

**FINAL  
Interchange Modification Report**

**APPENDICES  
VOLUME II OF III**

**Interstate 75 Interchange with  
State Road 52  
In Pasco County, Florida**

Prepared for:  
**Federal Highway Administration  
Florida Department of Transportation**

**October 2000**

**APPENDIX M**

**No-Build with TSM Design Traffic Analyses**

**APPENDIX Ma – PASSER III-90 Analyses**

**APPENDIX Mb – HCS Freeway Analyses**

**APPENDIX Mc – HCS Ramps Analyses**

**APPENDIX Md – TRANSYT-7F Queue Analysis**

**APPENDIX Ma**  
**PASSER III-90 Analyses**

**I-75 and SR 52 IMR  
Approach Delay Conversion to Stopped Delay for Passer III-90**

**2001 No-Build TSM**

Approach	Lane Group	2008 A.M. Peak Hour				2008 P.M. Peak Hour			
		VIC <sup>a</sup>	Delay <sup>b</sup>	LOS <sup>c</sup>	Internal Storage Ratio <sup>d</sup>	VIC <sup>a</sup>	Delay <sup>b</sup>	LOS <sup>c</sup>	Internal Storage Ratio <sup>d</sup>
<i>S.R. 52 at I-75 Northbound Exit/Entrance Ramps</i>									
EB	Left	0.70	24.62	C	0.33	0.76	20.31	C	0.20
	Thru	0.31	3.20	A	0.14	0.24	0.15	A	0.02
WB	Thru	0.69	29.42	D	--	0.71	26.12	D	--
NB	Left-Right	0.69	20.47	C	--	0.76	27.45	D	--
<i>S.R. 52 at I-75 Southbound Exit/Entrance Ramps</i>									
EB	Thru	0.59	17.48	C	--	0.59	23.42	C	--
WB	Left	0.60	3.44	A	0.09	0.59	2.69	A	0.10
	Thru	0.24	0.94	A	0.09	0.41	1.80	A	0.14
SB	Left-Right	0.61	34.96	D	--	0.59	30.30	D	--

- a. VIC is volume to capacity ratio
- b. Stopped delay in seconds per vehicle (stopped delay = approach delay / 1.3)
- c. Based on stopped delay which is the criteria used by the HCS to determine LOS
- d. Ratio of maximum queue per cycle to the available storage capacity for the movement

**2008 No-Build TSM**

Approach	Lane Group	2008 A.M. Peak Hour				2008 P.M. Peak Hour			
		VIC <sup>a</sup>	Delay <sup>b</sup>	LOS <sup>c</sup>	Internal Storage Ratio <sup>d</sup>	VIC <sup>a</sup>	Delay <sup>b</sup>	LOS <sup>c</sup>	Internal Storage Ratio <sup>d</sup>
<i>S.R. 52 at I-75 Northbound Exit/Entrance Ramps</i>									
EB	Left	1.16	148.58	F	1.17	1.19	163.35	F	1.36
	Thru	0.46	1.36	A	0.09	0.36	0.62	A	0.05
WB	Thru	1.14	154.96	F	--	1.17	166.05	F	--
NB	Left-Right	1.14	108.38	F	--	1.17	127.06	F	--
<i>S.R. 52 at I-75 Southbound Exit/Entrance Ramps</i>									
EB	Thru	1.06	71.79	F	--	0.86	37.69	D	--
WB	Left	1.06	50.50	E	0.60	0.86	0.00	A	0.00
	Thru	0.33	1.48	A	0.10	0.51	3.88	A	0.21
SB	Left-Right	1.07	96.48	F	--	0.87	47.57	E	--

- a. VIC is volume to capacity ratio
- b. Stopped delay in seconds per vehicle (stopped delay = approach delay / 1.3)
- c. Based on stopped delay which is the criteria used by the HCS to determine LOS
- d. Ratio of maximum queue per cycle to the available storage capacity for the movement

**2028 No-Build TSM**

Approach	Lane Group	2008 A.M. Peak Hour				2008 P.M. Peak Hour			
		V/C <sup>a</sup>	Delay <sup>b</sup>	LOS <sup>c</sup>	Internal Storage Ratio <sup>d</sup>	V/C <sup>a</sup>	Delay <sup>b</sup>	LOS <sup>c</sup>	Internal Storage Ratio <sup>d</sup>
<i>S.R. 52 at I-75 Northbound Exit/Entrance Ramps</i>									
EB	Left	1.48	455.19	F	*****	1.59	601.76	F	*****
	Thru	0.72	2.02	A	0.08	0.53	1.18	A	0.07
WB	Thru	1.46	434.83	F	--	1.58	589.15	F	--
NB	Left-Right	1.46	389.08	F	--	1.59	568.16	F	--
<i>S.R. 52 at I-75 Southbound Exit/Entrance Ramps</i>									
EB	Thru	1.44	366.50	F	--	1.22	156.02	F	--
WB	Left	1.45	346.48	F	*****	1.22	127.20	F	1.51
	Thru	0.63	5.76	A	0.28	0.71	5.98	A	0.31
SB	Left-Right	1.45	389.87	F	--	1.23	185.15	F	--

- a. V/C is volume to capacity ratio
  - b. Stopped delay in seconds per vehicle (stopped delay = approach delay / 1.3)
  - c. Based on stopped delay which is the criteria used by the HCS to determine LOS
  - d. Ratio of maximum queue per cycle to the available storage capacity for the movement
- \*\*\*\*\* Cannot be measured

<GID01>

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION  
DIAMOND INTERCHANGE SIGNALIZATION - 145105

PASSER3

PASSER III-90

VER 1.0  
OCT 90

PPPP	AAA	SSS	SSS	EEEE	RRRR	IIIIIIIIIIII
P P	A A	S S	S S	E	R R	I I I
P P	A A	S	S	E	R R	I I I
PPPP	AAAA	SSS	SSS	EEEE	RRRR	I I I
P	A A	S	S	E	R R	I I I
P	A A	S S	S S	E	R R	I I I
P	A A	SSS	SSS	EEEE	R R	IIIIIIIIIIII

\*\*\*\*\* GENERAL IDENTIFICATION DATA \*\*\*\*\*

FREEWAY NAME - - - I-75 NO BUILD 2001 AM  
 CITY NAME - - - - - PASCO CO.  
 DISTRICT NUMBER - - - - - 07  
 DATE - - - - - 11/08/99  
 RUN NUMBER - - - - - 00

<GID02>

\*\*\*\*\* ISOLATED INTERCHANGE OPERATION \*\*\*\*\*

\*\*\* PARAMETERS \*\*\*

NUMBER OF INTERCHANGES - - - 1  
 LOWER CYCLE LIMIT (SEC) - - - 95  
 UPPER CYCLE LIMIT (SEC) - - - 130  
 CYCLE INCREMENT (SEC) - - - 5

\*\*\* OPTIONS \*\*\*

OPTIMIZE INTERNAL OFFSETS ? - - YES  
 EVALUATE INTERNAL OFFSETS ? - - NO

<IMD01A>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 2A

\*\*\* LEFT-SIDE MOVEMENT DATA \*\*\*

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TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
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\*\*\*\*\*

ARTERIAL

RIGHT-TURN	390	1568	-
STRAIGHT-THROUGH	178	1001	0
STRAIGHT-THEN-LEFT	150	844	-

FRONTAGE ROAD

RIGHT-TURN	108	1545	-
STRAIGHT-THROUGH	0	0	0
LEFT-THEN-STRAIGHT	120	1727	-
LEFT-THEN-LEFT	0	0	-

INTERIOR

LEFT-TURN	360	1778	0
STRAIGHT-THROUGH	367	1872	-

<IMD01B>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 2B

\*\*\* RIGHT-SIDE MOVEMENT DATA \*\*\*

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TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
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\*\*\*\*\*

ARTERIAL

RIGHT-TURN	175	1591	-
STRAIGHT-THROUGH	93	384	0
STRAIGHT-THEN-LEFT	360	1488	-

FRONTAGE ROAD

RIGHT-TURN	427	1545	-
STRAIGHT-THROUGH	0	0	0
LEFT-THEN-STRAIGHT	274	3345	-
LEFT-THEN-LEFT	0	0	-

INTERIOR

LEFT-TURN	150	1752	0
STRAIGHT-THROUGH	298	1845	-

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\* \* \* INTERCHANGE 1 SR 52

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\*\*\* INTERNAL DELAY-OFFSET INFORMATION \*\*\*

\*\*\*\*\*  
PHASING OPTIMIZE? FORCE? INTERIOR QUEUE STORAGE  
\*\*\*\*\*

LEAD-LEAD	Y	-	THROUGH MOVEMENT AT LEFT SIDE (VEH)	24
LAG -LEAD	Y	-	LEFT-TURN MOVEMENT AT LEFT SIDE (VEH)	24
LEAD-LAG	Y	-	THROUGH MOVEMENT AT RIGHT SIDE (VEH)	24
LAG -LAG	Y	-	LEFT-TURN MOVEMENT AT RIGHT SIDE (VEH)	12
TTI -LEAD	N	-		

\*\*\*\*\*  
PERMITTED LEFT TURNS? INTERIOR TRAVEL TIMES  
\*\*\*\*\*

LEFT-SIDE INTERSECTION	NO	LEFT TO RIGHT (SEC)	- - - - -	15
RIGHT-SIDE INTERSECTION	NO	RIGHT TO LEFT (SEC)	- - - - -	15



<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 4A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

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MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	43.8	14.9	36.3	80.1	*	37.4	42.0	15.6	53.0
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V/C RATIO	.59	.61	.60	.24	*	.69	.69	.70	.31
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LEVEL OF SERVICE	A	B	A	A	*	B	B	C	A
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DELAY (SEC/VEH)	22.73	45.45	4.47	1.22	*	38.24	26.61	32.01	4.16
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LEVEL OF SERVICE	C	D	A	A	*	D	C	C	A
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STORAGE RATIO			.09	.09	*			.33	.14
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LEVEL OF SERVICE			B	B	*			D	C
------------------	--	--	---	---	---	--	--	---	---

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	19.04 VEH-HRS/HR
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INTERNAL OFFSET	25 SEC	CYCLE LENGTH	95 SEC
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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

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MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	46.2	15.6	38.2	84.4	*	39.4	44.2	16.4	55.8
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.59	.60	.59	.24	*	.68	.69	.69	.31
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LEVEL OF SERVICE	A	B	A	A	*	B	B	B	A
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DELAY (SEC/VEH)	23.56	47.14	4.34	1.59	*	38.99	27.60	32.68	5.61
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LEVEL OF SERVICE	C	D	A	A	*	D	C	D	A
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STORAGE RATIO			.09	.10	*			.34	.16
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			B	C	*			D	C
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PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	19.83 VEH-HRS/HR
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INTERNAL OFFSET	28 SEC	CYCLE LENGTH	100 SEC
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\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 6A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

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*****
MEASURES OF          LEFT-SIDE INTERSECTION *   RIGHT-SIDE INTERSECTION
EFFECTIVENESS        A    B    C    A+C *   A    B    C    A+C
*****
PHASE TIME (SEC)     48.6  16.2  40.2  88.8 *  41.4  46.5  17.1  58.5
*****
V/C RATIO            .59   .60   .59   .24 *   .68   .68   .69   .31
LEVEL OF SERVICE     A    B    A    A *   B    B    B    A
*****
DELAY (SEC/VEH)      24.41 49.17  4.20  1.51 * 39.80 28.48 34.05  6.30
LEVEL OF SERVICE     C    D    A    A *   D    C    D    A
*****
STORAGE RATIO                .09   .10 *                .36   .16
LEVEL OF SERVICE                B    C *                D    C
*****
PHASE ORDER  LEAD-LEAD      TOTAL INTERCHANGE DELAY  20.56 VEH-HRS/HR
INTERNAL OFFSET 30 SEC      CYCLE LENGTH 105 SEC
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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

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MEASURES OF LEFT-SIDE INTERSECTION \* RIGHT-SIDE INTERSECTION

EFFECTIVENESS A B C A+C \* A B C A+C

\*\*\*\*\*

PHASE TIME (SEC) 55.7 18.3 46.0 101.7 \* 47.4 53.4 19.2 66.6

V/C RATIO .58 .59 .58 .24 \* .67 .67 .68 .31

LEVEL OF SERVICE A A A A \* B B B A

DELAY (SEC/VEH) 27.06 54.51 3.83 1.74 \* 42.48 31.21 37.37 9.53

LEVEL OF SERVICE C E A A \* D C D B

STORAGE RATIO .09 .12 \* .41 .19

LEVEL OF SERVICE B C \* D C

\*\*\*\*\*

PHASE ORDER LEAD-LEAD TOTAL INTERCHANGE DELAY 22.85 VEH-HRS/HR

INTERNAL OFFSET 37 SEC CYCLE LENGTH 120 SEC

<GS101>

\* \* \* INTERCHANGE 1 SR 52

RUN 00 PAGE 10A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

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*****
MEASURES OF          LEFT-SIDE INTERSECTION *   RIGHT-SIDE INTERSECTION
EFFECTIVENESS        A    B    C    A+C *   A    B    C    A+C
*****
PHASE TIME (SEC)    58.1  18.9  48.0 106.1 * 49.4  55.7  19.9  69.3
*****
V/C RATIO            .57   .59   .58   .24 *   .67   .67   .67   .31
LEVEL OF SERVICE     A    A    A    A    *   B    B    B    A
*****
DELAY (SEC/VEH)     27.93 56.59  3.72  1.67 * 43.43 32.14 37.39 10.15
LEVEL OF SERVICE     C    E    A    A    *   D    C    D    B
*****
STORAGE RATIO                .09   .12 *                .41   .20
LEVEL OF SERVICE                B    C *                D    C
*****
PHASE ORDER  LEAD-LEAD      TOTAL INTERCHANGE DELAY  23.54 VEH-HRS/HR
INTERNAL OFFSET 39 SEC      CYCLE LENGTH 125 SEC
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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

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MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	60.5	19.6	49.9	110.4	*	51.4	58.0	20.6	72.0
------------------	------	------	------	-------	---	------	------	------	------

V/C RATIO	.57	.58	.57	.24	*	.66	.67	.67	.31
LEVEL OF SERVICE	A	A	A	A	*	B	B	B	A

DELAY (SEC/VEH)	28.79	58.43	3.63	1.61	*	44.41	33.08	39.07	11.75
LEVEL OF SERVICE	C	E	A	A	*	D	D	D	B

STORAGE RATIO			.09	.12	*			.43	.21
LEVEL OF SERVICE			B	C	*			D	C

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PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	24.37	VEH-HRS/HR
INTERNAL OFFSET	42 SEC	CYCLE LENGTH	130	SEC



\*\*\* SIGNAL PHASING INFORMATION \*\*\*

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*****
*                               *
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
*   A   B   C *   A   B   C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER         *   |   |---- *   |   ----| * LENGTH (SEC)
* ----> V   V * ----> | ----> *
*                               *
*****
1 *           A *           B *           34.00
2 *           A *           C *           18.50
3 *           A *           A *           .80
4 *           B *           A *           17.60
5 *           C *           A *           27.00
6 *           C *           B *           17.10
*                               *

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INTERNAL OFFSET 34 SEC

CYCLE LENGTH 115 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

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*****
*                               *
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
*   A   B   C *   A   B   C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER         *   |   |---- *   |   ----| * LENGTH (SEC)
* ----> V   V * ----> | ----> *
*                               *
*****
1 *           A *           B *           37.00
2 *           A *           C *           18.70
3 *           B *           C *           .50
4 *           B *           A *           17.80
5 *           C *           A *           29.60
6 *           C *           B *           16.40
*                               *

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INTERNAL OFFSET 37 SEC

CYCLE LENGTH 120 SEC

PHASE ORDER LEAD-LEAD



<GID01>

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION  
DIAMOND INTERCHANGE SIGNALIZATION - 145105

PASSER3

PASSER III-90

VER 1.0  
OCT 90

PPPP	AAA	SSS	SSS	EEEE	RRRR	IIIIIIIIIIII
P P	A A	S S	S S	E	R R	I I I
P P	A A	S	S	E	R R	I I I
PPPP	AAAA	SSS	SSS	EEEE	RRRR	I I I
P	A A	S	S	E	R R	I I I
P	A A	S S	S S	E	R R	I I I
P	A A	SSS	SSS	EEEE	R R	IIIIIIIIIIII

\*\*\*\*\* GENERAL IDENTIFICATION DATA \*\*\*\*\*

FREEWAY NAME - - - I-75 NO BUILD 2001 PM

CITY NAME - - - - - PASCO CO.

DISTRICT NUMBER - - - - - 07

DATE - - - - - 11/08/99

RUN NUMBER - - - - - 01

<GID02>

\*\*\*\*\* ISOLATED INTERCHANGE OPERATION \*\*\*\*\*

\*\*\* PARAMETERS \*\*\*

NUMBER OF INTERCHANGES - - - 1

LOWER CYCLE LIMIT (SEC) - - - 95

UPPER CYCLE LIMIT (SEC) - - - 130

CYCLE INCREMENT (SEC) - - - 5

\*\*\* OPTIONS \*\*\*

OPTIMIZE INTERNAL OFFSETS ? - - YES

EVALUATE INTERNAL OFFSETS ? - - NO

<IMD01A>

\*\*\* INTERCHANGE 1 SR 52

RUN 01 PAGE 2A

\*\*\* LEFT-SIDE MOVEMENT DATA \*\*\*

\*\*\*\*\*

TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
------------------	--------------	------------------------	---------------------

\*\*\*\*\*

ARTERIAL

RIGHT-TURN	274	1568	-
STRAIGHT-THROUGH	93	629	0
STRAIGHT-THEN-LEFT	180	1216	-

FRONTAGE ROAD

RIGHT-TURN	90	1545	-
STRAIGHT-THROUGH	0	0	0
LEFT-THEN-STRAIGHT	175	1727	-
LEFT-THEN-LEFT	0	0	-

INTERIOR

LEFT-TURN	427	1778	0
STRAIGHT-THROUGH	568	1872	-

<IMD01B>

\*\*\* INTERCHANGE 1 SR 52

RUN 01 PAGE 2B

\*\*\* RIGHT-SIDE MOVEMENT DATA \*\*\*

\*\*\*\*\*

TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
------------------	--------------	------------------------	---------------------

\*\*\*\*\*

ARTERIAL

RIGHT-TURN	120	1591	-
STRAIGHT-THROUGH	178	551	0
STRAIGHT-THEN-LEFT	427	1321	-

FRONTAGE ROAD

RIGHT-TURN	360	1545	-
STRAIGHT-THROUGH	0	0	0
LEFT-THEN-STRAIGHT	390	3345	-
LEFT-THEN-LEFT	0	0	-

INTERIOR

LEFT-TURN	180	1752	0
STRAIGHT-THROUGH	268	1845	-

\*\*\* INTERNAL DELAY-OFFSET INFORMATION \*\*\*

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*****
PHASING   OPTIMIZE?  FORCE?           INTERIOR QUEUE STORAGE
*****

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LEAD-LEAD      Y      -   THROUGH MOVEMENT AT LEFT SIDE (VEH)  24
LAG -LEAD      Y      -   LEFT-TURN MOVEMENT AT LEFT SIDE (VEH)  24
LEAD-LAG       Y      -   THROUGH MOVEMENT AT RIGHT SIDE (VEH)  24
LAG -LAG       Y      -   LEFT-TURN MOVEMENT AT RIGHT SIDE (VEH)  12
TTI -LEAD      N      -

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*****
PERMITTED LEFT TURNS?           INTERIOR TRAVEL TIMES
*****

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LEFT-SIDE INTERSECTION  NO   LEFT TO RIGHT (SEC) - - - - - 15
RIGHT-SIDE INTERSECTION NO   RIGHT TO LEFT (SEC) - - - - - 15

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<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 01 PAGE 4A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

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MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	32.1	20.2	42.7	74.8	*	44.8	33.3	16.9	61.7
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.59	.59	.59	.41	*	.75	.76	.76	.24
LEVEL OF SERVICE	A	A	A	A	*	C	C	C	A

DELAY (SEC/VEH)	30.44	39.39	3.50	2.34	*	33.95	35.69	26.40	.20
LEVEL OF SERVICE	C	D	A	A	*	D	D	C	A

STORAGE RATIO			.10	.14	*			.20	.02
LEVEL OF SERVICE			B	C	*			C	A

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	21.37 VEH-HRS/HR
INTERNAL OFFSET	16 SEC	CYCLE LENGTH	95 SEC

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 01 PAGE 5A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

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MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	33.8	21.2	45.0	78.8	*	47.3	35.1	17.6	64.9
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.59	.59	.59	.41	*	.75	.75	.76	.24
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LEVEL OF SERVICE	A	A	A	A	*	C	C	C	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	31.68	41.03	3.34	2.67	*	34.32	36.71	27.05	.48
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LEVEL OF SERVICE	C	D	A	A	*	D	D	C	A
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STORAGE RATIO			.10	.15	*			.25	.04
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LEVEL OF SERVICE			B	C	*			C	A
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PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	22.10 VEH-HRS/HR
INTERNAL OFFSET	18 SEC	CYCLE LENGTH	100 SEC

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 01 PAGE 6A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

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MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C
PHASE TIME (SEC)	35.5	22.2	47.3	82.8	*	49.7	36.9	18.4	68.1
V/C RATIO	.58	.58	.58	.40	*	.74	.74	.75	.24
LEVEL OF SERVICE	A	A	A	A	*	C	C	C	A
DELAY (SEC/VEH)	32.93	42.69	3.95	2.65	*	35.00	37.77	28.37	.86
LEVEL OF SERVICE	D	D	A	A	*	D	D	C	A
STORAGE RATIO			.11	.15	*			.30	.05
LEVEL OF SERVICE			C	C	*			D	B

\*\*\*\*\*

PHASE ORDER LEAD-LEAD TOTAL INTERCHANGE DELAY 22.96 VEH-HRS/HR  
INTERNAL OFFSET 20 SEC CYCLE LENGTH 105 SEC

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

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MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	37.2	23.2	49.6	86.8	*	52.2	38.6	19.2	71.4
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.58	.58	.58	.40	*	.74	.74	.74	.24
LEVEL OF SERVICE	A	A	A	A	*	C	C	C	A

DELAY (SEC/VEH)	34.19	44.37	3.08	3.08	*	35.50	39.05	27.67	1.34
LEVEL OF SERVICE	D	D	A	A	*	D	D	C	A

STORAGE RATIO			.10	.17	*			.35	.07
LEVEL OF SERVICE			B	C	*			D	B

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	23.64 VEH-HRS/HR
INTERNAL OFFSET	22 SEC	CYCLE LENGTH	110 SEC

<GSI01>

\* \* \* INTERCHANGE 1 SR 52

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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	38.9	24.2	51.9	90.8	*	54.6	40.5	19.9	74.5
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.58	.58	.58	.40	*	.73	.73	.74	.24
-----------	-----	-----	-----	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	A	A	A	A	*	C	C	C	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	35.46	46.07	3.65	2.86	*	36.26	40.00	28.57	1.57
-----------------	-------	-------	------	------	---	-------	-------	-------	------

LEVEL OF SERVICE	D	D	A	A	*	D	D	C	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.11	.17	*			.38	.07
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			C	C	*			D	B
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	24.42 VEH-HRS/HR
INTERNAL OFFSET	23 SEC	CYCLE LENGTH	115 SEC



<GSI01>

\* \* \* INTERCHANGE 1 SR 52

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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	40.6	25.1	54.3	94.9	*	57.1	42.2	20.7	77.8
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.57	.58	.57	.40	*	.73	.73	.74	.24
-----------	-----	-----	-----	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	A	A	A	A	*	C	C	C	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	36.73	47.92	3.50	3.21	*	36.85	41.32	28.72	2.06
-----------------	-------	-------	------	------	---	-------	-------	-------	------

LEVEL OF SERVICE	D	D	A	A	*	D	D	C	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.11	.19	*			.43	.09
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			C	C	*			D	B
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	25.24	VEH-HRS/HR
-------------	-----------	-------------------------	-------	------------

INTERNAL OFFSET	25 SEC	CYCLE LENGTH	120 SEC
-----------------	--------	--------------	---------

<GSI01>

\* \* \* INTERCHANGE 1 SR 52

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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
EFFECTIVENESS	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	42.3	26.0	56.7	99.0	*	59.5	44.0	21.5	81.0
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.57	.58	.57	.40	*	.73	.73	.73	.24
LEVEL OF SERVICE	A	A	A	A	*	C	C	C	A

DELAY (SEC/VEH)	38.01	49.78	3.37	3.26	*	37.66	42.49	29.45	2.32
LEVEL OF SERVICE	D	D	A	A	*	D	D	C	A

STORAGE RATIO			.11	.19	*			.46	.09
LEVEL OF SERVICE			C	C	*			D	B

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	26.03 VEH-HRS/HR
INTERNAL OFFSET	26 SEC	CYCLE LENGTH	125 SEC

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	44.0	27.0	59.0	103.0	*	62.0	45.7	22.3	84.3
------------------	------	------	------	-------	---	------	------	------	------

V/C RATIO	.57	.57	.57	.40	*	.72	.73	.73	.24
LEVEL OF SERVICE	A	A	A	A	*	C	C	C	A

DELAY (SEC/VEH)	39.29	51.49	3.27	3.61	*	38.32	43.84	30.23	3.17
LEVEL OF SERVICE	D	D	A	A	*	D	D	C	A

STORAGE RATIO			.11	.21	*			.53	.12
LEVEL OF SERVICE			C	C	*			E	C

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	26.90 VEH-HRS/HR
INTERNAL OFFSET	29 SEC	CYCLE LENGTH	130 SEC

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*****
*
*
1 * A * B * 16.00
2 * A * C * 16.10
3 * B * C * .80
4 * B * A * 19.40
5 * C * A * 25.40
6 * C * B * 17.30
*
*****
INTERNAL OFFSET 16 SEC CYCLE LENGTH 95 SEC
PHASE ORDER LEAD-LEAD

```

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*****
*
*
1 * A * B * 18.00
2 * A * C * 15.80
3 * B * C * 1.80
4 * B * A * 19.40
5 * C * A * 27.90
6 * C * B * 17.10
*
*****
INTERNAL OFFSET 18 SEC CYCLE LENGTH 100 SEC
PHASE ORDER LEAD-LEAD

```

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 01 PAGE 6B

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ---- | * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	20.00
2	A	C	15.50
3	B	C	2.90
4	B	A	19.30
5	C	A	30.40
6	C	B	16.90

INTERNAL OFFSET 20 SEC

CYCLE LENGTH 105 SEC

PHASE ORDER LEAD-LEAD

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 01 PAGE 7B

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ---- | * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	22.00
2	A	C	15.20
3	B	C	4.00
4	B	A	19.20
5	C	A	33.00
6	C	B	16.60

INTERNAL OFFSET 22 SEC

CYCLE LENGTH 110 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```
*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*****
```

PHASE INTERVAL NUMBER	A	B	C	A	B	C	LENGTH (SEC)
1	*	A	*	B	*		23.00
2	*	A	*	C	*		15.90
3	*	B	*	C	*		4.00
4	*	B	*	A	*		20.20
5	*	C	*	A	*		34.40
6	*	C	*	B	*		17.50

```
*****
INTERNAL OFFSET 23 SEC CYCLE LENGTH 115 SEC
PHASE ORDER LEAD-LEAD
```

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```
*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*****
```

PHASE INTERVAL NUMBER	A	B	C	A	B	C	LENGTH (SEC)
1	*	A	*	B	*		25.00
2	*	A	*	C	*		15.60
3	*	B	*	C	*		5.10
4	*	B	*	A	*		20.00
5	*	C	*	A	*		37.10
6	*	C	*	B	*		17.20

```
*****
INTERNAL OFFSET 25 SEC CYCLE LENGTH 120 SEC
PHASE ORDER LEAD-LEAD
```

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 01 PAGE 10B

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

\*\*\*\*\*

\* \* \* \* \*

\* LEFT-SIDE SEQUENCE \* RIGHT-SIDE SEQUENCE \*

\* A B C \* A B C \*

PHASE INTERVAL \* <---- | <---- \* <---- ^ ^ \* PHASE INTERVAL

NUMBER \* | |---- \* | ----| \* LENGTH (SEC)

\* ----> V V \* ----> | ----> \*

\* \* \* \* \*

\*\*\*\*\*

\* \* \* \* \*

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	PHASE INTERVAL LENGTH (SEC)
1	A	B	26.00
2	A	C	16.30
3	B	C	5.20
4	B	A	20.80
5	C	A	38.70
6	C	B	18.00

\* \* \* \* \*

INTERNAL OFFSET 26 SEC

CYCLE LENGTH 125 SEC

PHASE ORDER LEAD-LEAD

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 01 PAGE 11B

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

\*\*\*\*\*

\* \* \* \* \*

\* LEFT-SIDE SEQUENCE \* RIGHT-SIDE SEQUENCE \*

\* A B C \* A B C \*

PHASE INTERVAL \* <---- | <---- \* <---- ^ ^ \* PHASE INTERVAL

NUMBER \* | |---- \* | ----| \* LENGTH (SEC)

\* ----> V V \* ----> | ----> \*

\* \* \* \* \*

\*\*\*\*\*

\* \* \* \* \*

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	PHASE INTERVAL LENGTH (SEC)
1	A	B	29.00
2	A	C	15.00
3	B	C	7.30
4	B	A	19.70
5	C	A	42.30
6	C	B	16.70

\* \* \* \* \*

INTERNAL OFFSET 29 SEC

CYCLE LENGTH 130 SEC

PHASE ORDER LEAD-LEAD

<GID01>

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION  
DIAMOND INTERCHANGE SIGNALIZATION - 145105

PASSER3

PASSER III-90

VER 1.0  
OCT 90

PPPP	AAA	SSS	SSS	EEEE	RRRR	IIIIIIIIIIII
P P	A A	S S	S S	E	R R	I I I
P P	A A	S	S	E	R R	I I I
PPPP	AAAA	SSS	SSS	EEEE	RRRR	I I I
P	A A	S	S	E	R R	I I I
P	A A	S S	S S	E	R R	I I I
P	A A	SSS	SSS	EEEE	R R	IIIIIIIIIIII

\*\*\*\*\* GENERAL IDENTIFICATION DATA \*\*\*\*\*

FREEWAY NAME - - - I-75 NO BUILD 2008 AM

CITY NAME - - - - - PASCO CO.

