Bobs Copy

RECEIVED

APR 23 2007

Shropshire | Associates LLC GIBSON ASSOCIATES, P.A.

662 Main Street, Suite B
Lumberton, NJ 08048
PHONE (609) 714-0400
FAX (609) 714-9944

Letter of Transmittal

Date	Project No.
4/20/07	**SA7047**
Attention: Mr. Mark J. Gibson	
Re: Traffic Engineering Assessment – R.E. Pierson Construction – SA# 7047	

TO: Mr. Mark J. Gibson
R.E. Pierson Construction Company
c/o Gibson Associates
522 Sea Isle Boulevard
Ocean View, NJ 08230

WE ARE SENDING YOU:

☐ Reports ☐ Prints ☐ Plans ☐ Disks ☐ Specifications ☐ Copy of Letter ☐ Check

Copies	Date	No.	Description
10	4/20/07		Traffic Engineering Assessment – R.E. Pierson Construction – SA# 7047

TRANSMITTED as checked below:

☐ For Approval ☐ As requested ☐ For review and comment

Shropshire|Associates LLC

Traffic Engineering
Noise & Air Evaluations
Eminent Domain Consulting
Transportation Planning
Parking Studies
Access Permitting
Traffic Signal Design

662 MAIN STREET, SUITE B
LUMBERTON, NJ 08048

DAVID R SHROPSHIRE, PE, PP
A ANDREW FERANDA, PE, CME

PHONE
609 714 0400

FAX
609 714 9944

April 20, 2007

R.E. Pierson Construction Company
c/o Gibson Associates
522 Sea Isle Boulevard
Ocean View, New Jersey 08230

(via UPS)

Attn: Mark J. Gibson, P.L.S.

Re: Traffic Engineering Assessment
R.E. Pierson Construction
Woodbine-Ocean View Road (CR 550)
Dennis Township, Cape May County
SA Project No. 7047

Dear Mark:

In response to your request, a traffic engineering assessment has been prepared for the proposed R.E. Pierson construction facility located in Dennis Township, Cape May County, New Jersey (Figure 1). The proposal is for the development of construction facility that will include an asphalt plant, concrete plant, and recycling facility. These uses are proposed in addition to the existing sand mining operation on-site. The site is located along westbound Woodbine-Ocean View Road, west of its intersection with Corsons Tavern Road, with access being provided via two existing driveways along the roadway. The purpose of this assessment is to determine the amount of additional traffic to be generated by the proposed construction facility and analyze its impact on the adjacent roadway network.

Existing Conditions

A field reconnaissance was conducted to determine the existing intersection and roadway characteristics in the vicinity of the proposed site. A brief description of the roadways and intersections is provided below.

In the vicinity of the site, **Woodbine-Ocean View Road (CR 550)** is a two-lane undivided roadway under the jurisdiction of Cape May County and classified[1] as a Rural Major Collector along the site frontage. Woodbine-Ocean View Road has a posted speed limit of 50 MPH and an approximate cartway width of 40 feet, including 8-foot shoulders in both directions and is designated as a Truck Route. For the purpose of this study, Woodbine-Ocean View Road is assumed to extend in a general east-west direction.

[1] 2006 New Jersey Functional Classification Maps

Corsons Tavern Road (CR 628) is a two-lane undivided roadway that is classified as an Urban Collector and under the jurisdiction of Cape May County. Corsons Tavern Road has a posted speed limit of 45 MPH in the vicinity of its intersection with Woodbine-Ocean View Road and an approximate cartway width of 35 feet, including 7-foot shoulders in both directions. For the purpose of this study, Corsons Tavern Road is assumed to extend in a general north-south direction.

The four-legged **Woodbine-Ocean View Road/Corsons Tavern Road** intersection is controlled by a two-phase fully-actuated traffic signal with a 41 to 64-second variable cycle length. All approaches consist of a single lane providing for all possible movements.

The T-shaped **Woodbine-Ocean View Road/Site Access** intersections are stop-controlled along the southbound site access approaches. All approaches consist of a single lane providing for all possible movements.

Traffic Counts

In April 2007, manual turning movement counts (MTMC) were conducted at the above-mentioned study intersections. This data was analyzed to determine the peak hour traffic volumes that coincide with the peak combined volumes of the roadway and proposed development, which typically occur during the weekday AM (6:00 to 9:00 AM) and weekday PM (1:00 to 4:00 PM) peak periods. These periods were based upon conversations with the applicant regarding the peak operation of the construction facility. Figure 2a illustrates the existing AM and PM peak hour volumes at the above-mentioned intersections.

Due to the proposed R.E. Pierson construction facility being in the vicinity of the New Jersey coastal areas, increased traffic volumes are anticipated along the adjacent roadway network during the summer season. In order to provide for a more conservative analysis of the study intersections and adjacent roadway network, summer traffic data was obtained from Cape May County for Woodbine-Ocean View Road between its intersections with Corsons Tavern Road and Route 9. This data was used to extrapolate seasonal adjustment factors for the weekday AM and PM peak hours. These factors of 1.50 and 1.96 respectively, were applied to the April 2007 traffic volumes to adjust for peak seasonal volumes in the vicinity of the site. Figure 2b indicates the seasonally adjusted AM and PM peak hour volumes at the study locations. It should be noted that these volumes are used as the basis for all Existing, No-Build, and Build scenario analyses discussed below.

Future Conditions

The traffic resulting from the proposed R.E. Pierson construction facility will not affect the adjacent roadway network until it is fully built-out and occupied. It is estimated that the proposed development will be completed and occupied by 2009. Therefore, it can be expected that the existing traffic volumes will increase as result of other developments in the area of the site. Based on the New Jersey Functional Classification Maps, as well as the *Annual Background Growth Table* prepared by the New Jersey Department of Transportation, a 2.50% annual traffic growth will occur in the vicinity of the site. Figure 3 shows the projected 2009 No-Build volumes for the adjacent roadway network.

The amount of traffic to be generated by the proposed construction facility can best be determined by comparison with similar sites. Traffic counts were conducted at the existing R.E. Pierson construction facility in Bridgeport on Oak Grove Road. The existing facility in Bridgeport contains an asphalt plant, concrete plant, recycling facility, and sand plant and is similar in use to the proposed facility in Dennis Township. Table 1 indicates the amount of traffic that entered and exited during the weekday AM and PM peak hours at the existing R.E. Pierson facility in Bridgeport. The peak hours for the large vehicle traffic occurred between 8:00 and 9:00 AM, and 1:00 and 2:00 PM.

Table 1
Bridgeport Facility Trip Generation

Development	Vehicle	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Construction Facility	Large Vehicles	12	14	26	20	19	39
	Passenger Vehicles	15	3	18	3	3	6
	Totals	**27**	**17**	**44**	**23**	**22**	**45**

Based upon conversations with R.E. Pierson, April is typically not the peak month of operation for the existing facility in Bridgeport and the proposed facility in Dennis Township. As such, the number of large vehicles in April is significantly less than what is anticipated during peak operation. Data provided by the applicant for the existing and proposed facilities was used to determine the amount of daily truck traffic that will be generated by the site in Dennis Township. Based upon the data provided, the proposed Dennis Township facility could experience a peak daily truck traffic of 160 trips per day, which is divided into 80 inbound trips and 80 outbound trips.

Of the 160 total daily truck trips anticipated for the Dennis Township facility, data from the Bridgeport site indicates that approximately 21% of the truck trips will occur during the AM peak hour and 31% of the truck trips will occur during the PM peak hour. Therefore, the future maximum site traffic for the proposed Dennis Township facility is indicated in Table 2. It should be noted that based upon the operation of the existing Bridgeport facility, the peak hour traffic to be generated by the Dennis Township facility will not coincide with the peak hour of the traffic along the adjacent roadway network, specifically during peak summer roadway conditions. Typical peak summer roadway conditions occur on Friday between 4:00 PM and 6:00 PM and on Saturday between 11:00 AM and 2:00 PM. The proposed R.E. Pierson construction facility is typically not in operation during these periods and will therefore not impact the roadway network during peak summer roadway conditions.

Table 2
Dennis Township Facility Trip Generation

Development	Vehicle	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Construction Facility	Large Vehicles	17	17	34	25	25	50
	Passenger Vehicles	15	3	18	3	3	6
	Totals	**32**	**20**	**52**	**28**	**28**	**56**

The site traffic generated by the Dennis Township facility must then be distributed to the adjacent roadway network based on the routes in which the employees/patrons are expected to

travel. Conversations with the applicant indicate that approximately 60% of the large vehicle traffic will travel to/from the west, with the remaining 40% traveling to/from the east along Woodbine-Ocean View Road. As such, the large vehicle trips associated with the construction facility were distributed to the adjacent roadway network utilizing these percentages while the existing distribution of traffic along the adjacent roadway network (Figure 4) was used to determine the movement of the passenger vehicles. Figure 5 indicates the total site traffic for the proposed R.E. Pierson facility in Dennis Township. Adding the site traffic to the 2009 No-Build volumes, results in the Build volumes, which are illustrated in Figure 6.

Operational Analysis

In order to measure the quality of the traffic flow for the adjacent roadways and intersections, capacity analyses for the study intersections have been completed based upon the methods outlined in the *Highway Capacity Manual (HCM 2000 Edition)*. Capacity analysis is a procedure used to estimate the ability of the roadway network to carry traffic. Capacity analyses are performed based on a level of service methodology. Level of service (LOS) is a qualitative measure that characterizes the operational conditions of a roadway or intersection based on the perceptions by motorists and passengers. Levels of service are defined for each type of facility (i.e. freeways, highways, signalized intersections, unsignalized intersections). These levels of service range from LOS A to LOS F, with a LOS A representing the best operating conditions and a LOS F representing the worst operating conditions.

The levels of service for a signalized intersection are classified in terms of delay, which is based on the extent of driver discomfort and frustration, fuel consumption and lost travel time. The delay experienced by a motorist consists of many factors that relate to control, geometrics and traffic. Some of these factors include the quality of progression, traffic signal cycle length, the green time ratio and the volume to capacity ratio. The level of service for an unsignalized intersection is determined based on the average control delay associated with each minor movement (i.e. yielding left-turn movements from the major roads and stop-controlled movements from the minor approaches). The Level of Service criteria for unsignalized and signalized intersections are provided in Table 3.

Table 3
Level of Service Criteria

Level of Service	Unsignalized Delay (sec)	Signalized Delay (sec)
A	≤10	≤10
B	>10 and ≤15	>10 and ≤20
C	>15 and ≤25	>20 and ≤35
D	>25 and ≤35	>35 and ≤55
E	>35 and ≤50	>55 and ≤80
F	>50	>80

In order to assess the traffic impact of the proposed development, the study intersection was evaluated under the Existing, No-Build, and Build scenarios. A detailed description of the study intersection's operations under the three scenarios and a comparison summary for each intersection is provided below. The Existing, No-Build, and Build levels of service are indicated

in Figures 7, 8, and 9, respectively. As previously noted, all analyses were conducted using the seasonally adjusted traffic volumes.

Woodbine-Ocean View Road (CR 550) and Corsons Tavern Road (CR 628)

Under existing conditions, the Woodbine-Ocean View Road/Corsons Tavern Road signalized intersection functions at an overall LOS B during both the AM and PM peak hours. All individual approaches currently operate at a LOS B or better during both peak hours.

In the 2009 No-Build and Build scenarios, all individual approaches will continue to function at a LOS B or better during both the AM and PM peak hours. Overall, the Woodbine-Ocean View Road/Corsons Tavern Road signalized intersection will continue to function at a LOS B during both peak hours. The traffic resulting from the proposed R.E. Pierson construction facility will account for approximately 3.4% and 2.2% of the total 2009 Build traffic volumes at the above-mentioned intersection during the AM and PM peak hours, respectively.

Woodbine-Ocean View Road (CR 550) and Site Driveway Intersections

Under existing conditions, the southbound site driveway stop-controlled approaches operate at a LOS B during both the AM and PM peak hours, while the eastbound Woodbine-Ocean View Road conflicting left-turn movements currently function at a LOS A during both peak hours.

In the 2009 No-Build scenario, all stop-controlled and conflicting left-turn movements at the Woodbine-Ocean View Road/Site Driveway intersections will continue to operate at existing levels of service during both the AM and PM peak hours.

Under the 2009 Build conditions, the southbound site driveway stop-controlled approaches will function at a LOS C during both the AM and PM peak hours, with the exception of the west driveway approach, which will operate at a LOS B during the AM peak hour. Maximum queuing for the southbound site driveway approaches and eastbound Woodbine-Ocean View Road conflicting left-turn movements will be one (1) vehicle during both the AM and PM peak hours.

As previously noted, the AM and PM peak hour operation of the proposed R.E. Pierson construction facility will be staggered when compared to the peak hour of the adjacent roadway network and therefore the traffic to be generated by the proposed development will not significantly increase the peak hour volumes along Woodbine-Ocean View Road.

Conclusion

The amount of traffic to be generated by the proposed R.E. Pierson construction facility in Dennis Township will be similar to the existing Bridgeport facility. As such, it is anticipated that the proposed Dennis Township facility will generate a maximum of 160 daily truck trips during peak operation. Of these daily truck trips, approximately 21% will occur during the AM peak hour and 31% will occur during the PM peak hour. With the additional traffic for the employees and patrons, it is estimated that the proposed R.E. Pierson construction facility in Dennis Township will generate a total of 52 trips during the AM peak hour and 56 trips during the PM peak hour.

The traffic to be generated by the proposed R.E. Pierson construction facility will cause no significant changes in the levels of service at the Woodbine-Ocean View Road/Corsons Tavern Road signalized intersection during both the AM and PM peak hours. All individual approaches will operate at a LOS B or better during both peak hours, while overall the intersection will function at a LOS B during the AM and PM peak hours.

All outbound stop-controlled movements from the site driveways and inbound conflicting left-turn movements into the site driveways will operate at a LOS C or better during the AM and PM peak hours in the 2009 Build scenario. Maximum queuing for all movements will be one (1) vehicle during both peak hours.

Based upon the operation of the existing Bridgeport facility, the peak hour traffic to be generated by the Dennis Township facility will not coincide with the peak hour of the traffic along the adjacent roadway network, specifically during peak summer roadway conditions. Typical peak summer roadway conditions occur on Friday between 4:00 PM and 6:00 PM and on Saturday between 11:00 AM and 2:00 PM. As previously stated, peak truck traffic at the existing facility occurred on a typical weekday at 8:00 AM and 1:00 PM.

Please call us if you have any questions or need additional information.

