

**USH 45: CTH E TO STH 190 (MILWAUKEE COUNTY)
NIGHTTIME 2 LANE CLOSURE
NO DIVERSION ROUTE (MAX QUEUE METHOD)**

AUGUST
Analyzed for 2009
Construction Season

SUMMARY OF TRAFFIC MODEL OUTPUT
SUNDAY 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	871	0.0	1500	871	0	0.57	0	69.7	51.6	42.2	
1-2 AM	483	0.0	1500	483	0	0.53	0	70.1	52.8	43.6	
2-3 AM	450	0.0	1500	450	0	0.53	0	70.2	53.0	43.7	
3-4 AM	268	0.0	1500	268	0	0.51	0	70.2	53.5	44.4	
4-5 AM	310	0.0	1500	310	0	0.51	0	70.2	53.4	44.2	
5-6 AM	459	0.0	1500	459	0	0.53	0	70.2	53.0	43.7	
6-7 AM	969	0.0	1500	969	0	0.58	0	69.6	51.3	41.8	
7-8 AM	1286	0.0	1499	1286	0	0.81	0	69.1	46.3	36.1	
8-9 AM	1682	0.0	1499	1682	0	2.39	51	68.6	28.1	30.8	
9-10 AM	2567	0.0	OFF	2567	0	0.05	4	67.6	65.5	65.5	
10-11 AM	3395	0.0	OFF	3395	0	0.00	0	66.5	66.5	66.5	
11AM-NOON	3845	0.0	OFF	3845	0	0.00	0	64.6	64.6	64.6	
NOON-1PM	4304	0.0	OFF	4304	0	0.00	0	61.5	61.5	61.5	
1-2 PM	4135	0.0	OFF	4135	0	0.00	0	62.6	62.6	62.6	
2-3 PM	4389	0.0	OFF	4389	0	0.00	0	60.9	60.9	60.9	
3-4 PM	4146	0.0	OFF	4146	0	0.00	0	62.5	62.5	62.5	
4-5 PM	4103	0.0	OFF	4103	0	0.00	0	62.8	62.8	62.8	
5-6 PM	3281	0.0	OFF	3281	0	0.00	0	66.6	66.6	66.6	
6-7 PM	3451	0.0	OFF	3451	0	0.00	0	66.4	66.4	66.4	
7-8 PM	3016	0.0	1499	1559	1457	16.79+	419	67.0	7.4	36.6	
8-9 PM	2632	0.0	1499	1625	1007	14.93+	391	67.4	8.1	35.8	
9-10 PM	1867	0.0	1499	1746	121	14.65+	362	68.4	8.0	30.8	
10-11 PM	1440	0.0	1499	1387	53	15.86+	387	68.9	7.6	30.8	
11PM-MID	834	0.0	1499	834	0	1.83	84	69.7	33.0	41.2	

"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	0.0164
MAIN ROUTE WITH WORKS	0.0147
'DIVERSION'	0.0018
PIA: Personal Injury Accidents	
IMPACTS ON ROAD USERS	
ROAD USER COSTS PER DAY	\$38,746
CONGESTED HOURS PER DAY*	4

*Delays Exceeding User-Specified Maximum

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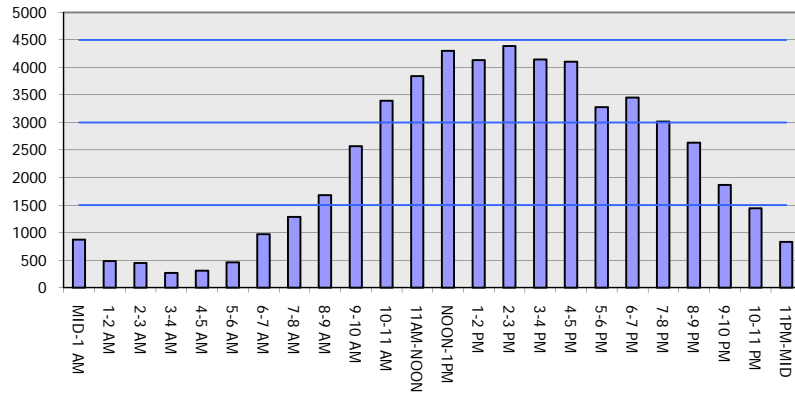
AUGUST

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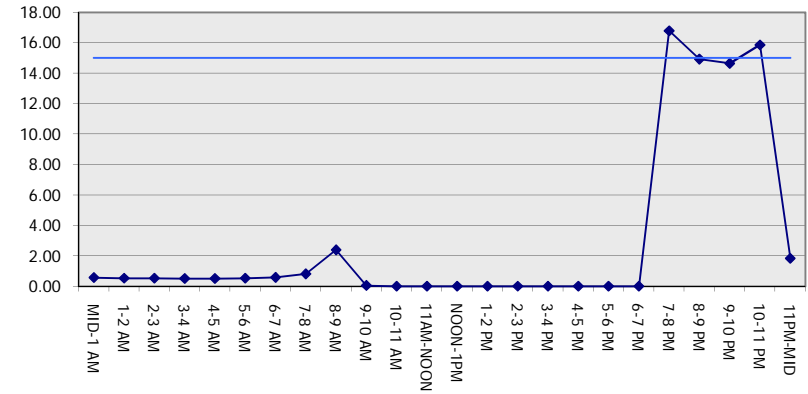
GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT

SUNDAY SOUTHBOUND DIRECTION

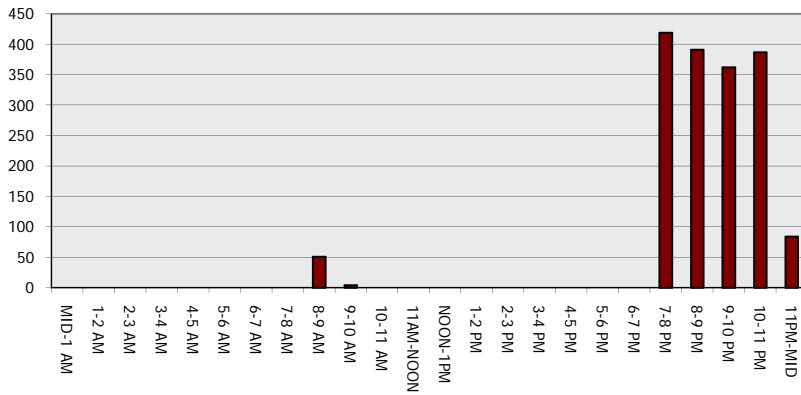
Main Route - Traffic Demand (Vehicles Per Hour)



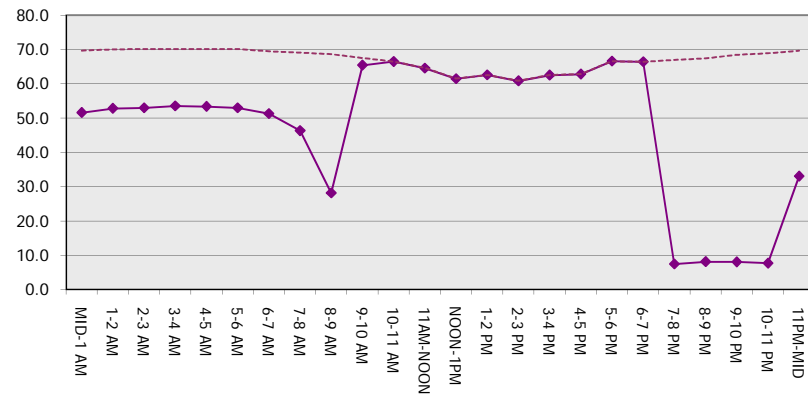
Main Route Average Delay Per Vehicle (Minutes)



Main Route - Average Queue Length (Vehicles)



Main Route - Average Speed (MPH)



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SUMMARY OF TRAFFIC MODEL OUTPUT

SUNDAY 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	1511	0.0	1500	1511	0	1.89	20	68.9	32.2	30.8
1-2 AM	957	0.0	1500	957	0	0.60	0	69.6	50.9	41.9
2-3 AM	830	0.0	1500	830	0	0.57	0	69.7	51.7	42.3
3-4 AM	579	0.0	1500	579	0	0.54	0	70.0	52.5	43.2
4-5 AM	487	0.0	1500	487	0	0.53	0	70.1	52.8	43.5
5-6 AM	699	0.0	1500	699	0	0.55	0	69.9	52.2	42.8
6-7 AM	885	0.0	1500	885	0	0.57	0	69.6	51.5	42.1
7-8 AM	1253	0.0	1499	1253	0	0.77	0	69.2	47.1	37.0
8-9 AM	1615	0.0	1499	1615	0	1.91	32	68.7	31.9	31.1
9-10 AM	2400	0.0	OFF	2400	0	0.03	2	67.8	66.7	66.7
10-11 AM	2744	0.0	OFF	2744	0	0.00	0	67.3	67.3	67.3
11AM-NOON	3285	0.0	OFF	3285	0	0.00	0	66.6	66.6	66.6
NOON-1PM	3708	0.0	OFF	3708	0	0.00	0	65.5	65.5	65.5
1-2 PM	3683	0.0	OFF	3683	0	0.00	0	65.7	65.7	65.7
2-3 PM	3655	0.0	OFF	3655	0	0.00	0	65.9	65.9	65.9
3-4 PM	4056	0.0	OFF	4056	0	0.00	0	63.2	63.2	63.2
4-5 PM	3782	0.0	OFF	3782	0	0.00	0	65.0	65.0	65.0
5-6 PM	3597	0.0	OFF	3597	0	0.00	0	66.3	66.3	66.3
6-7 PM	3616	0.0	OFF	3616	0	0.00	0	66.1	66.1	66.1
7-8 PM	2961	0.0	1499	1551	1409	16.46+	410	67.1	7.5	36.6
8-9 PM	2570	0.0	1506	1743	827	14.20+	369	67.6	8.3	34.8
9-10 PM	2110	0.0	1499	1615	495	16.47+	403	68.1	7.5	30.8
10-11 PM	1681	0.0	1500	1506	175	16.88+	413	68.6	7.3	30.8
11PM-MID	1101	0.0	1499	1101	0	7.42	215	69.4	13.2	34.1

"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	0.0163
MAIN ROUTE WITH WORKS	0.0143
'DIVERSION'	0.0020

PIA: Personal Injury Accidents

ECONOMIC IMPACT ON ROAD USERS	
ROAD USER COSTS PER DAY	\$43,190
CONGESTED HOURS PER DAY*	4

*Delays Exceeding User-Specified Maximum

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SUNDAY NORTHBOUND DIRECTION

