

IH 90: USH 14/61 TO USH 53 OFF-PEAK DAY CLOSURE DIVERSION ROUTE: USH 53 TO USH 14/61	AUGUST
	Analyzed for 2009 Construction Season

SUMMARY OF TRAFFIC MODEL OUTPUT

SUNDAY WESTBOUND DIRECTION

TIME OF DAY	FLOWS AND CAPACITY IN VEH/HR							AVERAGE SPEEDS IN MPH							
	MAIN ROUTE		ALTERNATE ROUTE		SITE CAPA CITY	FLOW MAIN ROUTE	FLOW DIVER -TING	TOTAL DIVN FLOW	AV.DEL PER VEH (MINS)	AVERAGE QUEUE (VEH)	MAIN ROUTE		ALTERNATE ROUTE		
	DEMAND FLOW	PCT HEAVY	NORMAL FLOW	PCT HEAVY							WITHOUT WORK ZN	WITH WORK ZN	SITE	WITHOUT WORK ZN	WITH WORK ZN
MID-1 AM	205	0.0	187	7.0	OFF	205	0	187	0.00	0	66.0	66.0	66.0	16.3	16.3
1-2 AM	138	0.0	125	7.0	OFF	138	0	125	0.00	0	66.1	66.1	66.1	18.3	18.3
2-3 AM	109	0.0	99	7.0	OFF	109	0	99	0.00	0	66.2	66.2	66.2	19.1	19.1
3-4 AM	96	0.0	88	7.0	OFF	96	0	88	0.00	0	66.2	66.2	66.2	19.5	19.5
4-5 AM	87	0.0	80	7.0	OFF	87	0	80	0.00	0	66.2	66.2	66.2	19.7	19.7
5-6 AM	99	0.0	91	7.0	OFF	99	0	91	0.00	0	66.2	66.2	66.2	19.4	19.4
6-7 AM	131	0.0	120	7.0	OFF	131	0	120	0.00	0	66.1	66.1	66.1	18.4	18.4
7-8 AM	294	0.0	269	7.0	OFF	294	0	269	0.00	0	65.8	65.8	65.8	13.6	13.6
8-9 AM	440	0.0	403	7.0	OFF	440	0	403	0.00	0	65.6	65.6	65.6	9.3	9.3
9-10 AM	693	0.0	634	7.0	1500	693	0	634	0.49	0	65.1	56.5	42.8	7.5	7.5
10-11 AM	1078	0.0	986	7.0	1500	1078	0	986+	0.53	0	64.4	55.4	41.4	5.6	5.6
11A-NOON	1447	0.0	1324	7.0	1499	1447	0	1324+	0.95	0	63.7	49.4	32.0	5.6	5.6
NOON-1PM	1503	0.0	1375	7.0	1499	1503	0	1375+	1.11	2	63.6	47.6	30.9	5.6	5.6
1-2 PM	1604	0.0	1468	7.0	1500	1604	0	1468+	2.99	57	63.4	33.3	30.8	5.6	5.6
2-3 PM	1688	0.0	1545	7.0	1500	1688	0	1545+	8.29	204	63.2	18.1	30.8	5.6	5.6
3-4 PM	1751	0.0	1602	7.0	1500	1751	0	1602+	16.58	427	63.1	10.9	30.8	5.6	5.7
4-5 PM	1730	0.0	1582	7.0	1500	1730	0	1582+	25.95	675	63.2	8.7	30.8	5.6	6.0
5-6 PM	1546	0.0	1414	7.0	1500	1546	0	1414+	31.38	819	63.5	8.0	30.8	5.6	6.3
6-7 PM	1346	0.0	1231	7.0	1500	1346	0	1231+	29.41	766	63.9	8.3	30.8	5.6	6.1
7-8 PM	1137	0.0	1041	7.0	OFF	1137	0	1041+	1.26	79	64.3	46.3	46.3	5.6	5.6
8-9 PM	865	0.0	791	7.0	OFF	865	0	791+	0.00	0	64.8	64.8	64.8	6.3	6.3
9-10 PM	697	0.0	638	7.0	OFF	697	0	638	0.00	0	65.1	65.1	65.1	7.5	7.5
10-11 PM	459	0.0	419	7.0	OFF	459	0	419	0.00	0	65.5	65.5	65.5	9.2	9.2
11PM-MID	283	0.0	258	7.0	OFF	283	0	258	0.00	0	65.9	65.9	65.9	13.9	13.9

