

To: Rob Balland, Paramounte Engineering
From: Brian Chambers, Assistant Director, 910.342.2782
CC: File;
Date: 12/1/2023
Re: The Avenue TRC Rev 4

The following is a list of comments for review from planning regarding the project. Please provide your corrections as listed below. A staff summary of comments:

Staff	Department	Notes
Brian Chambers	Planning, Plan Review	No comments
Eric Seidel	Engineering	No comments
Chris Walker	Fire	No comments
Randall Glazier	Traffic Engineering	Comments below
Bill McDow	Transportation	Comments attached

Traffic Engineering Comments:

Per Denys:

I have reviewed Mitesh's v3 comments and have provide the attached cursory update. Randall is checking in on the 3 circled items. (see attachment)

Per Randall:

- 1. Update existing notes related to the sight distance triangles throughout the plans,*

ALL PROPOSED VEGETATION WITHIN SIGHT DISTANCE TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30" TO 10' (SEC. 18-556)

be updated to,

'No parking spaces, fences, walls, posts, lights, shrubs, trees, or other type of obstructions not specifically exempted shall be permitted in the space between 30 inches and above ground and 10 feet above ground level within a triangular sight distance. (SEC. 18-556)'

- 2. Review the roundabout signage, I have attached some guidance for reference. The current standard uses R6-4 signs in the center island not One-Way signs.*
- 3. I did not see sheet C-6.0A which is referenced to be sign and striping details.*
- 4. (see attachment)*

PARAMOUNTE

ENGINEERING, INC.

November 17, 2023

Mitesh Baxi
City of Wilmington
Engineering Department
212 Operations Center Drive
Wilmington, NC 28412

RE: The Avenue TRC Rev 3 Comments

Dear Mitesh,

On behalf of CIP Construction, we are submitting a response to your comments emailed 10/12/2023. Please find your comments listed below with our response provided in **bold**.

SIGNAGE AND PAVEMENT MARKING PLAN:

Sheet C-2.22: Signage and pavement marking plan comments from Signs & Markings Manager. Images are attached for reference.

Note: Sheet C-2.22 is no longer applicable – it is now the Fire Truck Turning Exhibit. The correct sheet in the current plan set is C-2.26, “Signage and Pavement Marking Plan”. All comments have been addressed as directed below:

1. Remove right-turn only sign and add a stop sign, in an advance of crosswalk/ADA ramp for the driveway off Harborview Way immediate to Military Cutoff Rd.
Response: Right turn sign removed and stop sign added. See key note #27 on sheet L-2.1 and Sheet C-2.26, Traffic Sign Legend, call out #1 (stop sign), provided at this location.
2. Stop signs that face multilane approaches shall be minimum 36”x36”. The location is at the intersection of Carrol Ave/Havenstone Way.
Response: See sheet C-2.26, Traffic Sign Legend, call out #1A has been added to indicate use of 36” x 36” sized stop sign at multi-lane intersection of Carroll Avenue and Havenstone Way. See plan sheet for locations.
3. Pedestrian and bike related warning signs use fluorescent yellow green background. The sign images appear to show this color but a note to be included.
Response: See sheet C-2.26, Traffic Sign Legend, item #10. Note has been added stating that “Pedestrian related signage shall be fluorescent yellow-green background”.
4. Remove roundabout circulation sign and follow MUTCD guidelines for this sign.
Response: See sheet C-2.26, Traffic Sign Legend, item #9. A note has been added that states: “Roundabout striping and signage shall conform to MUTCD Guidelines”. The roundabout circulation sign has been removed. The proper

PARAMOUNT

ENGINEERING, INC.

sign per MUTCD guidelines (36"x36"x36" Yield Sign) has been added to the legend and shown on the plans where required.

★ Replace One Way w/ chevron

5. Delete City SD 11-14 from sheet C-6.0B and reference/use current MUTCD roundabout standards.

Fig. 2B-22

Response: City detail SD 11-14 has been removed from sheet C-6.0B. Notes have been added to this sheet, see upper right-hand corner of page, including reference to MUTCD standards and a copy of Figure 3C-1 taken from the MUTCD illustrating roundabout markings.

STREET LIGHTING [City of Wilmington Street Lighting Policy]:

1. Awaiting streetlighting plan for the section of Military Cutoff Rd abutting this development. Please submit the plans for City review as soon as they become available.

Response: Per the telephone conversation on November 16, 2023, with City of Wilmington Staff, Brian Chambers and Denys Vielkanowitz, the applicant confirms that this plan shall be provided by Duke Energy and all required streetlight improvements along Military shall be installed prior to issuance of a certificate of occupancy for the project. A note, "Military Cutoff Rd. Street Light Note" has been added to sheet C-2.0 to state that these streetlights shall be provided. The note is in the lower left-hand side of the sheet, above the Building Data Table.

