

## **Attachment H**

### **Dedham Street/I-95 Ramp Traffic Redistribution Calculations**

## METHODOLOGY

- 1) Redistribution of existing 2012 peak hr volumes
- 2) Proportions based on:
  - A. Tetra Tech 2012 count data - in Appendix
  - B. Tetra Tech 2010 count data - follows
  - C. CTPS 2008 ramp count data - follows
  - D. FST 2006 count data - follows



**TETRA TECH**

One Grant Street  
Framingham, MA 01701-9005  
(508) 903-2000

JOB \_\_\_\_\_

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

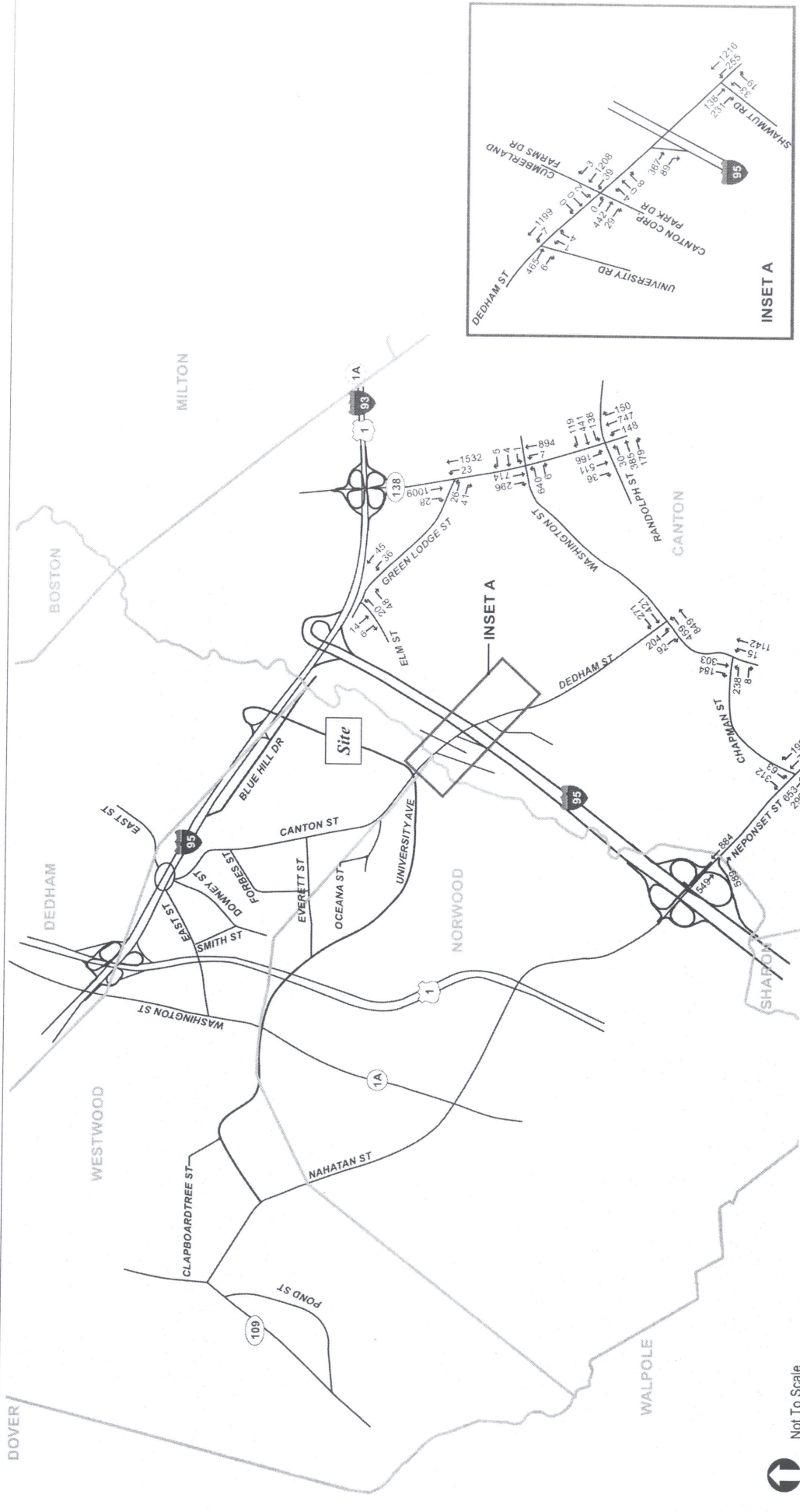
CALCULATED BY \_\_\_\_\_ DATE \_\_\_\_\_

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

SCALE \_\_\_\_\_



12/27/16, westwood-station-am-peak.mxd



Not To Scale

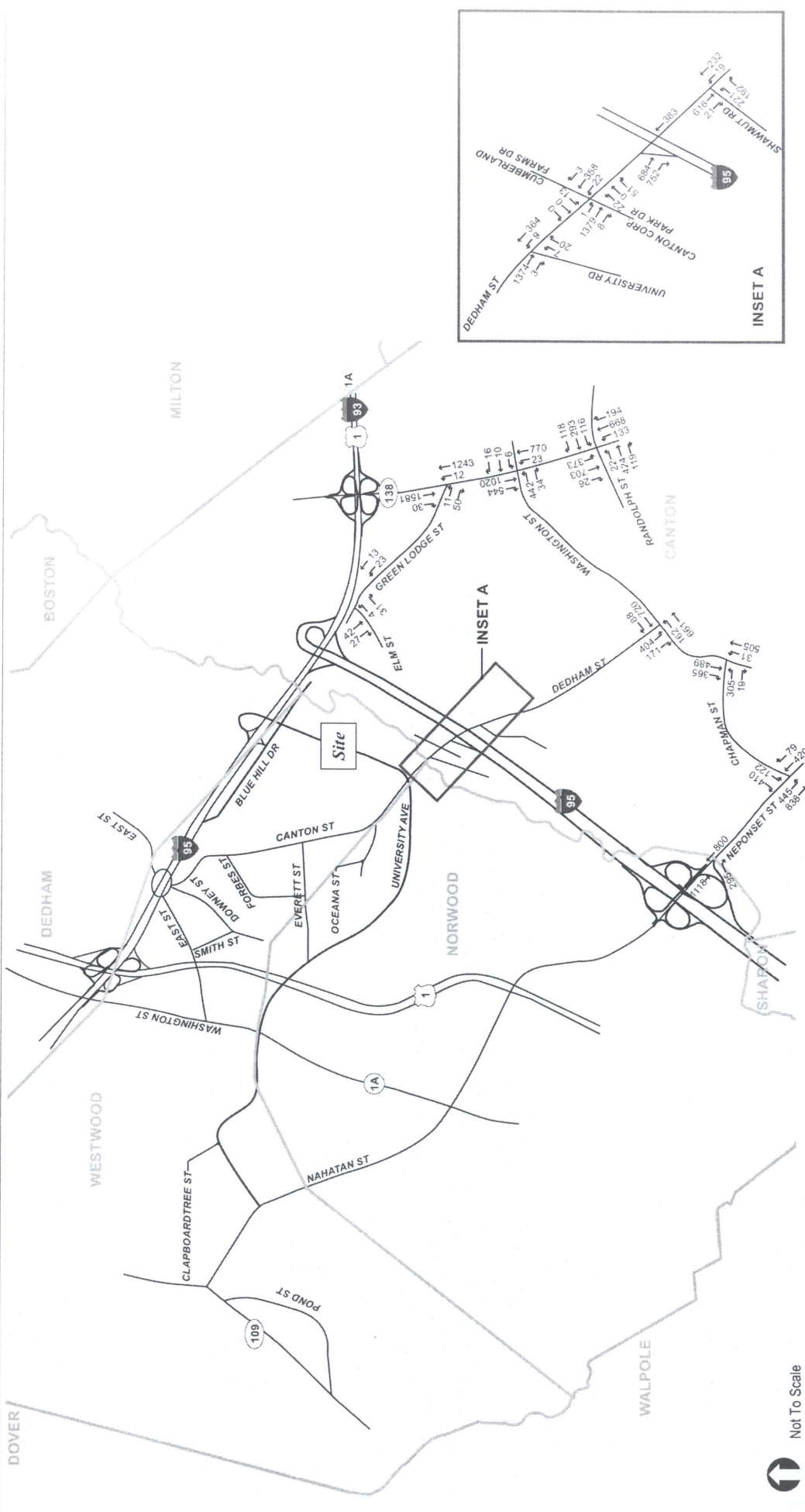
**TETRA TECH RIZZO**

One Grant Street  
Frammingham, MA 01701-9005  
508.903.2000  
www.tetratechrdzr.com

Westwood Station  
Westwood, Massachusetts

2010 Existing  
AM Peak Hour

Figure 2



Not To Scale



**TETRA TECH RIZZO**

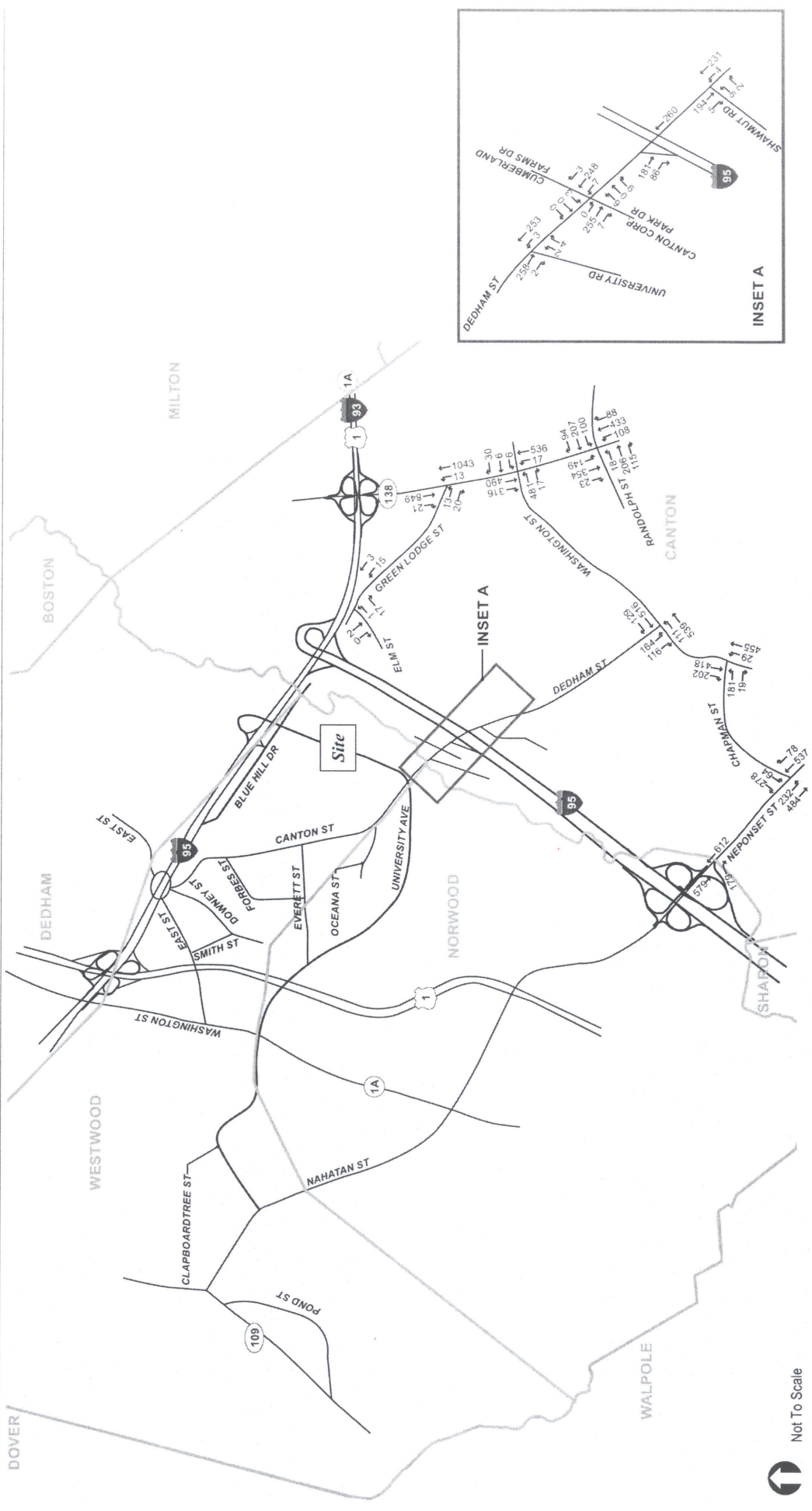
One Grant Street  
Framingham, MA 01701-9005  
508.903.2000  
www.tetratetchrizzo.com