Sincerely,
Shropshire Associates LLC

David R. Shropshire, P.E.
President

Nathan B. Mosley
Traffic Consultant

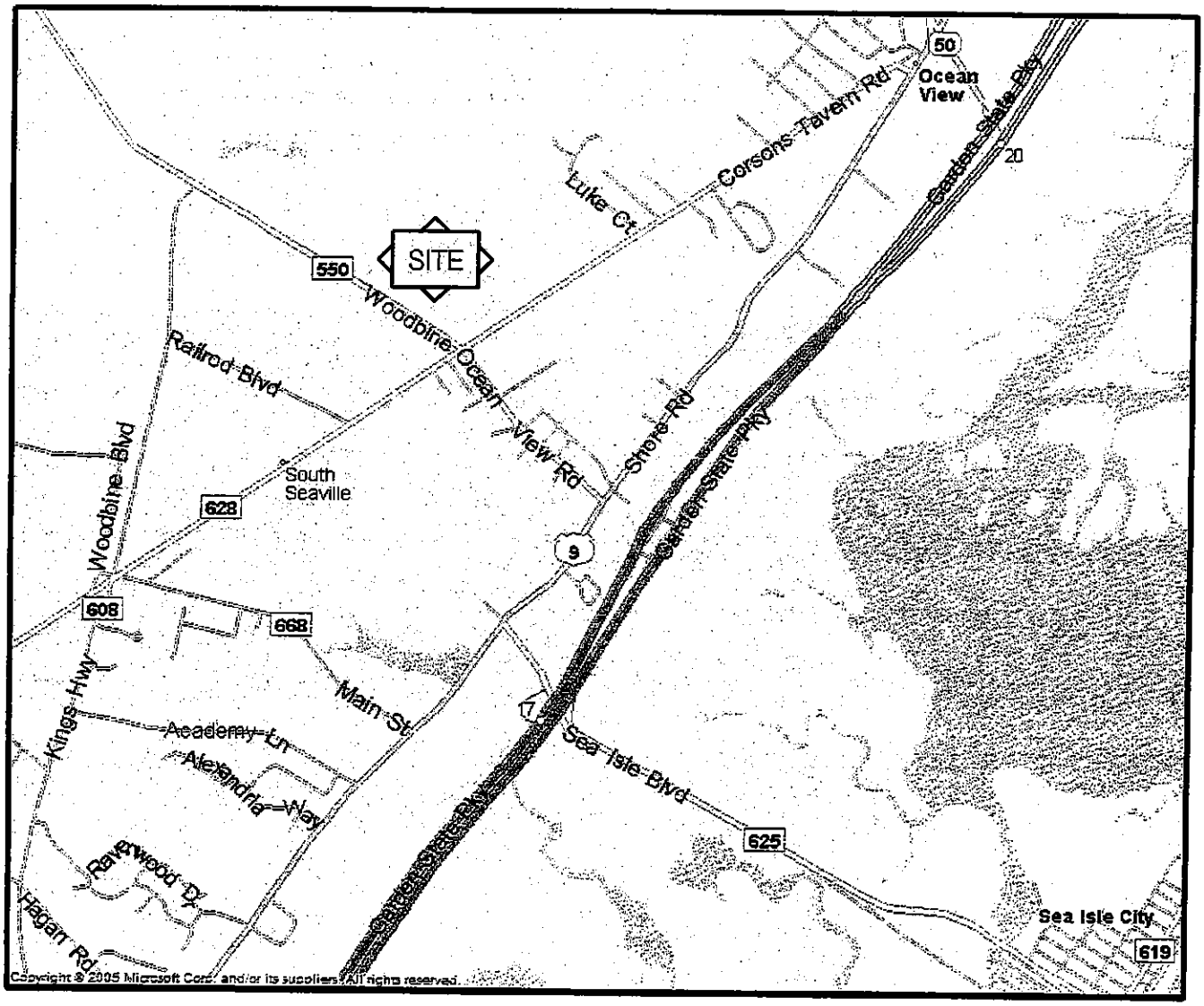
DRS/mas
Attachments

cc: *James Pickering, Esq.* *(via UPS w/ attachments)*
John J. Helbig *(via UPS w/ attachments)*
Curt Mitchell *(via UPS w/ attachments)*