TECHNICAL STANDARDS:

1. Show the lane configuration pavement markings for Military Cutoff Rd on truck turning exhibit sheet. This is to ensure the turn ends up in an appropriate lane.

Response: The proposed lane configurations pavement markings for Military Cutoff Rd. have been included on the Fire and Delivery Truck exhibit sheets; see plan sheets C-2.20 through C-2.26 for reference.

2. The city's 20'x70' and 46'x46' sight distance triangle are missing at locations like at the intersection of Military cutoff Rd intersecting with Everton Way and Carroll Ave, Havenstone Way, [Sec. 18-667 CofW Updated LDC] [Sec. 18-693 CofW Updated LDC]. 20' shall be measured from property line towards the property and extend lines up to curb. 70' shall be measured along curb line.

Response: Sight distance triangles have been added at the missing locations referenced, see sheets C-2.2 and C-2.7.

3. Show all the sight distance triangles on the site and landscape plans.

Response: See Site Plans and Landscape Plans, sight distance triangles are provided.

PARAMOUNTE

ENGINEERING, INC.

SIGHT DISTANCE TRIANGLE FOR ANY STREET/DRIVEWAY INTERSECTIONS WITH THOROUGHFARES:

1. Military Cutoff Rd is a major throughfare [Chap VII (C) (2) (a) of CofW Tech Stds]. In accordance with the City Code, sight distances along thoroughfares must be calculated in compliance with the AASHTO requirements. [Chap VII (C) (1) of CofW Tech Stds] [Sec.18-556 CofW LDC] [Sec. 18-667 CofW Updated LDC]. For Intersections with Traffic Signal Control, if right turns on a red signal are to be permitted from any approach, then the appropriate departure sight triangle to the left should be provided to accommodate right turns from that approach.

Response: Sight distance lines, per AASHTO requirements (480' design at 50 MPH), are shown to the left (from right-turn departures) at the intersections of Military Cutoff Rd. and Carroll Avenue and Military Cutoff Rd. and Everton Way. See locations on Site Plan sheets C-2.2 and C-2.7.

Thank you for your attention to this matter. If you have any questions regarding any of this information or require additional material, please feel free to call.

Sincerely,

Robert P. Balland, PE
Paramounte Engineering, Inc.

Section 2B.43 Roundabout Directional Arrow Signs (R6-4, R6-4a, and R6-4b)

Guidance:

- 01 Where the central island of a roundabout allows for the installation of signs, Roundabout Directional Arrow (R6-4 series) signs (see Figure 2B-20) should be used in the central island to direct traffic counter-clockwise around the central island, except as provided in Paragraph 11 in Section 2B.40.

Standard:

- 02 The R6-4 sign shall be a horizontal rectangle with two black chevron symbols pointing to the right on a white background. The R6-4a sign shall be a horizontal rectangle with three black chevron symbols pointing to the right on a white background. The R6-4b sign shall be a horizontal rectangle with four black chevron symbols pointing to the right on a white background. No border shall be used on the Roundabout Directional Arrow signs.

- 03 Roundabout Directional Arrow signs shall be used only at roundabouts and other circular intersections.

Guidance:

- 04 When used on the central island of a roundabout, the mounting height of a Roundabout Directional Arrow sign should be at least 4 feet, measured vertically from the bottom of the sign to the elevation of the near edge of the traveled way.

Option:

- 05 More than one Roundabout Directional Arrow sign and/or R6-4a or R6-4b signs may be used facing high-speed approaches, facing approaches with limited visibility, or in other circumstances as determined by engineering judgment where increased sign visibility would be appropriate.

Section 2B.44 Roundabout Circulation Plaque (R6-5P)

Guidance:

- 01 Where the central island of a roundabout does not provide a reasonable place to install a sign, Roundabout Circulation (R6-5P) plaques (see Figure 2B-20) should be placed below the YIELD signs on each approach.

Option:

- 02 At roundabouts where Roundabout Directional Arrow signs and/or ONE WAY signs have been installed in the central island, Roundabout Circulation plaques may be placed below the YIELD signs on approaches to roundabouts to supplement the central island signs.

- 03 The Roundabout Circulation plaque may be used at any type of circular intersection.

Section 2B.45 Examples of Roundabout Signing

Support:

- 01 Figures 2B-21 through 2B-23 illustrate examples of regulatory and warning signing for roundabouts of various configurations.

