

MEMORANDUM

To: Stephen O' Connell, PE
From: Jennifer Conley, PE, PTOE
Date: August 8, 2016
Project Name: Norfolk Traffic Impact Analysis
Project Number: 52779B
Subject: Evaluation of Additional Intersections

WSP|Parsons Brinckerhoff (PB) assessed the sight lines and crash data of seven intersections outlined in the BETA letter dated July 12, 2016 addressing their comments on the Traffic Impact Memorandum prepared for the proposed 40 unit townhouse development. PB has reviewed the intersections and offers the following additional information.

PB analyzed the available crash data for the most recent three years (2011-2014) at the seven intersections finding minimal crashes. The intersections of Cleveland Street at Seekonk Street and Cleveland Street at Holbrook Street experienced no crashes during the three year period. The intersections of Cleveland Street at the proposed site driveway and Cleveland Street at Fruit Street experienced one crash during the three year period while Seekonk Street at Fruit Street experienced two. The intersections of Route 115 at Cleveland Street and Route 115 at Holbrook Street (which is actually three intersections) experienced four crashes during the three year period.

PB determined the available stopping sight distance at each of the seven locations identified by BETA. The stopping sight distance at the intersections of Cleveland Street at the proposed site driveway, Cleveland Street at Seekonk Street, and Route 115 at Cleveland Street met the required stopping sight distance for a road with a speed limit of 35 miles per hour.

The four remaining intersections of Cleveland Street at Fruit Street, Seekonk Street at Fruit Street, Cleveland Street at Holbrook Street, and Route 115 at Holbrook Street have limited sight distance. The available stopping sight distance for the southerly leg at the intersection of Cleveland Street at Fruit Street is limited by vegetation. It is unclear if the vegetation is within the town's right of way. The intersection of Cleveland Street at Holbrook Street is limited by grading and vegetation near a memorial. The available stopping sight distance at the intersection of Seekonk Street at Fruit Street is limited due to vegetation. It is unclear if the vegetation is within the town's right of way.

The sight distance at the intersection of Route 115 at Holbrook Street is met at the northerly portion of the westbound leg accommodating westbound right movements, however, sight distance is limited at the southerly portion of Holbrook Street accommodating westbound left movements. Because westbound left traffic destined to the south from the site would make that maneuver at Cleveland Street at Route 115, no site traffic is anticipated on this leg of Holbrook Street.

Based on available sight lines and minimal crash data most location do not require additional study. Although sight lines are limited at Seekonk Street at Fruit Street, the number of crashes was only two over the three year period and only a max of two trips will impact this intersection during the peak hour.

Despite limited sight lines approaching Fruit Street at Cleveland Street, only one crash was reported over the three year period reviewed. It is unclear whether the vegetation limiting the sight lines is located within the public right of way. The sight lines at the intersection of Cleveland Street at Holbrook are limited by grading and vegetation, however, there have been no crashes reported over the three year period.

Table 1: Intersection Evaluation

Cleveland Street at Site Driveway					Comments
Trips			SSD		
AM	PM			Desired	Actual
25	28	EB Sight Lines to Driveway	250	380	SSD requirement met, minimal crashes
Crashes		WB Sight Lines to Driveway		485	
1					
Cleveland Street at Fruit Street					Comments
Trips			SSD		
AM	PM			Desired	Actual
18	19	EB Sight Lines to Fruit Street Southley Leg	250	180	SSD requirement not met for WB vehicles to see NB vehicles ¹
Crashes		WB Sight Lines to Fruit Street Southerly Leg		155	
1		EB Sight Lines to Fruit Street Northerly Leg		270	
		WB Sight Lines to Fruit Street Northerly Leg		270	
Seekonk Street at Fruit Street					Comments
Trips			SSD		
AM	PM			Desired	Actual
1	2	NB Sight Lines to Fruit Street	250	330	SSD requirement not met for SB vehicles to see EB vehicles
Crashes		SB Sight Lines to Fruit Street		140	
2					
Cleveland Street at Seekonk Street					Comments
Trips			SSD		
AM	PM			Desired	Actual
15	13	NB Sight Lines to Cleveland Street	250	430	SSD requirements are met, no crashes
Crashes		SB Sight Lines to Cleveland Street		315	
0					
Cleveland at Holbrook Street					Comments
Trips			SSD		
AM	PM			Desired	Actual
7	9	NB Sight Lines to Holbrook Street	250	130	SSD requirements are not met for NB vehicles to see EB vehicles ²
Crashes		SB Sight Lines to Holbrook Street		725	
0					
Route 115 at Cleveland Street					Comments
Trips			SSD		
AM	PM			Desired	Actual
3	3	EB Sight Lines to Cleveland Street	250	570	SSD requirement met, minimal crashes, minimal trips
Crashes		WB Sight Lines to Cleveland Street		480	
4					
Route 115 at Holbrook Street					Comments
Trips			SSD		
AM	PM			Desired	Actual
0	0	NB Sight Lines to Southerly Holbrook WBL	250	260	No impact at limited sight distance location, overall minor traffic impact
		SB Sight Lines to Southerly Holbrook WBL		220	
4	6	NB Sight Lines to Northerly Holbrook WBR		440	
Crashes		SB to the West Northerly Holbrook WBR		660	
4 ³					

1. Unclear if vegetation limiting sight distance is within town right of way.
2. Note grading and vegetation removal may be difficult because of memorial, but would increase sight lines.
3. Crashes do not differentiate which Holbrook intersection the crashes occurred.