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

+ INDICATES DIVERSION FLOW EXCEEDS USER-SPECIFIED WARNING LIMIT

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

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

AVERAGE ACCIDENT NUMBERS (PIA/DAY)	
MAIN ROUTE WITHOUT WORKS	0.0108
MAIN ROUTE WITH WORKS	0.0099
DIVERSION	0.1966

PIA: Personal Injury Accidents

IMPACTS ON ROAD USERS	
ROAD USER COSTS PER DAY (DOLLARS)	\$50,107
CONGESTED HOURS PER DAY*	4

*Delays Exceeding 15 Minutes

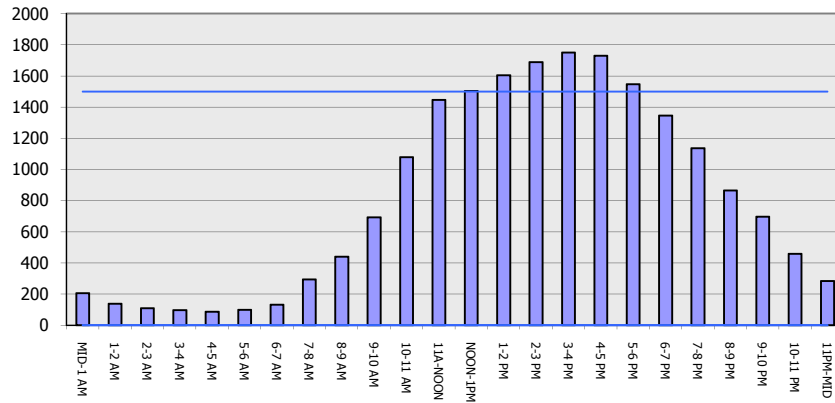
IH 90: USH 14/61 TO USH 53
OFF-PEAK DAY CLOSURE
DIVERSION ROUTE: USH 53 TO USH 14/61

AUGUST
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 Construction Season

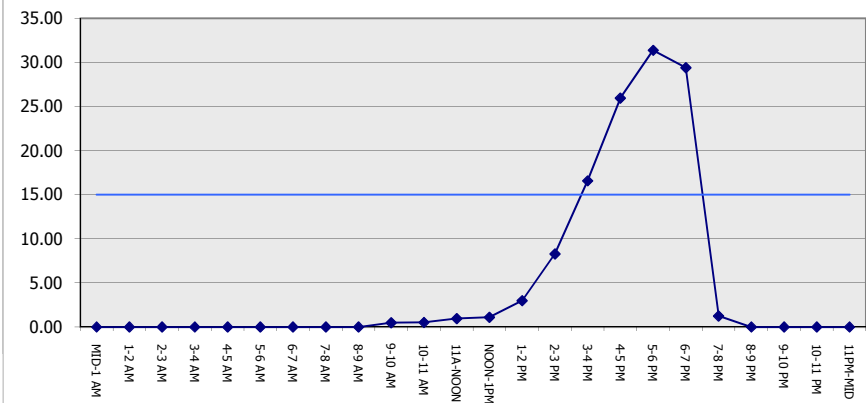
GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT

SUNDAY WESTBOUND DIRECTION

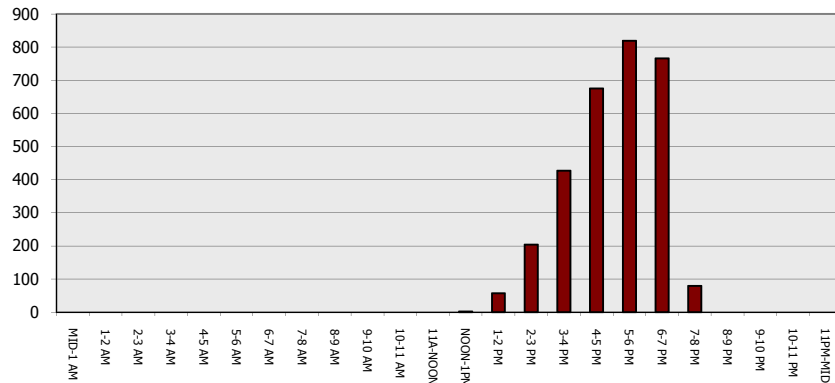
Main Route - Traffic Demand (Vehicles Per Hour)



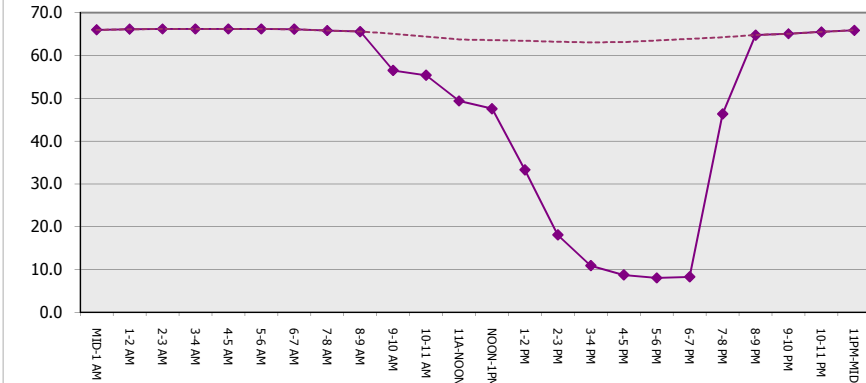
Main Route Average Delay Per Vehicle (Minutes)