Shropshire | Associates LLC
662 Main Street, Suite B
Lumberton, NJ 08048

FIGURE 1
SITE LOCATION MAP

N



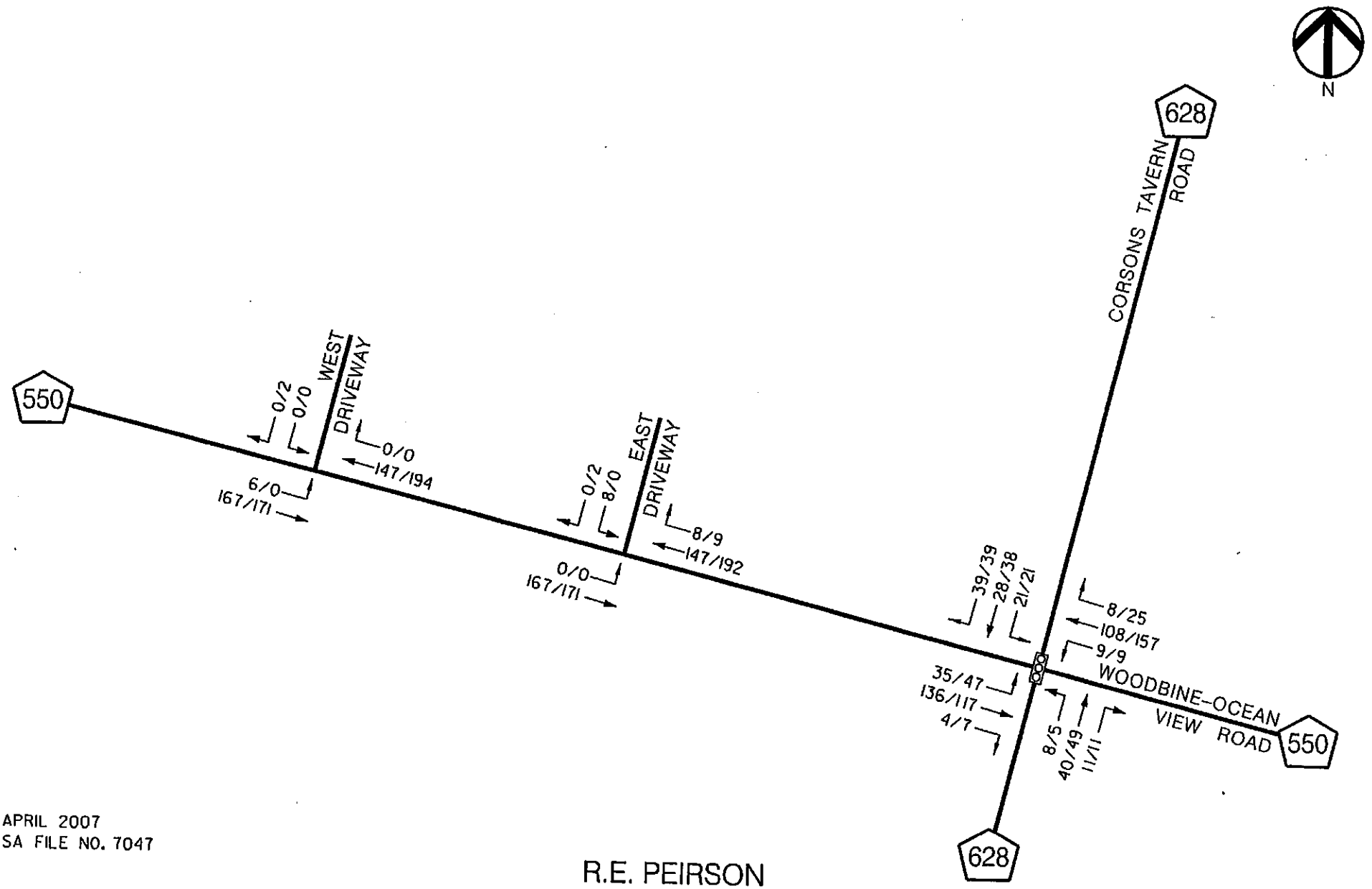
APRIL 2007
SA FILE NO. 7047

R.E. PIERSON

DENNIS TOWNSHIP, CAPE MAY COUNTY, NJ

Shropshire | Associates LLC
662 Main Street, Suite B
Lumberton, NJ 08048

FIGURE 2A
EXISTING VOLUMES



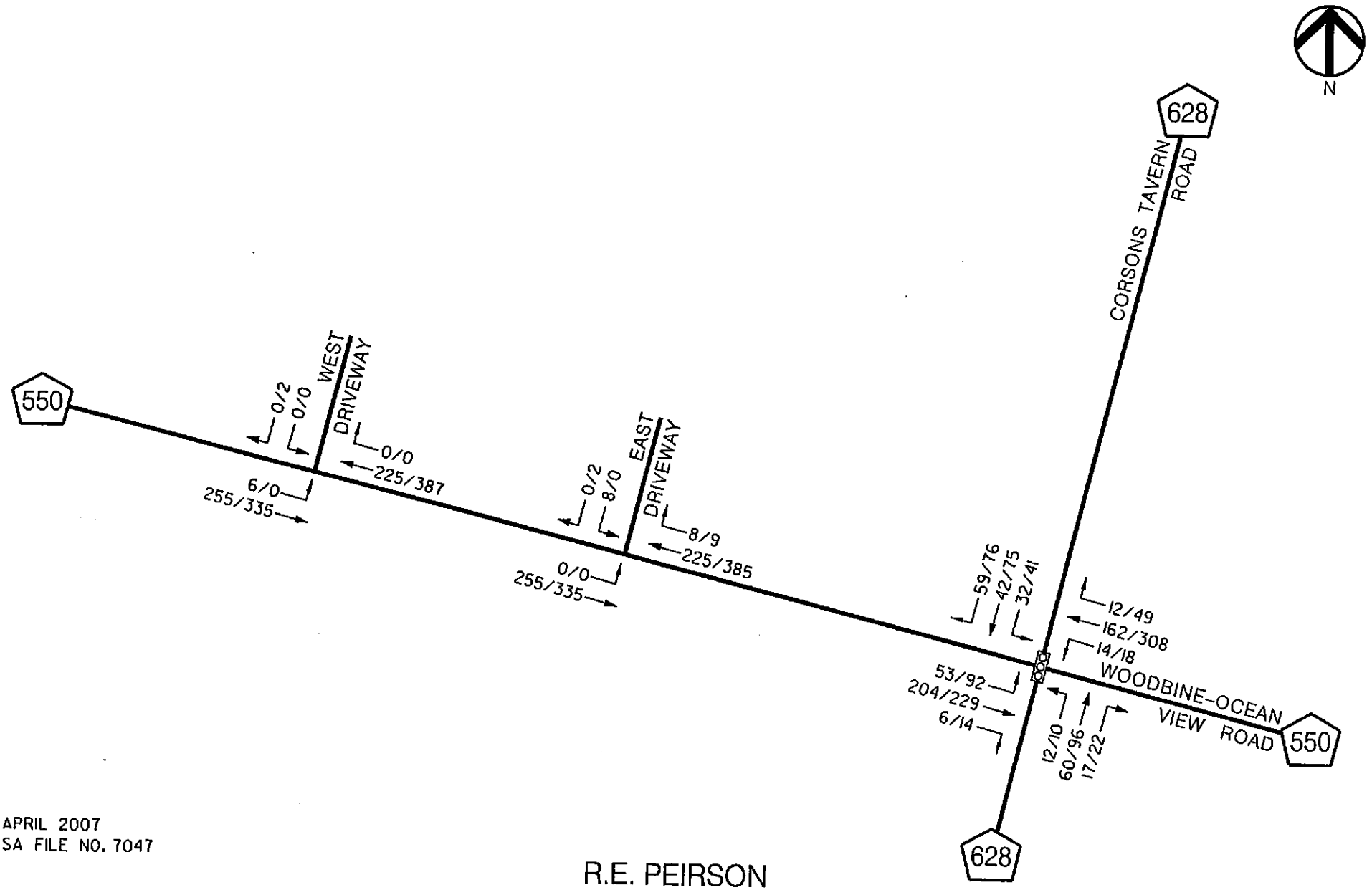
APRIL 2007
SA FILE NO. 7047

R.E. PEIRSON

DENNIS TOWNSHIP, CAPE MAY COUNTY, NJ

Shropshire | Associates LLC
662 Main Street, Suite B
Lumberton, NJ 08048

FIGURE 2B
SUMMER VOLUMES



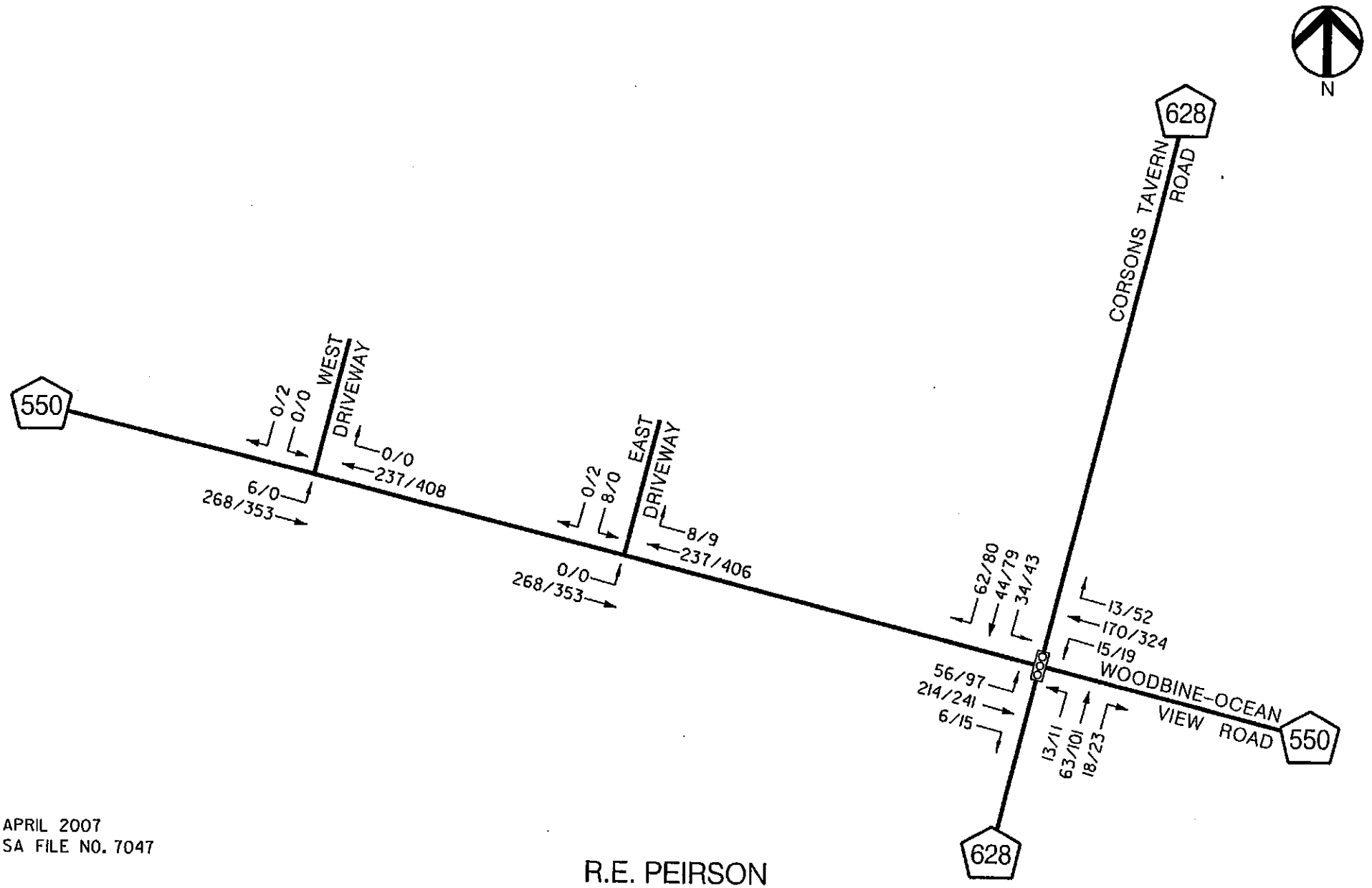
APRIL 2007
SA FILE NO. 7047

R.E. PEIRSON

DENNIS TOWNSHIP, CAPE MAY COUNTY, NJ

Shropshire | Associates LLC
662 Main Street, Suite B
Lumberton, NJ 08048

FIGURE 3
NO-BUILD VOLUMES



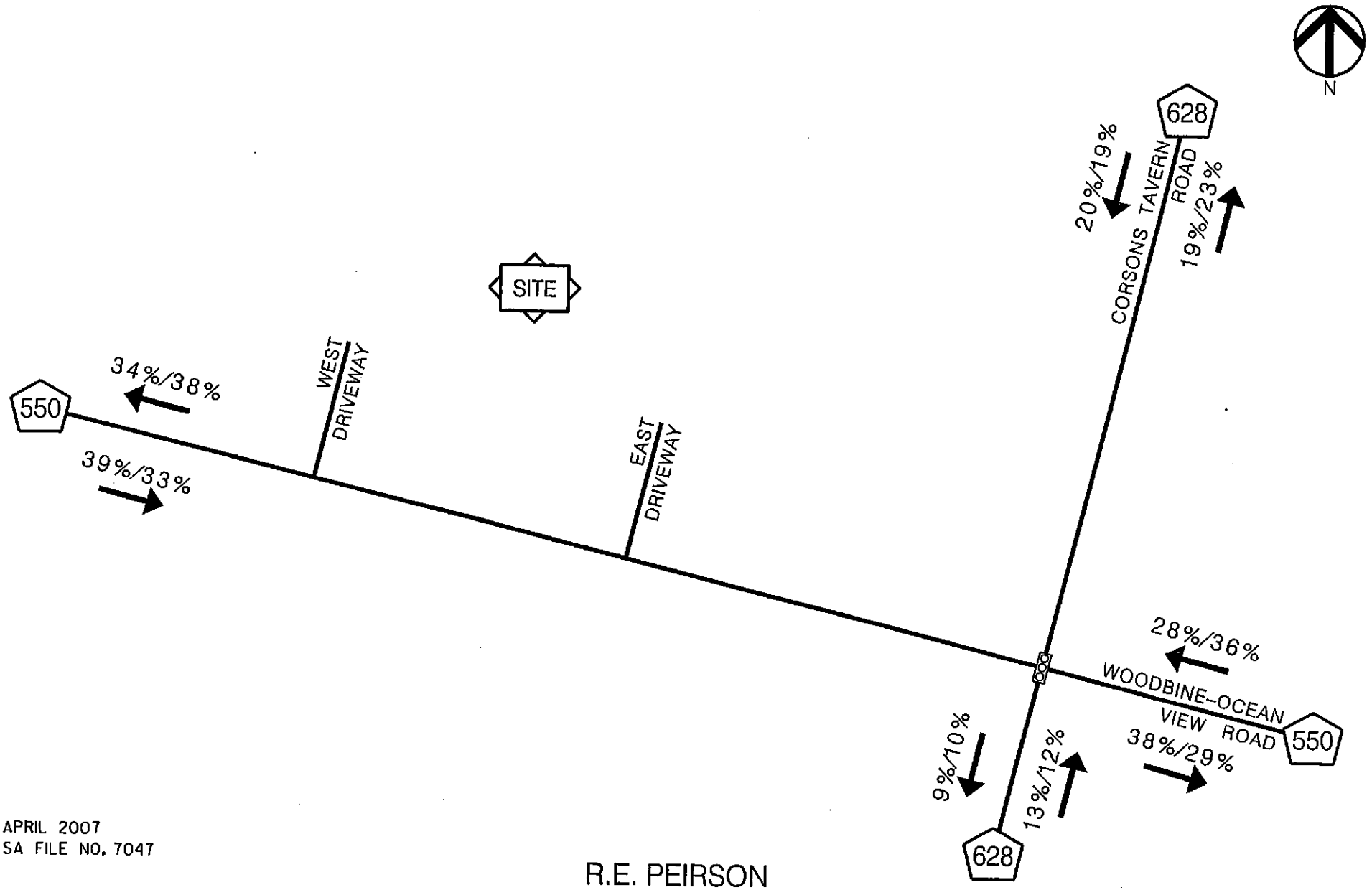
APRIL 2007
SA FILE NO. 7047

R.E. PEIRSON

DENNIS TOWNSHIP, CAPE MAY COUNTY, NJ

Shropshire | Associates LLC
662 Main Street, Suite B
Lumberton, NJ 08048

FIGURE 4
TRIP DISTRIBUTION



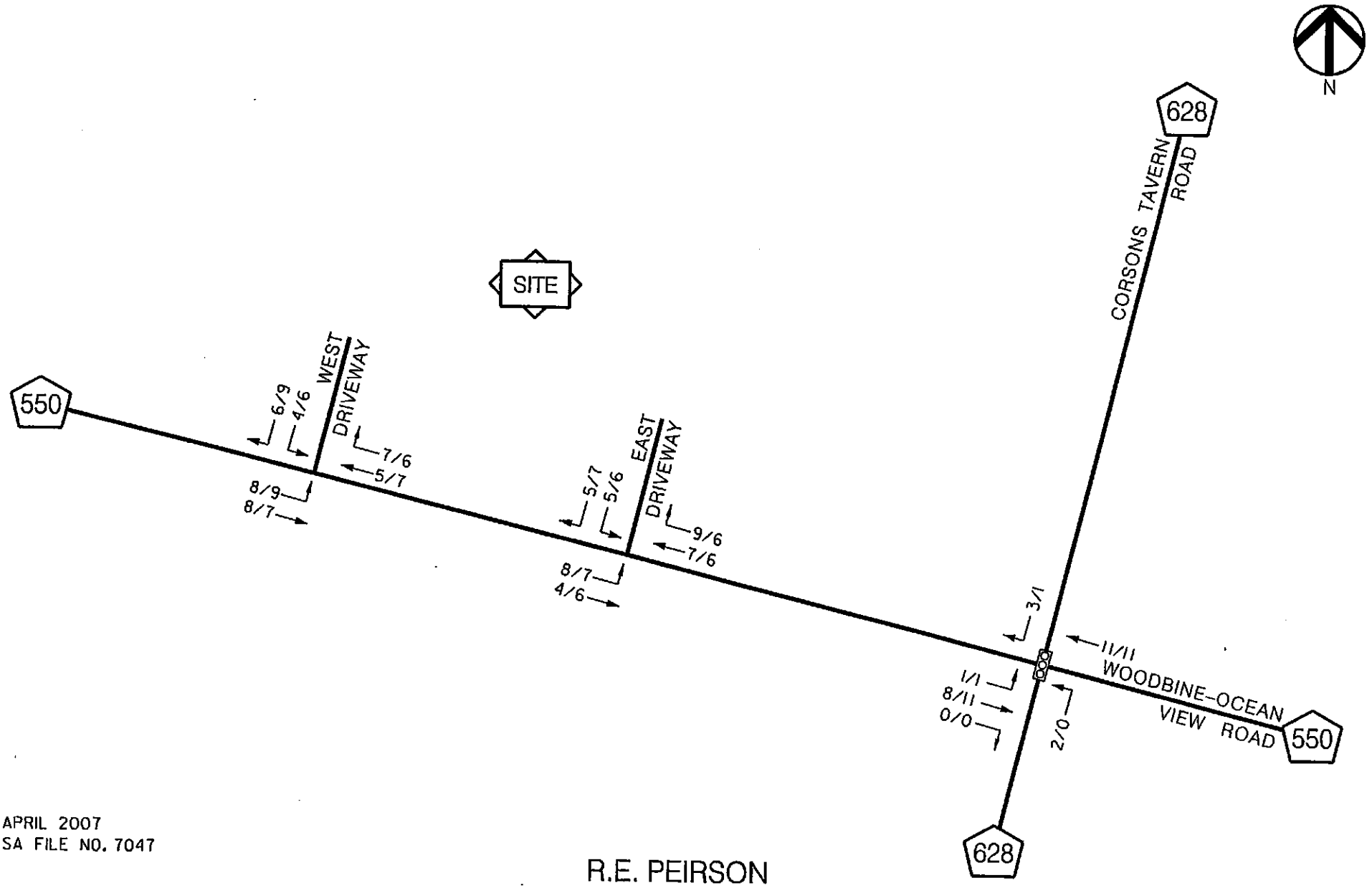
APRIL 2007
SA FILE NO. 7047

R.E. PEIRSON

DENNIS TOWNSHIP, CAPE MAY COUNTY, NJ

Shropshire | Associates LLC
662 Main Street, Suite B
Lumberton, NJ 08048

FIGURE 5
SITE TRAFFIC



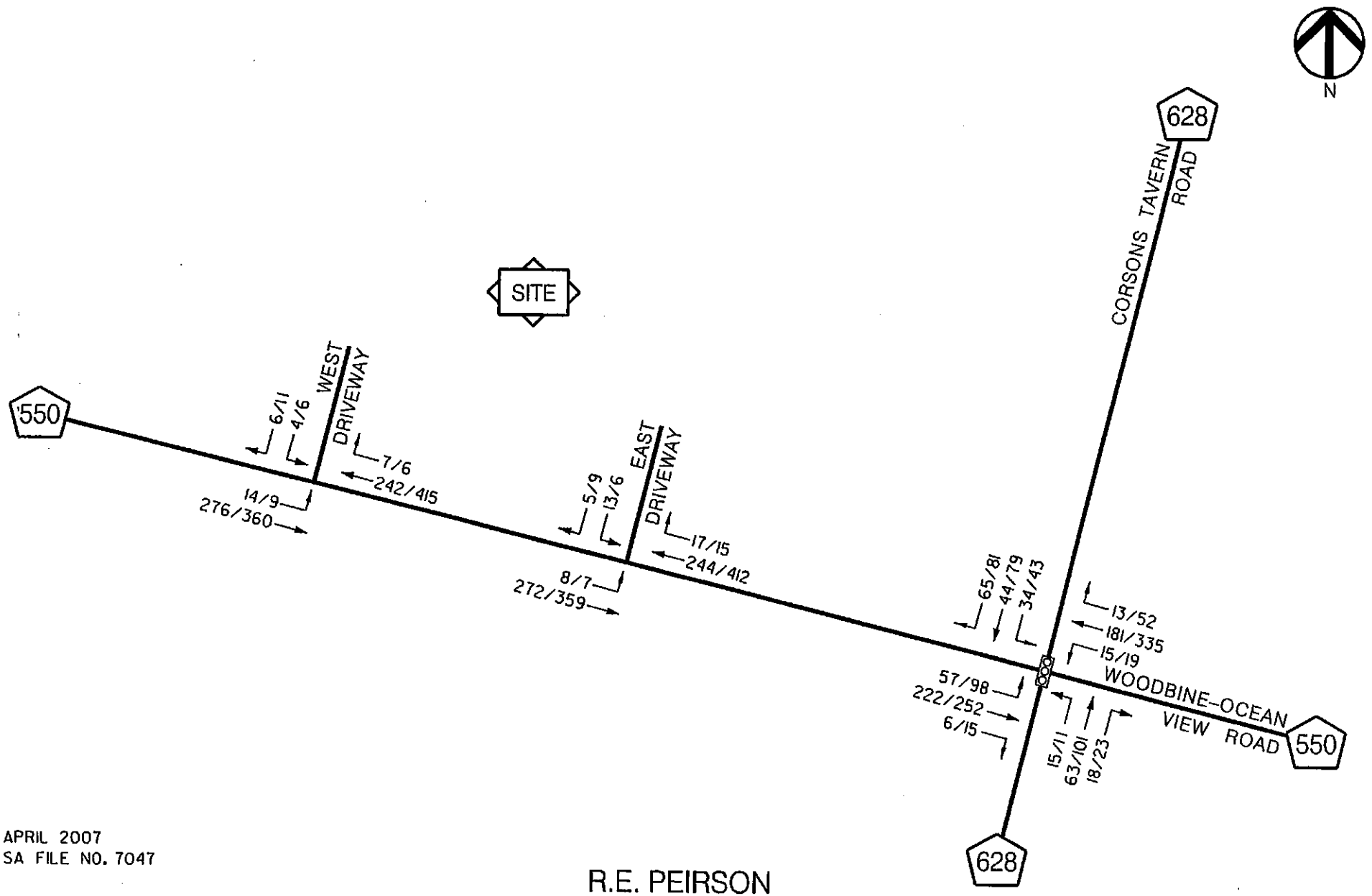
APRIL 2007
SA FILE NO. 7047

R.E. PEIRSON

DENNIS TOWNSHIP, CAPE MAY COUNTY, NJ

Shropshire | Associates LLC
662 Main Street, Suite B
Lumberton, NJ 08048

FIGURE 6
BUILD VOLUMES



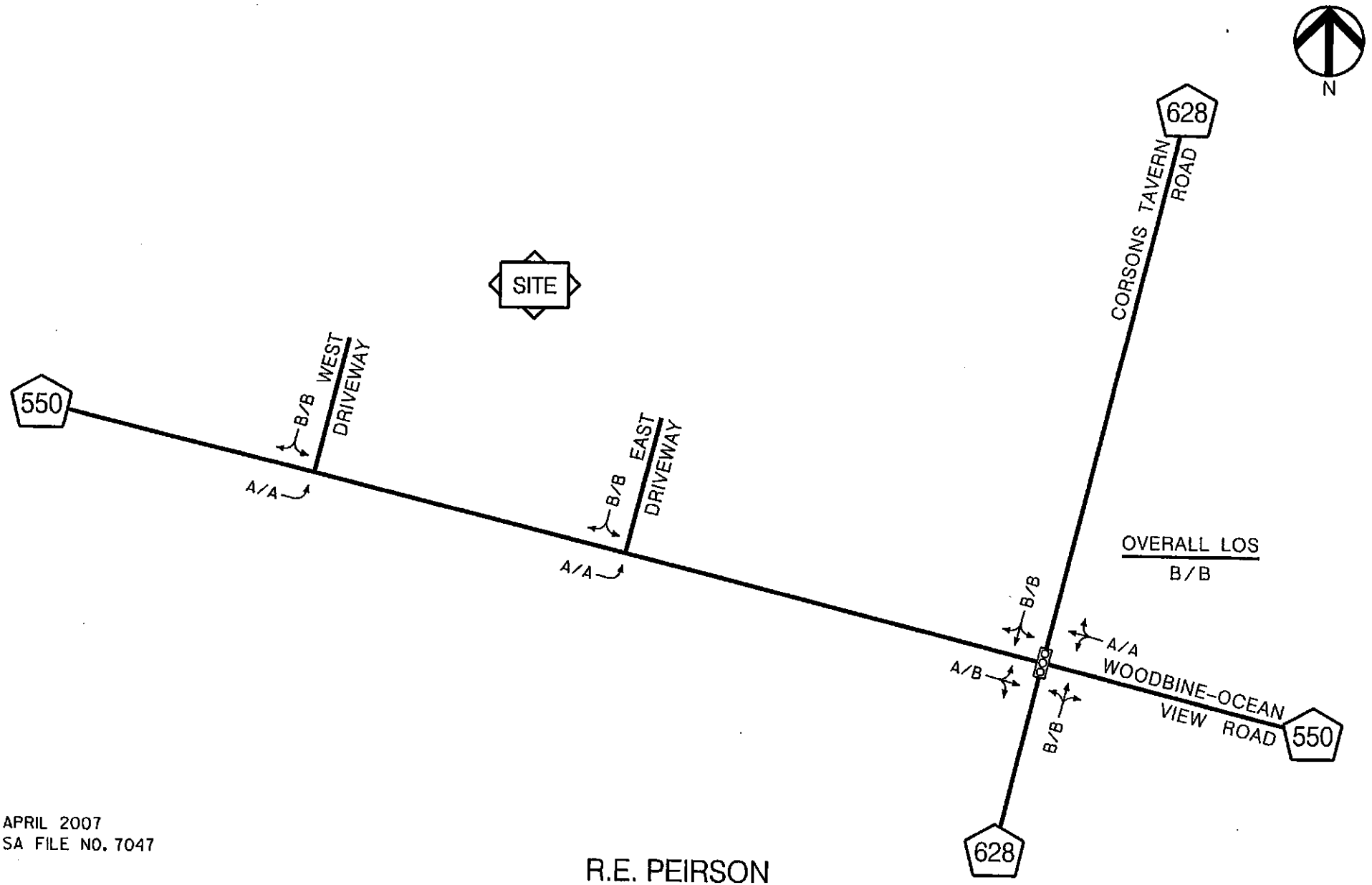
APRIL 2007
SA FILE NO. 7047

R.E. PEIRSON

DENNIS TOWNSHIP, CAPE MAY COUNTY, NJ

Shropshire | Associates LLC
662 Main Street, Suite B
Lumberton, NJ 08048

FIGURE 7
EXISTING LEVELS OF SERVICE



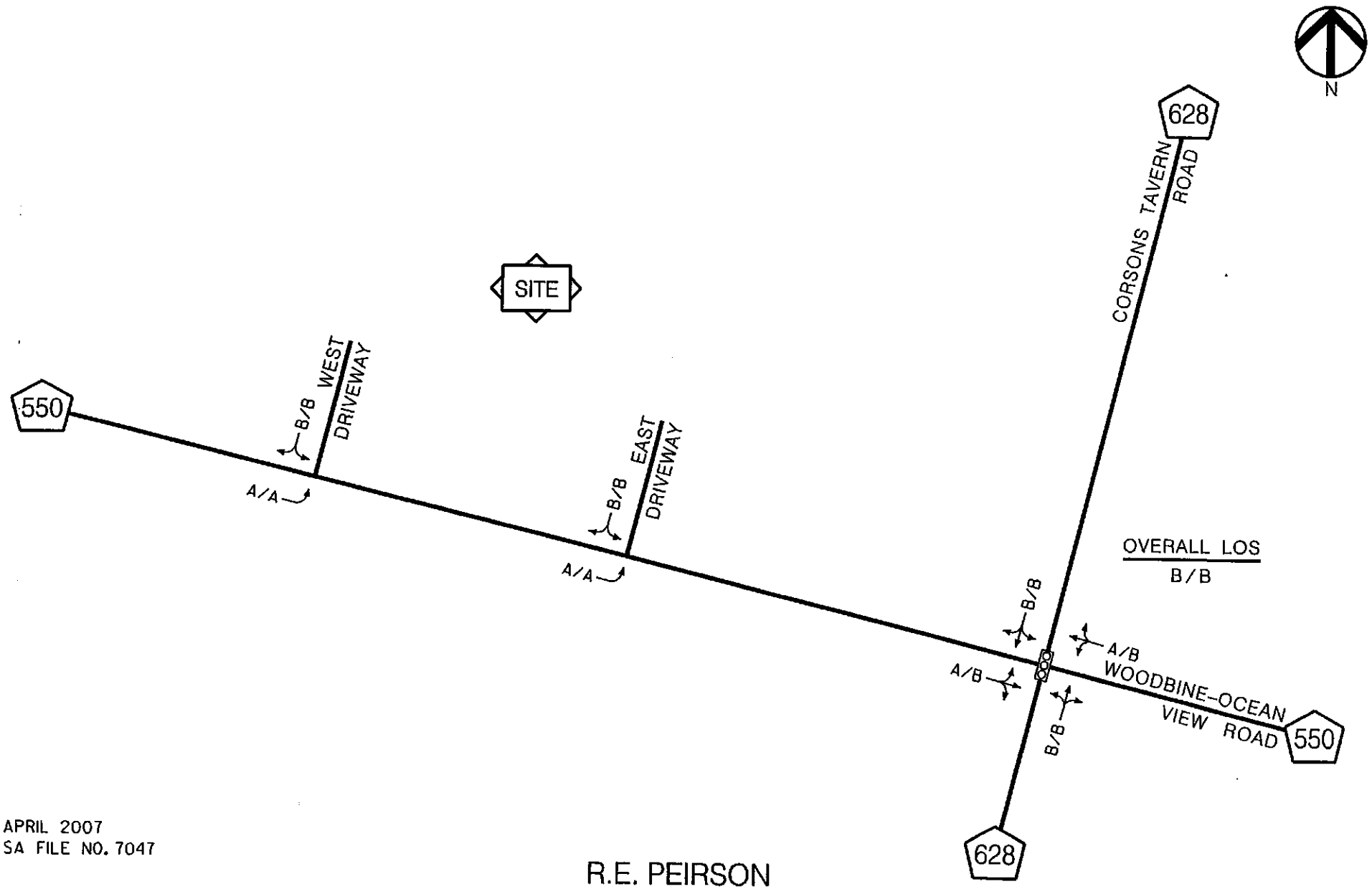
APRIL 2007
SA FILE NO. 7047

R.E. PEIRSON

DENNIS TOWNSHIP, CAPE MAY COUNTY, NJ

Shropshire | Associates LLC
662 Main Street, Suite B
Lumberton, NJ 08048

FIGURE 8
NO-BUILD LEVELS OF SERVICE



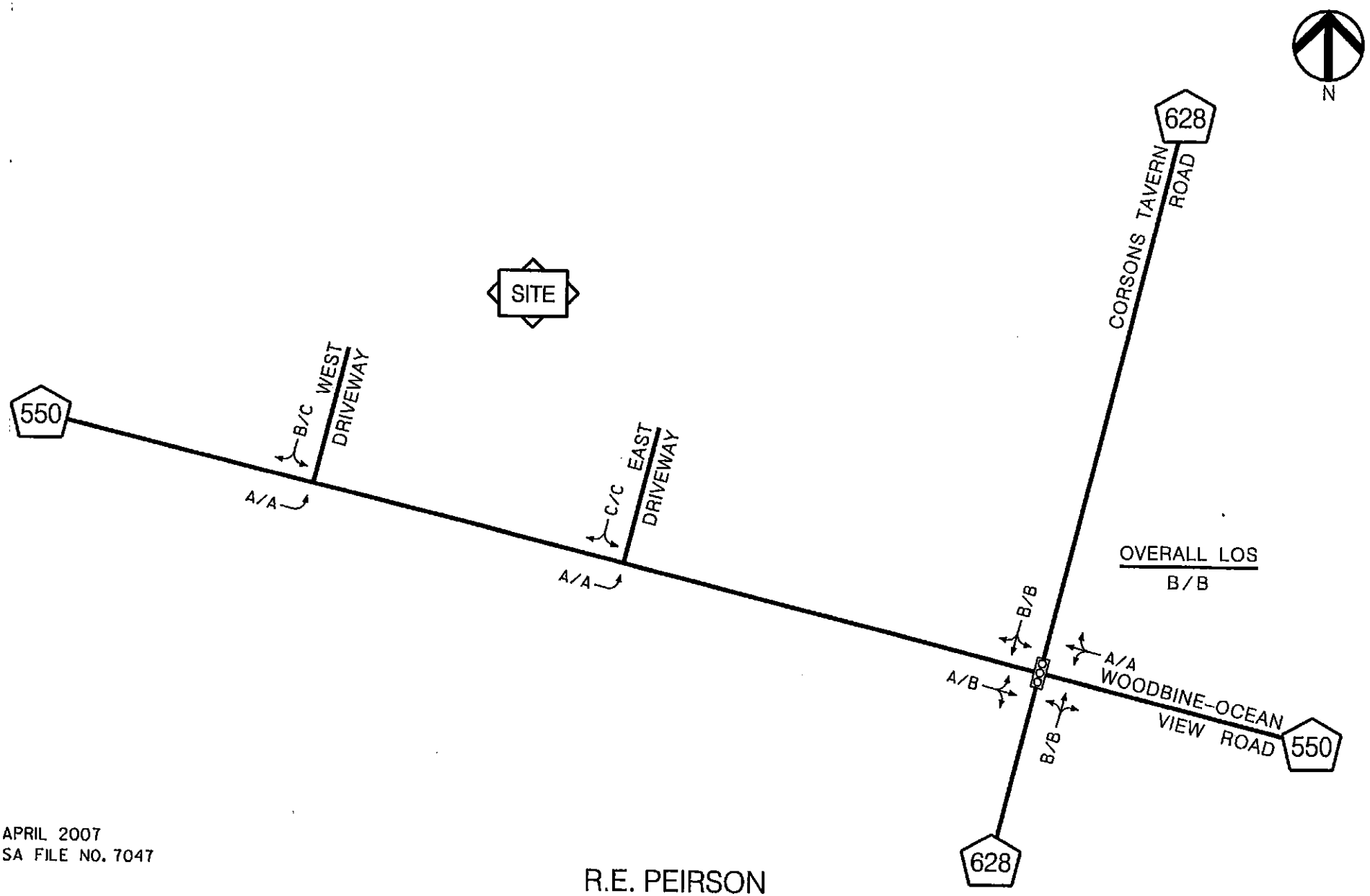
APRIL 2007
SA FILE NO. 7047

R.E. PEIRSON

DENNIS TOWNSHIP, CAPE MAY COUNTY, NJ

Shropshire | Associates LLC
662 Main Street, Suite B
Lumberton, NJ 08048

FIGURE 9
BUILD LEVELS OF SERVICE



APRIL 2007
SA FILE NO. 7047

