APPENDIX

ALTERNATIVES SUMMARY TABLE
ALTERNATIVES PROS AND CONS TABLE
DESIGN ALTERNATIVE EXHIBITS
VEHICLE MANEUVERING DIAGRAMS
VEHICLE MOVEMENT VOLUME DIAGRAMS
SIDRA ANALYSIS RESULTS
SYNCHRO ANALYSIS RESULTS

ALTERNATIVES SUMMARY TABLE

ALTERNATIVES SUMMARY TABLE

Alternative	Pedestrian/ Bicycle Accom.	Vehicle Movements Accommodated (Not Accommodated)		Utility Impacts	Tree Removed	Peak Hour Traffic Level of Service (LOS)		Private Property Taken			School Property Taken			Private Property Acquisition Cost[1]		School Property Acquisition Cost[1]		Constr Cost[2]	Total Cost[3]
		School Bus	WB-50			2022 Average Month Morning (Evening)	2022 Peak Month Morning (Evening)	#	Total SF	Residential Struct.	#	Total SF	Residential Struct.	Land	Residential Structures	Land	Residential Structures		
A	Yes	1-8,10-12 (9)	1-8,10-12 (9)	5 UP's & Controllers	Yes	A (A)	A (A)	5	14,849	2	1	6,110	0	$110,000	$830,000	$270,000	$0	$900,000	$2,110,000
B	Yes	All	1,2,4-6,8,10-12 (3, 7, 9)	5 UP's	No	A (A)	B (B)	7	29,676	5	0	0		$50,000	$1,300,000	$10,000	$870,000	$750,000	$2,980,000
C	Yes	All	1,2,4-8,11,12 (3, 9, 10)	5 UP's	No	A (A)	B (B)	6	8,269	1	1	96	0	$130,000	$330,000	$4,000	$0	$650,000	$1,114,000
D	Yes	1-8,10-12 (9)	1,2,5,7,8,11 (3, 4, 6, 9, 10, 12)	5 UP's & Controllers	No	C (C)	E (F)	3	1,823	0	1	2,265	0	$80,000	$0	$90,000	$0	$600,000	$770,000

Alternative A – 100 foot Roundabout with slip right turn lane (northbound)
Alternative B – 100 foot Roundabout
Alternative C – 70 foot Roundabout with slip right turn lane (southbound)
Alternative D – Oblique Intersection with slip right turn lane (northbound)

1- ROW cost based on assessed values and should only be used to compare "order of magnitude" differences for each alternative.
2- Cost for construction only, based on concept plans
3- Combined ROW and Construction cost

DESIGN ALTERNATIVE EXHIBITS

IMPACTS

LOT	OWNER	LAND IMPACT	OTHER IMPACTS
1	NANTUCKET COTTAGE HOSPITAL	256 SF	MINOR DRIVEWAY RECONFIGURATION
2	NANTUCKET COTTAGE HOSPITAL	2,718 SF	REMOVE/RELOCATE BUILDING
3	NANTUCKET COTTAGE HOSPITAL	2,260 SF	MAJOR DRIVEWAY RECONFIGURATION
4	SARAH L. DAVIS TRUSTEE	225 SF	N/A
5	TOWN OF NANTUCKET	6,110 SF	N/A
6	ROBERT H. SARVIS	N/A	N/A
7	LAWERENCE J. FIELD	N/A	N/A
8	NANTUCKET COTTAGE HOSPITAL	1,408 SF	REMOVE/RELOCATE BUILDING
9	NANTUCKET COTTAGE HOSPITAL	N/A	N/A
10	MARIEKE A. CURLEY TRUSTEE	347 SF	N/A

No.	Revision	Date

Designed by:	SPG
Drawn by:	WJH
Checked by:	SPG
Scale:	1"=50'
Date:	09/29/2015

Prepared For:
NANTUCKET COTTAGE HOSPITAL
57 SOUTH PROSPECT STREET
NANTUCKET, MA 02554
(508) 825-8100

Prepared By:
RJO'CONNELL & ASSOCIATES, INC.
CIVIL ENGINEERS, SURVEYORS & LAND PLANNERS
80 MONTVALE AVE
STONEHAM, MA 02180
781-279-0180 FAX 781-279-0173

Project Name:
NANTUCKET COTTAGE HOSPITAL
NANTUCKET, MA

Drawing Name:
FOUR CORNERS INTERSECTION IMPROVEMENTS

Drawing No.:
EX-A

Project No.: 13081

Copyright © 2014 by R.J. O'Connell & Associates, Inc.

Drawing name: T:\6581 Nantucket\Design\v2-100115\EX-A Four Corners_VAI rev 100115.dwg
Oct 01, 2015 - 15:14pm

IMPACTS

LOT	OWNER	LAND IMPACT	OTHER IMPACTS
1	NANTUCKET COTTAGE HOSPITAL	29 SF	MAJOR DRIVEWAY RECONFIGURATION
2	NANTUCKET COTTAGE HOSPITAL	1072 SF	REMOVE/RELOCATE BUILDING
3	NANTUCKET COTTAGE HOSPITAL	1108 SF	MAJOR DRIVEWAY RECONFIGURATION
4	SARAH H. DAVIS TRUSTEE	225 SF	N/A
5	TOWN OF NANTUCKET	N/A	N/A
6	ROBERT H. SARVIS	714 SF	REMOVE/RELOCATE BUILDING
7	LANEFENCE J. FIELD	891 SF	REMOVE/RELOCATE BUILDING
8	NANTUCKET COTTAGE HOSPITAL	3220 SF	REMOVE/RELOCATE BUILDING
9	NANTUCKET COTTAGE HOSPITAL	111 SF	REMOVE/RELOCATE BUILDING
10	MARIEPE A. CURLE TRUSTEE	N/A	N/A

No.	Revision	Date

Designed by:	SPG
Drawn by:	WJH
Checked by:	SPG
Scale:	1"=50'
Date:	09/29/2015

Prepared For:
NANTUCKET COTTAGE HOSPITAL
57 SOUTH PROSPECT STREET
NANTUCKET, MA 02554
(508) 825-8100

Prepared By:
RJO'CONNELL & ASSOCIATES, INC.
CIVIL ENGINEERS, SURVEYORS & LAND PLANNERS
80 NORTHAM AVE.
STOUGHTON, MA 02180
781-279-0188 FAX: 781-279-0173