DISTRICT NUMBER - - - - - 07

DATE - - - - - 11/08/99

RUN NUMBER - - - - - 08

<GID02>

\*\*\*\*\* ISOLATED INTERCHANGE OPERATION \*\*\*\*\*

\*\*\* PARAMETERS \*\*\*

NUMBER OF INTERCHANGES - - - 1

LOWER CYCLE LIMIT (SEC) - - - 95

UPPER CYCLE LIMIT (SEC) - - - 130

CYCLE INCREMENT (SEC) - - - 5

\*\*\* OPTIONS \*\*\*

OPTIMIZE INTERNAL OFFSETS ? - - YES

EVALUATE INTERNAL OFFSETS ? - - NO



<GID01>

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION  
DIAMOND INTERCHANGE SIGNALIZATION - 145105

PASSER3

PASSER III-90

VER 1.0

OCT 90

PPPP	AAA	SSS	SSS	EEEE	RRRR	IIIIIIIIIIII
P P A A S S S E R R	I I I					
P P A A S S E R R	I I I					
PPPP	AAAA	SSS	SSS	EEEE	RRRR	I I I
P A A S S E R R	I I I					
P A A S S S E R R	I I I					
P A A SSS SSS EEEEE R R	IIIIIIIIIIII					

\*\*\*\*\* GENERAL IDENTIFICATION DATA \*\*\*\*\*

FREEWAY NAME - - - I-75 NO BUILD 2008 AM

CITY NAME - - - - - PASCO CO.

DISTRICT NUMBER - - - - - 07

DATE - - - - - 11/11/99

RUN NUMBER - - - - - 08

<GID02>

\*\*\*\*\* ISOLATED INTERCHANGE OPERATION \*\*\*\*\*

\*\*\* PARAMETERS \*\*\*

NUMBER OF INTERCHANGES - - - - 1

LOWER CYCLE LIMIT (SEC) - - - - 95

UPPER CYCLE LIMIT (SEC) - - - - 130

CYCLE INCREMENT (SEC) - - - - 5

\*\*\* OPTIONS \*\*\*

OPTIMIZE INTERNAL OFFSETS ? - - YES

EVALUATE INTERNAL OFFSETS ? - - NO

<IMD01A>

\*\*\* INTERCHANGE 1 SR 52

RUN 08 PAGE 2A

\*\*\* LEFT-SIDE MOVEMENT DATA \*\*\*

\*\*\*\*\*

TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
------------------	--------------	------------------------	---------------------

\*\*\*\*\*

ARTERIAL

RIGHT-TURN	580	1568	-
STRAIGHT-THROUGH	140	738	0
STRAIGHT-THEN-LEFT	210	1107	-

FRONTAGE ROAD

RIGHT-TURN	144	1545	-
STRAIGHT-THROUGH	0	0	0
LEFT-THEN-STRAIGHT	300	1727	-
LEFT-THEN-LEFT	0	0	-

INTERIOR

LEFT-TURN	680	1778	0
STRAIGHT-THROUGH	470	1872	-

<IMD01B>

\*\*\* INTERCHANGE 1 SR 52

RUN 08 PAGE 2B

\*\*\* RIGHT-SIDE MOVEMENT DATA \*\*\*

\*\*\*\*\*

TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
------------------	--------------	------------------------	---------------------

\*\*\*\*\*

ARTERIAL

RIGHT-TURN	240	1591	-
STRAIGHT-THROUGH	120	281	0
STRAIGHT-THEN-LEFT	680	1591	-

FRONTAGE ROAD

RIGHT-TURN	700	1545	-
STRAIGHT-THROUGH	0	0	0
LEFT-THEN-STRAIGHT	350	3345	-
LEFT-THEN-LEFT	0	0	-

INTERIOR

LEFT-TURN	210	1752	0
STRAIGHT-THROUGH	440	1845	-

\*\*\* INTERNAL DELAY-OFFSET INFORMATION \*\*\*

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* * * * *
PHASING   OPTIMIZE?  FORCE?           INTERIOR QUEUE STORAGE
* * * * *

```

```

LEAD-LEAD      Y      -   THROUGH MOVEMENT AT LEFT SIDE (VEH)   24
LAG -LEAD      Y      -   LEFT-TURN MOVEMENT AT LEFT SIDE (VEH)  24
LEAD-LAG       Y      -   THROUGH MOVEMENT AT RIGHT SIDE (VEH)  24
LAG -LAG       Y      -   LEFT-TURN MOVEMENT AT RIGHT SIDE (VEH)  12
TTI -LEAD     N      -

```

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* * * * *
PERMITTED LEFT TURNS?           INTERIOR TRAVEL TIMES
* * * * *

```

```

LEFT-SIDE INTERSECTION  NO   LEFT TO RIGHT (SEC) - - - - - 15
RIGHT-SIDE INTERSECTION NO   RIGHT TO LEFT (SEC) - - - - - 15

```

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	37.2	19.4	38.4	75.6	*	39.6	41.6	13.8	53.4
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.06	1.07	1.06	.33	*	1.14	1.14	1.16	.46
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	A	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	93.33	125.42	65.65	1.92	*	201.45	140.90	193.15	1.77
-----------------	-------	--------	-------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	E	A	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.60	.10	*			1.17	.09
---------------	--	--	-----	-----	---	--	--	------	-----

LEVEL OF SERVICE			E	C	*			F	B
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	116.20	VEH-HRS/HR
INTERNAL OFFSET	23 SEC	CYCLE LENGTH	95 SEC	

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 08 PAGE 5A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF LEFT-SIDE INTERSECTION \* RIGHT-SIDE INTERSECTION  
EFFECTIVENESS A B C A+C \* A B C A+C

\*\*\*\*\*

PHASE TIME (SEC) 39.2 20.4 40.4 79.6 \* 41.7 43.9 14.4 56.1

\*

V/C RATIO 1.05 1.06 1.05 .33 \* 1.13 1.14 1.15 .46

LEVEL OF SERVICE F F F A \* F F F A

\*

DELAY (SEC/VEH) 91.12 120.77 62.41 2.41 \* 197.61 135.79 193.90 2.50

LEVEL OF SERVICE F F E A \* F F F A

\*

STORAGE RATIO .57 .12 \* 1.24 .11

LEVEL OF SERVICE E C \* F C

\*\*\*\*\*

PHASE ORDER LEAD-LEAD TOTAL INTERCHANGE DELAY 113.63 VEH-HRS/HR

INTERNAL OFFSET 26 SEC CYCLE LENGTH 100 SEC

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 08 PAGE 6A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	41.2	21.3	42.5	83.7	*	43.9	46.1	15.0	58.9
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.04	1.05	1.04	.33	*	1.12	1.13	1.14	.46
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LEVEL OF SERVICE	F	F	F	A	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	89.43	120.30	58.29	2.33	*	192.20	133.47	186.42	2.98
-----------------	-------	--------	-------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	E	A	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.54	.12	*			1.25	.13
---------------	--	--	-----	-----	---	--	--	------	-----

LEVEL OF SERVICE			E	C	*			F	C
------------------	--	--	---	---	---	--	--	---	---

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PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	110.98	VEH-HRS/HR
-------------	-----------	-------------------------	--------	------------

INTERNAL OFFSET	28 SEC	CYCLE LENGTH	105 SEC
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<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 08 PAGE 7A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	43.2	22.3	44.5	87.7	*	46.0	48.4	15.6	61.6
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.04	1.04	1.04	.33	*	1.12	1.12	1.14	.46
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	A	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	88.16	117.23	55.76	2.67	*	189.71	129.82	179.76	3.48
-----------------	-------	--------	-------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	E	A	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.52	.14	*			1.26	.15
---------------	--	--	-----	-----	---	--	--	------	-----

LEVEL OF SERVICE			E	C	*			F	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	108.92	VEH-HRS/HR
INTERNAL OFFSET	30 SEC	CYCLE LENGTH	110	SEC

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 08 PAGE 8A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF LEFT-SIDE INTERSECTION \* RIGHT-SIDE INTERSECTION  
EFFECTIVENESS A B C A+C \* A B C A+C

\*\*\*\*\*

PHASE TIME (SEC) 45.2 23.2 46.6 91.8 \* 48.1 50.7 16.2 64.3

V/C RATIO 1.03 1.04 1.03 .33 \* 1.11 1.12 1.13 .45

LEVEL OF SERVICE F F F A \* F F F A

DELAY (SEC/VEH) 87.24 117.50 48.97 2.86 \* 187.66 126.78 178.26 4.44

LEVEL OF SERVICE F F D A \* F F F A

STORAGE RATIO .46 .14 \* 1.25 .15

LEVEL OF SERVICE D C \* F C

\*\*\*\*\*

PHASE ORDER LEAD-LEAD TOTAL INTERCHANGE DELAY 106.93 VEH-HRS/HR

INTERNAL OFFSET 34 SEC CYCLE LENGTH 115 SEC



<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 08 PAGE 9A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	47.2	24.1	48.7	95.9	*	50.3	52.9	16.8	67.1
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.03	1.04	1.03	.33	*	1.11	1.11	1.12	.45
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	A	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	86.60	117.95	46.54	3.21	*	184.17	125.78	172.84	4.96
-----------------	-------	--------	-------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	D	A	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.44	.15	*			1.25	.16
---------------	--	--	-----	-----	---	--	--	------	-----

LEVEL OF SERVICE			D	C	*			F	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	105.69	VEH-HRS/HR
INTERNAL OFFSET	36 SEC	CYCLE LENGTH	120 SEC	

<GS101>

\*\*\* INTERCHANGE 1 SR 52

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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	49.2	25.1	50.7	99.9	*	52.4	55.2	17.4	69.8
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.02	1.03	1.02	.33	*	1.10	1.11	1.12	.45
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	A	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	86.19	116.25	45.26	3.27	*	182.89	123.58	177.17	5.78
-----------------	-------	--------	-------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	D	A	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.43	.15	*			1.29	.18
---------------	--	--	-----	-----	---	--	--	------	-----

LEVEL OF SERVICE			D	C	*			F	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	105.29	VEH-HRS/HR
INTERNAL OFFSET	39 SEC	CYCLE LENGTH	125	SEC

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	51.2	26.0	52.8	104.0	*	54.5	57.5	18.0	72.5
------------------	------	------	------	-------	---	------	------	------	------

V/C RATIO	1.02	1.03	1.02	.33	*	1.10	1.10	1.11	.45
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	A	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	85.99	117.12	44.80	2.67	*	181.88	121.76	167.61	5.86
-----------------	-------	--------	-------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	D	A	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.44	.14	*			1.25	.18
---------------	--	--	-----	-----	---	--	--	------	-----

LEVEL OF SERVICE			D	C	*			F	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	104.44	VEH-HRS/HR
INTERNAL OFFSET	40 SEC	CYCLE LENGTH	130	SEC

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

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\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*                                     *
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
*   A   B   C   *   A   B   C   *
PHASE INTERVAL * <---- | <---- * <---- ^   ^ * PHASE INTERVAL
NUMBER         *   |   |---- *   |   ----| * LENGTH (SEC)
* ----> V   V   * ----> |   ----> *
*                                     *
*****

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	23.00
2	A	C	13.80
3	A	A	.40
4	B	A	19.40
5	C	A	19.80
6	C	B	18.60

INTERNAL OFFSET 23 SEC

CYCLE LENGTH 95 SEC

PHASE ORDER LEAD-LEAD

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

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\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*                                     *
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
*   A   B   C   *   A   B   C   *
PHASE INTERVAL * <---- | <---- * <---- ^   ^ * PHASE INTERVAL
NUMBER         *   |   |---- *   |   ----| * LENGTH (SEC)
* ----> V   V   * ----> |   ----> *
*                                     *
*****

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	26.00
2	A	C	13.20
3	B	C	1.20
4	B	A	19.20
5	C	A	22.50
6	C	B	17.90

INTERNAL OFFSET 26 SEC

CYCLE LENGTH 100 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*

```

```

*****
*
*
1 * A * B * 28.00
2 * A * C * 13.20
3 * B * C * 1.80
4 * B * A * 19.50
5 * C * A * 24.40
6 * C * B * 18.10
*
*

```

```

*****
INTERNAL OFFSET 28 SEC CYCLE LENGTH 105 SEC
PHASE ORDER LEAD-LEAD

```

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*

```

```

*****
*
*
1 * A * B * 30.00
2 * A * C * 13.20
3 * B * C * 2.40
4 * B * A * 19.90
5 * C * A * 26.10
6 * C * B * 18.40
*
*

```

```

*****
INTERNAL OFFSET 30 SEC CYCLE LENGTH 110 SEC
PHASE ORDER LEAD-LEAD

```

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

\*\*\*\*\*

```

*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*

```

\*\*\*\*\*

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	34.00
2	A	C	11.20
3	B	C	5.00
4	B	A	18.20
5	C	A	29.90
6	C	B	16.70

\*\*\*\*\*

INTERNAL OFFSET 34 SEC                      CYCLE LENGTH 115 SEC  
 PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

\*\*\*\*\*

```

*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*

```

\*\*\*\*\*

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	36.00
2	A	C	11.20
3	B	C	5.60
4	B	A	18.50
5	C	A	31.80
6	C	B	16.90

\*\*\*\*\*

INTERNAL OFFSET 36 SEC                      CYCLE LENGTH 120 SEC  
 PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
*****
1 * A * B * 39.00
2 * A * C * 10.20
3 * B * C * 7.20
4 * B * A * 17.90
5 * C * A * 34.50
6 * C * B * 16.20
*
*

```

INTERNAL OFFSET 39 SEC

CYCLE LENGTH 125 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
*****
1 * A * B * 40.00
2 * A * C * 11.20
3 * B * C * 6.80
4 * B * A * 19.20
5 * C * A * 35.30
6 * C * B * 17.50
*
*

```

INTERNAL OFFSET 40 SEC

CYCLE LENGTH 130 SEC

PHASE ORDER LEAD-LEAD

\*\*\* INTERNAL DELAY-OFFSET INFORMATION \*\*\*

```

*****
PHASING   OPTIMIZE?  FORCE?           INTERIOR QUEUE STORAGE
*****

```

```

LEAD-LEAD      Y      -   THROUGH MOVEMENT AT LEFT SIDE (VEH)  24
LAG -LEAD      Y      -   LEFT-TURN MOVEMENT AT LEFT SIDE (VEH)  24
LEAD-LAG       Y      -   THROUGH MOVEMENT AT RIGHT SIDE (VEH)  24
LAG -LAG       Y      -   LEFT-TURN MOVEMENT AT RIGHT SIDE (VEH)  12
TTI -LEAD      N      -

```

```

*****
PERMITTED LEFT TURNS?           INTERIOR TRAVEL TIMES
*****

```

```

LEFT-SIDE INTERSECTION  NO   LEFT TO RIGHT (SEC) - - - - - 15
RIGHT-SIDE INTERSECTION NO   RIGHT TO LEFT (SEC) - - - - - 15

```



<GSI01>

\*\*\* INTERCHANGE 1 SR 52

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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	28.6	19.1	47.3	75.9	*	40.5	39.6	14.9	55.4
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.86	.87	.86	.51	*	1.17	1.17	1.19	.36
-----------	-----	-----	-----	-----	---	------	------	------	-----

LEVEL OF SERVICE	E	E	E	A	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	49.00	61.84	.00	5.05	*	215.87	165.18	212.35	.80
-----------------	-------	-------	-----	------	---	--------	--------	--------	-----

LEVEL OF SERVICE	D	E	A	A	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.00	.21	*			1.36	.05
---------------	--	--	-----	-----	---	--	--	------	-----

LEVEL OF SERVICE			A	C	*			F	B
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	104.44	VEH-HRS/HR
-------------	-----------	-------------------------	--------	------------

INTERNAL OFFSET	20 SEC	CYCLE LENGTH	95 SEC
-----------------	--------	--------------	--------

<GSI01>

\*\* INTERCHANGE 1 SR 52

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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*  
MEASURES OF LEFT-SIDE INTERSECTION \* RIGHT-SIDE INTERSECTION  
EFFECTIVENESS A B C A+C \* A B C A+C  
\*\*\*\*\*

PHASE TIME (SEC) 30.1 20.0 49.9 80.0 \* 42.6 41.8 15.6 58.2

V/C RATIO .86 .87 .86 .51 \* 1.16 1.16 1.18 .36  
LEVEL OF SERVICE E E E A \* F F F A

DELAY (SEC/VEH) 49.71 62.79 .00 5.42 \* 212.90 158.73 199.16 .95  
LEVEL OF SERVICE D E A A \* F F F A

STORAGE RATIO .00 .22 \* 1.31 .06  
LEVEL OF SERVICE A C \* F B

\*\*\*\*\*  
PHASE ORDER LEAD-LEAD TOTAL INTERCHANGE DELAY 102.33 VEH-HRS/HR  
INTERNAL OFFSET 21 SEC CYCLE LENGTH 100 SEC

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C		A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	31.6	20.8	52.6	84.2	*	44.8	43.9	16.3	61.1
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.85	.87	.85	.50	*	1.15	1.16	1.17	.36
-----------	-----	-----	-----	-----	---	------	------	------	-----

LEVEL OF SERVICE	D	E	E	A	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	50.55	64.83	.00	5.38	*	208.05	155.62	197.73	1.61
-----------------	-------	-------	-----	------	---	--------	--------	--------	------

LEVEL OF SERVICE	D	E	A	A	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.00	.22	*			1.37	.08
---------------	--	--	-----	-----	---	--	--	------	-----

LEVEL OF SERVICE			A	C	*			F	B
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	101.30	VEH-HRS/HR
INTERNAL OFFSET	24 SEC	CYCLE LENGTH	105 SEC	

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF LEFT-SIDE INTERSECTION \* RIGHT-SIDE INTERSECTION  
EFFECTIVENESS A B C A+C \* A B C A+C

\*\*\*\*\*

PHASE TIME (SEC) 33.0 21.9 55.1 88.1 \* 47.0 46.1 16.9 63.9

V/C RATIO .85 .85 .85 .50 \* 1.15 1.15 1.17 .36

LEVEL OF SERVICE D E D A \* F F F A

DELAY (SEC/VEH) 51.93 64.22 .00 5.75 \* 203.97 150.95 194.50 1.81

LEVEL OF SERVICE D E A A \* F F F A

STORAGE RATIO .00 .24 \* 1.38 .09

LEVEL OF SERVICE A C \* F B

\*\*\*\*\*

PHASE ORDER LEAD-LEAD TOTAL INTERCHANGE DELAY 99.95 VEH-HRS/HR

INTERNAL OFFSET 25 SEC CYCLE LENGTH 110 SEC

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

```

*****
MEASURES OF      LEFT-SIDE INTERSECTION *   RIGHT-SIDE INTERSECTION
EFFECTIVENESS    A      B      C      A+C *   A      B      C      A+C
*****
PHASE TIME (SEC) 34.5   22.7   57.8   92.3 *   49.2   48.2   17.6   66.8
*****
V/C RATIO        .84    .85    .84    .50 *   1.14   1.15   1.16   .36
LEVEL OF SERVICE D      E      D      A  *   F      F      F      A
*****
DELAY (SEC/VEH)  52.93  66.36  .00    6.12 *  200.53 148.98 182.22  2.31
LEVEL OF SERVICE E      E      A      A  *   F      F      F      A
*****
STORAGE RATIO          .00    .26 *           1.36   .10
LEVEL OF SERVICE          A      C  *           F      C
*****
PHASE ORDER  LEAD-LEAD      TOTAL INTERCHANGE DELAY  98.82 VEH-HRS/HR
INTERNAL OFFSET 27 SEC      CYCLE LENGTH 115 SEC

```

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C		A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	36.0	23.6	60.4	96.4	*	51.3	50.4	18.3	69.6
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.84	.85	.84	.50	*	1.14	1.14	1.15	.36
-----------	-----	-----	-----	-----	---	------	------	------	-----

LEVEL OF SERVICE	D	E	D	A	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	54.01	67.73	.00	6.65	*	199.55	145.55	181.50	2.82
-----------------	-------	-------	-----	------	---	--------	--------	--------	------

LEVEL OF SERVICE	E	E	A	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.00	.28	*			1.40	.11
---------------	--	--	-----	-----	---	--	--	------	-----

LEVEL OF SERVICE			A	C	*			F	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	98.71 VEH-HRS/HR
INTERNAL OFFSET	29 SEC	CYCLE LENGTH	120 SEC

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

```

*****
MEASURES OF          LEFT-SIDE INTERSECTION *   RIGHT-SIDE INTERSECTION
EFFECTIVENESS        A      B      C      A+C *   A      B      C      A+C
*****
PHASE TIME (SEC)    37.5   24.5   63.0  100.5 *  53.6  52.5  18.9  72.5
*****
V/C RATIO           .83    .85    .83    .50 *   1.13  1.13  1.15  .36
LEVEL OF SERVICE    D      D      D      A  *   F      F      F      A
*****
DELAY (SEC/VEH)     55.15  69.17  .00    6.46 *  195.16 144.36 181.02  3.35
LEVEL OF SERVICE    E      E      A      A  *   F      F      F      A
*****
STORAGE RATIO              .00    .28 *                   1.44  .13
LEVEL OF SERVICE              A      C  *                   F      C
*****
PHASE ORDER  LEAD-LEAD      TOTAL INTERCHANGE DELAY  98.17 VEH-HRS/HR
INTERNAL OFFSET  31 SEC      CYCLE LENGTH  125 SEC

```

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	39.0	25.4	65.6	104.6	*	55.7	54.7	19.6	75.3
------------------	------	------	------	-------	---	------	------	------	------

V/C RATIO	.83	.84	.83	.50	*	1.13	1.13	1.14	.36
-----------	-----	-----	-----	-----	---	------	------	------	-----

LEVEL OF SERVICE	D	D	D	A	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	56.34	70.66	.00	6.08	*	194.80	141.82	173.10	3.26
-----------------	-------	-------	-----	------	---	--------	--------	--------	------

LEVEL OF SERVICE	E	E	A	A	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.00	.28	*			1.40	.13
---------------	--	--	-----	-----	---	--	--	------	-----

LEVEL OF SERVICE			A	C	*			F	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	97.66	VEH-HRS/HR
INTERNAL OFFSET	31 SEC	CYCLE LENGTH	130	SEC



<SPI01>

\*\*\* INTERCHANGE 1 SR 52

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\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
*****

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	20.00
2	A	C	8.60
3	B	C	6.30
4	B	A	12.80
5	C	A	27.70
6	C	B	19.60

INTERNAL OFFSET 20 SEC

CYCLE LENGTH 95 SEC

PHASE ORDER LEAD-LEAD

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

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\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
*****

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	21.00
2	A	C	9.10
3	B	C	6.50
4	B	A	13.50
5	C	A	29.10
6	C	B	20.80

INTERNAL OFFSET 21 SEC

CYCLE LENGTH 100 SEC

PHASE ORDER LEAD-LEAD

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

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\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
*****
1 * A * B * 24.00
2 * A * C * 7.60
3 * B * C * 8.70
4 * B * A * 12.10
5 * C * A * 32.70
6 * C * B * 19.90
*
*

```

INTERNAL OFFSET 24 SEC

CYCLE LENGTH 105 SEC

PHASE ORDER LEAD-LEAD

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

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\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
*****
1 * A * B * 25.00
2 * A * C * 8.00
3 * B * C * 8.90
4 * B * A * 13.00
5 * C * A * 34.00
6 * C * B * 21.10
*
*

```

INTERNAL OFFSET 25 SEC

CYCLE LENGTH 110 SEC

PHASE ORDER LEAD-LEAD

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

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\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE (A, B, C)	RIGHT-SIDE SEQUENCE (A, B, C)	LENGTH (SEC)
1	A	B	27.00
2	A	C	7.50
3	B	C	10.10
4	B	A	12.60
5	C	A	36.60
6	C	B	21.20

INTERNAL OFFSET 27 SEC

CYCLE LENGTH 115 SEC

PHASE ORDER LEAD-LEAD

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 9B

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE (A, B, C)	RIGHT-SIDE SEQUENCE (A, B, C)	LENGTH (SEC)
1	A	B	29.00
2	A	C	7.00
3	B	C	11.30
4	B	A	12.30
5	C	A	39.00
6	C	B	21.40

INTERNAL OFFSET 29 SEC

CYCLE LENGTH 120 SEC

PHASE ORDER LEAD-LEAD

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 10B

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*                                     *
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
*   A   B   C   *   A   B   C   *
PHASE INTERVAL * <---- | <---- * <---- ^     ^ * PHASE INTERVAL
NUMBER         *   |   |---- *   |   ----| * LENGTH (SEC)
* ----> V   V   * ----> |   ----> *
*                                     *
*****
*                                     *
*                                     *
1   *           A           *           B           *           31.00
2   *           A           *           C           *           6.50
3   *           B           *           C           *           12.40
4   *           B           *           A           *           12.10
5   *           C           *           A           *           41.50
6   *           C           *           B           *           21.50
*                                     *

```

INTERNAL OFFSET 31 SEC

CYCLE LENGTH 125 SEC

PHASE ORDER LEAD-LEAD

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 11B

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*                                     *
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
*   A   B   C   *   A   B   C   *
PHASE INTERVAL * <---- | <---- * <---- ^     ^ * PHASE INTERVAL
NUMBER         *   |   |---- *   |   ----| * LENGTH (SEC)
* ----> V   V   * ----> |   ----> *
*                                     *
*****
*                                     *
*                                     *
1   *           A           *           B           *           31.00
2   *           A           *           C           *           8.00
3   *           B           *           C           *           11.60
4   *           B           *           A           *           13.80
5   *           C           *           A           *           41.90
6   *           C           *           B           *           23.70
*                                     *

```

INTERNAL OFFSET 31 SEC

CYCLE LENGTH 130 SEC

PHASE ORDER LEAD-LEAD

<GID01>

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION  
DIAMOND INTERCHANGE SIGNALIZATION - 145105

PASSER3

PASSER III-90

VER 1.0  
OCT 90

PPPP	AAA	SSS	SSS	EEEE	RRRR	IIIIIIIIIIII
P P A A S S S E R R	I I I					
P P A A S S E R R	I I I					
PPPP	AAAA	SSS	SSS	EEEE	RRRR	I I I
P A A S S E R R	I I I					
P A A S S S E R R	I I I					
P A A SSS SSS EEEEE R R	IIIIIIIIIIII					

\*\*\*\*\* GENERAL IDENTIFICATION DATA \*\*\*\*\*

FREEWAY NAME - - - I-75 NO BUILD 2028 AM

CITY NAME - - - - - PASCO CO.