Main Route - Average Queue Length (Vehicles)



Main Route - Average Speed (MPH)



IH 90: USH 14/61 TO USH 53 OFF-PEAK DAY CLOSURE DIVERSION ROUTE: USH 53 TO USH 14/61	AUGUST Analyzed for 2009 Construction Season
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SUMMARY OF TRAFFIC MODEL OUTPUT

SUNDAY EASTBOUND DIRECTION

TIME OF DAY	FLOWS AND CAPACITY IN VEH/HR							TOTAL DIVN FLOW	AV.DEL PER VEH (MINS)	AVERAGE QUEUE (VEH)	AVERAGE SPEEDS IN MPH				
	MAIN		DIVERSION		SITE CAPA CITY	FLOW MAIN ROUTE	FLOW DIVER -TING				MAIN ROUTE		SITE	ALTERNATE ROUTE	
	DEMAND FLOW	PCT HEAVY	NORMAL FLOW	PCT HEAVY							WITHOUT WORK ZN	WITH WORK ZN		WITHOUT WORK ZN	WITH WORK ZN
MID-1 AM	155	0.0	143	7.0	OFF	155	0	143	0.00	0	66.1	66.1	66.1	17.7	17.7
1-2 AM	122	0.0	111	7.0	OFF	122	0	111	0.00	0	66.1	66.1	66.1	18.8	18.8
2-3 AM	95	0.0	88	7.0	OFF	95	0	88	0.00	0	66.2	66.2	66.2	19.5	19.5
3-4 AM	120	0.0	109	7.0	OFF	120	0	109	0.00	0	66.1	66.1	66.1	18.8	18.8
4-5 AM	123	0.0	112	7.0	OFF	123	0	112	0.00	0	66.1	66.1	66.1	18.7	18.7
5-6 AM	146	0.0	134	7.0	OFF	146	0	134	0.00	0	66.1	66.1	66.1	18.0	18.0
6-7 AM	216	0.0	198	7.0	OFF	216	0	198	0.00	0	66.0	66.0	66.0	15.9	15.9
7-8 AM	370	0.0	338	7.0	OFF	370	0	338	0.00	0	65.7	65.7	65.7	11.3	11.3
8-9 AM	618	0.0	565	7.0	OFF	618	0	565	0.00	0	65.2	65.2	65.2	8.0	8.0
9-10 AM	956	0.0	875	7.0	1500	956	0	875+	0.51	0	64.6	55.8	41.9	5.7	5.7
10-11 AM	1301	0.0	1190	7.0	1499	1301	0	1190+	0.76	0	64.0	51.9	35.6	5.6	5.6
11A-NOON	1514	0.0	1385	7.0	1499	1514	0	1385+	1.23	6	63.6	46.3	31.1	5.6	5.6
NOON-1PM	1603	0.0	1467	7.0	1500	1603	0	1467+	3.51	71	63.4	30.7	30.8	5.6	5.6
1-2 PM	1709	0.0	1563	7.0	1500	1709	0	1563+	9.18	229	63.2	16.8	30.8	5.6	5.6
2-3 PM	1705	0.0	1560	7.0	1499	1705	0	1560+	17.23	441	63.2	10.6	30.8	5.6	5.7
3-4 PM	1643	0.0	1503	7.0	1499	1643	0	1503+	23.88	618	63.3	9.0	30.8	5.6	6.0
4-5 PM	1572	0.0	1438	7.0	1499	1572	0	1438+	28.05	729	63.5	8.4	30.8	5.6	6.1
5-6 PM	1368	0.0	1251	7.0	1500	1368	0	1251+	27.05	702	63.8	8.5	30.8	5.6	6.1
6-7 PM	1194	0.0	1093	7.0	1499	1194	0	1093+	18.74	485	64.1	10.2	30.8	5.6	5.7
7-8 PM	909	0.0	832	7.0	OFF	909	0	832+	0.28	16	64.7	59.6	59.6	6.0	6.0
8-9 PM	739	0.0	676	7.0	OFF	739	0	676	0.00	0	65.0	65.0	65.0	7.2	7.2
9-10 PM	536	0.0	490	7.0	OFF	536	0	490	0.00	0	65.4	65.4	65.4	8.6	8.6
10-11 PM	323	0.0	295	7.0	OFF	323	0	295	0.00	0	65.8	65.8	65.8	12.7	12.7
11PM-MID	269	0.0	246	7.0	OFF	269	0	246	0.00	0	65.9	65.9	65.9	14.3	14.3