Project Name:
NANTUCKET COTTAGE HOSPITAL
NANTUCKET, MA

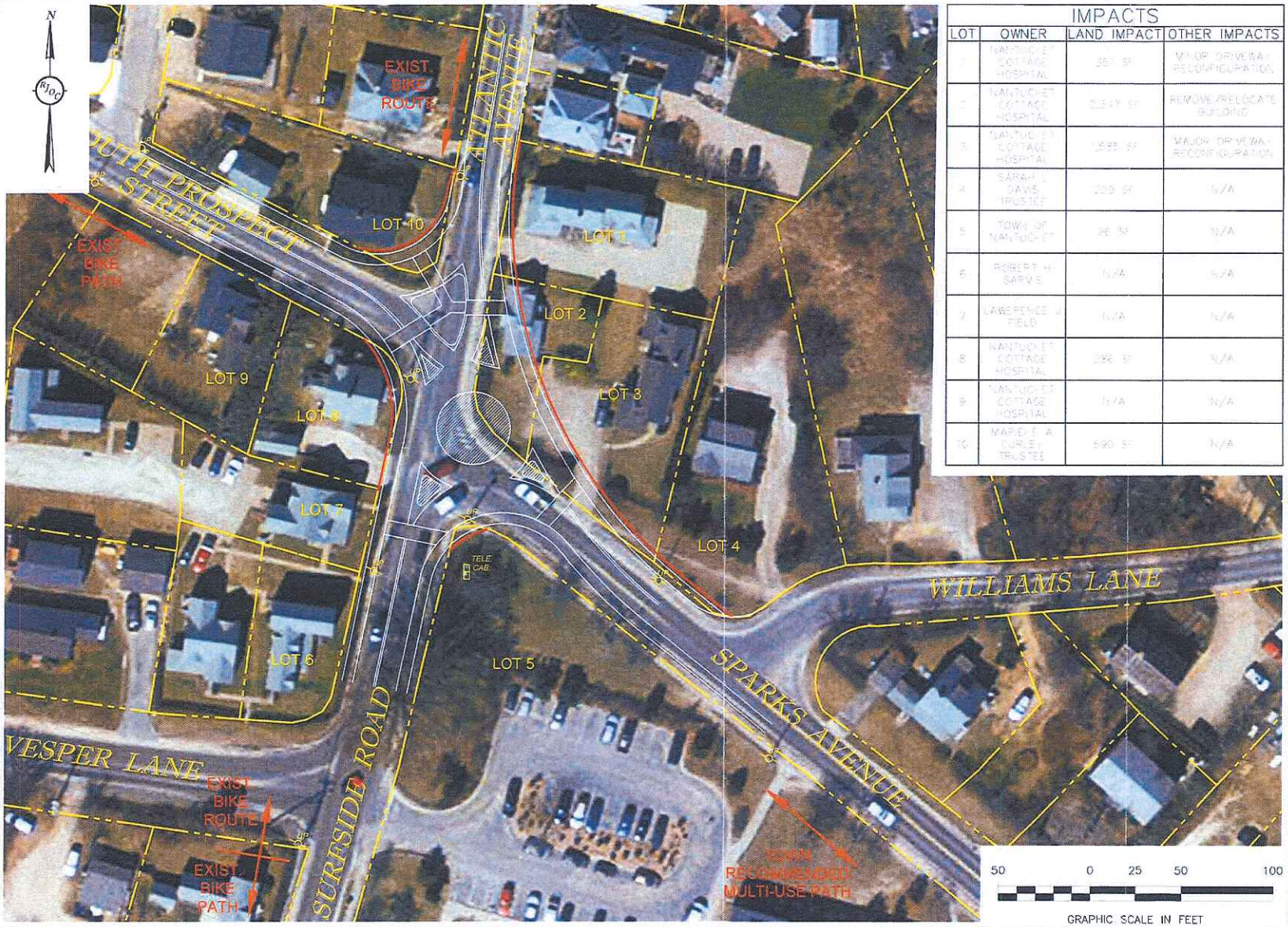
Drawing Name:
FOUR CORNERS INTERSECTION IMPROVEMENTS

Drawing No.:
EX-B

Project No.: 13081

Copyright © 2014 by R.J. O'Connell & Associates, Inc.

Drawing name: T:\8581 Nantucket\Design\v2-100115\EX-B Four Corners_WJH rev 100115.dwg
Oct 01, 2015 - 15:14pm



IMPACTS

LOT	OWNER	LAND IMPACT	OTHER IMPACTS
1	NANTUCKET COTTAGE HOSPITAL	361 SF	MINOR DRIVEWAY RECONFIGURATION
2	NANTUCKET COTTAGE HOSPITAL	2,347 SF	REMOVE/RELOCATE BUILDING
3	NANTUCKET COTTAGE HOSPITAL	1,885 SF	MAJOR DRIVEWAY RECONFIGURATION
4	SARAH L. DAVIS TRUSTEE	220 SF	N/A
5	TOWN OF NANTUCKET	26 SF	N/A
6	ROBERT H. SARVIS	N/A	N/A
7	LAWRENCE J. FIELD	N/A	N/A
8	NANTUCKET COTTAGE HOSPITAL	286 SF	N/A
9	NANTUCKET COTTAGE HOSPITAL	N/A	N/A
10	MARIELE A. CURLEY TRUSTEE	590 SF	N/A

Designed by:	SPG
Drawn by:	WJH
Checked by:	SPG
Scale:	1"=50'
Date:	09/29/2015

Prepared For:
NANTUCKET COTTAGE HOSPITAL
57 SOUTH PROSPECT STREET
NANTUCKET, MA 02554
(508) 825-8100

Prepared By:
RJO'CONNELL & ASSOCIATES, INC.
CIVIL ENGINEERS, SURVEYORS & LAND PLANNERS
80 MONTVALE AVE
STONEHAM, MA 02880
781-279-0180 FAX: 781-279-0173

Project Name:
NANTUCKET COTTAGE HOSPITAL
NANTUCKET, MA

Drawing Name:
FOUR CORNERS INTERSECTION IMPROVEMENTS

Drawing No.:
EX-C

Project No.: 13081

Copyright © 2014 by R.J. O'Connell & Associates, Inc.

Drawing name: T:\6581 Nantucket\Design\v2-100115\EX-C Four Corners_VAI rev 100115.dwg
Oct 01, 2015 - 15:19pm

IMPACTS

LOT	OWNER	LAND IMPACT	OTHER IMPACTS
1	NANTUCKET COTTAGE HOSPITAL	N/A	N/A
2	NANTUCKET COTTAGE HOSPITAL	621 SF	N/A
3	NANTUCKET COTTAGE HOSPITAL	584 SF	DRIVEWAY RECONFIGURATION
4	SARAH L. DAVIS TRUSTEE	N/A	N/A
5	TOWN OF NANTUCKET	2,265 SF	N/A
6	ROBERT H. SARVIS	N/A	N/A
7	LAWRENCE V. FIELD	N/A	N/A
8	NANTUCKET COTTAGE HOSPITAL	838 SF	N/A
9	NANTUCKET COTTAGE HOSPITAL	N/A	N/A
10	MARIETTA A. BURLE TRUSTEE	N/A	N/A

No.	Revision	Date

Designed by:	SPG
Drawn by:	WJH
Checked by:	SPG
Scale:	1"=50'
Date:	09/29/2015

Prepared For:
NANTUCKET COTTAGE HOSPITAL
57 SOUTH PROSPECT STREET
NANTUCKET, MA 02554
(508) 825-8100

Prepared By:
RJO'CONNELL & ASSOCIATES, INC.
CIVIL ENGINEERS, SURVEYORS & LAND PLANNERS
80 MONTVALE AVE.
STONEHAM, MA 02180
781-279-0180 FAX: 781-279-0173