Westwood Station  
Westwood, Massachusetts

2010 Existing  
PM Peak Hour

Figure 3

121-3719 - www.woodenring.com/pea4



Not To Scale



**TETRA TECH RIZZO**

One Grant Street  
 Framingham, MA 01701-9005  
 508.903.2000  
 www.tetrattechrizzo.com

Westwood Station  
 Westwood, Massachusetts

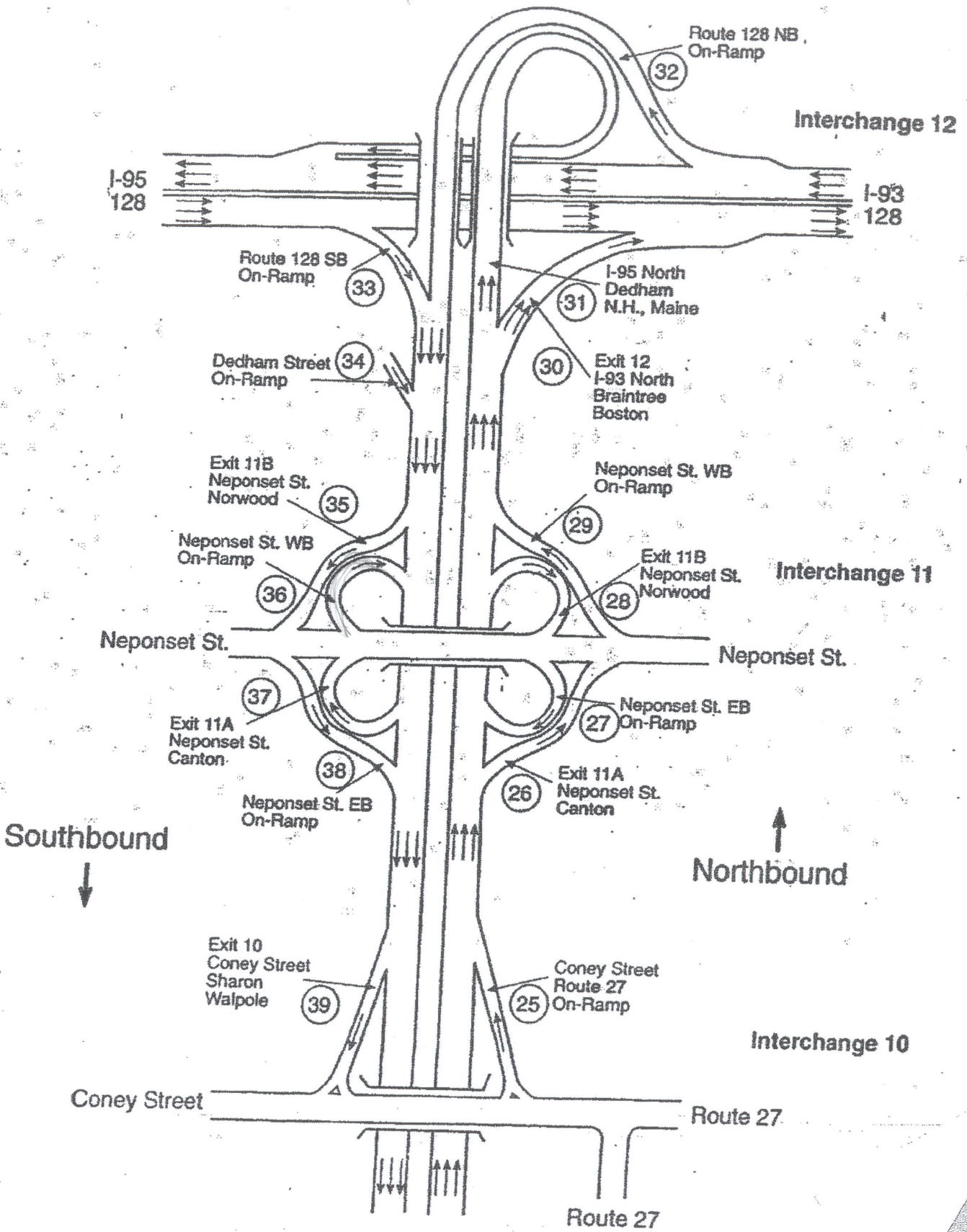
2010 Existing  
 Saturday Peak Hour Figure 4

PART 1

CTPS RAMP  
COUNTS

APRIL 2008

# Interstate 95 South Coney Street—Neponset Street—Route 128





Massachusetts Highway Department  
 WEEKLY SUMMARY FOR LANE 1  
 Starting: 4/28/2008

Page: 2

STA. 28

Site Reference: 080070000818  
 Site ID: 000000000028  
 Location: EX 11B NEPONSET ST NORWOOD OFF-RAMP  
 Direction: NORTH

File: 28.pin  
 City/Town: NORWOOD  
 Comment: VOL - I-95 RAMPS

TIME	MON 28	TUE 29	WED 30	THU 1	FRI 2	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00	12	9	16	31	19	15			15	77
02:00	8	8	6	14	20	11			11	56
03:00	8	7	9	9	8	8			8	42
04:00	7	12	12	9	11	10			10	51
05:00	40	39	42	34	43	39			39	198
06:00	125	116	111	120	104	115			115	576
07:00	392	363	399	415	349	383			383	1918
08:00	471	472	531	522	428	484			484	2424
09:00	424	483	509	514	410	468			468	2340
10:00	327	457	315	627	264	398			398	1930
11:00	213	289	235	247	232	223			223	1116
12:00	178	267	170	313	200	165			165	928
13:00	198	168	194	209	232	200			200	1001
14:00	175	188	215	240		204			204	818
15:00	205	198	410	215		257			257	1028
16:00	192	215	225	188		205			205	820
17:00	206	213	234	240		223			223	893
18:00	231	253	243	211		234			234	938
19:00	169	213	189	187		189			189	758
20:00	94	110	103	149		114			114	456
21:00	80	92	101	88		90			90	361
22:00	57	80	79	81		74			74	297
23:00	37	49	59	52		49			49	197
24:00	19	25	27	31		25			25	102
TOTALS	3868	4126	4434	4636	2321	4203	0	0	4203	19385
% AVG WKDY	92	98.1	105.4	110.3	55.2					
% AVG WEEK	92	98.1	105.4	110.3	55.2					
AM Times	08:00	09:00	08:00	10:00	08:00	09:00			06:00	
AM Peaks	471	483	531	627	428	484			484	
PM Times	18:00	18:00	15:00	14:00	13:00	15:00			15:00	
PM Peaks	231	253	410	240	232	257			257	

Massachusetts Highway Department  
 WEEKLY SUMMARY FOR LANE 1  
 Starting: 4/23/2008

Page: 2

STA. 29

Site Reference: 080070000408  
 Site ID: 000000000029  
 Location: NEPONSET ST WB ON-RAMP  
 Direction: NORTH

File: 29.pcn  
 City/Town: NORWOOD  
 Comment: VOL - I-95 RAMP

TIME	MON 28	TUE 29	WED 30	THU 1	FRI 2	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00	14	4	10	12	16	11			11	56
02:00	4	10	8	6	16	8			8	44
03:00	6	5	6	6	4	5			5	27
04:00	8	8	9	19	12	11			11	56
05:00	40	37	36	37	32	36			36	182
06:00	122	109	114	131	115	118			118	591
07:00	230	226	219	244	239	231			231	1158
08:00	246	262	289	277	253	265			265	1327
09:00	220	233	276	224	225	235			235	1178
10:00	237	199	168	186	203	198			198	993
11:00	159	216	232	210	209	205			205	1026
12:00	184	169	197	205	197	190			190	952
13:00	178	177	171	171	191	177			177	888
14:00	164	166	166	197		173			173	693
15:00	184	183	200	174		185			185	741
16:00	182	161	169	176		172			172	688
17:00	134	153	141	154		145			145	582
18:00	127	157	165	162		152			152	611
19:00	115	128	145	144		133			133	532
20:00	94	86	109	120		102			102	409
21:00	83	80	74	77		78			78	314
22:00	47	61	67	74		62			62	249
23:00	36	39	36	57		42			42	168
24:00	33	36	34	30		33			33	133
<hr/>										
TOTALS	2847	2905	3041	3093	1712	2967	0	0	2967	13598
% AVG WKDY	95.9	97.9	102.4	104.2	57.7					
% AVG WEEK	95.9	97.9	102.4	104.2	57.7					
AM Times	08:00	08:00	08:00	08:00	08:00	08:00			08:00	
AM Peaks	246	262	289	277	253	265			265	
PM Times	15:00	15:00	15:00	14:00	13:00	15:00			15:00	
PM Peaks	184	183	200	197	191	185			185	

Massachusetts Highway Department  
 WEEKLY SUMMARY FOR LANE 1  
 Starting: 4/28/2008