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

+ INDICATES DIVERSION FLOW EXCEEDS USER-SPECIFIED WARNING LIMIT

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

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

AVERAGE ACCIDENT NUMBERS (PIA/DAY)	
MAIN ROUTE WITHOUT WORKS	0.0107
MAIN ROUTE WITH WORKS	0.0098
DIVERSION	0.1953

PIA: Personal Injury Accidents

IMPACTS ON ROAD USERS	
ROAD USER COSTS PER DAY (DOLLARS)	\$53,011
CONGESTED HOURS PER DAY*	5

*Delays Exceeding 15 Minutes

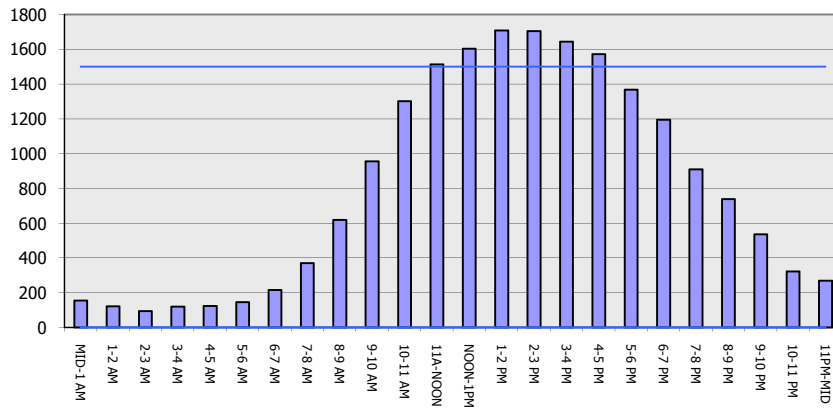
**IH 90: USH 14/61 TO USH 53
OFF-PEAK DAY CLOSURE
DIVERSION ROUTE: USH 53 TO USH 14/61**

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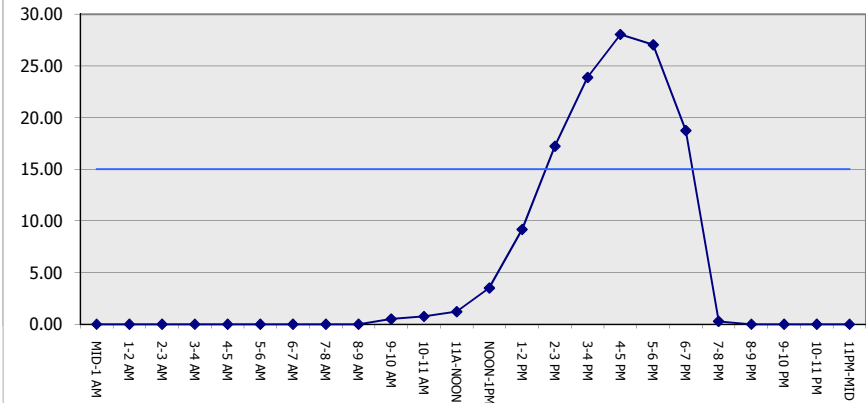
GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT

SUNDAY EASTBOUND DIRECTION

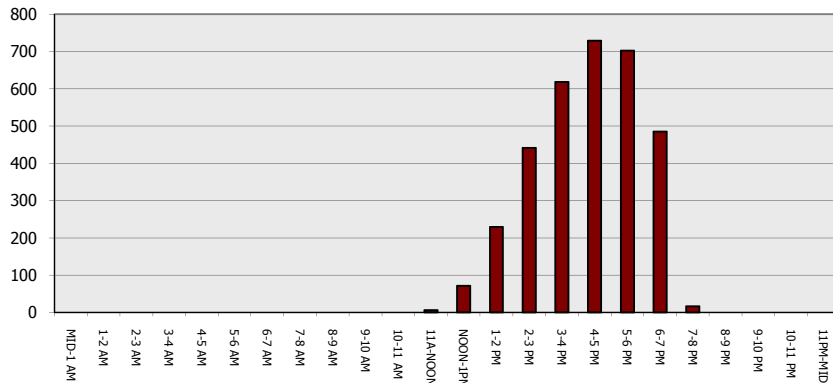
Main Route - Traffic Demand (Vehicles Per Hour)



Main Route Average Delay Per Vehicle (Minutes)



Main Route - Average Queue Length (Vehicles)



Main Route - Average Speed (MPH)