Project Name:
NANTUCKET COTTAGE HOSPITAL
NANTUCKET, MA

Drawing Name:
FOUR CORNERS INTERSECTION IMPROVEMENTS

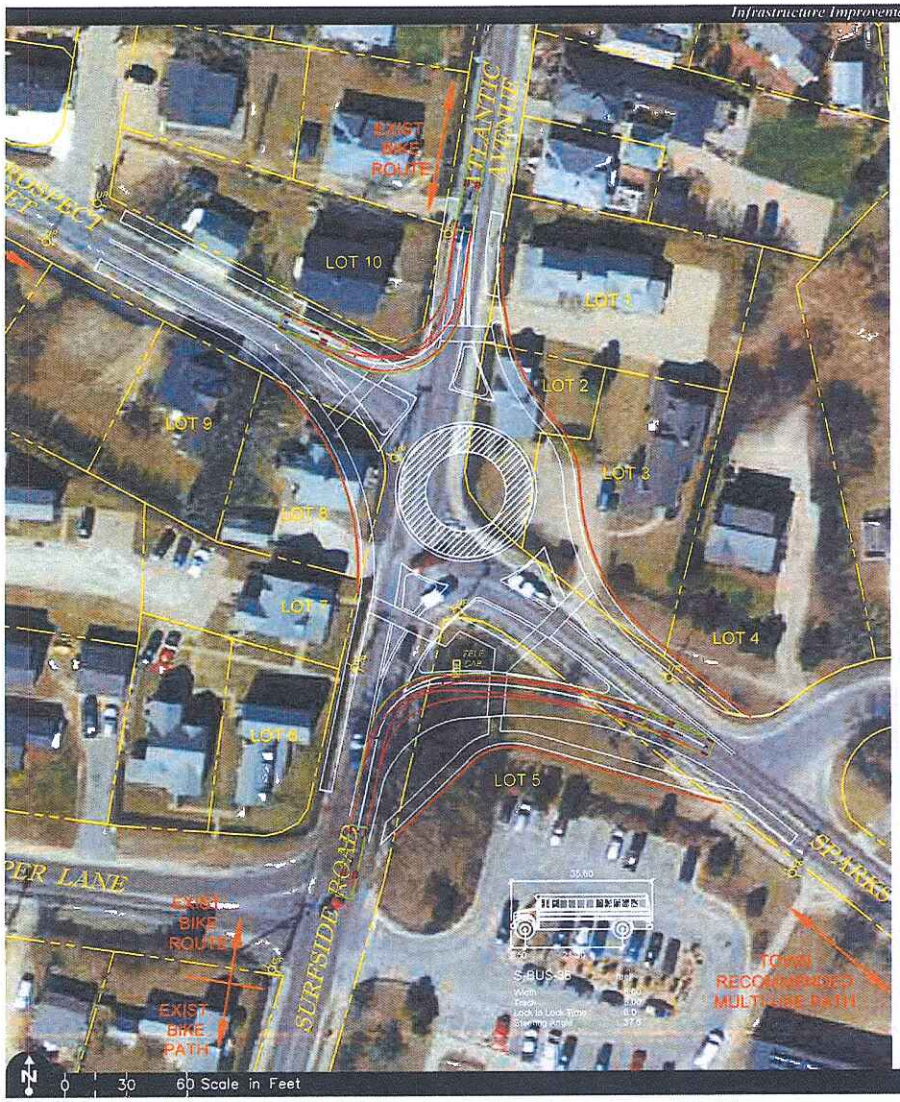
Drawing No.:
EX-D

Project No.: 13081

Copyright © 2014 by R.J. O'Connell & Associates, Inc.

Drawing name: T:\13081 Nantucket\Design\v2-100115\EX-D Four Corners_WH rev 100115.dwg
Oct 01, 2015 - 15:17pm

