# Alternatives for Pedestrian Safety Measures on Boston Post Road at Osborn School

## Alternate 1 – Boston Post Road Diet

This alternative proposes implementing a diet (i.e. lane reduction) on Boston Post Road (BPR) between Eldridge Place and Old Post Road. The diet would result in one northbound travel lane on BPR and two lanes in the southbound direction. The existing traffic signal and lane striping at the Oakland Beach Avenue/Osborn Road/BPR intersection would be modified to provide left-turn only lanes on BPR in each direction. Under the striping plan the two northbound travels lanes would be reduced to one and this lane would be shifted approximately six feet from the edge of the existing curb. The existing two lane configuration southbound would be modified to provide a right-only lane into the Osborn School access drive to accommodate the off-site queuing that occurs during school pick-up and drop-off hours. Curbs would be extended on Sonn Drive to "neck-down" the width of the road from approximately 40 to 24 feet. There would be no change to the existing sidewalk between Sonn Drive and Oakland Beach Avenue, except the sidewalk would be expanded on the southeast corner of the Oakland Beach Avenue/BPR intersection to provide a larger pedestrian queuing area.

Eliminating one northbound travel lane and shifting this lane six feet away from the curb edge addresses safety concerns that traffic is too close to the existing sidewalk between Sonn Drive and Oakland Beach Avenue. The alternative reinforces use of the existing pedestrian signal and crossing guard at the Oakland Beach Intersection. The diet provides an estimated reduction in travel speeds by 2-3 m.p.h. The neck-down of Sonn Drive reduces crossing distance of this street and improves pedestrian visibility. There is no change in vehicle level of service with this alternative.

*Estimated Cost $65,000*

## Alternate(s) 2 – Crossing @ Sonn Drive

This alternative includes all of the improvements in Alternative 1, but also adds a crosswalk on BPR at Sonn Drive. The criteria (i.e. "warrants") are not met for a crosswalk at this location based on the traffic and pedestrian data analyzed by the City's consulting traffic engineer. Crosswalks have many safety concerns and will require a crossing guard for students and other improvements.

**Alt. 2A -** The crosswalk could be raised by incorporating a speed table into its design. A speed table has less vertical elevation than a speed hump. It raises the surface of the road by three inches and has a flat section on top of ten or more feet. A speed table could reduce speeds by an estimated 6-7 m.p.h.

*Estimated Cost: add $15,000 to Alt. 1*

**Alt. 2B -** Adding a center median after the completion of the diet would require that a portion of the diet striping be removed and restriped to provide a painted (i.e. flush @$20,000) or raised (i.e. curbed and concrete @$30,000) median in the center of BPR. It would provide a break in the crosswalk walk, which would improve pedestrian safety. This alternative, however, would require that the northbound lane be shifted against the existing curb and reduce separation from the adjacent BPR sidewalk.

*Estimated Cost: Add $20,000 - $50,000 to Alt 2a.*

**Alt. 2C** – Pedestrian safety could be further enhanced if the diet configuration was maintained and a center median (either flush or raised) was added to BPR. A dedicated right-turn lane into Osborn School access drive would be required to accommodate a center median.

*Estimated Cost: Add $55,000 to Alt. 2b*

## Alternate 3 – Sonn Drive Signal

Alternative 3 includes a traffic signal at the Boston Post Road/Sonn Drive intersection and could be added to Alternative(s) 2. The criteria (i.e. "warrants") are not met for a traffic signal at this location based on the traffic and pedestrian data analyzed by the City's consulting traffic engineer. Upgrades to the existing signals and Old Post Road and Osborn/Oakland Beach would have to be made so that the three signals are properly coordinated to not adversely impact existing vehicle service levels. This alternative would require a crossing guard for students.

*Estimated Cost: Add $165,000 to Alts. 2A, 2B or 2C.*

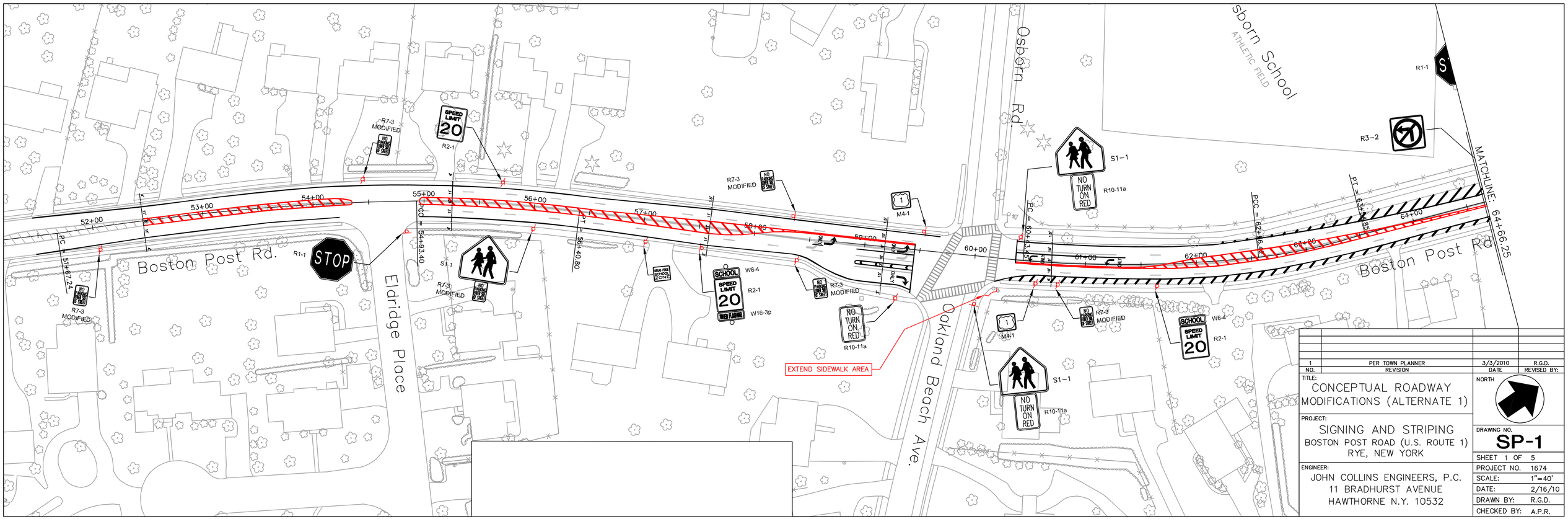
## Additional Information:

**John Collins Engineers, P.C. Drawings**

- Alternate 1: Drawing SP-1
- Alternate 2A: Drawing SP-2
- Alternate 2B: Drawings SP-3 and SP-4
- Alternate 2C: Drawing SP-5
- Alternate 3: Drawings SP-2, SP-4 & SP-5

**John Collins Engineers, P.C. Analysis:**

- Peak Hour Traffic Volume Figures 1 and 2.
- Table 1: Level of Service Summary Table
- Table 2: Queuing Summary Table
- Table 3: Signal Warrants Analysis
- Traffic Count Tables
- Speed Impacts of Traffic Calming Measures




| NO. | REVISION | DATE | REVISED BY: |
|---|---|---|---|
| 1 | PER TOWN PLANNER | 3/3/2010 | R.G.D. |

TITLE:
CONCEPTUAL ROADWAY MODIFICATIONS (ALTERNATE 1)

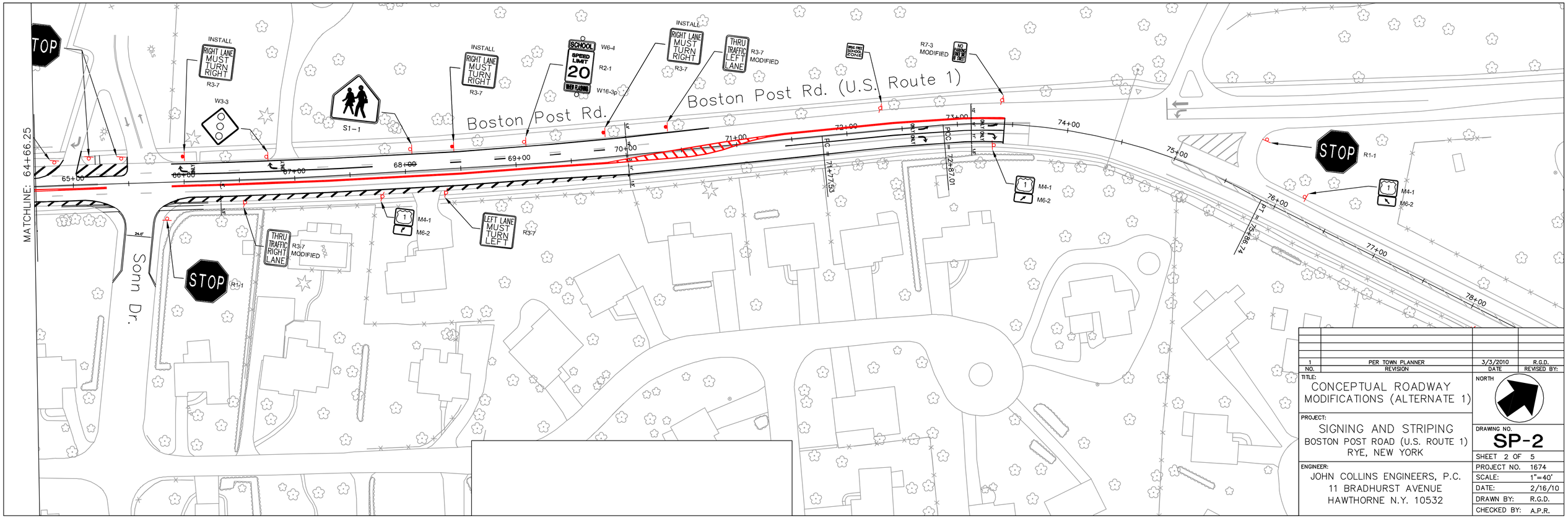
PROJECT:
SIGNING AND STRIPING
BOSTON POST ROAD (U.S. ROUTE 1)
RYE, NEW YORK

ENGINEER:
JOHN COLLINS ENGINEERS, P.C.
11 BRADHURST AVENUE
HAWTHORNE N.Y. 10532

NORTH

DRAWING NO. **SP-1**

| | |
|---|---|
| SHEET 1 OF 5 | |
| PROJECT NO. | 1674 |
| SCALE: | 1"=40' |
| DATE: | 2/16/10 |
| DRAWN BY: | R.G.D. |
| CHECKED BY: | A.P.R. |




| NO. | REVISION | DATE | REVISED BY: |
|---|---|---|---|
| 1 | PER TOWN PLANNER | 3/3/2010 | R.G.D. |

TITLE:
CONCEPTUAL ROADWAY MODIFICATIONS (ALTERNATE 1)

NORTH

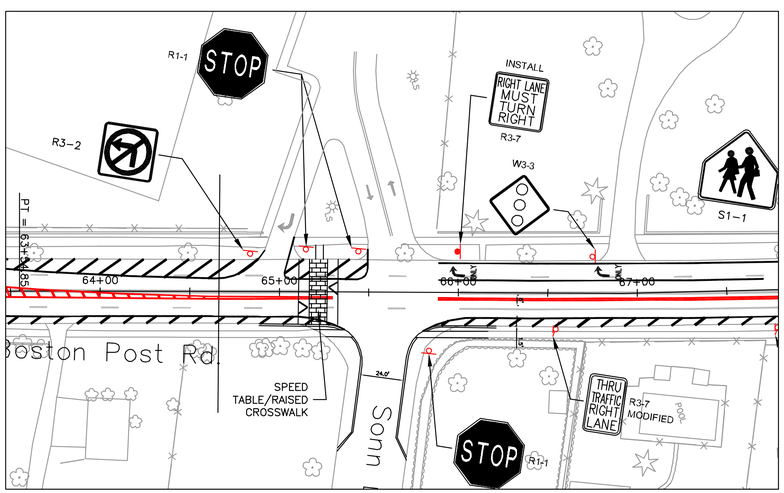
PROJECT:
SIGNING AND STRIPING
BOSTON POST ROAD (U.S. ROUTE 1)
RYE, NEW YORK

DRAWING NO.
SP-2

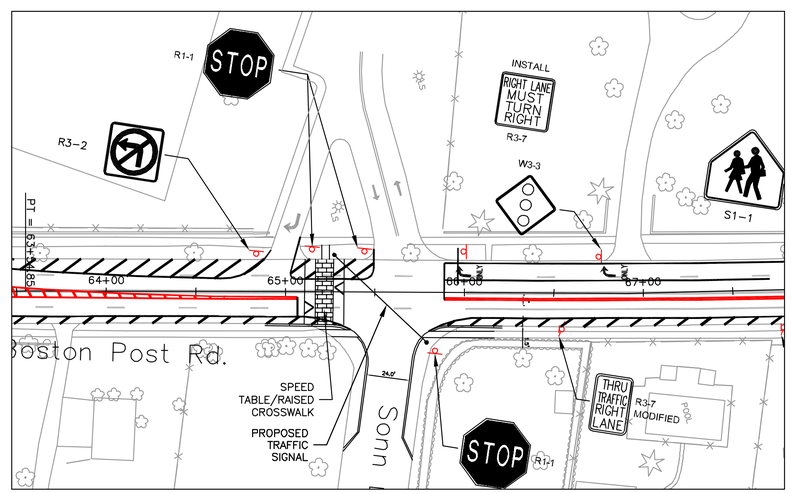
SHEET 2 OF 5

ENGINEER:
JOHN COLLINS ENGINEERS, P.C.
11 BRADHURST AVENUE
HAWTHORNE N.Y. 10532

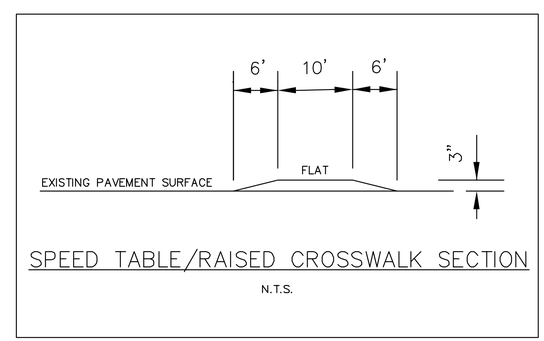
| | |
|---|---|
| PROJECT NO. | 1674 |
| SCALE: | 1"=40' |
| DATE: | 2/16/10 |
| DRAWN BY: | R.G.D. |
| CHECKED BY: | A.P.R. |