Page: 2

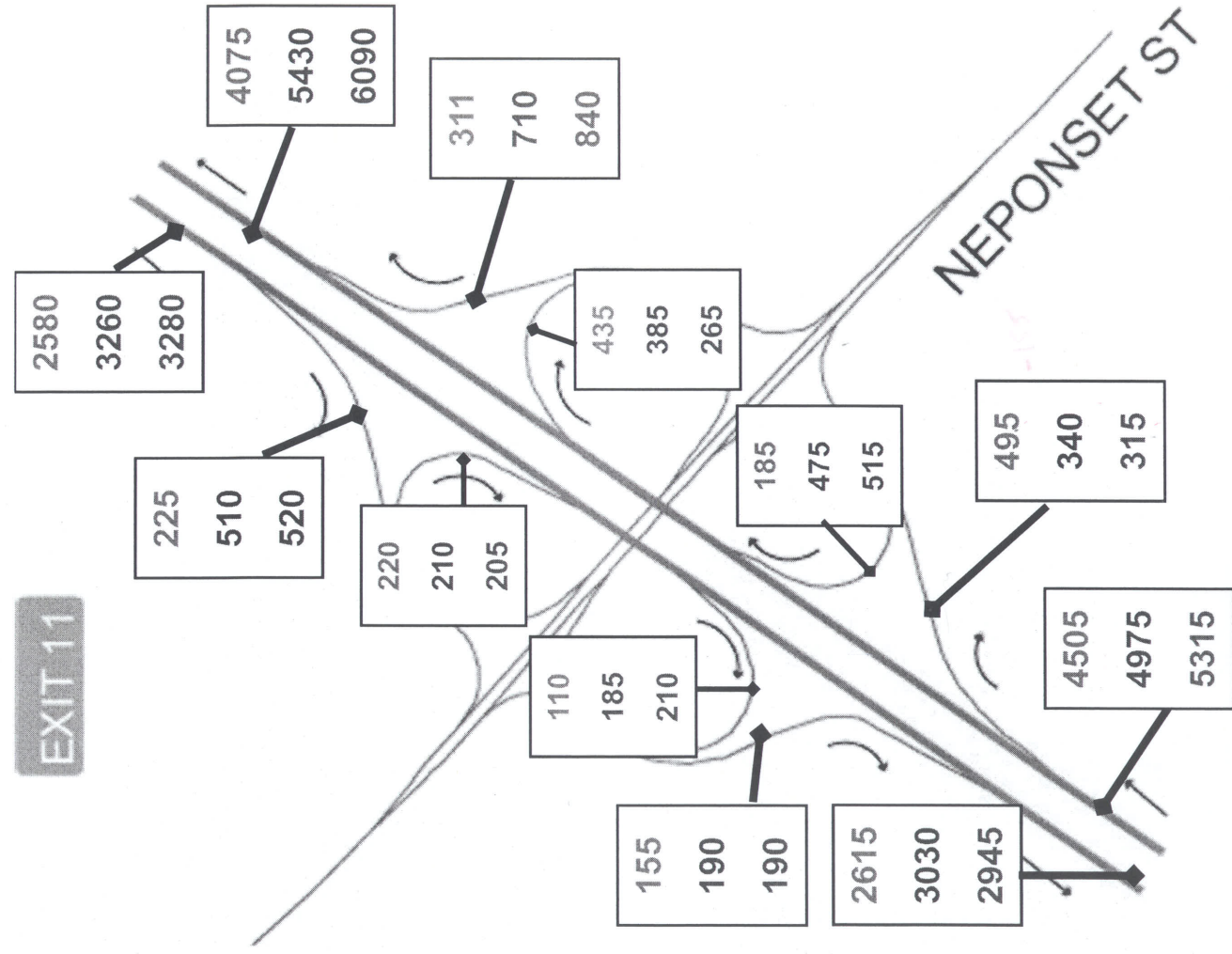
STA. 36

Site Reference: 080070000353  
 Site ID: 000000000036  
 Location: NEPONSET ST WB ON-RAMP  
 Direction: SOUTH

File: 36.prn  
 City/Town: NORWOOD  
 Comment: VOL - I-95 RAMPS

TIME	MON 28	TUE 29	WED 30	THU 1	FRI 2	WKDAY AVG	SAT	SUN	WEEK AVG	TOTAL
01:00	9	17	26	24	27	20			20	103
02:00	15	10	13	8	21	13			13	67
03:00	5	12	5	10	10	8			8	42
04:00	10	14	12	8	11	11			11	55
05:00	15	18	16	19	10	15			15	78
06:00	47	44	51	50	54	49			49	246
07:00	125	98	120	132	129	120			120	604
08:00	232	263	244	254	226	243			243	1219
09:00	233	255	257	200	221	233			233	1166
10:00	190	193	194	224		200			200	891
11:00	128	120	132	138		129			129	518
12:00	126	131	143	151		137			137	551
13:00	150	175	160	150		158			158	635
14:00	149	164	154	132		149			149	599
15:00	203	184	229	202		204			204	818
16:00	243	271	293	266		268			268	1073
17:00	318	328	348	361		338			338	1355
18:00	339	380	397	384		375			375	1500
19:00	228	216	222	234		225			225	900
20:00	123	173	149	142		146			146	587
21:00	89	97	93	113		98			98	382
22:00	58	55	68	75		64			64	256
23:00	36	38	45	64		45			45	183
24:00	32	45	61	62		50			50	200
TOTALS	3103	3301	3432	3403	709	3298	0	0	3298	13948
% AVG WKDY	94	100	104	103.1	21.4					
% AVG WEEK	94	100	104	103.1	21.4					
AM Times	09:00	08:00	09:00	08:00	08:00	08:00			08:00	
AM Peaks	233	263	257	254	226	243			243	
PM Times	18:00	18:00	18:00	18:00		18:00			18:00	
PM Peaks	339	380	397	384		375			375	

EXIT 11



AM

2006 Existing  
 2026 No-Build  
 2026 Build

No-Build includes  
 4.5 million @ Westwood  
 + new off-ramp at Dedham

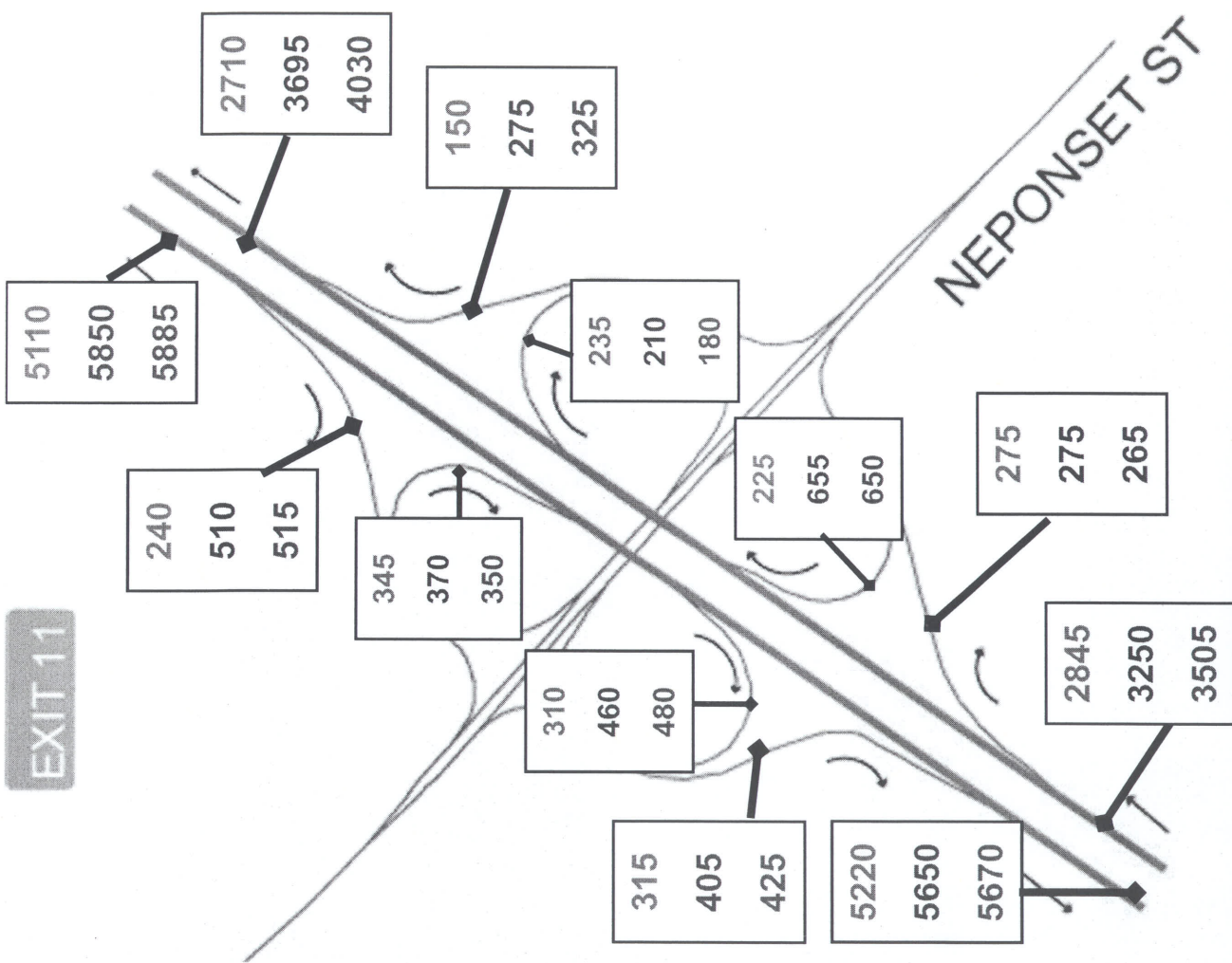
Build includes  
 No-Build + new I93/I95  
 Interchange