VEHICLE MANEUVERING DIAGRAMS



Vanasse & Associates, Inc.
Transportation Engineers & Planners

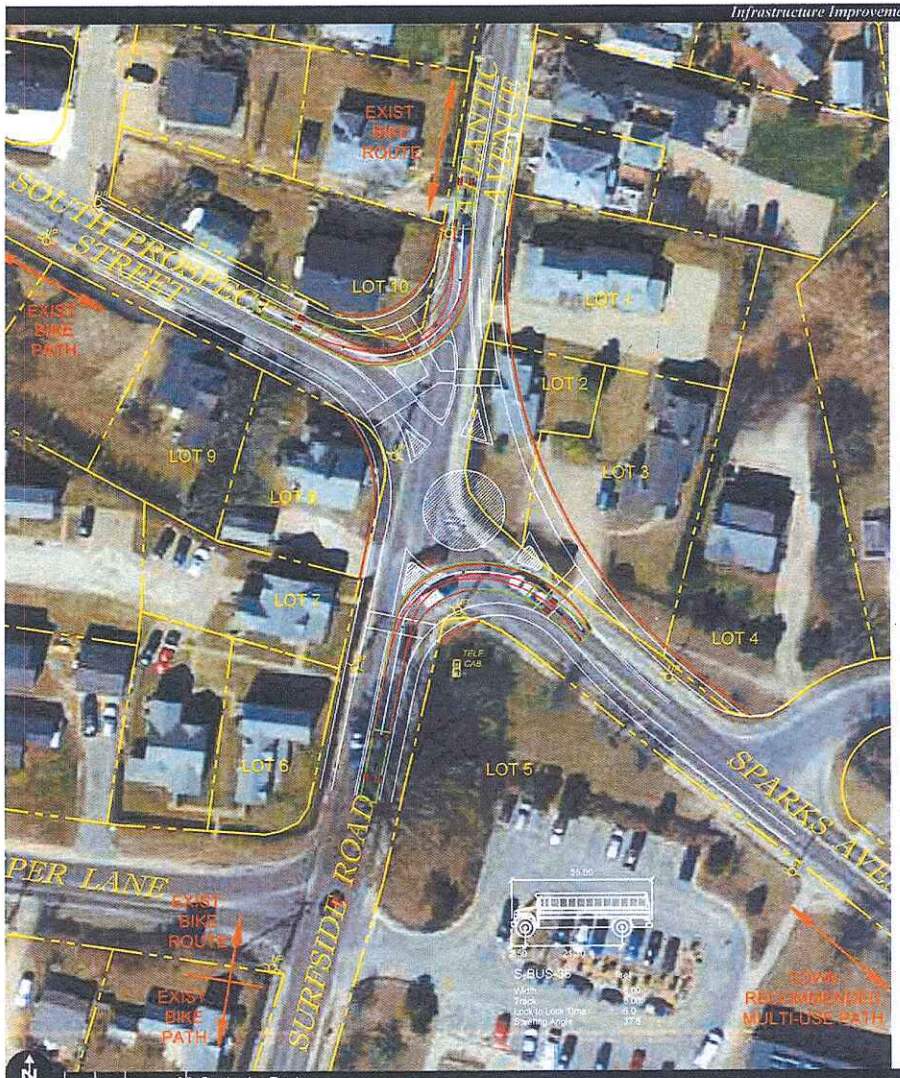
ALTERNATIVE A – VEHICLE MANEUVERING

Copyright © 2015 by VAI All Rights Reserved

Vanasse & Associates, Inc.
Transportation Engineers & Planners

ALTERNATIVE B – VEHICLE MANEUVERING

Copyright © 2015 by VAI All Rights Reserved



Vanasse & Associates, Inc.
Transportation Engineers & Planners

ALTERNATIVE C – VEHICLE MANEUVERING

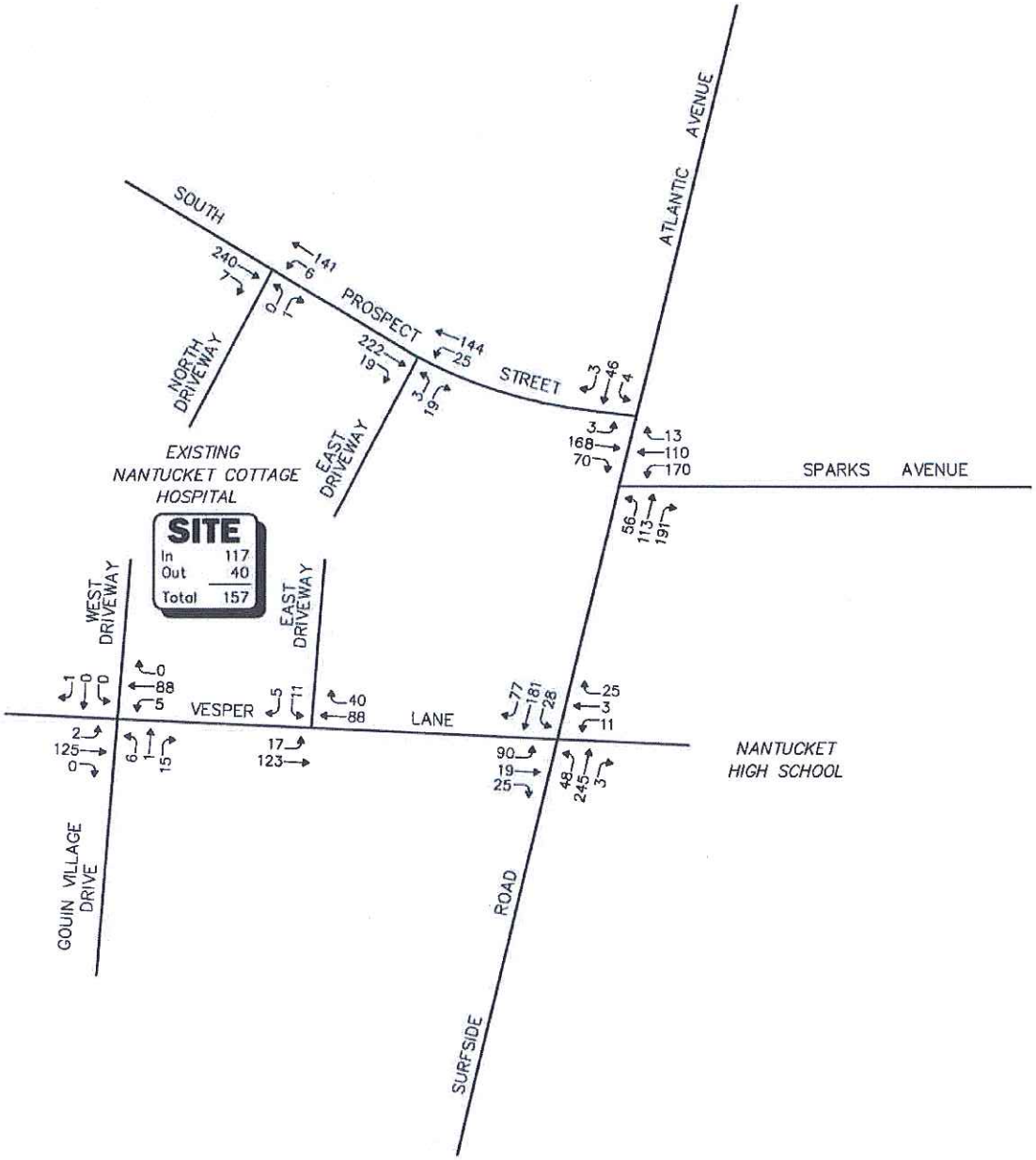
Copyright © 2015 by VAI All Rights Reserved

