



Downtown Elizabeth City Sign Assessment Technical Summary

Elizabeth City, North Carolina

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Kimley-Horn assessed existing street name and regulatory signs within the defined study area of downtown Elizabeth City, as illustrated by **Figure 1** of the *Water Street Two-Way to One-Way Operations Analysis*. During the assessment, field review teams collected photographs of each type of street name and regulatory sign currently present within the study area, and assessed each sign based on three (3) factors:

- 1) Sign legend consistency
- 2) Compliance with the 2009 Manual on Uniform Traffic Control Devices (MUTCD) and 2009 North Carolina supplement of the MUTCD
- 3) General condition of the existing sign panels (i.e., “good” or “poor”)

The following sections summarize the findings from the assessments.

Assessment Guideline Assumptions

When evaluating sign legend consistency, each inventoried sign panel’s legend was compared to other existing similar panels intending to illustrate the same message to road users. Elements such as font, letter size/capitalization, and text/border colors were considered in the sign legend consistency assessments.

The compliance assessment intended to identify each existing panel’s compliance to guidance provided in Table 2B-1 of the MUTCD and the 2009 North Carolina Supplement to the MUTCD. Overall, sign panel sizes should conform to criteria included under “Single Lane” in Table 2B-1, except for STOP signs which should be 36” x 36”, since all roadways located within the study area have posted speed limits of 35 miles per hour (mph) or less.

The third assessment component was the physical condition of the sign panel based upon qualitative visual assessments. Only two conditional categories were considered in the condition assessment – “good” and “poor”. Panels considered to be in “good” condition typically consisted of panels without cracking, had no fading present throughout any part of the legend, and were free of holes, rust, or other damages (e.g., bending, discoloration, etc.).

Overall Study Area Observations

There were two (2) distinct observations in the field that are noted in the assessments. First, several post-mounted sign panels are not installed at a minimum height of 7 feet to prevent the view of the sign being obstructed by parked vehicles or pedestrian traffic and/or impacting pedestrian mobility along sidewalks. Secondly, there are many locations of cluttered sign panels that provide an over-abundance of information to roadway users (see **Exhibit 1**). At these locations, sign messages are difficult to interpret, and in some cases, conflict with one another.



Exhibit 1: Photographs of Existing Sign Clutter

Street Name Sign Panel Assessments

Existing street name sign panels are inconsistent throughout the study area, as shown in **Exhibit 2**. Background colors differ between green and black, and lettering within the legends differ in terms of text style, text height, capitalization, and placement. As a result, most street name sign panels are not in compliance with current MUTCD and North Carolina MUTCD Supplement guidelines. Per the MUTCD, all street name sign panels shall comply with Chapter 2D (Guide Signs – Conventional Roads). Although inconsistent and non-compliant with current standards, all existing street name sign panels are in good physical condition.



Exhibit 2: Photographs of Existing Street Name Signs

Regulatory Sign Panels

Assessments for the following regulatory sign panels are summarized in this section:

- STOP Sign Panels (R1-1)
- In-Street Crossing (Yield) Sign Panels (R1-6)
- School Sign Panel (S1-1)
- School Speed Limit Sign Panel (S5-1)
- Speed Limit Sign Panels (R2-1)
- Do Not Enter Sign Panels (R5-1)
- One Way Sign Panels (R6-1)
- R7 Series and R8 Series
 - No Parking Any Time Sign Panels (R7-1)
 - No Parking Loading Zone Sign Panel (R7-6)
 - Reserved Parking for Persons with Disabilities Sign Panels (R7-8)
 - XX HR Parking X:XX AM to X:XX PM Sign Panels (R7-108)
 - No Parking Here to Corner Sign Panel (R8-1 Custom)

“STOP” Sign Panels (R1-1)

Existing R1-1 panels are consistent throughout the study area, and compliant with current MUTCD and North Carolina MUTCD Supplement guidelines. R1-1 sign criteria is included in Chapter 2B (Section 2B.05) of the MUTCD. All existing inventoried R1-1 sign panels are in good physical condition.



Exhibit 3: Photographs of Existing R1-1 Sign Panels

“In-Street Crossing (Yield)” Sign Panels (R1-6)

Existing R1-6 sign panels are both post mounted and installed within the roadway throughout the study area, as shown in **Exhibit 4**. As a result, those mounted on poles are not compliant with MUTCD and North Carolina MUTCD Supplement guidelines. R1-6 sign criteria is included in Chapter 2B (Section 2B.12) of the MUTCD. All existing inventoried R1-6 sign panels are in good physical condition.



Exhibit 4: Photographs of Existing R1-6 Sign Panels

“School” Sign Panel (S1-1)

Only one existing S1-1 sign panel is located within the study area (**Exhibit 6**). The existing S1-1 panel is not compliant with MUTCD and North Carolina Supplement guidelines with regards to background color (i.e., should be fluorescent yellow-green). S1-1 sign criteria is included in Chapter 7B (Section 7B.08) of the MUTCD. The existing S1-1 sign is in poor condition, with significant cracking throughout the panel and legend.