DISTRICT NUMBER - - - - - 07

DATE - - - - - 11/08/99

RUN NUMBER - - - - - 00

<GID02>

\*\*\*\*\* ISOLATED INTERCHANGE OPERATION \*\*\*\*\*

\*\*\* PARAMETERS \*\*\*

NUMBER OF INTERCHANGES - - - 1

LOWER CYCLE LIMIT (SEC) - - - 95

UPPER CYCLE LIMIT (SEC) - - - 130

CYCLE INCREMENT (SEC) - - - 5

\*\*\* OPTIONS \*\*\*

OPTIMIZE INTERNAL OFFSETS ? - - YES

EVALUATE INTERNAL OFFSETS ? - - NO

<IMD01A>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 2A

\*\*\* LEFT-SIDE MOVEMENT DATA \*\*\*

\*\*\*\*\*

TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
------------------	--------------	------------------------	---------------------

\*\*\*\*\*

ARTERIAL

RIGHT-TURN	716	1568	-
STRAIGHT-THROUGH	276	849	0
STRAIGHT-THEN-LEFT	324	996	-

FRONTAGE ROAD

RIGHT-TURN	243	1545	-
STRAIGHT-THROUGH	0	0	0
LEFT-THEN-STRAIGHT	494	1727	-
LEFT-THEN-LEFT	0	0	-

INTERIOR

LEFT-TURN	926	1778	0
STRAIGHT-THROUGH	850	1872	-

<IMD01B>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 2B

\*\*\* RIGHT-SIDE MOVEMENT DATA \*\*\*

\*\*\*\*\*

TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
------------------	--------------	------------------------	---------------------

\*\*\*\*\*

ARTERIAL

RIGHT-TURN	354	1568	-
STRAIGHT-THROUGH	175	293	0
STRAIGHT-THEN-LEFT	926	1552	-

FRONTAGE ROAD

RIGHT-TURN	765	1545	-
STRAIGHT-THROUGH	0	0	0
LEFT-THEN-STRAIGHT	675	3345	-
LEFT-THEN-LEFT	0	0	-

INTERIOR

LEFT-TURN	324	1752	0
STRAIGHT-THROUGH	770	1845	-

<DOI01>

\* \* \* INTERCHANGE 1 SR 52

RUN 00 PAGE 3

\*\*\* INTERNAL DELAY-OFFSET INFORMATION \*\*\*

```

*****
PHASING   OPTIMIZE?  FORCE?           INTERIOR QUEUE STORAGE
*****

```

```

LEAD-LEAD      Y      -   THROUGH MOVEMENT AT LEFT SIDE (VEH)  24
LAG -LEAD      Y      -   LEFT-TURN MOVEMENT AT LEFT SIDE (VEH)  24
LEAD-LAG       Y      -   THROUGH MOVEMENT AT RIGHT SIDE (VEH)  24
LAG -LAG       Y      -   LEFT-TURN MOVEMENT AT RIGHT SIDE (VEH)  12
TTI -LEAD      N      -

```

```

*****
PERMITTED LEFT TURNS?           INTERIOR TRAVEL TIMES
*****

```

```

LEFT-SIDE INTERSECTION  NO   LEFT TO RIGHT (SEC) - - - - - 15
RIGHT-SIDE INTERSECTION NO   RIGHT TO LEFT (SEC) - - - - - 15

```

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	34.1	22.7	38.2	72.3	*	42.9	36.2	15.9	58.8
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.44	1.45	1.45	.63	*	1.46	1.46	1.48	.72
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	C
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	476.45	506.83	450.42	7.49	*	565.28	505.80	591.75	2.63
-----------------	--------	--------	--------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			*****	.28	*			*****	.08
---------------	--	--	-------	-----	---	--	--	-------	-----

LEVEL OF SERVICE			F	C	*			F	B
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	616.38	VEH-HRS/HR
INTERNAL OFFSET	19 SEC	CYCLE LENGTH	95 SEC	



<GS101>

\* \* \* INTERCHANGE 1 SR 52

RUN 00 PAGE 5A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	35.9	23.8	40.3	76.2	*	45.3	38.1	16.6	61.9
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.43	1.44	1.43	.63	*	1.45	1.45	1.47	.72
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	C
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	463.62	495.75	431.69	7.91	*	546.71	493.91	576.86	2.84
-----------------	--------	--------	--------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			*****	.30	*			*****	.10
---------------	--	--	-------	-----	---	--	--	-------	-----

LEVEL OF SERVICE			F	C	*			F	B
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER LEAD-LEAD TOTAL INTERCHANGE DELAY 598.23 VEH-HRS/HR

INTERNAL OFFSET 21 SEC CYCLE LENGTH 100 SEC

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	37.7	25.0	42.3	80.0	*	47.7	40.0	17.3	65.0
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.42	1.43	1.43	.63	*	1.44	1.44	1.46	.72
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	C
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	452.62	475.82	423.23	6.84	*	530.79	483.67	567.92	3.11
-----------------	--------	--------	--------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			*****	.30	*			*****	.12
---------------	--	--	-------	-----	---	--	--	-------	-----

LEVEL OF SERVICE			F	C	*			F	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	583.25 VEH-HRS/HR
INTERNAL OFFSET	23 SEC	CYCLE LENGTH	105 SEC

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 7A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	39.5	26.1	44.4	83.9	*	50.0	42.0	18.0	68.0
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.41	1.42	1.42	.63	*	1.43	1.43	1.45	.72
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	C
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	443.11	468.32	408.35	7.25	*	521.94	469.00	556.17	3.46
-----------------	--------	--------	--------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			*****	.32	*			*****	.14
---------------	--	--	-------	-----	---	--	--	-------	-----

LEVEL OF SERVICE			F	D	*			F	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	569.93	VEH-HRS/HR
INTERNAL OFFSET	25 SEC	CYCLE LENGTH	110	SEC

<GS101>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 8A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	41.3	27.2	46.5	87.8	*	52.3	43.9	18.8	71.1
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.41	1.42	1.41	.62	*	1.42	1.43	1.44	.72
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	C
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	434.86	461.84	395.12	7.68	*	514.24	461.67	526.64	3.58
-----------------	--------	--------	--------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			*****	.33	*			*****	.15
---------------	--	--	-------	-----	---	--	--	-------	-----

LEVEL OF SERVICE			F	D	*			F	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER LEAD-LEAD TOTAL INTERCHANGE DELAY 557.73 VEH-HRS/HR

INTERNAL OFFSET 26 SEC CYCLE LENGTH 115 SEC

<GS101>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 9A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	43.1	28.4	48.5	91.6	*	54.6	45.9	19.5	74.1
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.40	1.41	1.40	.62	*	1.42	1.42	1.43	.71
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	C
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	427.68	447.82	390.15	7.29	*	507.50	450.20	528.19	3.74
-----------------	--------	--------	--------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			*****	.33	*			*****	.16
---------------	--	--	-------	-----	---	--	--	-------	-----

LEVEL OF SERVICE			F	D	*			F	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	548.87	VEH-HRS/HR
INTERNAL OFFSET	27 SEC	CYCLE LENGTH	120 SEC	

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 10A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	44.9	29.5	50.6	95.5	*	57.0	47.8	20.2	77.2
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.40	1.40	1.40	.62	*	1.41	1.41	1.43	.71
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	C
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	421.39	443.42	376.56	9.87	*	497.48	444.90	514.21	4.99
-----------------	--------	--------	--------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			*****	.37	*			*****	.20
---------------	--	--	-------	-----	---	--	--	-------	-----

LEVEL OF SERVICE			F	D	*			F	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	539.23	VEH-HRS/HR
INTERNAL OFFSET	32 SEC	CYCLE LENGTH	125	SEC

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	46.7	30.6	52.7	99.4	*	59.4	49.7	20.9	80.3
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.39	1.40	1.39	.62	*	1.40	1.41	1.42	.71
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	C
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	415.89	439.62	366.64	10.30	*	488.64	440.25	502.94	5.47
-----------------	--------	--------	--------	-------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			*****	.38	*			*****	.22
---------------	--	--	-------	-----	---	--	--	-------	-----

LEVEL OF SERVICE			F	D	*			F	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	530.87	VEH-HRS/HR
INTERNAL OFFSET	34 SEC	CYCLE LENGTH	130 SEC	

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*****

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	19.00
2	A	C	15.10
3	B	C	.80
4	B	A	21.90
5	C	A	21.00
6	C	B	17.20

INTERNAL OFFSET 19 SEC CYCLE LENGTH 95 SEC  
 PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*****

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	21.00
2	A	C	14.90
3	B	C	1.70
4	B	A	22.10
5	C	A	23.20
6	C	B	17.10

INTERNAL OFFSET 21 SEC CYCLE LENGTH 100 SEC  
 PHASE ORDER LEAD-LEAD



\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*****
*
*
1 * A * B * 23.00
2 * A * C * 14.70
3 * B * C * 2.60
4 * B * A * 22.40
5 * C * A * 25.30
6 * C * B * 17.00
*
*

```

INTERNAL OFFSET 23 SEC

CYCLE LENGTH 105 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*****
*
*
1 * A * B * 25.00
2 * A * C * 14.50
3 * B * C * 3.50
4 * B * A * 22.60
5 * C * A * 27.40
6 * C * B * 17.00
*
*

```

INTERNAL OFFSET 25 SEC

CYCLE LENGTH 110 SEC

PHASE ORDER LEAD-LEAD



\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*****

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	PHASE INTERVAL LENGTH (SEC)
1	A	B	32.00
2	A	C	12.90
3	B	C	7.30
4	B	A	22.20
5	C	A	34.80
6	C	B	15.80

INTERNAL OFFSET 32 SEC

CYCLE LENGTH 125 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*****

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	PHASE INTERVAL LENGTH (SEC)
1	A	B	34.00
2	A	C	12.70
3	B	C	8.20
4	B	A	22.40
5	C	A	37.00
6	C	B	15.70

INTERNAL OFFSET 34 SEC

CYCLE LENGTH 130 SEC

PHASE ORDER LEAD-LEAD

<GID01>

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION  
DIAMOND INTERCHANGE SIGNALIZATION - 145105

PASSER3

PASSER III-90

VER 1.0  
OCT 90

PPPP	AAA	SSS	SSS	EEEE	RRRR	IIIIIIIIIIII
P P A A S S S E R R	I I I					
P P A A S S E R R	I I I					
PPPP	AAAA	SSS	SSS	EEEE	RRRR	I I I
P A A S S E R R	I I I					
P A A S S S E R R	I I I					
P A A SSS SSS EEEEE R R	IIIIIIIIIIII					

\*\*\*\*\* GENERAL IDENTIFICATION DATA \*\*\*\*\*

FREEWAY NAME - - - I-75 NO BUILD 2028 PM

CITY NAME - - - - - PASCO CO.

DISTRICT NUMBER - - - - - 07

DATE - - - - - 11/08/99

RUN NUMBER - - - - - 00

<GID02>

\*\*\*\*\* ISOLATED INTERCHANGE OPERATION \*\*\*\*\*

\*\*\* PARAMETERS \*\*\*

NUMBER OF INTERCHANGES - - - 1

LOWER CYCLE LIMIT (SEC) - - - 95

UPPER CYCLE LIMIT (SEC) - - - 130

CYCLE INCREMENT (SEC) - - - 5

\*\*\* OPTIONS \*\*\*

OPTIMIZE INTERNAL OFFSETS ? - - YES

EVALUATE INTERNAL OFFSETS ? - - NO

<IMD01A>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 2A

\*\*\* LEFT-SIDE MOVEMENT DATA \*\*\*

\*\*\*\*\*

TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
---------------------	-----------------	---------------------------	------------------------

\*\*\*\*\*

ARTERIAL

RIGHT-TURN	675	1568	-
STRAIGHT-THROUGH	175	557	0
STRAIGHT-THEN-LEFT	405	1288	-

FRONTAGE ROAD

RIGHT-TURN	194	1545	-
STRAIGHT-THROUGH	0	0	0
LEFT-THEN-STRAIGHT	354	1727	-
LEFT-THEN-LEFT	0	0	-

INTERIOR

LEFT-TURN	765	1778	0
STRAIGHT-THROUGH	992	1872	-

<IMD01B>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 2B

\*\*\* RIGHT-SIDE MOVEMENT DATA \*\*\*

\*\*\*\*\*

TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
---------------------	-----------------	---------------------------	------------------------

\*\*\*\*\*

ARTERIAL

RIGHT-TURN	494	1591	-
STRAIGHT-THROUGH	276	496	0
STRAIGHT-THEN-LEFT	765	1376	-

FRONTAGE ROAD

RIGHT-TURN	926	1545	-
STRAIGHT-THROUGH	0	0	0
LEFT-THEN-STRAIGHT	716	3345	-
LEFT-THEN-LEFT	0	0	-

INTERIOR

LEFT-TURN	405	1752	0
STRAIGHT-THROUGH	529	1845	-

<00101>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 3

\*\*\* INTERNAL DELAY-OFFSET INFORMATION \*\*\*

```

*****
PHASING   OPTIMIZE?  FORCE?           INTERIOR QUEUE STORAGE
*****

```

```

LEAD-LEAD      Y      -   THROUGH MOVEMENT AT LEFT SIDE (VEH)  24
LAG -LEAD      Y      -   LEFT-TURN MOVEMENT AT LEFT SIDE (VEH)  24
LEAD-LAG       Y      -   THROUGH MOVEMENT AT RIGHT SIDE (VEH)  24
LAG -LAG       Y      -   LEFT-TURN MOVEMENT AT RIGHT SIDE (VEH)  12
TTI -LEAD      N      -

```

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*****
PERMITTED LEFT TURNS?           INTERIOR TRAVEL TIMES
*****

```

```

LEFT-SIDE INTERSECTION  NO   LEFT TO RIGHT (SEC) - - - - - 15
RIGHT-SIDE INTERSECTION NO   RIGHT TO LEFT (SEC) - - - - - 15

```

<GSI01>

\* \* \* INTERCHANGE 1 SR 52

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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	37.6	19.8	37.6	75.2	*	37.4	39.8	17.8	55.2
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.22	1.23	1.22	.71	*	1.58	1.59	1.59	.53
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	C	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	202.82	240.70	165.36	7.78	*	765.90	738.61	782.29	1.54
-----------------	--------	--------	--------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			1.51	.31	*		*****		.07
---------------	--	--	------	-----	---	--	-------	--	-----

LEVEL OF SERVICE			F	D	*		F		B
------------------	--	--	---	---	---	--	---	--	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	601.83	VEH-HRS/HR
INTERNAL OFFSET	24 SEC	CYCLE LENGTH	95 SEC	

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 5A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	39.6	20.8	39.6	79.2	*	39.4	42.0	18.6	58.0
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.21	1.22	1.21	.70	*	1.57	1.58	1.58	.53
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	C	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	197.39	231.22	158.35	6.94	*	746.24	714.38	766.79	1.85
-----------------	--------	--------	--------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			1.45	.31	*		*****		.09
---------------	--	--	------	-----	---	--	-------	--	-----

LEVEL OF SERVICE			F	D	*		F		B
------------------	--	--	---	---	---	--	---	--	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	584.74	VEH-HRS/HR
INTERNAL OFFSET	26 SEC	CYCLE LENGTH	100 SEC	



\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	41.7	21.7	41.6	83.3	*	41.4	44.2	19.4	60.8
------------------	------	------	------	------	---	------	------	------	------

\*\*\*\*\*

V/C RATIO	1.20	1.22	1.20	.70	*	1.56	1.57	1.58	.53
LEVEL OF SERVICE	F	F	F	C	*	F	F	F	A

\*\*\*\*\*

DELAY (SEC/VEH)	190.01	229.57	152.23	7.40	*	729.25	693.53	753.81	2.41
LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A

\*\*\*\*\*

STORAGE RATIO			1.39	.32	*			*****	.11
LEVEL OF SERVICE			F	D	*			F	C

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	570.54	VEH-HRS/HR
INTERNAL OFFSET	29 SEC	CYCLE LENGTH	105 SEC	

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	43.7	22.7	43.6	87.3	*	43.5	46.3	20.2	63.7
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.19	1.21	1.20	.70	*	1.55	1.56	1.57	.53
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	186.38	222.49	147.42	6.84	*	706.80	682.52	741.68	2.31
-----------------	--------	--------	--------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			1.38	.32	*			*****	.11
---------------	--	--	------	-----	---	--	--	-------	-----

LEVEL OF SERVICE			F	D	*			F	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	557.54	VEH-HRS/HR
INTERNAL OFFSET	29 SEC	CYCLE LENGTH	110 SEC	

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 8A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	45.7	23.7	45.6	91.3	*	45.4	48.5	21.1	66.5
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.19	1.20	1.19	.70	*	1.55	1.55	1.55	.53
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	183.34	216.57	142.60	7.71	*	701.52	666.23	715.59	2.68
-----------------	--------	--------	--------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			1.33	.36	*		*****		.12
---------------	--	--	------	-----	---	--	-------	--	-----

LEVEL OF SERVICE			F	D	*		F		C
------------------	--	--	---	---	---	--	---	--	---

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PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	547.26	VEH-HRS/HR
INTERNAL OFFSET	31 SEC	CYCLE LENGTH	115	SEC

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 9A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C		A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	47.7	24.6	47.7	95.4	*	47.5	50.6	21.9	69.4
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.18	1.19	1.18	.70	*	1.54	1.54	1.55	.53
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	180.80	216.54	136.49	6.74	*	683.41	658.15	706.92	2.82
-----------------	--------	--------	--------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			1.29	.34	*			*****	.13
---------------	--	--	------	-----	---	--	--	-------	-----

LEVEL OF SERVICE			F	D	*			F	C
------------------	--	--	---	---	---	--	--	---	---

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PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	537.24	VEH-HRS/HR
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INTERNAL OFFSET	32 SEC	CYCLE LENGTH	120 SEC
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<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 10A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

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MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	49.7	25.6	49.7	99.4	*	49.5	52.8	22.7	72.2
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.18	1.19	1.18	.69	*	1.53	1.54	1.55	.53
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	178.67	212.01	132.75	7.04	*	673.74	645.15	699.14	3.20
-----------------	--------	--------	--------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			1.26	.36	*		*****		.14
---------------	--	--	------	-----	---	--	-------	--	-----

LEVEL OF SERVICE			F	D	*		F		C
------------------	--	--	---	---	---	--	---	--	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	529.02	VEH-HRS/HR
-------------	-----------	-------------------------	--------	------------

INTERNAL OFFSET	34 SEC	CYCLE LENGTH	125 SEC
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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	51.8	26.5	51.7	103.5	*	51.4	55.0	23.6	75.0
------------------	------	------	------	-------	---	------	------	------	------

V/C RATIO	1.17	1.18	1.17	.69	*	1.53	1.53	1.53	.52
-----------	------	------	------	-----	---	------	------	------	-----

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	174.88	212.56	129.37	7.89	*	671.18	633.62	679.86	3.61
-----------------	--------	--------	--------	------	---	--------	--------	--------	------

LEVEL OF SERVICE	F	F	F	B	*	F	F	F	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			1.23	.39	*			*****	.15
---------------	--	--	------	-----	---	--	--	-------	-----

LEVEL OF SERVICE			F	D	*			F	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	522.32	VEH-HRS/HR
INTERNAL OFFSET	36 SEC	CYCLE LENGTH	130 SEC	

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	24.00
2	A	C	13.60
3	B	C	4.20
4	B	A	15.60
5	C	A	21.80
6	C	B	15.80

INTERNAL OFFSET 24 SEC                      CYCLE LENGTH 95 SEC  
 PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	26.00
2	A	C	13.60
3	B	C	5.00
4	B	A	15.80
5	C	A	23.60
6	C	B	16.00

INTERNAL OFFSET 26 SEC                      CYCLE LENGTH 100 SEC  
 PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
*****
*
*
1 * A * B * 31.00
2 * A * C * 14.70
3 * B * C * 6.40
4 * B * A * 17.30
5 * C * A * 28.10
6 * C * B * 17.50
*
*

```

INTERNAL OFFSET 31 SEC

CYCLE LENGTH 115 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
*****
*
*
1 * A * B * 32.00
2 * A * C * 15.70
3 * B * C * 6.20
4 * B * A * 18.40
5 * C * A * 29.10
6 * C * B * 18.60
*
*

```

INTERNAL OFFSET 32 SEC

CYCLE LENGTH 120 SEC

PHASE ORDER LEAD-LEAD



**APPENDIX Mb**  
**HCS Freeway Analyses**

=====  
 Post, Buckley, Schuh & Jernigan, Inc.  
 5300 W.Cypress Street  
 Suite 300  
 Tampa, FL 33607-1066  
 Ph: (813) 877-7275  
 =====

=====  
 File Name ..... I75S52A.HC3  
 Location..... I-75 SOUTH  
 From/To..... SR 54 TO SR 52  
 Analyst..... AJK  
 Time of Analysis..... 2001 AM NO BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2132	2550
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1173	1402
Level of Service (LOS)	C	C
Projected Speed at Flow Rate (mph)	70.0	69.6
Density (pc/mi/ln)	16.76	20.13
Density (veh/mi/ln)	16.04	19.26
Speed of prevailing traffic (mph)	70.0	69.7

=====  
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=====  
 File Name ..... I75S52P.HC3  
 Location..... I-75 SOUTH  
 From/To..... SR 54 TO SR 52  
 Analyst..... AJK  
 Time of Analysis..... 2001 PM NO BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2550	2132
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

	Terrain Type	E	E	F	F	F
		T	R	HV	W	P
Dir 1	LEVEL	1.50		0.957	1.00	1.00
Dir 2		1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1402	1173
Level of Service (LOS)	C	C
Projected Speed at Flow Rate (mph)	69.6	70.0
Density (pc/mi/ln)	20.13	16.76
Density (veh/mi/ln)	19.26	16.04
Speed of prevailing traffic (mph)	69.7	70.0

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=====  
 File Name ..... I75N52A.HC3  
 Location..... I-75 NORTH  
 From/To..... SR 52 TO CR 41  
 Analyst..... AJK  
 Time of Analysis..... 2001 AM NO BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1756	2100
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F	
	T	R	HV	W	P	
Dir 1 LEVEL	1.50		0.957	1.00	1.00	
Dir 2	1.50		0.957	1.00	1.00	

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	966	1155
Level of Service (LOS)	B	C
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	13.80	16.50
Density (veh/mi/ln)	13.21	15.79
Speed of prevailing traffic (mph)	70.0	70.0

=====  
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=====  
 File Name ..... I75N52P.HC3  
 Location..... I-75 NORTH  
 From/To..... SR 52 TO CR 41  
 Analyst..... AJK  
 Time of Analysis..... 2001 PM NO BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2100	1756
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1155	966
Level of Service (LOS)	C	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	16.50	13.80
Density (veh/mi/ln)	15.79	13.21
Speed of prevailing traffic (mph)	70.0	70.0

=====  
 Post, Buckley, Schuh & Jernigan, Inc.  
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 =====

File Name ..... I75ABA.HC3  
 Location..... I-75  
 From/To..... RAMP A TO RAMP B  
 Analyst..... AJK  
 Time of Analysis..... 2001 AM NO BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY

A. Geometrics and Traffic Input Data      Dir 1      Dir 2

	Dir 1	Dir 2
Traffic Volume (vph)	1431	1800
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F	
	T	R	HV	W	P	
Dir 1      LEVEL	1.50		0.957	1.00	1.00	
Dir 2	1.50		0.957	1.00	1.00	

C. Level of Service Results      Dir 1      Dir 2

	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	787	990
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	11.24	14.14
Density (veh/mi/ln)	10.76	13.53
Speed of prevailing traffic (mph)	70.0	70.0

=====  
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 Ph: (813) 877-7275  
 =====

File Name ..... I75ABP.HC3  
 Location..... I-75  
 From/To..... RAMP A TO RAMP B  
 Analyst..... AJK  
 Time of Analysis..... 2001 PM NO BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1800	1431
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results

	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	990	787
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	14.14	11.24
Density (veh/mi/ln)	13.53	10.76
Speed of prevailing traffic (mph)	70.0	70.0

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File Name ..... I75CDA.HC3  
 Location..... I-75  
 From/To..... RAMP C TO RAMP D  
 Analyst..... AJK  
 Time of Analysis..... 2001 AM NO BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1431	1800
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	787	990
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	11.24	14.14
Density (veh/mi/ln)	10.76	13.53
Speed of prevailing traffic (mph)	70.0	70.0



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 File Name ..... I75CDP.HC3  
 Location..... I-75  
 From/To..... RAMP C TO RAMP D  
 Analyst..... AJK  
 Time of Analysis..... 2001 PM NO BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1800	1431
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F	
	T	R	HV	W	P	
Dir 1 LEVEL	1.50		0.957	1.00	1.00	
Dir 2	1.50		0.957	1.00	1.00	

C. Level of Service Results

	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	990	787
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	14.14	11.24
Density (veh/mi/ln)	13.53	10.76
Speed of prevailing traffic (mph)	70.0	70.0

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 File Name ..... I75S52A.HC3  
 Location..... I-75 SOUTH  
 From/To..... SR 54 TO SR 52  
 Analyst..... AJK  
 Time of Analysis..... 2008 AM NO BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2640	3160
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results

	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1452	1738
Level of Service (LOS)	C	D
Projected Speed at Flow Rate (mph)	69.5	67.6
Density (pc/mi/ln)	20.90	25.70
Density (veh/mi/ln)	20.00	24.60
Speed of prevailing traffic (mph)	69.5	67.6

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 File Name ..... I75S52P.HC3  
 Location..... I-75 SOUTH  
 From/To..... SR 54 TO SR 52  
 Analyst..... AJK  
 Time of Analysis..... 2008 PM NO BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	3160	2640
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

	Terrain Type	E	E	F	F	F
		T	R	HV	W	P
Dir 1	LEVEL	1.50		0.957	1.00	1.00
Dir 2		1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1738	1452
Level of Service (LOS)	D	C
Projected Speed at Flow Rate (mph)	67.6	69.5
Density (pc/mi/ln)	25.70	20.90
Density (veh/mi/ln)	24.60	20.00
Speed of prevailing traffic (mph)	67.6	69.5

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File Name ..... I75N52A.HC3  
 Location..... I-75 NORTH  
 From/To..... SR 52 TO CR 41  
 Analyst..... AJK  
 Time of Analysis..... 2008 AM NO BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2040	2440
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1122	1342
Level of Service (LOS)	C	C
Projected Speed at Flow Rate (mph)	70.0	69.9
Density (pc/mi/ln)	16.03	19.21
Density (veh/mi/ln)	15.34	18.38
Speed of prevailing traffic (mph)	70.0	69.9

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 File Name ..... I75N52P.HC3  
 Location..... I-75 NORTH  
 From/To..... SR 52 TO CR 41  
 Analyst..... AJK  
 Time of Analysis..... 2008 PM NO BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2440	2040
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1342	1122
Level of Service (LOS)	C	C
Projected Speed at Flow Rate (mph)	69.9	70.0
Density (pc/mi/ln)	19.21	16.03
Density (veh/mi/ln)	18.38	15.34
Speed of prevailing traffic (mph)	69.9	70.0

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 File Name ..... I75ABA.HC3  
 Location..... I-75  
 From/To..... RAMP A TO RAMP B  
 Analyst..... AJK  
 Time of Analysis..... 2008 AM NO BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1590	1900
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F	
	T	R	HV	W	P	
Dir 1 LEVEL	1.50		0.957	1.00	1.00	
Dir 2	1.50		0.957	1.00	1.00	

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	874	1045
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	12.49	14.93
Density (veh/mi/ln)	11.95	14.29
Speed of prevailing traffic (mph)	70.0	70.0

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 File Name ..... I75ABP.HC3  
 Location..... I-75  
 From/To..... RAMP A TO RAMP B  
 Analyst..... AJK  
 Time of Analysis..... 2008 PM NO BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY  
 =====

A. Geometrics and Traffic Input Data            Dir 1            Dir 2

	Dir 1	Dir 2
Traffic Volume (vph)	1900	1590
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F	
	T	R	HV	W	P	
Dir 1    LEVEL	1.50		0.957	1.00	1.00	
Dir 2	1.50		0.957	1.00	1.00	

C. Level of Service Results                    Dir 1            Dir 2

	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1045	874
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	14.93	12.49
Density (veh/mi/ln)	14.29	11.95
Speed of prevailing traffic (mph)	70.0	70.0

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 File Name ..... I75CDA.HC3  
 Location..... I-75  
 From/To..... RAMP C TO RAMP D  
 Analyst..... AJK  
 Time of Analysis..... 2008 AM NO BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1590	1900
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F	
	T	R	HV	W	P	
Dir 1 LEVEL	1.50		0.957	1.00	1.00	
Dir 2	1.50		0.957	1.00	1.00	

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	874	1045
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	12.49	14.93
Density (veh/mi/ln)	11.95	14.29
Speed of prevailing traffic (mph)	70.0	70.0



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File Name ..... I75CDP.HC3  
 Location..... I-75  
 From/To..... RAMP C TO RAMP D  
 Analyst..... AJK  
 Time of Analysis..... 2008 PM NO BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY

A. Geometrics and Traffic Input Data            Dir 1            Dir 2

	Dir 1	Dir 2
Traffic Volume (vph)	1900	1590
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F	
	T	R	HV	W	P	
Dir 1    LEVEL	1.50		0.957	1.00	1.00	
Dir 2	1.50		0.957	1.00	1.00	

C. Level of Service Results                    Dir 1            Dir 2

	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1045	874
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	14.93	12.49
Density (veh/mi/ln)	14.29	11.95
Speed of prevailing traffic (mph)	70.0	70.0

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 File Name ..... I75S52P.HC3  
 Location..... I-75 SOUTH  
 From/To..... SR 54 TO SR 52  
 Analyst..... WFB  
 Time of Analysis..... 2028 PM NO BUILD  
 Date of Analysis..... 11/05/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	4580	3902
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

	Terrain Type	E	E	F	F	F
		T	R	HV	W	P
Dir 1	LEVEL	1.50		0.957	1.00	1.00
Dir 2		1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	* 2519	2146
Level of Service (LOS)	*F	E
Projected Speed at Flow Rate (mph)		61.1
Density (pc/mi/ln)		35.12
Density (veh/mi/ln)		33.61
Speed of prevailing traffic (mph)		61.1

\* Speed and density are highly variable for LOS F

\* Maximum Service Flow must not be greater than 2200 for 2 lanes.

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 File Name ..... I75N52A.HC3  
 Location..... I-75 NORTH  
 From/To..... SR 52 TO CR 41  
 Analyst..... WFB  
 Time of Analysis..... 2028 AM NO BUILD  
 Date of Analysis..... 11/05/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	3140	3837
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F	
	T	R	HV	W	P	
Dir 1 LEVEL	1.50		0.957	1.00	1.00	
Dir 2	1.50		0.957	1.00	1.00	

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1727	2110
Level of Service (LOS)	D	E
Projected Speed at Flow Rate (mph)	67.7	62.0
Density (pc/mi/ln)	25.50	34.01
Density (veh/mi/ln)	24.40	32.54
Speed of prevailing traffic (mph)	67.7	62.1

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 File Name ..... I75N52P.HC3  
 Location..... I-75 NORTH  
 From/To..... SR 52 TO CR 41  
 Analyst..... WFB  
 Time of Analysis..... 2028 PM NO BUILD  
 Date of Analysis..... 11/05/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	3837	3140
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	2110	1727
Level of Service (LOS)	E	D
Projected Speed at Flow Rate (mph)	62.0	67.7
Density (pc/mi/ln)	34.01	25.50
Density (veh/mi/ln)	32.54	24.40
Speed of prevailing traffic (mph)	62.1	67.7

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 File Name ..... I75ABA.HC3  
 Location..... I-75  
 From/To..... RAMP A TO RAMP B  
 Analyst..... WFB  
 Time of Analysis..... 2028 AM NO BUILD  
 Date of Analysis..... 11/05/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2462	2938
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

	Terrain Type	E	E	F	F	F
		T	R	HV	W	P
Dir 1	LEVEL	1.50		0.957	1.00	1.00
Dir 2		1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1354	1616
Level of Service (LOS)	C	C
Projected Speed at Flow Rate (mph)	69.8	68.7
Density (pc/mi/ln)	19.39	23.51
Density (veh/mi/ln)	18.56	22.49
Speed of prevailing traffic (mph)	69.8	68.7

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 File Name ..... I75ABP.HC3  
 Location..... I-75  
 From/To..... RAMP A TO RAMP B  
 Analyst..... WFB  
 Time of Analysis..... 2028 PM NO BUILD  
 Date of Analysis..... 11/05/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2938	2462
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

	Terrain Type	E	E	F	F	F
		T	R	HV	W	P
Dir 1	LEVEL	1.50		0.957	1.00	1.00
Dir 2		1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1616	1354
Level of Service (LOS)	C	C
Projected Speed at Flow Rate (mph)	68.7	69.8
Density (pc/mi/ln)	23.51	19.39
Density (veh/mi/ln)	22.49	18.56
Speed of prevailing traffic (mph)	68.7	69.8

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=====  
 File Name ..... I75CDA.HC3  
 Location..... I-75  
 From/To..... RAMP C TO RAMP D  
 Analyst..... WFB  
 Time of Analysis..... 2028 AM NO BUILD  
 Date of Analysis..... 11/05/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2462	2938
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1354	1616
Level of Service (LOS)	C	C
Projected Speed at Flow Rate (mph)	69.8	68.7
Density (pc/mi/ln)	19.39	23.51
Density (veh/mi/ln)	18.56	22.49
Speed of prevailing traffic (mph)	69.8	68.7

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=====  
 File Name ..... I75CDP.HC3  
 Location..... I-75  
 From/To..... RAMP C TO RAMP D  
 Analyst..... WFB  
 Time of Analysis..... 2028 PM NO BUILD  
 Date of Analysis..... 11/05/99  
 Other Information.... TSM NO BUILD WITH EXISTING GEOMETRY  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2938	2462
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	2	2
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F	
	T	R	HV	W	P	
Dir 1 LEVEL	1.50		0.957	1.00	1.00	
Dir 2	1.50		0.957	1.00	1.00	

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1616	1354
Level of Service (LOS)	C	C
Projected Speed at Flow Rate (mph)	68.7	69.8
Density (pc/mi/ln)	23.51	19.39
Density (veh/mi/ln)	22.49	18.56
Speed of prevailing traffic (mph)	68.7	69.8



**APPENDIX Mc**  
**HCS Ramps Analyses**

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File Name ..... INBONA.HC5
Location..... I-75 NB ON RAMP @ SR 52
Analyst..... AJK
Time of Analysis..... 2001 AM
Driver Population Factor..... 1.00
Date of Analysis..... 10/18/99
Other Information..... TSM NO BUILD

```

A. Ramp Configuration Input Data

	Analysis	
	Freeway	Ramp
Traffic Volume	1431	325
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
Length of acceleration lane is 863 ft.