Vanasse & Associates, Inc.
Transportation Engineers & Planners

ALTERNATIVE D – VEHICLE MANEUVERING

Copyright © 2015 by VAI All Rights Reserved

VEHICLE MOVEMENT VOLUME DIAGRAMS



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

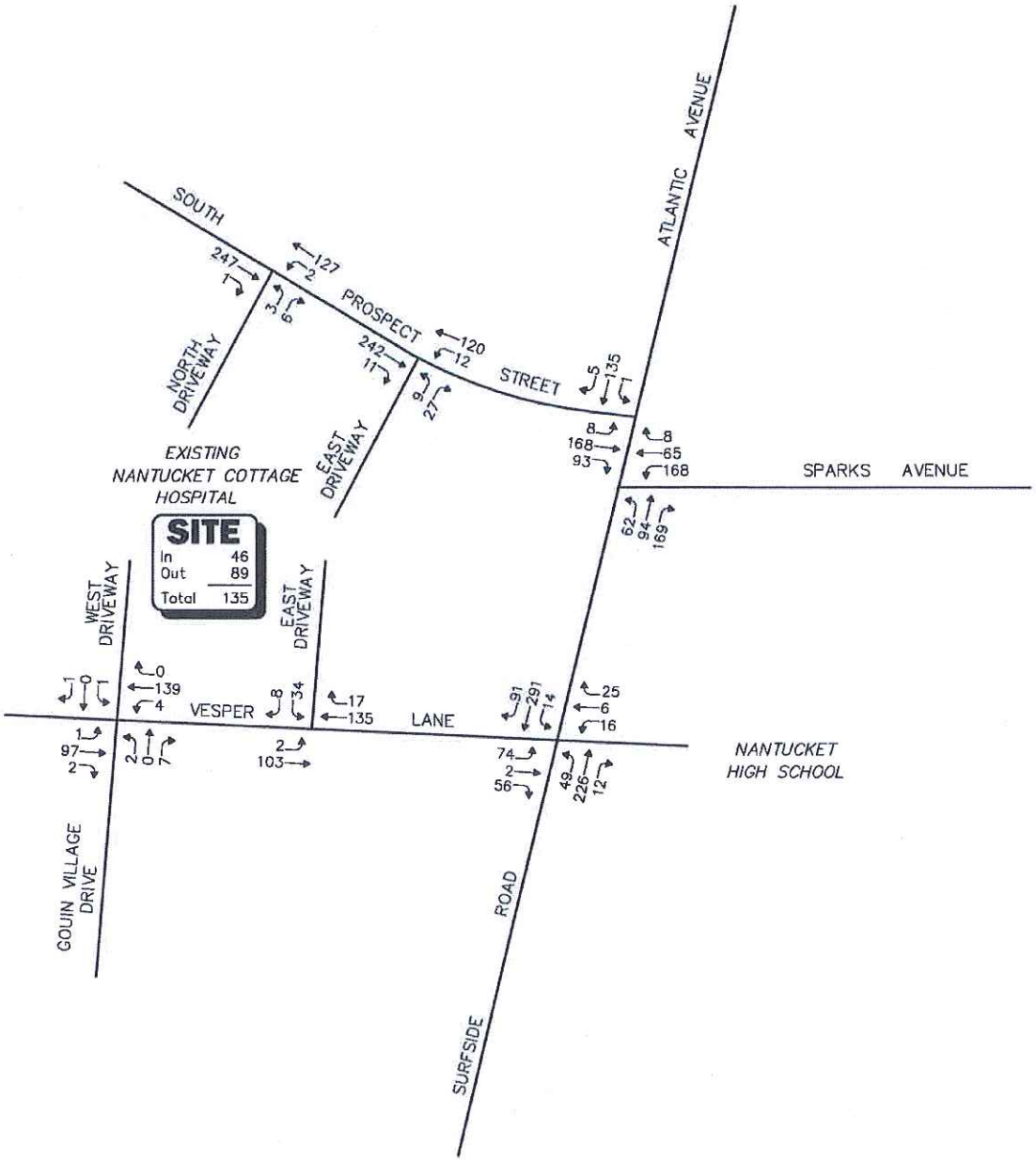
Figure 2

Vanasse & Associates, Inc.
Transportation Engineers & Planners

2015 Existing Weekday Morning Peak Hour Traffic Volumes Average Month Conditions

Copyright © 2016 by VAi. All Rights Reserved.

R:\6581\Van 2016\6581nt1.dwg, 1/15/2016 11:26:01 AM, DWG To PDF.pc3



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

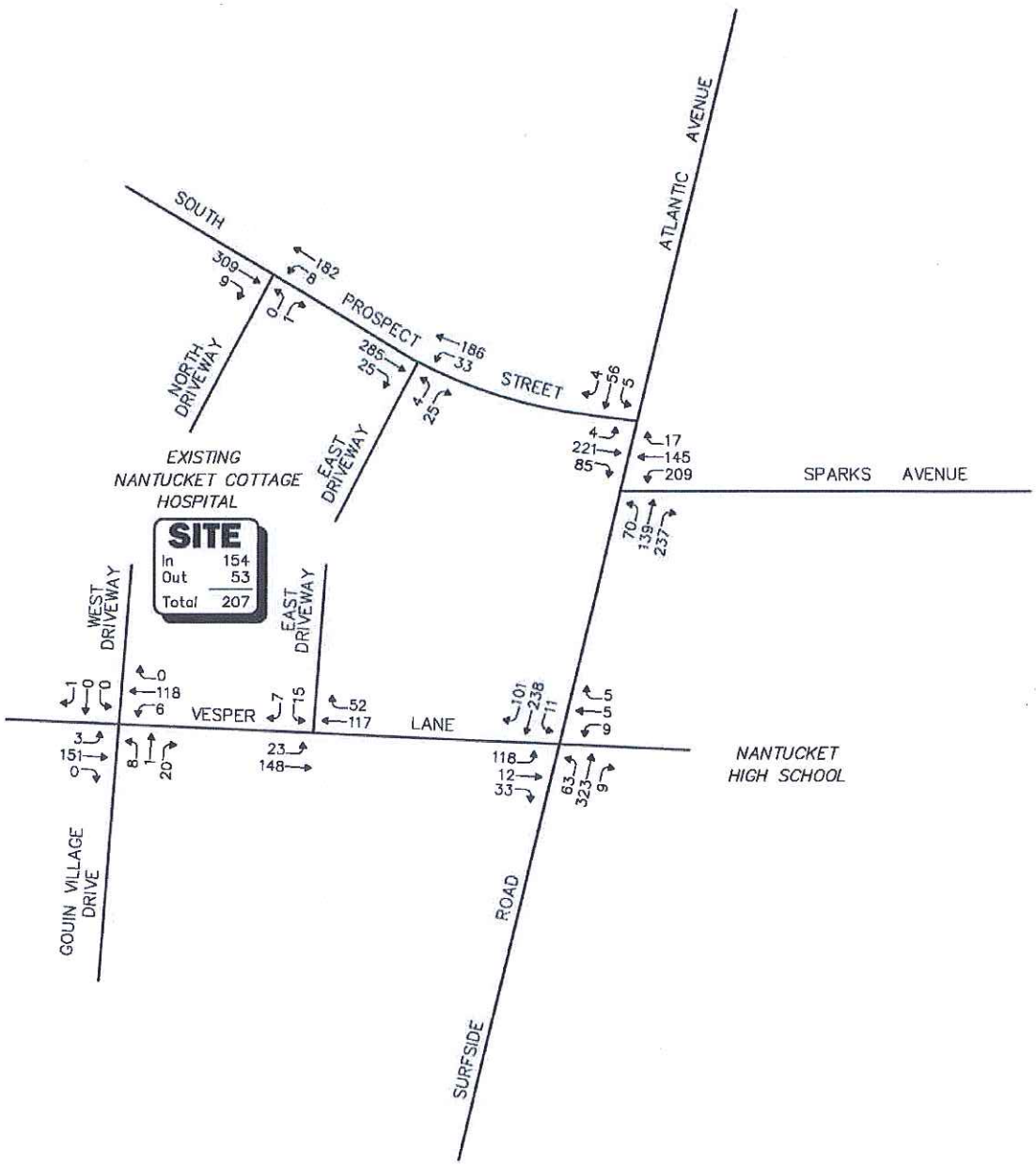
Figure 3

Vanasse & Associates, Inc.
Transportation Engineers & Planners

2015 Existing Weekday Evening Peak Hour Traffic Volumes Average Month Conditions

Copyright © 2016 by VAI. All Rights Reserved.