Source: FST

NEPONSET ST

PM

2006 Existing
2026 No-Build
2026 Build



EXIT 11

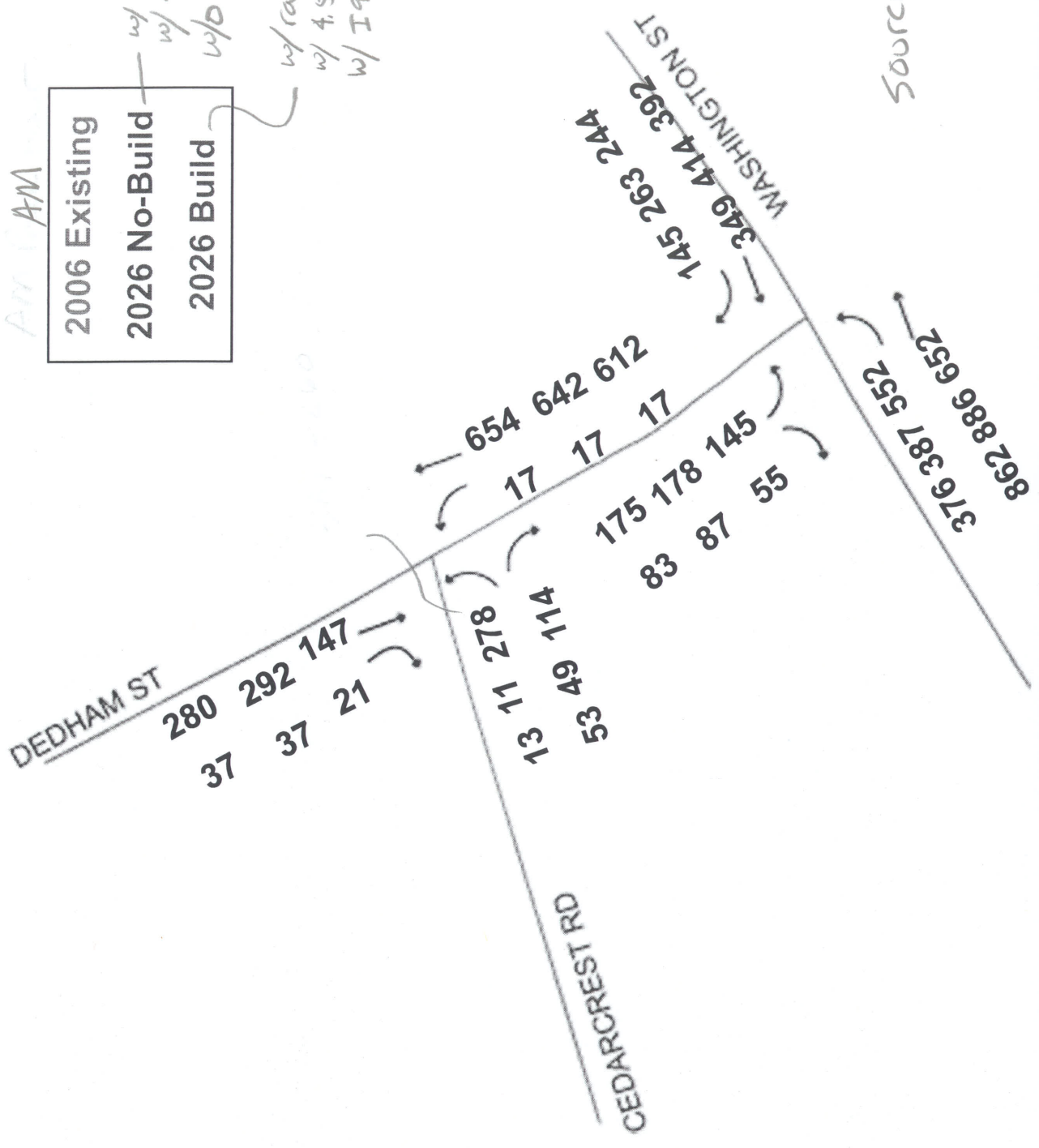
NEPONSET ST

AM CAM

- 2006 Existing
- 2026 No-Build
- 2026 Build

w/ ramp  
w/ 4.5 million w.s.  
w/o 95/93 Interchange

w/ ramp  
w/ 4.5 million w.s.  
w/ I95/93 Interchange

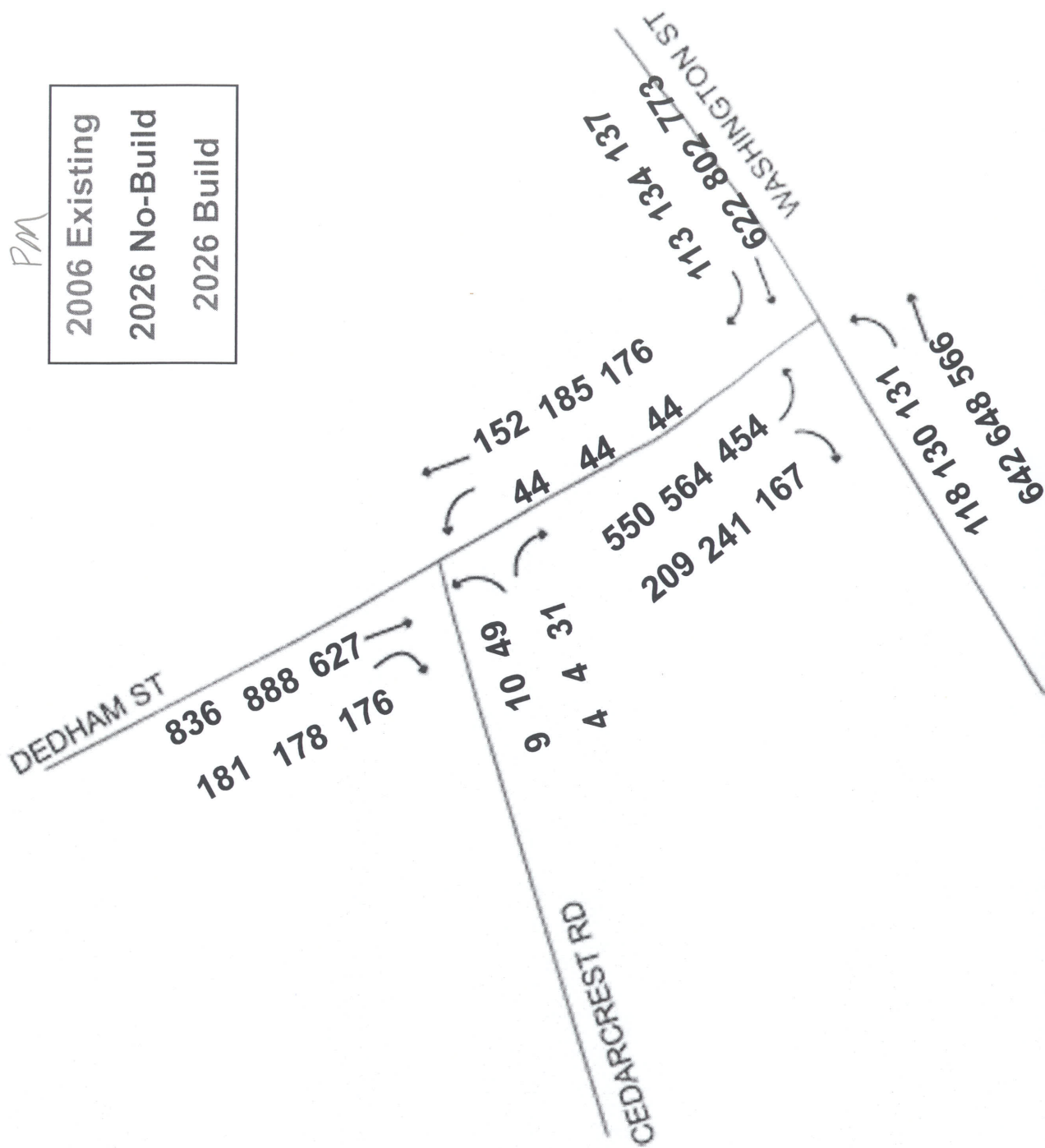


**MASS HIGHWAY**  
 I-95/I-93/University Avenue and Dedham Street Interchange Project

Source: FST (Presentation to FHWA)

PM

2006 Existing
2026 No-Build
2026 Build



I-95/I-93/University Avenue and Dedham Street  
Interchange Project

Redistribution of Existing  
Traffic Resulting from the  
New I-95/Dedham St.  
Interchange

Legend

Black = Existing Path

Red = Future Path



TETRA TECH

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JOB \_\_\_\_\_

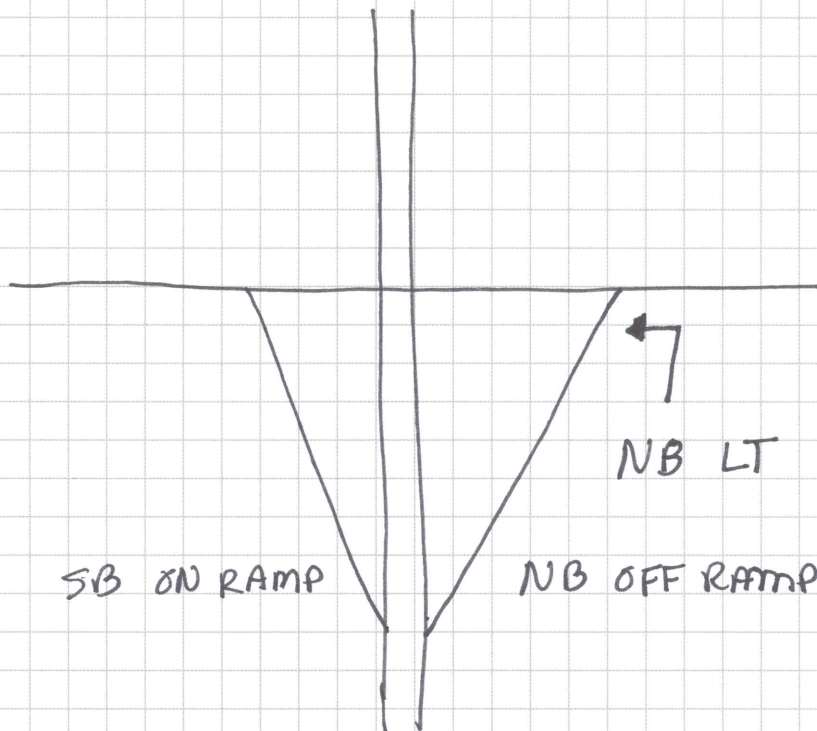
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CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