=====

File Name ..... INBONA.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway	LEVEL	1.50	0.957	1.00	1.00
Ramp		1.50	0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	1431	70 2	12.0	1.00	0.957	1.00	1574
Ramp	ON 325	50 1	12.0	1.00	0.985	1.00	347

Estimation of V12:

-----

PFM = 1.000 Using Equation: 1 V12 = 1574

Capacity Checks:

-----

VFO = 1921 VR12 = 1921

LOS, Speed, and Density:

-----

Level of Service (LOS) B  
 Computed Density (pc/mi/ln) 15  
 Computed Speed (mph) 63

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=====  
 File Name ..... INBONP.HC5  
 Location..... I-75 NB ON RAMP @ SR 52  
 Analyst..... AJK  
 Time of Analysis..... 2001 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... TSM NO-BUILD  
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	1800	300
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 863 ft.

=====  
 File Name ..... INBONP.HC5

B. Adjustment Factors

Terrain Type	E T	E R	F HV	F W	F P
Freeway LEVEL	1.50		0.957	1.00	1.00
Ramp	1.50		0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	1800	70 2	12.0	1.00	0.957	1.00	1980
Ramp	ON 300	50 1	12.0	1.00	0.985	1.00	321

Estimation of V12:

-----  
 PFM = 1.000 Using Equation: 1 V12 = 1980

Capacity Checks:

-----  
 VFO = 2301 VR12 = 2301

LOS, Speed, and Density:

-----  
 Level of Service (LOS) B  
 Computed Density (pc/mi/ln) 18  
 Computed Speed (mph) 62

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File Name ..... INBOFFA.HC5  
 Location..... I75 NB OFF RAMP @ SR 52  
 Analyst..... AJK  
 Time of Analysis..... 2001 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... TSM NO-BUILD

A. Ramp Configuration Input Data

	Analysis	
	Freeway	Ramp
Traffic Volume	2132	701
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 295 ft.

=====  
 File Name ..... INBOFFA.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway LEVEL	1.50		0.959	1.00	1.00
Ramp	1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2132	70 2	12.0	1.00	0.959	1.00	2340
Ramp	OFF 701	50 1	12.0	1.00	0.959	1.00	769

Estimation of V12:

-----  
 PFD = 1.000 Using Equation: 6 V12 = 2340

Capacity Checks:

-----  
 VF0+VR = 2340 V12 = 2340

LOS, Speed, and Density:

-----  
 Level of Service (LOS) C  
 Computed Density (pc/mi/ln) 22  
 Computed Speed (mph) 62

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=====  
 File Name ..... INBOFFP.HC5  
 Location..... I-75 NB OFF RAMP @ SR 52  
 Analyst..... AJK  
 Time of Analysis..... 2001 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... TSM NO BUILD  
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2550	750
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 295 ft.



File Name ..... INBOFFP.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2550	70 2	12.0	1.00	0.959	1.00	2798
Ramp	OFF 750	50 1	12.0	1.00	0.959	1.00	823

Estimation of V12:

PFD = 1.000 Using Equation: 6 V12 = 2798

Capacity Checks:

VFO+VR = 2798 V12 = 2798

LOS, Speed, and Density:

Level of Service (LOS) C  
 Computed Density (pc/mi/ln) 26  
 Computed Speed (mph) 61

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File Name ..... ISBONA.HC5  
 Location..... I-75 SB ON RAMP @ SR52  
 Analyst..... AJK  
 Time of Analysis..... 2001 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... TSM NO BUILD

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	1800	750
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	6.0
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 443 ft.

File Name ..... ISBONA.HC5

B. Adjustment Factors

Terrain Type		E	E	F	F	F
		T	R	HV	W	P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.971	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	1800	70 2	12.0	1.00	0.959	1.00	1975
Ramp	ON 750	50 1	12.0	1.00	0.971	1.00	813

Estimation of V12:

PFM = 1.000 Using Equation: 1 V12 = 1975

Capacity Checks:

VFO = 2788 VR12 = 2788

LOS, Speed, and Density:

Level of Service (LOS) C  
 Computed Density (pc/mi/ln) 24  
 Computed Speed (mph) 60

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=====  
 File Name ..... ISBONP.HC5  
 Location..... I-75 SB ON RAMP @ SR52  
 Analyst..... AJK  
 Time of Analysis..... 2001 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... TSM NO BUILD  
 =====

A. Ramp Configuration Input Data

	Analysis	
	Freeway	Ramp
Traffic Volume	1431	701
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	6.0
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 443 ft.

=====  
 File Name ..... ISBONP.HC5

B. Adjustment Factors

Terrain Type		E	E	F	F	F
		T	R	HV	W	P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.971	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	1431	70 2	12.0	1.00	0.959	1.00	1570
Ramp	ON 701	50 1	12.0	1.00	0.971	1.00	760

Estimation of V12:

-----  
 PFM = 1.000 Using Equation: 1 V12 = 1570

Capacity Checks:

-----  
 VFO = 2330 VR12 = 2330

LOS, Speed, and Density:

-----  
 Level of Service (LOS) C  
 Computed Density (pc/mi/ln) 21  
 Computed Speed (mph) 61

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File Name ..... ISBOFFA.HC5  
 Location..... I-75 SB OFF RAMP @ SR52  
 Analyst..... AJK  
 Time of Analysis..... 2001 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... TSM NO-BUILD

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2100	300
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	9.0
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 508 ft.

=====

File Name ..... ISBOFFA.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway LEVEL	1.50		0.957	1.00	1.00
Ramp	1.50		0.957	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2100	70 2	12.0	1.00	0.957	1.00	2310
Ramp	OFF 300	50 1	12.0	1.00	0.957	1.00	330

Estimation of V12:

-----

PFD = 1.000      Using Equation: 6      V12 = 2310

Capacity Checks:

-----

VFO+VR = 2310      V12 = 2310

LOS, Speed, and Density:

-----

Level of Service (LOS)	B
Computed Density (pc/mi/ln)	20
Computed Speed (mph)	63

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=====  
 File Name ..... ISBOFFP.HC5  
 Location..... I-75 SB OFF RAMP @ SR52  
 Analyst..... AJK  
 Time of Analysis..... 2001 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... TSM NO-BUILD  
 =====

A. Ramp Configuration Input Data

	Analysis	
	Freeway	Ramp
Traffic Volume	1756	325
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	9.0
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 508 ft.



File Name ..... ISBOFFP.HC5

B. Adjustment Factors

Terrain Type	E T	E R	F HV	F W	F P
Freeway LEVEL	1.50		0.957	1.00	1.00
Ramp	1.50		0.957	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	1756	70 2	12.0	1.00	0.957	1.00	1932
Ramp	OFF 325	50 1	12.0	1.00	0.957	1.00	358

Estimation of V12:

PFD = 1.000 Using Equation: 6 V12 = 1932

Capacity Checks:

VFO+VR = 1932 V12 = 1932

LOS, Speed, and Density:

Level of Service (LOS) B  
 Computed Density (pc/mi/ln) 16  
 Computed Speed (mph) 63

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=====  
 File Name ..... INBONA.HC5  
 Location..... I-75 NB ON RAMP @ SR 52  
 Analyst..... AJK  
 Time of Analysis..... 2008 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... TSM NO-BUILD  
 =====

A. Ramp Configuration Input Data

	Analysis	
	Freeway	Ramp
Traffic Volume	1590	450
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 863 ft.

=====  
 File Name ..... INBONA.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway LEVEL	1.50		0.957	1.00	1.00
Ramp	1.50		0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	1590	70 2	12.0	1.00	0.957	1.00	1749
Ramp	ON 450	50 1	12.0	1.00	0.985	1.00	481

Estimation of V12:

-----  
 PFM = 1.000 Using Equation: 1 V12 = 1749

Capacity Checks:

-----  
 VFO = 2230 VR12 = 2230

LOS, Speed, and Density:

-----  
 Level of Service (LOS) B  
 Computed Density (pc/mi/ln) 17  
 Computed Speed (mph) 62

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=====  
 File Name ..... INBONP.HC5  
 Location..... I-75 NB ON RAMP @ SR 52  
 Analyst..... AJK  
 Time of Analysis..... 2008 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... TSM NO-BUILD  
 =====

A. Ramp Configuration Input Data

	Analysis	
	Freeway	Ramp
Traffic Volume	1900	540
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 863 ft.

=====  
 File Name ..... INBONP.HCS

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway LEVEL	1.50		0.957	1.00	1.00
Ramp	1.50		0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)	
Freeway	1900	70	2	12.0	1.00	0.957	1.00	2090
Ramp	ON 540	50	1	12.0	1.00	0.985	1.00	577

Estimation of V12:

-----  
 PFM = 1.000 Using Equation: 1 V12 = 2090

Capacity Checks:

-----  
 VFO = 2667 VR12 = 2667

LOS, Speed, and Density:

-----  
 Level of Service (LOS) C  
 Computed Density (pc/mi/ln) 21  
 Computed Speed (mph) 62

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File Name ..... INBOFFA.HC5  
 Location..... 175 NB OFF RAMP @ SR 52  
 Analyst..... AJK  
 Time of Analysis..... 2008 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... TSM NO-BUILD

A. Ramp Configuration Input Data

	Analysis	
	Freeway	Ramp
Traffic Volume	2640	1050
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 295 ft.

=====  
 File Name ..... INBOFFA.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS	Lane Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2640	70	2	12.0	1.00	0.959	1.00	2897
Ramp	OFF 1050	50	1	12.0	1.00	0.959	1.00	1152

Estimation of V12:

-----  
 PFD = 1.000      Using Equation: 6      V12 = 2897

Capacity Checks:

-----  
 VFO+VR = 2897      V12 = 2897

LOS, Speed, and Density:

-----  
 Level of Service (LOS)                      C  
 Computed Density (pc/mi/ln)                27  
 Computed Speed (mph)                        61

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=====  
 File Name ..... INBOFFP.HC5  
 Location..... I-75 NB OFF RAMP @ SR 52  
 Analyst..... AJK  
 Time of Analysis..... 2008 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... TSM NO-BUILD  
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	3160	1260
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 295 ft.



=====  
 File Name ..... INBOFFP.HC5

B. Adjustment Factors

Terrain Type	E T	E R	F HV	F W	F P
Freeway LEVEL	1.50		0.959	1.00	1.00
Ramp	1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	3160	70 2	12.0	1.00	0.959	1.00	3468
Ramp	OFF 1260	50 1	12.0	1.00	0.959	1.00	1383

Estimation of V12:

-----  
 PFD = 1.000 Using Equation: 6 V12 = 3468

Capacity Checks:

-----  
 VFO+VR = 3468 V12 = 3468

LOS, Speed, and Density:

-----  
 Level of Service (LOS) D  
 Computed Density (pc/mi/ln) 31  
 Computed Speed (mph) 60

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File Name ..... ISBONA.HC5  
 Location..... I-75 SB ON RAMP @ SR52  
 Analyst..... AJK  
 Time of Analysis..... 2008 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... TSM NO-BUILD

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	1900	1260
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	6.0
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 443 ft.

File Name ..... ISBONA.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway LEVEL	1.50		0.959	1.00	1.00
Ramp	1.50		0.971	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	1900	70	2 12.0	1.00	0.959	1.00	2085
Ramp	ON 1260	50	1 12.0	1.00	0.971	1.00	1366

Estimation of V12:

PFM = 1.000 Using Equation: 1 V12 = 2085

Capacity Checks:

VFO = 3451 VR12 = 3451

LOS, Speed, and Density:

Level of Service (LOS) D  
 Computed Density (pc/mi/ln) 29  
 Computed Speed (mph) 59

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File Name ..... ISBONP.HC5
Location..... I-75 SB ON RAMP @ SR52
Analyst..... AJK
Time of Analysis..... 2008 PM
Driver Population Factor..... 1.00
Date of Analysis..... 10/18/99
Other Information..... TSM NO-BUILD
=====

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A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	1590	1050
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	6.0
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
Length of acceleration lane is 443 ft.

=====  
 File Name ..... ISBONP.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.971	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	1590	70 2	12.0	1.00	0.959	1.00	1745
Ramp	ON 1050	50 1	12.0	1.00	0.971	1.00	1138

Estimation of V12:

-----  
 PFM = 1.000 Using Equation: 1 V12 = 1745

Capacity Checks:

-----  
 VFO = 2883 VR12 = 2883

LOS, Speed, and Density:

-----  
 Level of Service (LOS) C  
 Computed Density (pc/mi/ln) 25  
 Computed Speed (mph) 60

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 File Name ..... ISBOFFA.HC5  
 Location..... I-75 SB OFF RAMP @ SR52  
 Analyst..... AJK  
 Time of Analysis..... 2008 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... TSM NO-BUILD  
 =====

A. Ramp Configuration Input Data

	Analysis	
	Freeway	Ramp
Traffic Volume	2440	540
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	9.0
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 508 ft.

=====  
 File Name ..... ISBOFFA.HC5

B. Adjustment Factors

Terrain Type		E	E	F	F	F
		T	R	HV	W	P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.957	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2440	70 2	12.0	1.00	0.957	1.00	2684
Ramp	OFF 540	50 1	12.0	1.00	0.957	1.00	594

Estimation of V12:

-----  
 PFD = 1.000 Using Equation: 6 V12 = 2684

Capacity Checks:

-----  
 VFO+VR = 2684 V12 = 2684

LOS, Speed, and Density:

-----  
 Level of Service (LOS) C  
 Computed Density (pc/mi/ln) 23  
 Computed Speed (mph) 62

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File Name ..... ISBOFFP.HC5  
 Location..... I-75 SB OFF RAMP @ SR52  
 Analyst..... AJK  
 Time of Analysis..... 2008 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... TSM NO-BUILD

A. Ramp Configuration Input Data

	Analysis	
	Freeway	Ramp
Traffic Volume	2040	450
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	9.0
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 508 ft.



=====  
 File Name ..... ISBOFFP.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway LEVEL	1.50		0.957	1.00	1.00
Ramp	1.50		0.957	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2040	70 2	12.0	1.00	0.957	1.00	2244
Ramp	OFF 450	50 1	12.0	1.00	0.957	1.00	495

Estimation of V12:

-----  
 PFD = 1.000 Using Equation: 6 V12 = 2244

Capacity Checks:

-----  
 VFO+VR = 2244 V12 = 2244

LOS, Speed, and Density:

-----  
 Level of Service (LOS) B  
 Computed Density (pc/mi/ln) 19  
 Computed Speed (mph) 62

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 File Name ..... INBOFFA.HC5  
 Location..... I75 NB OFF RAMP @ SR 52  
 Analyst..... WFB  
 Time of Analysis..... 2028 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 11/5/99  
 Other Information..... TSM NO-BUILD  
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	3908	1440
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 295 ft.

File Name ..... INBOFFA.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	3908	70	2	12.0	1.00	0.959	1.00	4289
Ramp	OFF 1440	50	1	12.0	1.00	0.959	1.00	1580

Estimation of V12:

PFD = 1.000      Using Equation: 6      V12 = 4289

Capacity Checks:

VFO+VR = 4289      V12 = 4289

LOS, Speed, and Density:

Level of Service (LOS)      E  
 Computed Density (pc/mi/ln)      38  
 Computed Speed (mph)      59

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 File Name ..... INBOFFP.HC5  
 Location..... I75 NB OFF RAMP @ SR 52  
 Analyst..... WFB  
 Time of Analysis..... 2028 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 11/5/99  
 Other Information..... TSM NO-BUILD  
 -----

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	4580	1642
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 295 ft.

=====  
 File Name ..... INBOFFP.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)	
Freeway	4580	70	2	12.0	1.00	0.959	1.00	5026
Ramp	OFF 1642	50	1	12.0	1.00	0.959	1.00	1802

Estimation of V12:

-----  
 PFD = 1.000      Using Equation: 6      V12 = 5026

Capacity Checks:

-----  
 VFO+VR = 5026      V12 = 5026

LOS, Speed, and Density:

-----  
 Level of Service (LOS)      F  
 Computed Density (pc/mi/ln)      \*  
 Computed Speed (mph)      \*

\*Unstable flow

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 File Name ..... INBONA.HC5  
 Location..... I75 NB ON RAMP @ SR 52  
 Analyst..... WFB  
 Time of Analysis..... 2028 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 11/5/99  
 Other Information..... TSM NO-BUILD  
 -----

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2462	678
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 863 ft.

=====

File Name ..... INBONA.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2462	70	2	12.0	1.00	0.957	1.00	2708
Ramp	678	50	1	12.0	1.00	0.985	1.00	724

Estimation of V12:

-----

PFM = 1.000      Using Equation: 1      V12 = 2708

Capacity Checks:

-----

VFO = 3432      VR12 = 3432

LOS, Speed, and Density:

-----

Level of Service (LOS)	C
Computed Density (pc/mi/ln)	27
Computed Speed (mph)	60

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=====  
 File Name ..... INBONP.HC5  
 Location..... I75 NB ON RAMP @ SR 52  
 Analyst..... WFB  
 Time of Analysis..... 2028 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 11/5/99  
 Other Information..... TSM NO-BUILD  
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2938	899
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 863 ft.



File Name ..... INBONP.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2938	70	2	12.0	1.00	0.957	1.00	3232
Ramp	ON 899	50	1	12.0	1.00	0.985	1.00	961

Estimation of V12:

PFM = 1.000      Using Equation: 1      V12 = 3232

Capacity Checks:

VFO = 4193      VR12 = 4193

LOS, Speed, and Density:

Level of Service (LOS)      D  
 Computed Density (pc/mi/ln)      32  
 Computed Speed (mph)      56

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File Name ..... ISBONA.HC5  
 Location..... I75 SB ON RAMP @ SR 52  
 Analyst..... WFB  
 Time of Analysis..... 2028 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 11/5/99  
 Other Information..... TSM NO-BUILD

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2938	1642
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	6.0
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 443 ft.

File Name ..... ISBONA.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.971	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2938	70	2	12.0	1.00	0.959	1.00	3224
Ramp	ON 1642	50	1	12.0	1.00	0.971	1.00	1780

Estimation of V12:

PFM = 1.000      Using Equation: 1      V12 = 3224

Capacity Checks:

VFO = 5004      VR12 = 5004

LOS, Speed, and Density:

Level of Service (LOS)      F  
 Computed Density (pc/mi/ln)      \*  
 Computed Speed (mph)      \*

\*Unstable flow

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 File Name ..... ISBONP.HC5  
 Location..... I75 SB ON RAMP @ SR 52  
 Analyst..... WFB  
 Time of Analysis..... 2028 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 11/5/99  
 Other Information..... TSM NO-BUILD  
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2462	1440
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	6.0
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 443 ft.

File Name ..... ISBONP.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.971	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2462	70	2	12.0	1.00	0.959	1.00	2702
Ramp	ON 1440	50	1	12.0	1.00	0.971	1.00	1561

Estimation of V12:

PFM = 1.000      Using Equation: 1      V12 = 2702

Capacity Checks:

VFO = 4263      VR12 = 4263

LOS, Speed, and Density:

Level of Service (LOS)	E
Computed Density (pc/mi/ln)	35
Computed Speed (mph)	54

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 File Name ..... ISBOFFA.HC5  
 Location..... I75 SB OFF RAMP @ SR 52  
 Analyst..... WFB  
 Time of Analysis..... 2028 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 11/5/99  
 Other Information..... TSM NO-BUILD  
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	3837	899
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	9.0
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 508 ft.

=====  
 File Name ..... ISBOFFA.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.957	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	3837	70	2	12.0	1.00	0.957	1.00	4221
Ramp	899	50	1	12.0	1.00	0.957	1.00	989

Estimation of V12:

-----  
 PFD = 1.000      Using Equation: 6      V12 = 4221

Capacity Checks:

-----  
 VFO+VR = 4221      V12 = 4221

LOS, Speed, and Density:

-----  
 Level of Service (LOS)      E  
 Computed Density (pc/mi/ln)      36  
 Computed Speed (mph)      61

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=====  
 File Name ..... ISBOFFP.HC5  
 Location..... I75 SB OFF RAMP @ SR 52  
 Analyst..... WFB  
 Time of Analysis..... 2028 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 11/5/99  
 Other Information..... TSM NO-BUILD  
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	3140	678
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	9.0
Percentage RV's	0.0	0.0
Number of Lanes	2	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 508 ft.



=====  
 File Name ..... ISBOFFP.HC5  
 =====

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.957	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)	
Freeway	3140	70	2	12.0	1.00	0.957	1.00	3454
Ramp	OFF 678	50	1	12.0	1.00	0.957	1.00	746

Estimation of V12:

-----  
 PFD = 1.000      Using Equation: 6      V12 = 3454

Capacity Checks:

-----  
 VFO+VR = 3454      V12 = 3454

LOS, Speed, and Density:

-----  
 Level of Service (LOS)      D  
 Computed Density (pc/mi/ln)      29  
 Computed Speed (mph)      62