- 02 Section 2D.38 contains information regarding guide signing at roundabouts and Chapter 3C contains information regarding pavement markings at roundabouts.

Figure 2B-20. Roundabout Signs and Plaques

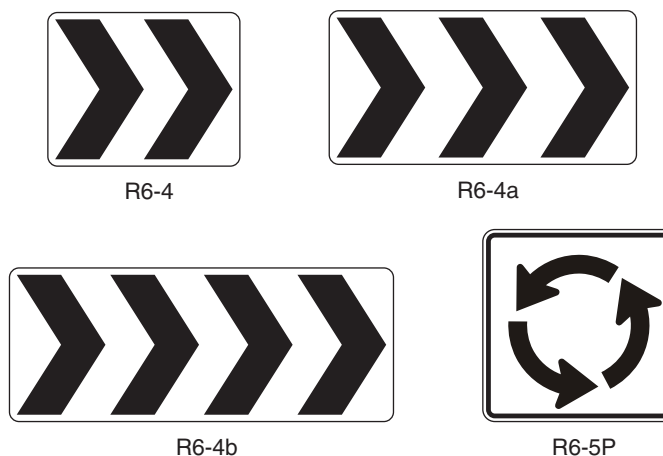
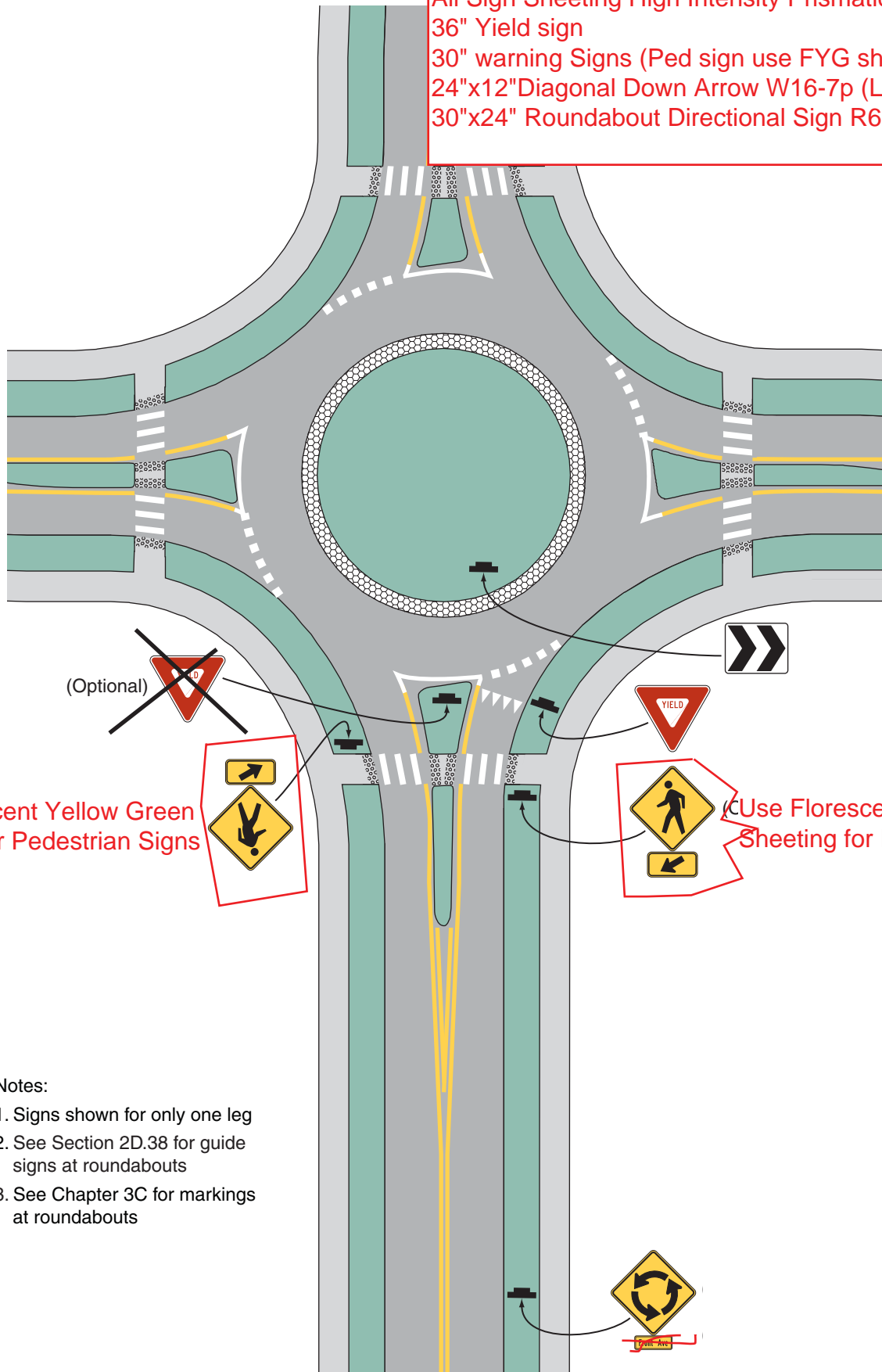