ALTERNATE 2A
WITH SPEED TABLE/RAISED CROSSWALK

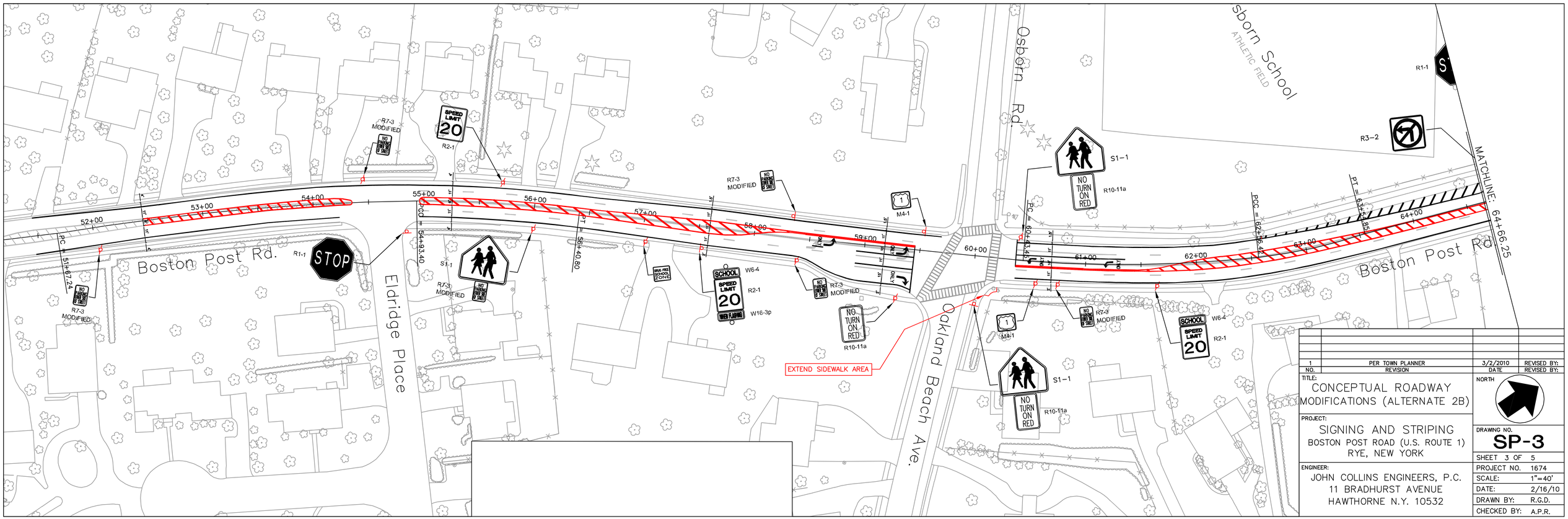



ALTERNATE 3
WITH TRAFFIC SIGNAL
(ALT 2A WITH TRAFFIC SIGNAL)




SPEED TABLE/RAISED CROSSWALK SECTION

N.T.S.




| NO. | REVISION | DATE | REVISED BY: |
|---|---|---|---|
| 1 | PER TOWN PLANNER | 3/2/2010 | |

TITLE:
CONCEPTUAL ROADWAY MODIFICATIONS (ALTERNATE 2B)

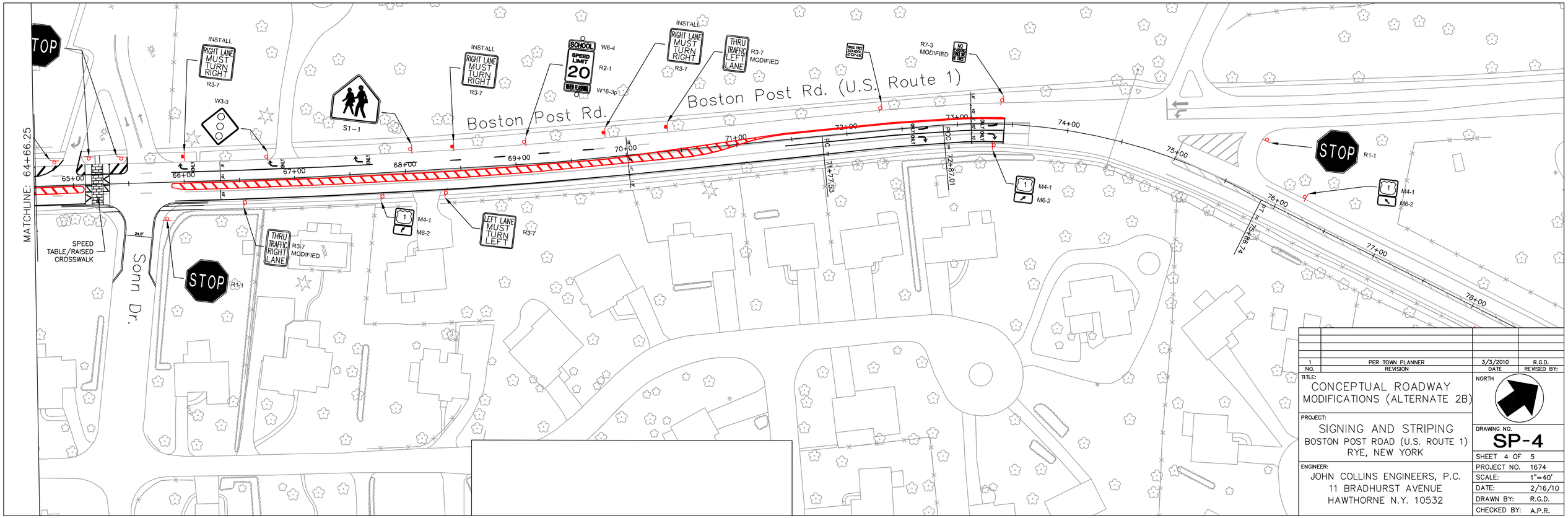
PROJECT:
SIGNING AND STRIPING
BOSTON POST ROAD (U.S. ROUTE 1)
RYE, NEW YORK

ENGINEER:
JOHN COLLINS ENGINEERS, P.C.
11 BRADHURST AVENUE
HAWTHORNE N.Y. 10532

NORTH

DRAWING NO.
SP-3

| | |
|---|---|
| SHEET 3 OF 5 | |
| PROJECT NO. | 1674 |
| SCALE: | 1"=40' |
| DATE: | 2/16/10 |
| DRAWN BY: | R.G.D. |
| CHECKED BY: | A.P.R. |




| NO. | REVISION | DATE | REVISED BY: |
|---|---|---|---|
| 1 | PER TOWN PLANNER | 3/3/2010 | R.G.D. |

TITLE:
CONCEPTUAL ROADWAY MODIFICATIONS (ALTERNATE 2B)

NORTH

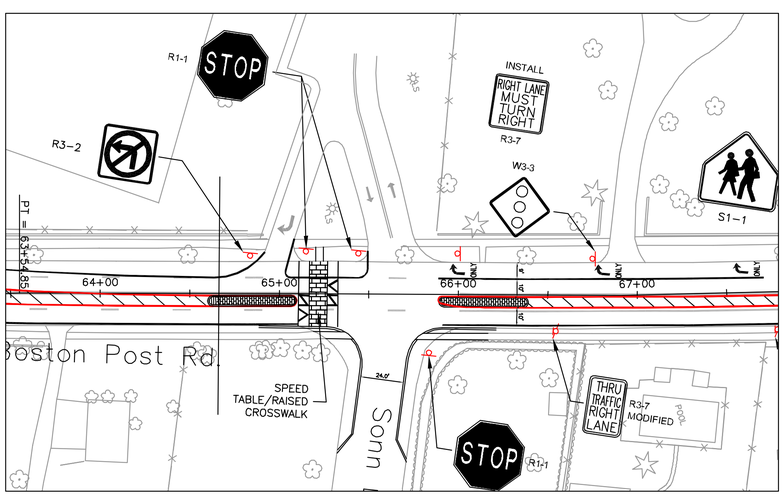
PROJECT:
SIGNING AND STRIPING
BOSTON POST ROAD (U.S. ROUTE 1)
RYE, NEW YORK

DRAWING NO.
**SP-4**

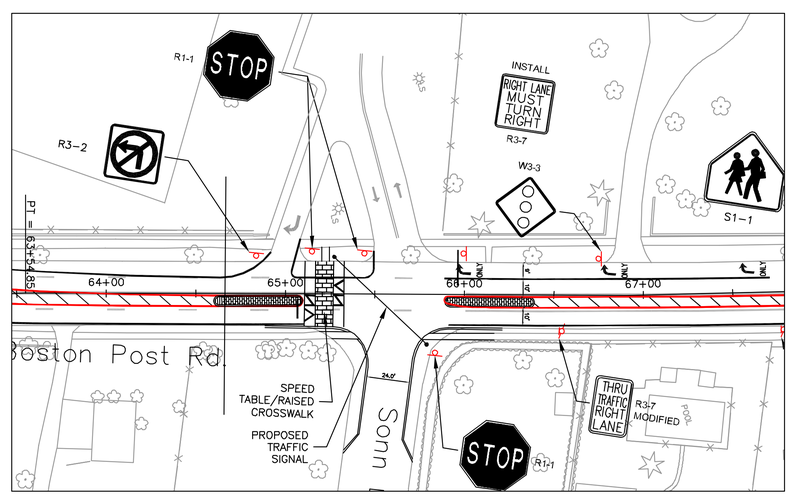
SHEET 4 OF 5

ENGINEER:
JOHN COLLINS ENGINEERS, P.C.
11 BRADHURST AVENUE
HAWTHORNE N.Y. 10532

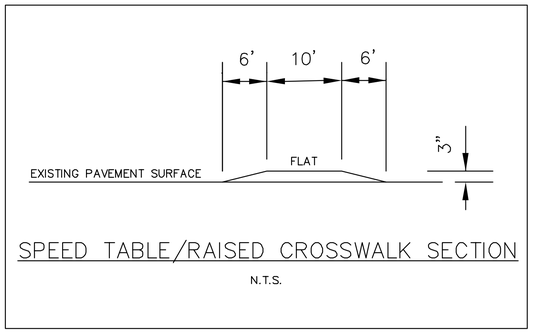
| | |
|---|---|
| PROJECT NO. | 1674 |
| SCALE: | 1"=40' |
| DATE: | 2/16/10 |
| DRAWN BY: | R.G.D. |
| CHECKED BY: | A.P.R. |




ALTERNATE 2B
WITH SPEED TABLE/RAISED CROSSWALK




ALTERNATE 3
WITH TRAFFIC SIGNAL
(ALT 2B WITH TRAFFIC SIGNAL)




SPEED TABLE/RAISED CROSSWALK SECTION

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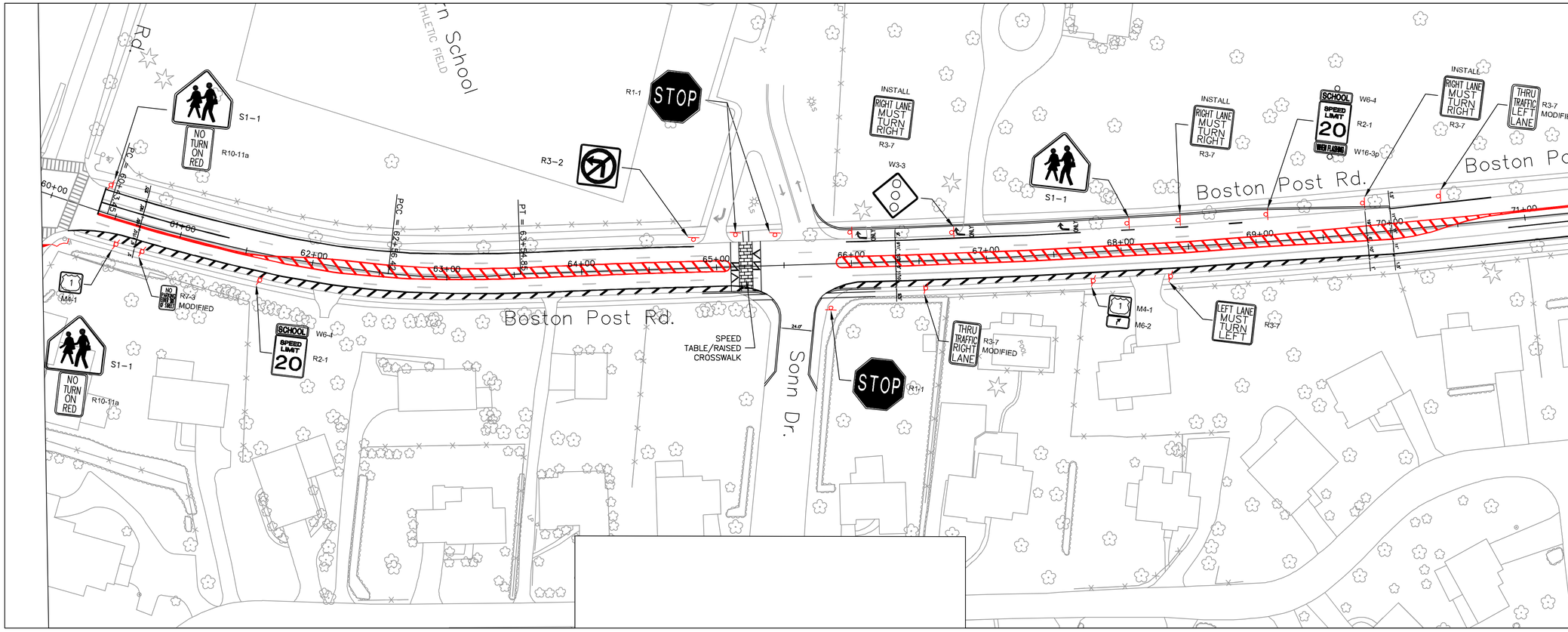



| NO. | REVISION | DATE | REVISED BY: |
|---|---|---|---|
| 1 | PER TOWN PLANNER | 3/3/2010 | R.G.D. |

TITLE:
CONCEPTUAL ROADWAY MODIFICATIONS (ALTERNATE 2C)