R.E. PEIRSON

DENNIS TOWNSHIP, CAPE MAY COUNTY, NJ

Shropshire Associates LLC

662 South Main Street
Lumberton, New Jersey 08048

N/S Route: Corson Tavern Road
E/W Route: Woodbine-Ocean View Rd.
Dennis Twp./Cape May Co.NJ
Clear/Tues./JA/2584

File Name : 70470002
Site Code : 70470002
Start Date : 4/3/2007
Page No : 1

Groups Printed- Unshifted - Heavy Vehicles

	Corson Tavern Road Southbound			Woodbine-Ocean View Road Westbound			Corson Tavern Road Northbound			Woodbine-Ocean View Road Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
06:00 AM	0	1	1	0	4	0	0	2	0	0	5	0	13
06:15 AM	3	0	1	1	7	1	0	4	1	0	15	2	35
06:30 AM	4	3	2	0	17	0	0	10	0	0	23	4	63
06:45 AM	10	4	5	3	20	1	2	7	1	0	24	3	80
Total	17	8	9	4	48	2	2	23	2	0	67	9	191
07:00 AM	3	7	6	2	20	0	1	3	2	1	18	7	70
07:15 AM	11	2	3	3	24	2	0	2	3	4	31	4	89
07:30 AM	11	10	8	2	30	3	2	4	1	2	39	10	122
07:45 AM	18	10	5	4	36	2	2	16	6	1	39	12	151
Total	43	29	22	11	110	7	5	25	12	8	127	33	432
08:00 AM	5	4	6	0	22	2	1	5	0	1	29	6	81
08:15 AM	5	4	2	2	20	2	6	15	1	0	29	7	93
08:30 AM	6	9	10	5	28	2	3	9	1	0	39	6	118
08:45 AM	10	5	1	5	30	2	5	9	0	0	21	4	92
Total	26	22	19	12	100	8	15	38	2	1	118	23	384
01:00 PM	14	6	3	5	34	1	1	9	0	2	28	8	111
01:15 PM	15	10	4	10	30	3	1	7	1	3	24	6	114
01:30 PM	9	9	3	6	31	2	4	11	1	1	36	8	121
01:45 PM	8	10	6	4	38	0	1	7	1	1	27	6	109
Total	46	35	16	25	133	6	7	34	3	7	115	28	455
02:00 PM	8	6	0	3	34	3	2	8	0	1	29	7	101
02:15 PM	8	14	4	8	33	1	2	7	1	0	29	12	119
02:30 PM	10	8	5	6	24	4	3	16	3	0	27	7	113
02:45 PM	10	12	3	8	28	1	3	9	0	4	23	8	109
Total	36	40	12	25	119	9	10	40	4	5	108	34	442
03:00 PM	8	11	5	5	36	2	6	7	0	2	26	14	122
03:15 PM	14	9	3	6	36	1	1	12	3	2	27	12	126
03:30 PM	11	10	6	5	46	2	3	11	0	2	37	14	147
03:45 PM	6	8	7	9	39	4	1	19	2	1	27	7	130
Total	39	38	21	25	157	9	11	49	5	7	117	47	525
Grand Total	207	172	99	102	667	41	50	209	28	28	652	174	2429
Apprch %	43.3	36	20.7	12.6	82.3	5.1	17.4	72.8	9.8	3.3	76.3	20.4	
Total %	8.5	7.1	4.1	4.2	27.5	1.7	2.1	8.6	1.2	1.2	26.8	7.2	
Unshifted	191	171	93	97	539	41	48	205	28	24	542	161	2140
% Unshifted	92.3	99.4	93.9	95.1	80.8	100	96	98.1	100	85.7	83.1	92.5	88.1
Heavy Vehicles	16	1	6	5	128	0	2	4	0	4	110	13	289
% Heavy Vehicles	7.7	0.6	6.1	4.9	19.2	0	4	1.9	0	14.3	16.9	7.5	11.9