**APPENDIX Md**  
**TRANSYT-7F Queue Analysis**

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* Release 7.10                (TRANSYT-7F)                15 March 1993 *
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* TRAFFIC SIGNAL SYSTEM OPTIMIZATION *
*
* PROGRAM *
*
* Sponsored by:                Developed by: *
*
* U.S. Department of Transportation                University of Florida *
* Federal Highway Administration                Transportation Research Center *
*
* Software Maintenance and User Support Furnished by: *
* Center for Microcomputers in Transportation (McTrans) *
* Transportation Research Center, University of Florida *
* 512 Weil Hall, Gainesville, FL 32611-2083 USA *
* (904) 392-0378 *
*
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*****

```

Date of Run: 11/15/99 Start Time of Run: 14: 5:35 Data File: TSM08AM.TIN

-----  
INPUT DATA REPORT FOR RUN 1  
-----

FIELDS:  
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16  
-----

File: TSM08am.sy5, Date:Nov 15, 1999, Analyst:  
1 95 130 5 3 1 0 0 -1 1 1 60 0 0 0 1

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE  
LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO  
ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

--- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC  
CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION.  
LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD  
TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

--- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH  
THE OPTIMIZED TIMING PLAN TO BE WRITTEN.



TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

115 38 259.22 67 370.6 329.4 3 329.3927

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

120 40 256.02 67 366.8 325.5 2 325.5322

File: TSM08am.sy5, Date:Nov 15, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

125 42 253.31 67 363.6 322.4 2 322.3709

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

130 43 261.08 67 373.4 332.2 4 332.1613

BEST CYCLE LENGTH = 125 SEC. CYCLE SENSITIVITY = 2.5 %

--- 80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS INDICATED BY CARD TYPE 52.

File: TSM08am.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 125 Seconds, 60 Steps

<PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL AVG. (v-hr)(sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST.CAP.	FUEL CONS. (gal)	
SB LEFT : 92	106.23	10.99	125.2	7.43	84.6	295.( 93)	10	71	11.44
RGHT : 82	85.05	7.26	103.2	4.40	62.7	232.( 92)	8	71	8.00
EB THRU : 33	41.85	2.49	24.4	1.09	10.6	159.( 43)	6	24	3.39
RGHT : 47	69.48	2.70	15.9	.37	2.2	116.( 19)	5	24	3.78
WB THRU : 36	51.06	1.02	7.4	.09	.7	23.( 5)	1	22	2.22
LEFT : 92	73.85	5.89	29.6	4.55	22.9	355.( 50)	8	22	12.47
NODE 2: 92	427.51	30.35		17.94	23.4	1181.( 43)			41.30
NB LEFT : 42	130.34	8.28	81.0	3.91	38.2	295.( 80)	10	150	9.86
RGHT :124*	261.03	164.90	805.5	156.15	762.7	737.(100)	47	75	129.17
EB THRU : 47	47.76	2.38	18.5	1.52	11.8	293.( 63)	10	22	8.20
LEFT : 81	22.80	4.45	72.6	4.04	65.8	185.( 84)	7	22	7.20
WB THRU :124*	146.29	221.11	727.0	216.21	710.8	1095.(100)	48>	28C	170.37
NODE 5:124*	608.21	401.13		381.83	476.6	2605.( 90)			324.80

All MOEs are in units per hour.

File: TSM08am.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 125 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	1036
Total Travel Time	veh-hr/hr	431
Total Uniform Delay	veh-hr/hr	43
Total Random Delay	veh-hr/hr	357
Total Delay	veh-hr/hr	400
Average Delay	sec/veh	255.0
Passenger Delay	pax-hr/hr	480
Stops: Total	veh/hr	3785
Percentage	%	67
System Speed	mph	2.4
Fuel Consumption	gal/hr	366
Operating Cost	\$/hr	1549
Performance Index	DI	324.9

Performance Index (PI): Disutility Index (DI):  
Disutility Index            Excess Fuel Consumption

No. of Simulations = 87, Links = 672 Elapsed Time = 2.9 sec.



File: TSM08am.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 125 Seconds, 60 Steps

-----  
TRANSYT-7F TRAFFIC SIGNAL TIMING TABLES  
-----

-----  
NETWORK-WIDE SIGNAL TIMING PARAMETERS  
-----

SYSTEM CYCLE LENGTH = 125 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

F : Fixed green.

V : Variable green.

Y : Yellow.

R : All-red.

An 'M' by an interval length means this is the minimum time available.

-----  
INTERSECTION CONTROLLER SETTINGS  
-----

-----  
INTERSECTION 2 ACTUATED - SPLITS OPTIMIZED  
-----

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 11M 4 77 4 25 4

Intvl Length (%): 9 3 62 3 20 3

Pin Settings (%): 100/0 9 12 74 77 97

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 15 81 29  
Splits (%): 12 65 23

LINKS MOVING : 206 202 212  
201 206 207  
209 209  
-201

Yield Point = 35 sec 28 %.

File: TSM08am.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 125 Seconds, 60 Steps

-----  
INTERSECTION 5 ACTUATED - SPLITS OPTIMIZED  
-----

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 13M 4 68 4 32 4

Intvl Length (%): 10 3 55 3 26 3

Pin Settings (%): 100/0 10 13 68 71 97

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 17 72 36

Splits (%): 13 58 29

LINKS MOVING : 505 506 511  
511 502 503  
-505

Yield Point = 5 sec 4 %.

TRANSYT-7F:

Page 10

File: TSM08am.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 125 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

--- 92 --- NOTE - END OF JOB!

\*\*\*\*\*

\*  
\* Release 7.10 (TRANSYT-7F) 15 March 1993 \*

TRAFFIC SIGNAL SYSTEM OPTIMIZATION

PROGRAM

\* Sponsored by: Developed by: \*  
\* U.S. Department of Transportation University of Florida \*  
\* Federal Highway Administration Transportation Research Center \*

\* Software Maintenance and User Support Furnished by: \*  
\* Center for Microcomputers in Transportation (McTrans) \*  
\* Transportation Research Center, University of Florida \*  
\* 512 Weil Hall, Gainesville, FL 32611-2083 USA \*  
\* (904) 392-0378 \*

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\* All Rights Reserved. \*

\*\*\*\*\*

Date of Run: 11/15/99 Start Time of Run: 14: 8:54 Data File: TSM08PM.TIN

-----  
INPUT DATA REPORT FOR RUN 1  
-----

FIELDS:  
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16  
-----

File: TSM08pm.sy5, Date:Nov 15, 1999, Analyst:  
1 95 130 5 3 1 0 0 -1 1 1 60 0 0 0 1

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE  
LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO  
ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

--- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC  
CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION.  
LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD  
TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

--- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH  
THE OPTIMIZED TIMING PLAN TO BE WRITTEN.

File: TSM28pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 100 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	1511
Total Travel Time	veh-hr/hr	4351
Total Uniform Delay	veh-hr/hr	89
Total Random Delay	veh-hr/hr	4215
Total Delay	veh-hr/hr	4304
Average Delay	sec/veh	1886.7
Passenger Delay	pax-hr/hr	5165
Stops: Total	veh/hr	6751
Percentage	%	82
System Speed	mph	.3
Fuel Consumption	gal/hr	3274
Operating Cost	\$/hr	11730
Performance Index	DI	3277.9

Performance Index (PI): Disutility Index (DI):  
Disutility Index            Excess Fuel Consumption

No. of Simulations = 75, Links = 593 Elapsed Time = 2.7 sec.

File: TSM28pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 100 Seconds, 60 Steps

-----  
TRANSYT-7F TRAFFIC SIGNAL TIMING TABLES  
-----

-----  
NETWORK-WIDE SIGNAL TIMING PARAMETERS  
-----

SYSTEM CYCLE LENGTH = 100 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

F : Fixed green.

V : Variable green.

Y : Yellow.

R : All-red.

An 'M' by an interval length means this is the minimum time available.

-----  
INTERSECTION CONTROLLER SETTINGS  
-----

-----  
INTERSECTION 2 ACTUATED - SPLITS OPTIMIZED  
-----

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 9M 4 53 4 26 4

Intvl Length (%): 9 4 53 4 26 4

Pin Settings (%): 100/0 9 13 66 70 96

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 13 57 30  
Splits (%): 13 57 30

LINKS MOVING : 201 202 212  
206 209 207  
206  
-201

Yield Point = 88 sec 88 %.



File: TSM28pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 100 Seconds, 60 Steps

-----  
INTERSECTION 5 ACTUATED - SPLITS OPTIMIZED  
-----

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 9M 4 56 4 23 4

Intvl Length (%): 9 4 56 4 23 4

Pin Settings (%): 100/0 9 13 69 73 96

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 13 60 27

Splits (%): 13 60 27

LINKS MOVING : 505 506 511  
511 502 503  
-505

Yield Point = 89 sec 89 %.

TRANSYT-7F:

Page 9

File: TSM28pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 100 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

--- 92 --- NOTE - END OF JOB!



File: TSM08pm.sy5, Date:Nov 15, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

PLOT AND OPTION CARDS

52 1 0 100 0 0 0 0 0 0 0 0 0 0 0 0

--- 72 --- NOTE - A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE  
DEFAULT NORMAL OPTIMIZATION STEP SIZES.  
IF CARD TYPE 4 WAS CODED, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE  
LENGTH HAS BEEN SELECTED.

--- 70 --- NOTE - NO ERRORS DETECTED. TRANSYT-7F PERFORMS FINAL PROCESSING.  
IF ANY ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

--- 74 --- NOTE - THERE ARE A TOTAL OF 2 NODES AND 11 LINKS,  
INCLUDING BOTTLENECKS, IF ANY, IN THIS RUN.

--- 77 --- NOTE - THERE WERE A TOTAL OF 1 WARNING MESSAGES ISSUED  
IN THE ABOVE REPORT.

File: TSM08pm.sy5, Date:Nov 15, 1999, Analyst:

-----  
 CYCLE EVALUATION SUMMARY PERFORMANCE  
 -----

CYCLE LENGTH (sec)	STEP SIZE (steps)	AVERAGE DELAY (sec/veh)	PERCENT STOPS (%)	FUEL CONSUMPTION (gal/hr)	DISUTILITY INDEX	NUMBER SATURATED LINKS	PERFORMANCE INDEX
--------------------	-------------------	-------------------------	-------------------	---------------------------	------------------	------------------------	-------------------

95	32	360.93	66	505.5	462.0	2	462.0145
----	----	--------	----	-------	-------	---	----------

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

100	33	356.91	66	501.1	457.7	2	457.6679
-----	----	--------	----	-------	-------	---	----------

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

105	35	352.46	66	496.0	452.6	2	452.5629
-----	----	--------	----	-------	-------	---	----------

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

110	37	347.26	68	490.9	447.4	2	447.4048
-----	----	--------	----	-------	-------	---	----------

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS

TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

115 38 343.40 68 486.3 442.8 2 442.8075

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

120 40 341.83 67 484.3 440.9 3 440.8568

File: TSM08pm.sy5, Date:Nov 15, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

125 42 340.15 67 482.5 439.0 3 439.0260

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

130 43 334.70 67 475.9 432.4 2 432.4133

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

BEST CYCLE LENGTH = 130 SEC. CYCLE SENSITIVITY = 2.2 %

--- 80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS INDICATED BY CARD TYPE 52.

File: TSM08pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 130 Seconds, 60 Steps

<PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST.CAP.	FUEL CONS. (gal)
SB LEFT : 79	85.05	7.16	101.9	4.31	61.4	231.( 91)	9	71	7.93
RGHT : 78	74.29	6.21	101.1	3.72	60.6	200.( 90)	7	71	6.88
EB THRU : 36	43.10	2.81	26.7	1.36	13.0	178.( 47)	7	24	3.75
RGHT : 30	41.85	1.71	16.7	.30	3.0	79.( 21)	3	24	2.38
WB THRU : 54	78.19	1.73	8.2	.32	1.5	43.( 6)	2	22	3.65
LEFT : 90	76.02	5.74	28.1	4.37	21.3	361.( 49)	12	22	12.53
NODE 2: 90	398.49	25.36		14.38	19.1	1091.( 40)			37.12
NB LEFT : 80	216.40	16.17	95.3	8.92	52.6	558.( 91)	21	150	18.52
RGHT : 131*	253.59	213.39	1072.9	204.89	1030.2	716.(100)	52	75	164.44
EB THRU : 36	39.09	1.83	17.4	1.12	10.6	213.( 56)	8	22	6.14
LEFT : 92	26.10	7.04	100.1	6.57	93.4	216.( 85)	8	22	9.74
WB THRU : 129*	160.31	314.01	942.0	308.64	925.9	1200.(100)	70>	28C	239.22
NODE 5: 131*	695.50	552.44		530.13	604.1	2904.( 92)			438.05

All MOEs are in units per hour.



File: TSM08pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 130 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	1094
Total Travel Time	veh-hr/hr	578
Total Uniform Delay	veh-hr/hr	51
Total Random Delay	veh-hr/hr	494
Total Delay	veh-hr/hr	545
Average Delay	sec/veh	333.7
Passenger Delay	pax-hr/hr	653
Stops: Total	veh/hr	3995
Percentage	%	68
System Speed	mph	1.9
Fuel Consumption	gal/hr	475
Operating Cost	\$/hr	1934
Performance Index	DI	431.7

Performance Index (PI): Disutility Index (DI):  
Disutility Index            Excess Fuel Consumption

No. of Simulations = 104, Links = 803 Elapsed Time = 3.1 sec.

File: TSM08pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 130 Seconds, 60 Steps

-----  
TRANSYT-7F TRAFFIC SIGNAL TIMING TABLES  
-----

-----  
NETWORK-WIDE SIGNAL TIMING PARAMETERS  
-----

SYSTEM CYCLE LENGTH = 130 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

F : Fixed green.

V : Variable green.

Y : Yellow.

R : All-red.

An 'M' by an interval length means this is the minimum time available.

-----  
INTERSECTION CONTROLLER SETTINGS  
-----

-----  
INTERSECTION 2 ACTUATED - SPLITS OPTIMIZED  
-----

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 18 4 76 4 24 4

Intvl Length (%): 14 3 59 3 18 3

Pin Settings (%): 100/0 14 17 76 79 97

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 22 80 28  
Splits (%): 17 62 21

LINKS MOVING : 206 202 212  
201 206 207  
209 209  
-201

Yield Point = 114 sec 88 %.

File: TSM08pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 130 Seconds, 60 Steps

-----  
INTERSECTION 5 ACTUATED - SPLITS OPTIMIZED  
-----

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 14 4 75 4 29 4

Intvl Length (%): 11 3 58 3 22 3

Pin Settings (%): 100/0 11 14 72 75 97

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 18 79 33

Splits (%): 14 61 25

LINKS MOVING : 505 506 511

511 502 503

-505

Yield Point = 85 sec 65 %.

TRANSYT-7F:

Page 10

File: TSM08pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 130 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

--- 92 --- NOTE - END OF JOB!

\*\*\*\*\*

\*  
\* Release 7.10 (TRANSYT-7F) 15 March 1993 \*

TRAFFIC SIGNAL SYSTEM OPTIMIZATION

PROGRAM

\* Sponsored by: Developed by: \*  
\* U.S. Department of Transportation University of Florida \*  
\* Federal Highway Administration Transportation Research Center \*

Software Maintenance and User Support Furnished by:  
Center for Microcomputers in Transportation (McTrans)  
Transportation Research Center, University of Florida  
512 Weil Hall, Gainesville, FL 32611-2083 USA  
(904) 392-0378

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\*\*\*\*\*

Date of Run: 11/15/99 Start Time of Run: 15: 2:11 Data File: TSM28AM.TIN

-----  
INPUT DATA REPORT FOR RUN 1  
-----

FIELDS:  
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16  
-----

File: TSM28am.sy5, Date:Nov 15, 1999, Analyst:  
1 95 130 5 3 1 0 0 -1 1 1 60 0 0 0 1

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE  
LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO  
ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

--- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC  
CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION.  
LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD  
TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

--- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH  
THE OPTIMIZED TIMING PLAN TO BE WRITTEN.



File: TSM28am.sy5, Date:Nov 15, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

PLOT AND OPTION CARDS

52 1 0 100 0 0 0 0 0 0 0 0 0 0 0 0

--- 72 --- NOTE - A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE  
DEFAULT NORMAL OPTIMIZATION STEP SIZES.  
IF CARD TYPE 4 WAS CODED, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE  
LENGTH HAS BEEN SELECTED.

--- 70 --- NOTE - NO ERRORS DETECTED. TRANSYT-7F PERFORMS FINAL PROCESSING.  
IF ANY ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

--- 74 --- NOTE - THERE ARE A TOTAL OF 2 NODES AND 11 LINKS,  
INCLUDING BOTTLENECKS, IF ANY, IN THIS RUN.

--- 77 --- NOTE - THERE WERE A TOTAL OF 1 WARNING MESSAGES ISSUED  
IN THE ABOVE REPORT.



File: TSM28am.sy5, Date: Nov 15, 1999, Analyst:

-----  
 CYCLE EVALUATION SUMMARY PERFORMANCE  
 -----

CYCLE LENGTH (sec)	STEP SIZE (steps)	AVERAGE DELAY (sec/veh)	PERCENT STOPS (%)	FUEL CONSUMPTION (gal/hr)	DISUTILITY INDEX	NUMBER SATURATED LINKS	PERFORMANCE INDEX
--------------------	-------------------	-------------------------	-------------------	---------------------------	------------------	------------------------	-------------------

95	32	1369.92	84	2465.5	2645.7	8	2645.6610
----	----	---------	----	--------	--------	---	-----------

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

100	33	1331.17	83	2396.1	2405.7	8	2405.7490
-----	----	---------	----	--------	--------	---	-----------

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

105	35	1275.44	84	2303.0	2476.9	8	2476.8900
-----	----	---------	----	--------	--------	---	-----------

110	37	1377.95	83	2474.6	2413.9	9	2413.9400
-----	----	---------	----	--------	--------	---	-----------

115	38	1333.04	79	2396.0	2401.7	8	2401.7120
-----	----	---------	----	--------	--------	---	-----------

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

120	40	1585.37	77	2825.3	2875.0	6	2875.0290
-----	----	---------	----	--------	--------	---	-----------

125	42	1608.65	80	2870.2	3206.7	6	3206.7020
-----	----	---------	----	--------	--------	---	-----------

130	43	1577.86	78	2814.0	2889.1	6	2889.1070
-----	----	---------	----	--------	--------	---	-----------

-----  
BEST CYCLE LENGTH = 115 SEC.    CYCLE SENSITIVITY = 11.2 %

80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST  
CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS  
INDICATED BY CARD TYPE 52.

File: TSM28am.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 115 Seconds, 60 Steps

<PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL AVG. (v-hr)(sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST.CAP.	FUEL CONS. (gal)
------------------------	------------	------------------------	--	-----------------------	-----------------------	--------------------------	----------------------------------	------------------------

SB LEFT :158*	174.80	393.922727.2	388.06	2686.6	520.(100)	33	71	294.27
RGHT :144*	143.20	213.701805.9	208.90	1765.4	426.(100)	27	71	161.24

EB THRU : 61	71.87	5.17	29.5	2.76	15.7	374.( 59)	12	24	7.03
RGHT : 85	85.74	8.54	40.8	5.66	27.0	575.( 76)	20	24	10.83

WB THRU : 63	92.32	2.78	11.2	1.11	4.5	307.( 34)	12	22	9.67
LEFT :158*	100.57	705.752605.9	703.93	2599.1	637.( 65)	33>		220530.88	

NODE	2:158*	668.501329.87	1310.43	1122.7	2839.( 68)			1013.92
------	--------	---------------	---------	--------	------------	--	--	---------

NB LEFT :137*	251.82	276.541400.2	268.09	1357.4	711.(100)	45	150	210.63
RGHT :156*	285.12	584.312613.1	574.75	2570.3	805.(100)	48	75	437.11

EB THRU : 75	83.65	4.79	21.3	3.28	14.5	440.( 54)	15	22	13.47
LEFT : 92	35.17	7.61	80.3	6.97	73.6	241.( 71)	8	22	10.80

WB THRU :160*	204.671203.742828.61196.88	2812.5	1532.(100)	98>				280893.40
---------------	----------------------------	--------	------------	-----	--	--	--	-----------

NODE	5:160*	860.432076.99	2049.97	1757.1	3729.( 89)			1565.41
------	--------	---------------	---------	--------	------------	--	--	---------

All MOEs are in units per hour.

File: TSM28am.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 115 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	1529
Total Travel Time	veh-hr/hr	3407
Total Uniform Delay	veh-hr/hr	94
Total Random Delay	veh-hr/hr	3266
Total Delay	veh-hr/hr	3360
Average Delay	sec/veh	1439.8
Passenger Delay	pax-hr/hr	4032
Stops: Total	veh/hr	6567
Percentage	%	78
System Speed	mph	.4
Fuel Consumption	gal/hr	2579
Operating Cost	\$/hr	9330
Performance Index	DI	2809.1

Performance Index (PI): Disutility Index (DI):  
 Disutility Index            Excess Fuel Consumption

No. of Simulations = 108, Links = 824 Elapsed Time = 3.2 sec.

File: TSM28am.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 115 Seconds, 60 Steps

-----  
TRANSYT-7F TRAFFIC SIGNAL TIMING TABLES  
-----

-----  
NETWORK-WIDE SIGNAL TIMING PARAMETERS  
-----

SYSTEM CYCLE LENGTH = 115 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

F : Fixed green.

V : Variable green.

Y : Yellow.

R : All-red.

An 'M' by an interval length means this is the minimum time available.

-----  
INTERSECTION CONTROLLER SETTINGS  
-----

-----  
INTERSECTION 2 ACTUATED - SPLITS OPTIMIZED  
-----

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 17 4 66 4 20M 4

Intvl Length (%): 15 3 59 3 17 3

Pin Settings (%): 100/0 15 18 77 80 97

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 21 70 24  
Splits (%): 18 62 20

LINKS MOVING : 201 202 212  
206 209 207  
206  
-201

Yield Point = 91 sec 79 %.

File: TSM28am.sy5, Date: Nov 15, 1999, Analyst:  
CYCLE: 115 Seconds, 60 Steps

-----  
INTERSECTION 5 ACTUATED - SPLITS OPTIMIZED  
-----

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 18 4 68 4 17M 4

Intvl Length (%): 16 3 60 3 15 3

Pin Settings (%): 100/0 16 19 79 82 97

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 22 72 21

Splits (%): 19 63 18

LINKS MOVING : 505 506 511

511 502 503

-505

Yield Point = 107 sec 93 %.

File: TSM28am.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 115 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

--- 92 --- NOTE - END OF JOB!



\*\*\*\*\*

\* Release 7.10 (TRANSYT-7F) 15 March 1993 \*

TRAFFIC SIGNAL SYSTEM OPTIMIZATION

PROGRAM

\* Sponsored by: Developed by: \*

\* U.S. Department of Transportation University of Florida \*

\* Federal Highway Administration Transportation Research Center \*

Software Maintenance and User Support Furnished by:
Center for Microcomputers in Transportation (McTrans)
Transportation Research Center, University of Florida
512 Weil Hall, Gainesville, FL 32611-2083 USA
(904) 392-0378

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\*\*\*\*\*

Date of Run: 11/15/99 Start Time of Run: 14:11:34 Data File: TSM28PM.TIN

INPUT DATA REPORT FOR RUN 1

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

File: TSM28pm.sy5, Date:Nov 15, 1999, Analyst:

1 95 130 5 3 1 0 0 -1 1 1 60 0 0 0 1

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE
LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO
ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

--- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC
CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION.
LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD
TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

--- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH
THE OPTIMIZED TIMING PLAN TO BE WRITTEN.



File: TSM28pm.sy5, Date:Nov 15, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

PLOT AND OPTION CARDS

52 1 0 100 0 0 0 0 0 0 0 0 0 0 0 0

--- 72 --- NOTE - A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE  
DEFAULT NORMAL OPTIMIZATION STEP SIZES.  
IF CARD TYPE 4 WAS CODED, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE  
LENGTH HAS BEEN SELECTED.

--- 70 --- NOTE - NO ERRORS DETECTED. TRANSYT-7F PERFORMS FINAL PROCESSING.  
IF ANY ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

--- 74 --- NOTE - THERE ARE A TOTAL OF 2 NODES AND 11 LINKS,  
INCLUDING BOTTLENECKS, IF ANY, IN THIS RUN.

--- 77 --- NOTE - THERE WERE A TOTAL OF 1 WARNING MESSAGES ISSUED  
IN THE ABOVE REPORT.

File: TSM28pm.sy5, Date:Nov 15, 1999, Analyst:

-----  
 CYCLE EVALUATION SUMMARY PERFORMANCE  
 -----

CYCLE LENGTH (sec)	STEP SIZE (steps)	AVERAGE DELAY (sec/veh)	PERCENT STOPS (%)	FUEL CONSUMPTION (gal/hr)	DISUTILITY INDEX	NUMBER SATURATED LINKS	PERFORMANCE INDEX
--------------------	-------------------	-------------------------	-------------------	---------------------------	------------------	------------------------	-------------------

95	32	1713.37	83	2981.1	2921.0	8	2920.9730
----	----	---------	----	--------	--------	---	-----------

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

100	33	1679.31	83	2923.8	2863.7	8	2863.7030
-----	----	---------	----	--------	--------	---	-----------

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

105	35	1688.44	80	2938.5	2883.1	7	2883.0920
-----	----	---------	----	--------	--------	---	-----------

110	37	1672.22	79	2909.5	2867.0	7	2867.0360
-----	----	---------	----	--------	--------	---	-----------

115	38	1850.07	79	3208.3	3149.3	5	3149.3310
-----	----	---------	----	--------	--------	---	-----------

120	40	1712.36	74	2971.1	2911.0	7	2911.0090
-----	----	---------	----	--------	--------	---	-----------

125	42	1995.47	80	3453.1	3509.8	4	3509.8410
-----	----	---------	----	--------	--------	---	-----------

130	43	1905.31	81	3303.6	3280.6	5	3280.6050
-----	----	---------	----	--------	--------	---	-----------

-----  
 BEST CYCLE LENGTH = 100 SEC.    CYCLE SENSITIVITY = 7.9 %

--- 80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS INDICATED BY CARD TYPE 52.

File: TSM28pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 100 Seconds, 60 Steps

<PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST. CAP.	FUEL CONSUMPTION (gal)
------------------------	-----	---------------------------	--------------------------------	-------------------------	--------------------------	--------------------------	-----------------------------	-----------------------------------	------------------------------

SB LEFT : 83	125.39	9.03	87.2	4.83	46.6	333.( 89)	10	71	10.53
RGHT : 85	114.63	8.66	91.4	4.82	50.9	305.( 90)	9	71	9.93

EB THRU : 63	69.48	5.19	30.6	2.86	16.9	394.( 64)	12	24	7.12
RGHT : 86	80.85	8.51	43.1	5.80	29.3	570.( 80)	17	24	10.70

WB THRU : 84	107.69	6.74	23.2	4.79	16.5	516.( 49)	15	22	16.80
LEFT :160*	83.03	629.3228	14.3	627.82	2807.6	595.( 74)	27>	22C	473.77

NODE	2:160*	581.07	667.45	650.91	603.2	2713.( 70)			528.84
------	--------	--------	--------	--------	-------	------------	--	--	--------

NB LEFT : 95*	267.05	22.60	107.9	13.65	65.2	711.( 94)	20	150	24.90
RGHT :178*	345.331239	654577.21228	0.7	4534.4	975.(100)	54	75	919.01	

EB THRU : 55	57.45	3.27	21.1	2.23	14.4	310.( 56)	10	22	9.37
LEFT :157*	43.94	317.282681	2	316.49	2674.5	426.(100)	24>	22C	241.27

WB THRU :179*	215.892100	304678.92093	0.6	4662.8	1616.(100)	90>	28C*****
---------------	------------	--------------	-----	--------	------------	-----	----------

NODE	5:179*	929.663683	3.10	3653.49	3039.0	4038.( 93)			2745.23
------	--------	------------	------	---------	--------	------------	--	--	---------

All MOEs are in units per hour.

**APPENDIX N**

**Ramp and Crossroad Queue Length Worksheets**

90 Percentile Queue Analysis  
 Design Year (2008) Build Alternative  
 Estimated Queue Lengths (Based on TRANSYT-7F Analyses)

Approach	Movement	# of Lanes	2008 A.M. Peak Hour						2008 P.M. Peak Hour					
			Queue Length		Decel Length <sup>d</sup>		Total Turn Lane Length		Queue Length		Decel Length <sup>d</sup>		Total Turn Lane Length	
			Feet <sup>a</sup>	Meters <sup>b</sup>	Feet <sup>a</sup>	Meters <sup>b</sup>	Feet <sup>a</sup>	Meters <sup>b</sup>	Feet <sup>a</sup>	Meters <sup>b</sup>	Feet <sup>a</sup>	Meters <sup>b</sup>	Feet <sup>a</sup>	Meters <sup>b</sup>
<b>No Build TSM</b>														
South Bound Off Ramp fro I-75	Left	1	500	152	185	55	685	207	450	137	185	55	635	192
	Right	1	500	152	185	55	<b>685</b>	<b>207</b>	350	107	185	55	535	162
North Bound Off Ramp fro I-75	Left	2	250	76	185	55	435	131	525	160	185	55	710	215
	Right	1	2350	716	185	55	2535	771	2600	792	185	55	<b>2785</b>	<b>847</b>
<b>Enhanced Diamond</b>														
South Bound Off Ramp fro I-75	Left	2	175	53	185	55	360	108	150	46	185	55	335	101
	Right	1	300	91	185	55	<b>485</b>	<b>146</b>	250	76	185	55	435	131
North Bound Off Ramp fro I-75	Left	2	200	61	185	55	385	116	375	114	185	55	560	169
	Right	2	400	122	185	55	<b>585</b>	<b>177</b>	400	122	185	55	585	177
<b>Loop 1</b>														
South Bound Off Ramp fro I-75	Left	2	175	53	185	55	360	108	150	46	185	55	335	101
	Right	1	250	76	185	55	<b>435</b>	<b>131</b>	200	61	185	55	385	116
North Bound Off Ramp fro I-75	Left	2	225	69	185	55	410	124	375	114	185	55	560	169
	Right	2	400	122	185	55	585	177	425	130	185	55	<b>610</b>	<b>185</b>
<b>Loop 2</b>														
South Bound Off Ramp fro I-75	Left	2	200	61	185	55	385	116	150	46	185	55	335	101
	Right	1	300	91	185	55	<b>485</b>	<b>146</b>	200	61	185	55	385	116
North Bound Off Ramp fro I-75	Left	2	225	69	185	55	410	124	375	114	185	55	560	169
	Right	2	425	130	185	55	<b>610</b>	<b>185</b>	375	114	185	55	560	169
<b>Loop 3</b>														
South Bound Off Ramp fro I-75	Left	2	200	61	185	55	385	116	175	53	185	55	360	108
	Right	1	250	76	185	55	435	131	300	91	185	55	<b>485</b>	<b>146</b>
North Bound Off Ramp fro I-75	Left	2	200	61	185	55	385	116	425	130	185	55	610	185
	Right	2	450	137	185	55	635	192	450	137	185	55	<b>635</b>	<b>192</b>

Notes:

- a English units deceleration length for lanes obtained from "Roadway and Traffic Design Standards, January 1994 Edition", Index 301.
  - b Metric units deceleration length for lanes obtained from "Roadway and Traffic Design Standards, January 1996 Edition", Index 301.
  - c No queue reported, therefore, assumed minimum queue of two (2) vehicles at 25 feet per vehicle.
  - d Design speed assumptions used to determine deceleration lengths
  - N/A Not applicable, no turn lanes
- Bold numbers represent recommended turn lane lengths.

90 Percentile Queue Analysis  
 Design Year (2028) Build Alternative  
 Estimated Queue Lengths (Based on TRANSYT-7F Analyses)

Approach	Movement	# of Lanes	2028 A.M. Peak Hour						2028 P.M. Peak Hour					
			Queue Length		Decel Length <sup>d</sup>		Total Turn Lane Length		Queue Length		Decel Length <sup>d</sup>		Total Turn Lane Length	
			Feet <sup>a</sup>	Meters <sup>b</sup>	Feet <sup>a</sup>	Meters <sup>b</sup>	Feet <sup>a</sup>	Meters <sup>b</sup>	Feet <sup>a</sup>	Meters <sup>b</sup>	Feet <sup>a</sup>	Meters <sup>b</sup>	Feet <sup>a</sup>	Meters <sup>b</sup>
<i>No Build TSM</i>														
South Bound Off Ram from I-75	Left	1	1650	503	185	55	1835	558	500	152	185	55	685	207
	Right	1	1700	518	185	55	<b>1885</b>	<b>573</b>	450	137	185	55	635	192
North Bound Off Ramp from I-75	Left	2	1125	343	185	55	1310	398	500	152	185	55	685	207
	Right	1	2400	732	185	55	<b>2585</b>	<b>787</b>	2700	823	185	55	<b>2885</b>	<b>878</b>
<i>Enhanced Diamond</i>														
South Bound Off Ram from I-75	Left	2	425	130	185	55	610	185	225	69	185	55	410	124
	Right	1	1200	366	185	55	<b>1385</b>	<b>421</b>	650	198	185	55	835	253
North Bound Off Ramp from I-75	Left	2	575	175	185	55	760	230	500	152	185	55	685	207
	Right	2	625	191	185	55	810	246	550	168	185	55	735	223
<i>Loop 1</i>														