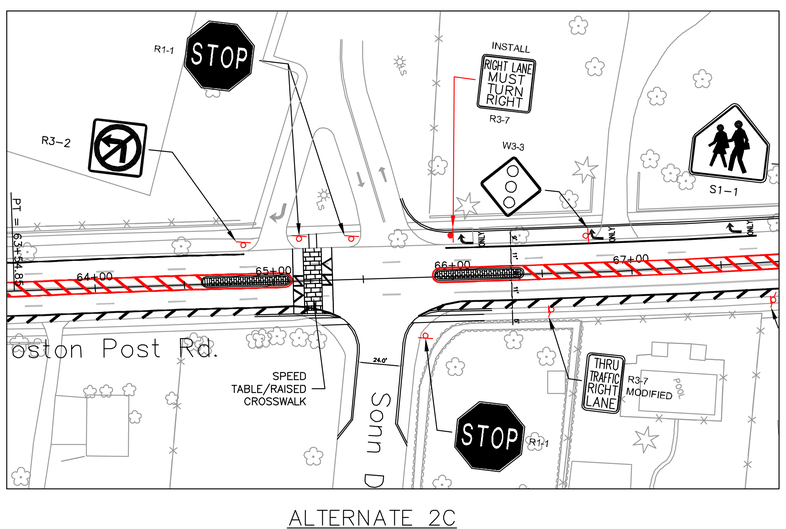
PROJECT:
SIGNING AND STRIPING
BOSTON POST ROAD (U.S. ROUTE 1)
RYE, NEW YORK

ENGINEER:
JOHN COLLINS ENGINEERS, P.C.
11 BRADHURST AVENUE
HAWTHORNE N.Y. 10532

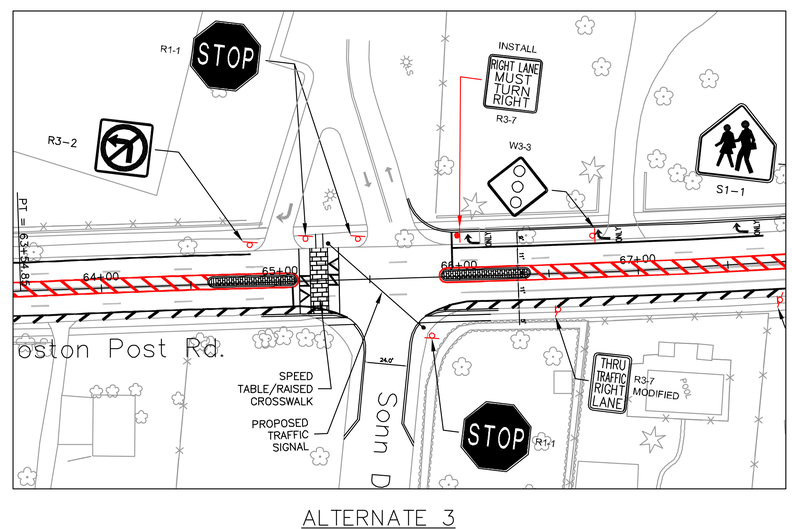
NORTH

DRAWING NO. SP-5

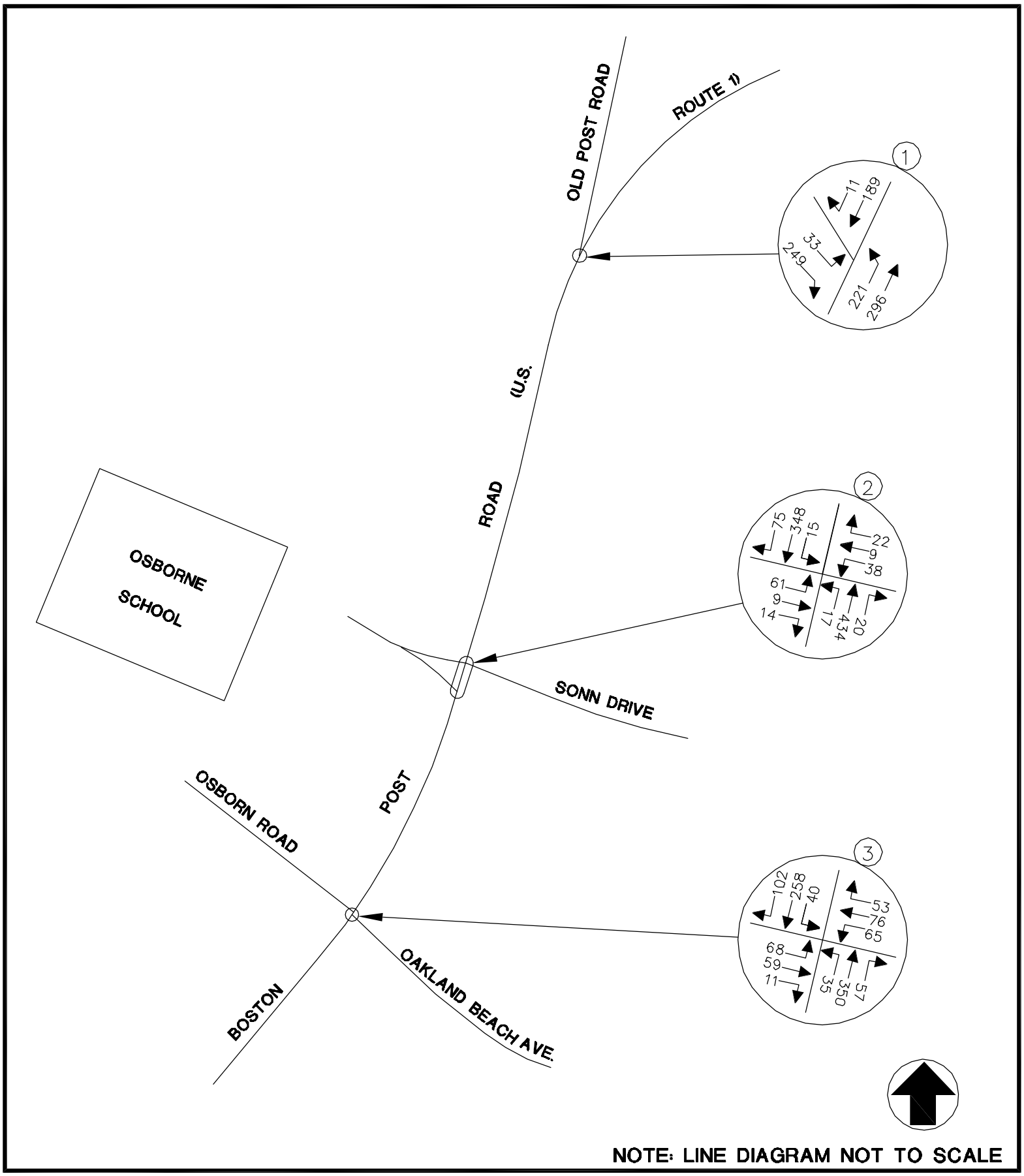
| | |
|---|---|
| SHEET | 5 OF 5 |
| PROJECT NO. | 1674 |
| SCALE: | 1"=40' |
| DATE: | 2/16/10 |
| DRAWN BY: | R.G.D. |
| CHECKED BY: | A.P.R. |




ALTERNATE 2C
WITH RAISED MEDIAN




ALTERNATE 3
WITH TRAFFIC SIGNAL
(ALT 2C WITH TRAFFIC SIGNAL)




U.S. ROUTE 1

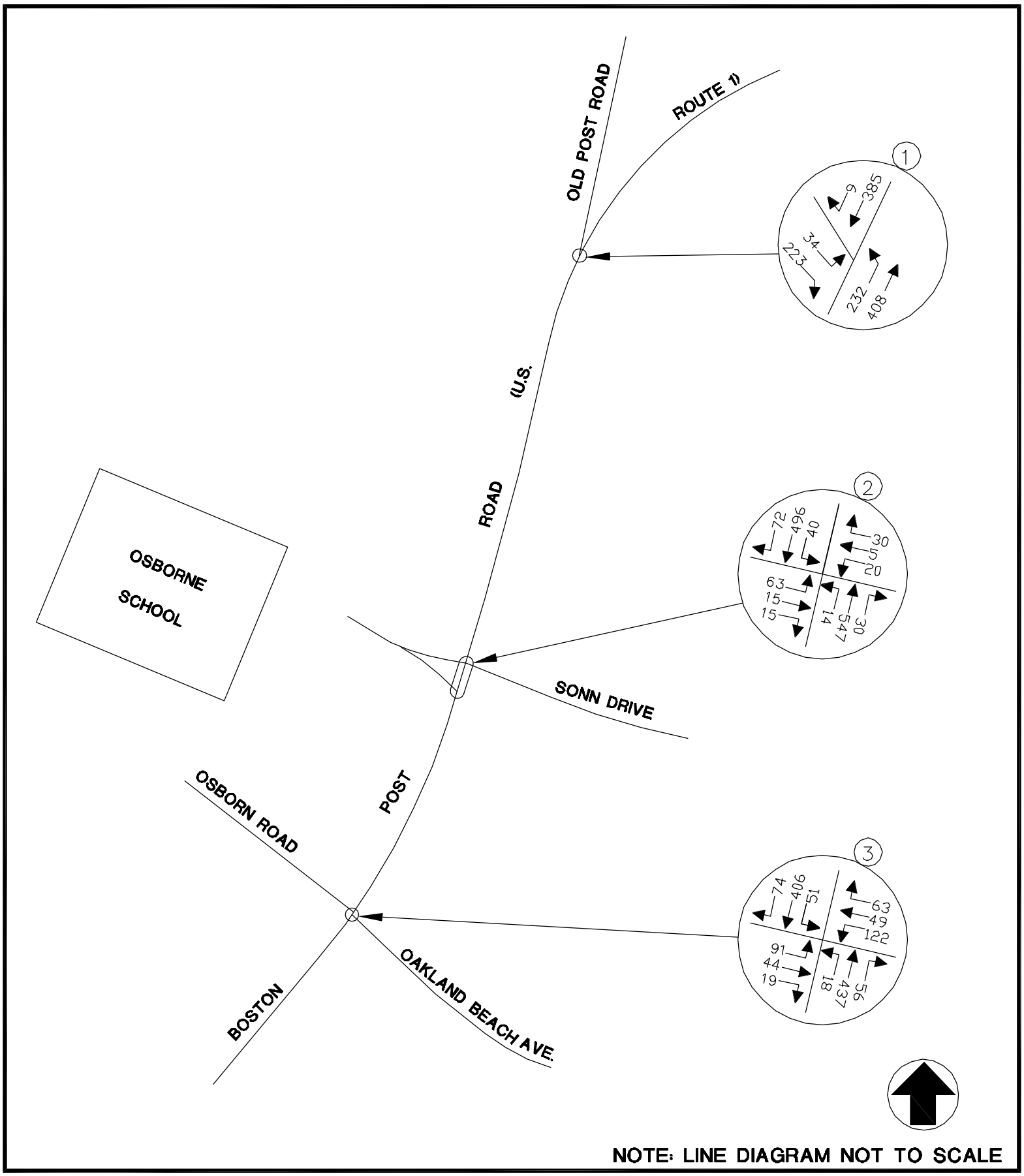
RYE, NEW YORK

2009 EXISTING TRAFFIC VOLUMES

WEEKDAY PEAK AM HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1674 DATE: FEBRUARY 2010 FIG. NO. 1




U.S. ROUTE 1

RYE, NEW YORK

2009 EXISTING TRAFFIC VOLUMES

WEEKDAY SCHOOL PEAK HOUR

JOHN COLLINS ENGINEERS, P.C.
HAWTHORNE , NEW YORK

PROJECT NO. 1674 DATE: FEBRUARY 2010 FIG. NO. 2

## TABLE 1

## LEVEL OF SERVICE SUMMARY TABLE

| | | | | 2009 EXISTING TRAFFIC VOLUMES | | | | | 2009 EXISTING TRAFFIC VOLUMES WITH PROPOSED DIET | | | | 2009 EXISTING TRAFFIC VOLUMES WITH PROPOSED DIET AND RIGHT TURN LANE AT SONN DRIVE | | | | 2009 EXISTING TRAFFIC VOLUMES WITH PROPOSED DIET, RIGH TURN LANE AND TRAFFIC SIGNAL AT SONN DRIVE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AM | | PM | | | AM | | PM | | AM | | PM | | AM | | PM | |
| | | | | V/C | LOS | V/C | LOS | | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS |
| 1 | U.S. ROUTE 1 & | **SIGNALIZED** | | | | | | | | | | | | | | | | | | |
| | OLD POST ROAD | NB | T | 0.44 | B[18.0] | 0.29 | B[11.8] | T | 0.24 | A[6.3] | .27+ | A[9.6] | 0.24 | B[11.6] | 0.27 | B[14.2] | 0.24 | A[9.8] | 0.27 | B[15.1] |
| | | | R | 0.31 | A[1.2] | 0.33 | A[1.0] | R | 0.25 | A[0.6] | 0.32 | A[1.4] | 0.25 | A[0.7] | 0.32 | A[0.5] | 0.25 | A[0.8] | 0.32 | A[1.0] |
| | | SB | L | 0.13 | C[21.9] | 0.19 | C[26.4] | L | 0.26 | D[41.2] | 0.25 | D[41.1] | 0.26 | D[41.2] | 0.25 | D[41.1] | 0.26 | D[41.2] | 0.25 | D[41.1] |
| | | | T | 0.25 | A[6.6] | 0.23 | A[6.3] | T | 0.24 | A[6.2] | 0.23 | A[9.5] | 0.24 | A[6.3] | 0.23 | A[9.7] | 0.24 | A[6.1] | 0.23 | A[9.7] |
| | | SWB | LR | 0.54 | C[23.9] | 0.99 | E[66.7] | LR | 0.70 | D[43.2] | 0.87 | D[48.3] | 0.69 | D[42.4] | 0.87 | D[47.8] | 0.70 | D[43.4] | 0.87 | D[47.8] |
| | | **OVERALL** | | **-** | **B[11.5]** | **-** | **C[24.6]** | | **-** | **B[13.1]** | **-** | **B[19.6]** | **-** | **B[14.2]** | **-** | **C[20.1]** | **-** | **B[14.0]** | **-** | **C[20.4]** |
| 2 | U.S. ROUTE 1 & | **UNSIGNALIZED** | | | | | | | | | | | | | | | | | | |
| | OSBORN SCHOOL/SONN DRIVE | EB | LT | 0.33 | D[26.5] | 0.52 | E[48.4] | LT | 0.47 | E[43.0] | 0.54 | F[51.6] | 0.52 | F[50.8] | 0.55 | F[53.3] | 0.47 | D[39.6] | 0.47 | D[43.9] |
| | | | R | 0.02 | B[10.0] | 0.03 | B[11.3] | R | 0.03 | B[11.4] | 0.04 | B[14.6] | 0.03 | B[10.9] | 0.04 | B[13.8] | 0.07 | B[15.3] | 0.07 | B[15.2] |
| | | WB | LTR | 0.26 | C[20.7] | 0.23 | C[23.2] | LTR | 0.36 | D[29.3] | 0.27 | D[27.0] | 0.39 | D[33.1] | 0.27 | D[27.4] | 0.35 | C[28.9] | 0.26 | C[21.3] |
| | | NB | LTR | 0.16 | A[0.8] | 0.19 | A[0.6] | LTR | 0.02 | A[0.5] | 0.02 | A[0.5] | 0.02 | A[0.5] | 0.02 | A[0.5] | 0.39 | A[3.5] | 0.45 | A[4.1] |
| | | SB | LTR | 0.17 | A[0.8] | 0.20 | A[1.7] | LTR | 0.02 | A[0.5] | 0.06 | A[1.4] | 0.02 | A[0.6] | 0.05 | A[1.4] | 0.3 | A[2.3] | 0.43 | A[2.6] |
| | | | | - | - | - | - | R | - | - | - | - | 0.05 | A[0.1] | 0.05 | A[0.1] | 0.07 | A[0.2] | 0.06 | A[0.1] |
| | | **OVERALL** | | - | - | - | - | | - | - | - | - | **-** | **-** | **-** | **-** | **-** | **A[7.4]** | **-** | **A[6.4]** |
| 3 | U.S. ROUTE 1 & | **SIGNALIZED** | | | | | | | | | | | | | | | | | | |
| | OSBORN ROAD/OAKLAND BEACH AVE | EB | LTR | 0.59 | D[35.3] | 0.51 | C[27.4] | LTR | 0.74 | E[58.8] | 0.77 | E[60.8] | 0.75 | E[60.2] | 0.77 | E[60.8] | 0.74 | E[58.8] | 0.77 | E[60.8] |
| | | WB | LTR | 0.83 | D[51.2] | 0.68 | C[33.1] | LTR | 0.83 | E[59.5] | 0.87 | E[63.2] | 0.83 | E[60.6] | 0.87 | E[63.2] | 0.83 | E[59.5] | 0.87 | E[63.2] |
| | | NB | LT | 0.45 | B[16.1] | 0.66 | C[26.4] | L | 0.13 | C[20.6] | 0.06 | C[21.8] | 0.11 | B[18.3] | 0.06 | B[18.6] | 0.13 | C[20.6] | 0.06 | B[18.6] |
| | | | | - | - | - | - | T | 0.48 | C[23.8] | 0.59 | C[27.2] | 0.46 | C[21.6] | 0.57 | C[24.5] | 0.48 | C[23.8] | 0.57 | C[24.5] |
| | | | R | 0.10 | A[8.4] | 0.11 | B[12.0] | R | 0.08 | B[14.8] | 0.08 | B[16.3] | 0.08 | B[13.2] | 0.08 | B[14.0] | 0.08 | B[14.8] | 0.08 | B[14.0] |
| | | SB | LTR | 0.40 | B[13.4] | 0.61 | C[23.2] | L | 0.16 | C[23.8] | 0.18 | B[18.9] | 0.15 | C[23.7] | 0.17 | B[14.5] | 0.16 | C[21.8] | 0.17 | B[11.5] |
| | | | | - | - | - | - | TR | 0.53 | C[22.1] | 0.62 | C[21.6] | 0.52 | C[24.5] | 0.61 | B[17.7] | 0.53 | C[21.0] | 0.61 | B[16.7] |
| | | **OVERALL** | | **-** | **C[22.9]** | **-** | **C[25.9]** | | **-** | **C[32.7]** | **-** | **C[34.0]** | **-** | **C[33.0]** | **-** | **C[31.6]** | **-** | **C[32.3]** | **-** | **C[31.2]** |

