Traffic Study

TRAFFIC IMPACT STUDY

YACHT CLUB AT SUMMER'S END

Coral Bay, St. John, USVI

January 23, 2013

TRAFFIC IMPACT STUDY

YACHT CLUB AT SUMMER'S END

Route 107 **Coral Bay, St. John, USVI**

Prepared by:

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January 23, 2013

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File No. 13-001

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INTRODUCTION

Horner & Canter Associates has prepared this Traffic Impact Study for the proposed development of Yacht Club at Summer's End located along Route 107 in Coral Bay, St. John, USVI. The applicant is The Summer's End Group, LLC. The proposed development will consist of a mix of retail, restaurant, office, residential and marina uses to be located along Route 107 in proximity to Estate Road.

For the purpose of this study, the ultimate build-out year for the proposed development is assumed to be 10 years, or 2023. This has been used as the future horizon year for this traffic study.

The purpose of this Traffic Impact Study is to determine the traffic impact the proposed development will have on the surrounding roadway network and the determination of roadway improvements that may be necessary to accommodate this project. This study includes the following scope:

- Acquisition of Manual Turning Movement (MTM) counts during a representative Friday (6:00 - 10:00 AM and 4:00 - 7:00 PM) and Saturday (8:00 - 10:00 AM and 4:00 - 7:00 PM) at the following intersections which constitute the study area:

    - Route 10/Route 107
    - Route 107/Estate Road

- Projection of site-generated traffic volumes and distribution of this traffic to the study area roadway network.

- Establishment of future traffic volumes for the study horizon year (2023).

- Analysis of future traffic conditions in 2023 at the study area intersections.

- Formulation of conclusions with regard to the traffic impact of the proposed development.

EXISTING CONDITIONS

The site is served primarily by Route 107. Route 107 is a two-lane roadway extending in a general north/south direction from its intersection with Route 10 to beyond the area proposed for development. Route 107 provides a variable cartway width of between 18 and 21 feet within a 30-feet right-of-way.

One of the key intersections in the area is Route 10 and Route 107. This intersection is configured as a "T-intersection, with stop-sign traffic control provided on the Route 107 approach to the intersection. Also included in the study is the local intersection of Route 107/Estate Road. This intersection is proposed to be reconfigured in conjunction with the proposed development, with Estate Road serving as a primary access for the development to connect to Route 107.

Existing Traffic Volumes

Since the peak hour traffic conditions reflect the critical periods for evaluation of operating conditions and traffic impact, existing traffic volumes were acquired at the two noted study area intersections through the conduct of Manual Turning Movement (MTM) counts. Counts were conducted on Friday, January 11, 2013 during the morning (6:00 AM - 10:00 AM) and afternoon (4:00 PM - 7:00 PM) peak periods. Counts were also conducted on Saturday, January 12, 2013 during the morning (8:00 - 10:00 AM) and afternoon (4:00 - 7:00 PM) peak periods. These count periods were selected to capture the peak hours and peak day of the week for both the existing traffic and for the projected traffic to be generated by the proposed development. The peak hour traffic count data is provided in the Appendix on pages A-1 through A-8.

The resultant existing peak hour traffic volumes are presented in Figures 1 and 2 for the Friday and Saturday peak periods, respectively.

SITE TRAFFIC

The determination of the amount of site traffic that a proposed development will generate can best be made by comparison with similar sites. The Institute of Transportation Engineers (ITE) has compiled hundreds of trip generation studies and published the results in Trip Generation, 8th Edition[1], which is the national standard used for estimating site traffic generation rates for a variety of land uses.

For the proposed Yacht Club at Summer's End, which contains a mix of land uses, several different ITE Land Use Codes were used for the various components of the development. The resultant trip generation is presented below in Table 1.

Table 1
Peak Hour Site Trips

	Weekday AM			Weekday PM			Saturday		
	In	Out	Total	In	Out	Total	In	Out	Total
Retail (13,339 s.f.)	29	18	47	81	84	165	120	111	231
Restaurant (232 seats)	57	52	109	87	80	167	65	58	123
Office (3,720 s.f.)	11	2	13	2	11	13	2	1	3
Apartments (10 D.U.)	2	7	9	15	8	23	12	11	23
Marina (148 berths)	4	8	12	16	15	31	16	22	40
Internalization (20%)	*-21*	*-17*	*-38*	*-40*	*-40*	*-80*	*-43*	*-41*	*-84*
Total	**82**	**70**	**152**	**161**	**158**	**319**	**174**	**162**	**336**

It should be noted that Table 1 reflects a 20% internalization factor. For mixed-use developments there is a trip-sharing that occurs between use destinations within the development. For example, a patron of the retail component may also be a patron of the restaurant component, which serves to reduce the number of external trips than would ordinarily be generated by separate stand-alone parcels. The 20% estimation for internalization is derived by applying ITE's methodologies for mixed-use developments. For this project it is considered to be a conservatively low estimate of trip-sharing.

[1] *Trip Generation, 8th Edition*; Institute of Transportation Engineers, Washington, D.C.: 2008

In Table 1 only one peak hour is shown for the Saturday. This is due to the fact that the ITE data only provides a "peak hour of the generator" for Saturday as opposed to distinct AM and PM data. For the purpose of this report, we assumed the peak hour of the generator (the subject site) will occur during both Saturday periods.

The site-generated traffic from Table 1 was distributed to the study area roadway network in a manner consistent with the anticipated origins and destinations to/from the development and in part on existing traffic patterns. The distribution percentages by direction are presented below:

Route 10	
to/from the west	70%
to/from the east	10%
Route 107	
to/from the south	20%
	100%

The distributed site trips are presented in Figures 3 and 4 for the Friday and Saturday peak periods, respectively.

FUTURE TRAFFIC CONDITIONS

To assess the impact of the site-generated traffic volumes on the study area roadway network, the future traffic volumes in the anticipated build-out year of the site (2023) were determined. To determine the level of background, or non-development, traffic growth that would be expected to occur in the intervening ten-year period we reviewed U.S. Census Bureau data. This data revealed that the recent trends are a slight decrease in population on St. John. To be conservative with our future traffic estimates we assumed a background traffic growth rate of one percent per year (10% total). This was applied to the existing traffic volumes to yield 2023 base traffic volumes without the development.

The total Build 2023 traffic volumes, which consist of the existing traffic volumes factored upward to account for background traffic growth and the site-generated traffic volumes distributed to the study area intersections, are presented in Figures 5 and 6 for the Friday and Saturday study peak periods, respectively.

Levels of Service

In order to determine the ability of the adjoining streets and intersections to accommodate the development-generated traffic, the Level of Service of these facilities is computed using the FHWA-accepted standards as put forth by the Transportation Research Board (TRB) in the Highway Capacity Manual (HCM 2010). Level of Service (LOS) is a measure of the quality of the traffic flow and generally is expressed as follows:

Level of Service
- A - Excellent - Free flow
- B - Very Good - Minor adjustments in traffic flows
- C - Good - Stable flow of traffic
- D - Satisfactory flow - Occasional short periods with minor delays
- E - CAPACITY FLOW- Regular delays
- F - Forced Flow - Significant delays and queuing

At unsignalized (stop-sign controlled) intersections, Level of Service is based on the average delay to controlled and yielding movements, such as exiting movements from a stop sign or the left-turn from a through street into a side street. The delay thresholds for various Levels of Service are located in the Appendix on page A-9.

Assessment

An assessment of the future 2023 operating conditions within the study area was completed. The assessment included a Level of Service (LOS) analysis of the study area intersections in order to determine if the projected traffic volumes can be acceptably accommodated within the study area and what improvements may be required to mitigate the site's traffic impact, if any. The future 2023 LOS results are presented in Figures 7 and 8 for the Friday and Saturday periods, respectively. The detailed capacity analysis worksheets are contained in the Appendix on pages A-10 through A-33.

As shown in Figures 7 and 8, the study area intersections will operate at very good to excellent Level of Service (LOS) after full build-out of the project. The intersection of Route 10/Route 107 will operate at highly acceptable LOS A or B during all four study peak periods. There are no improvements required to address the development traffic impact at this intersection.

The proposed site access driveways (including relocated Estate Road) intersecting Route 107 will operate at highly acceptable LOS A during all four study peak periods.

Given the post-development traffic levels, it is recommended that a minimum 20-feet-wide cartway be maintained on Route 107 within the project limits. There are no auxiliary turn lanes required along Route 107 to accommodate the future traffic.

CONCLUSIONS

The conduct of this Traffic Impact Study for the proposed Yacht Club at Summer's End in Coral Bay, St. John, USVI, has led to the following conclusions and recommendations:

1. The development will generate approximately 152 trips in the Friday AM peak hour, 319 trips in the Friday PM peak hour, and 336 in the Saturday peak hours.

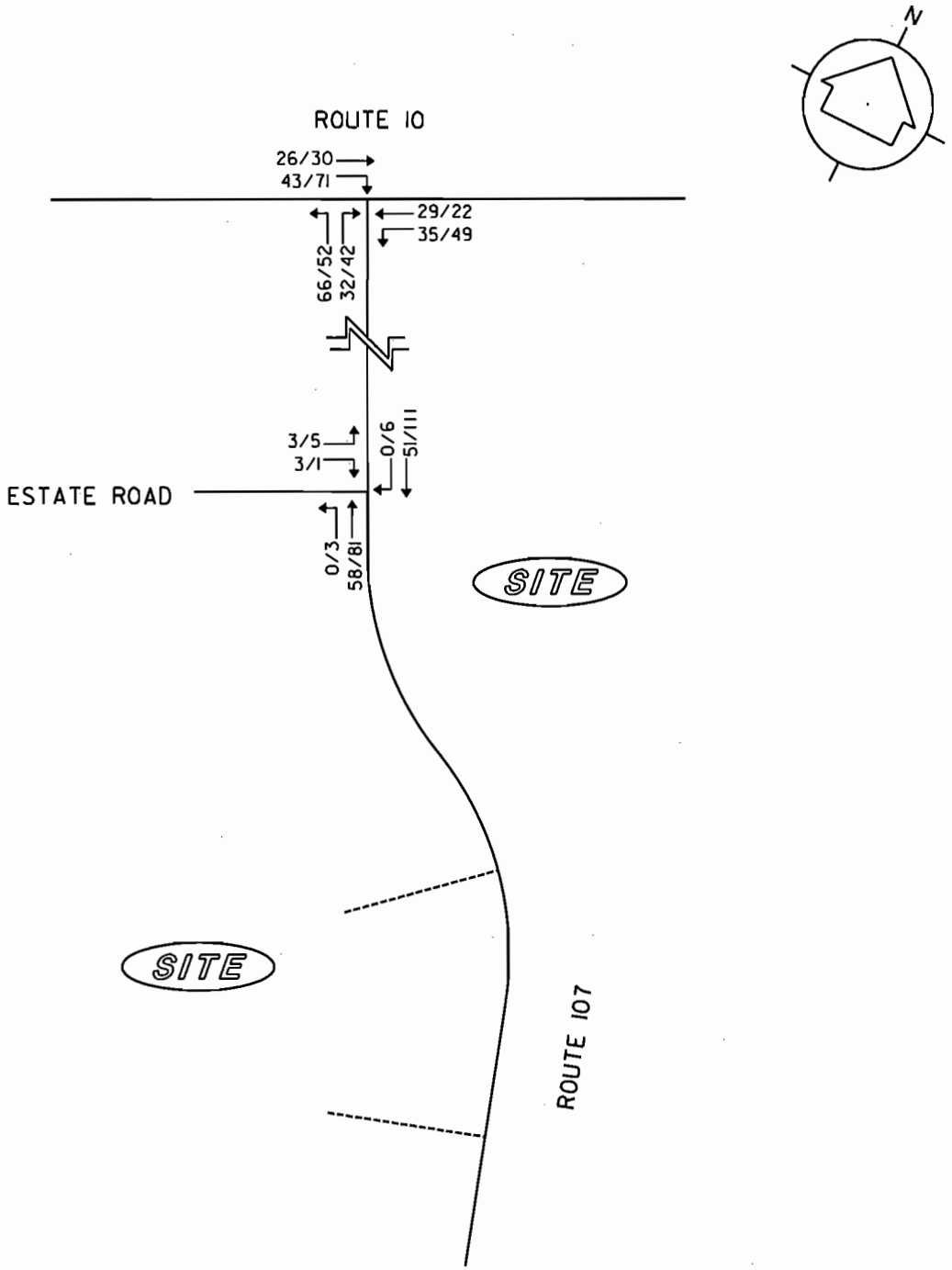
2. Access will be provided via three unsignalized driveways to Route 107 (including relocated Estate Road). The access driveways will operate at highly acceptable LOS A during the peak Friday and Saturday periods in the 2023 future build-out horizon.

