the road surface** (i.e., number of potholes/cracks)	5	4	3	2	1
(D) **Width of _outside_ (right) shoulders**	5	4	3	2	1
(E) **Width of _inside_ (left)shoulders**	5	4	3	2	1
(F) **Type of shoulder** (gravel, pavement, etc.)	5	4	3	2	1
(G) **How well traffic flows**	5	4	3	2	1
(H) **Roadway markings** (centerline and roadside striping)	5	4	3	2	1
(I) **Reflectivity markers** (if applicable)	5	4	3	2	1
(J) **Lighting** (if applicable)	5	4	3	2	1
(K) **Mowing & trimming along guard rails**	5	4	3	2	1
(L) **Mowing & trimming of all other areas**	5	4	3	2	1
(M) **Cleanliness** (lack of litter/debris)	5	4	3	2	1
(N) **Visibility of signs**	5	4	3	2	1
(O) **Condition of signs**	5	4	3	2	1
(X) **Overall condition** of this highway	5	4	3	2	1
(Y) **Overall appearance** of this highway	5	4	3	2	1
(Z) **Feeling of safety** on this highway	5	4	3	2	1

Comments: _____

PART II: IMPORTANCE RATINGS (Highway Type: Secondary)

Using a scale of 1 to 5 where 5 means EXTREMELY IMPORTANT and 1 means NOT IMPORTANT, please rate the importance of the following items when you travel on <u>HIGHWAYS</u> similar to the highway you just finished rating.

<u>Importance</u>

Features	Extremely Important	Very Important	Important	Less Important	Not Important
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of <u>outside</u> (right) shoulders*	5	4	3	2	1
(E) *Width of <u>inside</u> (left) shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings* (centerline and roadside striping)	5	4	3	2	1
(I) *Reflectivity markers* (if applicable)	5	4	3	2	1
(J) *Lighting* (if applicable)	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness* (lack of litter/debris)	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

Comments: _____

1. **Which THREE of these items are most important to your perception of the OVERALL CONDITION of <u>highways like the sections of Holt Store Rd you just rated</u>?** [Write in the letters below using the letters from the list above – LIST UP TO 3 items].

   ____   ____   ____

2. **Which THREE of these items are most important to your feeling of <u>SAFETY</u> while traveling on <u>highways like the sections of Holt Store Rd you just rated?</u>**[Write in the letters below using the letters from the list above- LIST UP TO 3 items].

   ____   ____   ____

3. **Which THREE of these items had the MOST impact on your perception of the <u>APPEARANCE</u> of <u>highways like the sections of Holt Store Rd you just rated</u>?** [Write in the letters below using the letters from the list above - LIST UP TO 3 items].

   ____   ____   ____

PART I: CONDITION RATINGS   MILE MARKER

3(1)	NC 61; Holts Store Rd to Herron Rd	N/A	N/A	Primary

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of <u>outside</u> (right) shoulders*	5	4	3	2	1
(E) *Width of <u>inside</u> (left) shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings (centerline and roadside striping)*	5	4	3	2	1
(I) *Reflectivity markers (if applicable)*	5	4	3	2	1
(J) *Lighting (if applicable)*	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness (lack of litter/debris)*	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

Comments: _____

PART I: CONDITION RATINGS   MILE MARKER

3(2)	NC 61; Herron Rd to Homeview Rd	N/A	N/A	Primary

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of <u>outside</u> (right) shoulders*	5	4	3	2	1
(E) *Width of <u>inside</u> (left)shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings (centerline and roadside striping)*	5	4	3	2	1
(I) *Reflectivity markers (if applicable)*	5	4	3	2	1
(J) *Lighting (if applicable)*	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness (lack of litter/debris)*	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

Comments: _____

PART I: CONDITION RATINGS　　　MILE MARKER

3(3)	NC 61; Homeview Rd to Konica Dr	N/A	N/A	Primary

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) **Width of lanes**	5	4	3	2	1
(B) **Smoothness** of the road surface	5	4	3	2	1
(C) **Physical condition of the road surface** (i.e., number of potholes/cracks)	5	4	3	2	1
(D) **Width of <u>outside</u> (right) shoulders**	5	4	3	2	1
(E) **Width of <u>inside</u> (left) shoulders**	5	4	3	2	1
(F) **Type of shoulder** (gravel, pavement, etc.)	5	4	3	2	1
(G) **How well traffic flows**	5	4	3	2	1
(H) **Roadway markings** (centerline and roadside striping)	5	4	3	2	1
(I) **Reflectivity markers** (if applicable)	5	4	3	2	1
(J) **Lighting** (if applicable)	5	4	3	2	1
(K) **Mowing & trimming along guard rails**	5	4	3	2	1
(L) **Mowing & trimming of all other areas**	5	4	3	2	1
(M) **Cleanliness** (lack of litter/debris)	5	4	3	2	1
(N) **Visibility of signs**	5	4	3	2	1
(O) **Condition of signs**	5	4	3	2	1
(X) **Overall condition** of this highway	5	4	3	2	1
(Y) **Overall appearance** of this highway	5	4	3	2	1
(Z) **Feeling of safety** on this highway	5	4	3	2	1