NOTE:

LEVEL OF SERVICE RESULTS EXPRESSED AS LOS [DELAY IN SECONDS]

## TABLE 2

## QUEUEING SUMMARY TABLE

| | | | | | 2009 EXISTING TRAFFIC VOLUME CONDITION | | | | | WITH DIET | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | 2009 EXISTING TRAFFIC VOLUME CONDITION | | | | 2009 EXISTING TRAFFIC VOLUME CONDITION WITH TRAFFIC SIGNAL AT SONN DRIVE | | | |
| | | | | AVAILABLE STORAGE LENGTH | AM | | PM | | AVAILABLE STORAGE LENGTH | AM | | PM | | AM | | PM | |
| | | | | | 50TH | 95TH | 50TH | 95TH | | 50TH | 95TH | 50TH | 95TH | 50TH | 95TH | 50TH | 95TH |
| 1 | U.S. ROUTE 1 & | SIGNALIZED | | | | | | | | | | | | | | | |
| | OLD POST ROAD | NB | T | 775' | 71 | 119 | 68 | 124 | 400' | 136 | 195 | 135 | 210 | 113 | 161 | 115 | 183 |
| | | | R | 775' | 0 | 44 | 0 | 60 | 775' | 1 | 5 | 2 | 10 | 20 | 38 | 23 | 43 |
| | | SB* | L | 240' | 12 | 32 | 11 | 33 | 240' | 19 | 44 | 18 | 45 | 19 | 44 | 18 | 45 |
| | | | T | 1000'+ | 44 | 72 | 35 | 64 | 1000'+ | 68 | 101 | 64 | 106 | 68 | 101 | 64 | 106 |
| | | SWB | LR | 800'+ | 71 | 123 | 125 | 265 | 800'+ | 109 | 169 | 175 | 275 | 109 | 169 | 175 | 275 |
| 2 | U.S. ROUTE 1 & | UNSIGNALIZED | | | | | | | | | | | | | | | |
| | OSBORN SCHOOL/SONN DRIVE | EB | LT | 150' | - | 33 | - | 64 | 150' | - | 64 | - | 79 | 33 | 62 | 36 | 73 |
| | | | R | 150' | - | 2 | - | 2 | 150' | - | 2 | - | 3 | 0 | 12 | 0 | 15 |
| | | WB | LTR | 200' | - | 18 | - | 19 | 200' | - | 29 | - | 25 | 14 | 41 | 11 | 40 |
| | | NB | LTR | 500' | - | 1 | - | 1 | 500' | - | 1 | - | 1 | 98 | 116 | 92 | 117 |
| | | SB | LTR | 775' | - | 1 | - | 3 | 775' | - | 1 | - | 4 | 208 | 278 | 359 | 492 |
| 3 | U.S. ROUTE 1 & | SIGNALIZED | | | | | | | | | | | | | | | |
| | OSBORN ROAD/OAKLAND BEACH AVE | EB | LTR | 650'+ | 82 | 135 | 84 | 148 | 650'+ | 79 | 131 | 81 | 144 | 79 | 131 | 81 | 144 |
| | | WB | LTR | 650' | 113 | 178 | 130 | 251 | 650' | 107 | 169 | 123 | 207 | 107 | 169 | 123 | 207 |
| | | NB | LT | 450'+ | 90 | 118 | 97 | 138 | 450'+ | 181 | 253 | 196 | 295 | 181 | 253 | 196 | 295 |
| | | | R | 50' | 3 | 25 | 4 | 28 | 50' | 10 | 31 | 10 | 32 | 10 | 31 | 10 | 32 |
| | | SB | LTR | 500' | 80 | 108 | 115 | 160 | 500' | 223 | 302 | 321 | 474 | 56 | 79 | 53 | 454 |

NOTE:

1) QUEUE LENGTHS ARE EXPRESSED IN FEET.

2) * OLD POST ROAD

**T A B L E NO. 3**

## SIGNAL WARRANTS ANALYSIS

(Based on National Manual of Uniform Traffic Control Devices)

**I N T E R S E C T I O N  D A T A**

MAJOR STREET: BOSTON POST ROAD (U.S. ROUTE 1)
MINOR STREET: SONN DRIVE

LOCATION: RYE, NEW YORK

DATE: 12/30/2009

VOLUME BASIS..... 2009 EXISTING TRAFFIC VOLUMES

CONDITION ..... TYPICAL WEEKDAY

**C H A R A C T E R I S T I C S**

| | |
|---|---|
| Number Of Lanes For Moving Traffic By Approach | |
| Major Street (Excluding Auxiliary Lanes) = | 2 |
| Minor Street (Including Auxiliary Lanes) = | 1 |
| Speed | |
| 85 % Speed >= 40 mph (Y or N)-----> | Y |
| Median | |
| Raised median 4' or more in width on major street (Y or N)?------> | N |
| Population | |
| Community < 10,000 (Y or N)------> | N |

| TIME | VOLUMES | | | WARRANT 1 CONDITION A | | WARRANT 1 CONDITION B | | WARRANT 2 | | WARRANT MET? | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hour Begin | Major Street | Minor Street | Major Peds | Major Street | Minor Street | Major Street | Minor Street | Major Street | Minor Street | 1A | 1B | 2 |
| 12:00 AM | | 0 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 01:00 AM | | 0 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 02:00 AM | | 0 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 03:00 AM | | 0 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 04:00 AM | | 0 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 05:00 AM | | 0 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 06:00 AM | 151 | 14 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 07:00 AM | 574 | 34 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 08:00 AM | 860 | 84 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | YES | NO |
| 09:00 AM | 744 | 49 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 10:00 AM | 744 | 50 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 11:00 AM | 800 | 37 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 12:00 PM | 864 | 34 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 01:00 PM | 800 | 33 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 02:00 PM | 915 | 38 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 03:00 PM | 975 | 108 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | YES | YES | NO |
| 04:00 PM | 960 | 49 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 05:00 PM | 901 | 46 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 06:00 PM | 763 | 22 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 07:00 PM | 599 | 31 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 08:00 PM | | 0 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 09:00 PM | | 0 | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |
| 10:00 PM | | | 0 | 420 | 105 | 630 | 53 | 1100 | 80 | NO | NO | NO |

NOTE : major peds = highest volume on major street crosswalk

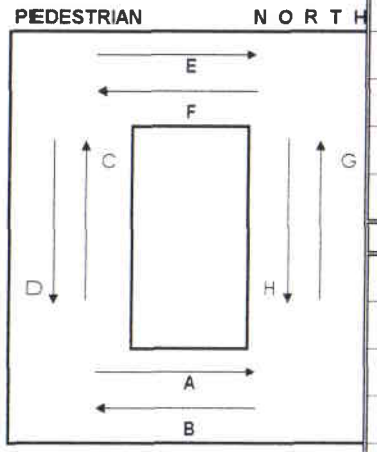
| | | | |
|---|---|---|---|
| TOTAL HOURS MEETING WARRANTS | 1 | 2 | 0 |
| TOTAL HOURS NEEDED TO SATISFY | 8 | 8 | 4 |

| | |
|---|---|
| MINIMUM VEHICULAR VOLUME | WARRANT 1A: NOT SATISFIED -- NO SIGNAL |
| INTERRUPTION OF CONTINUOUS TRAFFIC | WARRANT 1B: NOT SATISFIED -- NO SIGNAL |
| FOUR HOUR WARRANT | WARRANT 2: NOT SATISFIED -- NO SIGNAL |

LOCATION: BOSTON POST RD & OAKLAND BEACH AVE/OSBORN PROJECT: OSBORN - SONN POST ROAD

DATE OF COUNT: 12/22/09 DAY: TUESDAY JCE JOB #: 1674 START TIME : 07:00

**ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT**

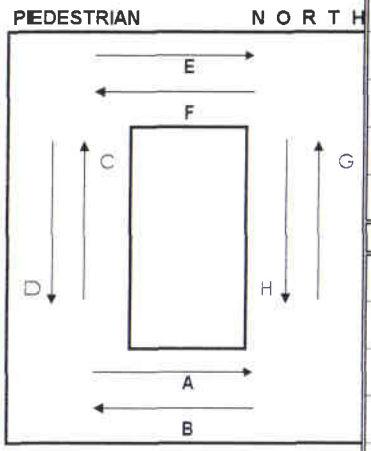



| AM PEAK HOUR | | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|
| 07:00 AM | 07:15 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 07:15 AM | 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:30 AM | 07:45 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 07:45 AM | 08:00 AM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 08:00 AM | 08:15 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 08:15 AM | 08:30 AM | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 |
| 08:30 AM | 08:45 AM | 0 | 3 | 11 | 0 | 0 | 0 | 0 | 0 |
| 08:45 AM | 09:00 AM | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| **PM PEAK HOUR** | | **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** |
| 02:00 PM | 02:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:15 PM | 02:30 PM | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 02:30 PM | 02:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:45 PM | 03:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 03:00 PM | 03:15 PM | 2 | 1 | 1 | 4 | 7 | 1 | 3 | 0 |
| 03:15 PM | 03:30 PM | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 |
| 03:30 PM | 03:45 PM | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| 03:45 PM | 04:00 PM | 0 | 0 | 0 | 1 | 3 | 0 | 1 | 0 |

LOCATION: BOSTON POST ROAD & SONN DRIVE PROJECT: OSBORN - SONN POST ROAD

DATE OF COUNT: 12/22/09 DAY: TUESDAY JCE JOB #: 1674 START TIME : 07:00

**ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT**




| AM PEAK HOUR | | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|
| 07:00 AM | 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM | 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 07:30 AM | 07:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:45 AM | 08:00 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:00 AM | 08:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:15 AM | 08:30 AM | 1 | 3 | 0 | 0 | 0 | 0 | 2 | 0 |
| 08:30 AM | 08:45 AM | 1 | 4 | 0 | 1 | 0 | 0 | 0 | 0 |
| 08:45 AM | 09:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **PM PEAK HOUR** | | **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** |
| 02:00 PM | 02:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:15 PM | 02:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:30 PM | 02:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:45 PM | 03:00 PM | 2 | 12 | 0 | 0 | 0 | 0 | 5 | 3 |
| 03:00 PM | 03:15 PM | 43 | 2 | 0 | 0 | 3 | 0 | 0 | 0 |
| 03:15 PM | 03:30 PM | 12 | 0 | 0 | 0 | 0 | 3 | 1 | 0 |
| 03:30 PM | 03:45 PM | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| 03:45 PM | 04:00 PM | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 |

PROJECT: OSBORN - SONN POST ROAD

PROJ. # 1674

LOCATIONS:

**LOCATION 1:**

STON POST RD & OAKLAND BEACH AVE/OSBORN RD

**LOCATION 2:**

BOSTON POST ROAD & SONN DRIVE

**LOCATION 3:**

BOSTON POST ROAD & OLD POST ROAD

**LOCATION 4:**

**LOCATION 5:**

**LOCATION 6:**

**AM COUNTS DONE:**

DATE: December 22, 2009

DAY: TUESDAY

**PM SCHOOL HOURS COUNTS DONE:**

DATE: December 22, 2009

DAY: TUESDAY

LOCATION: BOSTON POST RD & OAKLAND BEACH AVE/OSI PROJECT: OSBORN - SONN POST ROAD

DATE OF COUNT: 12/22/09 DAY: TUESDAY JCE JOB #: 1674 START TIME : 07:00 **AM**

## ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

| | EASTBOUND | | | WESTBOUND | | | NORTHBOUND | | | SOUTHBOUND | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AM PEAK HOUR | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | total | | |
| 07:00 AM 07:15 AM | 2 | 4 | 1 | 8 | 10 | 8 | 3 | 35 | 4 | 2 | 17 | 4 | 98 | A | |
| 07:15 AM 07:30 AM | 7 | 3 | 2 | 12 | 7 | 14 | 5 | 53 | 14 | 6 | 53 | 6 | 182 | A | |
| 07:30 AM 07:45 AM | 15 | 5 | 2 | 20 | 18 | 26 | 3 | 75 | 7 | 3 | 47 | 14 | 235 | A | |
| 07:45 AM 08:00 AM | 14 | 9 | 2 | 24 | 23 | 19 | 4 | 102 | 8 | 10 | 53 | 14 | 282 | A | 797 |
| 08:00 AM 08:15 AM | 9 | 17 | 1 | 26 | 20 | 16 | 5 | 69 | 9 | 9 | 66 | 12 | 259 | X | 958 |
| 08:15 AM 08:30 AM | 7 | 13 | 0 | 10 | 21 | 15 | 10 | 86 | 12 | 10 | 56 | 17 | 257 | X | 1033 |
| 08:30 AM 08:45 AM | 25 | 19 | 7 | 13 | 22 | 14 | 16 | 77 | 16 | 12 | 69 | 54 | 344 | X | 1142 |
| 08:45 AM 09:00 AM | 27 | 10 | 3 | 16 | 13 | 8 | 4 | 114 | 20 | 9 | 62 | 19 | 305 | X | 1165 |
| 09:00 AM 09:15 AM | | | | | | | | | | | | | 0 | A | 906 |
| 09:15 AM 09:30 AM | | | | | | | | | | | | | 0 | A | 649 |
| 09:30 AM 09:45 AM | | | | | | | | | | | | | 0 | A | 305 |
| 09:45 AM 10:00 AM | | | | | | | | | | | | | 0 | A | 0 |
| 10:00 AM 10:15 AM | | | | | | | | | | | | | 0 | A | 0 |
| 10:15 AM 10:30 AM | | | | | | | | | | | | | 0 | A | 0 |
| 10:30 AM 10:45 AM | | | | | | | | | | | | | 0 | A | 0 |
| 10:45 AM 11:00 AM | | | | | | | | | | | | | 0 | A | 0 |