3. The off-site intersection of Route 10/Route 107 will operate at very good LOS A/B for the stop-controlled approach of Route 107. There are no improvements at this intersection necessary to accommodate the increase in traffic attributable to this development.

4. The traffic generated by the proposed development can be integrated into the adjacent roadway network without significant negative traffic impact. It is recommended that a minimum 20-feet-wide cartway be maintained on Route 107 within the project limits. There are not auxiliary turn lanes required along Route 107 to accommodate the future traffic.

HCA *Horner & Canter Associates*

TRANSPORTATION AND TRAFFIC ENGINEERING



LEGEND:

◄—— AM/PM PEAK HOURS

FIGURE 1

EXISTING FRIDAY PEAK HOUR TRAFFIC VOLUMES

YACHT CLUB AT SUMMER'S END

CORAL BAY, ST. JOHN, USVI

13-001
JANUARY 2013

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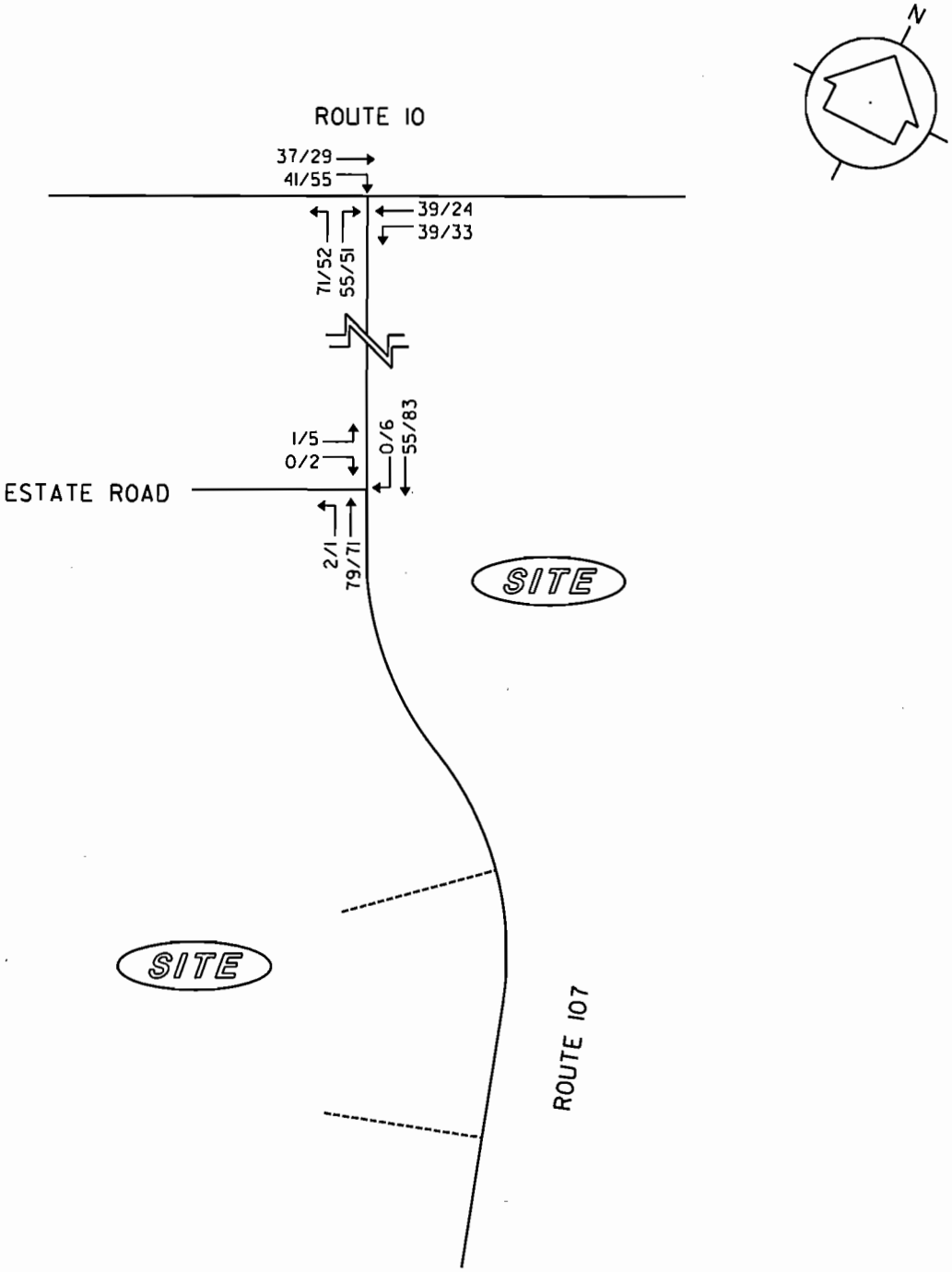
TRANSPORTATION AND TRAFFIC ENGINEERING



LEGEND:

← AM/PM PEAK HOURS

FIGURE 2

EXISTING SATURDAY PEAK HOUR TRAFFIC VOLUMES

YACHT CLUB AT SUMMER'S END

CORAL BAY, ST. JOHN, USVI

13-001
JANUARY 2013

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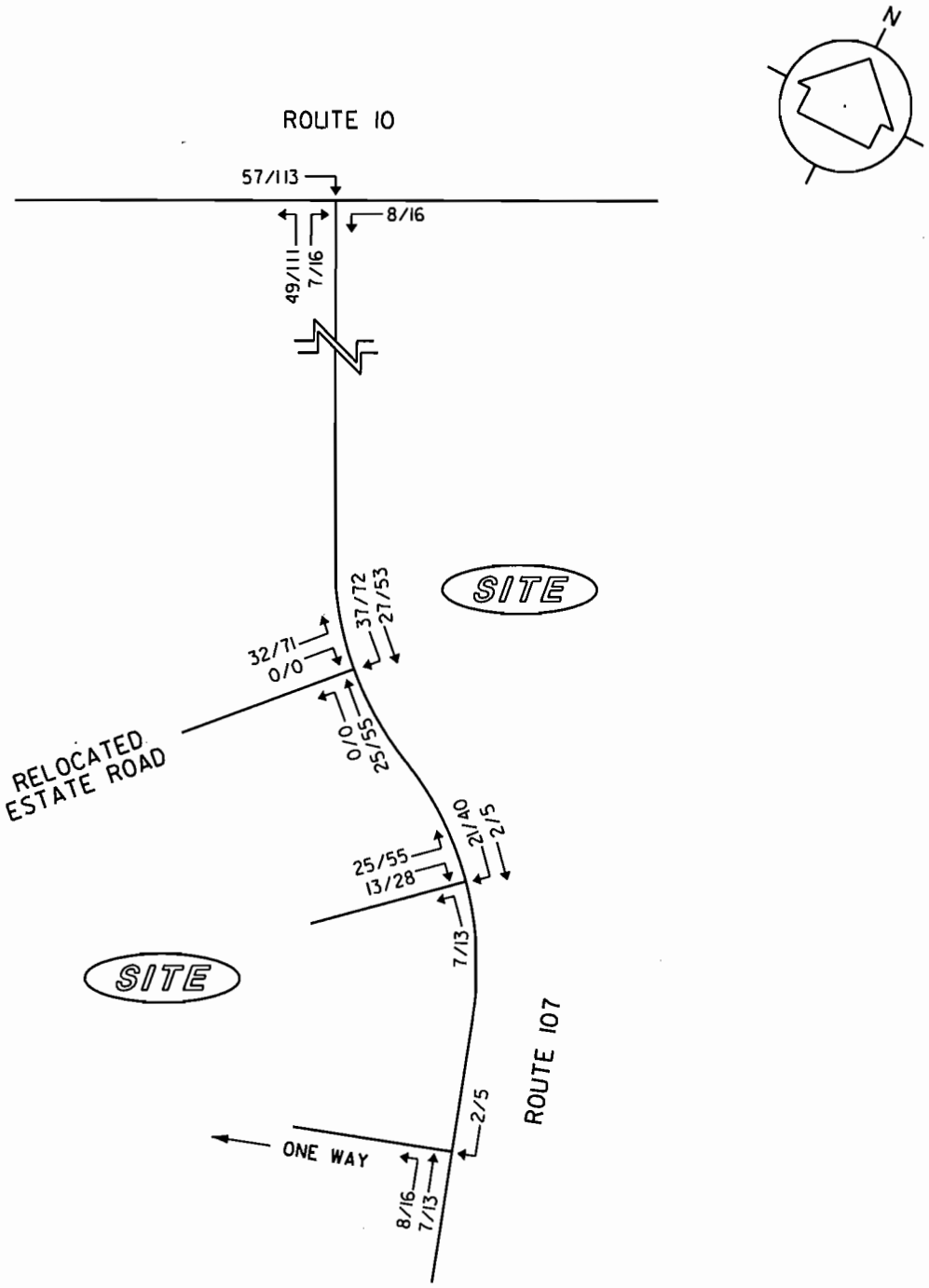

LEGEND:

◄—— AM/PM PEAK HOURS

FIGURE 3
SITE TRIPS: FRIDAY PEAK HOURS

YACHT CLUB AT SUMMER'S END

CORAL BAY, ST. JOHN, USVI

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JANUARY 2013

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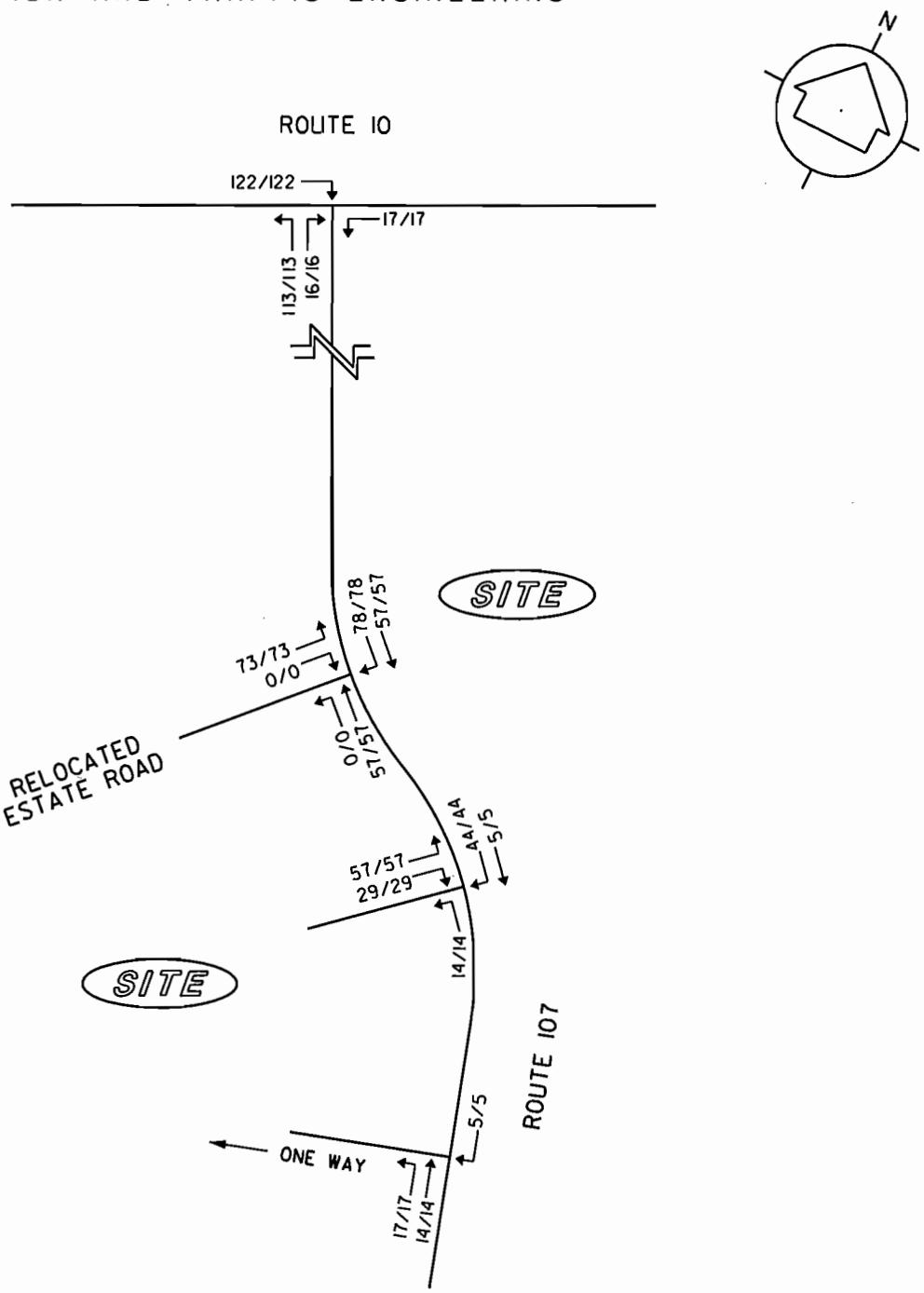

LEGEND:

← AM/PM PEAK HOURS

FIGURE 4
SITE TRIPS: SATURDAY PEAK HOURS

YACHT CLUB AT SUMMER'S END

CORAL BAY, ST. JOHN, USVI

13-001
JANUARY 2013

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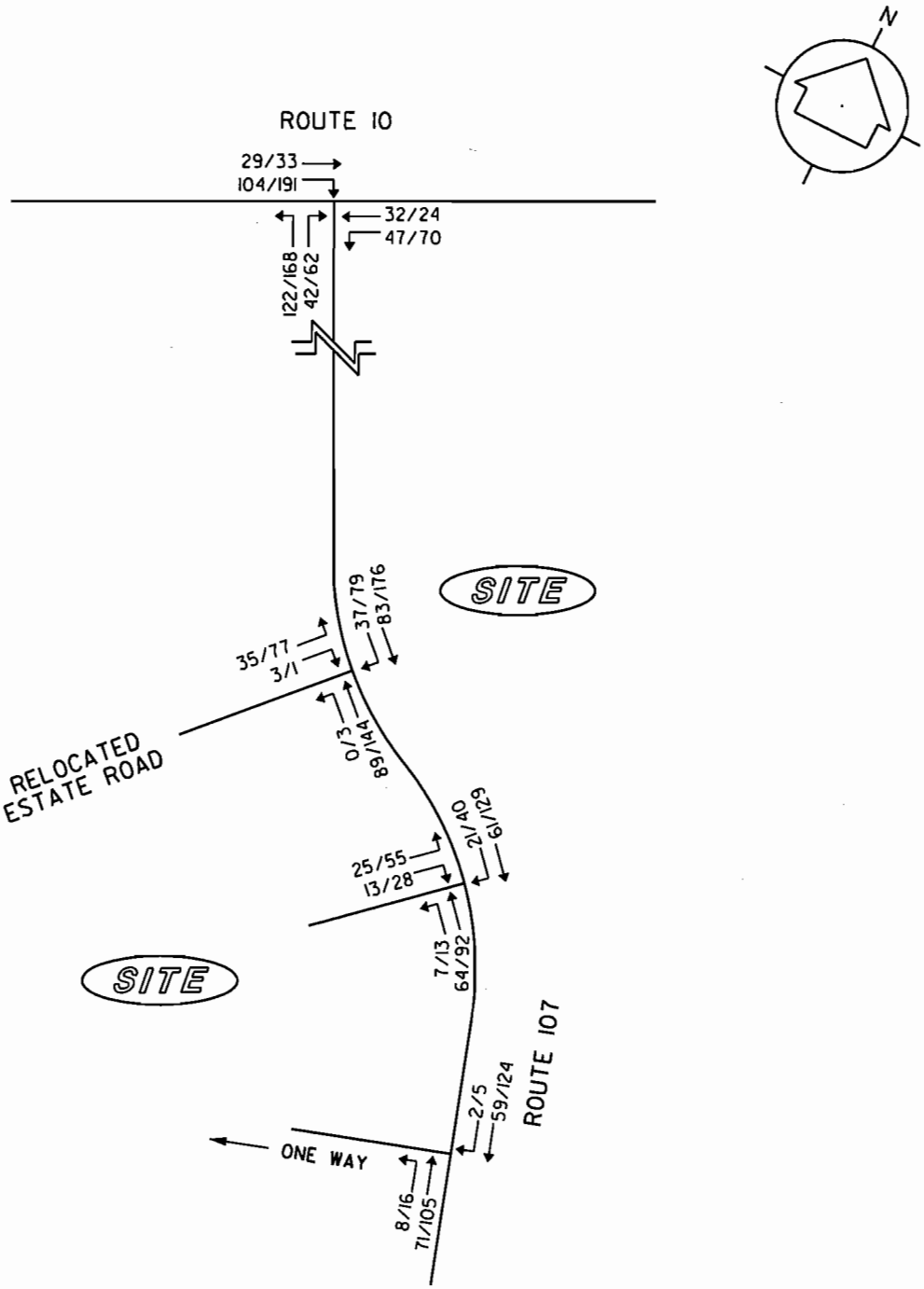

LEGEND:

← AM/PM PEAK HOURS

FIGURE 5
FUTURE 2023 FRIDAY
PEAK HOUR TRAFFIC VOLUMES

YACHT CLUB AT SUMMER'S END

CORAL BAY, ST. JOHN, USVI

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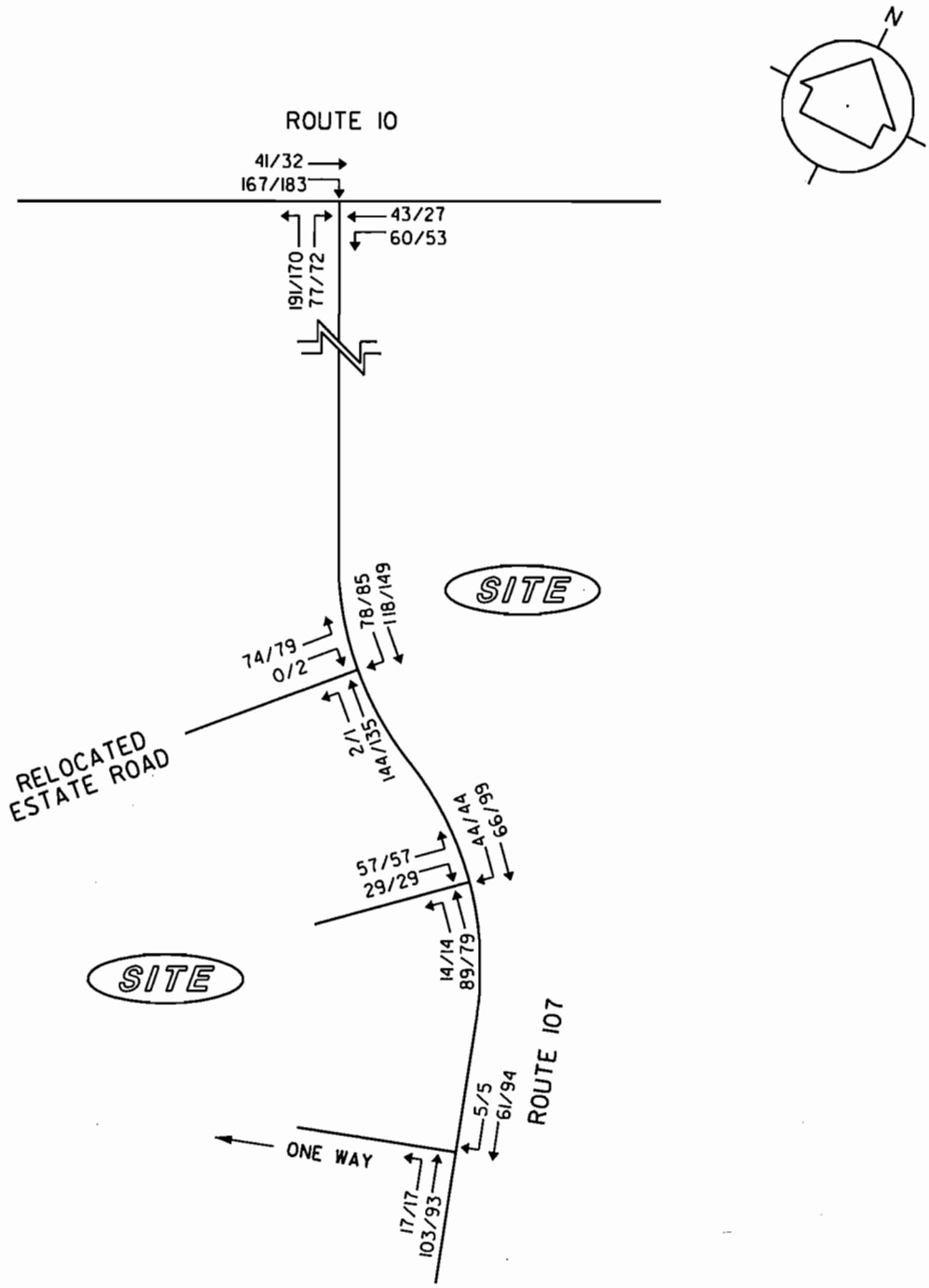

LEGEND:

← AM/PM PEAK HOURS

FIGURE 6
FUTURE 2023 SATURDAY
PEAK HOUR TRAFFIC VOLUMES

YACHT CLUB AT SUMMER'S END

CORAL BAY, ST. JOHN, USVI

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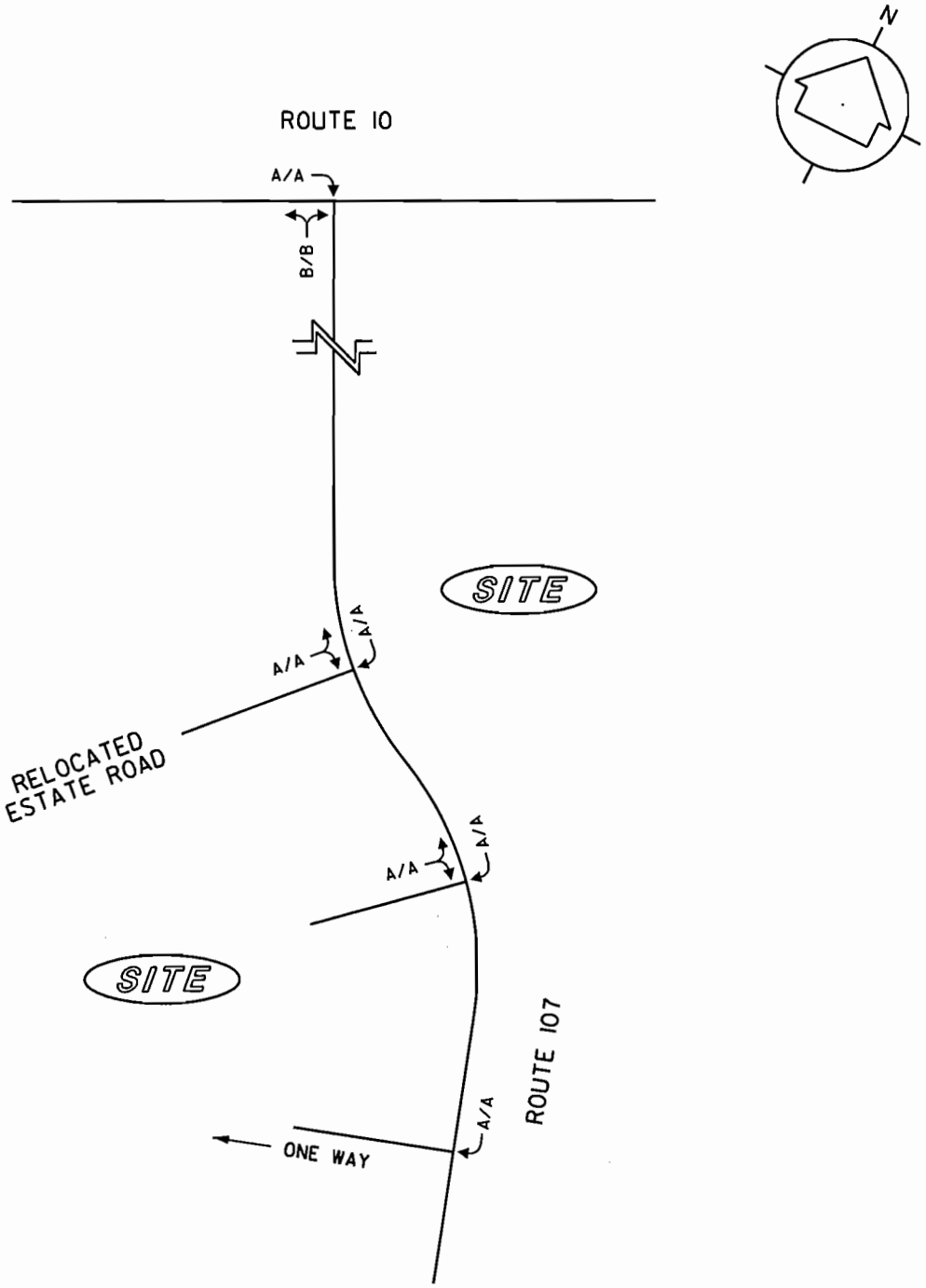

LEGEND:

⟵ AM/PM PEAK HOURS

FIGURE 7
FUTURE 2023
LEVELS OF SERVICE: FRIDAY PEAK HOURS

YACHT CLUB AT SUMMER'S END

CORAL BAY, ST. JOHN, USVI

13-001
JANUARY 2013

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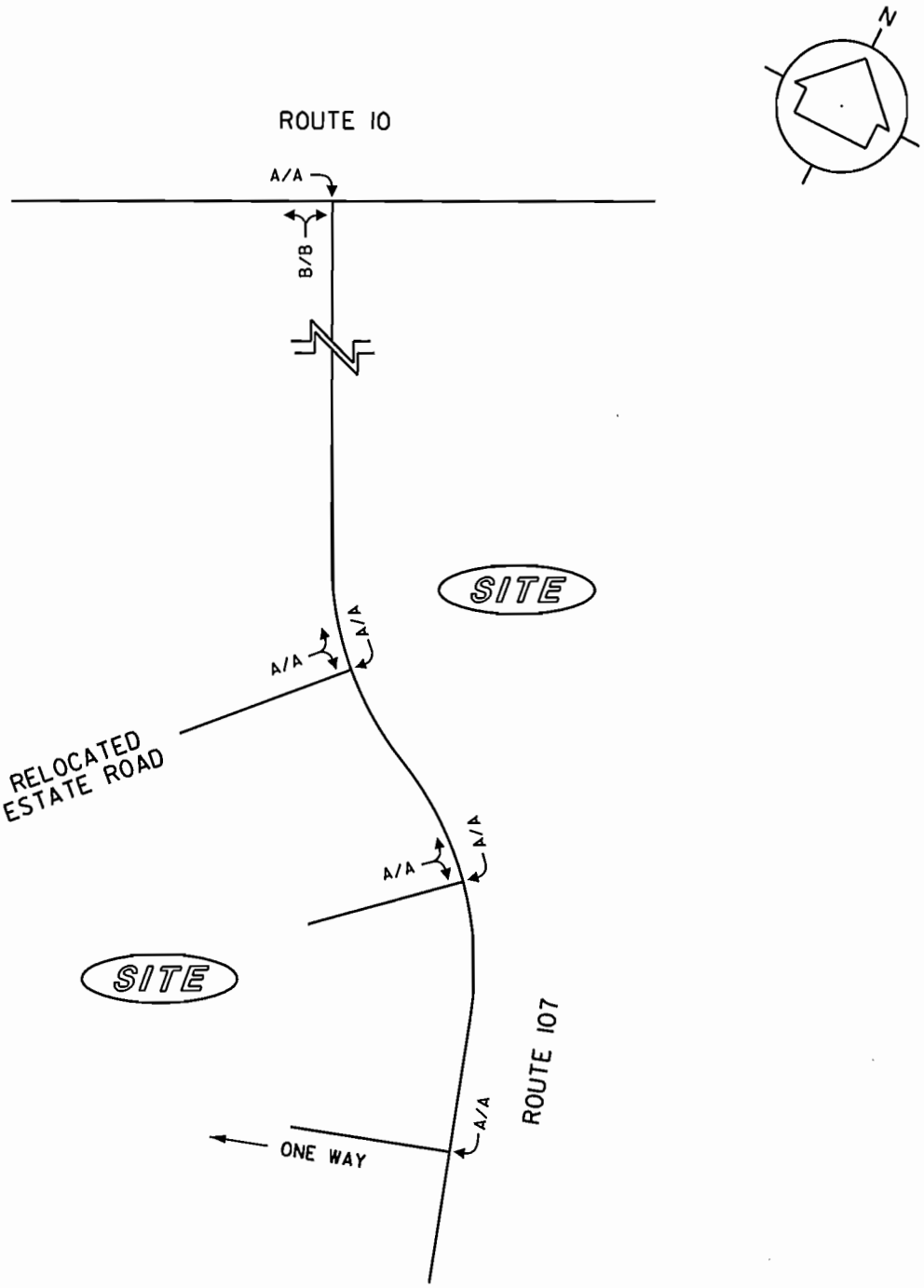


LEGEND:

⟵ AM/PM PEAK HOURS

FIGURE 8
FUTURE 2023
LEVELS OF SERVICE: FRIDAY PEAK HOURS

YACHT CLUB AT SUMMER'S END

CORAL BAY, ST. JOHN, USVI

13-001
JANUARY 2013

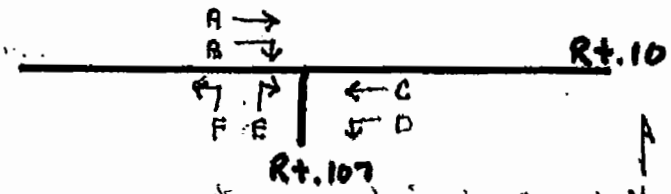
APPENDIX

13-001
Yacht Club at Summer's End
Coral Bay, U.S. Virgin Islands

HORNER CANTER ASSOCIATES

Turning Movements

Rt.10/Rt.107 Intersection Diagram:



Skinny shipwreck Cruz Skinny shipwreck Skinny Cruz Bay

	Friday January11,2013	Rt.10 EASTBOUND A- Thru	Rt.10 EASTBOUND B- Right Turn	Rt. 10 WESTBOUND C- Thru	Rt. 10 WESTBOUND D- Left Turn	Rt.107 NORTHBOUND E- Right Turn	Rt.107 NORTHBOUND F- Left Turn
12	6:00-6:15 AM	0	4	0	1	1	6
17	6:15-6:30 AM	1	3	0	1	1	11
22	6:30-6:45 AM	3	3	2	4	4	6
19	6:45-7:00 AM	1	4	4	1	1	8
30	7:00-7:15 AM	3	3	2	5	5	12
44	7:15-7:30 AM	6	7	6	6	9	10
50	7:30-7:45 AM	3	4	3	7	8	25
48	7:45-8:00 AM	5	9	7	4	8	15
41	8:00-8:15 AM	6	4	7	7	6	11
190							
42	8:15-8:30 AM	5	6	5	9	6	11
201							
65	8:30-8:45 AM	10	12	4	12	8	19
34	8:45-9:00 AM	1	2	4	3	5	19
231							
49	9:00-9:15 AM	5	10	6	6	11	11
53	9:15-9:30 AM	8	9	9	5	6	16
60	9:30-9:45 AM	5	8	6	14	8	19
69	9:45-10:00 AM	8	16	8	10	7	20

PEAK HOUR 9:00 AM - 10:00 AM

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Yacht Club at Summer's End
Coral Bay, U.S. Virgin Islands

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Turning Movements

1/11/13 - FRI
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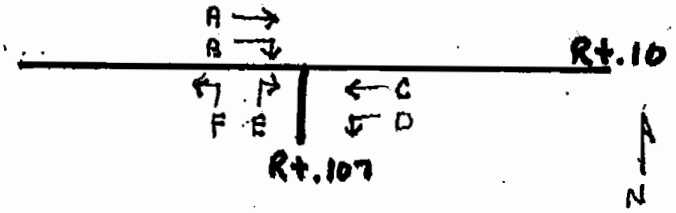


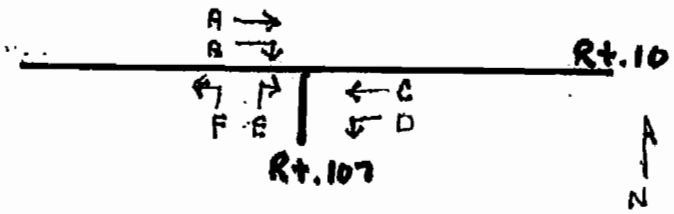
Rt.10/Rt.107 Intersection Diagram:

Skinnyleg shipwreck Cruz Shipwreck Skinnyleg Cruz Bay

	Friday January11,2013	Rt.10 EASTBOUND		Rt. 10 WESTBOUND		Rt.107 NORTHBOUND	
		A- Thru	B- Right Turn	C- Thru	D- Left Turn	E- Right Turn	F- Left Turn
58	4:00-4:15 PM	5	12	6	3	8	24
62	4:15-4:30 PM	9	16	5	13	7	12
266 83	4:30-4:45 PM	9	19	9	15	10	21
46	4:45-5:00 PM	3	14	5	8	9	7
73	5:00-5:15 PM	11	22	7	10	10	13
234 64	5:15-5:30 PM	7	16	1	16	13	11
62	5:30-5:45 PM	8	23	9	6	4	12
47	5:45-6:00 PM	8	6	1	15	6	11
61	5:00-5:15 PM	7	19	4	15	6	10
57	5:15-5:30 PM	4	12	5	8	13	15
50	5:30-5:45 PM	2	16	4	6	10	12
60	5:45-7:00 PM	10	17	3	15	12	3

PEAK HOUR 4:30 PM - 5:30 PM

Rt.10/Rt.107 Intersection Diagram:



	Saturday January12,2013	Rt.10 EASTBOUND		Rt. 10 WESTBOUND		Rt.107 NORTHBOUND	
		A- Thru	B- Right Turn	C- Thru	D- Left Turn	E- Right Turn	F- Left Turn
23	8:00-8:15 AM	2	5	3	3	3	7
26	8:15-8:30 AM	1	5	2	2	3	13
49	8:30-8:45 AM	8	10	1	10	6	14
56	8:45-9:00 AM	10	16	3	5	10	12
282							
68	9:00-9:15 AM	8	8	13	9	18	12
67	9:15-9:30 AM	7	7	8	12	12	21
70	9:30-9:45 AM	7	10	9	9	12	23
77	9:45-10:00 AM	15	16	9	9	13	15

PEAK HOUR 9:00 AM — 10:00 AM

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Yacht Club at Summer's End
Coral Bay, U.S. Virgin Islands

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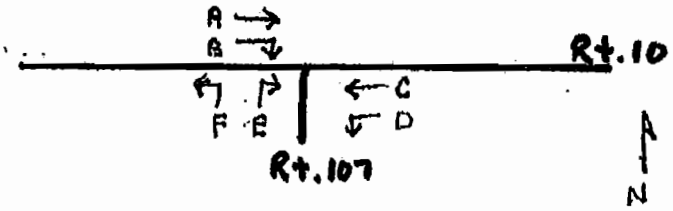
Turning Movements

Rt.10/Rt.107 Intersection Diagram:



Saturday January12,2013	Rt.10 EASTBOUND		Rt. 10 WESTBOUND		Rt.107 NORTHBOUND	
	A- Thru	B- Right Turn	C- Thru	D- Left Turn	E- Right Turn	F- Left Turn
4:00-4:15 PM	10	15	4	10	5	13
4:15-4:30 PM	6	8	9	6	9	10
4:30-4:45 PM	4	12	13	15	11	12
4:45-5:00 PM	7	13	6	13	8	15
5:00-5:15 PM	8	9	7	10	10	13
5:15-5:30 PM	7	12	8	7	10	7
5:30-5:45 PM	5	12	6	4	15	9
5:45-6:00 PM	7	13	5	10	15	18
5:00-5:15 PM	10	18	5	12	11	18
6:15-6:30 PM	6	16	6	8	9	5
6:30-6:45 PM	3	12	2	5	9	3
6:45-7:00 PM	3	7	2	8	7	13

234
57
48
67
62
57
244
51
243
51
68
74
50
34
40

PEAK HOUR 5:15 PM - 6:15 PM

13-001
Yacht Club at Summer's End
Coral Bay, U.S. Virgin Islands

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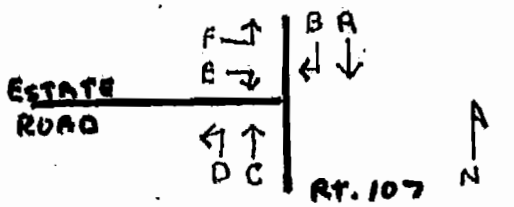
Turning Movements

Estate Road/Rt.107

Intersection Diagram:



	Friday January11,2013	Rt.107 SOUTHBOUND		Rt. 107 NORTHBOUND		Estate Road	
		A- Thru	B- Right Turn	C- Thru	D- Left Turn	E- Right Turn	F- Left Turn
10	6:00-6:15 AM	1 1	0	8	0	0	1 1
11	6:15-6:30 AM	1 1	0	10	0	0	0
11	6:30-6:45 AM	3	1 1	4	1 1	0	2
12	6:45-7:00 AM	3	0	7	0	1 1	1 1
19	7:00-7:15 AM	3	0	16	0	0	0
28	7:15-7:30 AM	12	0	15	0	0	1 1
34	7:30-7:45 AM	12	0	16	1 1	0	5
24	7:45-8:00 AM	8	0	13	0	0	3
21	8:00-8:15 AM	11	0	10	0	0	0
27	8:15-8:30 AM	12	0	15	0	0	0
33	8:30-8:45 AM	16	0	15	0	0	2
33	8:45-9:00 AM	9	0	20	0	3	1 1
22	9:00-9:15 AM	14	0	8	0	0	0
25	9:15-9:30 AM	13	0	12	0	0	0
21	9:30-9:45 AM	6	0	15	0	0	1 1
33	9:45-10:00 AM	17	0	15	0	1 1	0

107
106
105
115
113

Heavy !
School Bus
VI Tran
School Bus
VI Tran
School Bus
School Bus
Delivery
School Bus
Septic Truck
Delivery

Gov !
Police

PEAK HOUR 8:85 AM - 9:85 AM

13-001
Yacht Club at Summer's End
Coral Bay, U.S. Virgin Islands

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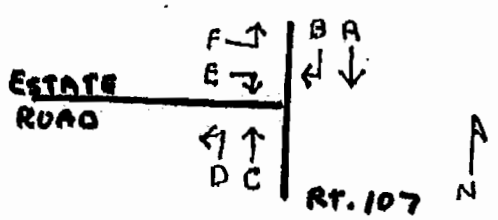
Turning Movements

1/11/13
Enid

Triangle

Estate Rd./Rt.107

Intersection Diagram:



	Friday January11,2013	Rt.107 SOUTHBOUND A- Thru	B- Right Turn	Rt. 107 NORTHBOUND C- Thru	D- Left Turn	Estate Road E- Right Turn	F- Left Turn
38	4:00-4:15 PM	14	4	18	0	0	2
37	4:15-4:30 PM	10	0	10	0	0	1
42	4:30-4:45 PM	19	1	22	0	0	0
206 50	4:45-5:00 PM	30	2	18	0	0	0
56	5:00-5:15 PM	28	2	23	1	0	2
47	5:15-5:30 PM	25	1	19	1	0	2
53	5:30-5:45 PM	28	1	21 ①	1	1	1
32	5:45-6:00 PM	16	1	12	0	1	2
182 32	6:00-6:15 PM	19	1	9	0	0	3
56	6:15-6:30 PM	21	1	32	0	0	2
58	6:30-6:45 PM	18	1	17	0	0	2
56	6:45-7:00 PM	34	3	18	0	1	0

① Motorcycle

~~PH Stop by Cases~~

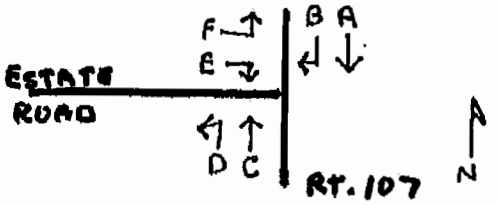
D - 1 4:00

PEAK HOUR 4:45 PM - 5:45 PM

13-001
Yacht Club at Summer's End
Coral Bay, U.S. Virgin Islands

HORNER CANTER ASSOCIATES

Turning Movements



Estate Rd/Rt.107

Intersection Diagram:

	Saturday January12,2013	Rt.107 SOUTHBOUND		Rt. 107 NORTHBOUND		Estate Road	
		A- Thru	B- Right Turn	C- Thru	D- Left Turn	E- Right Turn	F- Left Turn
24	8:00-8:15 AM	9	1	10	1	0	3
18	8:15-8:30 AM	7	0	10	0	0	1
24	8:30-8:45 AM	9	0	14	0	0	1
31	8:45-9:00 AM	16	3	10	0	0	2
137							
35	9:00-9:15 AM	14	0	21	0	0	0
30	9:15-9:30 AM	12	0	18	0	0	0
34	9:30-9:45 AM	16	0	17	1	0	0
38	9:45-10:00 AM	13	0	23	1	0	1

PEAK HOUR 9:00 AM - 10:00 AM

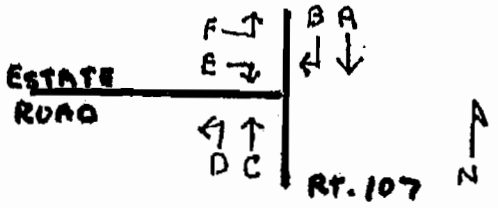
13-001
Yacht Club at Summer's End
Coral Bay, U.S. Virgin Islands

HORNER CANTER ASSOCIATES

Turning Movements

Estate Rd./Rt.107

Intersection Diagram:



Saturday January12,2013	Rt.107 SOUTHTBOUND		Rt. 107 NORTHBOUND		Estate Road	
	A- Thru	B- Right Turn	C- Thru	D- Left Turn	E- Right Turn	F- Left Turn
4:00-4:15 PM	21	4	19	0	0	1
4:15-4:30 PM	21	1	18	0	2	0
4:30-4:45 PM	18	1	19	1	0	4
4:45-5:00 PM	23	0	15	0	0	0
5:00-5:15 PM	11	4	18	1	2	2
5:15-5:30 PM	9	2	10	1	1	1
5:30-5:45 PM	20	0	14	0	1	2
5:45-6:00 PM	21	1	31	0	0	2
5:00-5:15 PM	15	0	19	0	0	1
6:15-6:30 PM	22	3	10	0	0	2
6:30-6:45 PM	9	2	10	2	0	0
6:45-7:00 PM	17	0	17	0	0	4

168
45
42
43
38
168
38
24
164
37
55
35
37
23
38

PEAK HR. 4:00 PM - 5:00 PM

Level of Service Criteria

Level of Service at intersections is defined in terms of DELAY. Delay is a measure of driver discomfort, frustration, and lost travel time, thus the rating of delay from highly acceptable LOS A to unacceptable LOS F.

At traffic signals, delay is a complex measure and is dependent on a number of variables including signal progression, the cycle length, the green-time ratio, clearance times, trucks, pedestrians, parking, and signal phasing.

At unsignalized intersections, delay is dependent on the available gaps in the two-way flow of the uninterrupted traffic movement, intersection width, and queuing.

Intersection LOS

	Signalized	Unsignalized
LOS A	Less than 10.0 sec/veh	Less than 10.0 sec/veh
B	10.0 to 20.0 sec/veh	10.0 to 15.0 sec/veh
C	20.0 to 35.0 sec/veh	15.0 to 25.0 sec/veh
D	35.0 to 55.0 sec/veh	25.0 to 35.0 sec/veh
E	55.0 to 80.0 sec/veh	35.0 to 50.0 sec/veh
F	Greater than 80.0 sec/veh	Greater than 50.0 sec/veh

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DHH*	Intersection	*Route 10/Route 107*
Agency/Co.	*Horner & Canter Associates*	Jurisdiction	*St. John, USVI*
Date Performed	*1/21/13*	Analysis Year	*Existing*
Analysis Time Period	*Friday AM Peak*		

Project Description *13-001 Yacht Club at Summer's End*

East/West Street: *Route 10* | North/South Street: *Route 107*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*29*	*35*	*43*	*26*	
Peak-Hour Factor, PHF	*1.00*	*0.84*	*0.84*	*0.84*	*0.84*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*34*	*41*	*51*	*30*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*32*		*66*			
Peak-Hour Factor, PHF	*0.84*	*1.00*	*0.84*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*38*	*0*	*78*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*51*		*116*				
C (m) (veh/h)		*1537*		*927*				
v/c		*0.03*		*0.13*				
95% queue length		*0.10*		*0.43*				
Control Delay (s/veh)		*7.4*		*9.4*				
LOS		*A*		*A*				
Approach Delay (s/veh)	--	--		*9.4*				
Approach LOS	--	--		*A*				

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DHH*	Intersection	*Route 10/Route 107*
Agency/Co.	*Horner & Canter Associates*	Jurisdiction	*St. John, USVI*
Date Performed	*1/21/13*	Analysis Year	*Existing*
Analysis Time Period	*Friday PM Peak*		

