

**USH 45: STH 145 TO CTH E (MILWAUKEE COUNTY)
NIGHTTIME 2 LANE CLOSURE
NO DIVERSION ROUTE (MAX QUEUE METHOD)**

OCTOBER
Analyzed for 2009
Construction Season

SUMMARY OF TRAFFIC MODEL OUTPUT
FRIDAY SOUTHBOUND DIRECTION

TIME OF DAY	FLOWS AND CAPACITY IN VEH/HR						AVERAGE SPEEDS IN MPH				
	MAIN ROUTE		SITE CAPA CITY	FLOW		AV.DEL PER VEH (MINS)	AVERAGE QUEUE (VEH)	MAIN ROUTE		SITE	
	DEMAND FLOW	PCT HEAVY		MAIN ROUTE	'DIVER TED'			WITHOUT WORK ZONE	WITH WORK ZONE		
MID-1 AM	390	0.0	1500	390	0	0.52	0	70.2	55.5	43.9	
1-2 AM	281	0.0	1500	281	0	0.51	0	70.2	55.8	44.3	
2-3 AM	283	0.0	1500	283	0	0.51	0	70.2	55.8	44.3	
3-4 AM	376	0.0	1500	376	0	0.52	0	70.2	55.5	44.0	
4-5 AM	738	0.0	1500	738	0	0.56	0	69.8	54.4	42.6	
5-6 AM	2034	0.0	OFF	2034	0	0.00	0	68.2	68.2	68.2	
6-7 AM	4362	0.0	OFF	4362	0	0.00	0	61.0	61.0	61.0	
7-8 AM	5340	0.0	OFF	5340	0	0.00	0	54.4	54.4	54.4	
8-9 AM	4094	0.0	OFF	4094	0	0.00	0	62.9	62.9	62.9	
9-10 AM	3440	0.0	OFF	3440	0	0.00	0	66.4	66.4	66.4	
10-11 AM	3454	0.0	OFF	3454	0	0.00	0	66.4	66.4	66.4	
11AM-NOON	3594	0.0	OFF	3594	0	0.00	0	66.3	66.3	66.3	
NOON-1PM	3700	0.0	OFF	3700	0	0.00	0	65.6	65.6	65.6	
1-2 PM	3470	0.0	OFF	3470	0	0.00	0	66.4	66.4	66.4	
2-3 PM	4112	0.0	OFF	4112	0	0.00	0	62.8	62.8	62.8	
3-4 PM	4318	0.0	OFF	4318	0	0.00	0	61.4	61.4	61.4	
4-5 PM	4506	0.0	OFF	4506	0	0.00	0	60.1	60.1	60.1	
5-6 PM	4173	0.0	OFF	4173	0	0.00	0	62.3	62.3	62.3	
6-7 PM	3246	0.0	OFF	3246	0	0.00	0	66.7	66.7	66.7	
7-8 PM	2197	0.0	1499	1953	244	12.51+	316	68.0	9.8	30.8	
8-9 PM	1555	0.0	1499	1420	135	15.89+	387	68.8	8.2	30.8	
9-10 PM	1499	0.0	1500	1499	0	15.71+	382	68.9	8.3	30.8	
10-11 PM	1233	0.0	1499	1233	0	9.97	251	69.2	11.6	31.8	
11PM-MID	1077	0.0	1500	1077	0	1.05	17	69.4	45.3	39.5	

"OFF" INDICATES NO ROAD WORK (ALL LANES OPEN TO TRAFFIC)

+ INDICATES QUEUEING EXCEEDS USER-SPECIFIED MAXIMUM LIMIT

----- SITE BREAKDOWN DELAYS -----	
BREAKDOWN DURATION (MINS)	0
RANGE OF QUEUE DELAY - MIN (VEH-H) MAX	0.0
AV BREAKDOWNS PER DAY	0.00
AV QUEUE DELAY/DAY (VEH-H)	0.0
AV TOTAL DELAY/DAY (VEH-H)	0.0

----- SITE ACCIDENT DELAYS -----	
BREAKDOWN DURATION (MINS)	0
RANGE OF QUEUE DELAY - MIN (VEH-H) MAX	0
AV BREAKDOWNS PER DAY	0
AV QUEUE DELAY/DAY (VEH-H)	0
AV TOTAL DELAY/DAY (VEH-H)	0