Comments: _____

PART I: CONDITION RATINGS   *MILE MARKER*

3(4)	NC 61; Greeson Rd to US 70	N/A	N/A	Primary

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) **Width of lanes**	5	4	3	2	1
(B) **Smoothness** of the road surface	5	4	3	2	1
(C) **Physical condition of the road surface** (i.e., number of potholes/cracks)	5	4	3	2	1
(D) **Width of <u>outside</u> (right) shoulders**	5	4	3	2	1
(E) **Width of <u>inside</u> (left)shoulders**	5	4	3	2	1
(F) **Type of shoulder** (gravel, pavement, etc.)	5	4	3	2	1
(G) **How well traffic flows**	5	4	3	2	1
(H) **Roadway markings** (centerline and roadside striping)	5	4	3	2	1
(I) **Reflectivity markers** (if applicable)	5	4	3	2	1
(J) **Lighting** (if applicable)	5	4	3	2	1
(K) **Mowing & trimming along guard rails**	5	4	3	2	1
(L) **Mowing & trimming of all other areas**	5	4	3	2	1
(M) **Cleanliness** (lack of litter/debris)	5	4	3	2	1
(N) **Visibility of signs**	5	4	3	2	1
(O) **Condition of signs**	5	4	3	2	1
(X) **Overall condition** of this highway	5	4	3	2	1
(Y) **Overall appearance** of this highway	5	4	3	2	1
(Z) **Feeling of safety** on this highway	5	4	3	2	1

Comments: _____

PART II: IMPORTANCE RATINGS (Highway Type: Primary)

Using a scale of 1 to 5 where 5 means EXTREMELY IMPORTANT and 1 means NOT IMPORTANT, please rate the importance of the following items when you travel on <u>Highways</u> similar to the one you just finished rating.

	Importance				
Features	**Extremely Important**	**Very Important**	**Important**	**Less Important**	**Not Important**
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of <u>outside (right) shoulders</u>*	5	4	3	2	1
(E) *Width of <u>inside</u> (left) shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings* (centerline and roadside striping)	5	4	3	2	1
(I) *Reflectivity markers* (if applicable)	5	4	3	2	1
(J) *Lighting* (if applicable)	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness* (lack of litter/debris)	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

Comments: _____

---

1. **Which THREE of these items are most important to your perception of the OVERALL CONDITION of <u>highways like the sections of NC 61 you just rated</u>?** [Write in the letters below using the letters from the list above – LIST UP TO 3 items].

   _____   _____   _____

2. **Which THREE of these items are most important to your feeling of <u>SAFETY</u> while traveling on <u>highways like the sections of NC 61 you just rated?</u>**[Write in the letters below using the letters from the list above- LIST UP TO 3 items].

   _____   _____   _____

3. **Which THREE of these items had the MOST impact on your perception of the <u>APPEARANCE</u> of <u>highways like the sections of NC 61 you just rated</u>?** [Write in the letters below using the letters from the list above - LIST UP TO 3 items].

   _____   _____   _____

PART I: CONDITION RATINGS   MILE MARKER

4(1)	US 70; NC 61 to Brightwood Church Rd	N/A	N/A	Primary

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of <u>outside</u> (right) shoulders*	5	4	3	2	1
(E) *Width of <u>inside</u> (left) shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings* (centerline and roadside striping)	5	4	3	2	1
(I) *Reflectivity markers* (if applicable)	5	4	3	2	1
(J) *Lighting* (if applicable)	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness* (lack of litter/debris)	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

Comments: _____

PART I: CONDITION RATINGS   MILE MARKER

4(2)	US 70; Brightwood Church Rd to Golf House Rd East	N/A	N/A	Primary

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) **Width of lanes**	5	4	3	2	1
(B) **Smoothness** of the road surface	5	4	3	2	1
(C) **Physical condition of the road surface** (i.e., number of potholes/cracks)	5	4	3	2	1
(D) **Width of <u>outside</u> (right) shoulders**	5	4	3	2	1
(E) **Width of <u>inside</u> (left) shoulders**	5	4	3	2	1
(F) **Type of shoulder** (gravel, pavement, etc.)	5	4	3	2	1
(G) **How well traffic flows**	5	4	3	2	1
(H) **Roadway markings** (centerline and roadside striping)	5	4	3	2	1
(I) **Reflectivity markers** (if applicable)	5	4	3	2	1
(J) **Lighting** (if applicable)	5	4	3	2	1
(K) **Mowing & trimming along guard rails**	5	4	3	2	1
(L) **Mowing & trimming of all other areas**	5	4	3	2	1
(M) **Cleanliness** (lack of litter/debris)	5	4	3	2	1
(N) **Visibility of signs**	5	4	3	2	1
(O) **Condition of signs**	5	4	3	2	1
(X) **Overall condition** of this highway	5	4	3	2	1
(Y) **Overall appearance** of this highway	5	4	3	2	1
(Z) **Feeling of safety** on this highway	5	4	3	2	1

Comments: _____

PART I: CONDITION RATINGS   MILE MARKER

4(3)	US 70; .4 miles W of Rock Creek Diary Rd to Knox Rd	N/A	N/A	Primary

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of outside (right) shoulders*	5	4	3	2	1
(E) *Width of inside (left)shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings* (centerline and roadside striping)	5	4	3	2	1
(I) *Reflectivity markers* (if applicable)	5	4	3	2	1
(J) *Lighting* (if applicable)	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness* (lack of litter/debris)	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

Comments: _____

PART II: IMPORTANCE RATINGS (Highway Type: Primary)

Using a scale of 1 to 5 where 5 means EXTREMELY IMPORTANT and 1 means NOT IMPORTANT, please rate the importance of the following items when you travel on HIGHWAYS similar to the highway you just finished rating.