Exhibit 6: Photograph of Existing S1-1 Sign Panel

“School Speed Limit XX” Sign Panel (S5-1)

Only one existing S5-1 sign panel is located within the study area (**Exhibit 7**). The existing S5-1 panel is not compliant with MUTCD and North Carolina Supplement guidelines with respect to the number and configuration of sign panels needed at school speed limit flashing beacon locations. S5-1 sign criteria is included in Chapter 7B (Section 7B.15) of the MUTCD. The existing S5-1 sign text is still relatively legible however, the right-half of the physical panel has been damaged and is bent backwards.



Exhibit 7: Photograph of Existing S5-1 Sign Panel

“Speed Limit XX” Sign Panels (R2-1)

Existing R2-1 panels are consistent throughout the study area (**Exhibit 5**), and are compliant with the MUTCD and North Carolina Supplement guidelines. R2-1 sign criteria is included in Chapter 2B (Section 2B.13) of the MUTCD. All existing inventoried R2-1 sign panels are in good physical condition.



Exhibit 5: Photographs of Existing R2-1 Sign Panels

“Do Not Enter” Sign Panels (R5-1)

Existing R5-1 panels are consistent throughout the study area (**Exhibit 8**), and are compliant with MUTCD and North Carolina Supplement guidelines. R5-1 sign criteria is included in Chapter 2B (Section 2B.37) of the MUTCD. All existing inventoried R5-1 sign panels are in good physical condition.



Exhibit 8: Photograph of Existing R5-1 Sign Panels

“One Way” Sign Panels (R6-1)

Existing R6-1 panels are consistent throughout the study area (**Exhibit 10**). Although border thicknesses and type vary among signs, the MUTCD indicates that border thickness is a “should” condition, and not a “shall” condition. Therefore, the current R6-1 panels are consistent with MUTCD and North Carolina Supplement guidelines. It is important to note that starting December 31, 2019, new R6-1 compliance guidelines will become effective (see Chapter 2B, Section 2B.40) of the MUTCD. All existing inventoried R6-1 sign panels are in good physical condition.



Exhibit 10: Photographs of Existing R6-1 Sign Panels

R7 Series and R8 Series Sign Panels

The R7 and R8 Series signs assessed throughout the study area include:

- R7-1: “No Parking Anytime”
- R7-6: “No Parking Loading Zone”
- R7-8: “Reserved Parking for Persons with Disabilities”
- R7-108: “XX HR Parking X:XX AM to X:XX PM”
- R8-1 (Custom): “No Parking (Here to Corner)”

“No Parking Any Time” Sign Panels (R7-1)

Existing R7-1 panels are not consistent throughout the study area, as shown in **Exhibit 11**. The existing R7-1 panels have varying background colors and have lettering within the legends that differ in terms of text style, text height, capitalization, and placement. As a result, most of the R7-1 panels are not in compliance with MUTCD and North Carolina Supplement guidelines. R7-1 sign criteria is included in Chapter 2B (Section 2B.46) of the MUTCD. Mostly all existing inventoried R7-1 sign panels are in poor physical condition with cracking and overall discoloration.



Exhibit 11: Photographs of Existing R7-1 Sign Panels

“No Parking Loading Zone” Sign Panel (R7-6)

Only one existing R7-6 sign panel is located within the study area (**Exhibit 12**). The existing R7-6 panel is compliant with MUTCD and North Carolina Supplement guidelines. R7-6 sign criteria is included in Chapter 2B (Section 2B.46) of the MUTCD. The existing inventoried R7-6 sign panel is in good physical condition.



Exhibit 12: Photograph of Existing R7-6 Sign Panel

“Reserved Parking for Persons with Disabilities” Sign Panels (R7-8)

Existing R7-8 panels are consistent throughout the study area (**Exhibit 13**), and are compliant with MUTCD and North Carolina Supplement guidelines. R7-8 sign criteria is included in Chapter 2B (Section 2B.46) of the MUTCD. Several locations do not indicate the maximum penalty amount on the supplementary plaques that are currently present below the R7-8 panels. The existing supplementary plaques appear to have the previous maximum penalty amounts covered and not updated. With regards to physical condition, most of the existing inventoried R7-8 panels are in poor condition, with cracking and discoloration present.



Exhibit 13: Photographs of Existing R7-8 Sign Panels

“XX HR Parking X:XX AM to X:XX PM” Sign Panels (R7-108)

Existing R7-108 panels vary throughout the study area (**Exhibit 14**) reflecting 15-minute, 30-minute, and 2-hour parking restrictions. Lettering within the legends differ in terms of text style, text height, text color and placement, which makes most panels not compliant with MUTCD or North Carolina Supplement guidelines. R7-8 sign criteria is included in Chapter 2B (Section 2B.46) of the MUTCD. With regards to physical condition, most of the existing inventoried R7-108 panels are in poor condition, with cracking, discoloration, and holes present along the panel surfaces.



Exhibit 14: Photographs of Existing R7-108 Sign Panels

“No Parking Here to Corner” Sign Panel (R8-1 Custom)

Only one existing R8-1 Custom sign panel is located within the study area (**Exhibit 15**). The existing R8-1 Custom sign panel is compliant with MUTCD and North Carolina Supplement guidelines. R8-1 sign criteria is included in Chapter 2B (Section 2B.47) of the MUTCD. The existing inventoried R8-1 custom sign panel is in good physical condition.



Exhibit 15: Photograph of Existing R8-1 Custom Sign Panel