SCALE \_\_\_\_\_





TETRA TECH

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JOB \_\_\_\_\_

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

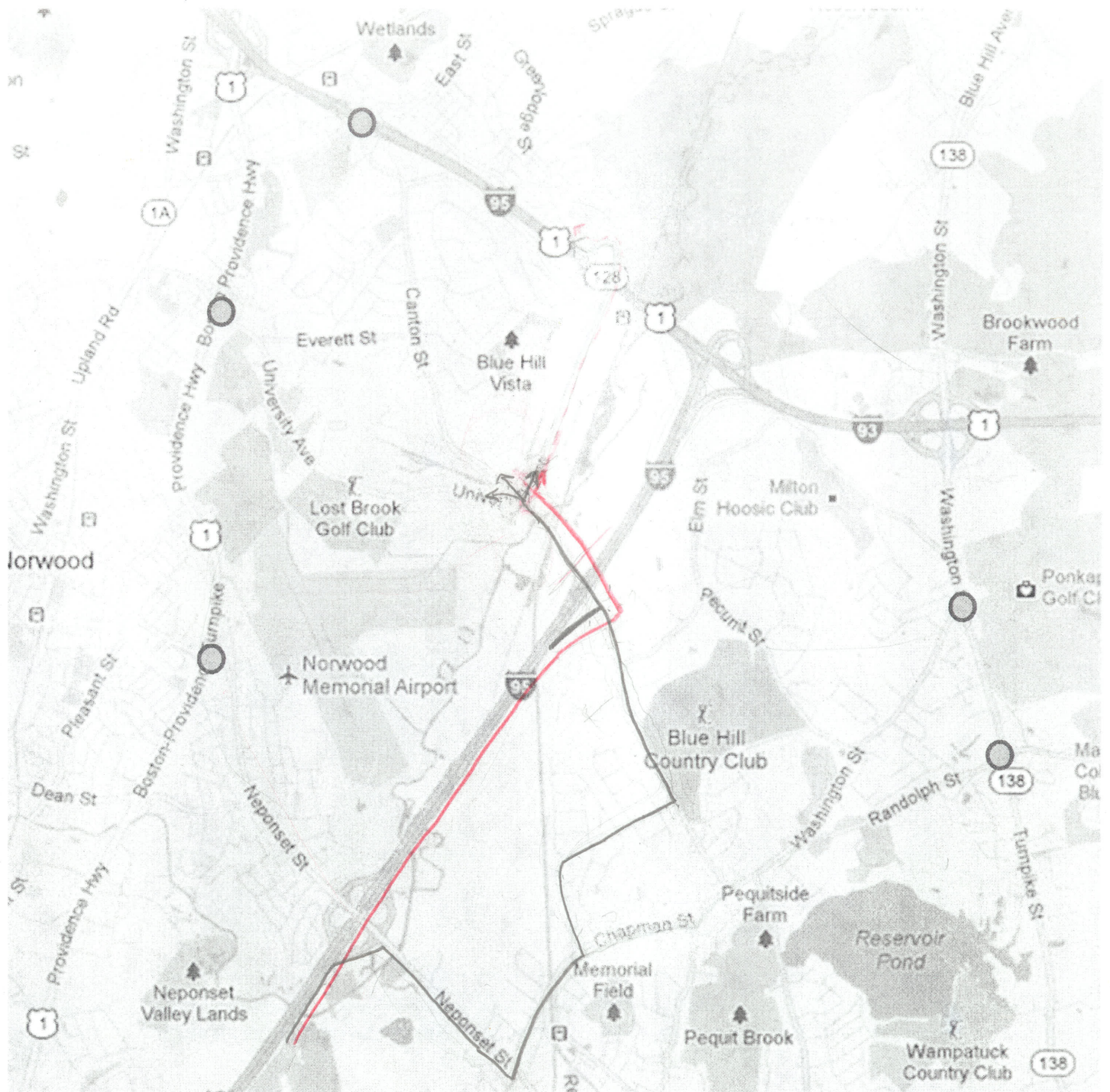
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CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

SCALE \_\_\_\_\_

✓

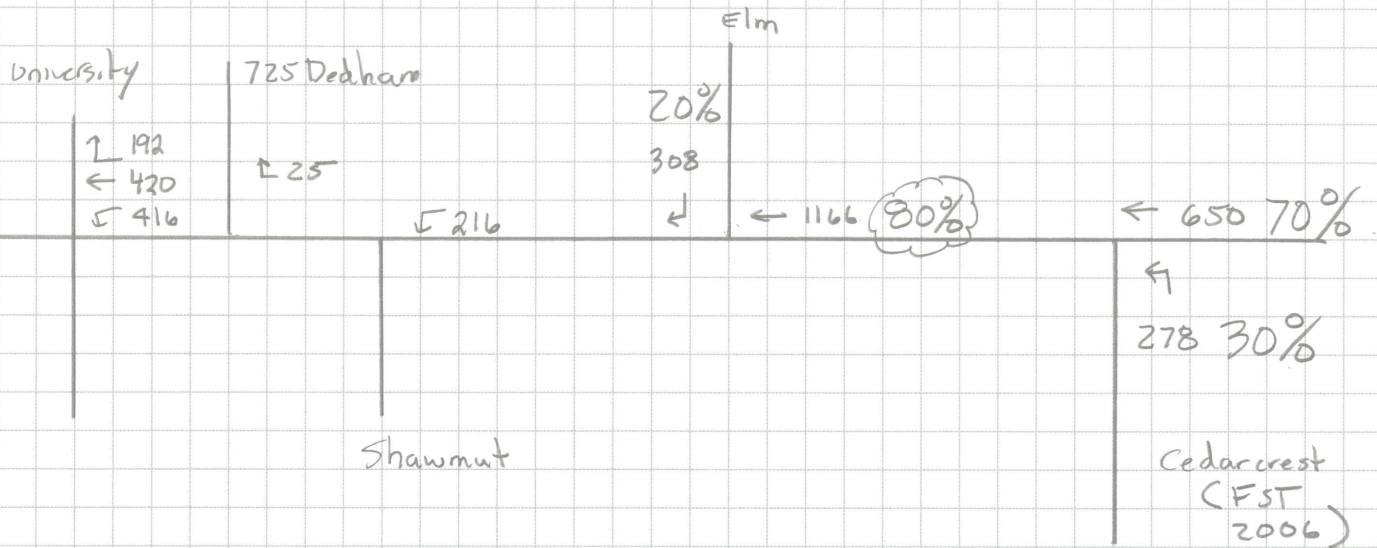
1.



AM 46  
 PM 0  
 SAT 0

# PATH 1 - CALL.

AM only



Assume 1/2 of volume coming out of Cedarcrest is cut-through

$$(278/2) / [278/2 + 650] = 18\%$$

$$192 \times 100\% + 420 \times 15\% + 416 \times 15\% = 317$$

$$317 \times 80\% \times 18\% = \underline{\underline{46}}$$



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JOB \_\_\_\_\_

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

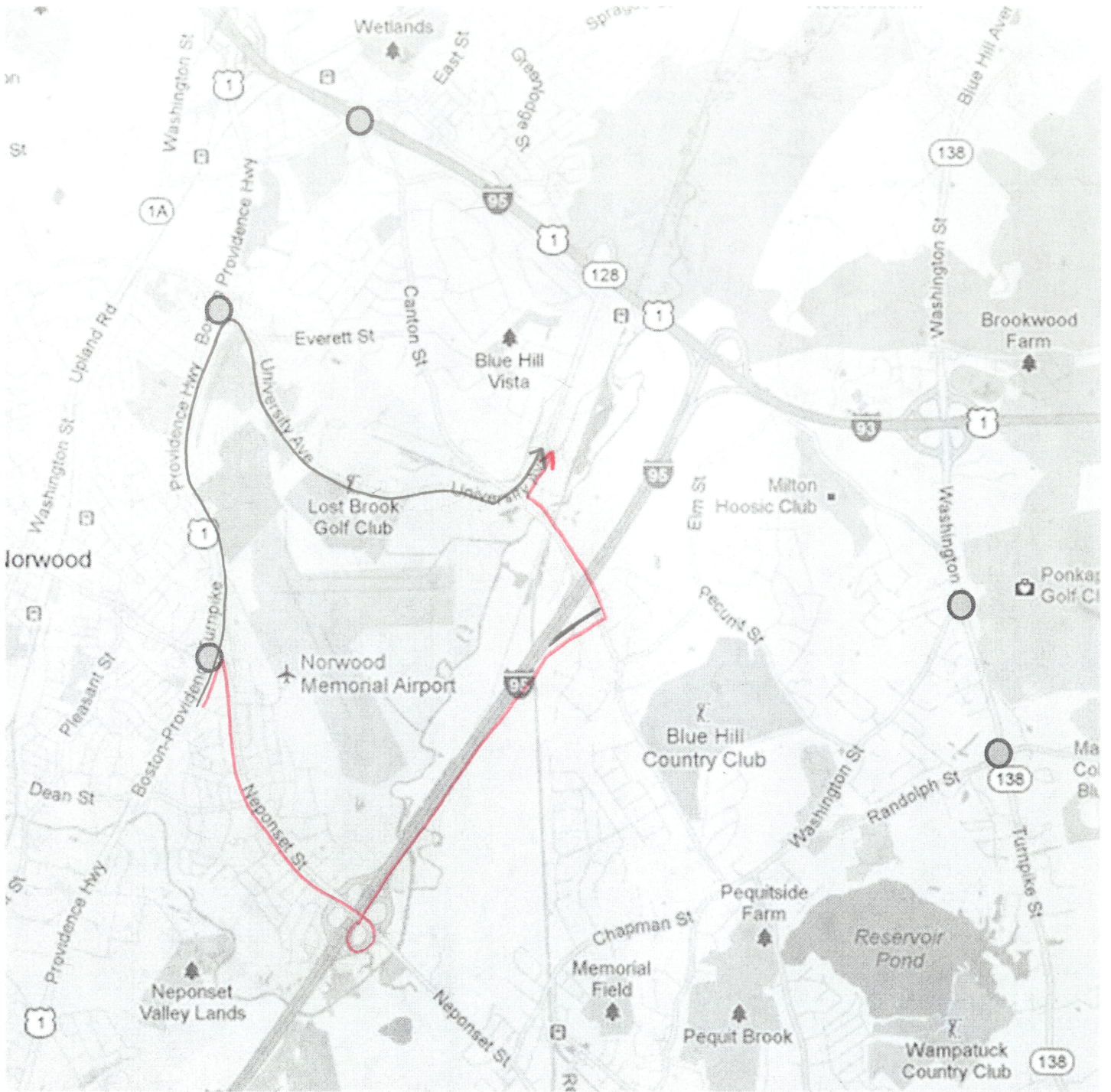
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CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