Project Description *13-001 Yacht Club at Summer's End*

East/West Street: *Route 10* | North/South Street: *Route 107*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*22*	*49*	*71*	*30*	
Peak-Hour Factor, PHF	*1.00*	*0.80*	*0.80*	*0.80*	*0.80*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*27*	*61*	*88*	*37*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*42*		*52*			
Peak-Hour Factor, PHF	*0.80*	*1.00*	*0.80*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*52*	*0*	*64*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*88*		*116*				
C (m) (veh/h)		*1520*		*832*				
v/c		*0.06*		*0.14*				
95% queue length		*0.18*		*0.48*				
Control Delay (s/veh)		*7.5*		*10.0*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--		*10.0*				
Approach LOS	--	--		*B*				

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DHH*	Intersection	*Route 10/Route 107*
Agency/Co.	*Horner & Canter Associates*	Jurisdiction	*St. John, USVI*
Date Performed	*1/21/13*	Analysis Year	*Existing*
Analysis Time Period	*Saturday AM Peak*		

Project Description *13-001 Yacht Club at Summer's End*

East/West Street: *Route 10*	North/South Street: *Route 107*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*39*	*39*	*41*	*37*	
Peak-Hour Factor, PHF	*1.00*	*0.92*	*0.92*	*0.92*	*0.92*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*42*	*42*	*44*	*40*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*55*		*71*			
Peak-Hour Factor, PHF	*0.92*	*1.00*	*0.92*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*59*	*0*	*77*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*44*		*136*				
C (m) (veh/h)		*1526*		*894*				
v/c		*0.03*		*0.15*				
95% queue length		*0.09*		*0.54*				
Control Delay (s/veh)		*7.4*		*9.7*				
LOS		*A*		*A*				
Approach Delay (s/veh)	--	--		*9.7*				
Approach LOS	--	--		*A*				

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DHH	Intersection	Route 10/Route 107
Agency/Co.	Horner & Canter Associates	Jurisdiction	St. John, USVI
Date Performed	1/21/13	Analysis Year	Existing
Analysis Time Period	Saturday PM Peak		

Project Description 13-001 Yacht Club at Summer's End

East/West Street: Route 10 | North/South Street: Route 107

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		24	33	55	29	
Peak-Hour Factor, PHF	1.00	0.82	0.82	0.82	0.82	1.00
Hourly Flow Rate, HFR (veh/h)	0	29	40	67	35	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	51		52			
Peak-Hour Factor, PHF	0.82	1.00	0.82	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	62	0	63	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		67		125				
C (m) (veh/h)		1545		861				
v/c		0.04		0.15				
95% queue length		0.14		0.51				
Control Delay (s/veh)		7.4		9.9				
LOS		A		A				
Approach Delay (s/veh)	--	--	9.9					
Approach LOS	--	--	A					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DHH*	Intersection	*Route 107/Estate Road*
Agency/Co.	*Horner & Canter Associates*	Jurisdiction	*St. John, USVI*
Date Performed	*1/21/13*	Analysis Year	*Existing*
Analysis Time Period	*Friday AM Peak*		

Project Description *13-001 Yacht Club at Summer's End*

East/West Street: *Estate Road* | North/South Street: *Route 107*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*0*	*51*			*58*	*0*
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.84*	*1.00*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*0*	*58*	*0*	*0*	*66*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*3*		*3*			
Peak-Hour Factor, PHF	*0.87*	*0.84*	*0.87*	*0.84*	*0.84*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*3*	*0*	*3*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*0*						*6*	
C (m) (veh/h)	*1549*						*935*	
v/c	*0.00*						*0.01*	
95% queue length	*0.00*						*0.02*	
Control Delay (s/veh)	*7.3*						*8.9*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--					*8.9*	
Approach LOS	--	--					*A*	

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DHH	Intersection	Route 107/Estate Road
Agency/Co.	Horner & Canter Associates	Jurisdiction	St. John, USVI
Date Performed	1/21/13	Analysis Year	Existing
Analysis Time Period	Friday PM Peak		

Project Description 13-001 Yacht Club at Summer's End

East/West Street: Estate Road	North/South Street: Route 107
Intersection Orientation: North-South	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	6	111			81	3
Peak-Hour Factor, PHF	0.92	0.92	0.84	1.00	0.92	0.92
Hourly Flow Rate, HFR (veh/h)	6	120	0	0	88	3
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	1		5			
Peak-Hour Factor, PHF	0.92	0.84	0.92	0.84	0.84	1.00
Hourly Flow Rate, HFR (veh/h)	1	0	5	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	6						6	
C (m) (veh/h)	1517						932	
v/c	0.00						0.01	
95% queue length	0.01						0.02	
Control Delay (s/veh)	7.4						8.9	
LOS	A						A	
Approach Delay (s/veh)	--	--				8.9		
Approach LOS	--	--				A		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DHH*	Intersection	*Route 107/Estate Road*
Agency/Co.	*Horner & Canter Associates*	Jurisdiction	*St. John, USVI*
Date Performed	*1/21/13*	Analysis Year	*Existing*
Analysis Time Period	*Saturday AM Peak*		

Project Description *13-001 Yacht Club at Summer's End*

East/West Street: *Estate Road*	North/South Street: *Route 107*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*0*	*55*			*79*	*2*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.84*	*1.00*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*61*	*0*	*0*	*87*	*2*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*		*1*			
Peak-Hour Factor, PHF	*0.90*	*0.84*	*0.90*	*0.84*	*0.84*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*1*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*0*						*1*	
C (m) (veh/h)	*1519*						*976*	
v/c	*0.00*						*0.00*	
95% queue length	*0.00*						*0.00*	
Control Delay (s/veh)	*7.4*						*8.7*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--				*8.7*		
Approach LOS	--	--				*A*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DHH*	Intersection	*Route 107/Estate Road*
Agency/Co.	*Horner & Canter Associates*	Jurisdiction	*St. John, USVI*
Date Performed	*1/21/13*	Analysis Year	*Existing*
Analysis Time Period	*Saturday PM Peak*		

Project Description *13-001 Yacht Club at Summer's End*

East/West Street: *Estate Road*	North/South Street: *Route 107*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*6*	*83*			*71*	*1*
Peak-Hour Factor, PHF	*0.93*	*0.93*	*0.84*	*1.00*	*0.93*	*0.93*
Hourly Flow Rate, HFR (veh/h)	*6*	*89*	*0*	*0*	*76*	*1*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*2*		*5*			
Peak-Hour Factor, PHF	*0.93*	*0.84*	*0.93*	*0.84*	*0.84*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*2*	*0*	*5*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*6*						*7*	
C (m) (veh/h)	*1535*						*933*	
v/c	*0.00*						*0.01*	
95% queue length	*0.01*						*0.02*	
Control Delay (s/veh)	*7.4*						*8.9*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--				*8.9*		
Approach LOS	--	--				*A*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DHH*	Intersection	*Route 10/Route 107*
Agency/Co.	*Horner & Canter Associates*	Jurisdiction	*St. John, USVI*
Date Performed	*1/21/13*	Analysis Year	*Future 2023*
Analysis Time Period	*Friday AM Peak*		

Project Description	*13-001 Yacht Club at Summer's End*
East/West Street: *Route 10*	North/South Street: *Route 107*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*32*	*47*	*104*	*29*	
Peak-Hour Factor, PHF	*1.00*	*0.84*	*0.84*	*0.84*	*0.84*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*38*	*55*	*123*	*34*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*42*		*122*			
Peak-Hour Factor, PHF	*0.84*	*1.00*	*0.84*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*50*	*0*	*145*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*123*		*195*				
C (m) (veh/h)		*1514*		*857*				
v/c		*0.08*		*0.23*				
95% queue length		*0.26*		*0.87*				
Control Delay (s/veh)		*7.6*		*10.4*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--		*10.4*				
Approach LOS	--	--		*B*				

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DHH	Intersection	Route 10/Route 107
Agency/Co.	Horner & Canter Associates	Jurisdiction	St. John, USVI
Date Performed	1/21/13	Analysis Year	Future 2023
Analysis Time Period	Friday PM Peak		

Project Description 13-001 Yacht Club at Summer's End

East/West Street: Route 10 | North/South Street: Route 107

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		24	70	191	33	
Peak-Hour Factor, PHF	1.00	0.80	0.80	0.80	0.80	1.00
Hourly Flow Rate, HFR (veh/h)	0	29	87	238	41	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	62		168			
Peak-Hour Factor, PHF	0.80	1.00	0.80	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	77	0	209	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		238		286				
C (m) (veh/h)		1485		709				
v/c		0.16		0.40				
95% queue length		0.57		1.96				
Control Delay (s/veh)		7.9		13.5				
LOS		A		B				
Approach Delay (s/veh)	--	--	13.5					
Approach LOS	--	--	B					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DHH	Intersection	Route 10/Route 107
Agency/Co.	Horner & Canter Associates	Jurisdiction	St. John, USVI
Date Performed	1/21/13	Analysis Year	Future 2023
Analysis Time Period	Saturday AM Peak		

Project Description 13-001 Yacht Club at Summer's End

East/West Street: Route 10	North/South Street: Route 107
Intersection Orientation: East-West	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		43	60	167	41	
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00
Hourly Flow Rate, HFR (veh/h)	0	46	65	181	44	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	77		191			
Peak-Hour Factor, PHF	0.92	1.00	0.92	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	83	0	207	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		181		290				
C (m) (veh/h)		1492		758				
v/c		0.12		0.38				
95% queue length		0.41		1.80				
Control Delay (s/veh)		7.7		12.7				
LOS		A		B				
Approach Delay (s/veh)	--	--	12.7					
Approach LOS	--	--	B					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DHH*	Intersection	*Route 10/Route 107*
Agency/Co.	*Horner & Canter Associates*	Jurisdiction	*St. John, USVI*
Date Performed	*1/21/13*	Analysis Year	*Future 2023*
Analysis Time Period	*Saturday PM Peak*		

Project Description *13-001 Yacht Club at Summer's End*

East/West Street: *Route 10* | North/South Street: *Route 107*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*27*	*53*	*183*	*32*	
Peak-Hour Factor, PHF	*1.00*	*0.82*	*0.82*	*0.82*	*0.82*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*32*	*64*	*223*	*39*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*72*		*170*			
Peak-Hour Factor, PHF	*0.82*	*1.00*	*0.82*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*87*	*0*	*207*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*223*		*294*				
C (m) (veh/h)		*1510*		*717*				
v/c		*0.15*		*0.41*				
95% queue length		*0.52*		*2.01*				
Control Delay (s/veh)		*7.8*		*13.5*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*13.5*					
Approach LOS	--	--	*B*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DHH	Intersection	Route 107/Estate Road
Agency/Co.	Horner & Canter Associates	Jurisdiction	St. John, USVI
Date Performed	1/21/13	Analysis Year	Future 2023
Analysis Time Period	Friday AM Peak		

Project Description	13-001 Yacht Club at Summer's End
East/West Street:	Estate Road
North/South Street:	Route 107
Intersection Orientation:	North-South
Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	37	83			89	0
Peak-Hour Factor, PHF	0.87	0.87	0.84	1.00	0.87	0.87
Hourly Flow Rate, HFR (veh/h)	42	95	0	0	102	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	3		35			
Peak-Hour Factor, PHF	0.87	0.84	0.87	0.84	0.84	1.00
Hourly Flow Rate, HFR (veh/h)	3	0	40	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	42						43	
C (m) (veh/h)	1503						934	
v/c	0.03						0.05	
95% queue length	0.09						0.14	
Control Delay (s/veh)	7.5						9.0	
LOS	A						A	
Approach Delay (s/veh)	--	--				9.0		
Approach LOS	--	--				A		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DHH	Intersection	Route 107/Estate Road
Agency/Co.	Horner & Canter Associates	Jurisdiction	St. John, USVI
Date Performed	1/21/13	Analysis Year	Future 2023
Analysis Time Period	Friday PM Peak		