South Bound Off Ram from I-75	Left	2	325	99	185	55	510	154	500	152	185	55	685	207
	Right	1	350	107	185	55	535	162	550	168	185	55	<b>735</b>	<b>223</b>
North Bound Off Ramp from I-75	Left	2	450	137	185	55	635	192	475	145	185	55	660	200
	Right	2	400	122	185	55	585	177	550	168	185	55	735	223
<i>Loop 2</i>														
South Bound Off Ram from I-75	Left	2	300	91	185	55	485	146	225	69	185	55	410	124
	Right	1	450	137	185	55	<b>635</b>	<b>192</b>	400	122	185	55	585	177
North Bound Off Ramp from I-75	Left	2	450	137	185	55	635	192	500	152	185	55	685	207
	Right	2	425	130	185	55	610	185	575	175	185	55	<b>760</b>	<b>230</b>
<i>Loop 3</i>														
South Bound Off Ram from I-75	Left	2	325	99	185	55	510	154	275	84	185	55	480	139
	Right	1	450	137	185	55	635	192	500	152	185	55	<b>685</b>	<b>207</b>
North Bound Off Ramp from I-75	Left	2	450	137	185	55	635	192	550	168	185	55	735	223
	Right	2	425	130	185	55	610	185	600	183	185	55	<b>785</b>	<b>238</b>

Notes:

- a English units deceleration length for lanes obtained from "Roadway and Traffic Design Standards, January 1994 Edition", Index 301.
  - b Metric units deceleration length for lanes obtained from "Roadway and Traffic Design Standards, January 1996 Edition", Index 301.
  - c No queue reported, therefore, assumed minimum queue of two (2) vehicles at 25 feet per vehicle.
  - d Design speed assumptions used to determine deceleration lengths
- N/A Not applicable, no turn lanes

Bold numbers represent recommended turn lane lengths.



Average Queue Length Analysis  
 Design Year (2008) Build Alternative  
 Average Queue Lengths (Based on TRANSYT-7F Analyses)

Approach	Movement	# of Lanes	2008 A.M. Peak Hour					2008 P.M. Peak Hour				
			Queue Length		Distance between intersection		Spill Back	Queue Length		Distance between intersection		Spill Back
			Feet	Meters	Feet	Meters		Feet	Meters	Feet	Meters	
<b>No Build TSM</b>												
SR 52 Eastbound to South Bound I-75	Thru	1	150	46	1115	340	NO	175	53	1115	340	NO
	Right	1	125	38	1115	340	NO	75	23	1115	340	NO
SR 52 West Bound to South Bound I-75	Thru	1	25	8	354	108	NO	50	15	354	108	NO
	Left	1	200	61	354	108	NO	300	91	354	108	NO
East Bound to North Bound I-75	Thru	1	250	76	354	108	NO	200	61	354	108	NO
	Left	1	175	53	354	108	NO	200	61	354	108	NO
West Bound to North Bound I-75	Thru	1	1200	366	N/A	N/A	N/A	1750	533	N/A	N/A	N/A
	Right	1	1200	366	N/A	N/A	N/A	1750	533	N/A	N/A	N/A
<b>Enhanced Diamond</b>												
SR 52 Eastbound to South Bound I-75	Thru	3	50	15	938	286	NO	58	18	938	286	NO
	Right	1	375	114	938	286	NO	200	61	938	286	NO
SR 52 West Bound to South Bound I-75	Thru	2	25	8	538	164	NO	38	11	538	164	NO
	Left	2	200	61	538	164	NO	138	42	538	164	NO
East Bound to North Bound I-75	Thru	2	50	15	538	164	NO	0	0	538	164	NO
	Left	1	50	15	538	164	NO	75	23	538	164	NO
West Bound to North Bound I-75	Thru	4	63	19	N/A	N/A	N/A	63	19	N/A	N/A	N/A
	Right	1	75	23	N/A	N/A	N/A	100	30	N/A	N/A	N/A
<b>Loop 1</b>												
SR 52 Eastbound to South Bound I-75	Thru	2	38	11	906	276	NO	38	11	906	276	NO
	Left	1	125	38	906	276	NO	50	15	906	276	NO
SR 52 West Bound to South Bound I-75	Thru <sup>c</sup>	2	25	8	1516	462	NO	25	8	1516	462	NO
	Right	1	175	53	1516	462	NO	125	38	1516	462	NO
East Bound to North Bound I-75	Thru	2	38	11	1516	462	NO	38	11	1516	462	NO
	Left	1	50	15	1516	462	NO	50	15	1516	462	NO
West Bound to North Bound I-75	Thru	2	150	46	N/A	N/A	N/A	163	50	N/A	N/A	N/A
	Right	1	75	23	N/A	N/A	N/A	125	38	N/A	N/A	N/A
<b>Loop 2</b>												
SR 52 West Bound to South Bound I-75	Thru <sup>c</sup>	2	25	8	906	276	NO	25	8	906	276	NO
	Right	1	150	46	906	276	NO	125	38	906	276	NO
SR 52 East Bound to South Bound I-75	Thru <sup>c</sup>	2	25	8	1246	380	NO	25	8	1246	380	NO
	Right <sup>c</sup>	1	50	15	1246	380	NO	50	15	1246	380	NO
East Bound to North Bound I-75	Thru	2	63	19	1246	380	NO	63	19	1246	380	NO
	Left	1	50	15	1246	380	NO	50	15	1246	380	NO
West Bound to North Bound I-75	Thru	2	163	50	N/A	N/A	N/A	163	50	N/A	N/A	N/A
	Right	1	75	23	N/A	N/A	N/A	100	30	N/A	N/A	N/A
<b>Loop 3</b>												
SR 52 West Bound to South Bound I-75	Thru <sup>c</sup>	2	25	8	906	276	NO	25	8	906	276	NO
	Right	1	200	61	906	276	NO	125	38	906	276	NO
SR 52 East Bound to South Bound I-75	Thru <sup>c</sup>	2	25	8	1246	380	NO	25	8	1246	380	NO
	Right <sup>c</sup>	1	50	15	1246	380	NO	50	15	1246	380	NO
East Bound to North Bound I-75	Thru	2	50	15	1246	380	NO	63	19	1246	380	NO
	Left	1	50	15	1246	380	NO	75	23	1246	380	NO
West Bound to North Bound I-75	Thru	2	175	53	N/A	N/A	N/A	175	53	N/A	N/A	N/A
	Right	1	100	30	N/A	N/A	N/A	125	38	N/A	N/A	N/A

Notes:

c No queue reported, therefore, assumed minimum queue of two (2) vehicles at 25 feet per vehicle.

N/A Not applicable, no turn lanes

Bold numbers represent recommended turn lane lengths.

Average Queue Length Analyses  
 Design Year (2028) Build Alternative  
 Average Queue Lengths (Based on TRANSYT-7F Analyses)

Approach	Movement	2028 A.M. Peak Hour						2028 P.M. Peak Hour				
		# of Lanes	Queue Length		Distance between intersection		Spill Back	Queue Length		Distance between intersection		Spill Back
			Feet	Meters	Feet	Meters		Feet	Meters	Feet	Meters	
<b>No Build TSM</b>												
SR 52 Eastbound to South Bound I-75	Thru	1	300	91	1115	340	NO	300	91	1115	340	NO
	Right	1	500	152	1115	340	NO	425	130	1115	340	NO
SR 52 West Bound to South Bound I-75	Thru	1	300	91	354	108	NO	375	114	354	108	YES
	Left	1	825	251	354	108	YES	675	206	354	108	YES
East Bound to North Bound I-75	Thru	1	375	114	354	108	YES	250	76	354	108	YES
	Left	1	200	61	354	108	NO	600	183	354	108	YES
West Bound to North Bound I-75	Thru	1	2450	747	N/A	N/A	N/A	2250	686	N/A	N/A	N/A
	Right	1	2450	747	N/A	N/A	N/A	2250	686	N/A	N/A	N/A
<b>Enhanced Diamond</b>												
SR 52 Eastbound to South Bound I-75	Thru	3	125	38	938	286	NO	92	28	938	286	NO
	Right	1	1225	373	938	286	YES	800	244	938	286	NO
SR 52 West Bound to South Bound I-75	Thru	2	88	27	538	164	NO	88	27	538	164	NO
	Left	2	500	152	538	164	NO	300	91	538	164	NO
East Bound to North Bound I-75	Thru	2	163	50	538	164	NO	100	30	538	164	NO
	Left	1	150	46	538	164	NO	125	38	538	164	NO
West Bound to North Bound I-75	Thru	4	138	42	N/A	N/A	N/A	119	36	N/A	N/A	N/A
	Right	1	200	61	N/A	N/A	N/A	300	91	N/A	N/A	N/A
<b>Loop 1</b>												
SR 52 Eastbound to South Bound I-75	Thru	2	50	15	906	276	NO	38	11	906	276	NO
	Left	1	475	145	906	276	NO	950	290	906	276	YES
SR 52 West Bound to South Bound I-75	Thru <sup>c</sup>	2	25	8	1516	462	NO	25	8	1516	462	NO
	Right	1	250	76	1516	462	NO	50	15	1516	462	NO
East Bound to North Bound I-75	Thru	2	75	23	1516	462	NO	88	27	1516	462	NO
	Left	1	225	69	1516	462	NO	225	69	1516	462	NO
West Bound to North Bound I-75	Thru	2	250	76	N/A	N/A	N/A	225	69	N/A	N/A	N/A
	Right	1	150	46	N/A	N/A	N/A	225	69	N/A	N/A	N/A
<b>Loop 2</b>												
SR 52 West Bound to South Bound I-75	Thru <sup>c</sup>	2	25	8	906	276	NO	25	8	906	276	NO
	Right	1	250	76	906	276	NO	100	30	906	276	NO
SR 52 East Bound to South Bound I-75	Thru <sup>c</sup>	2	25	8	1246	380	NO	25	8	1246	380	NO
	Right <sup>c</sup>	1	50	15	1246	380	NO	50	15	1246	380	NO
East Bound to North Bound I-75	Thru	2	138	42	1246	380	NO	375	114	1246	380	NO
	Left	1	200	61	1246	380	NO	375	114	1246	380	NO
West Bound to North Bound I-75	Thru	2	263	80	N/A	N/A	N/A	700	213	N/A	N/A	N/A
	Right	1	150	46	N/A	N/A	N/A	700	213	N/A	N/A	N/A
<b>Loop 3</b>												
SR 52 West Bound to South Bound I-75	Thru <sup>c</sup>	2	25	8	906	276	NO	25	8	906	276	NO
	Right	1	250	76	906	276	NO	200	61	906	276	NO
SR 52 East Bound to South Bound I-75	Thru <sup>c</sup>	2	25	8	1246	380	NO	25	8	1246	380	NO
	Right <sup>c</sup>	1	50	15	1246	380	NO	50	15	1246	380	NO
East Bound to North Bound I-75	Thru	2	125	38	1246	380	NO	113	34	1246	380	NO
	Left	1	225	69	1246	380	NO	325	99	1246	380	NO
West Bound to North Bound I-75	Thru	2	250	76	N/A	N/A	N/A	350	107	N/A	N/A	N/A
	Right	1	150	46	N/A	N/A	N/A	350	107	N/A	N/A	N/A

Notes:

c No queue reported, therefore, assumed minimum queue of two (2) vehicles at 25 feet per vehicle.

N/A Not applicable, no turn lanes

Bold numbers represent recommended turn lane lengths.

**APPENDIX O**

**Enhanced Diamond Alternative Design Traffic Analysis**

**APPENDIX Oa – HCS Unsignalized Build Intersection Analyses**

**APPENDIX Ob – Passer III-90 Analyses**

**APPENDIX Oc – HCS Freeway Analyses**

**APPENDIX Od – HCS Ramp Analyses**

**APPENDIX Oe – Transyt-7F Queue Analyses**

**APPENDIX Oa**  
**HCS Unsignalized Build Intersection Analyses**

=====  
 Post, Buckley, Schuh & Jernigan, Inc.  
 5300 W.Cypress Street  
 Suite 300  
 Tampa, FL 33607-1066  
 Ph: (813) 877-7275  
 =====

Streets: (N-S) OLD TAMPA ROAD (E-W) SR 52  
 Major Street Direction.... EW  
 Length of Time Analyzed... 60 (min)  
 Analyst..... AJK  
 Date of Analysis..... 10/18/99  
 Other Information.....2008 BUILD AM  
 Two-way Stop-controlled Intersection  
 =====

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	1	1	2	0	1	0	1	0	0	0
Stop/Yield			N			N						
Volumes		828	26	113	597		10		102			
PHF		.95	.95	.95	.95		.95		.95			
Grade		0			0			0				
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's				1.10			1.10		1.10			

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.50	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.50	3.30
Left Turn Minor Road	7.00	3.40

=====

Worksheet for TWSC Intersection

-----  
 Step 1: RT from Minor Street                      NB                      SB  
 -----

Conflicting Flows: (vph)                      436  
 Potential Capacity: (pcph)                      833  
 Movement Capacity: (pcph)                      833  
 Prob. of Queue-Free State:                      0.86  
 -----

Step 2: LT from Major Street                      WB                      EB  
 -----

Conflicting Flows: (vph)                      899  
 Potential Capacity: (pcph)                      564  
 Movement Capacity: (pcph)                      564  
 Prob. of Queue-Free State:                      0.77  
 -----

Step 4: LT from Minor Street                      NB                      SB  
 -----

Conflicting Flows: (vph)                      1618  
 Potential Capacity: (pcph)                      98  
 Major LT, Minor TH  
 Impedance Factor:                      0.77  
 Adjusted Impedance Factor:                      0.77  
 Capacity Adjustment Factor  
 due to Impeding Movements                      0.77  
 Movement Capacity: (pcph)                      75  
 -----

Intersection Performance Summary

Movement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg.	95%	Approach LOS	Approach Delay (sec/veh)
				Total Delay (sec/veh)	Queue Length (veh)		
NB L	12	75		57.1	0.6	F	9.7
NB R	118	833		5.0	0.5	B	
WB L	131	564		8.3	1.0	B	1.3

Intersection Delay = 1.2 sec/veh

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=====  
 Streets: (N-S) OLD TAMPA ROAD (E-W) SR 52  
 Major Street Direction.... EW  
 Length of Time Analyzed... 60 (min)  
 Analyst..... AJK  
 Date of Analysis..... 10/18/99  
 Other Information.....2008 BUILD PM  
 Two-way Stop-controlled Intersection  
 =====

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	1	1	2	0	1	0	1	0	0	0
Stop/Yield			N			N						
Volumes		597	10	102	828		26		113			
PHF		.95	.95	.95	.95		.95		.95			
Grade		0			0			0				
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's				1.10			1.10		1.10			

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.50	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.50	3.30
Left Turn Minor Road	7.00	3.40

Worksheet for TWSC Intersection

-----  
 Step 1: RT from Minor Street NB SB  
 -----

Conflicting Flows: (vph) 314  
 Potential Capacity: (pcph) 960  
 Movement Capacity: (pcph) 960  
 Prob. of Queue-Free State: 0.86  
 -----

Step 2: LT from Major Street WB EB  
 -----

Conflicting Flows: (vph) 639  
 Potential Capacity: (pcph) 778  
 Movement Capacity: (pcph) 778  
 Prob. of Queue-Free State: 0.85  
 -----

Step 4: LT from Minor Street NB SB  
 -----

Conflicting Flows: (vph) 1606  
 Potential Capacity: (pcph) 100  
 Major LT, Minor TH  
 Impedance Factor: 0.85  
 Adjusted Impedance Factor: 0.85  
 Capacity Adjustment Factor  
 due to Impeding Movements 0.85  
 Movement Capacity: (pcph) 85  
 -----

Intersection Performance Summary

Movement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg. 95%		LOS	Approach Delay (sec/veh)
				Total Delay (sec/veh)	Queue Length (veh)		
NB L	30	85		65.0	1.6	F	15.7
NB R	131	960		4.3	0.5	A	
WB L	118	778		5.5	0.6	B	0.6

Intersection Delay = 1.6 sec/veh



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=====  
 Streets: (N-S) OLD TAMPA ROAD (E-W) SR 52  
 Major Street Direction.... EW  
 Length of Time Analyzed... 60 (min)  
 Analyst..... AJK  
 Date of Analysis..... 10/18/99  
 Other Information.....2028 BUILD AM  
 Two-way Stop-controlled Intersection  
 =====

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	1	1	2	0	1	0	1	0	0	0
Stop/Yield			N			N						
Volumes		1169	38	162	1093		15		147			
PHF		.95	.95	.95	.95		.95		.95			
Grade		0			0			0				
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's				1.10			1.10		1.10			

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.50	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.50	3.30
Left Turn Minor Road	7.00	3.40

Worksheet for TWSC Intersection

-----  
 Step 1: RT from Minor Street                      NB                      SB  
 -----

Conflicting Flows: (vph)                      616  
 Potential Capacity: (pcph)                      675  
 Movement Capacity: (pcph)                      675  
 Prob. of Queue-Free State:                      0.75  
 -----

Step 2: LT from Major Street                      WB                      EB  
 -----

Conflicting Flows: (vph)                      1271  
 Potential Capacity: (pcph)                      356  
 Movement Capacity: (pcph)                      356  
 Prob. of Queue-Free State:                      0.47  
 -----

Step 4: LT from Minor Street                      NB                      SB  
 -----

Conflicting Flows: (vph)                      2553  
 Potential Capacity: (pcph)                      25  
 Major LT, Minor TH  
 Impedance Factor:                      0.47  
 Adjusted Impedance Factor:                      0.47  
 Capacity Adjustment Factor  
 due to Impeding Movements                      0.47  
 Movement Capacity: (pcph)                      12  
 -----

Intersection Performance Summary

Movement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg.		LOS	Approach Delay (sec/veh)
				Total Delay (sec/veh)	95% Queue Length (veh)		
NB L	18	12	*	5.3	F	169.1	
NB R	171	675		7.1	B		
WB L	188	356		21.3	D	2.7	

Intersection Delay = 11.8 sec/veh

\* The calculated value was greater than 999.9.

=====  
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 =====

=====  
 Streets: (N-S) OLD TAMPA ROAD (E-W) SR 52  
 Major Street Direction.... EW  
 Length of Time Analyzed... 60 (min)  
 Analyst..... AJK  
 Date of Analysis..... 10/18/99  
 Other Information.....2028 BUILD PM  
 Two-way Stop-controlled Intersection  
 =====

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	1	1	2	0	1	0	1	0	0	0
Stop/Yield			N			N						
Volumes		1093	15	147	1169		38		162			
PHF		.95	.95	.95	.95		.95		.95			
Grade		0			0			0				
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's				1.10			1.10		1.10			

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.50	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.50	3.30
Left Turn Minor Road	7.00	3.40

=====

Worksheet for TWSC Intersection

-----			
Step 1: RT from Minor Street	NB	SB	
-----			
Conflicting Flows: (vph)	576		
Potential Capacity: (pcph)	707		
Movement Capacity: (pcph)	707		
Prob. of Queue-Free State:	0.73		
-----			
Step 2: LT from Major Street	WB	EB	
-----			
Conflicting Flows: (vph)	1167		
Potential Capacity: (pcph)	405		
Movement Capacity: (pcph)	405		
Prob. of Queue-Free State:	0.58		
-----			
Step 4: LT from Minor Street	NB	SB	
-----			
Conflicting Flows: (vph)	2537		
Potential Capacity: (pcph)	25		
Major LT, Minor TH			
Impedance Factor:	0.58		
Adjusted Impedance Factor:	0.58		
Capacity Adjustment Factor			
due to Impeding Movements	0.58		
Movement Capacity: (pcph)	14		
-----			

Intersection Performance Summary

Movement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg.	95%	LOS	Approach Delay (sec/veh)
				Total Delay (sec/veh)	Queue Length (veh)		
NB L	44	14		*	16.1	F	853.1
NB R	188	707		6.9	1.2	B	
WB L	171	405		15.3	2.4	C	1.7

Intersection Delay = 65.9 sec/veh

\* The calculated value was greater than 999.9.

Post, Buckley, Schuh & Jernigan, Inc.

Streets: (E-W) SR 52 (N-S) I-75  
 Analyst: AJK File Name: OLTAMSIA.HC9  
 Area Type: Other 10-27-99 AM  
 Comment: OLD TAMPA ROAD 2028 BUILD

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	1	1	2	0	1	0	1	0	0	0
Volumes		1169	38	162	1093		15		147			
Lane W (ft)		12.0	12.0	12.0	12.0		12.0		12.0			
RTOR Vols			0			72			72			
Lost Time		3.00	3.00	3.00	3.00		3.00		3.00			

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left	*		
Thru	*				Thru			
Right	*				Right	*		
Peds					Peds			
WB Left	*	*			SB Left			
Thru	*	*			Thru			
Right					Right			
Peds					Peds			
NB Right			*		EB Right			
SB Right					WB Right			
Green	20.0A	10.0P			Green	12.0A		
Yellow/AR	6.0	6.0			Yellow/AR	6.0		

Cycle Length: 60 secs Phase combination order: #1 #2 #5

Intersection Performance Summary

Lane Group	Mvmts	Cap	Adj Sat	v/c	g/C	Approach:			
			Flow	Ratio	Ratio	Delay	LOS	Delay	LOS
EB T	1374		3585	0.941	0.383	19.9	C	19.6	C
EB R	607		1583	0.066	0.383	8.9	B		
WB L	596		1770	0.287	0.650	10.7	B	3.0	A
WB T	2398		3689	0.504	0.650	1.9	A		
NB L	442		1770	0.036	0.250	12.9	B	6.8	B
NB R	818		1583	0.097	0.517	5.6	B		

Intersection Delay = 11.0 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.481

Streets: (E-W) SR 52 (N-S) I-75  
 Analyst: AJK File Name: OLTAMSIP.HC9  
 Area Type: Other 10-27-99 PM  
 Comment: OLD TAMPA ROAD 2028 BUILD

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	1	1	2	0	1	0	1	0	0	0
Volumes	1093 15			147 1169			38 162					
Lane W (ft)	12.0 12.0			12.0 12.0			12.0 12.0					
RTOR Vols	0			72			72					
Lost Time	3.00 3.00			3.00 3.00			3.00 3.00					

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left *			
Thru	*				Thru			
Right	*				Right *			
Peds					Peds			
WB Left	*	*			SB Left			
Thru	*	*			Thru			
Right					Right			
Peds					Peds			
NB Right			*		EB Right			
SB Right					WB Right			
Green	20.0A	10.0P			Green	12.0A		
Yellow/AR	6.0	6.0			Yellow/AR	6.0		

Cycle Length: 60 secs Phase combination order: #1 #2 #5

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Approach:				
					Mvmts	Cap	Flow	Ratio	Delay
EB	T	1374	3585	0.880	0.383	15.8	C	15.7	C
	R	607	1583	0.026	0.383	8.8	B		
WB	L	596	1770	0.260	0.650	9.9	B	2.9	A
	T	2398	3689	0.539	0.650	2.0	A		
NB	L	442	1770	0.090	0.250	13.1	B	7.9	B
	R	818	1583	0.116	0.517	5.7	B		

Intersection Delay = 8.7 sec/veh Intersection LOS = B  
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.492

**APPENDIX Ob**  
**Passer III-90 Analyses**

**2008 Build Enhanced Diamond**

Approach	Lane Group	2008 A.M. Peak Hour				2008 P.M. Peak Hour			
		V/C <sup>a</sup>	Delay <sup>b</sup>	LOS <sup>c</sup>	Internal Storage Ratio <sup>d</sup>	V/C <sup>a</sup>	Delay <sup>b</sup>	LOS <sup>c</sup>	Internal Storage Ratio <sup>d</sup>
<i>S.R. 52 at I-75 Northbound Exit/Entrance Ramps</i>									
EB	Left	0.61	20.38	C	0.40	0.63	14.98	B	0.39
	Thru	0.22	2.89	A	0.11	0.17	1.24	A	0.09
WB	Thru	0.60	22.48	C	--	0.62	23.63	C	--
NB	Left-Right	0.60	19.12	C	--	0.62	20.44	C	--
<i>S.R. 52 at I-75 Southbound Exit/Entrance Ramps</i>									
EB	Thru	0.75	18.01	C	--	0.58	18.82	C	--
WB	Left	0.76	8.46	B	0.14	0.58	0.97	A	0.06
	Thru	0.16	0.00	A	0.00	0.25	0.00	A	0.00
SB	Left-Right	0.76	40.00	D	--	0.59	32.47	D	--

- a. V/C is volume to capacity ratio
- b. Stopped delay in seconds per vehicle (stopped delay = approach delay / 1.3)
- c. Based on stopped delay which is the criteria used by the HCS to determine LOS
- d. Ratio of maximum queue per cycle to the available storage capacity for the movement

**2028 Build Enhanced Diamond**

Approach	Lane Group	2028 A.M. Peak Hour				2028 P.M. Peak Hour			
		V/C <sup>a</sup>	Delay <sup>b</sup>	LOS <sup>c</sup>	Internal Storage Ratio <sup>d</sup>	V/C <sup>a</sup>	Delay <sup>b</sup>	LOS <sup>c</sup>	Internal Storage Ratio <sup>d</sup>
<i>S.R. 52 at I-75 Northbound Exit/Entrance Ramps</i>									
EB	Left	0.78	21.38	C	0.56	0.96	45.87	E	1.06
	Thru	0.35	1.57	A	0.19	0.23	1.87	A	0.11
WB	Thru	0.77	24.69	C	--	0.96	45.66	E	--
NB	Left-Right	0.78	25.56	D	--	0.96	39.10	D	--
<i>S.R. 52 at I-75 Southbound Exit/Entrance Ramps</i>									
EB	Thru	1.03	53.63	E	--	0.89	25.76	D	--
WB	Left	1.03	43.38	E	0.79	0.89	16.18	C	0.25
	Thru	0.30	0.46	A	0.13	0.34	0.00	A	0.00
SB	Left-Right	1.04	85.22	F	--	0.90	56.49	E	--

- a. V/C is volume to capacity ratio
- b. Stopped delay in seconds per vehicle (stopped delay = approach delay / 1.3)
- c. Based on stopped delay which is the criteria used by the HCS to determine LOS
- d. Ratio of maximum queue per cycle to the available storage capacity for the movement



<GID01>

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION  
DIAMOND INTERCHANGE SIGNALIZATION - 145105

PASSER3

PASSER III-90

VER 1.0  
OCT 90

PPPP	AAA	SSS	SSS	EEEE	RRRR	IIIIIIIIIIII
P P	A A	S S	S S	E	R R	I I I
P P	A A	S	S	E	R R	I I I
PPPP	AAAA	SSS	SSS	EEEE	RRRR	I I I
P	A A	S	S	E	R R	I I I
P	A A	S S	S S	E	R R	I I I
P	A A	SSS	SSS	EEEE	R R	IIIIIIIIIIII

\*\*\*\*\* GENERAL IDENTIFICATION DATA \*\*\*\*\*

FREEWAY NAME - - - I-75 DIAMOND 2008 AM

CITY NAME - - - - - PASCO CO.

DISTRICT NUMBER - - - - - 07

DATE - - - - - 11/15/99

RUN NUMBER - - - - - 00

<GID02>

\*\*\*\*\* ISOLATED INTERCHANGE OPERATION \*\*\*\*\*

\*\*\* PARAMETERS \*\*\*

NUMBER OF INTERCHANGES - - - 1

LOWER CYCLE LIMIT (SEC) - - - 95

UPPER CYCLE LIMIT (SEC) - - - 130

CYCLE INCREMENT (SEC) - - - 5

\*\*\* OPTIONS \*\*\*

OPTIMIZE INTERNAL OFFSETS ? - - YES

EVALUATE INTERNAL OFFSETS ? - - NO

<IMD01A>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 2A

\*\*\* LEFT-SIDE MOVEMENT DATA \*\*\*

\*\*\*\*\*

TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
------------------	--------------	------------------------	---------------------

\*\*\*\*\*

ARTERIAL

RIGHT-TURN	580	1568	-
STRAIGHT-THROUGH	140	3689	0
STRAIGHT-THEN-LEFT	210	1845	-

FRONTAGE ROAD

RIGHT-TURN	144	1545	-
STRAIGHT-THROUGH	0	0	0
LEFT-THEN-STRAIGHT	300	3345	-
LEFT-THEN-LEFT	0	0	-

INTERIOR

LEFT-TURN	680	3444	0
STRAIGHT-THROUGH	470	3744	-

<IMD01B>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 2B

\*\*\* RIGHT-SIDE MOVEMENT DATA \*\*\*

\*\*\*\*\*

TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
------------------	--------------	------------------------	---------------------

\*\*\*\*\*

ARTERIAL

RIGHT-TURN	240	1591	-
STRAIGHT-THROUGH	120	3744	0
STRAIGHT-THEN-LEFT	680	3744	-

FRONTAGE ROAD

RIGHT-TURN	700	3091	-
STRAIGHT-THROUGH	0	0	0
LEFT-THEN-STRAIGHT	350	3345	-
LEFT-THEN-LEFT	0	0	-

INTERIOR

LEFT-TURN	210	1752	0
STRAIGHT-THROUGH	440	3689	-

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\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 3

\*\*\* INTERNAL DELAY-OFFSET INFORMATION \*\*\*

\*\*\*\*\*  
PHASING OPTIMIZE? FORCE? INTERIOR QUEUE STORAGE  
\*\*\*\*\*

LEAD-LEAD	Y	-	THROUGH MOVEMENT AT LEFT SIDE (VEH)	24
LAG -LEAD	Y	-	LEFT-TURN MOVEMENT AT LEFT SIDE (VEH)	24
LEAD-LAG	Y	-	THROUGH MOVEMENT AT RIGHT SIDE (VEH)	24
LAG -LAG	Y	-	LEFT-TURN MOVEMENT AT RIGHT SIDE (VEH)	12
TTI -LEAD	N	-		

\*\*\*\*\*  
PERMITTED LEFT TURNS? INTERIOR TRAVEL TIMES  
\*\*\*\*\*

LEFT-SIDE INTERSECTION	NO	LEFT TO RIGHT (SEC)	- - - - -	15
RIGHT-SIDE INTERSECTION	NO	RIGHT TO LEFT (SEC)	- - - - -	15

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	50.6	15.6	28.8	79.4	*	32.6	39.6	22.8	55.4
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.75	.76	.76	.16	*	.60	.60	.61	.22
LEVEL OF SERVICE	C	C	C	A	*	B	B	B	A

DELAY (SEC/VEH)	23.41	54.90	11.00	.00	*	29.23	24.86	26.50	3.76
LEVEL OF SERVICE	C	E	B	A	*	C	C	C	A

STORAGE RATIO			.14	.00	*			.40	.11
LEVEL OF SERVICE			C	A	*			D	C

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	30.27 VEH-HRS/HR
INTERNAL OFFSET	31 SEC	CYCLE LENGTH	95 SEC

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	53.4	16.3	30.3	83.7	*	34.3	41.8	23.9	58.2
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.75	.76	.75	.16	*	.60	.60	.60	.22
-----------	-----	-----	-----	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	C	C	C	A	*	A	A	B	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	23.99	56.33	10.82	.50	*	30.52	25.82	26.56	3.13
-----------------	-------	-------	-------	-----	---	-------	-------	-------	------

LEVEL OF SERVICE	C	E	B	A	*	C	C	C	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.24	.09	*			.40	.11
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			C	B	*			D	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	31.22 VEH-HRS/HR
INTERNAL OFFSET	29 SEC	CYCLE LENGTH	100 SEC

<GS101>

\* \* \* INTERCHANGE 1 SR 52

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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	56.2	17.0	31.8	88.0	*	36.1	43.9	25.0	61.1
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.74	.75	.75	.16	*	.59	.60	.60	.22
-----------	-----	-----	-----	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	C	C	C	A	*	A	A	A	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	24.59	57.84	10.84	.96	*	31.73	26.88	29.04	2.98
-----------------	-------	-------	-------	-----	---	-------	-------	-------	------

LEVEL OF SERVICE	C	E	B	A	*	C	C	C	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.33	.09	*			.45	.11
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			D	B	*			D	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	32.40	VEH-HRS/HR
INTERNAL OFFSET	29 SEC	CYCLE LENGTH	105 SEC	

<GS101>

\* \* \* INTERCHANGE 1 SR 52

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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	59.0	17.7	33.3	92.3	*	37.8	46.1	26.1	63.9
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.74	.75	.74	.16	*	.59	.59	.60	.22
-----------	-----	-----	-----	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	C	C	C	A	*	A	A	A	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	25.21	59.42	11.49	.00	*	33.03	27.85	30.22	4.76
-----------------	-------	-------	-------	-----	---	-------	-------	-------	------

LEVEL OF SERVICE	C	E	B	A	*	D	C	C	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.15	.00	*			.46	.12
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			C	A	*			D	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	33.69 VEH-HRS/HR
INTERNAL OFFSET	38 SEC	CYCLE LENGTH	110 SEC

<GSI01>

\* \* \* INTERCHANGE 1 SR 52

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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	61.8	18.4	34.8	96.6	*	39.5	48.2	27.3	66.8
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.74	.74	.74	.16	*	.59	.59	.59	.22
-----------	-----	-----	-----	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	C	C	C	A	*	A	A	A	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	25.86	61.06	11.41	.00	*	34.34	28.92	30.94	5.00
-----------------	-------	-------	-------	-----	---	-------	-------	-------	------

LEVEL OF SERVICE	C	E	B	A	*	D	C	C	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.16	.00	*			.47	.13
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			C	A	*			D	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	34.79	VEH-HRS/HR
INTERNAL OFFSET	40 SEC	CYCLE LENGTH	115 SEC	



<GSI01>

\*\*\* INTERCHANGE 1 SR 52

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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	64.6	19.1	36.3	100.9	*	41.2	50.3	28.5	69.7
------------------	------	------	------	-------	---	------	------	------	------

V/C RATIO	.73	.74	.73	.16	*	.59	.59	.59	.22
-----------	-----	-----	-----	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	C	C	C	A	*	A	A	A	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	26.51	62.75	11.30	.41	*	35.65	29.99	33.79	4.79
-----------------	-------	-------	-------	-----	---	-------	-------	-------	------

LEVEL OF SERVICE	C	E	B	A	*	D	C	D	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.22	.09	*			.51	.13
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			C	B	*			E	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	36.01	VEH-HRS/HR
-------------	-----------	-------------------------	-------	------------

INTERNAL OFFSET	40 SEC	CYCLE LENGTH	120 SEC
-----------------	--------	--------------	---------

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

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\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	67.4	19.8	37.8	105.2	*	43.0	52.4	29.6	72.6
------------------	------	------	------	-------	---	------	------	------	------

V/C RATIO	.73	.74	.73	.16	*	.58	.58	.59	.22
-----------	-----	-----	-----	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	C	C	C	A	*	A	A	A	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	27.18	64.48	11.21	.00	*	36.87	31.06	32.97	5.45
-----------------	-------	-------	-------	-----	---	-------	-------	-------	------

LEVEL OF SERVICE	C	E	B	A	*	D	C	D	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.16	.00	*			.51	.13
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			C	A	*			E	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	37.00	VEH-HRS/HR
INTERNAL OFFSET	44 SEC	CYCLE LENGTH	125 SEC	

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 11A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	70.2	20.5	39.3	109.5	*	44.7	54.6	30.7	75.4
------------------	------	------	------	-------	---	------	------	------	------

V/C RATIO	.73	.73	.73	.15	*	.58	.58	.58	.22
-----------	-----	-----	-----	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	C	C	C	A	*	A	A	A	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	27.86	66.24	12.36	1.34	*	38.18	32.04	33.63	6.16
-----------------	-------	-------	-------	------	---	-------	-------	-------	------

LEVEL OF SERVICE	C	E	B	A	*	D	C	D	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.39	.14	*		.52	.17	
---------------	--	--	-----	-----	---	--	-----	-----	--

LEVEL OF SERVICE			D	C	*		E	C	
------------------	--	--	---	---	---	--	---	---	--

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	38.56 VEH-HRS/HR
INTERNAL OFFSET	40 SEC	CYCLE LENGTH	130 SEC

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*                                     *
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
*   A   B   C *   A   B   C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER         *   |   |---- *   |   ----| * LENGTH (SEC)
* ----> V   V * ----> | ----> *
*                                     *
*****
1   *           A           *           B           *           31.00
2   *           A           *           C           *           19.60
3   *           B           *           C           *           3.20
4   *           B           *           A           *           12.40
5   *           C           *           A           *           20.20
6   *           C           *           B           *           8.60
*                                     *