<u>Importance</u>

Features	Extremely Important	Very Important	Important	Less Important	Not Important
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of <u>outside</u> (right) shoulders*	5	4	3	2	1
(E) *Width of <u>inside</u> (left)shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings* (centerline and roadside striping)	5	4	3	2	1
(I) *Reflectivity markers* (if applicable)	5	4	3	2	1
(J) *Lighting* (if applicable)	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness* (lack of litter/debris)	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

Comments: _____

---

1. **Which THREE of these items are most important to your perception of the OVERALL <u>CONDITION</u> of <u>highways like the sections of US 70 you just rated</u>?** [Write in the letters below using the letters from the list above – LIST UP TO 3 items].

   ____   ____   ____

2. **Which THREE of these items are most important to your feeling of <u>SAFETY</u> while traveling on <u>highways like the sections of US 70 you just rated</u>?** [Write in the letters below using the letters from the list above- LIST UP TO 3 items].

   ____   ____   ____

3. **Which THREE of these items had the MOST impact on your perception of the <u>APPEARANCE</u> of <u>highways like the sections of US 70 you just rated</u>?** [Write in the letters below using the letters from the list above - LIST UP TO 3 items].

   ____   ____   ____

PART I: CONDITION RATINGS   *MILE MARKER*

5(1)	Bethel Church Rd; Knox Rd to Sedalia Rd	N/A	N/A	Secondary

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of **outside** (right) shoulders*	5	4	3	2	1
(E) *Width of **inside** (left)shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings (centerline and roadside striping)*	5	4	3	2	1
(I) *Reflectivity markers (if applicable)*	5	4	3	2	1
(J) *Lighting (if applicable)*	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness (lack of litter/debris)*	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

Comments: _____

PART I: CONDITION RATINGS   MILE MARKER

5(2)	Bethel Chruch Rd; .2 miles E of Sedalia Rd to St John church Rd	N/A	N/A	Secondary

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of <u>outside (right)</u> shoulders*	5	4	3	2	1
(E) *Width of <u>inside</u> (left) shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings* (centerline and roadside striping)	5	4	3	2	1
(I) *Reflectivity markers* (if applicable)	5	4	3	2	1
(J) *Lighting* (if applicable)	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness* (lack of litter/debris)	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

Comments: _____

PART II: IMPORTANCE RATINGS (Highway Type: Secondary)
Using a scale of 1 to 5 where 5 means EXTREMELY IMPORTANT and 1 means NOT IMPORTANT, please rate the importance of the following items when you travel on <u>HIGHWAYS</u> similar to the highway you just finished rating.

<u>Importance</u>

Features	Extremely Important	Very Important	Important	Less Important	Not Important
(A) ***Width of lanes***	5	4	3	2	1
(B) ***Smoothness*** of the road surface	5	4	3	2	1
(C) ***Physical condition of the road surface*** (i.e., number of potholes/cracks)	5	4	3	2	1
(D) ***Width of <u>outside</u> (right) shoulders***	5	4	3	2	1
(E) ***Width of <u>inside</u> (left)shoulders***	5	4	3	2	1
(F) ***Type of shoulder*** (gravel, pavement, etc.)	5	4	3	2	1
(G) ***How well traffic flows***	5	4	3	2	1
(H) ***Roadway markings*** *(centerline and roadside striping)*	5	4	3	2	1
(I) ***Reflectivity markers*** *(if applicable)*	5	4	3	2	1
(J) ***Lighting*** *(if applicable)*	5	4	3	2	1
(K) ***Mowing & trimming along guard rails***	5	4	3	2	1
(L) ***Mowing & trimming of all other areas***	5	4	3	2	1
(M) ***Cleanliness*** *(lack of litter/debris)*	5	4	3	2	1
(N) ***Visibility of signs***	5	4	3	2	1
(O) ***Condition of signs***	5	4	3	2	1
(X) ***Overall condition*** of this highway	5	4	3	2	1
(Y) ***Overall appearance*** of this highway	5	4	3	2	1
(Z) ***Feeling of safety*** on this highway	5	4	3	2	1

*Comments***: _____**

---

1. **Which THREE of these items are most important to your perception of the OVERALL CONDITION of <u>highways like the sections of Bethel Church Rd you just rated</u>?** [Write in the letters below using the letters from the list above – LIST UP TO 3 items].

    ____   ____   ____

2. **Which THREE of these items are most important to your feeling of <u>SAFETY</u> while traveling on <u>highways like the sections of Bethel Church Rd you just rated?</u>**[Write in the letters below using the letters from the list above- LIST UP TO 3 items].

    ____   ____   ____

3. **Which THREE of these items had the MOST impact on your perception of the <u>APPEARANCE</u> of <u>highways like the sections of Bethel Church Rd you just rated</u>?** [Write in the letters below using the letters from the list above - LIST UP TO 3 items].