Project Description	13-001 Yacht Club at Summer's End
East/West Street:	Estate Road
North/South Street:	Route 107
Intersection Orientation:	North-South
Study Period (hrs):	0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	79	176			144	3
Peak-Hour Factor, PHF	0.92	0.92	0.84	1.00	0.92	0.92
Hourly Flow Rate, HFR (veh/h)	85	191	0	0	156	3
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	1		77			
Peak-Hour Factor, PHF	0.92	0.84	0.92	0.84	0.84	1.00
Hourly Flow Rate, HFR (veh/h)	1	0	83	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	85						84	
C (m) (veh/h)	1433						884	
v/c	0.06						0.10	
95% queue length	0.19						0.31	
Control Delay (s/veh)	7.7						9.5	
LOS	A						A	
Approach Delay (s/veh)	--	--				9.5		
Approach LOS	--	--				A		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DHH	Intersection	Route 107/Estate Road
Agency/Co.	Horner & Canter Associates	Jurisdiction	St. John, USVI
Date Performed	1/21/13	Analysis Year	Future 2023
Analysis Time Period	Saturday AM Peak		

Project Description 13-001 Yacht Club at Summer's End

East/West Street: Estate Road	North/South Street: Route 107
Intersection Orientation: North-South	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	78	118			144	2
Peak-Hour Factor, PHF	0.90	0.90	0.84	1.00	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	86	131	0	0	160	2
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	0		74			
Peak-Hour Factor, PHF	0.90	0.84	0.90	0.84	0.84	1.00
Hourly Flow Rate, HFR (veh/h)	0	0	82	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	86						82	
C (m) (veh/h)	1429						889	
v/c	0.06						0.09	
95% queue length	0.19						0.30	
Control Delay (s/veh)	7.7						9.5	
LOS	A						A	
Approach Delay (s/veh)	--	--				9.5		
Approach LOS	--	--				A		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DHH	Intersection	Route 107/Estate Road
Agency/Co.	Horner & Canter Associates	Jurisdiction	St. John, USVI
Date Performed	1/21/13	Analysis Year	Future 2023
Analysis Time Period	Saturday PM Peak		

Project Description 13-001 Yacht Club at Summer's End

East/West Street: Estate Road	North/South Street: Route 107
Intersection Orientation: North-South	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	85	149			135	1
Peak-Hour Factor, PHF	0.93	0.93	0.84	1.00	0.93	0.93
Hourly Flow Rate, HFR (veh/h)	91	160	0	0	145	1
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	2		79			
Peak-Hour Factor, PHF	0.93	0.84	0.93	0.84	0.84	1.00
Hourly Flow Rate, HFR (veh/h)	2	0	84	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	91						86	
C (m) (veh/h)	1448						890	
v/c	0.06						0.10	
95% queue length	0.20						0.32	
Control Delay (s/veh)	7.7						9.5	
LOS	A						A	
Approach Delay (s/veh)	--	--				9.5		
Approach LOS	--	--				A		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DHH*	Intersection	*Route 107/Site Access North*
Agency/Co.	*Horner & Canter Associates*	Jurisdiction	*St. John, USVI*
Date Performed	*1/21/13*	Analysis Year	*Future 2023*
Analysis Time Period	*Friday AM Peak*		

Project Description *13-001 Yacht Club at Summer's End*

East/West Street: *Site Access North*	North/South Street: *Route 107*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*21*	*61*			*64*	*7*
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.84*	*1.00*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*24*	*70*	*0*	*0*	*73*	*8*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*13*		*25*			
Peak-Hour Factor, PHF	*0.87*	*0.84*	*0.87*	*0.84*	*0.84*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*14*	*0*	*28*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*24*						*42*	
C (m) (veh/h)	*1529*						*911*	
v/c	*0.02*						*0.05*	
95% queue length	*0.05*						*0.14*	
Control Delay (s/veh)	*7.4*						*9.1*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--				*9.1*		
Approach LOS	--	--				*A*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DHH	Intersection	Route 107/Site Access North
Agency/Co.	Horner & Canter Associates	Jurisdiction	St. John, USVI
Date Performed	1/21/13	Analysis Year	Future 2023
Analysis Time Period	Friday PM Peak		

Project Description 13-001 Yacht Club at Summer's End

East/West Street: Site Access North | North/South Street: Route 107

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	40	129			92	13
Peak-Hour Factor, PHF	0.92	0.92	0.84	1.00	0.92	0.92
Hourly Flow Rate, HFR (veh/h)	43	140	0	0	99	14
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	28		55			
Peak-Hour Factor, PHF	0.92	0.84	0.92	0.84	0.84	1.00
Hourly Flow Rate, HFR (veh/h)	30	0	59	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	43						89	
C (m) (veh/h)	1489						823	
v/c	0.03						0.11	
95% queue length	0.09						0.36	
Control Delay (s/veh)	7.5						9.9	
LOS	A						A	
Approach Delay (s/veh)	--	--				9.9		
Approach LOS	--	--				A		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DHH	Intersection	Route 107/Site Access North
Agency/Co.	Horner & Canter Associates	Jurisdiction	St. John, USVI
Date Performed	1/21/13	Analysis Year	Future 2023
Analysis Time Period	Saturday AM Peak		

Project Description 13-001 Yacht Club at Summer's End

East/West Street: Site Access North | North/South Street: Route 107

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	44	66			89	14
Peak-Hour Factor, PHF	0.90	0.90	0.84	1.00	0.90	0.90
Hourly Flow Rate, HFR (veh/h)	48	73	0	0	98	15
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	29		57			
Peak-Hour Factor, PHF	0.90	0.84	0.90	0.84	0.84	1.00
Hourly Flow Rate, HFR (veh/h)	32	0	63	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	48						95	
C (m) (veh/h)	1489						848	
v/c	0.03						0.11	
95% queue length	0.10						0.38	
Control Delay (s/veh)	7.5						9.8	
LOS	A						A	
Approach Delay (s/veh)	--	--				9.8		
Approach LOS	--	--				A		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DHH*	Intersection	*Route 107/Site Access North*
Agency/Co.	*Horner & Canter Associates*	Jurisdiction	*St. John, USVI*
Date Performed	*1/21/13*	Analysis Year	*Future 2023*
Analysis Time Period	*Saturday PM Peak*		

Project Description *13-001 Yacht Club at Summer's End*

East/West Street: *Site Access North*	North/South Street: *Route 107*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*44*	*99*			*79*	*14*
Peak-Hour Factor, PHF	*0.93*	*0.93*	*0.84*	*1.00*	*0.93*	*0.93*
Hourly Flow Rate, HFR (veh/h)	*47*	*106*	*0*	*0*	*84*	*15*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*29*		*57*			
Peak-Hour Factor, PHF	*0.93*	*0.84*	*0.93*	*0.84*	*0.84*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*31*	*0*	*61*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*47*						*92*	
C (m) (veh/h)	*1507*						*849*	
v/c	*0.03*						*0.11*	
95% queue length	*0.10*						*0.36*	
Control Delay (s/veh)	*7.5*						*9.8*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--				*9.8*		
Approach LOS	--	--				*A*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DHH*
Agency/Co.	*Horner & Canter Associates*
Date Performed	*1/21/13*
Analysis Time Period	*Friday AM Peak*

Site Information

Intersection	*Route 107/Site Access South*
Jurisdiction	*St. John, USVI*
Analysis Year	*Future 2023*

Project Description *13-001 Yacht Club at Summer's End*

East/West Street: *Site Access South* | North/South Street: *Route 107*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*2*	*59*			*71*	*8*
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.84*	*1.00*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*2*	*67*	*0*	*0*	*81*	*9*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*0.87*	*0.84*	*0.87*	*0.84*	*0.84*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*							
v (veh/h)	*2*							
C (m) (veh/h)	*1518*							
v/c	*0.00*							
95% queue length	*0.00*							
Control Delay (s/veh)	*7.4*							
LOS	*A*							
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DHH*
Agency/Co.	*Horner & Canter Associates*
Date Performed	*1/21/13*
Analysis Time Period	*Friday PM Peak*

Site Information

Intersection	*Route 107/Site Access South*
Jurisdiction	*St. John, USVI*
Analysis Year	*Future 2023*

Project Description *13-001 Yacht Club at Summer's End*

East/West Street: *Site Access South* | North/South Street: *Route 107*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*5*	*124*			*105*	*16*
Peak-Hour Factor, PHF	*0.92*	*0.92*	*0.84*	*1.00*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*5*	*134*	*0*	*0*	*114*	*17*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*0.92*	*0.84*	*0.92*	*0.84*	*0.84*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*							
v (veh/h)	*5*							
C (m) (veh/h)	*1467*							
v/c	*0.00*							
95% queue length	*0.01*							
Control Delay (s/veh)	*7.5*							
LOS	*A*							
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DHH*
Agency/Co.	*Horner & Canter Associates*
Date Performed	*1/21/13*
Analysis Time Period	*Saturday AM Peak*

Site Information

Intersection	*Route 107/Site Access South*
Jurisdiction	*St. John, USVI*
Analysis Year	*Future 2023*

Project Description *13-001 Yacht Club at Summer's End*

East/West Street: *Site Access South* | North/South Street: *Route 107*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*5*	*61*			*103*	*17*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.84*	*1.00*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*5*	*67*	*0*	*0*	*114*	*18*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*0.90*	*0.84*	*0.90*	*0.84*	*0.84*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*							
v (veh/h)	*5*							
C (m) (veh/h)	*1466*							
v/c	*0.00*							
95% queue length	*0.01*							
Control Delay (s/veh)	*7.5*							
LOS	*A*							
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DHH*
Agency/Co.	*Horner & Canter Associates*
Date Performed	*1/21/13*
Analysis Time Period	*Saturday PM Peak*

Site Information

Intersection	*Route 107/Site Access South*
Jurisdiction	*St. John, USVI*
Analysis Year	*Future 2023*

Project Description *13-001 Yacht Club at Summer's End*

East/West Street: *Site Access South* | North/South Street: *Route 107*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*5*	*94*			*93*	*17*
Peak-Hour Factor, PHF	*0.93*	*0.93*	*0.84*	*1.00*	*0.93*	*0.93*
Hourly Flow Rate, HFR (veh/h)	*5*	*101*	*0*	*0*	*99*	*18*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*0.93*	*0.84*	*0.93*	*0.84*	*0.84*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

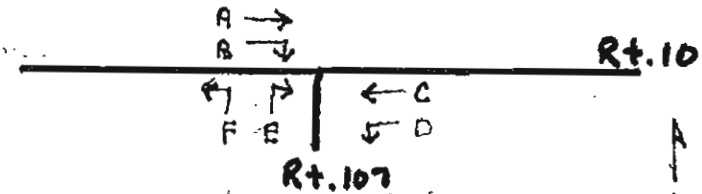
Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*							
v (veh/h)	*5*							
C (m) (veh/h)	*1484*							
v/c	*0.00*							
95% queue length	*0.01*							
Control Delay (s/veh)	*7.4*							
LOS	*A*							
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

13-001
Yacht Club at Summer's End
Coral Bay, U.S. Virgin Islands

HORNER CANTER ASSOCIATES

Turning Movements

Rt.10/Rt.107 Intersection Diagram:



Skinny Shipwreck Cruz Shipwreck Skinny Cruz Sky

Friday	Rt.10 EASTBOUND		Rt. 10 WESTBOUND		Rt.107 NORTHBOUND	
January11,2013	A- Thru	B- Right Turn	C- Thru	D- Left Turn	E- Right Turn	F- Left Turn
6:00-6:15 AM		4		1		6
6:15-6:30 AM	1	3		1	1	9
6:30-6:45 AM	3	4	2	4	4	6
6:45-7:00 AM	1	5	4	1	1	8
7:00-7:15 AM	3	3	2	5	5	12
7:15-7:30 AM	5	7	5	5	7	10
7:30-7:45 AM	3	4	3	7	7	18
7:45-8:00 AM	4	9	7	4	8	13
8:00-8:15 AM	5	4	6	7	4	11
8:15-8:30 AM	5	5	5	8	5	9
8:30-8:45 AM	10	11	4	12	8	14
8:45-9:00 AM	1	2	4	3	3	14
9:00-9:15 AM	5	8	6	6	7	7
9:15-9:30 AM	7	9	7	5	5	9
9:30-9:45 AM	5	8	5	9	7	12
9:45-10:00 AM	8	14	8	7	6	13

