

Wednesday, July 05, 2024

Green Hill Beach Road Sight Distance Study

Based upon "The Gurdjian-Walsh Plat" by Flynn Surveys for

Proposed Minor Subdivision Located in the Town of South Kingstown

Performed at the request of:

Flynn Surveys Inc./Ardelems-K. Gurdjian-Walsh Living Trust

By: Jeffrey S. Davis PE

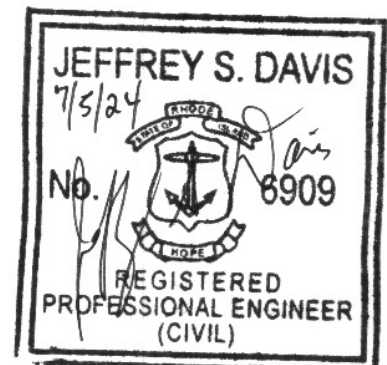


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CREDENTIALS

A SELECTIVE RESUME

- Assistant Chief Engineer / Department of Public Works/ Engineering Division / City of Cranston 2000-Present
- Traffic Impact and Analysis Study 2002
Traffic Impact and Analysis Study for the Proposed Jamestown Dive Shop Public Swimming Pool Facility located on North Main Road, Expert Witness provided at meeting of the Zoning Board
- Site Plan with Parking and Entrance access on Boston Neck Road, Narragansett

Fiscal Alteration Permit on State Roadway and Expert Witness provided to the Zoning Board

- Traffic Engineer / Department of Public Works/ Engineering Division / City of Cranston 1998-2000
- Traffic Impact and Analysis Study 1999
Traffic Impact and Analysis Study for the Proposed Spring Lake Golf Course to be located on Laten Knight Road, Cranston at the Mayor's request
- Masters in Transportation Engineering / U R I – Civil Engineering Department 1997
- Town of Narragansett / Engineering Division - Highway Design 1997-1998
- Rhode Island Department of Transportation / Engineering Division Intern ship 1992-1994
- B.S. Civil Engineering / URI – Civil Engineering Department 1994

1.0 Introduction

Need and Purpose:

The primary purpose for conducting a Sight Distance study is to provide guidance in the planning of site access and off site improvements needed to permit the road system to satisfactorily accommodate site and non-site traffic. It will also assist developers and property owners in making land use site-planning decisions. This will help to identify the contribution this site makes to roadway system traffic loads.

1.1 Sight and Stopping S Distance Studies:

Sight distance is the length of roadway that the driver can see. It is assumed that the drivers eyes are 3.5' above the surface of the roadway. The object to be sighted is assumed at .5' above the road. The sight distance should be long enough to allow a driver traveling at the maximum speed (25 mph) to stop before coming to an observed object. Vehicles merging on to Greenhill Beach Rd from the driveway at the proposed minor subdivision are the concern of this report.

Stopping Distance on wet pavement @ 25mph= $1.47(tp)(MPH)SQ + (MPH)SQ/(30)(f+G)$, $tp = .9$, $f = .16$ $G = 0$ when level = 95'

Stopping sight minimum passing distance recommended by AASHTO = 1100'

1.1 Description of Project

The proposed project is located on Assessors Plat 84-1 Lot 28 on at 259 Green Hill Beach Road in the Town of South Kingstown as shown on the Survey site plan provided in Appendix A. A 6 bedroom residential residence a proposed 16' wide gravel

drive located adjacent to the existing drive at the existing 4 bedroom dwelling. The proposed project will use Green Hill Beach Road for access to and from the site. Traffic volumes are generally light on Green Hill Road classified as a Rural Minor Collector.

1.2 Study Area

A 16 foot gravel private driveway is proposed for this project.

1.3 Data Collection

Graphical data provided by Flynn Surveys subdivision survey Existing Conditions & Conceptual plan dated revised 6/25/2024.

2.3 Sight and Stopping Distances

Sight distance is the length of roadway that the driver can see. The sight distance should be long enough to allow a driver traveling at the roadway design speed to stop before coming upon an observed object. The proposed project intersection with Green Hill Beach Road will be at a relatively level and straight section of the road. A curve located 400' north of the entrance will block sight of the gravel drive. Stopping and sight distance will determine minimum distances for safety

A design speed of 30 MPH can be used for Green Hill Beach Road as typical for a rural two lane collector and greater than the 25 MPH enforceable speed limit.

3.0 Conclusions

Stopping sight distance minimum on wet pavement @ 25-30 mph would be 200 feet. Passing sight distance on a 2 lane highway 1100' would be recommended as ideal when using AASHTO minimum sight distances (AASHTO PGDHS-1990

Tables III-1 and III-5. There is 105' of available sight distance for the proposed project entrance. This will not meet the above mentioned 200' sight distance AASHTO recommends. Stopping distance is 95 feet but if the driver is not able to see the object in time they will not brake in time.

3.1 Recommendations

There is a northerly curve when heading south on Green Hill Beach road toward the proposed drive. When negotiating the curve to maintain the recommended sight distance minimum of 200' a clear cut sight easement would be required from the project land area. I recommend a 'line of sight' clear cut easement be prepared. An easement or abandonment should be noted on the minor subdivision conceptual plan survey. Also a no passing notification sign at the curve going south would be recommended.

APPENDIX

- A. Sight Lines
- B. 1" = 100' Minor Subdivision plan by Flynn Surveys for reference

7/5/24

GREEN HILL BEACH: SIGHT LINES

SKETCH W/ DISTANCE NOTED

by JEFFREY DAVIS REF: FLYNN SURVEYS