    ____   ____   ____

PART I: CONDITION RATINGS   MILE MARKER

6(1)	St Johns Rd; Bethel Church Rd to Carmon Rd	N/A	N/A	Secondary

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of <u>outside</u> (right) shoulders*	5	4	3	2	1
(E) *Width of <u>inside</u> (left)shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings* (centerline and roadside striping)	5	4	3	2	1
(I) *Reflectivity markers* (if applicable)	5	4	3	2	1
(J) *Lighting* (if applicable)	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness* (lack of litter/debris)	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

*Comments***: _____

PART II: IMPORTANCE RATINGS (Highway Type: Secondary)

Using a scale of 1 to 5 where 5 means EXTREMELY IMPORTANT and 1 means NOT IMPORTANT, please rate the importance of the following items when you travel on HIGHWAYS similar to the highway you just finished rating.

<div align="center"><u>Importance</u></div>

Features	Extremely Important	Very Important	Important	Less Important	Not Important
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of <u>outside</u> (right) shoulders*	5	4	3	2	1
(E) *Width of <u>inside</u> (left)shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings (centerline and roadside striping)*	5	4	3	2	1
(I) *Reflectivity markers (if applicable)*	5	4	3	2	1
(J) *Lighting (if applicable)*	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness (lack of litter/debris)*	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

Comments: _____

---

1. **Which THREE of these items are most important to your perception of the OVERALL CONDITION of <u>highways like the sections of St Johns Rd you just rated</u>?** [Write in the letters below using the letters from the list above – LIST UP TO 3 items].

    ____   ____   ____

2. **Which THREE of these items are most important to your feeling of <u>SAFETY</u> while traveling on <u>highways like the sections of St Johns Rd you just rated?</u>**[Write in the letters below using the letters from the list above- LIST UP TO 3 items].

    ____   ____   ____

3. **Which THREE of these items had the MOST impact on your perception of the <u>APPEARANCE</u> of <u>highways like the sections of St Johns Rd you just rated</u>?** [Write in the letters below using the letters from the list above - LIST UP TO 3 items].

    ____   ____   ____

PART I: CONDITION RATINGS   *MILE MARKER*

	Carmon Rd; St Johns Church Rd to Falcon Rd			
7(1)		N/A	N/A	Secondary

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of <u>outside</u> (right) shoulders*	5	4	3	2	1
(E) *Width of <u>inside</u> (left)shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings* (centerline and roadside striping)	5	4	3	2	1
(I) *Reflectivity markers* (if applicable)	5	4	3	2	1
(J) *Lighting* (if applicable)	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness* (lack of litter/debris)	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

Comments: _____

PART II: IMPORTANCE RATINGS (Highway Type: Secondary)

Using a scale of 1 to 5 where 5 means EXTREMELY IMPORTANT and 1 means NOT IMPORTANT, please rate the importance of the following items when you travel on __HIGHWAYS__ similar to the highway you just finished rating.

Importance

Features	Extremely Important	Very Important	Important	Less Important	Not Important
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of <u>outside</u> (right) shoulders*	5	4	3	2	1
(E) *Width of <u>inside</u> (left)shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings* (centerline and roadside striping)	5	4	3	2	1
(I) *Reflectivity markers* (if applicable)	5	4	3	2	1
(J) *Lighting* (if applicable)	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness* (lack of litter/debris)	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

Comments: _____

---

1. **Which THREE of these items are most important to your perception of the OVERALL CONDITION of <u>highways like the sections of Carmon Rd you just rated?</u>** [Write in the letters below using the letters from the list above – LIST UP TO 3 items].

   ____   ____   ____

2. **Which THREE of these items are most important to your feeling of <u>SAFETY</u> while traveling on <u>highways like the sections of Carmon Rd you just rated?</u>**[Write in the letters below using the letters from the list above- LIST UP TO 3 items].

   ____   ____   ____

3. **Which THREE of these items had the MOST impact on your perception of the <u>APPEARANCE</u> of <u>highways like the sections of Carmon Rd you just rated?</u>** [Write in the letters below using the letters from the list above - LIST UP TO 3 items].

   ____   ____   ____

PART I: CONDITION RATINGS   MILE MARKER

8(1)	NC 100; Dew Sharpe Rd to US 70	N/A	N/A	Primary

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of outside (right) shoulders*	5	4	3	2	1
(E) *Width of inside (left)shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings* (centerline and roadside striping)	5	4	3	2	1
(I) *Reflectivity markers* (if applicable)	5	4	3	2	1
(J) *Lighting* (if applicable)	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness* (lack of litter/debris)	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

Comments: _____

PART II: IMPORTANCE RATINGS *(Highway Type: Primary)*

Using a scale of 1 to 5 where 5 means EXTREMELY IMPORTANT and 1 means NOT IMPORTANT, please rate the importance of the following items when you travel on Highways similar to the one you just finished rating.

Importance

Features	Extremely Important	Very Important	Important	Less Important	Not Important
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of <u>outside</u> (right) shoulders*	5	4	3	2	1
(E) *Width of <u>inside</u> (left)shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings* (centerline and roadside striping)	5	4	3	2	1
(I) *Reflectivity markers* (if applicable)	5	4	3	2	1
(J) *Lighting* (if applicable)	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness* (lack of litter/debris)	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

Comments: _____

_____

1. **Which THREE of these items are most important to your perception of the OVERALL CONDITION of <u>highways like the sections of NC 100 you just rated</u>?** [Write in the letters below using the letters from the list above – LIST UP TO 3 items].