R:\6581\Van 2016\6581nt2.dwg, 1/15/2016 11:26:54 AM, DWG To PDF.pc3



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

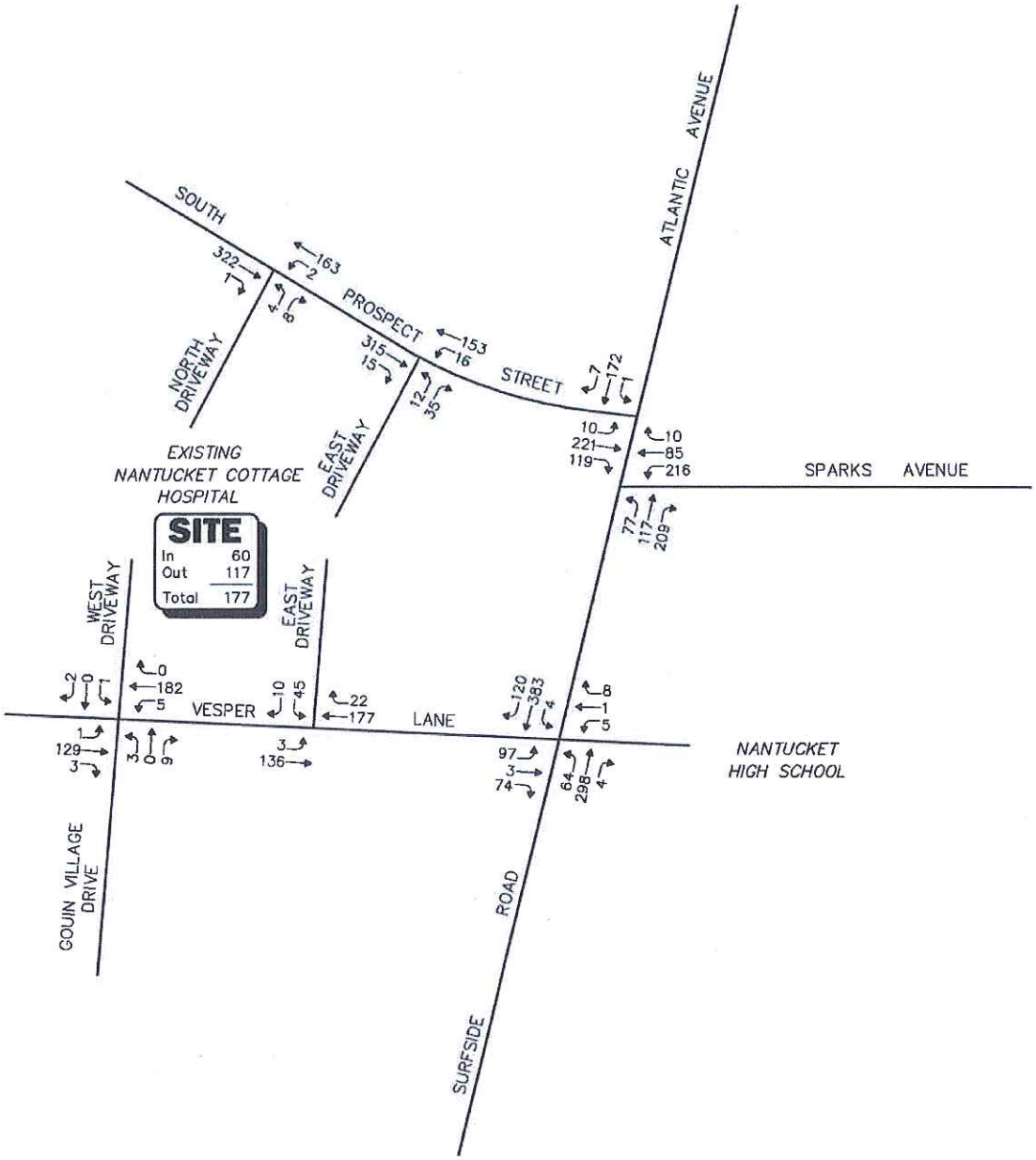
Figure 4

Vanasse & Associates, Inc.
Transportation Engineers & Planners

2015 Existing Weekday Morning Peak Hour Traffic Volumes Peak Month Conditions

Copyright © 2016 by VAI. All Rights Reserved.