## CALCULATED PEAK 15-MINUTE VOLUMES

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07:00 AM 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:30 AM 07:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:45 AM 08:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:00 AM 08:15 AM | 9 | 17 | 1 | 26 | 20 | 16 | 5 | 69 | 9 | 9 | 66 | 12 | 259 |
| 08:15 AM 08:30 AM | 7 | 13 | 0 | 10 | 21 | 15 | 10 | 86 | 12 | 10 | 56 | 17 | 257 |
| 08:30 AM 08:45 AM | 25 | 19 | 7 | 13 | 22 | 14 | 16 | 77 | 16 | 12 | 69 | 54 | 344 |
| 08:45 AM 09:00 AM | 27 | 10 | 3 | 16 | 13 | 8 | 4 | 114 | 20 | 9 | 62 | 19 | 305 |
| 09:00 AM 09:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 09:15 AM 09:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 09:30 AM 09:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 09:45 AM 10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 AM 10:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 AM 10:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 AM 10:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 AM 11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## CALCULATED PEAK HOUR VOLUMES

| AM PEAK HOUR | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | total | PHF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08:00 AM 09:00 AM | 68 | 59 | 11 | 65 | 76 | 53 | 35 | 346 | 57 | 40 | 253 | 102 | 1165 | 0.846657 |
| PHF BY MOVEMENT | 0.63 | 0.78 | 0.39 | 0.63 | 0.86 | 0.83 | 0.55 | 0.76 | 0.71 | 0.83 | 0.92 | 0.47 | | |
| PHF BY APPROACH | | 0.68 | | | 0.78 | | | 0.79 | | | 0.73 | | | |

| | | | | | |
|---|---|---|---|---|---|
| 102 | 253 | 40 | ^ | 6 | 53 |
| 12 | 11 | 10 | < | 5 | 76 |
| < | v | > | v | 4 | 65 |
| 68 | 1 | ^ | < | ^ | > |
| 59 | 2 | > | 7 | 8 | 9 |
| 11 | 3 | v | 35 | 346 | 57 |

LOCATION: BOSTON POST RD & OAKLAND BEACH AVE/OSI PROJECT: OSBORN - SONN POST ROAD

DATE OF COUNT: 12/22/09 DAY: TUESDAY JCE JOB #: 1674 START TIME: 14:15 **PM**

## ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

| | EASTBOUND | | | WESTBOUND | | | NORTHBOUND | | | SOUTHBOUND | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PM PEAK HOUR | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | total | | |
| 02:15 PM 02:30 PM | 12 | 10 | 4 | 13 | 8 | 8 | 9 | 100 | 22 | 7 | 86 | 18 | 297 | A | |
| 02:30 PM 02:45 PM | 15 | 6 | 5 | 30 | 15 | 15 | 3 | 103 | 23 | 14 | 111 | 17 | 357 | A | |
| 02:45 PM 03:00 PM | 15 | 11 | 3 | 29 | 10 | 18 | 4 | 114 | 8 | 12 | 108 | 29 | 361 | X | |
| 03:00 PM 03:15 PM | 45 | 10 | 8 | 33 | 11 | 19 | 5 | 90 | 12 | 14 | 83 | 25 | 355 | X | 1370 |
| 03:15 PM 03:30 PM | 16 | 9 | 6 | 34 | 11 | 14 | 5 | 98 | 12 | 16 | 95 | 7 | 323 | X | 1396 |
| 03:30 PM 03:45 PM | 15 | 14 | 2 | 26 | 17 | 12 | 4 | 121 | 24 | 9 | 120 | 13 | 377 | X | 1416 |
| 03:45 PM 04:00 PM | 9 | 13 | 4 | 17 | 4 | 11 | 1 | 105 | 22 | 10 | 94 | 10 | 300 | A | 1355 |
| 04:00 PM 04:15 PM | | | | | | | | | | | | | 0 | A | 1000 |
| 04:15 PM 04:30 PM | | | | | | | | | | | | | 0 | A | 677 |
| 04:30 PM 04:45 PM | | | | | | | | | | | | | 0 | A | 300 |
| 04:45 PM 05:00 PM | | | | | | | | | | | | | 0 | A | 0 |
| 05:00 PM 05:15 PM | | | | | | | | | | | | | 0 | A | 0 |
| 05:15 PM 05:30 PM | | | | | | | | | | | | | 0 | A | 0 |
| 05:30 PM 05:45 PM | | | | | | | | | | | | | 0 | A | 0 |
| 05:45 PM 06:00 PM | | | | | | | | | | | | | 0 | A | 0 |
| 06:00 PM 06:15 PM | | | | | | | | | | | | | 0 | A | 0 |

## CALCULATED PEAK 15-MINUTE VOLUMES

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02:15 PM 02:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:30 PM 02:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:45 PM 03:00 PM | 15 | 11 | 3 | 29 | 10 | 18 | 4 | 114 | 8 | 12 | 108 | 29 | 361 |
| 03:00 PM 03:15 PM | 45 | 10 | 8 | 33 | 11 | 19 | 5 | 90 | 12 | 14 | 83 | 25 | 355 |
| 03:15 PM 03:30 PM | 16 | 9 | 6 | 34 | 11 | 14 | 5 | 98 | 12 | 16 | 95 | 7 | 323 |
| 03:30 PM 03:45 PM | 15 | 14 | 2 | 26 | 17 | 12 | 4 | 121 | 24 | 9 | 120 | 13 | 377 |
| 03:45 PM 04:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:00 PM 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:15 PM 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 PM 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:45 PM 05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:00 PM 05:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:15 PM 05:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:30 PM 05:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:45 PM 06:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 06:00 PM 06:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## CALCULATED PEAK HOUR VOLUMES

| PM PEAK HOUR | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | total | PHF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02:45 PM 03:45 PM | 91 | 44 | 19 | 122 | 49 | 63 | 18 | 423 | 56 | 51 | 406 | 74 | 1416 | 0.938992 |
| PHF BY MOVEMENT | 0.51 | 0.79 | 0.59 | 0.90 | 0.72 | 0.83 | 0.90 | 0.87 | 0.58 | 0.80 | 0.85 | 0.64 | | |
| PHF BY APPROACH | | 0.61 | | | 0.93 | | | 0.83 | | | 0.89 | | | |

| | | | | | |
|---|---|---|---|---|---|
| 74 | 406 | 51 | ^ | 6 | 63 |
| 12 | 11 | 10 | < | 5 | 49 |
| < | v | > | v | 4 | 122 |
| 91 | 1 | ^ | < | ^ | > |
| 44 | 2 | > | 7 | 8 | 9 |
| 19 | 3 | v | 18 | 423 | 56 |

LOCATION: BOSTON POST ROAD & SONN DRIVE PROJECT: OSBORN - SONN POST ROAD

DATE OF COUNT: 12/22/09 DAY: TUESDAY JCE JOB #: 1674 START TIME: 07:00 **AM**

## ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

| | EASTBOUND | | | WESTBOUND | | | NORTHBOUND | | | SOUTHBOUND | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AM PEAK HOUR | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | total | | |
| 07:00 AM 07:15 AM | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 47 | 0 | 1 | 24 | 0 | 76 | A | |
| 07:15 AM 07:30 AM | 1 | 0 | 0 | 4 | 0 | 3 | 0 | 70 | 2 | 2 | 56 | 0 | 138 | A | |
| 07:30 AM 07:45 AM | 0 | 0 | 0 | 6 | 0 | 10 | 1 | 110 | 1 | 1 | 66 | 1 | 196 | A | |
| 07:45 AM 08:00 AM | 0 | 0 | 0 | 3 | 1 | 11 | 3 | 127 | 1 | 2 | 77 | 0 | 225 | A | 635 |
| 08:00 AM 08:15 AM | 4 | 0 | 0 | 6 | 1 | 3 | 1 | 94 | 5 | 6 | 84 | 10 | 214 | X | 773 |
| 08:15 AM 08:30 AM | 18 | 4 | 5 | 5 | 6 | 6 | 4 | 92 | 3 | 4 | 62 | 34 | 243 | X | 878 |
| 08:30 AM 08:45 AM | 35 | 5 | 8 | 16 | 1 | 4 | 4 | 102 | 5 | 1 | 107 | 30 | 318 | X | 1000 |
| 08:45 AM 09:00 AM | 4 | 0 | 1 | 11 | 1 | 9 | 8 | 146 | 7 | 4 | 54 | 1 | 246 | X | 1021 |
| 09:00 AM 09:15 AM | | | | | | | | | | | | | 0 | A | 807 |
| 09:15 AM 09:30 AM | | | | | | | | | | | | | 0 | A | 564 |
| 09:30 AM 09:45 AM | | | | | | | | | | | | | 0 | A | 246 |
| 09:45 AM 10:00 AM | | | | | | | | | | | | | 0 | A | 0 |
| 10:00 AM 10:15 AM | | | | | | | | | | | | | 0 | A | 0 |
| 10:15 AM 10:30 AM | | | | | | | | | | | | | 0 | A | 0 |
| 10:30 AM 10:45 AM | | | | | | | | | | | | | 0 | A | 0 |
| 10:45 AM 11:00 AM | | | | | | | | | | | | | 0 | A | 0 |

## CALCULATED PEAK 15-MINUTE VOLUMES

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07:00 AM 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:30 AM 07:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:45 AM 08:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:00 AM 08:15 AM | 4 | 0 | 0 | 6 | 1 | 3 | 1 | 94 | 5 | 6 | 84 | 10 | 214 |
| 08:15 AM 08:30 AM | 18 | 4 | 5 | 5 | 6 | 6 | 4 | 92 | 3 | 4 | 62 | 34 | 243 |
| 08:30 AM 08:45 AM | 35 | 5 | 8 | 16 | 1 | 4 | 4 | 102 | 5 | 1 | 107 | 30 | 318 |
| 08:45 AM 09:00 AM | 4 | 0 | 1 | 11 | 1 | 9 | 8 | 146 | 7 | 4 | 54 | 1 | 246 |
| 09:00 AM 09:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 09:15 AM 09:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 09:30 AM 09:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 09:45 AM 10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 AM 10:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 AM 10:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 AM 10:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 AM 11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## CALCULATED PEAK HOUR VOLUMES

| AM PEAK HOUR | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | total | PHF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08:00 AM 09:00 AM | 61 | 9 | 14 | 38 | 9 | 22 | 17 | 434 | 20 | 15 | 307 | 75 | 1021 | 0.802673 |
| PHF BY MOVEMENT | 0.44 | 0.45 | 0.44 | 0.59 | 0.38 | 0.61 | 0.53 | 0.74 | 0.71 | 0.63 | 0.72 | 0.55 | | |
| PHF BY APPROACH | | 0.44 | | | 0.82 | | | 0.73 | | | 0.72 | | | |

| | | | | | |
|---|---|---|---|---|---|
| 75 | 307 | 15 | ^ | 6 | 22 |
| 12 | 11 | 10 | < | 5 | 9 |
| < | v | > | v | 4 | 38 |
| 61 | 1 | ^ | < | ^ | > |
| 9 | 2 | > | 7 | 8 | 9 |
| 14 | 3 | v | 17 | 434 | 20 |

LOCATION: BOSTON POST ROAD & SONN DRIVE PROJECT: OSBORN - SONN POST ROAD

DATE OF COUNT: 12/22/09 DAY: TUESDAY JCE JOB #: 1674 START TIME: 14:00 **PM**

## ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

| | | EASTBOUND | | | WESTBOUND | | | NORTHBOUND | | | SOUTHBOUND | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PM PEAK HOUR | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | total | | |
| 02:00 PM | 02:15 PM | 1 | 1 | 2 | 3 | 1 | 2 | 2 | 103 | 2 | 2 | 97 | 2 | 218 | A | |
| 02:15 PM | 02:30 PM | 2 | 0 | 2 | 5 | 2 | 3 | 2 | 113 | 2 | 4 | 112 | 4 | 251 | A | |
| 02:30 PM | 02:45 PM | 2 | 0 | 0 | 3 | 2 | 6 | 4 | 125 | 3 | 4 | 127 | 9 | 285 | X | |
| 02:45 PM | 03:00 PM | 3 | 0 | 0 | 6 | 0 | 6 | 3 | 115 | 15 | 16 | 137 | 19 | 320 | X | 1074 |
| 03:00 PM | 03:15 PM | 43 | 14 | 8 | 6 | 0 | 10 | 2 | 139 | 2 | 8 | 143 | 37 | 412 | X | 1268 |
| 03:15 PM | 03:30 PM | 15 | 1 | 7 | 5 | 3 | 8 | 5 | 153 | 10 | 12 | 117 | 7 | 343 | X | 1360 |
| 03:30 PM | 03:45 PM | 7 | 7 | 2 | 4 | 0 | 6 | 0 | 120 | 6 | 5 | 122 | 1 | 280 | A | 1355 |
| 03:45 PM | 04:00 PM | 4 | 0 | 0 | 6 | 0 | 5 | 0 | 133 | 2 | 5 | 95 | 0 | 250 | A | 1285 |
| 04:00 PM | 04:15 PM | | | | | | | | | | | | | 0 | A | 873 |
| 04:15 PM | 04:30 PM | | | | | | | | | | | | | 0 | A | 530 |
| 04:30 PM | 04:45 PM | | | | | | | | | | | | | 0 | A | 250 |
| 04:45 PM | 05:00 PM | | | | | | | | | | | | | 0 | A | 0 |
| 05:00 PM | 05:15 PM | | | | | | | | | | | | | 0 | A | 0 |
| 05:15 PM | 05:30 PM | | | | | | | | | | | | | 0 | A | 0 |
| 05:30 PM | 05:45 PM | | | | | | | | | | | | | 0 | A | 0 |
| 05:45 PM | 06:00 PM | | | | | | | | | | | | | 0 | A | 0 |