   ____   ____   ____

2. **Which THREE of these items are most important to your feeling of <u>SAFETY</u> while traveling on <u>highways like the sections of NC 100 you just rated</u>?**[Write in the letters below using the letters from the list above- LIST UP TO 3 items].

   ____   ____   ____

3. **Which THREE of these items had the MOST impact on your perception of the <u>APPEARANCE</u> of <u>highways like the sections of NC 100 you just rated</u>?** [Write in the letters below using the letters from the list above - LIST UP TO 3 items].

   ____   ____   ____

PART I: CONDITION RATINGS *MILE MARKER*

9(1)	I-40/85; NC 61 to University Dr	138	140	Interstate

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) **Width of lanes**	5	4	3	2	1
(B) **Smoothness** of the road surface	5	4	3	2	1
(C) **Physical condition of the road surface** (i.e., number of potholes/cracks)	5	4	3	2	1
(D) **Width of <u>outside</u> (right) shoulders**	5	4	3	2	1
(E) **Width of <u>inside</u> (left)shoulders**	5	4	3	2	1
(F) **Type of shoulder** (gravel, pavement, etc.)	5	4	3	2	1
(G) **How well traffic flows**	5	4	3	2	1
(H) **Roadway markings** (centerline and roadside striping)	5	4	3	2	1
(I) **Reflectivity markers** (if applicable)	5	4	3	2	1
(J) **Lighting** (if applicable)	5	4	3	2	1
(K) **Mowing & trimming along guard rails**	5	4	3	2	1
(L) **Mowing & trimming of all other areas**	5	4	3	2	1
(M) **Cleanliness** (lack of litter/debris)	5	4	3	2	1
(N) **Visibility of signs**	5	4	3	2	1
(O) **Condition of signs**	5	4	3	2	1
(X) **Overall condition** of this highway	5	4	3	2	1
(Y) **Overall appearance** of this highway	5	4	3	2	1
(Z) **Feeling of safety** on this highway	5	4	3	2	1

Comments: _____

PART I: CONDITION RATINGS   *MILE MARKER*

9(2)	I-40/85; University Dr to mm 139	140	139	Interstate

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of <u>outside</u> (right) shoulders*	5	4	3	2	1
(E) *Width of <u>inside</u> (left) shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings* (centerline and roadside striping)	5	4	3	2	1
(I) *Reflectivity markers* (if applicable)	5	4	3	2	1
(J) *Lighting* (if applicable)	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness* (lack of litter/debris)	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

Comments: _____

PART I: CONDITION RATINGS   *MILE MARKER*

9(3)	I-40/85; mm 139 to NC 61	139	137.7	Interstate

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) **Width of lanes**	5	4	3	2	1
(B) **Smoothness** of the road surface	5	4	3	2	1
(C) **Physical condition of the road surface** (i.e., number of potholes/cracks)	5	4	3	2	1
(D) **Width of <u>outside</u> (right) shoulders**	5	4	3	2	1
(E) **Width of <u>inside</u> (left) shoulders**	5	4	3	2	1
(F) **Type of shoulder** (gravel, pavement, etc.)	5	4	3	2	1
(G) **How well traffic flows**	5	4	3	2	1
(H) **Roadway markings** (centerline and roadside striping)	5	4	3	2	1
(I) **Reflectivity markers** (if applicable)	5	4	3	2	1
(J) **Lighting** (if applicable)	5	4	3	2	1
(K) **Mowing & trimming along guard rails**	5	4	3	2	1
(L) **Mowing & trimming of all other areas**	5	4	3	2	1
(M) **Cleanliness** (lack of litter/debris)	5	4	3	2	1
(N) **Visibility of signs**	5	4	3	2	1
(O) **Condition of signs**	5	4	3	2	1
(X) **Overall condition** of this highway	5	4	3	2	1
(Y) **Overall appearance** of this highway	5	4	3	2	1
(Z) **Feeling of safety** on this highway	5	4	3	2	1

Comments: _____

PART I: CONDITION RATINGS   *MILE MARKER*

9(4)	I-40/85; NC 61 to Rock Creek Diary Rd	137	135.8	Interstate

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) **Width of lanes**	5	4	3	2	1
(B) **Smoothness** of the road surface	5	4	3	2	1
(C) **Physical condition of the road surface** (i.e., number of potholes/cracks)	5	4	3	2	1
(D) **Width of *outside* (right) shoulders**	5	4	3	2	1
(E) **Width of *inside* (left)shoulders**	5	4	3	2	1
(F) **Type of shoulder** (gravel, pavement, etc.)	5	4	3	2	1
(G) **How well traffic flows**	5	4	3	2	1
(H) **Roadway markings** (centerline and roadside striping)	5	4	3	2	1
(I) **Reflectivity markers** (if applicable)	5	4	3	2	1
(J) **Lighting** (if applicable)	5	4	3	2	1
(K) **Mowing & trimming along guard rails**	5	4	3	2	1
(L) **Mowing & trimming of all other areas**	5	4	3	2	1
(M) **Cleanliness** (lack of litter/debris)	5	4	3	2	1
(N) **Visibility of signs**	5	4	3	2	1
(O) **Condition of signs**	5	4	3	2	1
(X) **Overall condition** of this highway	5	4	3	2	1
(Y) **Overall appearance** of this highway	5	4	3	2	1
(Z) **Feeling of safety** on this highway	5	4	3	2	1