Shropshire Associates LLC

662 South Main Street
Lumberton, New Jersey 08048

N/S Route: Corson Tavern Road
E/W Route: Woodbine-Ocean View Rd.
Dennis Twp./Cape May Co.NJ
Clear/Tues./JA/2584

File Name : 70470002
Site Code : 70470002
Start Date : 4/3/2007

	Corson Tavern Road Southbound				Woodbine-Ocean View Road Westbound				Corson Tavern Road Northbound				Woodbine-Ocean View Road Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	11	10	8	29	2	30	3	35	2	4	1	7	2	39	10	51	122
07:45 AM	18	10	5	33	4	36	2	42	2	16	6	24	1	39	12	52	151
08:00 AM	5	4	6	15	0	22	2	24	1	5	0	6	1	29	6	36	81
08:15 AM	5	4	2	11	2	20	2	24	6	15	1	22	0	29	7	36	93
Total Volume	39	28	21	88	8	108	9	125	11	40	8	59	4	136	35	175	447
% App. Total	44.3	31.8	23.9		6.4	86.4	7.2		18.6	67.8	13.6		2.3	77.7	20		
PHF	.542	.700	.656	.667	.500	.750	.750	.744	.458	.625	.333	.615	.500	.872	.729	.841	.740
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	8	11	5	24	5	36	2	43	6	7	0	13	2	26	14	42	122
03:15 PM	14	9	3	26	6	36	1	43	1	12	3	16	2	27	12	41	126
03:30 PM	11	10	6	27	5	46	2	53	3	11	0	14	2	37	14	53	147
03:45 PM	6	8	7	21	9	39	4	52	1	19	2	22	1	27	7	35	130
Total Volume	39	38	21	98	25	157	9	191	11	49	5	65	7	117	47	171	525
% App. Total	39.8	38.8	21.4		13.1	82.2	4.7		16.9	75.4	7.7		4.1	68.4	27.5		
PHF	.696	.864	.750	.907	.694	.853	.563	.901	.458	.645	.417	.739	.875	.791	.839	.807	.893

Shropshire Associates LLC

662 South Main Street
Lumberton, New Jersey 08048

N/S Route: R/E. Pierson East Access
E/W Route: Woodbine-Ocean View Rd.
Dennis Twp./Cape May Co. NJ
Clear/Tues./BEB/2538

File Name : 70470003
Site Code : 70470003
Start Date : 4/3/2007
Page No : 1

Groups Printed- Unshifted - East Access Heavy Vehicles

	R.E Pierson East Access Southbound		Woodbine-Ocean View Road Westbound		Woodbine-Ocean View Road Eastbound		
Start Time	Right	Left	Right	Thru	Thru	Left	Int. Total
06:00 AM	0	1	0	7	12	0	20
06:15 AM	4	8	0	11	8	0	31
06:30 AM	0	0	0	22	27	0	49
06:45 AM	0	1	0	22	29	0	52
Total	4	10	0	62	76	0	152
07:00 AM	0	1	1	22	22	0	46
07:15 AM	0	1	1	36	43	0	81
07:30 AM	0	2	2	41	48	0	93
07:45 AM	0	4	4	51	41	0	100
Total	0	8	8	150	154	0	320
08:00 AM	0	1	1	33	51	0	86
08:15 AM	0	2	1	24	32	0	59
08:30 AM	0	0	0	38	38	0	76
08:45 AM	0	1	2	36	28	0	67
Total	0	4	4	131	149	0	288
01:00 PM	0	1	3	44	30	0	78
01:15 PM	0	4	5	39	27	0	75
01:30 PM	0	4	2	37	37	1	81
01:45 PM	0	1	0	41	31	0	73
Total	0	10	10	161	125	1	307
02:00 PM	0	2	2	37	30	0	71
02:15 PM	0	0	5	35	34	0	74
02:30 PM	2	1	1	35	33	0	72
02:45 PM	0	0	5	32	32	1	70
Total	2	3	13	139	129	1	287
03:00 PM	1	0	2	39	41	0	83
03:15 PM	1	0	1	52	33	0	87
03:30 PM	0	0	4	49	52	0	105
03:45 PM	0	0	2	45	37	0	84
Total	2	0	9	185	163	0	359
Grand Total	8	35	44	828	796	2	1713
Apprch %	18.6	81.4	5	95	99.7	0.3	
Total %	0.5	2	2.6	48.3	46.5	0.1	
Unshifted	0	1	0	740	707	1	1449
% Unshifted	0	2.9	0	89.4	88.8	50	84.6
East Access Heavy Vehicles	8	34	44	88	89	1	264
% East Access Heavy Vehicles	100	97.1	100	10.6	11.2	50	15.4

	R.E Pierson East Access Southbound			Woodbine-Ocean View Road Westbound			Woodbine-Ocean View Road Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	1	1	1	36	37	43	0	43	81
07:30 AM	0	2	2	2	41	43	48	0	48	93
07:45 AM	0	4	4	4	51	55	41	0	41	100
08:00 AM	0	1	1	1	33	34	51	0	51	86
Total Volume	0	8	8	8	161	169	183	0	183	360
% App. Total	0	100		4.7	95.3		100	0		
PHF	.000	.500	.500	.500	.789	.768	.897	.000	.897	.900

Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 03:00 PM

03:00 PM	**1**	0	**1**	2	39	41	41	0	41	83
03:15 PM	1	0	1	1	**52**	**53**	33	0	33	87
03:30 PM	0	0	0	**4**	49	53	**52**	0	**52**	**105**
03:45 PM	0	0	0	2	45	47	37	0	37	84
Total Volume	2	0	2	9	185	194	163	0	163	359
% App. Total	100	0		4.6	95.4		100	0		
PHF	.500	.000	.500	.563	.889	.915	.784	.000	.784	.855

Shropshire Associates LLC

662 South Main Street
Lumberton, New Jersey 08048

N/S Route: R/E. Pierson Wast Access
E/W Route: Woodbine-Ocean View Rd.
Dennis Twp./Cape May Co. NJ
Clear/Tues./BEB/2538

File Name : 70470003
Site Code : 70470003
Start Date : 4/3/2007
Page No : 1

Groups Printed- West Access

	R.E Pierson East Access Southbound		Woodbine-Ocean View Road Westbound		Woodbine-Ocean View Road Eastbound		
Start Time	Right	Left	Right	Thru	Thru	Left	Int. Total
06:00 AM	0	0	0	0	0	3	3
06:30 AM	0	0	0	0	0	3	3
Total	0	0	0	0	0	6	6
07:00 AM	0	0	0	0	0	1	1
07:45 AM	0	0	1	0	0	0	1
Total	0	0	1	0	0	1	2
08:00 AM	0	0	0	0	0	1	1
08:15 AM	1	0	0	0	0	0	1
08:30 AM	0	1	0	0	0	0	1
Total	1	1	0	0	0	1	3
01:45 PM	1	0	0	0	0	0	1
Total	1	0	0	0	0	0	1
02:30 PM	1	0	0	0	0	0	1
Total	1	0	0	0	0	0	1
Grand Total	3	1	1	0	0	8	13
Apprch %	75	25	100	0	0	100	
Total %	23.1	7.7	7.7	0	0	61.5	

	R.E Pierson East Access Southbound			Woodbine-Ocean View Road Westbound			Woodbine-Ocean View Road Eastbound			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 06:00 AM										
06:00 AM	0	0	0	0	0	0	0	3	3	3
06:15 AM	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	3	3	3
06:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	6	6	6
% App. Total	0	0		0	0		0	100		
PHF	.000	.000	.000	.000	.000	.000	.000	.500	.500	.500
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 01:45 PM										
01:45 PM	1	0	1	0	0	0	0	0	0	1
02:00 PM	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0
02:30 PM	1	0	1	0	0	0	0	0	0	1
Total Volume	2	0	2	0	0	0	0	0	0	2
% App. Total	100	0		0	0		0	0		
PHF	.500	.000	.500	.000	.000	.000	.000	.000	.000	.500

Shropshire Associates LLC

662 South Main Street
Lumberton, New Jersey 08048

N/S Route: Oak Grove Road (CR 671)
E/W Route: R.E. Pierson Access
Logan Twp./Gloucester Co. NJ
Clear/Tues./CA/2585

File Name : 70470001
Site Code : 70470001
Start Date : 4/3/2007
Page No : 1

Groups Printed- Unshifted

	Oak Grove Road Southbound		Oak Grove Road Northbound		R.E. Pierson Access Eastbound		
Start Time	Right	Thru	Thru	Left	Right	Left	Int. Total
06:00 AM	0	3	2	0	0	0	5
06:15 AM	1	3	2	0	0	0	6
06:30 AM	2	2	2	3	1	0	10
06:45 AM	1	3	7	1	0	0	12
Total	4	11	13	4	1	0	33
07:00 AM	1	4	9	2	1	1	18
07:15 AM	3	5	7	2	0	0	17
07:30 AM	1	1	5	2	0	0	9
07:45 AM	2	2	5	0	1	1	11
Total	7	12	26	6	2	2	55
08:00 AM	1	3	2	0	1	1	8
08:15 AM	0	3	3	0	0	0	6
08:30 AM	1	2	3	1	0	1	8
08:45 AM	0	3	0	0	0	1	4
Total	2	11	8	1	1	3	26
01:00 PM	1	4	4	0	0	0	9
01:15 PM	0	5	2	0	0	1	8
01:30 PM	3	4	4	3	0	0	14
01:45 PM	1	5	5	0	1	1	13
Total	5	18	15	3	1	2	44
02:00 PM	1	5	4	0	3	3	16
02:15 PM	0	4	5	0	1	0	10
02:30 PM	1	0	5	0	0	0	6
02:45 PM	0	4	3	1	1	2	11
Total	2	13	17	1	5	5	43
03:00 PM	2	1	4	0	0	2	9
03:15 PM	0	9	4	0	0	0	13
03:30 PM	0	9	5	1	1	0	16
03:45 PM	0	8	8	0	0	0	16
Total	2	27	21	1	1	2	54
Grand Total	22	92	100	16	11	14	255
Apprch %	19.3	80.7	86.2	13.8	44	56	
Total %	8.6	36.1	39.2	6.3	4.3	5.5	

	Oak Grove Road Southbound			Oak Grove Road Northbound			R.E. Pierson Access Eastbound			
Start Time	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 06:30 AM										
06:30 AM	2	2	4	2	3	5	1	0	1	10
06:45 AM	1	3	4	7	1	8	0	0	0	12
07:00 AM	1	4	5	9	2	11	1	1	2	18
07:15 AM	3	5	8	7	2	9	0	0	0	17
Total Volume	7	14	21	25	8	33	2	1	3	57
% App. Total	33.3	66.7		75.8	24.2		66.7	33.3		
PHF	.583	.700	.656	.694	.667	.750	.500	.250	.375	.792

Shropshire Associates LLC

662 South Main Street
Lumberton, New Jersey 08048

N/S Route: Oak Grove Road (CR 671)
E/W Route: R.E. Pierson Access
Logan Twp./Gloucester Co. NJ
Clear/Tues:/CA/2585

File Name : 70470001
Site Code : 70470001
Start Date : 4/3/2007
Page No : 2

	Oak Grove Road Southbound			Oak Grove Road Northbound			R.E. Pierson Access Eastbound			
Start Time	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:00 PM										
03:00 PM	2	1	3	4	0	4	0	2	2	9
03:15 PM	0	9	9	4	0	4	0	0	0	13
03:30 PM	0	9	9	5	1	6	1	0	1	16
03:45 PM	0	8	8	8	0	8	0	0	0	16
Total Volume	2	27	29	21	1	22	1	2	3	54
% App. Total	6.9	93.1		95.5	4.5		33.3	66.7		
PHF	.250	.750	.806	.656	.250	.688	.250	.250	.375	.844

Shropshire Associates LLC

662 South Main Street
Lumberton, New Jersey 08048

N/S Route: Oak Grove Road (CR 671)
E/W Route: R.E. Pierson Access
Logan Twp./Gloucester Co. NJ
Clear/Tues./CA/2585

File Name : 70470001
Site Code : 70470001
Start Date : 4/3/2007
Page No : 1

Groups Printed- Heavy Vehicles

	Oak Grove Road Southbound		Oak Grove Road Northbound		R.E. Pierson Access Eastbound		
Start Time	Right	Thru	Thru	Left	Right	Left	Int. Total
06:30 AM	1	0	0	2	0	0	3
06:45 AM	4	0	1	2	1	1	9
Total	5	0	1	4	1	1	12
07:00 AM	1	0	0	0	1	5	7
07:15 AM	2	1	1	0	0	1	5
07:30 AM	0	0	0	0	2	0	2
07:45 AM	2	0	0	1	0	0	3
Total	5	1	1	1	3	6	17
08:00 AM	1	0	0	0	1	2	4
08:15 AM	2	0	0	2	1	1	6
08:30 AM	3	0	0	2	2	1	8
08:45 AM	0	1	0	2	3	3	9
Total	6	1	0	6	7	7	27
01:00 PM	5	0	0	2	2	3	12
01:15 PM	2	0	0	2	2	2	8
01:30 PM	3	0	0	1	4	2	10
01:45 PM	3	0	0	2	3	1	9
Total	13	0	0	7	11	8	39
02:00 PM	1	0	0	2	1	2	6
02:15 PM	0	0	0	0	0	2	2
02:30 PM	2	0	0	1	2	1	6
02:45 PM	0	0	0	0	2	1	3
Total	3	0	0	3	5	6	17
03:00 PM	0	0	0	2	0	0	2
03:15 PM	0	0	0	0	2	0	2
Total	0	0	0	2	2	0	4
Grand Total	32	2	2	23	29	28	116
Apprch %	94.1	5.9	8	92	50.9	49.1	
Total %	27.6	1.7	1.7	19.8	25	24.1	