## CALCULATED PEAK 15-MINUTE VOLUMES

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02:00 PM | 02:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:15 PM | 02:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:30 PM | 02:45 PM | 2 | 0 | 0 | 3 | 2 | 6 | 4 | 125 | 3 | 4 | 127 | 9 | 285 |
| 02:45 PM | 03:00 PM | 3 | 0 | 0 | 6 | 0 | 6 | 3 | 115 | 15 | 16 | 137 | 19 | 320 |
| 03:00 PM | 03:15 PM | 43 | 14 | 8 | 6 | 0 | 10 | 2 | 139 | 2 | 8 | 143 | 37 | 412 |
| 03:15 PM | 03:30 PM | 15 | 1 | 7 | 5 | 3 | 8 | 5 | 153 | 10 | 12 | 117 | 7 | 343 |
| 03:30 PM | 03:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:45 PM | 04:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:00 PM | 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:15 PM | 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 PM | 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:45 PM | 05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:00 PM | 05:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:15 PM | 05:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:30 PM | 05:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:45 PM | 06:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## CALCULATED PEAK HOUR VOLUMES

| PM PEAK HOUR | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | total | PHF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02:30 PM | 03:30 PM | 63 | 15 | 15 | 20 | 5 | 30 | 14 | 532 | 30 | 40 | 524 | 72 | 1360 | 0.825243 |
| PHF BY MOVEMENT | | 0.37 | 0.27 | 0.47 | 0.83 | 0.42 | 0.75 | 0.70 | 0.87 | 0.50 | 0.63 | 0.92 | 0.49 | | |
| PHF BY APPROACH | | | 0.36 | | | 0.86 | | | 0.86 | | | 0.85 | | | |

| | | | | | |
|---|---|---|---|---|---|
| 72 | 524 | 40 | ^ | 6 | 30 |
| 12 | 11 | 10 | < | 5 | 5 |
| < | v | > | v | 4 | 20 |
| 63 | 1 | ^ | < | ^ | > |
| 15 | 2 | > | 7 | 8 | 9 |
| 15 | 3 | v | 14 | 532 | 30 |

LOCATION: BOSTON POST ROAD & OLD POST ROAD PROJECT: OSBORN - SONN POST ROAD

DATE OF COUNT: 12/22/09 DAY: TUESDAY JCE JOB #: 1674 START TIME : 07:00 **AM**

## ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

| | EASTBOUND | | | WESTBOUND | | | NORTHBOUND | | | SOUTHBOUND | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AM PEAK HOUR | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | total | | |
| 07:00 AM 07:15 AM | 3 | | 16 | | | | 24 | 20 | | | 18 | 1 | 82 | A | |
| 07:15 AM 07:30 AM | 5 | | 25 | | | | 35 | 31 | | | 28 | 2 | 126 | A | |
| 07:30 AM 07:45 AM | 16 | | 38 | | | | 31 | 94 | | | 31 | 4 | 214 | A | |
| 07:45 AM 08:00 AM | 15 | | 37 | | | | 52 | 109 | | | 44 | 5 | 262 | X | 684 |
| 08:00 AM 08:15 AM | 9 | | 55 | | | | 56 | 48 | | | 42 | 3 | 213 | X | 815 |
| 08:15 AM 08:30 AM | 6 | | 71 | | | | 53 | 63 | | | 36 | 2 | 231 | X | 920 |
| 08:30 AM 08:45 AM | 3 | | 86 | | | | 60 | 75 | | | 67 | 1 | 292 | X | 998 |
| 08:45 AM 09:00 AM | 1 | | 31 | | | | 53 | 99 | | | 46 | 3 | 233 | A | 969 |
| 09:00 AM 09:15 AM | | | | | | | | | | | | | 0 | A | 756 |
| 09:15 AM 09:30 AM | | | | | | | | | | | | | 0 | A | 525 |
| 09:30 AM 09:45 AM | | | | | | | | | | | | | 0 | A | 233 |
| 09:45 AM 10:00 AM | | | | | | | | | | | | | 0 | A | 0 |
| 10:00 AM 10:15 AM | | | | | | | | | | | | | 0 | A | 0 |
| 10:15 AM 10:30 AM | | | | | | | | | | | | | 0 | A | 0 |
| 10:30 AM 10:45 AM | | | | | | | | | | | | | 0 | A | 0 |
| 10:45 AM 11:00 AM | | | | | | | | | | | | | 0 | A | 0 |

## CALCULATED PEAK 15-MINUTE VOLUMES

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07:00 AM 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:15 AM 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:30 AM 07:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07:45 AM 08:00 AM | 15 | 0 | 37 | 0 | 0 | 0 | 52 | 109 | 0 | 0 | 44 | 5 | 262 |
| 08:00 AM 08:15 AM | 9 | 0 | 55 | 0 | 0 | 0 | 56 | 48 | 0 | 0 | 42 | 3 | 213 |
| 08:15 AM 08:30 AM | 6 | 0 | 71 | 0 | 0 | 0 | 53 | 63 | 0 | 0 | 36 | 2 | 231 |
| 08:30 AM 08:45 AM | 3 | 0 | 86 | 0 | 0 | 0 | 60 | 75 | 0 | 0 | 67 | 1 | 292 |
| 08:45 AM 09:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 09:00 AM 09:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 09:15 AM 09:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 09:30 AM 09:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 09:45 AM 10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:00 AM 10:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 AM 10:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 AM 10:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 AM 11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## CALCULATED PEAK HOUR VOLUMES

| AM PEAK HOUR | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | total | PHF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07:45 AM 08:45 AM | 33 | 0 | 249 | 0 | 0 | 0 | 221 | 295 | 0 | 0 | 189 | 11 | 998 | 0.854452 |
| PHF BY MOVEMENT | 0.55 | #DIV/0! | 0.72 | #DIV/0! | #DIV/0! | #DIV/0! | 0.92 | 0.68 | #DIV/0! | #DIV/0! | 0.71 | 0.55 | | |
| PHF BY APPROACH | | 0.79 | | | #DIV/0! | | | 0.80 | | | 0.74 | | | |

| | | | | | |
|---|---|---|---|---|---|
| 11 | 189 | 0 | ^ | 6 | 0 |
| 12 | 11 | 10 | < | 5 | 0 |
| < | v | > | v | 4 | 0 |
| 33 | 1 | ^ | < | ^ | > |
| 0 | 2 | > | 7 | 8 | 9 |
| 249 | 3 | v | 221 | 295 | 0 |

LOCATION: BOSTON POST ROAD & OLD POST ROAD PROJECT: OSBORN - SONN POST ROAD

DATE OF COUNT: 12/22/09 DAY: TUESDAY JCE JOB #: 1674 START TIME: 14:00 **PM**

## ENTER 15-MINUTE COUNT VOLUMES BY MOVEMENT

| | | EASTBOUND | | | WESTBOUND | | | NORTHBOUND | | | SOUTHBOUND | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PM PEAK HOUR | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | total | | |
| 02:00 PM | 02:15 PM | 12 | | 39 | | | | 32 | 73 | | | 68 | 3 | 227 | A | |
| 02:15 PM | 02:30 PM | 5 | | 53 | | | | 40 | 76 | | | 70 | 3 | 247 | A | |
| 02:30 PM | 02:45 PM | 4 | | 52 | | | | 51 | 79 | | | 89 | 2 | 277 | X | |
| 02:45 PM | 03:00 PM | 11 | | 74 | | | | 48 | 96 | | | 103 | 5 | 337 | X | 1088 |
| 03:00 PM | 03:15 PM | 12 | | 61 | | | | 66 | 115 | | | 81 | 1 | 336 | X | 1197 |
| 03:15 PM | 03:30 PM | 7 | | 36 | | | | 67 | 118 | | | 57 | 1 | 286 | X | 1236 |
| 03:30 PM | 03:45 PM | 4 | | 46 | | | | 50 | 94 | | | 74 | 2 | 270 | A | 1229 |
| 03:45 PM | 04:00 PM | 5 | | 44 | | | | 50 | 86 | | | 75 | 3 | 263 | A | 1155 |
| 04:00 PM | 04:15 PM | | | | | | | | | | | | | 0 | A | 819 |
| 04:15 PM | 04:30 PM | | | | | | | | | | | | | 0 | A | 533 |
| 04:30 PM | 04:45 PM | | | | | | | | | | | | | 0 | A | 263 |
| 04:45 PM | 05:00 PM | | | | | | | | | | | | | 0 | A | 0 |
| 05:00 PM | 05:15 PM | | | | | | | | | | | | | 0 | A | 0 |
| 05:15 PM | 05:30 PM | | | | | | | | | | | | | 0 | A | 0 |
| 05:30 PM | 05:45 PM | | | | | | | | | | | | | 0 | A | 0 |
| 05:45 PM | 06:00 PM | | | | | | | | | | | | | 0 | A | 0 |

## CALCULATED PEAK 15-MINUTE VOLUMES

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02:00 PM | 02:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:15 PM | 02:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:30 PM | 02:45 PM | 4 | 0 | 52 | 0 | 0 | 0 | 51 | 79 | 0 | 0 | 89 | 2 | 277 |
| 02:45 PM | 03:00 PM | 11 | 0 | 74 | 0 | 0 | 0 | 48 | 96 | 0 | 0 | 103 | 5 | 337 |
| 03:00 PM | 03:15 PM | 12 | 0 | 61 | 0 | 0 | 0 | 66 | 115 | 0 | 0 | 81 | 1 | 336 |
| 03:15 PM | 03:30 PM | 7 | 0 | 36 | 0 | 0 | 0 | 67 | 118 | 0 | 0 | 57 | 1 | 286 |
| 03:30 PM | 03:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:45 PM | 04:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:00 PM | 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:15 PM | 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 PM | 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:45 PM | 05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:00 PM | 05:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:15 PM | 05:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:30 PM | 05:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:45 PM | 06:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## CALCULATED PEAK HOUR VOLUMES

| PM PEAK HOUR | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | total | PHF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02:30 PM | 03:30 PM | 34 | 0 | 223 | 0 | 0 | 0 | 232 | 408 | 0 | 0 | 330 | 9 | 1236 | 0.916914 |
| PHF BY MOVEMENT | | 0.71 | #DIV/0! | 0.75 | #DIV/0! | #DIV/0! | #DIV/0! | 0.87 | 0.86 | #DIV/0! | #DIV/0! | 0.80 | 0.45 | | |
| PHF BY APPROACH | | | 0.76 | | | #DIV/0! | | | 0.86 | | | 0.78 | | | |

| | | | | | |
|---|---|---|---|---|---|
| 9 | 330 | 0 | ^ | 6 | 0 |
| 12 | 11 | 10 | < | 5 | 0 |
| < | v | > | v | 4 | 0 |
| 34 | 1 | ^ | < | ^ | > |
| 0 | 2 | > | 7 | 8 | 9 |
| 223 | 3 | v | 232 | 408 | 0 |

# JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: SONN - POST ROAD
LOCATION: RYE, NEW YORK
JCE JOB# 1674

Site Code: 167400000555
Station ID:
BOSTON POST ROAD (NORTH OF SONN DRIVE)

Latitude: 0' 0.000 Undefined

| Start | 21-Dec-09 | | Tue | | Wed | | Thu | | Fri | | Sat | | Sun | | Week Average | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Time | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB |
| 12:00 AM | * | * | 26 | 23 | 31 | 44 | * | * | * | * | * | * | * | * | 28 | 34 |
| 01:00 | * | * | 15 | 17 | 24 | 26 | * | * | * | * | * | * | * | * | 20 | 22 |
| 02:00 | * | * | 11 | 12 | 15 | 4 | * | * | * | * | * | * | * | * | 13 | 8 |
| 03:00 | * | * | 6 | 12 | 7 | 5 | * | * | * | * | * | * | * | * | 6 | 9 |
| 04:00 | * | * | 10 | 5 | 12 | 4 | * | * | * | * | * | * | * | * | 11 | 4 |
| 05:00 | * | * | 35 | 18 | 24 | 11 | * | * | * | * | * | * | * | * | 30 | 14 |
| 06:00 | * | * | 93 | 58 | 81 | 57 | * | * | * | * | * | * | * | * | 87 | 58 |
| 07:00 | * | * | 349 | 225 | 349 | 213 | * | * | * | * | * | * | * | * | 349 | 219 |
| 08:00 | * | * | 460 | 400 | 445 | 398 | * | * | * | * | * | * | * | * | 452 | 399 |
| 09:00 | * | * | 434 | 300 | 394 | 295 | * | * | * | * | * | * | * | * | 419 | 298 |
| 10:00 | * | * | 384 | 360 | 432 | 352 | * | * | * | * | * | * | * | * | 408 | 356 |
| 11:00 | * | * | 426 | 374 | 433 | 408 | * | * | * | * | * | * | * | * | 430 | 390 |
| 12:00 PM | * | * | 444 | 420 | 451 | 439 | * | * | * | * | * | * | * | * | 448 | 430 |
| 01:00 | * | * | 394 | 405 | 439 | 384 | * | * | * | * | * | * | * | * | 416 | 395 |
| 02:00 | * | * | 414 | 501 | 445 | 533 | * | * | * | * | * | * | * | * | 430 | 517 |
| 03:00 | 522 | 471 | 524 | 451 | 466 | 397 | * | * | * | * | * | * | * | * | 504 | 440 |
| 04:00 | 420 | 446 | 488 | 472 | * | * | * | * | * | * | * | * | * | * | 454 | 459 |
| 05:00 | 386 | 499 | 403 | 498 | * | * | * | * | * | * | * | * | * | * | 384 | 498 |
| 06:00 | 346 | 398 | 343 | 420 | * | * | * | * | * | * | * | * | * | * | 344 | 409 |
| 07:00 | 304 | 284 | 296 | 303 | * | * | * | * | * | * | * | * | * | * | 300 | 294 |
| 08:00 | 191 | 243 | 190 | 228 | * | * | * | * | * | * | * | * | * | * | 190 | 236 |
| 09:00 | 112 | 161 | 142 | 174 | * | * | * | * | * | * | * | * | * | * | 127 | 168 |
| 10:00 | 71 | 86 | 86 | 117 | * | * | * | * | * | * | * | * | * | * | 78 | 102 |
| 11:00 | 36 | 53 | 64 | 66 | * | * | * | * | * | * | * | * | * | * | 50 | 60 |
| Lane | 2368 | 2641 | 6047 | 5860 | 4048 | 3569 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5978 | 5819 |
| Day | 5009 | | 11907 | | 7617 | | 0 | | 0 | | 0 | | 0 | | 11797 | |
| AM Peak | | | 08:00 | 08:00 | 08:00 | 11:00 | | | | | | | | | 08:00 | 08:00 |
| Vol. | | | 460 | 400 | 445 | 406 | | | | | | | | | 452 | 399 |
| PM Peak | 15:00 | 17:00 | 15:00 | 14:00 | 15:00 | 14:00 | | | | | | | | | 15:00 | 14:00 |
| Vol. | 522 | 499 | 524 | 501 | 466 | 533 | | | | | | | | | 504 | 517 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Comb. Total | 5009 | 11907 | 7617 | 0 | 0 | 0 | 0 | 11797 |