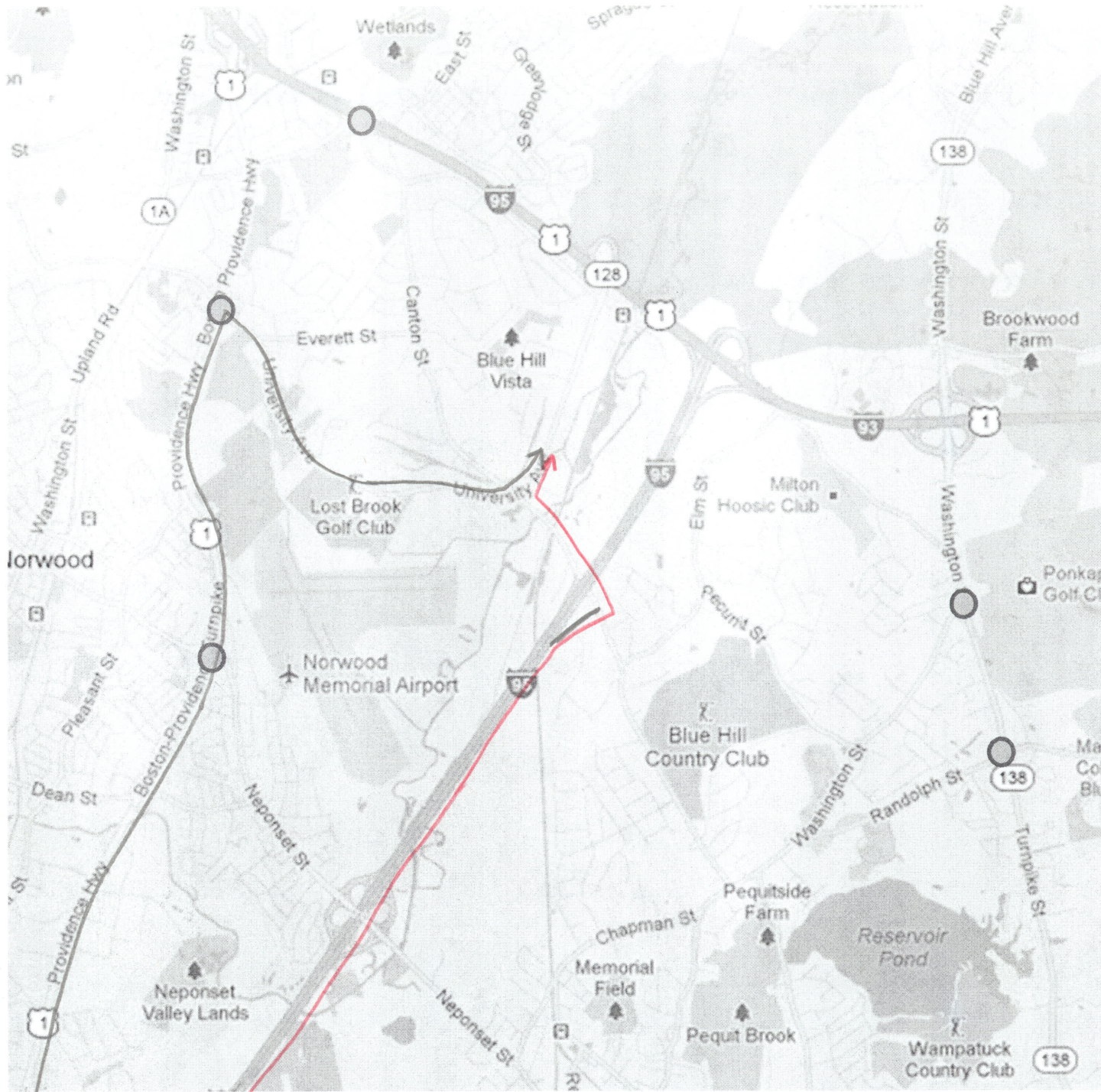
SCALE \_\_\_\_\_

✓ small %

2.



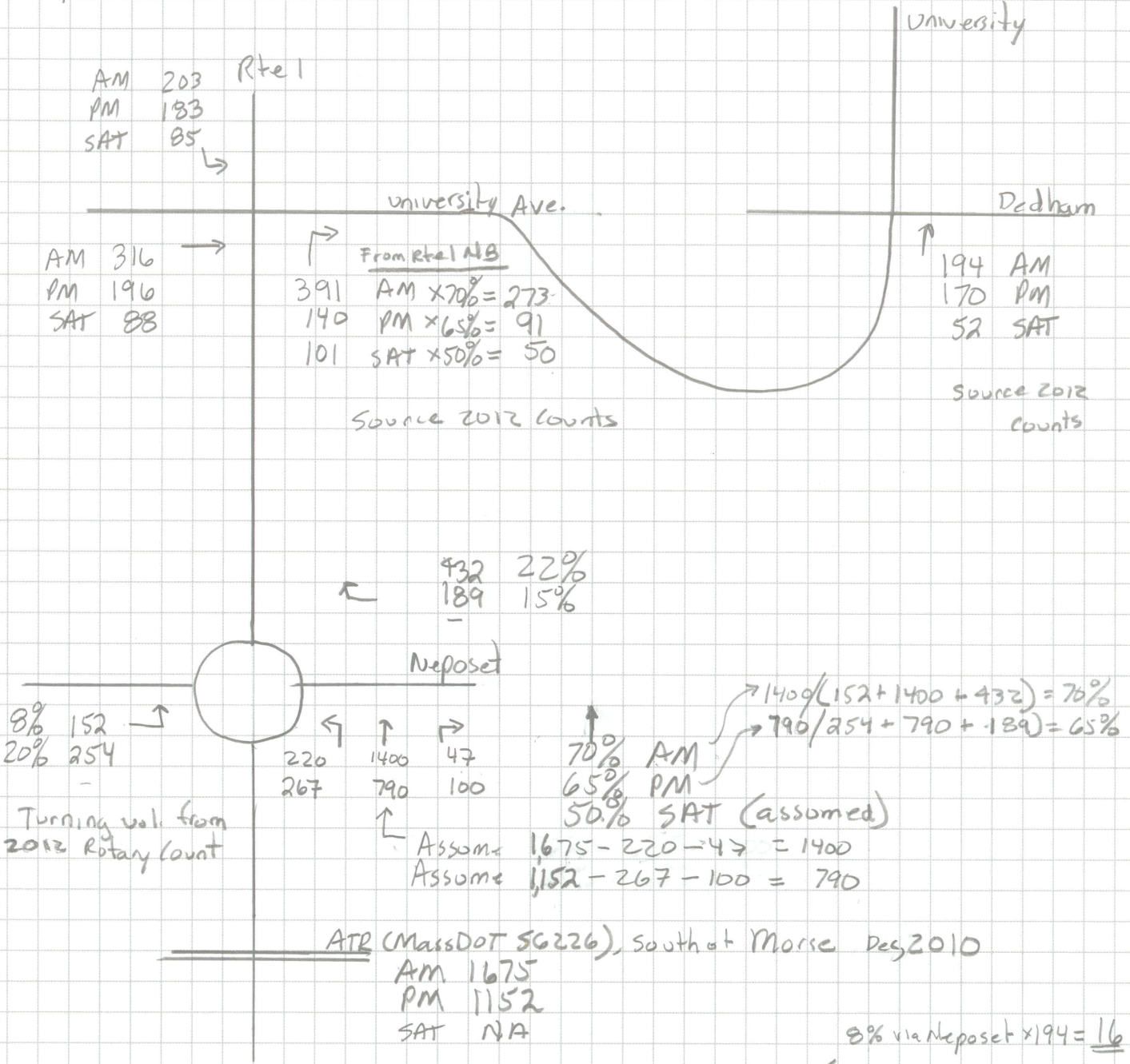
AM 16  
PM 9  
SAT 3



Coney St.

AM 50  
PM 24  
SAT 9

PATHS 2+3 CALCS



Source 2012 Counts

Source 2012 Counts

Turning vol. from 2012 Rotary Count

ATR (MassDOT SG226), South at Morse Dec 2010

AM 1675  
 PM 1152  
 SAT NA

8% via Neponset  $\times 194 = 16$

AM: NB on Rte 1 = 273 [273 + 316 + 203] = 34% < 26% via Coney  $\times 194 = 50$

PM: NB on Rte 1 = 91 [91 + 196 + 183] = 19% < 5% via Neponset  $\times 170 = 9$   
 14% via Coney  $\times 170 = 24$

SAT: NB on Rte 1 = 50 [50 + 88 + 85] = 22% < 5% via Neponset  $\times 52 = 3$   
 17% via Coney  $\times 52 = 9$



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JOB \_\_\_\_\_  
 SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_  
 CALCULATED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 SCALE \_\_\_\_\_

Location Info	
Location ID	6226_NB
Type	I-SECTION
Functional Class	-
Located On	BLUE STAR MEMORIAL HIGHWAY
Between	AND
Direction	NB
Community	NORWOOD
MPO_ID	
HPMS ID	
Agency	Massachusetts Highway Department

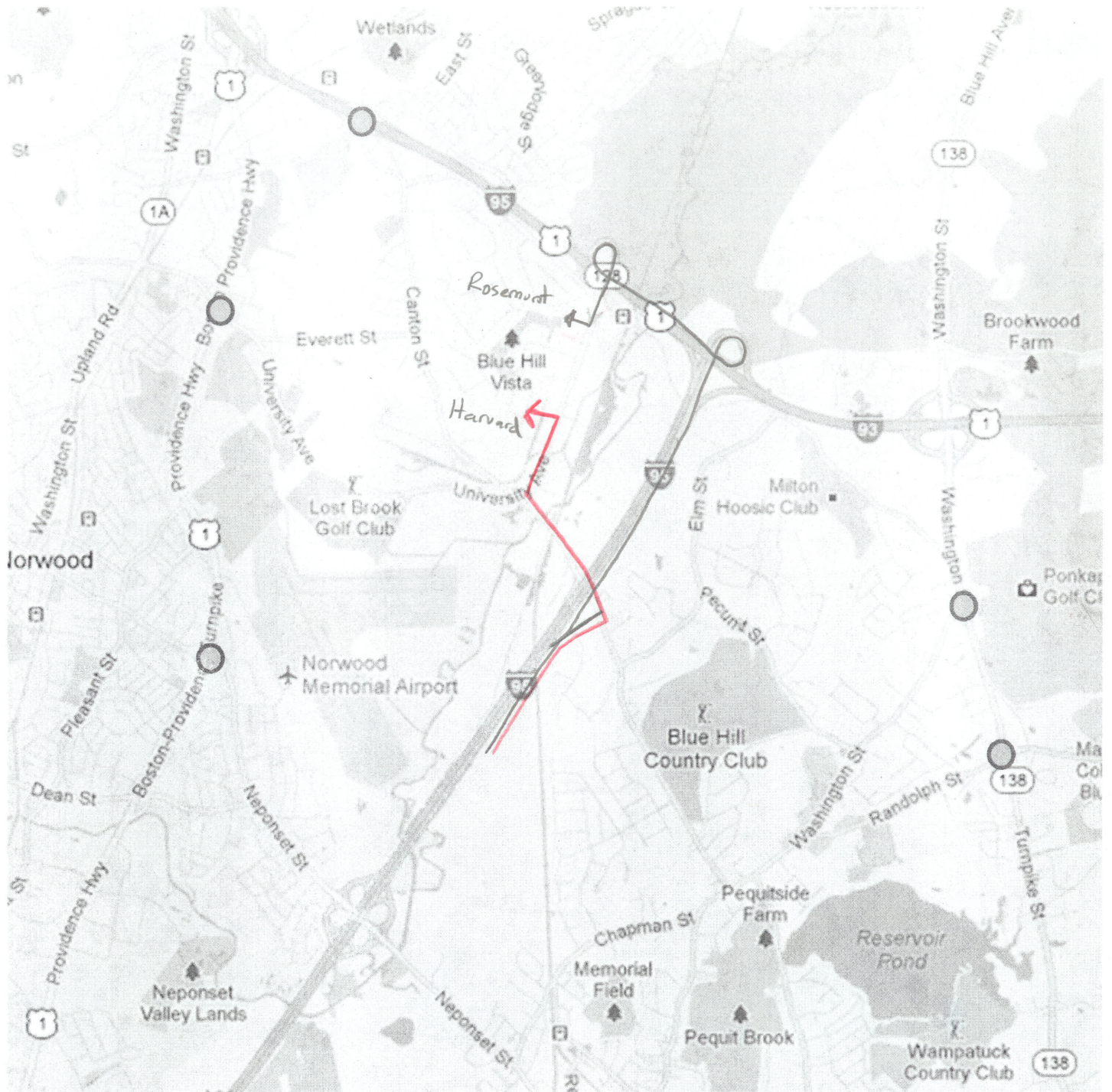
Count Data Info	
Start Date	12/7/2010
End Date	12/8/2010
Start Time	12:00 AM
End Time	12:00 AM
Direction	
Notes	
Count Source	1.1E+11
File Name	CLC6226.prn
Weather	
Study	
Owner	mhd