R:\6581\Van 2016\6581n3.dwg, 1/15/2016 11:27:52 AM, DWG To PDF.pc3



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

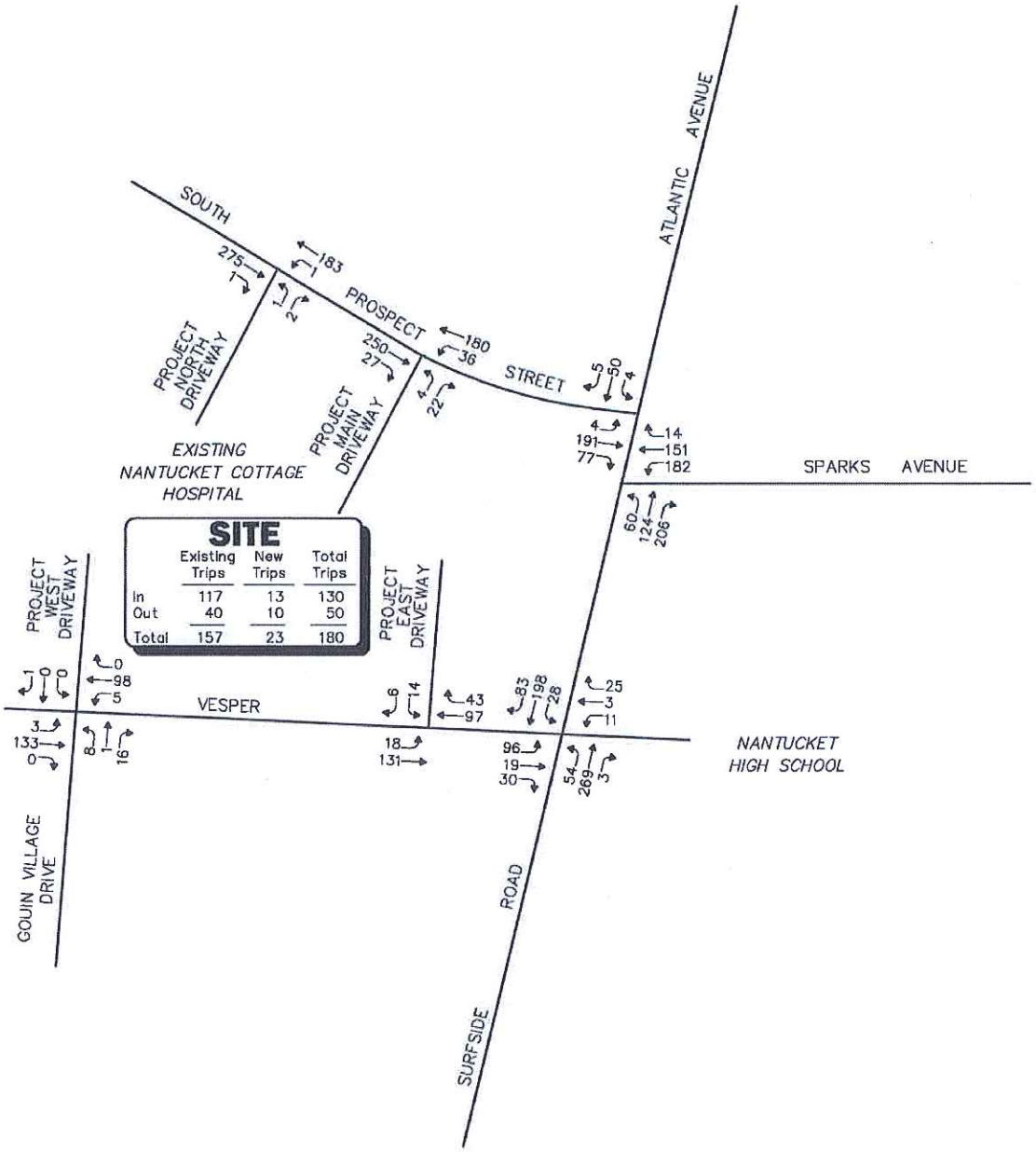
Not To Scale

Figure 5

Vanasse & Associates, Inc.
Transportation Engineers & Planners

2015 Existing
Weekday Evening
Peak Hour Traffic Volumes
Peak Month Conditions

R:\6581\Jan 2016\6581rt4.dwg, 1/15/2016 11:29:02 AM, DWG To PDF.pc3



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

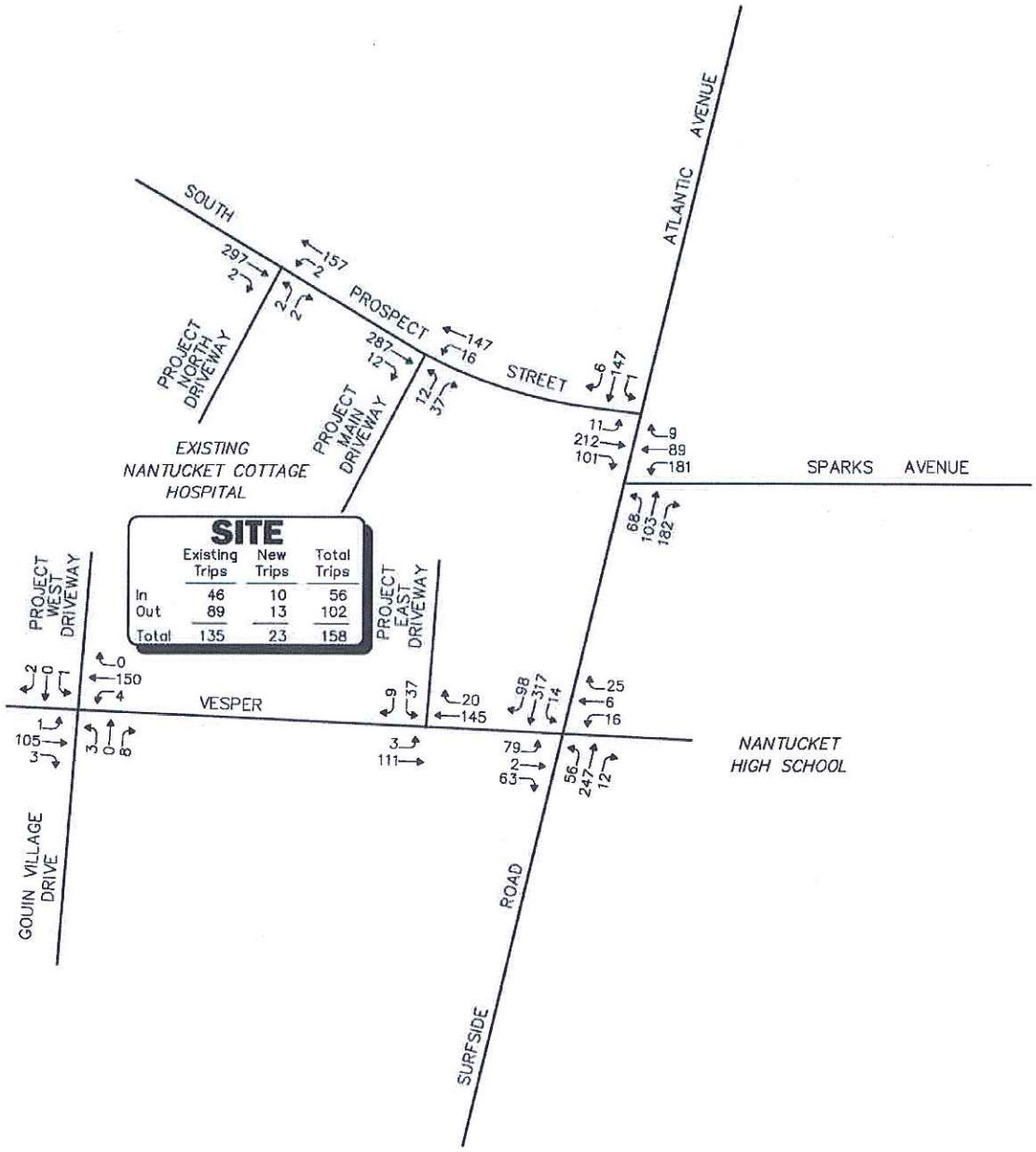
Figure 13

Vanasse & Associates, Inc.
Transportation Engineers & Planners

2022 Build
Weekday Morning
Peak Hour Traffic Volumes
Average Month Conditions

Copyright © 2016 by VAI. All Rights Reserved.

R:\6581\Jan 2016\6581rd12.dwg, 1/15/2016 11:36:49 AM, DWG To PDF.pc3



SITE	Existing Trips	New Trips	Total Trips
In	46	10	56
Out	89	13	102
Total	135	23	158

Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

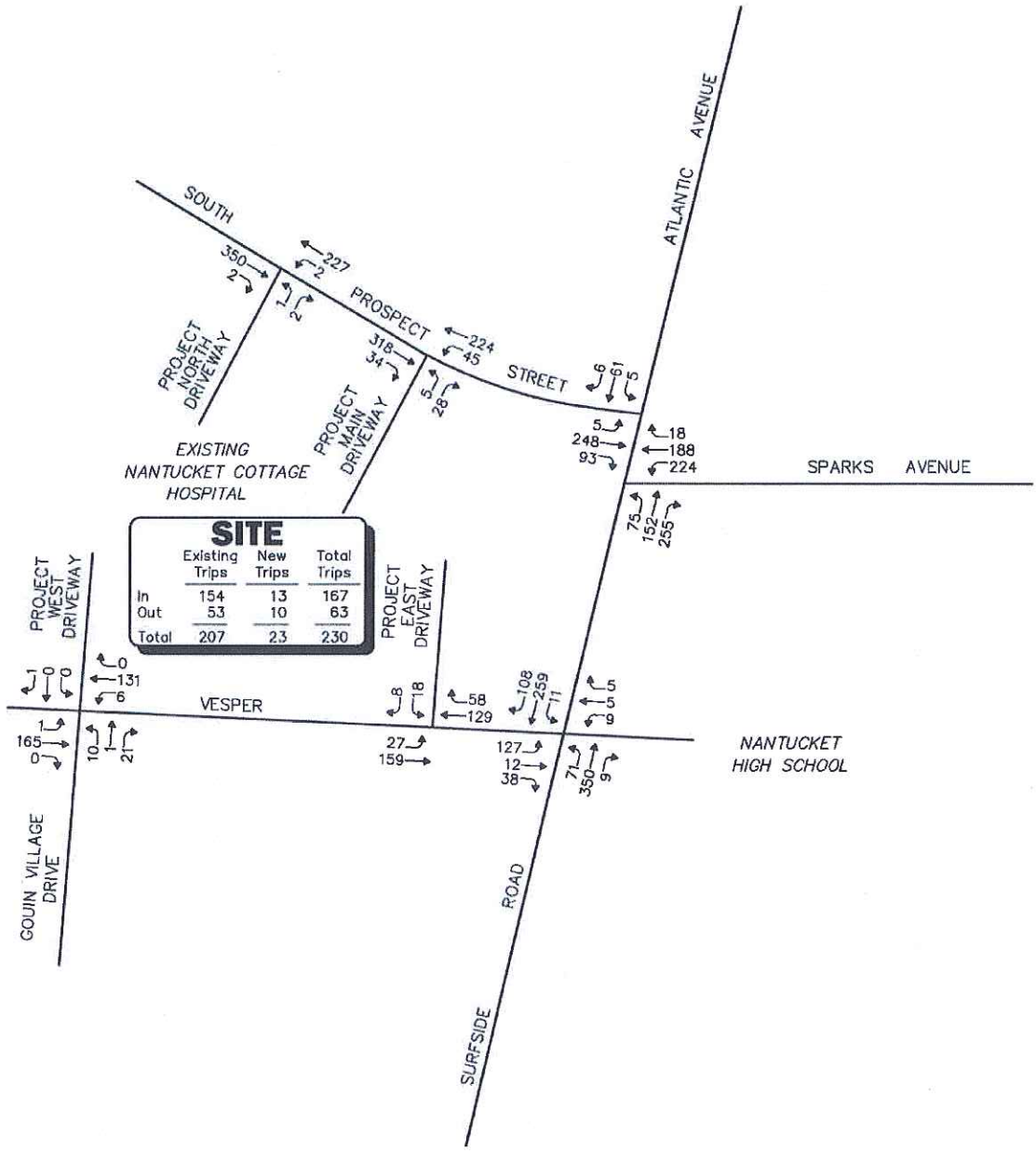
Figure 14

Vanasse & Associates, Inc.
Transportation Engineers & Planners

2022 Build
Weekday Evening
Peak Hour Traffic Volumes
Average Month Conditions

Copyright © 2016 by VAI. All Rights Reserved.

R:\5581\Van 2016\5581nt13.dwg, 1/15/2016 11:37:31 AM, DWG To PDF.pc3



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

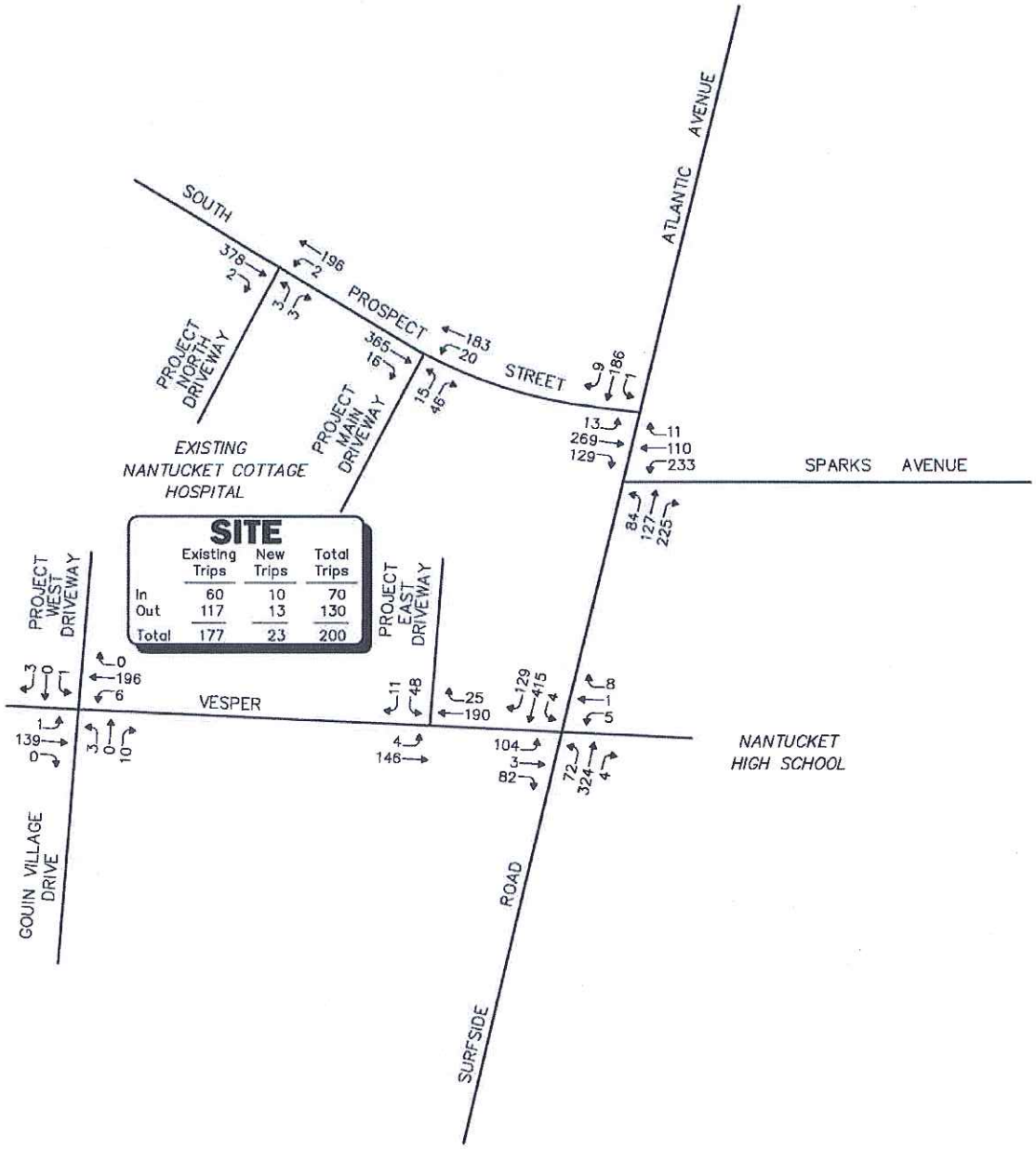
Figure 15

Vanasse & Associates, Inc.
Transportation Engineers & Planners

2022 Build
Weekday Morning
Peak Hour Traffic Volumes
Peak Month Conditions

Copyright © 2016 by VAI. All Rights Reserved.

R:\6581\Jan 2016\6581rt14.dwg, 1/15/2016 11:38:05 AM, DWG To PDF.pc3



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 16

Vanasse & Associates, Inc.
Transportation Engineers & Planners

2022 Build
Weekday Evening
Peak Hour Traffic Volumes
Peak Month Conditions

Copyright © 2016 by VAi. All Rights Reserved.

R:\6581\Van 2016\6581nt15.dwg, 1/15/2016 11:47:47 AM, DWG To PDF.pc3