	Oak Grove Road Southbound			Oak Grove Road Northbound			R.E. Pierson Access Eastbound			
Start Time	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	1	0	1	0	0	0	1	2	3	4
08:15 AM	2	0	2	0	2	2	1	1	2	6
08:30 AM	3	0	3	0	2	2	2	1	3	8
08:45 AM	0	1	1	0	2	2	3	3	6	9
Total Volume	6	1	7	0	6	6	7	7	14	27
% App. Total	85.7	14.3		0	100		50	50		
PHF	.500	.250	.583	.000	.750	.750	.583	.583	.583	.750

Shropshire Associates LLC

662 South Main Street
Lumberton, New Jersey 08048

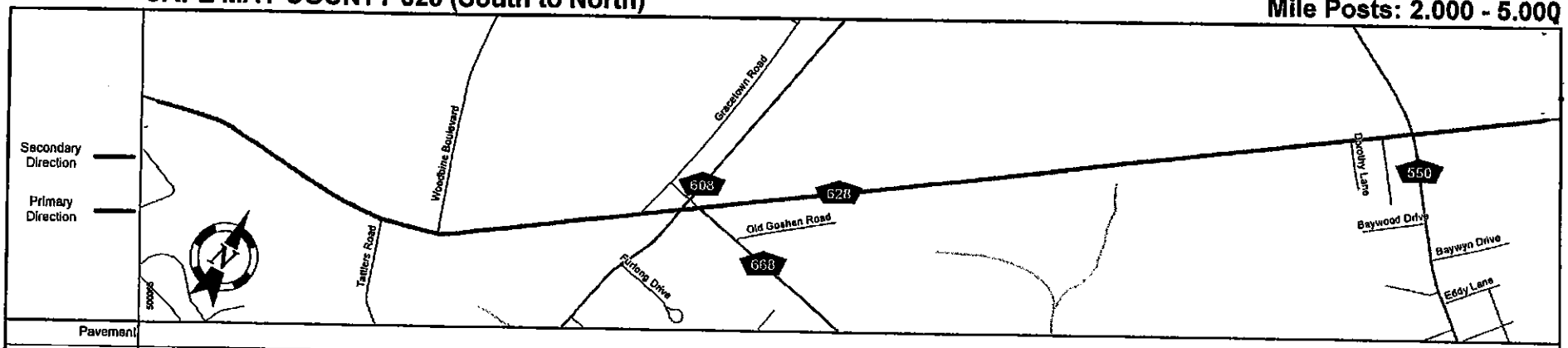
N/S Route: Oak Grove Road (CR 671)
E/W Route: R.E. Pierson Access
Logan Twp./Gloucester Co. NJ
Clear/Tues./CA/2585

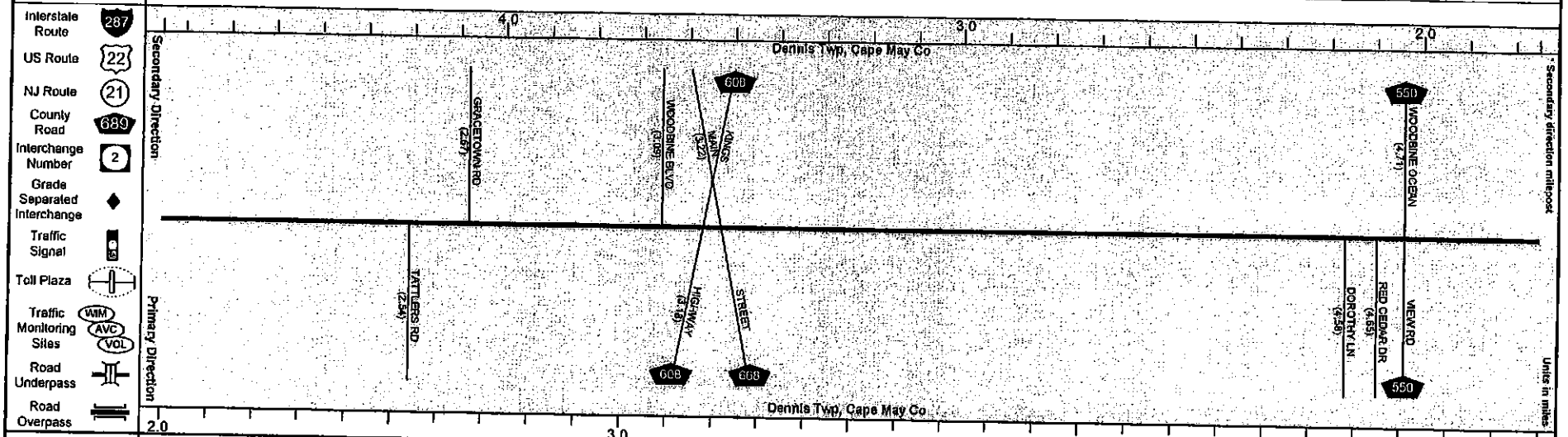
File Name : 70470001
Site Code : 70470001
Start Date : 4/3/2007
Page No : 2

	Oak Grove Road Southbound			Oak Grove Road Northbound			R.E. Pierson Access Eastbound			
Start Time	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Peak Hour Analysis From 01:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 01:00 PM										
01:00 PM	**5**	0	**5**	0	**2**	**2**	2	**3**	5	**12**
01:15 PM	2	0	2	0	2	2	2	2	4	8
01:30 PM	3	0	3	0	1	1	**4**	2	**6**	10
01:45 PM	3	0	3	0	2	2	3	1	4	9
Total Volume	13	0	13	0	7	7	11	8	19	39
% App. Total	100	0		0	100		57.9	42.1		
PHF	.650	.000	.650	.000	.875	.875	.688	.667	.792	.813

CAPE MAY COUNTY 628 (South to North)

Mile Posts: 2.000 - 5.000





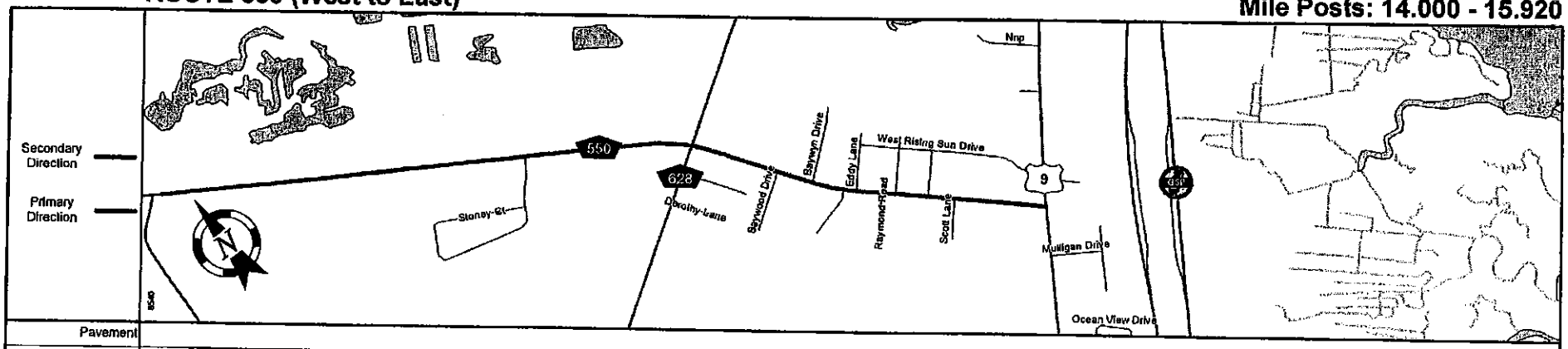
	2.0	3.0	4.0	5.0
Street Name	Dennisville Road		Corsons Tavern Road	
Jurisdiction	County			
Functional Class	Urban Collector			
Federal Aid Sys	STP			
Speed Limit	50 | 40 | 35 | 40		50 | 45 | 50	
Number of Lanes	2			
Med. Type	None			
Med. Width	0			
Pavement	21			
Shoulder	7 | 4	2	7	23 | 8
Traffic Volume				
Traffic Sta. ID				
Structure No.				
Enlarged Views				

SRI = 05000628__

Date last inventoried: August 1999

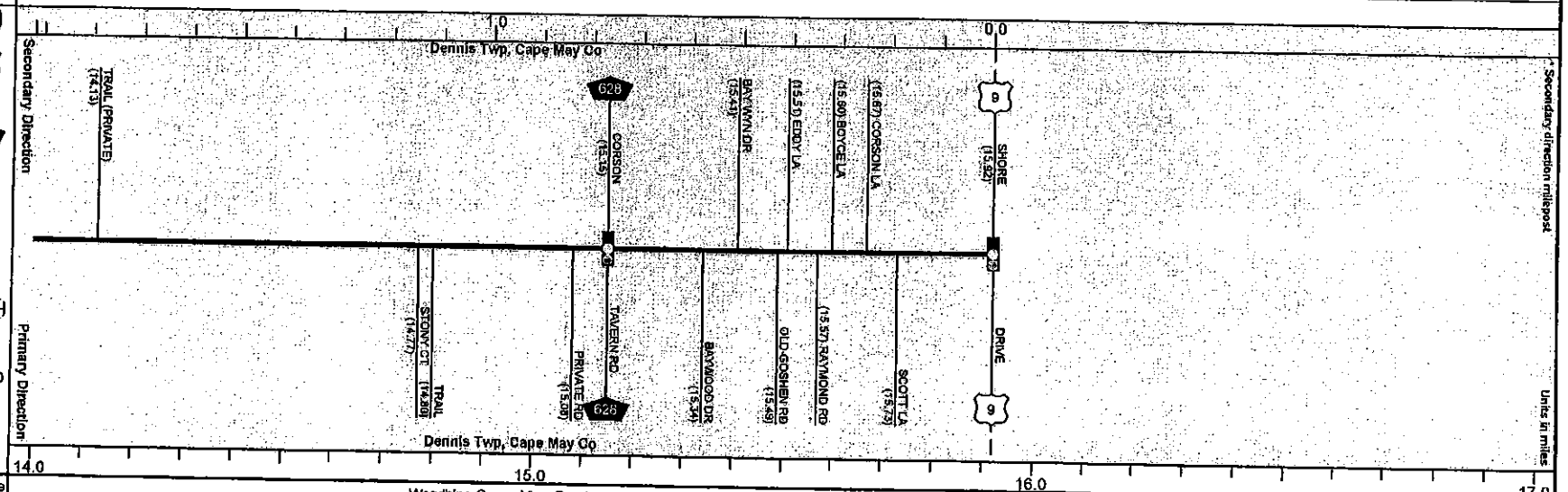
ROUTE 550 (West to East)

Mile Posts: 14.000 - 15.920



Pavement	
Shoulder	
Number of Lanes	
Speed Limit	
Street Name	

Interstate Route 287
US Route 22
NJ Route 21
County Road 689
Interchange Number 2
Grade Separated Interchange
Traffic Signal
Toll Plaza
Traffic Monitoring Sites WIM AVC VOL
Road Underpass
Road Overpass



Street Name	Woodbine-Ocean View Road		
Jurisdiction	County		
Functional Class	Rural Major Collector		Urban Collector
Federal Aid Sys	STP		
Speed Limit	50		40
Number of Lanes	2		
Med. Type	None		
Med. Width	0		
Pavement	24		
Shoulder	7		5
Traffic Volume	4,582 (2005)		
Traffic Sta. ID	5-8-214		
Structure No.			
Enlarged Views			

End Rt. 550 MP=15.92

SRI = 00000550__

Date last inventoried: February 2004

FEBRUARY 7, 2003

WOODBINE-OCEANVIEW ROAD (CR 550) AND CORSONS TAVERN ROAD (CR 628)
Township of Dennis, Cape May County, NJ
TRAFFIC SIGNAL TIMINGS

VARIABLE CYCLE LENGTH -- 41 TO 64 SECONDS

PHASE	1,2,3,4,5	6,7,8,9	TIME (SEC.)
1. Woodbine-Oceanview Road (CR 550) ROW	G	R	**15-30**
Change	Y	R	**5**
Clearance	R	R	**2**
2. Corsons Tavern Road (CR 628) ROW	R	G	**12-20**
Change	R	Y	**5**
Clearance	R	R	**2**
Emergency Flash	Y	R	**50-60 per min.**

MANUAL CONTROL TO BE DISCONNECTED. MEMORY CIRCUITS TO BE 'OFF'.

VEHICLE INTERVAL TO BE SET AT 3 SECONDS.

IF NO ACTUATION OCCURS, SIGNAL SHALL REST IN ALL-RED INTERVAL.

IF ACTUATION OF A PHASE OCCURS DURING THE CHANGE (YELLOW) OR CLEARANCE (ALL-RED) INTERVALS OF THE SAME PHASE, THE CHANGE AND CLEARANCE INTERVALS SHALL TIME OUT FULLY BEFORE REVERTING TO THE ROW (GREEN) PHASE.