```

INTERNAL OFFSET 31 SEC

CYCLE LENGTH 95 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*                                     *
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
*   A   B   C *   A   B   C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER         *   |   |---- *   |   ----| * LENGTH (SEC)
* ----> V   V * ----> | ----> *
*                                     *
*****
1   *           A           *           B           *           29.00
2   *           A           *           C           *           23.90
3   *           A           *           A           *           .50
4   *           B           *           A           *           16.30
5   *           C           *           A           *           17.50
6   *           C           *           B           *           12.80
*                                     *

```

INTERNAL OFFSET 29 SEC

CYCLE LENGTH 100 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
1 * A * B * 29.00
2 * A * C * 25.00
3 * A * A * 2.20
4 * B * A * 17.00
5 * C * A * 16.90
6 * C * B * 14.90
*
*

```

INTERNAL OFFSET 29 SEC

CYCLE LENGTH 105 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
1 * A * B * 38.00
2 * A * C * 21.00
3 * B * C * 5.10
4 * B * A * 12.60
5 * C * A * 25.20
6 * C * B * 8.10
*
*

```

INTERNAL OFFSET 38 SEC

CYCLE LENGTH 110 SEC

PHASE ORDER LEAD-LEAD

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 8B

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*                                     *
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
*  A   B   C   *  A   B   C   *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER         *   |   |---- *   |   ----| * LENGTH (SEC)
* ----> V   V   * ----> |   ----> *
*                                     *
*****
*                                     *
*                                     *
1   *           A           *           B           *           40.00
2   *           A           *           C           *           21.80
3   *           B           *           C           *           5.50
4   *           B           *           A           *           12.90
5   *           C           *           A           *           26.60
6   *           C           *           B           *           8.20
*                                     *
*****

```

INTERNAL OFFSET 40 SEC

CYCLE LENGTH 115 SEC

PHASE ORDER LEAD-LEAD

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 9B

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*                                     *
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
*  A   B   C   *  A   B   C   *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER         *   |   |---- *   |   ----| * LENGTH (SEC)
* ----> V   V   * ----> |   ----> *
*                                     *
*****
*                                     *
*                                     *
1   *           A           *           B           *           40.00
2   *           A           *           C           *           24.60
3   *           B           *           C           *           3.90
4   *           B           *           A           *           15.20
5   *           C           *           A           *           26.00
6   *           C           *           B           *           10.30
*                                     *
*****

```

INTERNAL OFFSET 40 SEC

CYCLE LENGTH 120 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

\*\*\*\*\*

	* LEFT-SIDE SEQUENCE *			* RIGHT-SIDE SEQUENCE *			
	A	B	C	A	B	C	
PHASE INTERVAL	<----		<----	<----	^	^	PHASE INTERVAL
NUMBER	*		----	*		----	LENGTH (SEC)
	* ---->	V	V	* ---->		---->	

\*\*\*\*\*

1	*	A	*	B	*	44.00
2	*	A	*	C	*	23.40
3	*	B	*	C	*	6.20
4	*	B	*	A	*	13.60
5	*	C	*	A	*	29.40
6	*	C	*	B	*	8.40

\*\*\*\*\*

INTERNAL OFFSET 44 SEC CYCLE LENGTH 125 SEC  
PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

\*\*\*\*\*

	* LEFT-SIDE SEQUENCE *			* RIGHT-SIDE SEQUENCE *			
	A	B	C	A	B	C	
PHASE INTERVAL	<----		<----	<----	^	^	PHASE INTERVAL
NUMBER	*		----	*		----	LENGTH (SEC)
	* ---->	V	V	* ---->		---->	

\*\*\*\*\*

1	*	A	*	B	*	40.00
2	*	A	*	C	*	30.20
3	*	B	*	C	*	.50
4	*	B	*	A	*	20.00
5	*	C	*	A	*	24.70
6	*	C	*	B	*	14.60

\*\*\*\*\*

INTERNAL OFFSET 40 SEC CYCLE LENGTH 130 SEC  
PHASE ORDER LEAD-LEAD

<GID01>

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION  
DIAMOND INTERCHANGE SIGNALIZATION - 145105

PASSER3

PASSER III-90

VER 1.0  
OCT 90

PPPP	AAA	SSS	SSS	EEEE	RRRR	IIIIIIIIIIII
P P A A S S S S E					R R	I I I
P P A A S		S		E	R R	I I I
PPPP	AAAA	SSS	SSS	EEEE	RRRR	I I I
P	A A	S	S	E	R R	I I I
P	A A S S S S E				R R	I I I
P	A A SSS	SSS	EEEE	R R		IIIIIIIIIIII

\*\*\*\*\* GENERAL IDENTIFICATION DATA \*\*\*\*\*

FREEWAY NAME - - - I-75 DIAMOND 2008 PM

CITY NAME - - - - - PASCO CO.

DISTRICT NUMBER - - - - - 07

DATE - - - - - 11/15/99

RUN NUMBER - - - - - 00

<GID02>

\*\*\*\*\* ISOLATED INTERCHANGE OPERATION \*\*\*\*\*

\*\*\* PARAMETERS \*\*\*

NUMBER OF INTERCHANGES - - - 1

LOWER CYCLE LIMIT (SEC) - - - 95

UPPER CYCLE LIMIT (SEC) - - - 130

CYCLE INCREMENT (SEC) - - - 5

\*\*\* OPTIONS \*\*\*

OPTIMIZE INTERNAL OFFSETS ? - - YES

EVALUATE INTERNAL OFFSETS ? - - NO



<IMD01A>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 2A

\*\*\* LEFT-SIDE MOVEMENT DATA \*\*\*

\*\*\*\*\*

TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
------------------	--------------	------------------------	---------------------

\*\*\*\*\*

ARTERIAL

RIGHT-TURN	350	1568	-
STRAIGHT-THROUGH	120	3689	0
STRAIGHT-THEN-LEFT	240	1845	-

FRONTAGE ROAD

RIGHT-TURN	126	1545	-
STRAIGHT-THROUGH	0	0	0
LEFT-THEN-STRAIGHT	240	3345	-
LEFT-THEN-LEFT	0	0	-

INTERIOR

LEFT-TURN	700	3444	0
STRAIGHT-THROUGH	720	3744	-

<IMD01B>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 2B

\*\*\* RIGHT-SIDE MOVEMENT DATA \*\*\*

\*\*\*\*\*

TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
------------------	--------------	------------------------	---------------------

\*\*\*\*\*

ARTERIAL

RIGHT-TURN	300	1591	-
STRAIGHT-THROUGH	140	3744	0
STRAIGHT-THEN-LEFT	700	3744	-

FRONTAGE ROAD

RIGHT-TURN	680	3091	-
STRAIGHT-THROUGH	0	0	0
LEFT-THEN-STRAIGHT	580	3345	-
LEFT-THEN-LEFT	0	0	-

INTERIOR

LEFT-TURN	240	1752	0
STRAIGHT-THROUGH	360	3689	-

<DOI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 3

\*\*\* INTERNAL DELAY-OFFSET INFORMATION \*\*\*

\*\*\*\*\*  
PHASING OPTIMIZE? FORCE? INTERIOR QUEUE STORAGE  
\*\*\*\*\*

LEAD-LEAD	Y	-	THROUGH MOVEMENT AT LEFT SIDE (VEH)	24
LAG -LEAD	Y	-	LEFT-TURN MOVEMENT AT LEFT SIDE (VEH)	24
LEAD-LAG	Y	-	THROUGH MOVEMENT AT RIGHT SIDE (VEH)	24
LAG -LAG	Y	-	LEFT-TURN MOVEMENT AT RIGHT SIDE (VEH)	12
TTI -LEAD	N	-		

\*\*\*\*\*  
PERMITTED LEFT TURNS? INTERIOR TRAVEL TIMES  
\*\*\*\*\*

LEFT-SIDE INTERSECTION	NO	LEFT TO RIGHT (SEC)	- - - - -	15
RIGHT-SIDE INTERSECTION	NO	RIGHT TO LEFT (SEC)	- - - - -	15

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 4A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C		A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	40.6	17.2	37.2	77.8	*	32.8	37.5	24.7	57.5
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.58	.59	.58	.25	*	.62	.62	.63	.17
LEVEL OF SERVICE	A	A	A	A	*	B	B	B	A

DELAY (SEC/VEH)	24.46	42.21	1.26	.00	*	30.72	26.57	19.47	1.61
LEVEL OF SERVICE	C	D	A	A	*	C	C	B	A

STORAGE RATIO			.06	.00	*			.39	.09
LEVEL OF SERVICE			B	A	*			D	B

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	28.32 VEH-HRS/HR
INTERNAL OFFSET	20 SEC	CYCLE LENGTH	95 SEC

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	42.8	18.0	39.2	82.0	*	34.6	39.4	26.0	60.6
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.58	.58	.58	.25	*	.62	.62	.62	.17
LEVEL OF SERVICE	A	A	A	A	*	B	B	B	A

DELAY (SEC/VEH)	25.41	43.99	1.28	.00	*	31.86	27.78	19.85	2.00
LEVEL OF SERVICE	C	D	A	A	*	C	C	C	A

STORAGE RATIO			.06	.00	*			.47	.10
LEVEL OF SERVICE			B	A	*			D	B

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	29.53	VEH-HRS/HR
INTERNAL OFFSET	22 SEC	CYCLE LENGTH	100	SEC

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	45.0	18.8	41.2	86.2	*	36.3	41.5	27.2	63.5
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.57	.58	.57	.25	*	.61	.62	.62	.17
-----------	-----	-----	-----	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	A	A	A	A	*	B	B	B	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	26.37	45.78	1.30	.00	*	33.14	28.79	21.18	2.36
-----------------	-------	-------	------	-----	---	-------	-------	-------	------

LEVEL OF SERVICE	C	D	A	A	*	D	C	C	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.06	.00	*			.51	.10
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			B	A	*			E	B
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	30.78 VEH-HRS/HR
INTERNAL OFFSET	24 SEC	CYCLE LENGTH	105 SEC

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C
PHASE TIME (SEC)	47.2	19.6	43.2	90.4	*	38.0	43.5	28.5	66.5
V/C RATIO	.57	.58	.57	.24	*	.61	.61	.62	.17
LEVEL OF SERVICE	A	A	A	A	*	B	B	B	A
DELAY (SEC/VEH)	27.33	47.59	1.25	.00	*	34.42	29.91	21.47	2.48
LEVEL OF SERVICE	C	D	A	A	*	D	C	C	A
STORAGE RATIO			.06	.00	*			.51	.10
LEVEL OF SERVICE			B	A	*			E	B

\*\*\*\*\*

PHASE ORDER LEAD-LEAD TOTAL INTERCHANGE DELAY 31.96 VEH-HRS/HR  
INTERNAL OFFSET 25 SEC CYCLE LENGTH 110 SEC

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 8A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	49.5	20.3	45.2	94.7	*	39.8	45.5	29.7	69.5
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.56	.58	.57	.24	*	.61	.61	.61	.17
-----------	-----	-----	-----	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	A	A	A	A	*	B	B	B	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	28.21	49.61	1.28	.00	*	35.60	31.04	21.73	2.80
-----------------	-------	-------	------	-----	---	-------	-------	-------	------

LEVEL OF SERVICE	C	D	A	A	*	D	C	C	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.07	.00	*			.52	.10
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			B	A	*			E	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	33.15	VEH-HRS/HR
INTERNAL OFFSET	27 SEC	CYCLE LENGTH	115	SEC

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 9A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	51.7	21.1	47.2	98.9	*	41.5	47.5	31.0	72.5
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.56	.57	.56	.24	*	.60	.61	.61	.17
-----------	-----	-----	-----	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	A	A	A	A	*	B	B	B	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	29.18	51.44	1.31	.00	*	36.90	32.16	23.11	3.12
-----------------	-------	-------	------	-----	---	-------	-------	-------	------

LEVEL OF SERVICE	C	D	A	A	*	D	C	C	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.07	.00	*			.56	.10
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			B	A	*			E	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	34.44 VEH-HRS/HR
INTERNAL OFFSET	29 SEC	CYCLE LENGTH	120 SEC



<GSI01>

\* \* \* INTERCHANGE 1 SR 52

RUN 00 PAGE 10A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	53.8	22.0	49.2	103.0	*	43.2	49.5	32.3	75.5
------------------	------	------	------	-------	---	------	------	------	------

V/C RATIO	.56	.57	.56	.24	*	.60	.60	.61	.17
-----------	-----	-----	-----	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	A	A	A	A	*	B	B	B	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	30.25	53.09	1.34	.00	*	38.20	33.29	23.35	4.89
-----------------	-------	-------	------	-----	---	-------	-------	-------	------

LEVEL OF SERVICE	C	E	A	A	*	D	D	C	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.07	.00	*			.57	.15
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			B	A	*			E	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	35.81	VEH-HRS/HR
INTERNAL OFFSET	31 SEC	CYCLE LENGTH	125	SEC

<GS101>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 11A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	56.0	22.8	51.2	107.2	*	44.9	51.5	33.6	78.5
------------------	------	------	------	-------	---	------	------	------	------

V/C RATIO	.56	.56	.56	.24	*	.60	.60	.60	.17
-----------	-----	-----	-----	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	A	A	A	A	*	A	B	B	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	31.23	54.94	1.30	.00	*	39.51	34.42	23.88	4.99
-----------------	-------	-------	------	-----	---	-------	-------	-------	------

LEVEL OF SERVICE	C	E	A	A	*	D	D	C	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.07	.00	*			.60	.15
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			B	A	*			E	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	37.02 VEH-HRS/HR
-------------	-----------	-------------------------	------------------

INTERNAL OFFSET	32 SEC	CYCLE LENGTH	130 SEC
-----------------	--------	--------------	---------

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ---- | * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*

```

PHASE INTERVAL NUMBER	A	B	C	A	B	C	LENGTH (SEC)
1		A			B		20.00
2		A			C		20.60
3		B			C		4.10
4		B			A		13.10
5		C			A		19.70
6		C			B		17.50

```

*****
INTERNAL OFFSET 20 SEC CYCLE LENGTH 95 SEC
PHASE ORDER LEAD-LEAD

```

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ---- | * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*

```

PHASE INTERVAL NUMBER	A	B	C	A	B	C	LENGTH (SEC)
1		A			B		22.00
2		A			C		20.80
3		B			C		5.20
4		B			A		12.80
5		C			A		21.80
6		C			B		17.40

```

*****
INTERNAL OFFSET 22 SEC CYCLE LENGTH 100 SEC
PHASE ORDER LEAD-LEAD

```

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

\*\*\*\*\*

\* \* \* \* \*

\* LEFT-SIDE SEQUENCE \* RIGHT-SIDE SEQUENCE \*

\* A B C \* A B C \*

PHASE INTERVAL \* <---- | <---- \* <---- ^ ^ \* PHASE INTERVAL

NUMBER \* | |---- \* | ----| \* LENGTH (SEC)

\* ----> V V \* ----> | ----> \*

\* \* \* \* \*

\*\*\*\*\*

\* \* \* \* \*

1 \* A \* B \* 24.00

2 \* A \* C \* 21.00

3 \* B \* C \* 6.20

4 \* B \* A \* 12.60

5 \* C \* A \* 23.70

6 \* C \* B \* 17.50

\* \* \* \* \*

INTERNAL OFFSET 24 SEC CYCLE LENGTH 105 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

\*\*\*\*\*

\* \* \* \* \*

\* LEFT-SIDE SEQUENCE \* RIGHT-SIDE SEQUENCE \*

\* A B C \* A B C \*

PHASE INTERVAL \* <---- | <---- \* <---- ^ ^ \* PHASE INTERVAL

NUMBER \* | |---- \* | ----| \* LENGTH (SEC)

\* ----> V V \* ----> | ----> \*

\* \* \* \* \*

\*\*\*\*\*

\* \* \* \* \*

1 \* A \* B \* 25.00

2 \* A \* C \* 22.20

3 \* B \* C \* 6.30

4 \* B \* A \* 13.30

5 \* C \* A \* 24.70

6 \* C \* B \* 18.50

\* \* \* \* \*

INTERNAL OFFSET 25 SEC CYCLE LENGTH 110 SEC

PHASE ORDER LEAD-LEAD

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 8B

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
1 * A * B * 27.00
2 * A * C * 22.50
3 * B * C * 7.20
4 * B * A * 13.10
5 * C * A * 26.70
6 * C * B * 18.50
*
*

```

INTERNAL OFFSET 27 SEC

CYCLE LENGTH 115 SEC

PHASE ORDER LEAD-LEAD

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 9B

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
1 * A * B * 29.00
2 * A * C * 22.70
3 * B * C * 8.30
4 * B * A * 12.80
5 * C * A * 28.70
6 * C * B * 18.50
*
*

```

INTERNAL OFFSET 29 SEC

CYCLE LENGTH 120 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
1 * A * B * 31.00
2 * A * C * 22.80
3 * B * C * 9.50
4 * B * A * 12.50
5 * C * A * 30.70
6 * C * B * 18.50
*
*

```

INTERNAL OFFSET 31 SEC

CYCLE LENGTH 125 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
1 * A * B * 32.00
2 * A * C * 24.00
3 * B * C * 9.60
4 * B * A * 13.20
5 * C * A * 31.70
6 * C * B * 19.50
*
*

```

INTERNAL OFFSET 32 SEC

CYCLE LENGTH 130 SEC

PHASE ORDER LEAD-LEAD

<GID01>

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION  
DIAMOND INTERCHANGE SIGNALIZATION - 145105

PASSER3

PASSER III-90

VER 1.0  
OCT 90

PPPP	AAA	SSS	SSS	EEEE	RRRR	IIIIIIIIIIII
P P A A S S S S E	R R	I I I				
P P A A S S E	R R	I I I				
PPPP	AAAA	SSS	SSS	EEEE	RRRR	I I I
P A A S S S E	R R	I I I				
P A A S S S S E	R R	I I I				
P A A SSS SSS EEEEE	R R	IIIIIIIIIIII				

\*\*\*\*\* GENERAL IDENTIFICATION DATA \*\*\*\*\*

FREEWAY NAME - - - I-75 DIAMOND 2028 AM

CITY NAME - - - - - PASCO CO.

DISTRICT NUMBER - - - - - 07

DATE - - - - - 11/15/99

RUN NUMBER - - - - - 00

<GID02>

\*\*\*\*\* ISOLATED INTERCHANGE OPERATION \*\*\*\*\*

\*\*\* PARAMETERS \*\*\*

NUMBER OF INTERCHANGES - - - - 1

LOWER CYCLE LIMIT (SEC) - - - - 95

UPPER CYCLE LIMIT (SEC) - - - - 130

CYCLE INCREMENT (SEC) - - - - 5

\*\*\* OPTIONS \*\*\*

OPTIMIZE INTERNAL OFFSETS ? - - YES

EVALUATE INTERNAL OFFSETS ? - - NO

<IMD01A>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 2A

\*\*\* LEFT-SIDE MOVEMENT DATA \*\*\*

\*\*\*\*\*

TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
---------------------	-----------------	---------------------------	------------------------

\*\*\*\*\*

ARTERIAL

RIGHT-TURN	716	1568	-
STRAIGHT-THROUGH	276	3689	0
STRAIGHT-THEN-LEFT	324	1845	-

FRONTAGE ROAD

RIGHT-TURN	270	1545	-
STRAIGHT-THROUGH	0	0	0
LEFT-THEN-STRAIGHT	494	3345	-
LEFT-THEN-LEFT	0	0	-

INTERIOR

LEFT-TURN	926	3444	0
STRAIGHT-THROUGH	850	3744	-

<IMD01B>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 2B

\*\*\* RIGHT-SIDE MOVEMENT DATA \*\*\*

\*\*\*\*\*

TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
---------------------	-----------------	---------------------------	------------------------

\*\*\*\*\*

ARTERIAL

RIGHT-TURN	354	1591	-
STRAIGHT-THROUGH	175	3744	0
STRAIGHT-THEN-LEFT	926	3744	-

FRONTAGE ROAD

RIGHT-TURN	765	3091	-
STRAIGHT-THROUGH	0	0	0
LEFT-THEN-STRAIGHT	675	3345	-
LEFT-THEN-LEFT	0	0	-

INTERIOR

LEFT-TURN	324	1752	0
STRAIGHT-THROUGH	770	3689	-



<DOI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 3

\*\*\* INTERNAL DELAY-OFFSET INFORMATION \*\*\*

\*\*\*\*\*  
PHASING OPTIMIZE? FORCE? INTERIOR QUEUE STORAGE  
\*\*\*\*\*

LEAD-LEAD	Y	-	THROUGH MOVEMENT AT LEFT SIDE (VEH)	24
LAG -LEAD	Y	-	LEFT-TURN MOVEMENT AT LEFT SIDE (VEH)	24
LEAD-LAG	Y	-	THROUGH MOVEMENT AT RIGHT SIDE (VEH)	24
LAG -LAG	Y	-	LEFT-TURN MOVEMENT AT RIGHT SIDE (VEH)	12
TTI -LEAD	N	-		

\*\*\*\*\*  
PERMITTED LEFT TURNS? INTERIOR TRAVEL TIMES  
\*\*\*\*\*

LEFT-SIDE INTERSECTION	NO	LEFT TO RIGHT (SEC)	- - - - -	15
RIGHT-SIDE INTERSECTION	NO	RIGHT TO LEFT (SEC)	- - - - -	15

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

```

*****
MEASURES OF          LEFT-SIDE INTERSECTION *   RIGHT-SIDE INTERSECTION
EFFECTIVENESS        A      B      C      A+C *   A      B      C      A+C
*****
PHASE TIME (SEC)    46.3   20.0   28.7   75.0 *   34.4   34.1   26.5   60.9
*****
V/C RATIO            1.03   1.04   1.03   .30 *   .77   .78   .78   .35
LEVEL OF SERVICE    F      F      F      A *   C      C      C      A
*****
DELAY (SEC/VEH)     69.72 110.78 56.39   .60 *   32.10 33.23 27.79   2.04
LEVEL OF SERVICE    E      F      E      A *   C      D      C      A
*****
STORAGE RATIO                .79   .13 *                .56   .19
LEVEL OF SERVICE                E      C *                E      C
*****
PHASE ORDER  LEAD-LEAD      TOTAL INTERCHANGE DELAY  74.58 VEH-HRS/HR
INTERNAL OFFSET 22 SEC      CYCLE LENGTH  95 SEC

```

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	48.8	21.0	30.2	79.0	*	36.2	35.9	27.9	64.1
------------------	------	------	------	------	---	------	------	------	------

\*\*\*\*\*

V/C RATIO	1.02	1.03	1.03	.30	*	.77	.78	.77	.35
-----------	------	------	------	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	F	F	F	A	*	C	C	C	A
------------------	---	---	---	---	---	---	---	---	---

\*\*\*\*\*

DELAY (SEC/VEH)	68.44	108.26	55.59	.86	*	33.33	34.41	28.34	2.17
-----------------	-------	--------	-------	-----	---	-------	-------	-------	------

LEVEL OF SERVICE	E	F	E	A	*	D	D	C	A
------------------	---	---	---	---	---	---	---	---	---

\*\*\*\*\*

STORAGE RATIO			.84	.14	*			.60	.19
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			F	C	*			E	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	75.31	VEH-HRS/HR
-------------	-----------	-------------------------	-------	------------

INTERNAL OFFSET	23 SEC	CYCLE LENGTH	100 SEC
-----------------	--------	--------------	---------

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 6A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	51.4	21.9	31.7	83.1	*	38.0	37.8	29.2	67.2
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.01	1.03	1.02	.30	*	.76	.77	.77	.35
-----------	------	------	------	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	F	F	F	A	*	C	C	C	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	66.64	109.01	50.59	1.10	*	34.58	35.45	28.52	2.52
-----------------	-------	--------	-------	------	---	-------	-------	-------	------

LEVEL OF SERVICE	E	F	D	A	*	D	D	C	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.85	.14	*			.61	.23
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			F	C	*			E	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	75.17 VEH-HRS/HR
INTERNAL OFFSET	23 SEC	CYCLE LENGTH	105 SEC

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	53.9	22.9	33.2	87.1	*	39.8	39.7	30.5	70.3
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.01	1.02	1.01	.30	*	.76	.76	.77	.35
-----------	------	------	------	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	F	F	F	A	*	C	C	C	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	66.06	107.46	50.64	1.55	*	35.84	36.53	30.30	2.66
-----------------	-------	--------	-------	------	---	-------	-------	-------	------

LEVEL OF SERVICE	E	F	D	A	*	D	D	C	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.88	.18	*			.66	.23
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			F	C	*			E	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	76.49 VEH-HRS/HR
INTERNAL OFFSET	24 SEC	CYCLE LENGTH	110 SEC

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 8A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	56.4	23.9	34.7	91.1	*	41.6	41.5	31.9	73.5
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.00	1.01	1.01	.30	*	.76	.76	.76	.35
-----------	------	------	------	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	F	F	F	A	*	C	C	C	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	65.70	106.38	46.34	1.83	*	37.12	37.79	29.42	2.55
-----------------	-------	--------	-------	------	---	-------	-------	-------	------

LEVEL OF SERVICE	E	F	D	A	*	D	D	C	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.90	.19	*			.65	.23
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			F	C	*			E	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	76.52	VEH-HRS/HR
INTERNAL OFFSET	24 SEC	CYCLE LENGTH	115	SEC

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	59.0	24.8	36.2	95.2	*	43.5	43.2	33.3	76.8
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	1.00	1.01	1.00	.30	*	.75	.76	.76	.34
-----------	------	------	------	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	E	F	F	A	*	C	C	C	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	64.84	107.73	46.98	1.92	*	38.27	39.20	31.14	2.92
-----------------	-------	--------	-------	------	---	-------	-------	-------	------

LEVEL OF SERVICE	E	F	D	A	*	D	D	C	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.94	.19	*			.74	.24
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			F	C	*			E	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	78.24 VEH-HRS/HR
INTERNAL OFFSET	26 SEC	CYCLE LENGTH	120 SEC

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	61.5	25.8	37.7	99.2	*	45.2	45.2	34.6	79.8
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.99	1.00	1.00	.30	*	.75	.75	.76	.34
-----------	-----	------	------	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	E	F	E	A	*	C	C	C	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	64.86	107.20	44.55	1.68	*	39.70	40.20	31.31	3.52
-----------------	-------	--------	-------	------	---	-------	-------	-------	------

LEVEL OF SERVICE	E	F	D	A	*	D	D	C	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.88	.19	*			.78	.25
---------------	--	--	-----	-----	---	--	--	-----	-----

LEVEL OF SERVICE			F	C	*			E	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	78.95 VEH-HRS/HR
INTERNAL OFFSET	29 SEC	CYCLE LENGTH	125 SEC



\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	64.0	26.8	39.2	103.2	*	47.1	46.9	36.0	83.1
------------------	------	------	------	-------	---	------	------	------	------

V/C RATIO	.99	1.00	.99	.30	*	.75	.75	.75	.34
LEVEL OF SERVICE	E	E	E	A	*	C	C	C	A

DELAY (SEC/VEH)	65.00	106.95	45.58	1.77	*	40.88	41.62	32.31	4.24
LEVEL OF SERVICE	E	F	D	A	*	D	D	C	A

STORAGE RATIO			.93	.19	*			.82	.29
LEVEL OF SERVICE			F	C	*			F	C

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	80.84 VEH-HRS/HR
INTERNAL OFFSET	30 SEC	CYCLE LENGTH	130 SEC

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 4B

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*                                     *
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
*   A   B   C *   A   B   C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER         *   |   |---- *   |   ----| * LENGTH (SEC)
* ----> V   V * ----> | ----> *
*                                     *
*****
1   *           A   *           B   *           22.00
2   *           A   *           C   *           24.30
3   *           B   *           C   *           2.20
4   *           B   *           A   *           17.80
5   *           C   *           A   *           16.60
6   *           C   *           B   *           12.10
*                                     *

```

INTERNAL OFFSET 22 SEC

CYCLE LENGTH 95 SEC

PHASE ORDER LEAD-LEAD

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 5B

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*                                     *
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
*   A   B   C *   A   B   C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER         *   |   |---- *   |   ----| * LENGTH (SEC)
* ----> V   V * ----> | ----> *
*                                     *
*****
1   *           A   *           B   *           23.00
2   *           A   *           C   *           25.80
3   *           B   *           C   *           2.10
4   *           B   *           A   *           18.90
5   *           C   *           A   *           17.30
6   *           C   *           B   *           12.90
*                                     *

```

INTERNAL OFFSET 23 SEC

CYCLE LENGTH 100 SEC

PHASE ORDER LEAD-LEAD

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 6B

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

\*\*\*\*\*

```

*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
*  A  B  C *  A  B  C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	23.00
2	A	C	28.40
3	B	C	.80
4	B	A	21.10
5	C	A	16.90
6	C	B	14.80

INTERNAL OFFSET 23 SEC

CYCLE LENGTH 105 SEC

PHASE ORDER LEAD-LEAD

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 7B

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

\*\*\*\*\*

```

*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
*  A  B  C *  A  B  C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	24.00
2	A	C	29.90
3	B	C	.60
4	B	A	22.30
5	C	A	17.50
6	C	B	15.70

INTERNAL OFFSET 24 SEC

CYCLE LENGTH 110 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*

```

```

*****
*
*
1 * A * B * 24.00
2 * A * C * 31.90
3 * A * A * .50
4 * B * A * 23.90
5 * C * A * 17.20
6 * C * B * 17.50
*
*