ADT ADT 11,907 AADT 11,907

# JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: SONN - POST ROAD
LOCATION: RYE, NEW YORK
JCE JOB# 1674

Site Code: 167400000999
Station ID:
SONN DRIVE (EAST OF BOSTON POST ROAD AND WEST OF FRANKLIN AVENUE)
Latitude: 0' 0.000 Undefined

| Start | 21-Dec-09 | | Tue | | Wed | | Thu | | Fri | | Sat | | Sun | | Week Average | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Time | EB | WB | EB | WB | EB | WB | EB | WB | EB | WB | EB | WB | EB | WB | EB | WB |
| 12:00 AM | * | * | 9 | 4 | 4 | 3 | * | * | * | * | * | * | * | * | 6 | 4 |
| 01:00 | * | * | 6 | 3 | 1 | 2 | * | * | * | * | * | * | * | * | 4 | 2 |
| 02:00 | * | * | 1 | 1 | 0 | 0 | * | * | * | * | * | * | * | * | 0 | 0 |
| 03:00 | * | * | 0 | 0 | 1 | 3 | * | * | * | * | * | * | * | * | 0 | 2 |
| 04:00 | * | * | 0 | 0 | 2 | 1 | * | * | * | * | * | * | * | * | 1 | 0 |
| 05:00 | * | * | 5 | 5 | 0 | 6 | * | * | * | * | * | * | * | * | 2 | 6 |
| 06:00 | * | * | 4 | 14 | 5 | 14 | * | * | * | * | * | * | * | * | 4 | 14 |
| 07:00 | * | * | 16 | 34 | 21 | 34 | * | * | * | * | * | * | * | * | 18 | 34 |
| 08:00 | * | * | 44 | 70 | 62 | 61 | * | * | * | * | * | * | * | * | 53 | 66 |
| 09:00 | * | * | 47 | 49 | 37 | 38 | * | * | * | * | * | * | * | * | 42 | 44 |
| 10:00 | * | * | 35 | 50 | 33 | 36 | * | * | * | * | * | * | * | * | 34 | 43 |
| 11:00 | * | * | 26 | 37 | 44 | 44 | * | * | * | * | * | * | * | * | 35 | 40 |
| 12:00 PM | * | * | 48 | 34 | 52 | 42 | * | * | * | * | * | * | * | * | 50 | 38 |
| 01:00 | * | * | 31 | 33 | 35 | 40 | * | * | * | * | * | * | * | * | 33 | 36 |
| 02:00 | 53 | 51 | 36 | 38 | 30 | 31 | * | * | * | * | * | * | * | * | 40 | 40 |
| 03:00 | 82 | 60 | 78 | 52 | 61 | 30 | * | * | * | * | * | * | * | * | 74 | 47 |
| 04:00 | 45 | 46 | 51 | 49 | * | * | * | * | * | * | * | * | * | * | 48 | 48 |
| 05:00 | 54 | 40 | 52 | 46 | * | * | * | * | * | * | * | * | * | * | 53 | 43 |
| 06:00 | 75 | 41 | 58 | 22 | * | * | * | * | * | * | * | * | * | * | 66 | 32 |
| 07:00 | 50 | 38 | 38 | 31 | * | * | * | * | * | * | * | * | * | * | 44 | 34 |
| 08:00 | 32 | 25 | 33 | 21 | * | * | * | * | * | * | * | * | * | * | 32 | 23 |
| 09:00 | 21 | 13 | 19 | 15 | * | * | * | * | * | * | * | * | * | * | 20 | 14 |
| 10:00 | 6 | 4 | 24 | 9 | * | * | * | * | * | * | * | * | * | * | 15 | 6 |
| 11:00 | 8 | 4 | 7 | 2 | * | * | * | * | * | * | * | * | * | * | 8 | 3 |
| Lane | 426 | 322 | 668 | 619 | 388 | 385 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 682 | 619 |
| Day | 748 | | 1287 | | 773 | | 0 | | 0 | | 0 | | 0 | | 1301 | |
| AM Peak | | | 09:00 | 08:00 | 08:00 | 08:00 | | | | | | | | | 08:00 | 08:00 |
| Vol. | | | 47 | 70 | 62 | 61 | | | | | | | | | 53 | 66 |
| PM Peak | 15:00 | 15:00 | 15:00 | 15:00 | 15:00 | 12:00 | | | | | | | | | 15:00 | 16:00 |
| Vol. | 82 | 60 | 78 | 52 | 61 | 42 | | | | | | | | | 74 | 48 |

| Comb. Total | 748 | 1287 | 773 | 0 | 0 | 0 | 0 | 1301 |
|---|---|---|---|---|---|---|---|---|

ADT ADT 1,287 AADT 1,287

# JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: SONN - POST ROAD
LOCATION: RYE, NEW YORK
JCE JOB# 1674

Site Code: 167400000555
Station ID:
BOSTON POST ROAD (NORTH OF SONN DRIVE)

NB

Latitude: 0' 0.000 Undefined

| Start Time | 1 15 | 16 20 | 21 25 | 26 30 | 31 35 | 36 40 | 41 45 | 46 50 | 51 55 | 56 60 | 61 65 | 66 70 | 71 75 | 76 999 | Total | 85th Percent | 95th Percent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/21/09 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 01:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 02:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 03:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 04:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 05:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 06:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 07:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 08:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 09:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 10:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 11:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 12 PM | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 13:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 14:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 15:00 | 57 | 22 | 81 | 113 | 150 | 72 | 24 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 522 | 37 | 41 |
| 16:00 | 32 | 11 | 28 | 55 | 150 | 116 | 21 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 420 | 39 | 42 |
| 17:00 | 30 | 12 | 24 | 83 | 133 | 71 | 11 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 366 | 37 | 40 |
| 18:00 | 17 | 13 | 28 | 62 | 123 | 86 | 14 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 346 | 38 | 40 |
| 19:00 | 15 | 11 | 10 | 52 | 104 | 84 | 26 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 304 | 39 | 43 |
| 20:00 | 4 | 6 | 9 | 23 | 64 | 53 | 30 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 191 | 41 | 44 |
| 21:00 | 2 | 5 | 3 | 7 | 33 | 41 | 14 | 5 | 1 | 0 | 0 | 1 | 0 | 0 | 112 | 42 | 46 |
| 22:00 | 1 | 1 | 6 | 5 | 24 | 22 | 8 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 71 | 41 | 45 |
| 23:00 | 0 | 0 | 0 | 3 | 8 | 19 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 36 | 41 | 44 |
| Total | 158 | 81 | 189 | 403 | 789 | 564 | 152 | 28 | 2 | 0 | 1 | 1 | 0 | 0 | 2368 | | |
| Percent | 6.7% | 3.4% | 8.0% | 17.0% | 33.3% | 23.8% | 6.4% | 1.2% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | | | |
| AM Peak | | | | | | | | | | | | | | | | | |
| Vol. | | | | | | | | | | | | | | | | | |
| PM Peak | 15:00 | 15:00 | 15:00 | 15:00 | 15:00 | 16:00 | 20:00 | 16:00 | 21:00 | | 17:00 | 21:00 | | | 15:00 | | |
| Vol. | 57 | 22 | 81 | 113 | 150 | 116 | 30 | 7 | 1 | | 1 | 1 | | | 522 | | |

# JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: SONN - POST ROAD
LOCATION: RYE, NEW YORK
JCE JOB# 1674

Site Code: 167400000555
Station ID:
BOSTON POST ROAD (NORTH OF SONN DRIVE)

NB

Latitude: 0' 0.000 Undefined

| Start Time | 1 15 | 16 20 | 21 25 | 26 30 | 31 35 | 36 40 | 41 45 | 46 50 | 51 55 | 56 60 | 61 65 | 66 70 | 71 75 | 76 999 | Total | 85th Percent | 95th Percent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/22/09 | 0 | 1 | 1 | 3 | 5 | 11 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 26 | 41 | 46 |
| 01:00 | 0 | 1 | 1 | 0 | 5 | 6 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 40 | 45 |
| 02:00 | 0 | 1 | 0 | 0 | 5 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 45 | 46 |
| 03:00 | 0 | 0 | 0 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 36 | 37 |
| 04:00 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 46 | 47 |
| 05:00 | 0 | 1 | 3 | 1 | 8 | 11 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 43 | 44 |
| 06:00 | 1 | 1 | 4 | 9 | 36 | 28 | 10 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 93 | 40 | 45 |
| 07:00 | 19 | 9 | 12 | 47 | 149 | 78 | 26 | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 349 | 39 | 44 |
| 08:00 | 35 | 9 | 56 | 87 | 147 | 99 | 20 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 460 | 38 | 41 |
| 09:00 | 14 | 10 | 27 | 80 | 154 | 121 | 31 | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 444 | 39 | 43 |
| 10:00 | 21 | 13 | 18 | 43 | 127 | 128 | 28 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 384 | 40 | 43 |
| 11:00 | 35 | 7 | 19 | 62 | 154 | 116 | 27 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 426 | 39 | 42 |
| 12 PM | 24 | 12 | 19 | 48 | 131 | 158 | 45 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 444 | 40 | 44 |
| 13:00 | 28 | 5 | 16 | 51 | 127 | 113 | 46 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 394 | 40 | 44 |
| 14:00 | 33 | 4 | 18 | 68 | 138 | 116 | 27 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 414 | 39 | 43 |
| 15:00 | 54 | 15 | 78 | 92 | 164 | 92 | 24 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 524 | 38 | 41 |
| 16:00 | 31 | 9 | 26 | 51 | 194 | 132 | 35 | 8 | 1 | 0 | 1 | 0 | 0 | 0 | 488 | 39 | 43 |
| 17:00 | 29 | 15 | 29 | 65 | 152 | 88 | 20 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 403 | 38 | 42 |
| 18:00 | 15 | 8 | 13 | 49 | 131 | 89 | 30 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 343 | 40 | 44 |
| 19:00 | 13 | 3 | 17 | 47 | 106 | 72 | 31 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 296 | 40 | 44 |
| 20:00 | 10 | 4 | 6 | 9 | 60 | 64 | 33 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 190 | 42 | 44 |
| 21:00 | 4 | 4 | 6 | 5 | 42 | 59 | 20 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 142 | 41 | 44 |
| 22:00 | 0 | 0 | 5 | 7 | 22 | 33 | 15 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 86 | 42 | 45 |
| 23:00 | 1 | 1 | 0 | 3 | 11 | 25 | 15 | 6 | 1 | 1 | 0 | 0 | 0 | 0 | 64 | 45 | 49 |
| Total | 367 | 133 | 374 | 828 | 2073 | 1645 | 502 | 106 | 14 | 4 | 1 | 0 | 0 | 0 | 6047 | | |
| Percent | 6.1% | 2.2% | 6.2% | 13.7% | 34.3% | 27.2% | 8.3% | 1.8% | 0.2% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | | | |
| AM Peak | 08:00 | 10:00 | 08:00 | 08:00 | 09:00 | 10:00 | 09:00 | 07:00 | 09:00 | 00:00 | | | | | 08:00 | | |
| Vol. | 35 | 13 | 56 | 87 | 154 | 128 | 31 | 8 | 2 | 1 | | | | | 460 | | |
| PM Peak | 15:00 | 15:00 | 15:00 | 15:00 | 16:00 | 12:00 | 13:00 | 14:00 | 22:00 | 23:00 | 16:00 | | | | 15:00 | | |
| Vol. | 54 | 15 | 78 | 92 | 194 | 158 | 46 | 9 | 3 | 1 | 1 | | | | 524 | | |

# JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: SONN - POST ROAD
LOCATION: RYE, NEW YORK
JCE JOB# 1674

Site Code: 167400000555
Station ID:
BOSTON POST ROAD (NORTH OF SONN DRIVE)

NB

Latitude: 0' 0.000 Undefined

| Start Time | 1 15 | 16 20 | 21 25 | 26 30 | 31 35 | 36 40 | 41 45 | 46 50 | 51 55 | 56 60 | 61 65 | 66 70 | 71 75 | 76 999 | Total | 85th Percent | 95th Percent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/23/09 | 0 | 1 | 0 | 1 | 8 | 8 | 10 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 31 | 44 | 50 |
| 01:00 | 0 | 0 | 1 | 2 | 8 | 7 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 42 | 45 |
| 02:00 | 0 | 0 | 0 | 1 | 7 | 4 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 15 | 41 | 42 |
| 03:00 | 0 | 0 | 1 | 0 | 0 | 1 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 7 | 50 | 51 |
| 04:00 | 0 | 0 | 1 | 0 | 2 | 5 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 12 | 42 | 43 |
| 05:00 | 0 | 0 | 1 | 4 | 3 | 4 | 5 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 24 | 48 | 52 |
| 06:00 | 1 | 2 | 3 | 7 | 21 | 29 | 15 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 81 | 42 | 45 |
| 07:00 | 19 | 9 | 17 | 21 | 130 | 115 | 32 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 349 | 40 | 44 |
| 08:00 | 36 | 6 | 60 | 74 | 145 | 88 | 29 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 445 | 39 | 43 |
| 09:00 | 25 | 9 | 16 | 41 | 134 | 120 | 43 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 394 | 40 | 44 |
| 10:00 | 24 | 7 | 9 | 38 | 172 | 142 | 32 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 432 | 40 | 43 |
| 11:00 | 28 | 8 | 27 | 35 | 144 | 128 | 48 | 11 | 4 | 0 | 0 | 0 | 0 | 0 | 433 | 40 | 45 |
| 12 PM | 26 | 8 | 19 | 48 | 173 | 107 | 59 | 8 | 2 | 1 | 0 | 0 | 0 | 0 | 451 | 41 | 44 |
| 13:00 | 22 | 5 | 16 | 28 | 112 | 172 | 69 | 14 | 1 | 0 | 0 | 0 | 0 | 0 | 439 | 42 | 45 |
| 14:00 | 42 | 4 | 19 | 37 | 135 | 143 | 59 | 5 | 0 | 0 | 1 | 0 | 0 | 0 | 445 | 40 | 44 |
| 15:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 16:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 17:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 18:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 19:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 20:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 21:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 22:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 23:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| Total | 223 | 59 | 190 | 337 | 1194 | 1073 | 414 | 73 | 15 | 2 | 1 | 1 | 0 | 0 | 3582 | | |
| Percent | 6.2% | 1.6% | 5.3% | 9.4% | 33.3% | 30.0% | 11.6% | 2.0% | 0.4% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | | | |
| AM Peak | 08:00 | 07:00 | 08:00 | 08:00 | 10:00 | 10:00 | 11:00 | 11:00 | 11:00 | 04:00 | | 00:00 | | | 08:00 | | |
| Vol. | 36 | 9 | 60 | 74 | 172 | 142 | 48 | 11 | 4 | 1 | | 1 | | | 445 | | |
| PM Peak | 14:00 | 12:00 | 12:00 | 12:00 | 12:00 | 13:00 | 13:00 | 13:00 | 12:00 | 12:00 | 14:00 | | | | 12:00 | | |
| Vol. | 42 | 8 | 19 | 48 | 173 | 172 | 69 | 14 | 2 | 1 | 1 | | | | 451 | | |
| Grand Total | 748 | 273 | 753 | 1568 | 4056 | 3282 | 1068 | 207 | 31 | 6 | 3 | 2 | 0 | 0 | 11997 | | |
| Percent | 6.2% | 2.3% | 6.3% | 13.1% | 33.8% | 27.4% | 8.9% | 1.7% | 0.3% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | | | |

| | |
|---|---|
| 15th Percentile : | 26 MPH |
| 50th Percentile : | 34 MPH |
| 85th Percentile : | 40 MPH |
| 95th Percentile : | 44 MPH |