Comments: _____

PART I: CONDITION RATINGS   MILE MARKER

9(5)	I-40/85; Just after Rock Creek Diary Rd to Mt Hope Church Rd	134.7	132.6	Interstate

Condition Grade

Features	greatly exceeds expectations	exceeds expectations	meets basic expectations	below expectations	far below expectations
(A) **Width of lanes**	5	4	3	2	1
(B) **Smoothness** of the road surface	5	4	3	2	1
(C) **Physical condition of the road surface** (i.e., number of potholes/cracks)	5	4	3	2	1
(D) **Width of _outside_ (right) shoulders**	5	4	3	2	1
(E) **Width of _inside_ (left)shoulders**	5	4	3	2	1
(F) **Type of shoulder** (gravel, pavement, etc.)	5	4	3	2	1
(G) **How well traffic flows**	5	4	3	2	1
(H) **Roadway markings** (centerline and roadside striping)	5	4	3	2	1
(I) **Reflectivity markers** (if applicable)	5	4	3	2	1
(J) **Lighting** (if applicable)	5	4	3	2	1
(K) **Mowing & trimming along guard rails**	5	4	3	2	1
(L) **Mowing & trimming of all other areas**	5	4	3	2	1
(M) **Cleanliness** (lack of litter/debris)	5	4	3	2	1
(N) **Visibility of signs**	5	4	3	2	1
(O) **Condition of signs**	5	4	3	2	1
(X) **Overall condition** of this highway	5	4	3	2	1
(Y) **Overall appearance** of this highway	5	4	3	2	1
(Z) **Feeling of safety** on this highway	5	4	3	2	1

Comments: _____

PART II: IMPORTANCE RATINGS (Highway Type: Interstate)

Using a scale of 1 to 5 where 5 means EXTREMELY IMPORTANT and 1 means NOT IMPORTANT, please rate the importance of the following items when you travel on <u>Interstates</u> similar to the one you just finished rating.

<div align="center">

Importance

</div>

Features	Extremely Important	Very Important	Important	Less Important	Not Important
(A) *Width of lanes*	5	4	3	2	1
(B) *Smoothness* of the road surface	5	4	3	2	1
(C) *Physical condition of the road surface* (i.e., number of potholes/cracks)	5	4	3	2	1
(D) *Width of <u>outside (right) shoulders</u>*	5	4	3	2	1
(E) *Width of <u>inside</u> (left)shoulders*	5	4	3	2	1
(F) *Type of shoulder* (gravel, pavement, etc.)	5	4	3	2	1
(G) *How well traffic flows*	5	4	3	2	1
(H) *Roadway markings* (centerline and roadside striping)	5	4	3	2	1
(I) *Reflectivity markers* (if applicable)	5	4	3	2	1
(J) *Lighting* (if applicable)	5	4	3	2	1
(K) *Mowing & trimming along guard rails*	5	4	3	2	1
(L) *Mowing & trimming of all other areas*	5	4	3	2	1
(M) *Cleanliness* (lack of litter/debris)	5	4	3	2	1
(N) *Visibility of signs*	5	4	3	2	1
(O) *Condition of signs*	5	4	3	2	1
(X) *Overall condition* of this highway	5	4	3	2	1
(Y) *Overall appearance* of this highway	5	4	3	2	1
(Z) *Feeling of safety* on this highway	5	4	3	2	1

Comments: _____

---

1. **Which THREE of these items are most important to your perception of the OVERALL <u>CONDITION</u> of <u>highways like the sections of I40/85 you just rated</u>?** [Write in the letters below using the letters from the list above – LIST UP TO 3 items].

    _____   _____   _____

2. **Which THREE of these items are most important to your feeling of <u>SAFETY</u> while traveling on <u>highways like the sections of I40/85 you just rated?</u>**[Write in the letters below using the letters from the list above- LIST UP TO 3 items].

    _____   _____   _____

3. **Which THREE of these items had the MOST impact on your perception of the <u>APPEARANCE of</u> <u>highways like the sections of I40/85 you just rated</u>?** [Write in the letters below using the letters from the list above - LIST UP TO 3 items].

    _____   _____   _____

PART III: DISCUSSION QUESTIONS FOR THE END OF THE COURSE
These questions will be asked by the moderator at the end of the roadway review course.

1) **USING a grading scale of "A" thru "F", how would you grade the overall quality of the highways in North Carolina?**

   A (excellent)   B (good)   C (average)   D (below average)   F (failing)

Why do you feel that way?

2) **Do you have any suggestions to improve signage on highways in North Carolina?**

3) **Is the clear space between the roadway and trees along highways adequate?**

Appendix F:
Regression Analysis

Predicting Satisfaction with Highways

Since overall satisfaction with a highway is likely to be a function of more than one highway feature and can vary by highway type, the research team conducted regression analysis of the survey data for each type of highway to identify which highway features were the best predictors of:(1) overall satisfaction with condition (2) overall satisfaction with appearance, and (3) feeling of safety.The individual ratings for each of the 15 highway features that were evaluated were used as independent variables. The regression analysis was then conducted three separate times for each type of highway using the following ratings as the dependent variables: (1) overall satisfaction with condition (2) satisfaction with appearance, and (3) feeling of safety.