Interval: 15 mins					
Time	15 Min				Hourly Count
	1st	2nd	3rd	4th	
00:00 - 01:00	210	266	199	179	854
01:00 - 02:00	188	173	162	42	565
02:00 - 03:00	26	41	7	6	80
03:00 - 04:00	3	15	16	11	45
04:00 - 05:00	13	23	23	33	92
05:00 - 06:00	35	70	105	130	340
06:00 - 07:00	189	264	315	414	1182
07:00 - 08:00	432	418	377	432	1659
08:00 - 09:00	387	442	413	367	1609
09:00 - 10:00	310	288	320	278	1196
10:00 - 11:00	266	275	278	269	1088
11:00 - 12:00	285	264	297	285	1131
12:00 - 13:00	279	344	329	347	1299
13:00 - 14:00	352	317	305	335	1309
14:00 - 15:00	318	283	278	302	1181
15:00 - 16:00	306	286	285	254	1131
16:00 - 17:00	315	287	257	252	1111
17:00 - 18:00	304	318	272	258	1152
18:00 - 19:00	261	235	204	207	907
19:00 - 20:00	161	163	208	171	703
20:00 - 21:00	189	175	136	134	634
21:00 - 22:00	140	124	105	96	465
22:00 - 23:00	86	76	50	51	263
23:00 - 24:00	42	34	24	25	125
TOTAL					20121

7:45

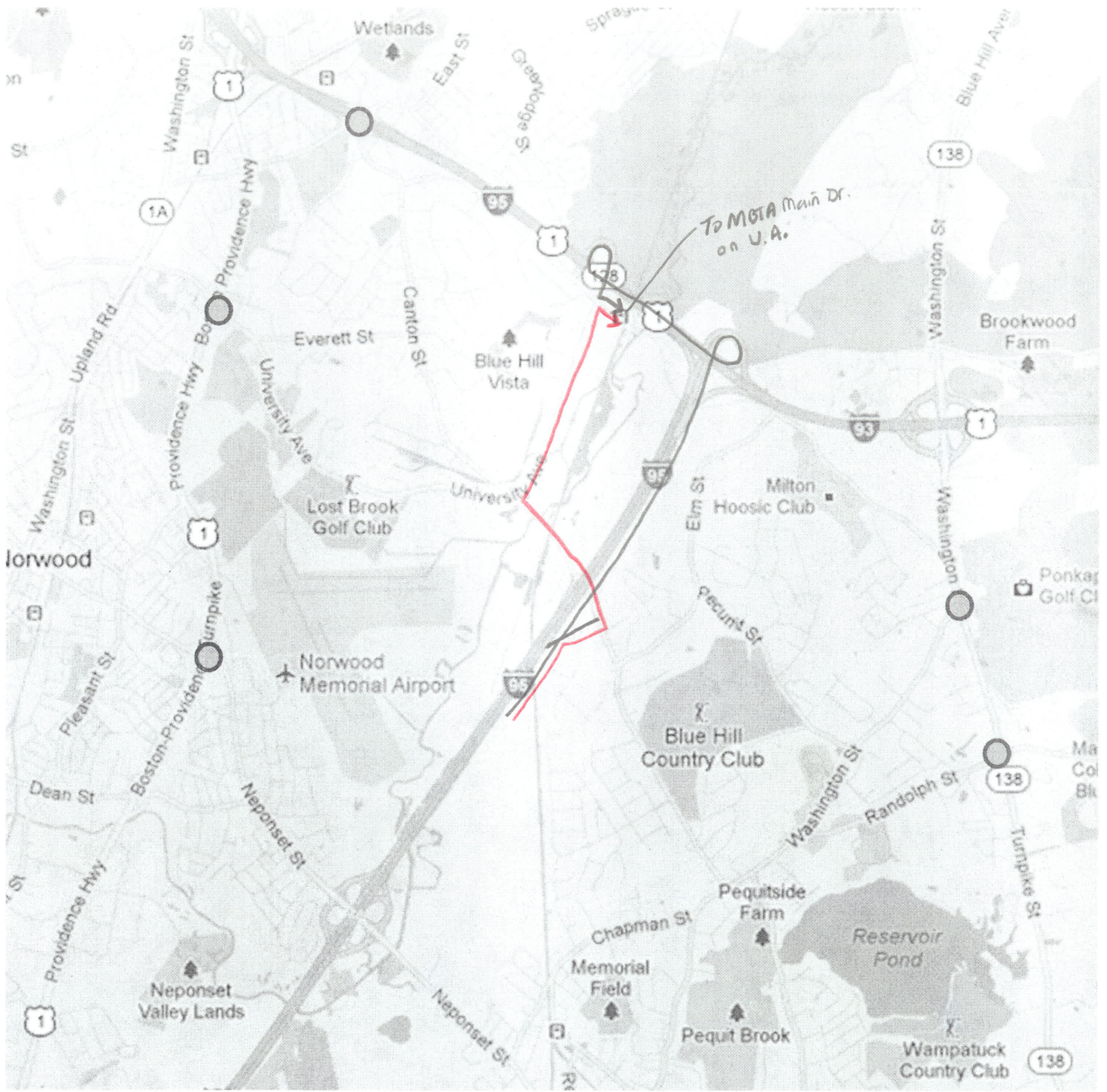
1674

NO SATURDAY AVAILABLE



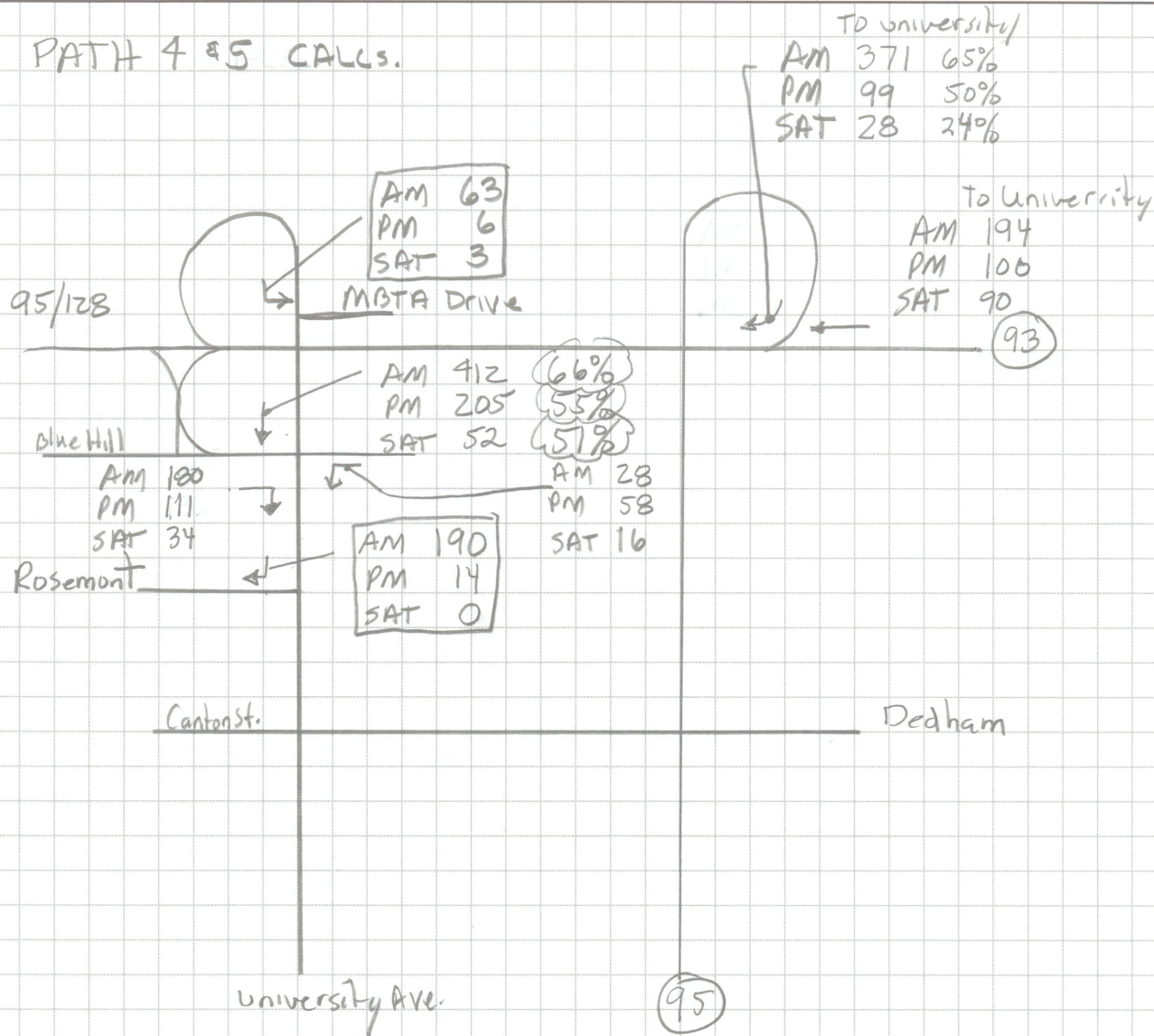
AM 61  
PM 3  
SAT 0





AM 20  
 PM 2  
 SAT 0

PATH 4 & 5 CALCS.