AVERAGE ACCIDENT NUMBERS (PIA/DAY)	
MAIN ROUTE WITHOUT WORKS	0.0232
MAIN ROUTE WITH WORKS	0.0225
'DIVERSION'	0.0003
PIA: Personal Injury Accidents	
IMPACTS ON ROAD USERS	
ROAD USER COSTS PER DAY	\$21,505
CONGESTED HOURS PER DAY*	3

*Delays Exceeding User-Specified Maximum

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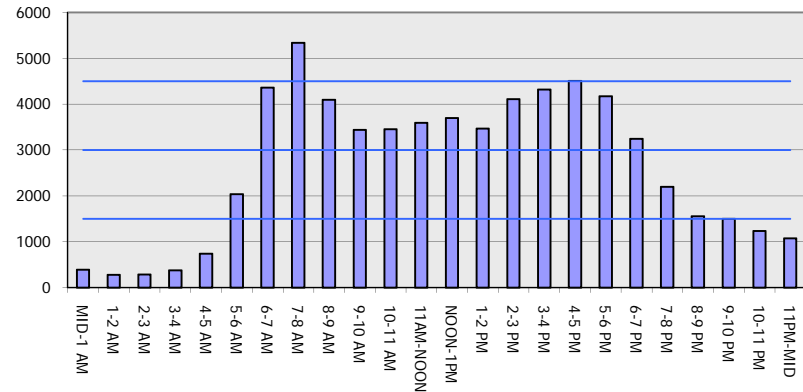
OCTOBER

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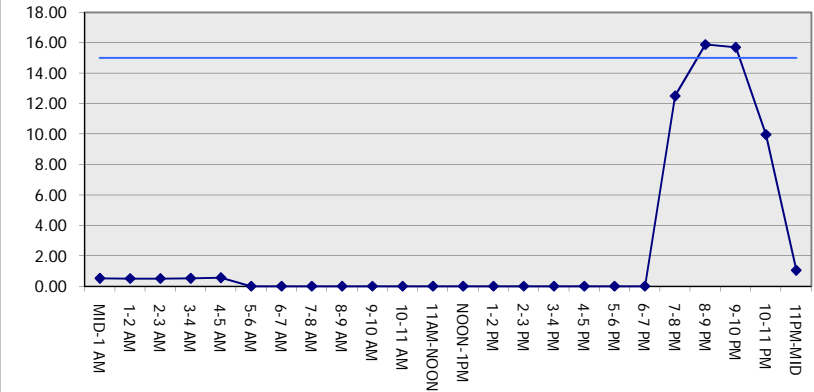
GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT

FRIDAY SOUTHBOUND DIRECTION

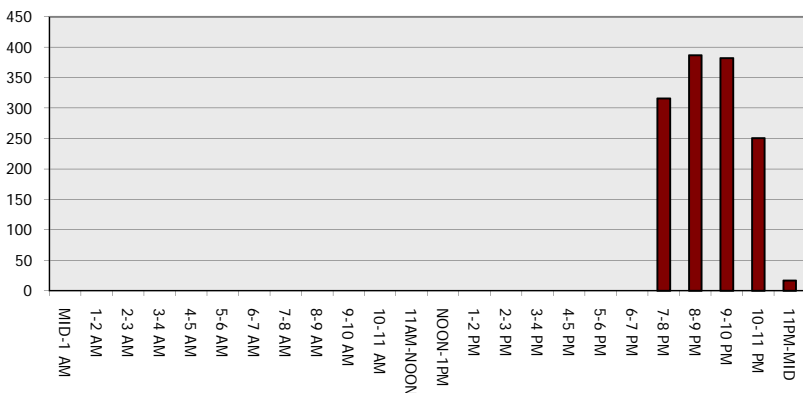
Main Route - Traffic Demand (Vehicles Per Hour)