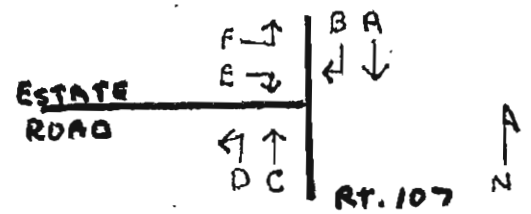
13-001
Yacht Club at Summer's End
Coral Bay, U.S. Virgin Islands

HORNER CANTER ASSOCIATES

Turning Movements

Estate Road/Rt.107

Intersection Diagram:



Friday	Rt.107 SOUTHBOUND		Rt. 107 NORTHBOUND		Estate Road	
January11,2013	A- Thru	B- Right Turn	C- Thru	D- Left Turn	E- Right Turn	F- Left Turn
6:00-6:15 AM	1		5 3			1
6:15-6:30 AM	1		5 5			
6:30-6:45 AM	3	1	4	1		2
6:45-7:00 AM	3		5 2		1	1
7:00-7:15 AM	3		5 5 1			
7:15-7:30 AM	5 5 2		5 5 5			1
7:30-7:45 AM	5 5 2		5 5 1 5	1		5
7:45-8:00 AM	5 3		5 5 3			3
8:00-8:15 AM	5 5 1		5 5			
8:15-8:30 AM	5 5 2		5 5 5			
8:30-8:45 AM	5 5 1		5 5 5			2
8:45-9:00 AM	5 4		5 5 5 5		3	1
9:00-9:15 AM	5 5 4		5 5 3			
9:15-9:30 AM	5 5 3		5 5 2			
9:30-9:45 AM	5 1		5 5 5			1
9:45-10:00 AM	5 5 2		5 5 4		1	

Heavy 1
School Bus
VI Tran
School Bus
VI Tran
School Bus
School Bus
Delivery
School Bus
Septic Truck
Delivery

Gov 1
Police

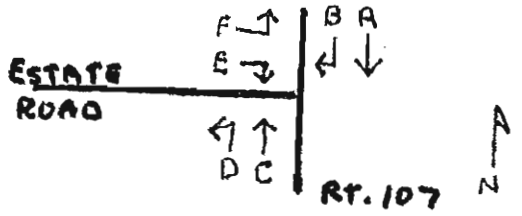
13-001
Yacht Club at Summer's End
Coral Bay, U.S. Virgin Islands

HORNER CANTER ASSOCIATES

Turning Movements

1/11/13
Enid

Triangle



Estate Rd./Rt.107

Intersection Diagram:

Friday	Rt.107 SOUTHBOUND		Rt. 107 NORTHBOUND		Estate Road	
January11,2013	A- Thru	B- Right Turn	C- Thru	D- Left Turn	E- Right Turn	F- Left Turn
4:00-4:15 PM	24	4	19			2
4:15-4:30 PM	18		16			1
4:30-4:45 PM	21	1	17			
4:45-5:00 PM	24	2	15			
5:00-5:15 PM	23	2	18	1		2
5:15-5:30 PM	19	1	19	1		2
5:30-5:45 PM	18	1	16 (1)	1	1	1
5:45-6:00 PM	16	1	12		1	2
5:00-5:15 PM	19	1	14			3
6:15-6:30 PM	17	1	22	2		2
6:30-6:45 PM	18	1	18			2
6:45-7:00 PM	23 (1)	3	17		1	

(1) Motorcycle

~~PH Stop by Cases~~

D - 1 4:00

13-001
Yacht Club at Summer's End
Coral Bay, U.S. Virgin Islands

HORNER CANTER ASSOCIATES

Turning Movements

1/11/13 - FRI
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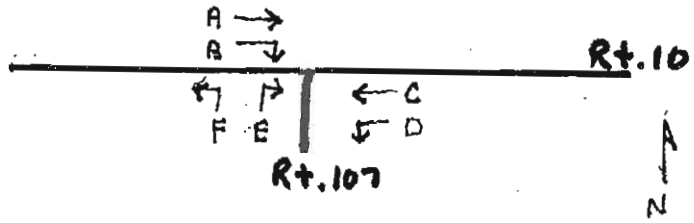
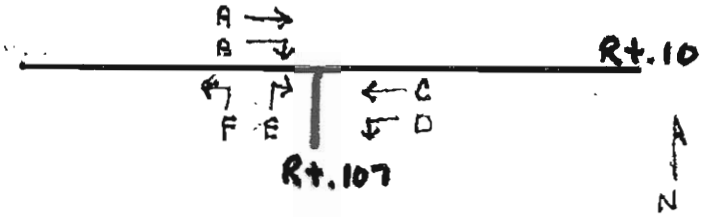


Rt.10/Rt.107 Intersection Diagram:

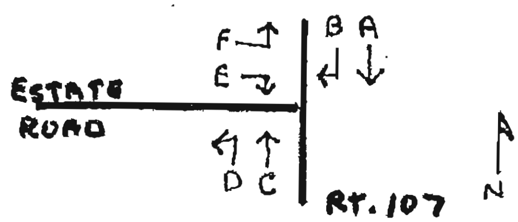
Skinnyleg shipwreck Cruz Shipwreck Skinnyleg Cruz Bay

Friday January11,2013	Rt.10 EASTBOUND		Rt. 10 WESTBOUND		Rt.107 NORTHBOUND	
	A- Thru	B- Right Turn	C- Thru	D- Left Turn	E- Right Turn	F- Left Turn
4:00-4:15 PM	4	7	5	3	6	12
4:15-4:30 PM	7	9	4	8	7	11
4:30-4:45 PM	8	12	7	9	9	11
4:45-5:00 PM	3	10	4	7	8	6
5:00-5:15 PM	9	11	6	9	8	10
5:15-5:30 PM	7	11	1	8	9	9
5:30-5:45 PM	7	11	8	5	4	9
5:45-6:00 PM	8	6	1	10	5	9
5:00-5:15 PM	7	10	4	10	5	7
6:15-6:30 PM	3	9	4	7	8	9
6:30-6:45 PM	2	10	3	5	9	10
6:45-7:00 PM	9	9	3	8	7	3

Rt.10/Rt.107 Intersection Diagram:



Saturday January12,2013	Rt.10 EASTBOUND		Rt. 10 WESTBOUND		Rt.107 NORTHBOUND	
	A- Thru	B- Right Turn	C- Thru	D- Left Turn	E- Right Turn	F- Left Turn
8:00-8:15 AM	11	1111	111	111	111	1111 11
8:15-8:30 AM		1111	11	11	111	1111 1111 111
8:30-8:45 AM	1111 111	1111 1111	1	1111 1111	1111 1	1111 1111 111
8:45-9:00 AM	1111 1111	1111 1111 1111 1	111	1111	1111 1111	1111 1111 11
9:00-9:15 AM	1111 111	1111 111	1111 1111 111	1111 1111	1111 1111 1111 11	1111 1111 11
9:15-9:30 AM	1111 11	1111 11	1111 111	1111 1111 11	1111 1111 11	1111 1111 1111 1
9:30-9:45 AM	1111 11	1111 1111	1111 1111	1111 1111	1111 1111 11	1111 1111 1111 111
9:45-10:00 AM	1111 1111 1111	1111 1111 1111 1	1111 1111	1111 1111	1111 1111 111	1111 1111 1111

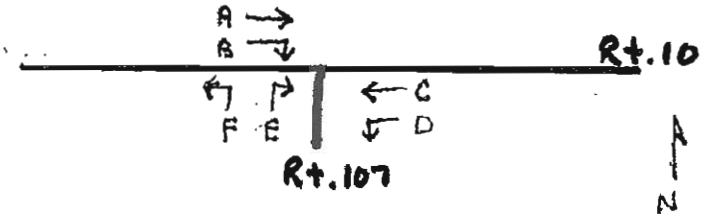


Estate Rd/Rt.107

Intersection Diagram:

Saturday January12,2013	Rt.107 SOUTHBOUND		Rt. 107 NORTHBOUND		Estate Road	
	A- Thru	B- Right Turn	C- Thru	D- Left Turn	E- Right Turn	F- Left Turn
8:00-8:15 AM	𝍸 ||||	|	𝍸 𝍸	|		|||
8:15-8:30 AM	𝍸 ||		𝍸 𝍸			|
8:30-8:45 AM	𝍸 ||||		𝍸 𝍸 ||||			|
8:45-9:00 AM	𝍸 𝍸 𝍸 |	|||	𝍸 𝍸			||
9:00-9:15 AM	𝍸 𝍸 ||||		𝍸 𝍸 | 𝍸 𝍸			
9:15-9:30 AM	𝍸 𝍸 ||		𝍸 𝍸 𝍸 |||			
9:30-9:45 AM	𝍸 𝍸 𝍸 |		𝍸 𝍸 𝍸 ||	|		
9:45-10:00 AM	𝍸 𝍸 |||		𝍸 𝍸 | 𝍸 𝍸 ||	|		|

Rt.10/Rt.107 Intersection Diagram:



Saturday January12,2013	Rt.10 EASTBOUND		Rt. 10 WESTBOUND		Rt.107 NORTHBOUND	
	A- Thru	B- Right Turn	C- Thru	D- Left Turn	E- Right Turn	F- Left Turn
4:00-4:15 PM	10	13	4	10	5	13
4:15-4:30 PM	6	8	9	6	9	10
4:30-4:45 PM	4	12	13	12	11	12
4:45-5:00 PM	7	13	6	12	8	12
5:00-5:15 PM	8	9	7	10	7	11
5:15-5:30 PM	7	12	8	7	10	7
5:30-5:45 PM	5	12	6	4	12	9
5:45-6:00 PM	7	13	5	10	13	13
5:00-5:15 PM	10	13	5	12	11	13
6:15-6:30 PM	6	12	6	8	9	5
6:30-6:45 PM	3	12	2	5	9	3
6:45-7:00 PM	3	7	2	8	6	13

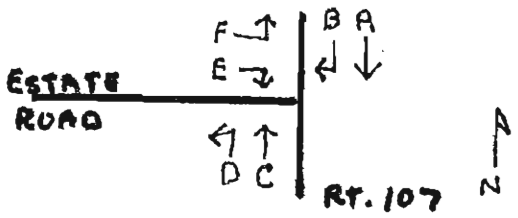
13-001
Yacht Club at Summer's End
Coral Bay, U.S. Virgin Islands

HORNER CANTER ASSOCIATES

Turning Movements

Estate Rd./Rt.107

Intersection Diagram:



Saturday	Rt.107 SOUTHTBOUND		Rt. 107 NORTHBOUND		Estate Road	
January12,2013	A- Thru	B- Right Turn	C- Thru	D- Left Turn	E- Right Turn	F- Left Turn
4:00-4:15 PM	36	4	19			1
4:15-4:30 PM	21	1	18	1	2	
4:30-4:45 PM	18	1	17	1		4
4:45-5:00 PM	23		13			
5:00-5:15 PM	16	4	14	1	2	2
5:15-5:30 PM	14	2	12	1	1	1
5:30-5:45 PM	20		14		1	2
5:45-6:00 PM	17	1	21			2
5:00-5:15 PM	12		14			1
6:15-6:30 PM	17	3	12			2
6:30-6:45 PM	14	2	12	2		
6:45-7:00 PM	12		12			4