Figure 2B-22. Example of Regulatory and Warning Signs for a One-Lane Roundabout

All Sign Sheeting High Intensity Prismatic
 36" Yield sign
 30" warning Signs (Ped sign use FYG sheeting)
 24"x12" Diagonal Down Arrow W16-7p (L) (R) (FYG)
 30"x24" Roundabout Directional Sign R6-4)



(Optional)

Use Florescent Yellow Green Sheeting for Pedestrian Signs

(Use Florescent Yellow Green Sheeting for Pedestrian Signs

- Notes:
1. Signs shown for only one leg
 2. See Section 2D.38 for guide signs at roundabouts
 3. See Chapter 3C for markings at roundabouts

Project Name: **THE AVENUE**

TRC Date: **11.30.2023**

Reviewer Name: **BILL McDow**

Reviewer Department/Division: **PDT/Transportation Planning**

TECHNICAL STANDARDS:

1. A TIA with conditions was approved for The Avenue. The development will be required to install TIA improvements prior to issuance of CO. [[The Avenue Rezoning Ordinance, Condition #17, dated 6-5-2018](#)]
2. Please contact NCDOT to verify the proposed Harborview Drive stem length meets NCDOT requirements per the Avenue TIA Approval with Conditions Letter. [[Revised The Avenue TIA Approval Letter with Conditions dated 2-25-19.](#)] Please revise.
3. The proposed 87' Everton Way internal protective stem is less than the 100' required by the TIA. Everton Way is required to have a 100' Internal Protective Stem, measured from the ROW. [[Revised The Avenue TIA Approval Letter with Conditions dated 2-25-19.](#)]
4. Please contact NCDOT to verify the proposed Harborview Drive stem length is acceptable to meet the NCDOT requirements per the Avenue TIA Approval with Conditions Letter. [[Revised The Avenue TIA Approval Letter with Conditions dated 2-25-19.](#)]
5. Please revise the site plan to show the pedestrian signals and push buttons. Harborview Drive is required to be configured as a signalized pedestrian crossing with pedestrian signal equipment. [[The Avenue Rezoning Ordinance Conditions, dated 6-5-18.](#)] Please revise.
6. Plan sheets C-2.21 and C-2.24 show a raised crosswalk between Building 4 and Parking Structure 1. Please revise to a standard crosswalk.
7. Plan sheets C-2.20 and C-2.23 show a raised crosswalk between Building 2 and Building 6. Please revise to a standard crosswalk.
8. Please clarify the design for the proposed Raised Plaza area between Building 7 and Building 8 on Carroll Avenue, (plan sheet C-2.8). The Tabletop intersection was approved; however, this plaza appears to be a different design. Please revise to a standard cross section.
9. As previously stated, the proposed Roundabouts do not meet AASHTO, City of Wilmington and MUTCD requirements. Please revise.
10. The proposed distance between the crosswalks and yield lines at the Roundabouts do not meet the minimum requirements. A minimum of 22' is required from the yield line at the circular travel way to the crosswalk along each entrance and exit approach. Please revise.
11. The eastbound approach to the Harborview Roundabout is missing a Splitter Island. Please revise.
12. The traffic flow for Parking Lot #3 and Parking Structure 2 at Harborview Way is not properly marked (plan sheet C-2.2 and L-2.5). The two-way flow from the parking structure appears to block the start of the one-way entrance to parking lot 3 from Harborview Way. Please revise.
13. The intersection of Lilygate Lane and Harborview Way is skewed and not aligned along the roadway centerlines, (plan sheets C-2.8 and L-2.9). Please align the centerlines of Lilygate Lane, and Harborview Way, and reposition the curb line for the NE corner of the intersection. The nonsymmetrical NE corner radius (R20' on the NE corner vs R25' on the NW corner radius) also appears to be negatively impacting the alignment of the intersection. Please revise.
14. Please ensure Stop Bars are placed at each Stop approach and Stop Sign. Some intersections such as the intersection of Carroll Avenue and Harborview Way appear to be missing Stop Bars when Stop Signs are shown on the site plans. (see sheet C-2.8, L-2.9 and L-2.15).