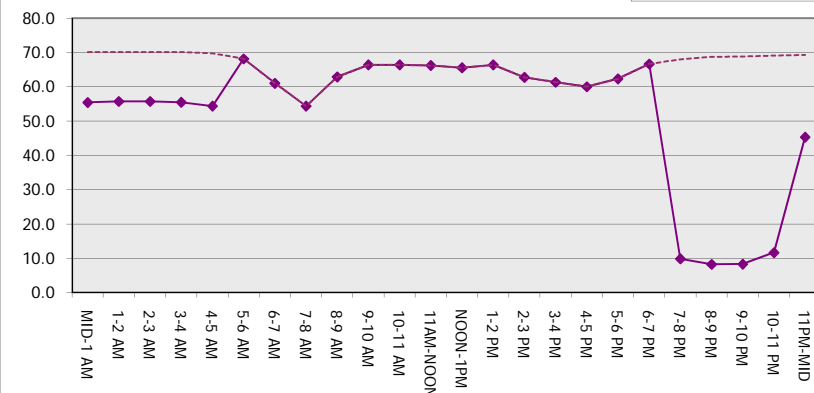
Main Route Average Delay Per Vehicle (Minutes)



Main Route - Average Queue Length (Vehicles)



Main Route - Average Speed (MPH)



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SUMMARY OF TRAFFIC MODEL OUTPUT

FRIDAY NORTHBOUND DIRECTION

TIME OF DAY	FLOWS AND CAPACITY IN VEH/HR						AVERAGE SPEEDS IN MPH			
	MAIN ROUTE		SITE CAPA CITY	FLOW		AV.DEL PER VEH (MINS)	AVERAGE QUEUE (VEH)	MAIN ROUTE		SITE
	DEMAND FLOW	PCT HEAVY		MAIN ROUTE	'DIVER TED'			WITHOUT WORK ZONE	WITH WORK ZONE	
MID-1 AM	551	0.0	1500	551	0	0.67	6	70.0	52.4	43.3
1-2 AM	355	0.0	1500	355	0	0.52	0	70.2	55.6	44.1
2-3 AM	348	0.0	1500	348	0	0.51	0	70.2	55.6	44.1
3-4 AM	399	0.0	1500	399	0	0.52	0	70.2	55.5	43.9
4-5 AM	722	0.0	1500	722	0	0.56	0	69.9	54.5	42.7
5-6 AM	1953	0.0	OFF	1953	0	0.00	0	68.3	68.3	68.3
6-7 AM	3566	0.0	OFF	3566	0	0.00	0	66.3	66.3	66.3
7-8 AM	4793	0.0	OFF	4793	0	0.00	0	58.1	58.1	58.1
8-9 AM	3894	0.0	OFF	3894	0	0.00	0	64.3	64.3	64.3
9-10 AM	3189	0.0	OFF	3189	0	0.00	0	66.8	66.8	66.8
10-11 AM	3234	0.0	OFF	3234	0	0.00	0	66.7	66.7	66.7
11AM-NOON	3572	0.0	OFF	3572	0	0.00	0	66.3	66.3	66.3
NOON-1PM	3977	0.0	OFF	3977	0	0.00	0	63.7	63.7	63.7
1-2 PM	4195	0.0	OFF	4195	0	0.00	0	62.2	62.2	62.2
2-3 PM	4880	0.0	OFF	4880	0	0.00	0	57.5	57.5	57.5
3-4 PM	5704	0.0	OFF	5704	0	0.00	0	51.9	51.9	51.9
4-5 PM	6294	0.0	OFF	6294	0	0.00	0	47.9	47.9	47.9
5-6 PM	5737	0.0	OFF	5737	0	0.00	0	51.7	51.7	51.7
6-7 PM	4006	0.0	OFF	4006	0	0.00	0	63.5	63.5	63.5
7-8 PM	2702	0.0	1499	1633	1069	14.91+	376	67.4	8.6	36.1
8-9 PM	2215	0.0	1499	1761	454	14.23+	358	68.0	8.9	31.8
9-10 PM	2209	0.0	1499	1500	709	16.62+	407	68.0	7.9	30.8
10-11 PM	1720	0.0	1500	1500	220	16.62+	406	68.6	7.9	30.8
11PM-MID	1205	0.0	1499	1205	0	11.00	285	69.2	10.8	32.8

"OFF" INDICATES NO ROAD WORK (ALL LANES OPEN TO TRAFFIC)

+ INDICATES QUEUEING EXCEEDS USER-SPECIFIED MAXIMUM LIMIT

----- SITE BREAKDOWN DELAYS -----	
BREAKDOWN DURATION (MINS)	0
RANGE OF QUEUE DELAY - MIN (VEH-H) MAX	0.0
AV BREAKDOWNS PER DAY	0.00
AV QUEUE DELAY/DAY (VEH-H)	0.0
AV TOTAL DELAY/DAY (VEH-H)	0.0