SHORT REPORT

General Information		Site Information	
Analyst	*nbm ea1*	Intersection	*Woodbine-Ocean/Corsons Tavern*
Agency or Co.	*Shropshire Associates LLC*	Area Type	*All other areas*
Date Performed	*4/13/2007*	Jurisdiction	*Cape May County*
Time Period	*Existing AM Peak Hour*	Analysis Year	*2007*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	*0*	*1*	*0*	*0*	*1*	*0*	*0*	*1*	*0*	*0*	*1*	*0*
Lane Group		*LTR*			*LTR*			*LTR*			*LTR*	
Volume (vph)	*53*	*204*	*6*	*14*	*162*	*12*	*12*	*60*	*17*	*32*	*42*	*59*
% Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
PHF	*0.84*	*0.84*	*0.84*	*0.74*	*0.74*	*0.74*	*0.62*	*0.62*	*0.62*	*0.67*	*0.67*	*0.67*
Pretimed/Actuated (P/A)	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*
Startup Lost Time		*2.0*			*2.0*			*2.0*			*2.0*	
Extension of Effective Green		*5.0*			*5.0*			*5.0*			*5.0*	
Arrival Type		*3*			*3*			*3*			*3*	
Unit Extension		*2.0*			*2.0*			*2.0*			*2.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*1*	*0*	*0*	*1*	*0*	*0*	*2*	*0*	*0*	*6*
Lane Width		*12.0*			*12.0*			*12.0*			*12.0*	
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/Hour												
Bus Stops/Hour		*0*			*0*			*0*			*0*	
Minimum Pedestrian Time												

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = *30.0*	G =	G =	G =	G = *20.0*	G =	G =	G =
	Y = *7*	Y =	Y =	Y =	Y = *7*	Y =	Y =	Y =

Duration of Analysis (hrs) = *0.25*

Cycle Length C = *64.0*

Lane Group Capacity, Control Delay, and LOS Determination

	EB	WB	NB	SB
Adjusted Flow Rate	*312*	*253*	*140*	*190*
Lane Group Capacity	*857*	*920*	*620*	*568*
v/c Ratio	*0.36*	*0.28*	*0.23*	*0.33*
Green Ratio	*0.52*	*0.52*	*0.36*	*0.36*
Uniform Delay d_1	*9.2*	*8.7*	*14.3*	*14.9*
Delay Factor k	*0.04*	*0.04*	*0.04*	*0.04*
Incremental Delay d_2	*0.1*	*0.1*	*0.1*	*0.1*
PF Factor	*1.000*	*1.000*	*1.000*	*1.000*
Control Delay	*9.3*	*8.8*	*14.4*	*15.1*
Lane Group LOS	*A*	*A*	*B*	*B*
Approach Delay	*9.3*	*8.8*	*14.4*	*15.1*
Approach LOS	*A*	*A*	*B*	*B*
Intersection Delay	*11.2*	Intersection LOS		*B*

SHORT REPORT

General Information		Site Information	
Analyst	*nbm ep1*	Intersection	*Woodbine-Ocean/Corsons Tavern*
Agency or Co.	*Shropshire Associates LLC*	Area Type	*All other areas*
Date Performed	*4/13/2007*	Jurisdiction	*Cape May County*
Time Period	*Existing PM Peak Hour*	Analysis Year	*2007*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	*0*	*1*	*0*	*0*	*1*	*0*	*0*	*1*	*0*	*0*	*1*	*0*
Lane Group		*LTR*			*LTR*			*LTR*			*LTR*	
Volume (vph)	*92*	*229*	*14*	*18*	*308*	*49*	*10*	*96*	*22*	*41*	*75*	*76*
% Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
PHF	*0.81*	*0.81*	*0.81*	*0.90*	*0.90*	*0.90*	*0.74*	*0.74*	*0.74*	*0.91*	*0.91*	*0.91*
Pretimed/Actuated (P/A)	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*
Startup Lost Time		*2.0*			*2.0*			*2.0*			*2.0*	
Extension of Effective Green		*5.0*			*5.0*			*5.0*			*5.0*	
Arrival Type		*3*			*3*			*3*			*3*	
Unit Extension		*2.0*			*2.0*			*2.0*			*2.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*1*	*0*	*0*	*5*	*0*	*0*	*2*	*0*	*0*	*8*
Lane Width		*12.0*			*12.0*			*12.0*			*12.0*	
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/Hour												
Bus Stops/Hour		*0*			*0*			*0*			*0*	
Minimum Pedestrian Time												

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = *30.0*	G =	G =	G =	G = *20.0*	G =	G =	G =
	Y = *7*	Y =	Y =	Y =	Y = *7*	Y =	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *64.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB	WB	NB	SB
Adjusted Flow Rate	*413*	*411*	*171*	*202*
Lane Group Capacity	*770*	*919*	*635*	*575*
v/c Ratio	*0.54*	*0.45*	*0.27*	*0.35*
Green Ratio	*0.52*	*0.52*	*0.36*	*0.36*
Uniform Delay d_1	*10.4*	*9.8*	*14.5*	*15.0*
Delay Factor k	*0.07*	*0.04*	*0.04*	*0.04*
Incremental Delay d_2	*0.4*	*0.1*	*0.1*	*0.1*
PF Factor	*1.000*	*1.000*	*1.000*	*1.000*
Control Delay	*10.8*	*9.9*	*14.6*	*15.2*
Lane Group LOS	*B*	*A*	*B*	*B*
Approach Delay	*10.8*	*9.9*	*14.6*	*15.2*
Approach LOS	*B*	*A*	*B*	*B*
Intersection Delay	*11.8*	Intersection LOS		*B*

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*nbm ea2*	Intersection	*Woodbine-Ocean View/East Acces*
Agency/Co.	*Shropshire Associates LLC*	Jurisdiction	*Cape May County*
Date Performed	*4/13/2007*	Analysis Year	*2007*
Analysis Time Period	*Existing AM Peak Hour*		

Project Description	*7047 - R.E. Pierson*
East/West Street: *Woodbine-Ocean View (CR 550)*	North/South Street: *East Site Access*
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)	*0*	*255*			*225*	*8*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*1.00*	*1.00*	*0.77*	*0.77*
Hourly Flow Rate, HFR (veh/h)	*0*	*283*	*0*	*0*	*292*	*10*
Percent Heavy Vehicles	*2*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*8*		*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.50*	*1.00*	*0.50*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*16*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*0*	*2*
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)	*0*						*16*	
C (m) (veh/h)	*1259*						*477*	
v/c	*0.00*						*0.03*	
95% queue length	*0.00*						*0.10*	
Control Delay (s/veh)	*7.9*						*12.8*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--					*12.8*	
Approach LOS	--	--					*B*	

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*nbm ep2*	Intersection	*Woodbine-Ocean View/East Acces*
Agency/Co.	*Shropshire Associates LLC*	Jurisdiction	*Cape May County*
Date Performed	*4/13/2007*	Analysis Year	*2007*
Analysis Time Period	*Existing PM Peak Hour*		

Project Description *7047 - R.E. Pierson*

East/West Street: *Woodbine-Ocean View (CR 550)*	North/South Street: *East Site Access*
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)	*0*	*335*			*385*	*9*
Peak-Hour Factor, PHF	*0.78*	*0.78*	*1.00*	*1.00*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*0*	*429*	*0*	*0*	*418*	*9*
Percent Heavy Vehicles	*2*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*0*		*2*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.50*	*1.00*	*0.50*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*4*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*0*	*2*
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)	*0*						*4*	
C (m) (veh/h)	*1132*						*632*	
v/c	*0.00*						*0.01*	
95% queue length	*0.00*						*0.02*	
Control Delay (s/veh)	*8.2*						*10.7*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--					*10.7*	
Approach LOS	--	--					*B*	

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*nbm ea3*	Intersection	*Woodbine-Ocean View/West Acces*
Agency/Co.	*Shropshire Associates LLC*	Jurisdiction	*Cape May County*
Date Performed	*4/13/2007*	Analysis Year	*2007*
Analysis Time Period	*Existing AM Peak Hour*		

Project Description	*7047 - R.E. Pierson*
East/West Street: *Woodbine-Ocean View (CR 550)*	North/South Street: *West Site Access*
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)	6	255			225	0
Peak-Hour Factor, PHF	0.90	0.90	1.00	1.00	0.77	0.77
Hourly Flow Rate, HFR (veh/h)	6	283	0	0	292	0
Percent Heavy Vehicles	2	–	–	0	–	–
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				1		0
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.25	1.00	0.25
Hourly Flow Rate, HFR (veh/h)	0	0	0	4	0	0
Percent Heavy Vehicles	0	0	0	2	0	2
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)	6						4	
C (m) (veh/h)	1270						470	
v/c	0.00						0.01	
95% queue length	0.01						0.03	
Control Delay (s/veh)	7.8						12.7	
LOS	A						B	
Approach Delay (s/veh)	–	–					12.7	
Approach LOS	–	–					B	

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*nbm ep3*	Intersection	*Woodbine-Ocean View/West Acces*
Agency/Co.	*Shropshire Associates LLC*	Jurisdiction	*Cape May County*
Date Performed	*4/13/2007*	Analysis Year	*2007*
Analysis Time Period	*Existing PM Peak Hour*		

Project Description *7047 - R.E. Pierson*

East/West Street: *Woodbine-Ocean View (CR 550)*	North/South Street: *West Site Access*
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)	*0*	*335*			*387*	*0*
Peak-Hour Factor, PHF	*0.78*	*0.78*	*1.00*	*1.00*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*0*	*429*	*0*	*0*	*420*	*0*
Percent Heavy Vehicles	*2*	–	–	*0*	–	–
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*0*		*2*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.50*	*1.00*	*0.50*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*4*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*0*	*2*
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)	*0*						*4*	
C (m) (veh/h)	*1139*						*633*	
v/c	*0.00*						*0.01*	
95% queue length	*0.00*						*0.02*	
Control Delay (s/veh)	*8.2*						*10.7*	
LOS	*A*						*B*	
Approach Delay (s/veh)	–	–					*10.7*	
Approach LOS	–	–					*B*	

SHORT REPORT

General Information		Site Information	
Analyst	*nbm na1*	Intersection	*Woodbine-Ocean/Corsons Tavern*
Agency or Co.	*Shropshire Associates LLC*	Area Type	*All other areas*
Date Performed	*4/13/2007*	Jurisdiction	*Cape May County*
Time Period	*No-Build AM Peak Hour*	Analysis Year	*2009*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	*0*	*1*	*0*	*0*	*1*	*0*	*0*	*1*	*0*	*0*	*1*	*0*
Lane Group		*LTR*			*LTR*			*LTR*			*LTR*	
Volume (vph)	*56*	*214*	*6*	*15*	*170*	*13*	*13*	*65*	*18*	*34*	*44*	*62*
% Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
PHF	*0.84*	*0.84*	*0.84*	*0.74*	*0.74*	*0.74*	*0.62*	*0.62*	*0.62*	*0.67*	*0.67*	*0.67*
Pretimed/Actuated (P/A)	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*
Startup Lost Time		*2.0*			*2.0*			*2.0*			*2.0*	
Extension of Effective Green		*5.0*			*5.0*			*5.0*			*5.0*	
Arrival Type		*3*			*3*			*3*			*3*	
Unit Extension		*2.0*			*2.0*			*2.0*			*2.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*1*	*0*	*0*	*1*	*0*	*0*	*2*	*0*	*0*	*6*
Lane Width		*12.0*			*12.0*			*12.0*			*12.0*	
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/Hour												
Bus Stops/Hour		*0*			*0*			*0*			*0*	
Minimum Pedestrian Time												

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = *30.0*	G =	G =	G =	G = *20.0*	G =	G =	G =
	Y = *7*	Y =	Y =	Y =	Y = *7*	Y =	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *64.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB	WB	NB	SB
Adjusted Flow Rate	*328*	*266*	*152*	*201*
Lane Group Capacity	*852*	*919*	*618*	*565*
v/c Ratio	*0.38*	*0.29*	*0.25*	*0.36*
Green Ratio	*0.52*	*0.52*	*0.36*	*0.36*
Uniform Delay d_1	*9.4*	*8.8*	*14.4*	*15.1*
Delay Factor k	*0.04*	*0.04*	*0.04*	*0.04*
Incremental Delay d_2	*0.1*	*0.1*	*0.1*	*0.1*
PF Factor	*1.000*	*1.000*	*1.000*	*1.000*
Control Delay	*9.5*	*8.9*	*14.5*	*15.2*
Lane Group LOS	*A*	*A*	*B*	*B*
Approach Delay	*9.5*	*8.9*	*14.5*	*15.2*
Approach LOS	*A*	*A*	*B*	*B*
Intersection Delay	*11.3*	Intersection LOS		*B*

SHORT REPORT

General Information		Site Information	
Analyst	*nbm np1*	Intersection	*Woodbine-Ocean/Corsons Tavern*
Agency or Co.	*Shropshire Associates LLC*	Area Type	*All other areas*
Date Performed	*4/13/2007*	Jurisdiction	*Cape May County*
Time Period	*No-Build PM Peak Hour*	Analysis Year	*2009*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	*0*	*1*	*0*	*0*	*1*	*0*	*0*	*1*	*0*	*0*	*1*	*0*
Lane Group		*LTR*			*LTR*			*LTR*			*LTR*	
Volume (vph)	*97*	*241*	*15*	*19*	*324*	*52*	*11*	*101*	*23*	*43*	*79*	*80*
% Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
PHF	*0.81*	*0.81*	*0.81*	*0.90*	*0.90*	*0.90*	*0.74*	*0.74*	*0.74*	*0.91*	*0.91*	*0.91*
Pretimed/Actuated (P/A)	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*
Startup Lost Time		*2.0*			*2.0*			*2.0*			*2.0*	
Extension of Effective Green		*5.0*			*5.0*			*5.0*			*5.0*	
Arrival Type		*3*			*3*			*3*			*3*	
Unit Extension		*2.0*			*2.0*			*2.0*			*2.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*2*	*0*	*0*	*5*	*0*	*0*	*2*	*0*	*0*	*8*
Lane Width		*12.0*			*12.0*			*12.0*			*12.0*	
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/Hour												
Bus Stops/Hour		*0*			*0*			*0*			*0*	
Minimum Pedestrian Time												

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = *30.0*	G =	G =	G =	G = *20.0*	G =	G =	G =
	Y = *7*	Y =	Y =	Y =	Y = *7*	Y =	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *64.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB	WB	NB	SB
Adjusted Flow Rate	*434*	*433*	*179*	*213*
Lane Group Capacity	*758*	*917*	*634*	*574*
v/c Ratio	*0.57*	*0.47*	*0.28*	*0.37*
Green Ratio	*0.52*	*0.52*	*0.36*	*0.36*
Uniform Delay d_1	*10.7*	*9.9*	*14.6*	*15.2*
Delay Factor k	*0.11*	*0.04*	*0.04*	*0.04*
Incremental Delay d_2	*0.7*	*0.1*	*0.1*	*0.1*
PF Factor	*1.000*	*1.000*	*1.000*	*1.000*
Control Delay	*11.3*	*10.1*	*14.7*	*15.3*
Lane Group LOS	*B*	*B*	*B*	*B*
Approach Delay	*11.3*	*10.1*	*14.7*	*15.3*
Approach LOS	*B*	*B*	*B*	*B*
Intersection Delay	*12.0*	Intersection LOS		*B*

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*nbm na2*	Intersection	*Woodbine-Ocean View/East Acces*
Agency/Co.	*Shropshire Associates LLC*	Jurisdiction	*Cape May County*
Date Performed	*4/13/2007*	Analysis Year	*2009*
Analysis Time Period	*No-Build AM Peak Hour*		

