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June 23, 2016

**Dan Cumbo, PE**  
Davenport  
3722 Shipyard Boulevard, Suite E  
Wilmington, NC 28403

RE: Approval of the Traffic Impact Analysis (TIA) associated with the proposed  
**Pender Land Greenway Park Development**  
Pender County, NC

Dear Mr. Cumbo:

Based on the information provided, and conversations held to date, it is our understanding that the proposed development will consist of:

**Phase 1**

- 121 Single Family Homes

**Phase 2**

- 16 Townhomes
- 160 Apartments
- 18,000 SF of Office
- 22,000 SF of Retail

This development is located between US Highway 17 and Country Club Road south of Sloop Point Loop Road in Pender County, North Carolina.

The site plan provided proposes access at the following points:

- US 17 and Site Access 1 (Right-in/Right-out only)
- Country Club Road and Site Access 2
- Azalea Lane and Site Access 3

Wilmington Urban Area Metropolitan Planning Organization

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- Azalea Lane and Site Access 4
  - Bluebird Lane and Site Access 5

Below please find the scope to be used for the Traffic Impact Analysis:

**1. Data Collection - Analysis Parameters:**

a. Existing Conditions

- i. Turning movement counts weekday AM (6:30 AM – 8:30 AM) and PM (4:00 PM – 6:00 PM) peak periods, Signal Timing (if applicable) and Lane Geometry;
  - US 17 at Long Leaf Drive
  - US 17 at Sloop Point Loop Road
  - US 17 at Site Access 1 (Right-in/Right-out only)
  - Sloop Point Loop Road at Country Club Road
  - Country Club Road at Azalea Drive
  - Country Club Road at Site Access 2
- ii. Signal plans may be acquired by sending an email request to NCDOT Traffic Services: Ross Kimbro, rkimbrot@ncdot.gov or by calling (910) 341-0300

b. Site Trip Generation, Site Trip Distribution and Background Traffic Assumptions

- i. Site Trip Generation Estimate
  - See attached (provided by Davenport)
- ii. Site Trip Distribution
  - To be determined based on collected traffic count data. Must be approved prior to use in the TIA.
- iii. Adjacent Development (approved (but as of yet to be built)) development including but limited to;
  - Wyndwater
  - Hawksbill Cove
- iv. Planned Roadway Improvements
  - U-5732
- v. Background Traffic Assumptions
  - Horizon year – Phase 1 – 2024: Phase 2 - 2026
  - Growth rate – 1% per year

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vi. Other Information

2. **Capacity Analysis: Week day AM & PM Peak Hour (as listed and for locations per 1.a.i)**

- a. Existing – 2016
- b. 2024 Phase 1 Future No-Build Conditions  
[Existing +1% background growth]
- c. 2024 Phase 1 Future Build Conditions  
[Existing +1% background growth + site trips]
- d. 2026 Full Build Future No-Build Conditions  
[Existing (including Phase 1) +1% background growth]
- e. 2026 Full Build Future Build Conditions  
[Existing (including Phase 1) +1% background growth + site trips]

3. **Final Report Submittal:**

- a. Completed TIA Application
- b. Signed and sealed by a Professional Engineer
- c. Four bound copies
- d. Four Electronic copies to include PDF of TIA and Synchro files and Synchro analysis files in digital format

4. **Notes:**

- i. TIA's shall be prepared according to NCDOT Congestion Management Guidelines. Any deviations from such shall be approved prior to preparation of the TIA.
- ii. This scope shall remain valid for three months from the date of this letter.
- iii. Please note that if any changes occur (including but not limited to; land use, intensity, phasing, and/or site access) additional analysis may be required.
- iv.

Please contact me at 910-473-5130 with any questions regarding this scope.

Sincerely,



Amy Kimes, PE  
Project Manager  
Wilmington Metropolitan Planning Organization

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Attachments: Trip Generation Summary (provided by Davenport)  
Site Map (provided by Davenport)

Cc: Robert Vause, PE, Division Maintenance Engineer, NCDOT  
Patrick Riddle, District Engineer, NCDOT  
Allen Hancock, Assistant Division Traffic Engineer, NCDOT  
Kyle Breuer, Planning Director, Pender County  
Megan O'Hare, Senior Planner, Pender County  
Bill McDow, Transportation Planner, WMPO  
Mike Kozlosky, Executive Director, WMPO

ITE Trip Generation										
Pender Land Greenway Park										
Average Weekday Driveway Volumes					24 Hour		AM Peak Hour		PM Peak Hour	
					Two-Way		Enter	Exit	Enter	Exit
Land Use	ITE Land Code	Size	Method - Type		Volume	Enter	Exit	Enter	Exit	
<b>Phase 1</b>										
Single Family Homes	210	121	Dwelling Units	Rate - Adjacent	1152	23	68	76	45	
<b>Phase 1 Total Trips</b>					<b>1152</b>	<b>23</b>	<b>68</b>	<b>76</b>	<b>45</b>	
<b>Phase 2</b>										
Townhomes	230	16	Dwelling Units	Rate - Adjacent	93	1	6	5	3	
Apartments	220	160	Dwelling Units	Equation - Adjacent	1093	16	66	69	37	
Office	710	18.0	Th.Sq.Ft. GFA	Equation - Adjacent	357	43	6	17	82	
Shopping Center	820	22.0	Th.Sq.Ft. GLA	Equation - Adjacent	2,538	38	24	104	113	
<b>Phase 2 Total Unadjusted Trips</b>					<b>4,081</b>	<b>98</b>	<b>102</b>	<b>195</b>	<b>235</b>	
<b>Full Build Unadjusted Trips</b>					<b>5,233</b>	<b>121</b>	<b>170</b>	<b>271</b>	<b>280</b>	
<b>Internal Capture Overall %</b>					<b>12.38%</b>	<b>N/A</b>		<b>10.89%</b>		
Residential					-258	0	0	-16	-9	
Office					-70	0	0	-3	-4	
Retail					-320	0	0	-11	-17	
<b>Total Internal Full Build Trips Reduction</b>					<b>-648</b>	<b>0</b>	<b>0</b>	<b>-30</b>	<b>-30</b>	
Residential					2,080	40	140	134	76	
Office					287	43	6	14	78	
Shopping Center					2,218	38	24	93	96	
<b>Total External Full Build Trips</b>					<b>4,585</b>	<b>121</b>	<b>170</b>	<b>241</b>	<b>250</b>	
Pass-by Shopping Center			34% PM		-377	0	0	-32	-33	
<b>Total Pass-by Reduction</b>					<b>-377</b>	<b>0</b>	<b>0</b>	<b>-32</b>	<b>-33</b>	
<b>Total Adjusted Full Build Trips</b>					<b>4,208</b>	<b>121</b>	<b>170</b>	<b>209</b>	<b>217</b>	