Statistics

| | |
|---|---|
| 10 MPH Pace Speed : | 31-40 MPH |
| Number in Pace : | 7338 |
| Percent in Pace : | 61.2% |
| Number of Vehicles > 55 MPH : | 11 |
| Percent of Vehicles > 55 MPH : | 0.1% |
| Mean Speed(Average) : | 32 MPH |

# JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: SONN - POST ROAD
LOCATION: RYE, NEW YORK
JCE JOB# 1674

Site Code: 167400000555
Station ID:
BOSTON POST ROAD (NORTH OF SONN DRIVE)

Latitude: 0' 0.000 Undefined

SB

| Start Time | 1 15 | 16 20 | 21 25 | 26 30 | 31 35 | 36 40 | 41 45 | 46 50 | 51 55 | 56 60 | 61 65 | 66 70 | 71 75 | 76 999 | Total | 85th Percent | 95th Percent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/21/09 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 01:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 02:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 03:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 04:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 05:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 06:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 07:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 08:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 09:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 10:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 11:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 12 PM | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 13:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 14:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 15:00 | 74 | 40 | 88 | 92 | 105 | 65 | 5 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 471 | 36 | 39 |
| 16:00 | 39 | 11 | 22 | 81 | 171 | 92 | 29 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 446 | 38 | 42 |
| 17:00 | 30 | 9 | 45 | 99 | 205 | 92 | 16 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 499 | 37 | 40 |
| 18:00 | 29 | 13 | 47 | 60 | 145 | 84 | 18 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 398 | 38 | 40 |
| 19:00 | 11 | 4 | 14 | 40 | 102 | 88 | 24 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 284 | 39 | 43 |
| 20:00 | 4 | 2 | 16 | 23 | 94 | 77 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 243 | 40 | 43 |
| 21:00 | 3 | 1 | 4 | 17 | 48 | 67 | 20 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 161 | 40 | 44 |
| 22:00 | 1 | 0 | 1 | 4 | 34 | 31 | 14 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 86 | 41 | 44 |
| 23:00 | 0 | 0 | 2 | 2 | 23 | 20 | 3 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 53 | 40 | 43 |
| Total | 191 | 80 | 239 | 418 | 927 | 616 | 156 | 9 | 5 | 0 | 0 | 0 | 0 | 0 | 2641 | | |
| Percent | 7.2% | 3.0% | 9.0% | 15.8% | 35.1% | 23.3% | 5.9% | 0.3% | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | | | |
| AM Peak | | | | | | | | | | | | | | | | | |
| Vol. | | | | | | | | | | | | | | | | | |
| PM Peak | 15:00 | 15:00 | 15:00 | 17:00 | 17:00 | 16:00 | 16:00 | 17:00 | 23:00 | | | | | | 17:00 | | |
| Vol. | 74 | 40 | 88 | 99 | 205 | 92 | 29 | 2 | 2 | | | | | | 499 | | |

# JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: SONN - POST ROAD
LOCATION: RYE, NEW YORK
JCE JOB# 1674

Site Code: 167400000555
Station ID:
BOSTON POST ROAD (NORTH OF SONN DRIVE)

SB

Latitude: 0' 0.000 Undefined

| Start Time | 1 15 | 16 20 | 21 25 | 26 30 | 31 35 | 36 40 | 41 45 | 46 50 | 51 55 | 56 60 | 61 65 | 66 70 | 71 75 | 76 999 | Total | 85th Percent | 95th Percent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/22/09 | 0 | 2 | 4 | 3 | 2 | 8 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 41 | 43 |
| 01:00 | 0 | 0 | 3 | 2 | 5 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 39 | 42 |
| 02:00 | 0 | 1 | 1 | 0 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 38 | 39 |
| 03:00 | 0 | 0 | 0 | 0 | 10 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 35 | 40 |
| 04:00 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 42 | 43 |
| 05:00 | 0 | 0 | 1 | 2 | 6 | 7 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 39 | 45 |
| 06:00 | 3 | 0 | 5 | 6 | 19 | 15 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 41 | 44 |
| 07:00 | 15 | 4 | 19 | 31 | 75 | 57 | 18 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 225 | 40 | 44 |
| 08:00 | 41 | 39 | 69 | 85 | 99 | 58 | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 400 | 36 | 39 |
| 09:00 | 20 | 4 | 21 | 53 | 82 | 84 | 33 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 300 | 40 | 43 |
| 10:00 | 21 | 5 | 26 | 82 | 112 | 86 | 23 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 360 | 39 | 42 |
| 11:00 | 25 | 2 | 17 | 71 | 131 | 93 | 29 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 374 | 39 | 43 |
| 12 PM | 37 | 5 | 27 | 92 | 142 | 91 | 22 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 420 | 38 | 41 |
| 13:00 | 25 | 2 | 20 | 91 | 143 | 89 | 28 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 406 | 39 | 43 |
| 14:00 | 42 | 14 | 60 | 107 | 140 | 103 | 27 | 7 | 0 | 1 | 0 | 0 | 0 | 0 | 501 | 38 | 42 |
| 15:00 | 75 | 35 | 57 | 88 | 113 | 66 | 13 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 451 | 37 | 40 |
| 16:00 | 37 | 4 | 20 | 55 | 193 | 125 | 29 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 472 | 39 | 43 |
| 17:00 | 40 | 17 | 32 | 108 | 187 | 93 | 18 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 498 | 38 | 40 |
| 18:00 | 18 | 7 | 29 | 54 | 150 | 128 | 31 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 420 | 39 | 42 |
| 19:00 | 16 | 5 | 20 | 36 | 95 | 106 | 23 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 303 | 40 | 42 |
| 20:00 | 8 | 2 | 16 | 27 | 66 | 71 | 33 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 228 | 41 | 44 |
| 21:00 | 6 | 2 | 7 | 15 | 52 | 71 | 19 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 174 | 40 | 43 |
| 22:00 | 3 | 1 | 7 | 19 | 46 | 30 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 117 | 39 | 43 |
| 23:00 | 0 | 1 | 3 | 1 | 20 | 23 | 11 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 66 | 44 | 49 |
| Total | 432 | 152 | 464 | 1028 | 1893 | 1416 | 396 | 67 | 11 | 1 | 0 | 0 | 0 | 0 | 5860 | | |
| Percent | 7.4% | 2.6% | 7.9% | 17.5% | 32.3% | 24.2% | 6.8% | 1.1% | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | | | |
| AM Peak | 08:00 | 08:00 | 08:00 | 08:00 | 11:00 | 11:00 | 09:00 | 07:00 | 08:00 | | | | | | 08:00 | | |
| Vol. | 41 | 39 | 69 | 85 | 131 | 93 | 33 | 6 | 1 | | | | | | 400 | | |
| PM Peak | 15:00 | 15:00 | 14:00 | 17:00 | 16:00 | 18:00 | 20:00 | 13:00 | 16:00 | 14:00 | | | | | 14:00 | | |
| Vol. | 75 | 35 | 60 | 108 | 193 | 128 | 33 | 7 | 3 | 1 | | | | | 501 | | |

# JOHN COLLINS ENGINEERS, P.C.

11 BRADHURST AVENUE
HAWTHORNE, NY, 10532
(914) 347-7500 / FAX (914) 347-7266

Default Comments
PROJECT: SONN - POST ROAD
LOCATION: RYE, NEW YORK
JCE JOB# 1674

Site Code: 167400000555
Station ID:
BOSTON POST ROAD (NORTH OF SONN DRIVE)

SB

Latitude: 0' 0.000 Undefined

| Start Time | 1 15 | 16 20 | 21 25 | 26 30 | 31 35 | 36 40 | 41 45 | 46 50 | 51 55 | 56 60 | 61 65 | 66 70 | 71 75 | 76 999 | Total | 85th Percent | 95th Percent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/23/09 | 0 | 0 | 1 | 2 | 12 | 14 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 43 | 46 |
| 01:00 | 0 | 0 | 2 | 1 | 10 | 4 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 43 | 45 |
| 02:00 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 41 | 42 |
| 03:00 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 45 | 46 |
| 04:00 | 0 | 0 | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 37 | 41 |
| 05:00 | 0 | 1 | 1 | 1 | 3 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 11 | 41 | 42 |
| 06:00 | 0 | 1 | 1 | 7 | 15 | 19 | 10 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 57 | 43 | 46 |
| 07:00 | 11 | 5 | 16 | 30 | 61 | 63 | 20 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 213 | 40 | 44 |
| 08:00 | 43 | 34 | 77 | 69 | 91 | 59 | 19 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 398 | 37 | 42 |
| 09:00 | 26 | 7 | 18 | 38 | 98 | 73 | 29 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 295 | 40 | 44 |
| 10:00 | 30 | 4 | 18 | 55 | 114 | 102 | 24 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 352 | 39 | 43 |
| 11:00 | 35 | 9 | 23 | 68 | 137 | 91 | 37 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 406 | 39 | 43 |
| 12 PM | 33 | 1 | 33 | 55 | 161 | 122 | 31 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 439 | 39 | 42 |
| 13:00 | 25 | 5 | 20 | 70 | 109 | 108 | 37 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 384 | 40 | 44 |
| 14:00 | 57 | 18 | 77 | 144 | 128 | 87 | 17 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 533 | 37 | 40 |
| 15:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 16:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 17:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 18:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 19:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 20:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 21:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 22:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| 23:00 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| Total | 260 | 85 | 288 | 541 | 942 | 748 | 250 | 50 | 8 | 0 | 0 | 0 | 0 | 0 | 3172 | | |
| Percent | 8.2% | 2.7% | 9.1% | 17.1% | 29.7% | 23.6% | 7.9% | 1.6% | 0.3% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | | | |
| AM Peak | 08:00 | 08:00 | 08:00 | 08:00 | 11:00 | 10:00 | 11:00 | 07:00 | 09:00 | | | | | | 11:00 | | |
| Vol. | 43 | 34 | 77 | 69 | 137 | 102 | 37 | 6 | 2 | | | | | | 406 | | |
| PM Peak | 14:00 | 14:00 | 14:00 | 14:00 | 12:00 | 12:00 | 13:00 | 13:00 | 13:00 | | | | | | 14:00 | | |
| Vol. | 57 | 18 | 77 | 144 | 161 | 122 | 37 | 8 | 2 | | | | | | 533 | | |
| Grand Total | 883 | 317 | 991 | 1987 | 3762 | 2780 | 802 | 126 | 24 | 1 | 0 | 0 | 0 | 0 | 11673 | | |
| Percent | 7.6% | 2.7% | 8.5% | 17.0% | 32.2% | 23.8% | 6.9% | 1.1% | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | | | |

| | |
|---|---|
| 15th Percentile : | 23 MPH |
| 50th Percentile : | 33 MPH |
| 85th Percentile : | 39 MPH |
| 95th Percentile : | 43 MPH |

Statistics

| | |
|---|---|
| 10 MPH Pace Speed : | 31-40 MPH |
| Number in Pace : | 6542 |
| Percent in Pace : | 56.0% |
| Number of Vehicles > 55 MPH : | 1 |
| Percent of Vehicles > 55 MPH : | 0.0% |
| Mean Speed(Average) : | 31 MPH |

**JOHN COLLINS ENGINEERS, P.C.** TRAFFIC • TRANSPORTATION ENGINEERS
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**Institute of Transportation Engineers**

**Traffic Calming Measures**

**Speed Tables**

**Description:**

- long raised speed humps with a flat section in the middle and ramps on the ends; sometimes constructed with brick or other textured materials on the flat section
- sometimes called flat top speed humps, trapezoidal humps, speed platforms, raised crosswalks, or raised crossings

**Applications:**

- local and collector streets
- main roads through small communities
- typically long enough for the entire wheelbase of a passenger car to rest on top
- work well in combination with textured crosswalks, curb extensions, and curb radius reductions
- can include a crosswalk

**Design/Installation Issues:**

- typically 22 feet in the direction of travel with 6 foot ramps on each end and a 10 foot flat section in the middle; other lengths (32 and 48 feet) reported in U.S. practice
- most common height is between 3 and 4 inches (and reported as high as 6 inches)
- ramps are typically 6 feet long (reported up to 10 feet long) and are either parabolic or linear
- careful design is needed for drainage

**Potential Impacts:**

- no effect on access
- speeds are reduced, but usually to a higher crossing speed than at speed humps (typically between 25 and 27 miles per hour)
- traffic volumes have been reduced on average by 12 percent depending on alternative routes available
- collisions have been reduced on average by 45 percent on treated streets (not adjusted for traffic diversion)
- reported to increase pedestrian visibility and likelihood that driver yields to pedestrian

**Emergency Response Issues:**

- typically preferred by fire departments over 12 to 14-foot speed humps
- generally less than 3 seconds of delay per hump for fire trucks

**Typical Cost:**

- approximately $2,500 (in 1997 dollars) for asphalt tables; higher for brickwork, stamped asphalt, concrete ramps and other enhancements sometimes used at pedestrian crossings

# Speed Impacts
**(85th Percentile)**

| Calming Measure | Average Speed After Calming | Average Change in Speed With Calming (mph) | Average % Change in Speed with Calming Measures |
|---|---|---|---|
| 12' Hump | 27.3 | -7.8 | -22 |
| 14' Hump | 28.6 | -7.7 | -23 |
| 22' Table | 29.2 | -7.3 | -20 |
| Narrowing (Diet) | 32.3 | -2.6 | -4 |

Source: U.S. Traffic Calming Manual, American Planning Association, ASCE Press