Project Description	*7047 - R.E. Pierson*
East/West Street: *Woodbine-Ocean View (CR 550)*	North/South Street: *East Site Access*
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)	*0*	*268*			*237*	*8*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*1.00*	*1.00*	*0.77*	*0.77*
Hourly Flow Rate, HFR (veh/h)	*0*	*297*	*0*	*0*	*307*	*10*
Percent Heavy Vehicles	*2*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*8*		*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.50*	*1.00*	*0.50*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*16*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*0*	*2*
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)	*0*						*16*	
C (m) (veh/h)	*1243*						*458*	
v/c	*0.00*						*0.03*	
95% queue length	*0.00*						*0.11*	
Control Delay (s/veh)	*7.9*						*13.1*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--				*13.1*		
Approach LOS	--	--				*B*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*nbm np2*	Intersection	*Woodbine-Ocean View/East Acces*
Agency/Co.	*Shropshire Associates LLC*	Jurisdiction	*Cape May County*
Date Performed	*4/13/2007*	Analysis Year	*2009*
Analysis Time Period	*No-Build PM Peak Hour*		

Project Description	*7047 - R.E. Pierson*
East/West Street: *Woodbine-Ocean View (CR 550)*	North/South Street: *East Site Access*
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)	*0*	*353*			*406*	*9*
Peak-Hour Factor, PHF	*0.78*	*0.78*	*1.00*	*1.00*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*0*	*452*	*0*	*0*	*441*	*9*
Percent Heavy Vehicles	*2*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*0*		*2*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.50*	*1.00*	*0.50*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*4*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*0*	*2*
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)	*0*						*4*	
C (m) (veh/h)	*1110*						*612*	
v/c	*0.00*						*0.01*	
95% queue length	*0.00*						*0.02*	
Control Delay (s/veh)	*8.2*						*10.9*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--					*10.9*	
Approach LOS	--	--					*B*	

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*nbm na3*	Intersection	*Woodbine-Ocean View/West Acces*
Agency/Co.	*Shropshire Associates LLC*	Jurisdiction	*Cape May County*
Date Performed	*4/13/2007*	Analysis Year	*2009*
Analysis Time Period	*No-Build AM Peak Hour*		

Project Description	*7047 - R.E. Pierson*
East/West Street: *Woodbine-Ocean View (CR 550)*	North/South Street: *West Site Access*
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)	*6*	*268*			*237*	*0*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*1.00*	*1.00*	*0.77*	*0.77*
Hourly Flow Rate, HFR (veh/h)	*6*	*297*	*0*	*0*	*307*	*0*
Percent Heavy Vehicles	*2*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*1*		*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.25*	*1.00*	*0.25*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*4*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*0*	*2*
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)	*6*						*4*	
C (m) (veh/h)	*1254*						*452*	
v/c	*0.00*						*0.01*	
95% queue length	*0.01*						*0.03*	
Control Delay (s/veh)	*7.9*						*13.0*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--					*13.0*	
Approach LOS	--	--					*B*	

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*nbm np3*	Intersection	*Woodbine-Ocean View/West Acces*
Agency/Co.	*Shropshire Associates LLC*	Jurisdiction	*Cape May County*
Date Performed	*4/13/2007*	Analysis Year	*2009*
Analysis Time Period	*No-Build PM Peak Hour*		

Project Description *7047 - R.E. Pierson*

East/West Street: *Woodbine-Ocean View (CR 550)*	North/South Street: *West Site Access*
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)	*0*	*353*			*408*	*0*
Peak-Hour Factor, PHF	*0.78*	*0.78*	*1.00*	*1.00*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*0*	*452*	*0*	*0*	*443*	*0*
Percent Heavy Vehicles	*2*	–	–	*0*	–	–
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*0*		*2*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.50*	*1.00*	*0.50*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*4*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*0*	*2*
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)	*0*						*4*	
C (m) (veh/h)	*1117*						*615*	
v/c	*0.00*						*0.01*	
95% queue length	*0.00*						*0.02*	
Control Delay (s/veh)	*8.2*						*10.9*	
LOS	*A*						*B*	
Approach Delay (s/veh)	–	–					*10.9*	
Approach LOS	–	–					*B*	

SHORT REPORT

General Information		Site Information	
Analyst	*nbm ba1*	Intersection	*Woodbine-Ocean/Corsons Tavern*
Agency or Co.	*Shropshire Associates LLC*	Area Type	*All other areas*
Date Performed	*4/13/2007*	Jurisdiction	*Cape May County*
Time Period	*Build AM Peak Hour*	Analysis Year	*2009*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	*0*	*1*	*0*	*0*	*1*	*0*	*0*	*1*	*0*	*0*	*1*	*0*
Lane Group		*LTR*			*LTR*			*LTR*			*LTR*	
Volume (vph)	*57*	*222*	*6*	*15*	*181*	*13*	*15*	*63*	*18*	*34*	*44*	*65*
% Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
PHF	*0.84*	*0.84*	*0.84*	*0.74*	*0.74*	*0.74*	*0.62*	*0.62*	*0.62*	*0.67*	*0.67*	*0.67*
Pretimed/Actuated (P/A)	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*
Startup Lost Time		*2.0*			*2.0*			*2.0*			*2.0*	
Extension of Effective Green		*5.0*			*5.0*			*5.0*			*5.0*	
Arrival Type		*3*			*3*			*3*			*3*	
Unit Extension		*2.0*			*2.0*			*2.0*			*2.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*1*	*0*	*0*	*1*	*0*	*0*	*2*	*0*	*0*	*7*
Lane Width		*12.0*			*12.0*			*12.0*			*12.0*	
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/Hour												
Bus Stops/Hour		*0*			*0*			*0*			*0*	
Minimum Pedestrian Time												

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = *30.0*	G =	G =	G =	G = *20.0*	G =	G =	G =
	Y = *7*	Y =	Y =	Y =	Y = *7*	Y =	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *64.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB	WB	NB	SB
Adjusted Flow Rate	*338*	*281*	*152*	*204*
Lane Group Capacity	*850*	*920*	*612*	*565*
v/c Ratio	*0.40*	*0.31*	*0.25*	*0.36*
Green Ratio	*0.52*	*0.52*	*0.36*	*0.36*
Uniform Delay d_1	*9.4*	*8.9*	*14.4*	*15.1*
Delay Factor k	*0.04*	*0.04*	*0.04*	*0.04*
Incremental Delay d_2	*0.1*	*0.1*	*0.1*	*0.1*
PF Factor	*1.000*	*1.000*	*1.000*	*1.000*
Control Delay	*9.6*	*9.0*	*14.5*	*15.2*
Lane Group LOS	*A*	*A*	*B*	*B*
Approach Delay	*9.6*	*9.0*	*14.5*	*15.2*
Approach LOS	*A*	*A*	*B*	*B*
Intersection Delay	*11.3*	Intersection LOS		*B*

SHORT REPORT

General Information		Site Information	
Analyst	*nbm bp1*	Intersection	*Woodbine-Ocean/Corsons Tavern*
Agency or Co.	*Shropshire Associates LLC*	Area Type	*All other areas*
Date Performed	*4/13/2007*	Jurisdiction	*Cape May County*
Time Period	*Build PM Peak Hour*	Analysis Year	*2009*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	*0*	*1*	*0*	*0*	*1*	*0*	*0*	*1*	*0*	*0*	*1*	*0*
Lane Group		*LTR*			*LTR*			*LTR*			*LTR*	
Volume (vph)	*98*	*252*	*15*	*19*	*335*	*52*	*11*	*101*	*23*	*43*	*79*	*81*
% Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
PHF	*0.81*	*0.81*	*0.81*	*0.90*	*0.90*	*0.90*	*0.74*	*0.74*	*0.74*	*0.91*	*0.91*	*0.91*
Pretimed/Actuated (P/A)	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*
Startup Lost Time		*2.0*			*2.0*			*2.0*			*2.0*	
Extension of Effective Green		*5.0*			*5.0*			*5.0*			*5.0*	
Arrival Type		*3*			*3*			*3*			*3*	
Unit Extension		*2.0*			*2.0*			*2.0*			*2.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*2*	*0*	*0*	*5*	*0*	*0*	*2*	*0*	*0*	*9*
Lane Width		*12.0*			*12.0*			*12.0*			*12.0*	
Parking/Grade/Parking	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*	*N*	*0*	*N*
Parking/Hour												
Bus Stops/Hour		*0*			*0*			*0*			*0*	
Minimum Pedestrian Time												

Phasing	EW Perm	02	03	04	NS Perm	06	07	08
Timing	G = *30.0*	G =	G =	G =	G = *20.0*	G =	G =	G =
	Y = *7*	Y =	Y =	Y =	Y = *7*	Y =	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *64.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB	WB	NB	SB
Adjusted Flow Rate	*448*	*445*	*179*	*213*
Lane Group Capacity	*756*	*918*	*634*	*574*
v/c Ratio	*0.59*	*0.48*	*0.28*	*0.37*
Green Ratio	*0.52*	*0.52*	*0.36*	*0.36*
Uniform Delay d_1	*10.8*	*10.0*	*14.6*	*15.2*
Delay Factor k	*0.13*	*0.04*	*0.04*	*0.04*
Incremental Delay d_2	*0.9*	*0.1*	*0.1*	*0.1*
PF Factor	*1.000*	*1.000*	*1.000*	*1.000*
Control Delay	*11.7*	*10.2*	*14.7*	*15.3*
Lane Group LOS	*B*	*B*	*B*	*B*
Approach Delay	*11.7*	*10.2*	*14.7*	*15.3*
Approach LOS	*B*	*B*	*B*	*B*
Intersection Delay	*12.2*	Intersection LOS		*B*

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*nbm ba2*	Intersection	*Woodbine-Ocean View/East Acces*
Agency/Co.	*Shropshire Associates LLC*	Jurisdiction	*Cape May County*
Date Performed	*4/13/2007*	Analysis Year	*2009*
Analysis Time Period	*Build AM Peak Hour*		

Project Description *7047 - R.E. Pierson*	
East/West Street: *Woodbine-Ocean View (CR 550)*	North/South Street: *East Site Access*
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)	*8*	*272*			*244*	*17*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.74*	*0.74*
Hourly Flow Rate, HFR (veh/h)	*8*	*302*	*0*	*0*	*329*	*22*
Percent Heavy Vehicles	*75*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*13*		*5*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*14*	*0*	*5*
Percent Heavy Vehicles	*0*	*0*	*0*	*75*	*0*	*75*
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)	*8*						*19*	
C (m) (veh/h)	*895*						*371*	
v/c	*0.01*						*0.05*	
95% queue length	*0.03*						*0.16*	
Control Delay (s/veh)	*9.1*						*15.2*	
LOS	*A*						*C*	
Approach Delay (s/veh)	--	--					*15.2*	
Approach LOS	--	--					*C*	

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*nbm bp2*	Intersection	*Woodbine-Ocean View/East Acces*
Agency/Co.	*Shropshire Associates LLC*	Jurisdiction	*Cape May County*
Date Performed	*4/13/2007*	Analysis Year	*2009*
Analysis Time Period	*Build PM Peak Hour*		

Project Description *7047 - R.E. Pierson*

East/West Street: *Woodbine-Ocean View (CR 550)* | North/South Street: *East Site Access*

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)	*7*	*359*			*412*	*15*
Peak-Hour Factor, PHF	*0.78*	*0.78*	*1.00*	*1.00*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*8*	*460*	*0*	*0*	*447*	*16*
Percent Heavy Vehicles	*75*	–	–	*0*	–	–
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*6*		*9*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.90*	*1.00*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*6*	*0*	*10*
Percent Heavy Vehicles	*0*	*0*	*0*	*75*	*0*	*75*
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)	*8*						*16*	
C (m) (veh/h)	*803*						*332*	
v/c	*0.01*						*0.05*	
95% queue length	*0.03*						*0.15*	
Control Delay (s/veh)	*9.5*						*16.4*	
LOS	*A*						*C*	
Approach Delay (s/veh)	–	–					*16.4*	
Approach LOS	–	–					*C*	

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	nbm ba3	Intersection	Woodbine-Ocean View/West Acces
Agency/Co.	Shropshire Associates LLC	Jurisdiction	Cape May County
Date Performed	4/13/2007	Analysis Year	2009
Analysis Time Period	Build AM Peak Hour		

Project Description	7047 - R.E. Pierson		
East/West Street:	Woodbine-Ocean View (CR 550)	North/South Street:	West Site Access
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)	14	276			242	7
Peak-Hour Factor, PHF	0.90	0.90	1.00	1.00	0.77	0.77
Hourly Flow Rate, HFR (veh/h)	15	306	0	0	314	9
Percent Heavy Vehicles	75	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				4		6
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.90	1.00	0.90
Hourly Flow Rate, HFR (veh/h)	0	0	0	4	0	6
Percent Heavy Vehicles	0	0	0	75	0	75
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)	15						10	
C (m) (veh/h)	919						446	
v/c	0.02						0.02	
95% queue length	0.05						0.07	
Control Delay (s/veh)	9.0						13.3	
LOS	A						B	
Approach Delay (s/veh)	--	--					13.3	
Approach LOS	--	--					B	

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*nbm bp3*	Intersection	*Woodbine-Ocean View/West Acces*
Agency/Co.	*Shropshire Associates LLC*	Jurisdiction	*Cape May County*
Date Performed	*4/13/2007*	Analysis Year	*2009*
Analysis Time Period	*Build PM Peak Hour*		

Project Description	*7047 - R.E. Pierson*
East/West Street: *Woodbine-Ocean View (CR 550)*	North/South Street: *West Site Access*
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)	*9*	*360*			*415*	*6*
Peak-Hour Factor, PHF	*0.78*	*0.78*	*1.00*	*1.00*	*0.92*	*0.92*
Hourly Flow Rate, HFR (veh/h)	*11*	*461*	*0*	*0*	*451*	*6*
Percent Heavy Vehicles	*75*	--	–	*0*	–	–
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*6*		*11*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.90*	*1.00*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*6*	*0*	*12*
Percent Heavy Vehicles	*0*	*0*	*0*	*75*	*0*	*75*
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)	*11*						*18*	
C (m) (veh/h)	*807*						*342*	
v/c	*0.01*						*0.05*	
95% queue length	*0.04*						*0.17*	
Control Delay (s/veh)	*9.5*						*16.1*	
LOS	*A*						*C*	
Approach Delay (s/veh)	–	–					*16.1*	
Approach LOS	–	–					*C*	