Assume 75% Divert onto new ramp for Rosemont  
 Assume 50% Divert onto new ramp for MBTA

Rosemont

AM:  $190 \times 66\% \times 65\% \times 75\% = \underline{\underline{61}}$

PM:  $14 \times 55\% \times 50\% \times 75\% = \underline{\underline{3}}$

SAT:  $0$

MBTA Driveway

AM:  $63 \times 65\% \times 50\% = \underline{\underline{20}}$

PM:  $6 \times 50\% \times 50\% = \underline{\underline{2}}$

SAT:  $3 \times 24\% \times 50\% = \underline{\underline{0}}$



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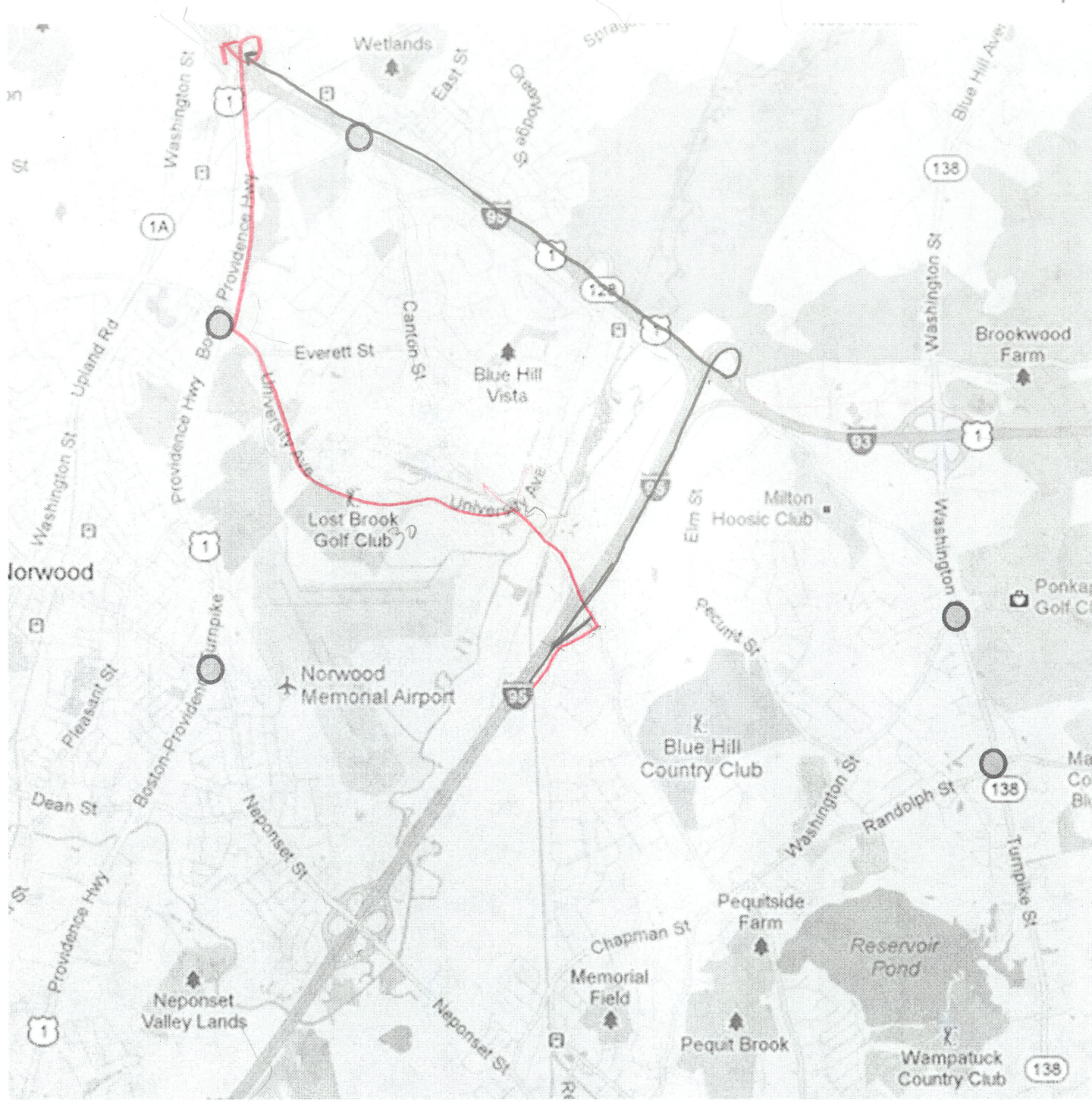
JOB \_\_\_\_\_

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

CALCULATED BY \_\_\_\_\_ DATE \_\_\_\_\_

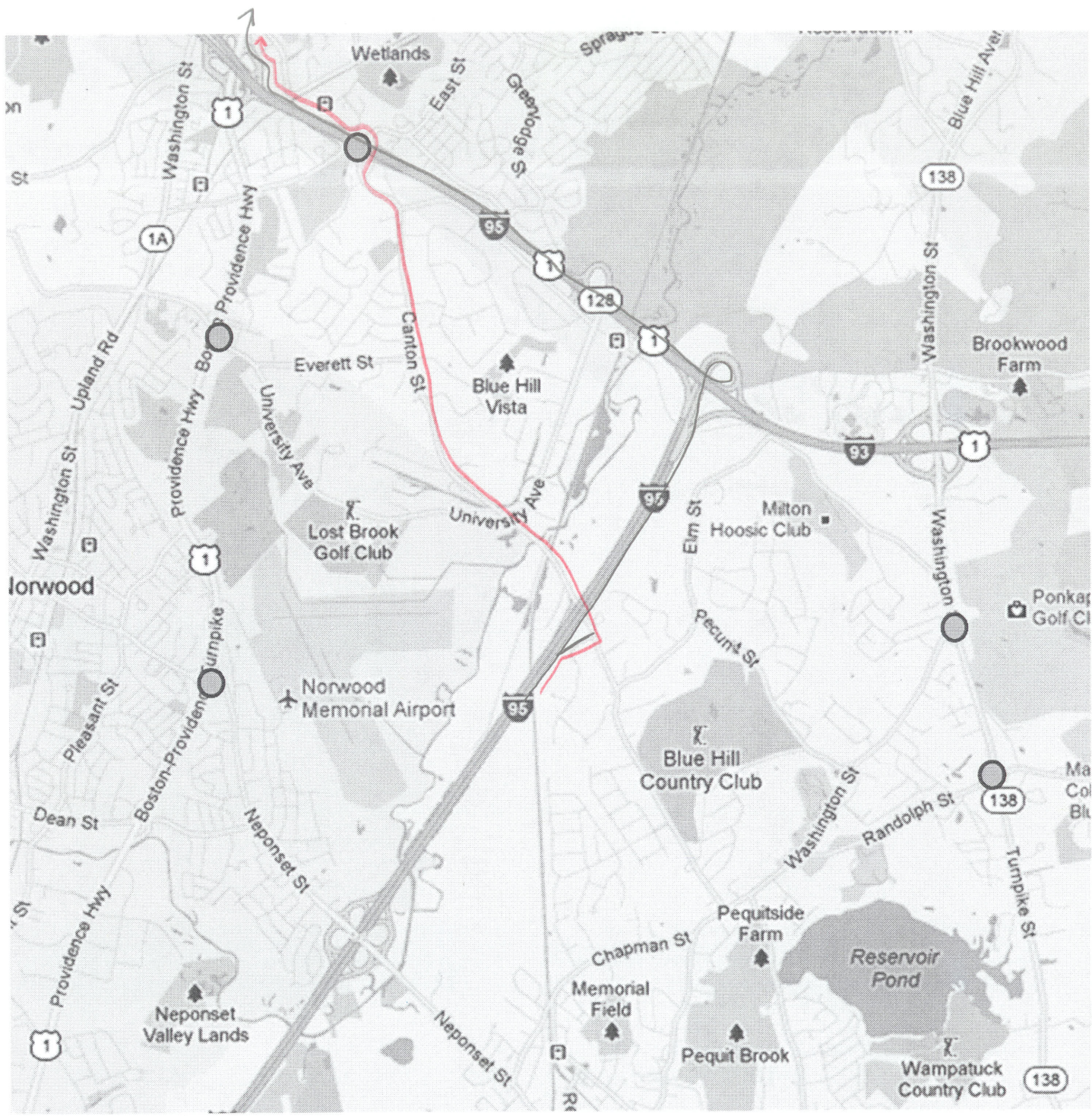
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SCALE \_\_\_\_\_

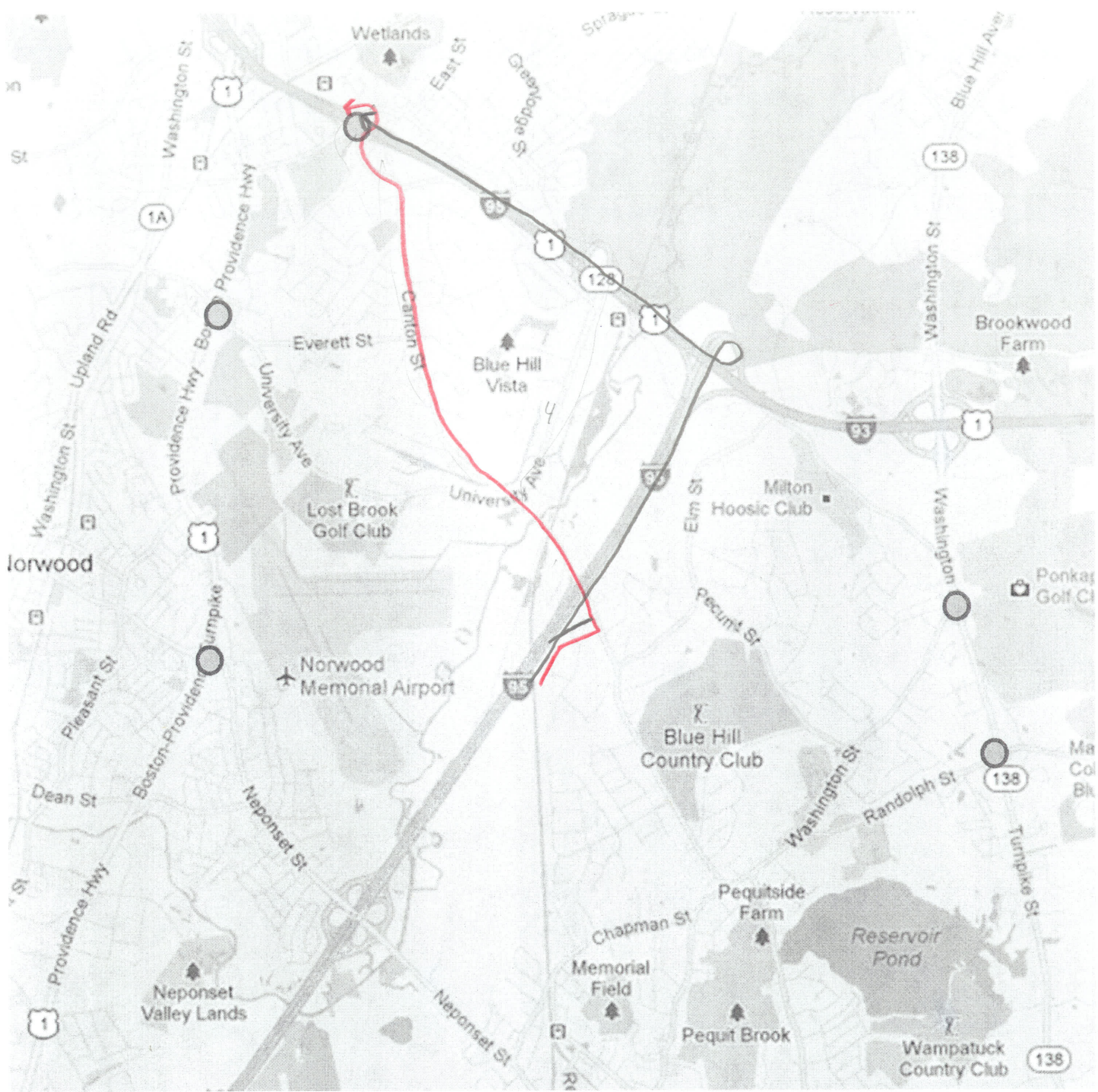


AM 36  
PM 0  
SAT 0





AM 1  
PM 0  
SAT 0



AM 48  
 PM 0  
 SAT 0