The goal was to develop a regression model that would predict overall satisfaction with condition, overall satisfaction with appearance, and feeling of safety with: **Interstates**, **Primary**, and **Secondary** highways a high percentage of the time using the condition ratings from a minimum of three highway features as the independent variables.

The findings are summarized on the following pages.

Predicting Overall Condition with <u>Interstate Highways</u>.

With the overall condition rating set as the dependent variable and physical condition of the road surface, cleanliness, and roadway markings set as independent variables, the regression model for interstate highways predicted the observed value for the overall condition rating 77.4% of the time. The regression model predicted the observed value for the overall condition rating within +/- 1 of the observed value more than 96.1% of the time.

The findings of the regression analysis suggest that NCDOT can manage overall satisfaction with the condition of interstate highways by managing (1) physical condition of the road surface, (2) cleanliness, and (3) roadway markings as shown in the regression equation in the tablebelow.

Regression Model for Predicting *Overall Condition* with <u>INTERSTATE</u> Highways

<u>Model</u>
OC=0.518 + .303(PC) + .312(CL) +.260(RM)

OC=Overall Condition Rating
PC=Physical Condition of Road Surface Rating
CL=Cleanliness Rating
RM=Roadway Markings Rating

<u>When Predicted Results Are Rounded to the Nearest Integer:</u>
Frequency that the observed value was predicted without error 77.4%
Frequency that the observed value was predicted within +/-1: 96.1%

Predicting Satisfaction with Overall Appearance with <u>Interstate Highways</u>.

With the overall appearance rating set as the dependent variable and cleanliness, smoothness of the road surface, and the mowing and trimming of all other areas set as independent variables, the regression model for interstate highways predicted the observed value for the overall appearance rating 77.2% of the time. The regression model predicted the observed value for the overall appearance rating within +/- 1 of the observed value more than 96.4% of the time.

The findings of the regression analysis suggest that NCDOT can manage overall satisfaction with the appearance of interstate highways by managing (1) cleanliness, (2) smoothness of the road surface, and (3) the mowing and trimming of all other areas as shown in the regression equation in the table below.

Regression Model for Predicting *Overall Appearance* with <u>INTERSTATE</u> Highways

<u>Model</u>
OA=0.535 + .361(CL) + .333(SM) +.193(MTO)

OA=Overall Appearance Rating
CL=Cleanliness Rating
SM=Smoothness of Road Surface Rating
MTO=Mowing and Trimming of All Other Areas Rating

<u>**When Predicted Results Are Rounded to the Nearest Integer:**</u>
Frequency that the observed value was predicted without error 77.2%
Frequency that the observed value was predicted within +/-1: 96.4%

Predicting the Feeling of Safety with <u>Interstate Highways</u>.

With the feeling of safety rating set as the dependent variable and traffic flow, condition of signs, and the physical condition of the road surface set as independent variables, the regression model for interstate highways predicted the observed value for the feeling of safety rating 75.9% of the time. The regression model predicted the observed value for the feeling of safety rating within +/- 1 of the observed value more than 94.7% of the time.

The findings of the regression analysis suggest that NCDOT can manage the overall feeling of safety on interstate highways by managing (1) traffic flow, (2) condition of signs, and (3) the physical condition of the road surfaces shown in the regression equation in the table below.

Regression Model for Predicting *Feeling of Safety* with <u>INTERSTATE</u> Highways

<u>Model</u>

$$FS = 0.477 + .325(TF) + .330(CS) + .206(PC)$$

FS=Feeling of Safety Rating
TF=Traffic Flow Rating
CS=Condition of Signs Rating
PC=Physical Condition of Road Surface Rating

<u>When Predicted Results Are Rounded to the Nearest Integer:</u>
Frequency that the observed value was predicted without error 75.9%
Frequency that the observed value was predicted within +/-1: 94.7%

Predicting Overall Condition with <u>Primary Highways</u>.

With the overall condition rating set as the dependent variable and smoothness of the road surface, cleanliness, and roadway markings set as independent variables, the regression model for primary highways predicted the observed value for the overall condition rating 73.1% of the time. The regression model predicted the observed value for the overall condition rating within +/- 1 of the observed value more than 95.2% of the time.

The findings of the regression analysis suggest that NCDOT can manage overall satisfaction with the condition of primary highways by managing (1) smoothness of the road surface, (2) cleanliness, and (3) roadway markings as shown in the regression equation in the table below.

Regression Model for Predicting *Overall Condition* with <u>PRIMARY</u> Highways

<u>Model</u>
OC=0.512 + .362(SM) + .260(CL) +.228(RM)

OC=Overall Condition Rating
SM=Smoothness of Road Surface Rating
CL=Cleanliness Rating
RM=Roadway Markings Rating

<u>**When Predicted Results Are Rounded to the Nearest Integer:**</u>
Frequency that the observed value was predicted without error 73.1%
Frequency that the observed value was predicted within +/-1: 95.2%

Predicting Satisfaction with Overall Appearance with <u>Primary Highways</u>.

With the overall appearance rating set as the dependent variable and cleanliness, physical condition of the road surface, and condition of signs set as independent variables, the regression model for primary highways predicted the observed value for the overall appearance rating 72.1% of the time. The regression model predicted the observed value for the overall appearance rating within +/- 1 of the observed value more than 94.7% of the time.