----- SITE ACCIDENT DELAYS -----	
BREAKDOWN DURATION (MINS)	0
RANGE OF QUEUE DELAY - MIN (VEH-H) MAX	0
AV BREAKDOWNS PER DAY	0
AV QUEUE DELAY/DAY (VEH-H)	0
AV TOTAL DELAY/DAY (VEH-H)	0

AVERAGE ACCIDENT NUMBERS (PIA/DAY)	
MAIN ROUTE WITHOUT WORKS	0.0261
MAIN ROUTE WITH WORKS	0.0246
'DIVERSION'	0.0021

PIA: Personal Injury Accidents

ECONOMIC IMPACT ON ROAD USERS	
ROAD USER COSTS PER DAY	\$36,143
CONGESTED HOURS PER DAY*	4

*Delays Exceeding User-Specified Maximum

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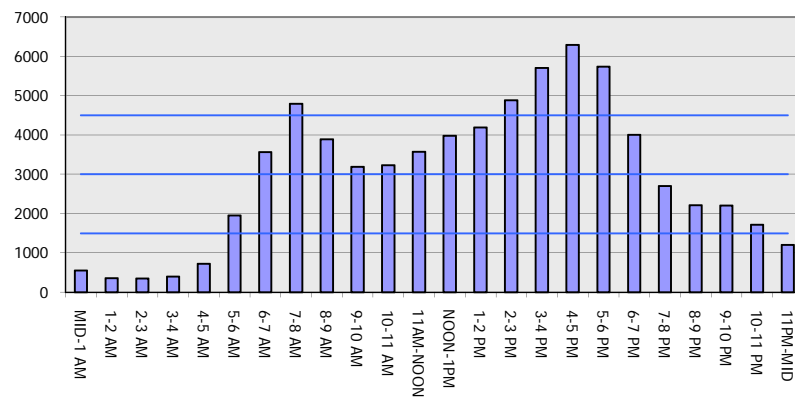
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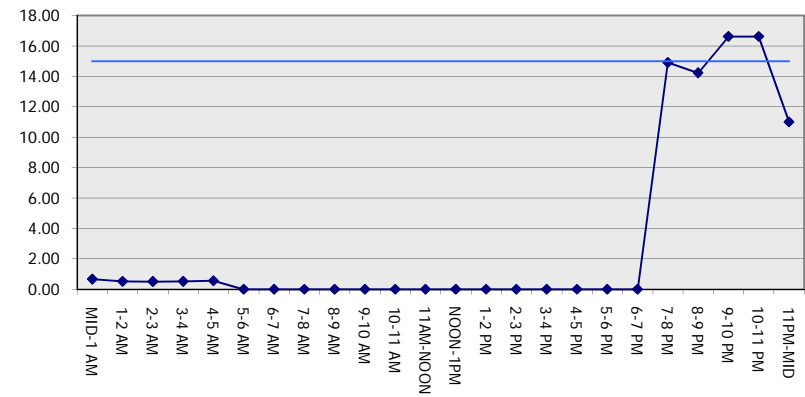
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FRIDAY NORTHBOUND DIRECTION

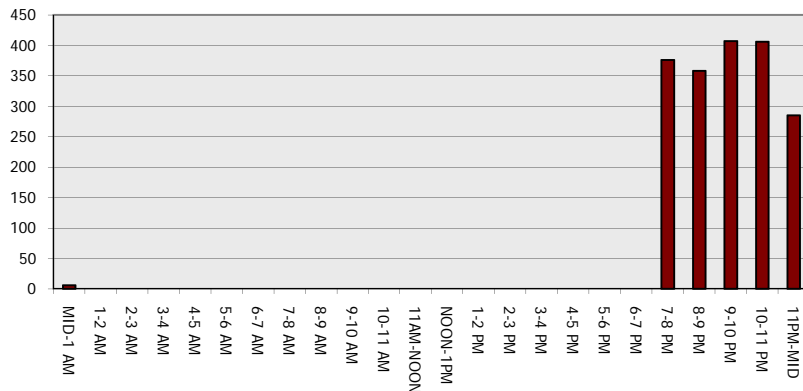
Main Route - Traffic Demand (Vehicles Per Hour)



Main Route Average Delay Per Vehicle (Minutes)



Main Route - Average Queue Length (Vehicles)



Main Route - Average Speed (MPH)