The findings of the regression analysis suggest that NCDOT can manage overall satisfaction with the appearance of primary highways by managing (1) cleanliness, (2) physical condition of the road surface, and (3) condition of signs as shown in the regression equation in the tablebelow.

Regression Model for Predicting *Overall Appearance* with <u>PRIMARY</u> Highways

<u>Model</u>
OA=0.21 + .328(CL) + .321(PC) +.281(CS)

OA=Overall Appearance Rating
CL=Cleanliness Rating
PC=Physical Condition of Road Surface Rating
CS=Condition of Signs Rating

<u>When Predicted Results Are Rounded to the Nearest Integer:</u>
Frequency that the observed value was predicted without error 72.1%
Frequency that the observed value was predicted within +/-1: 94.7%

Predicting the Feeling of Safety with <u>Primary Highways</u>.

With the feeling of safety rating set as the dependent variable and width of lanes, visibility of signs, and roadway markings set as independent variables, the regression model for primary highways predicted the observed value for the feeling of safety rating 70.4% of the time. The regression model predicted the observed value for the feeling of safety rating within +/- 1 of the observed value more than 93.0% of the time.

The findings of the regression analysis suggest that NCDOT can manage the overall feeling of safety on primary highways by managing (1) width of lanes, (2) visibility of signs, and (3) roadway markings as shown in the regression equation in the table below.

Regression Model for Predicting *Feeling of Safety* with <u>PRIMARY</u> Highways

<u>Model</u>
$$FS = 0.097 + .367(WL) + .342(VS) + .250(RM)$$

FS = Feeling of Safety Rating
WL = Width of Lanes Rating
VS = Visibility of Signs Rating
RM = Roadway Markings Rating

<u>When Predicted Results Are Rounded to the Nearest Integer:</u>
Frequency that the observed value was predicted without error 70.4%
Frequency that the observed value was predicted within +/-1: 93.0%

Predicting Overall Condition with <u>Secondary Highways</u>.

With the overall condition rating set as the dependent variable and smoothness of the road surface, roadway markings, and the physical condition of the road surface set as the independent variables, the regression model for secondary highways predicted the observed value for the overall condition rating 75.3% of the time. The regression model predicted the observed value for the overall condition rating within +/- 1 of the observed value more than 96.8% of the time.

The findings of the regression analysis suggest that NCDOT can manage overall satisfaction with the condition of secondary highways by managing (1) smoothness of the road surface, (2) roadway markings, and (3) physical condition of the road surface as shown in the regression equation in the table below.

Regression Model for Predicting Overall Condition with <u>SECONDARY</u> Highways

Model

$$OC = 0.697 + .264(SM) + .260(RM) + .255(PC)$$

OC=Overall Condition Rating
SM=Smoothness of Road Surface Rating
RM=Roadway Markings Rating
PC=Physical Condition of Road Surface Rating

When Predicted Results Are Rounded to the Nearest Integer:
Frequency that the observed value was predicted without error 70.6%
Frequency that the observed value was predicted within +/-1: 95.7%

Predicting Satisfaction with Overall Appearance with <u>Secondary Highways</u>.

With the overall appearance rating set as the dependent variable and smoothness of the road surface, cleanliness, and roadway markings set as independent variables, the regression model for secondary highways predicted the observed value for the overall appearance rating 68.2% of the time. The regression model predicted the observed value for the overall appearance rating within +/- 1 of the observed value more than 95.2% of the time.

The findings of the regression analysis suggest that NCDOT can manage overall satisfaction with the appearance of secondary highways by managing (1) smoothness of the road surface, (2) cleanliness, and (3) roadway markings as shown in the regression equation in the tablebelow.

Regression Model for Predicting *Overall Appearance* with <u>SECONDARY</u> Highways

Model

$$OA = 0.531 + .286(SM) + .321(CL) + .225(RM)$$

OA=Overall Appearance Rating
SM=Smoothness of Road Surface Rating
CL=Cleanliness Rating
RM=Roadway Markings Rating

When Predicted Results Are Rounded to the Nearest Integer:
Frequency that the observed value was predicted without error 68.2%
Frequency that the observed value was predicted within +/-1: 95.2%

Predicting the Feeling of Safety with <u>Secondary Highways</u>.

With the feeling of safety rating set as the dependent variable and width of lanes, visibility of signs, and traffic flow set as independent variables, the regression model for secondary highways predicted the observed value for the feeling of safety rating 67.3% of the time. The regression model predicted the observed value for the feeling of safety rating within +/- 1 of the observed value more than 93.4% of the time.

The findings of the regression analysis suggest that NCDOT can manage the overall feeling of safety on secondary highways by managing (1) width of lanes, (2) visibility of signs, and (3) traffic flowas shown in the regression equation in the table below.

Regression Model for Predicting *Feeling of Safety* with <u>SECONDARY</u> Highways

<u>Model</u>
FS=-0.073 + .359(WL) + .333(VS) +.301(TF)

FS=Feeling of Safety Rating
WL=Width of Lanes Rating
VS=Visibility of Signs Rating
TF=Traffic Flow Rating

<u>When Predicted Results Are Rounded to the Nearest Integer:</u>
Frequency that the observed value was predicted without error 67.3%
Frequency that the observed value was predicted within +/-1: 93.4%