```

INTERNAL OFFSET 24 SEC

CYCLE LENGTH 115 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*

```

```

*****
*
*
1 * A * B * 26.00
2 * A * C * 33.00
3 * B * C * .30
4 * B * A * 24.50
5 * C * A * 19.00
6 * C * B * 17.20
*
*

```

INTERNAL OFFSET 26 SEC

CYCLE LENGTH 120 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*****

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	29.00
2	A	C	32.50
3	B	C	2.10
4	B	A	23.70
5	C	A	21.50
6	C	B	16.20

INTERNAL OFFSET 29 SEC

CYCLE LENGTH 125 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*****

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	30.00
2	A	C	34.00
3	B	C	2.00
4	B	A	24.80
5	C	A	22.30
6	C	B	16.90

INTERNAL OFFSET 30 SEC

CYCLE LENGTH 130 SEC

PHASE ORDER LEAD-LEAD

<GID01>

TEXAS DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION  
DIAMOND INTERCHANGE SIGNALIZATION - 145105

PASSER3

PASSER III-90

VER 1.0

OCT 90

PPPP	AAA	SSS	SSS	EEEE	RRRR	IIIIIIIIIIII
P P A A S S S E	R R	I I I				
P P A A S S E	R R	I I I				
PPPP	AAAA	SSS	SSS	EEEE	RRRR	IIIIIIIIII
P A A S S E	R R	I I I				
P A A S S S E	R R	I I I				
P A A SSS SSS	EEEE	R R	IIIIIIIIIIII			

\*\*\*\*\* GENERAL IDENTIFICATION DATA \*\*\*\*\*

FREEWAY NAME - - - I-75 DIAMOND 2028 PM

CITY NAME - - - - - PASCO CO.

DISTRICT NUMBER - - - - - 07

DATE - - - - - 11/15/99

RUN NUMBER - - - - - 00

<GID02>

\*\*\*\*\* ISOLATED INTERCHANGE OPERATION \*\*\*\*\*

\*\*\* PARAMETERS \*\*\*

NUMBER OF INTERCHANGES - - - - 1

LOWER CYCLE LIMIT (SEC) - - - - 95

UPPER CYCLE LIMIT (SEC) - - - - 130

CYCLE INCREMENT (SEC) - - - - 5

\*\*\* OPTIONS \*\*\*

OPTIMIZE INTERNAL OFFSETS ? - - YES

EVALUATE INTERNAL OFFSETS ? - - NO

<IMD01A>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 2A

\*\*\* LEFT-SIDE MOVEMENT DATA \*\*\*

\*\*\*\*\*

TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
---------------------	-----------------	---------------------------	------------------------

\*\*\*\*\*

ARTERIAL

RIGHT-TURN	675	1568	-
STRAIGHT-THROUGH	175	3689	0
STRAIGHT-THEN-LEFT	405	1845	-

FRONTAGE ROAD

RIGHT-TURN	194	1545	-
STRAIGHT-THROUGH	0	0	0
LEFT-THEN-STRAIGHT	354	3345	-
LEFT-THEN-LEFT	0	0	-

INTERIOR

LEFT-TURN	765	3444	0
STRAIGHT-THROUGH	992	3744	-

<IMD01B>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 2B

\*\*\* RIGHT-SIDE MOVEMENT DATA \*\*\*

\*\*\*\*\*

TRAFFIC MOVEMENT	VOLUME (VPH)	SATURATION FLOW (VPHG)	MINIMUM PHASE (SEC)
---------------------	-----------------	---------------------------	------------------------

\*\*\*\*\*

ARTERIAL

RIGHT-TURN	494	1591	-
STRAIGHT-THROUGH	276	3744	0
STRAIGHT-THEN-LEFT	765	3744	-

FRONTAGE ROAD

RIGHT-TURN	926	3091	-
STRAIGHT-THROUGH	0	0	0
LEFT-THEN-STRAIGHT	716	3345	-
LEFT-THEN-LEFT	0	0	-

INTERIOR

LEFT-TURN	405	1778	0
STRAIGHT-THROUGH	529	3744	-

\*\*\* INTERNAL DELAY-OFFSET INFORMATION \*\*\*

```

*****
PHASING    OPTIMIZE?  FORCE?          INTERIOR QUEUE STORAGE
*****

```

```

LEAD-LEAD      Y      -   THROUGH MOVEMENT AT LEFT SIDE (VEH)  24
LAG -LEAD      Y      -   LEFT-TURN MOVEMENT AT LEFT SIDE (VEH)  24
LEAD-LAG       Y      -   THROUGH MOVEMENT AT RIGHT SIDE (VEH)  24
LAG -LAG       Y      -   LEFT-TURN MOVEMENT AT RIGHT SIDE (VEH)  12
TTI -LEAD      N      -

```

```

*****
PERMITTED LEFT TURNS?          INTERIOR TRAVEL TIMES
*****

```

```

LEFT-SIDE INTERSECTION  NO   LEFT TO RIGHT (SEC) - - - - - 15
RIGHT-SIDE INTERSECTION NO   RIGHT TO LEFT (SEC) - - - - - 15

```



\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C		A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	50.1	17.2	27.7	77.8	*	34.8	33.7	26.5	61.3
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.89	.90	.89	.34	*	.96	.96	.96	.23
-----------	-----	-----	-----	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	E	E	E	A	*	E	E	E	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	33.49	73.44	21.03	.00	*	59.36	50.83	59.63	2.43
-----------------	-------	-------	-------	-----	---	-------	-------	-------	------

LEVEL OF SERVICE	D	E	C	A	*	E	D	E	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.25	.00	*			1.06	.11
---------------	--	--	-----	-----	---	--	--	------	-----

LEVEL OF SERVICE			C	A	*			F	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	63.82	VEH-HRS/HR
INTERNAL OFFSET	27 SEC	CYCLE LENGTH	95	SEC

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C		A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	52.9	18.0	29.1	82.0	*	36.7	35.5	27.8	64.5
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.88	.90	.88	.34	*	.95	.95	.96	.23
-----------	-----	-----	-----	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	E	E	E	A	*	E	E	E	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	33.59	73.85	21.44	.00	*	58.75	50.86	55.32	4.07
-----------------	-------	-------	-------	-----	---	-------	-------	-------	------

LEVEL OF SERVICE	D	E	C	A	*	E	D	E	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.25	.00	*			1.03	.16
---------------	--	--	-----	-----	---	--	--	------	-----

LEVEL OF SERVICE			C	A	*			F	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER LEAD-LEAD TOTAL INTERCHANGE DELAY 64.45 VEH-HRS/HR

INTERNAL OFFSET 30 SEC CYCLE LENGTH 100 SEC

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 6A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	55.6	18.9	30.5	86.1	*	38.6	37.2	29.2	67.8
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.88	.88	.88	.34	*	.94	.95	.95	.23
LEVEL OF SERVICE	E	E	E	A	*	E	E	E	A

DELAY (SEC/VEH)	34.06	73.07	21.94	.00	*	58.48	51.74	55.34	4.65
LEVEL OF SERVICE	D	E	C	A	*	E	D	E	A

STORAGE RATIO			.26	.00	*			1.07	.16
LEVEL OF SERVICE			C	A	*			F	C

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	65.70 VEH-HRS/HR
INTERNAL OFFSET	33 SEC	CYCLE LENGTH	105 SEC

<GSI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 7A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	58.4	19.6	32.0	90.4	*	40.5	38.9	30.6	71.1
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.87	.89	.87	.34	*	.94	.94	.94	.23
-----------	-----	-----	-----	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	E	E	E	A	*	E	E	E	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	34.37	75.30	21.26	.00	*	58.47	52.71	53.72	4.70
-----------------	-------	-------	-------	-----	---	-------	-------	-------	------

LEVEL OF SERVICE	D	E	C	A	*	E	E	E	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.26	.00	*			1.08	.16
---------------	--	--	-----	-----	---	--	--	------	-----

LEVEL OF SERVICE			C	A	*			F	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER LEAD-LEAD TOTAL INTERCHANGE DELAY 66.70 VEH-HRS/HR

INTERNAL OFFSET 34 SEC CYCLE LENGTH 110 SEC

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C		A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	61.2	20.4	33.4	94.6	*	42.3	40.8	31.9	74.2
------------------	------	------	------	------	---	------	------	------	------

V/C RATIO	.87	.88	.87	.34	*	.93	.94	.94	.23
-----------	-----	-----	-----	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	E	E	E	A	*	E	E	E	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	34.75	76.28	21.04	.00	*	59.24	52.71	54.04	4.99
-----------------	-------	-------	-------	-----	---	-------	-------	-------	------

LEVEL OF SERVICE	D	E	C	A	*	E	E	E	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.26	.00	*			1.09	.17
---------------	--	--	-----	-----	---	--	--	------	-----

LEVEL OF SERVICE			C	A	*			F	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	67.81	VEH-HRS/HR
INTERNAL OFFSET	36 SEC	CYCLE LENGTH	115	SEC

<GSI01>

\* \* \* INTERCHANGE 1 SR 52

RUN 00 PAGE 9A

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF LEFT-SIDE INTERSECTION \* RIGHT-SIDE INTERSECTION  
EFFECTIVENESS A B C A+C \* A B C A+C

\*\*\*\*\*

\*

PHASE TIME (SEC) 63.9 21.3 34.8 98.7 \* 44.2 42.5 33.3 77.5

\*

V/C RATIO .86 .87 .87 .34 \* .93 .93 .93 .23

LEVEL OF SERVICE E E E A \* E E E A

\*

DELAY (SEC/VEH) 35.40 76.27 20.57 .00 \* 59.55 53.88 54.79 5.52

LEVEL OF SERVICE D E C A \* E E E A

\*

STORAGE RATIO .26 .00 \* 1.13 .17

LEVEL OF SERVICE C A \* F C

\*\*\*\*\*

PHASE ORDER LEAD-LEAD TOTAL INTERCHANGE DELAY 69.19 VEH-HRS/HR

INTERNAL OFFSET 39 SEC CYCLE LENGTH 120 SEC

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

\*\*\*\*\*

MEASURES OF EFFECTIVENESS	LEFT-SIDE INTERSECTION				*	RIGHT-SIDE INTERSECTION			
	A	B	C	A+C	*	A	B	C	A+C

\*\*\*\*\*

PHASE TIME (SEC)	66.7	22.1	36.2	102.9	*	46.0	44.4	34.6	80.6
------------------	------	------	------	-------	---	------	------	------	------

V/C RATIO	.86	.87	.86	.33	*	.92	.93	.93	.23
-----------	-----	-----	-----	-----	---	-----	-----	-----	-----

LEVEL OF SERVICE	E	E	E	A	*	E	E	E	A
------------------	---	---	---	---	---	---	---	---	---

DELAY (SEC/VEH)	35.88	77.56	21.29	.00	*	60.51	54.21	55.37	5.79
-----------------	-------	-------	-------	-----	---	-------	-------	-------	------

LEVEL OF SERVICE	D	E	C	A	*	E	E	E	A
------------------	---	---	---	---	---	---	---	---	---

STORAGE RATIO			.27	.00	*			1.17	.18
---------------	--	--	-----	-----	---	--	--	------	-----

LEVEL OF SERVICE			C	A	*			F	C
------------------	--	--	---	---	---	--	--	---	---

\*\*\*\*\*

PHASE ORDER	LEAD-LEAD	TOTAL INTERCHANGE DELAY	70.68 VEH-HRS/HR
INTERNAL OFFSET	41 SEC	CYCLE LENGTH	125 SEC

\*\*\* GENERAL SIGNALIZATION INFORMATION \*\*\*

```

*****
MEASURES OF          LEFT-SIDE INTERSECTION *    RIGHT-SIDE INTERSECTION
EFFECTIVENESS        A      B      C      A+C *    A      B      C      A+C
*****

```

```

PHASE TIME (SEC)  69.5  22.8  37.7  107.2 *  47.9  46.1  36.0  83.9

```

```

V/C RATIO          .85   .87   .86   .33 *   .92   .93   .93   .23
LEVEL OF SERVICE   E     E     E     A   *   E     E     E     A

```

```

DELAY (SEC/VEH)   36.41  79.88  20.88  .00 *  61.04  55.50  55.28  6.28
LEVEL OF SERVICE   D     F     C     A   *   E     E     E     A

```

```

STORAGE RATIO                .27   .00 *                1.18   .18
LEVEL OF SERVICE                C     A   *                F     C

```

\*\*\*\*\*

```

PHASE ORDER  LEAD-LEAD      TOTAL INTERCHANGE DELAY  72.18 VEH-HRS/HR
INTERNAL OFFSET  44 SEC      CYCLE LENGTH  130 SEC

```



\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*                                     *
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
*   A   B   C   *   A   B   C   *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER         *   |   |---- *   |   ----| * LENGTH (SEC)
* ----> V   V   * ----> |   ----> *
*                                     *
*****

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	27.00
2	A	C	23.10
3	B	C	3.40
4	B	A	13.80
5	C	A	21.00
6	C	B	6.70

INTERNAL OFFSET 27 SEC

CYCLE LENGTH 95 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*                                     *
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
*   A   B   C   *   A   B   C   *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER         *   |   |---- *   |   ----| * LENGTH (SEC)
* ----> V   V   * ----> |   ----> *
*                                     *
*****

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	30.00
2	A	C	22.90
3	B	C	4.90
4	B	A	13.10
5	C	A	23.60
6	C	B	5.50

INTERNAL OFFSET 30 SEC

CYCLE LENGTH 100 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
1 * A * B * 33.00
2 * A * C * 22.60
3 * B * C * 6.60
4 * B * A * 12.30
5 * C * A * 26.30
6 * C * B * 4.20
*
*

```

INTERNAL OFFSET 33 SEC

CYCLE LENGTH 105 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
1 * A * B * 34.00
2 * A * C * 24.40
3 * B * C * 6.20
4 * B * A * 13.40
5 * C * A * 27.10
6 * C * B * 4.90
*
*

```

INTERNAL OFFSET 34 SEC

CYCLE LENGTH 110 SEC

PHASE ORDER LEAD-LEAD

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 8B

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ---- | * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
*****

```

PHASE INTERVAL NUMBER	A	B	C	A	B	C	PHASE INTERVAL LENGTH (SEC)
1	*	A	*	B	*		36.00
2	*	A	*	C	*		25.20
3	*	B	*	C	*		6.70
4	*	B	*	A	*		13.70
5	*	C	*	A	*		28.60
6	*	C	*	B	*		4.80

INTERNAL OFFSET 36 SEC

CYCLE LENGTH 115 SEC

PHASE ORDER LEAD-LEAD

<SPI01>

\*\*\* INTERCHANGE 1 SR 52

RUN 00 PAGE 9B

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ---- | * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
*****

```

PHASE INTERVAL NUMBER	A	B	C	A	B	C	PHASE INTERVAL LENGTH (SEC)
1	*	A	*	B	*		39.00
2	*	A	*	C	*		24.90
3	*	B	*	C	*		8.40
4	*	B	*	A	*		12.90
5	*	C	*	A	*		31.30
6	*	C	*	B	*		3.50

INTERNAL OFFSET 39 SEC

CYCLE LENGTH 120 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
*****

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	41.00
2	A	C	25.70
3	B	C	8.90
4	B	A	13.20
5	C	A	32.80
6	C	B	3.40

INTERNAL OFFSET 41 SEC

CYCLE LENGTH 125 SEC

PHASE ORDER LEAD-LEAD

\*\*\* SIGNAL PHASING INFORMATION \*\*\*

```

*****
*
* LEFT-SIDE SEQUENCE * RIGHT-SIDE SEQUENCE *
* A B C * A B C *
PHASE INTERVAL * <---- | <---- * <---- ^ ^ * PHASE INTERVAL
NUMBER * | |---- * | ----| * LENGTH (SEC)
* ----> V V * ----> | ----> *
*
*
*****

```

PHASE INTERVAL NUMBER	LEFT-SIDE SEQUENCE	RIGHT-SIDE SEQUENCE	LENGTH (SEC)
1	A	B	44.00
2	A	C	25.50
3	B	C	10.50
4	B	A	12.30
5	C	A	35.60
6	C	B	2.10

INTERNAL OFFSET 44 SEC

CYCLE LENGTH 130 SEC

PHASE ORDER LEAD-LEAD

**APPENDIX Oc**  
**HCS Freeway Analyses**

=====  
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 =====

=====  
 File Name ..... I75S52A.HC3  
 Location..... I-75 SOUTH  
 From/To..... SR 54 TO SR 52  
 Analyst..... AJK  
 Time of Analysis..... 2008 AM BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... BUILD ENHANCED DIAMOND  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2640	3160
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

	Terrain Type	E	E	F	F	F
		T	R	HV	W	P
Dir 1	LEVEL	1.50		0.957	1.00	1.00
Dir 2		1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	968	1159
Level of Service (LOS)	B	C
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	13.83	16.56
Density (veh/mi/ln)	13.23	15.84
Speed of prevailing traffic (mph)	70.0	70.0

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=====  
 File Name ..... I75S52P.HC3  
 Location..... I-75 SOUTH  
 From/To..... SR 54 TO SR 52  
 Analyst..... AJK  
 Time of Analysis..... 2008 PM BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... BUILD ENHANCED DIAMOND  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	3160	2640
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1159	968
Level of Service (LOS)	C	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	16.56	13.83
Density (veh/mi/ln)	15.84	13.23
Speed of prevailing traffic (mph)	70.0	70.0

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 =====

=====  
 File Name ..... I75N52A.HC3  
 Location..... I-75 NORTH  
 From/To..... SR 52 TO CR 41  
 Analyst..... AJK  
 Time of Analysis..... 2008 AM BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... BUILD ENHANCED DIAMOND  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2040	2440
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results

	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	748	895
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	10.69	12.79
Density (veh/mi/ln)	10.23	12.24
Speed of prevailing traffic (mph)	70.0	70.0



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=====  
 File Name ..... I75N52P.HC3  
 Location..... I-75 NORTH  
 From/To..... SR 52 TO CR 41  
 Analyst..... AJK  
 Time of Analysis..... 2008 PM BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... BUILD ENHANCED DIAMOND  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2440	2040
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	895	748
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	12.79	10.69
Density (veh/mi/ln)	12.24	10.23
Speed of prevailing traffic (mph)	70.0	70.0

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 =====

File Name ..... I75ABA.HC3  
 Location..... I-75  
 From/To..... RAMP A TO RAMP B  
 Analyst..... AJK  
 Time of Analysis..... 2008 AM BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... BUILD ENHANCED DIAMOND

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1590	1900
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	583	697
Level of Service (LOS)	A	A
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	8.33	9.96
Density (veh/mi/ln)	7.97	9.53
Speed of prevailing traffic (mph)	70.0	70.0

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=====  
 File Name ..... 175ABP.HC3  
 Location..... I-75  
 From/To..... RAMP A TO RAMP B  
 Analyst..... AJK  
 Time of Analysis..... 2008 PM BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... BUILD ENHANCED DIAMOND  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1900	1590
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results

	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	697	583
Level of Service (LOS)	A	A
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	9.96	8.33
Density (veh/mi/ln)	9.53	7.97
Speed of prevailing traffic (mph)	70.0	70.0

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File Name ..... I75CDA.HC3  
 Location..... I-75  
 From/To..... RAMP C TO RAMP D  
 Analyst..... AJK  
 Time of Analysis..... 2008 AM BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... BUILD ENHANCED DIAMOND

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1590	1900
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results

	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	583	697
Level of Service (LOS)	A	A
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	8.33	9.96
Density (veh/mi/ln)	7.97	9.53
Speed of prevailing traffic (mph)	70.0	70.0

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File Name ..... I75CDP.HC3  
 Location..... I-75  
 From/To..... RAMP C TO RAMP D  
 Analyst..... AJK  
 Time of Analysis..... 2008 PM BUILD  
 Date of Analysis..... 10/19/99  
 Other Information.... BUILD ENHANCED DIAMOND

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1900	2040
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	697	748
Level of Service (LOS)	A	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	9.96	10.69
Density (veh/mi/ln)	9.53	10.23
Speed of prevailing traffic (mph)	70.0	70.0

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 File Name ..... I75S52A.HC3  
 Location..... I-75 SOUTH  
 From/To..... SR 54 TO SR 52  
 Analyst..... WFB  
 Time of Analysis..... 2028 AM BUILD  
 Date of Analysis..... 11/ 8/99  
 Other Information.... BUILD ENHANCED DIAMOND  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	3902	4580
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

	Terrain Type	E	E	F	F	F
		T	R	HV	W	P
Dir 1	LEVEL	1.50		0.957	1.00	1.00
Dir 2		1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1431	1679
Level of Service (LOS)	C	D
Projected Speed at Flow Rate (mph)	69.5	68.2
Density (pc/mi/ln)	20.58	24.62
Density (veh/mi/ln)	19.69	23.56
Speed of prevailing traffic (mph)	69.5	68.2

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 File Name ..... I75S52P.HC3  
 Location..... I-75 SOUTH  
 From/To..... SR 54 TO SR 52  
 Analyst..... WFB  
 Time of Analysis..... 2028 PM BUILD  
 Date of Analysis..... 11/ 8/99  
 Other Information.... BUILD ENHANCED DIAMOND  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	4580	3902
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

	Terrain Type	E	E	F	F	F
		T	R	HV	W	P
Dir 1	LEVEL	1.50		0.957	1.00	1.00
Dir 2		1.50		0.957	1.00	1.00

C. Level of Service Results

	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1679	1431
Level of Service (LOS)	D	C
Projected Speed at Flow Rate (mph)	68.2	69.5
Density (pc/mi/ln)	24.62	20.58
Density (veh/mi/ln)	23.56	19.69
Speed of prevailing traffic (mph)	68.2	69.5

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 File Name ..... I75N52A.HC3  
 Location..... I-75 NORTH  
 From/To..... SR 52 TO CR 41  
 Analyst..... WFB  
 Time of Analysis..... 2028 AM BUILD  
 Date of Analysis..... 11/ 8/99  
 Other Information.... BUILD ENHANCED DIAMOND  
 =====

A. Geometrics and Traffic Input Data                      Dir 1                      Dir 2

	Dir 1	Dir 2
Traffic Volume (vph)	3140	3837
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1            LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results                                      Dir 1                                      Dir 2

	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1151	1407
Level of Service (LOS)	C	C
Projected Speed at Flow Rate (mph)	70.0	69.6
Density (pc/mi/ln)	16.44	20.21
Density (veh/mi/ln)	15.73	19.34
Speed of prevailing traffic (mph)	70.0	69.6



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 File Name ..... I75N52P.HC3  
 Location..... I-75 NORTH  
 From/To..... SR 52 TO CR 41  
 Analyst..... WFB  
 Time of Analysis..... 2028 PM BUILD  
 Date of Analysis..... 11/ 8/99  
 Other Information.... BUILD ENHANCED DIAMOND  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	3837	3140
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

	Terrain Type	E	E	F	F	F
		T	R	HV	W	P
Dir 1	LEVEL	1.50		0.957	1.00	1.00
Dir 2		1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1407	1151
Level of Service (LOS)	C	C
Projected Speed at Flow Rate (mph)	69.6	70.0
Density (pc/mi/ln)	20.21	16.44
Density (veh/mi/ln)	19.34	15.73
Speed of prevailing traffic (mph)	69.6	70.0

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 File Name ..... I75ABA.HC3  
 Location..... I-75  
 From/To..... RAMP A TO RAMP B  
 Analyst..... WFB  
 Time of Analysis..... 2028 AM BUILD  
 Date of Analysis..... 11/ 8/99  
 Other Information.... BUILD ENHANCED DIAMOND  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2462	2938
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	903	1077
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	12.90	15.39
Density (veh/mi/ln)	12.34	14.72
Speed of prevailing traffic (mph)	70.0	70.0

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 File Name ..... I75ABP.HC3  
 Location..... I-75  
 From/To..... RAMP A TO RAMP B  
 Analyst..... WFB  
 Time of Analysis..... 2028 PM BUILD  
 Date of Analysis..... 11/ 8/99  
 Other Information.... BUILD ENHANCED DIAMOND  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2938	2462
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1077	903
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	15.39	12.90
Density (veh/mi/ln)	14.72	12.34
Speed of prevailing traffic (mph)	70.0	70.0

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 File Name ..... I75CDA.HC3  
 Location..... I-75  
 From/To..... RAMP C TO RAMP D  
 Analyst..... WFB  
 Time of Analysis..... 2028 AM BUILD  
 Date of Analysis..... 11/ 8/99  
 Other Information.... BUILD ENHANCED DIAMOND  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2462	2938
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	903	1077
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	12.90	15.39
Density (veh/mi/ln)	12.34	14.72
Speed of prevailing traffic (mph)	70.0	70.0

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 File Name ..... I75CDP.HC3  
 Location..... I-75  
 From/To..... RAMP C TO RAMP D  
 Analyst..... WFB  
 Time of Analysis..... 2028 PM BUILD  
 Date of Analysis..... 11/ 8/99  
 Other Information.... BUILD ENHANCED DIAMOND  
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2938	2462
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1077	903
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	15.39	12.90
Density (veh/mi/ln)	14.72	12.34
Speed of prevailing traffic (mph)	70.0	70.0

**APPENDIX Od**  
**HCS Ramp Analyses**

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=====  
 File Name ..... INBOFFA.HC5  
 Location..... I75 NB OFF RAMP @ SR 52  
 Analyst..... AJK  
 Time of Analysis..... 2008 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... ENHANCED DIAMOND  
 =====

A. Ramp Configuration Input Data

	Analysis	
	Freeway	Ramp
Traffic Volume	2640	1050
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 525 ft.

=====  
 File Name ..... INBOFFA.HC5

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Freeway LEVEL	1.50		0.959	1.00	1.00
Ramp	1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2640	70 3	12.0	1.00	0.959	1.00	2897
Ramp	OFF 1050	50 1	12.0	1.00	0.959	1.00	1152

Estimation of V12:

-----  
 PFD = 0.635 Using Equation: 7 V12 = 2259

Capacity Checks:

-----  
 VF0+VR = 2897 V12 = 2259

LOS, Speed, and Density:

-----  
 Level of Service (LOS) B  
 Computed Density (pc/mi/ln) 19  
 Computed Speed (mph) 61



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File Name ..... INBOFFP.HC5  
 Location..... I-75 NB OFF RAMP @ SR 52  
 Analyst..... AJK  
 Time of Analysis..... 2008 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... ENHANCED DIAMOND

A. Ramp Configuration Input Data

	Analysis	
	Freeway	Ramp
Traffic Volume	3160	1260
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 525 ft.

=====  
 File Name ..... INBOFFP.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway LEVEL	1.50		0.959	1.00	1.00
Ramp	1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	3160	70 3	12.0	1.00	0.959	1.00	3468
Ramp	OFF 1260	50 1	12.0	1.00	0.959	1.00	1383

Estimation of V12:

-----  
 PFD = 0.610 Using Equation: 7 V12 = 2654

Capacity Checks:

-----  
 VFO+VR = 3468 V12 = 2654

LOS, Speed, and Density:

-----  
 Level of Service (LOS) C  
 Computed Density (pc/mi/ln) 22  
 Computed Speed (mph) 60

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File Name ..... INBONA.HC5  
 Location..... I-75 NB ON RAMP @ SR 52  
 Analyst..... AJK  
 Time of Analysis..... 2008 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... ENHANCED DIAMOND

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	1590	450
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 1181 ft.

File Name ..... INBONA.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway	LEVEL	1.50	0.957	1.00	1.00
Ramp		1.50	0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	1590	70	3	12.0	1.00	0.957	1749
Ramp	ON 450	50	1	12.0	1.00	0.985	481

Estimation of V12:

PFM = 0.611 Using Equation: 2 V12 = 1068

Capacity Checks:

VFO = 2230 VR12 = 1549

LOS, Speed, and Density:

Level of Service (LOS) A  
 Computed Density (pc/mi/ln) 10  
 Computed Speed (mph) 64

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File Name ..... INBONP.HC5  
 Location..... I-75 NB ON RAMP @ SR 52  
 Analyst..... AJK  
 Time of Analysis..... 2008 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... ENHANCED DIAMOND

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	1900	540
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 1181 ft.

=====  
 File Name ..... INBONP.HC5

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Freeway	LEVEL	1.50	0.957	1.00	1.00
Ramp		1.50	0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	1900	70	3 12.0	1.00	0.957	1.00	2090
Ramp	ON 540	50	1 12.0	1.00	0.985	1.00	577

Estimation of V12:

-----  
 PFM = 0.611 Using Equation: 2 V12 = 1276

Capacity Checks:

-----  
 VFO = 2667 VR12 = 1853

LOS, Speed, and Density:

-----  
 Level of Service (LOS) B  
 Computed Density (pc/mi/ln) 12  
 Computed Speed (mph) 64

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=====  
 File Name ..... ISBOFFA.HC5  
 Location..... I-75 SB OFF RAMP @ SR52  
 Analyst..... AJK  
 Time of Analysis..... 2008 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... ENHANCED DIAMOND  
 =====

A. Ramp Configuration Input Data

	Analysis	
	Freeway	Ramp
Traffic Volume	2440	540
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	9.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 492 ft.

=====  
 File Name ..... ISBOFFA.HC5

B. Adjustment Factors

Terrain Type	E T	E R	F HV	F W	F P
Freeway LEVEL	1.50		0.957	1.00	1.00
Ramp	1.50		0.957	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2440	70 3	12.0	1.00	0.957	1.00	2684
Ramp	OFF 540	50 1	12.0	1.00	0.957	1.00	594

Estimation of V12:

-----  
 PFD = 0.666 Using Equation: 7 V12 = 1985

Capacity Checks:

-----  
 VFO+VR = 2684 V12 = 1985

LOS, Speed, and Density:

-----  
 Level of Service (LOS) B  
 Computed Density (pc/mi/ln) 17  
 Computed Speed (mph) 62



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=====  
 File Name ..... ISBOFFP.HC5  
 Location..... I-75 SB OFF RAMP @ SR52  
 Analyst..... AJK  
 Time of Analysis..... 2008 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... ENHANCED DIAMOND  
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2040	450
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	9.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 492 ft.

=====  
 File Name ..... ISBOFFP.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway LEVEL	1.50		0.957	1.00	1.00
Ramp	1.50		0.957	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2040	70 3	12.0	1.00	0.957	1.00	2244
Ramp	OFF 450	50 1	12.0	1.00	0.957	1.00	495

Estimation of V12:

-----  
 PFD = 0.681 Using Equation: 7 V12 = 1686

Capacity Checks:

-----  
 VFO+VR = 2244 V12 = 1686

LOS, Speed, and Density:

-----  
 Level of Service (LOS) B  
 Computed Density (pc/mi/ln) 14  
 Computed Speed (mph) 62

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File Name ..... ISBONA.HC5  
 Location..... I-75 SB ON RAMP @ SR52  
 Analyst..... AJK  
 Time of Analysis..... 2008 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... ENHANCED DIAMOND

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	1900	1260
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	6.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 1312 ft.

=====  
 File Name ..... ISBONA.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway	LEVEL	1.50	0.959	1.00	1.00
Ramp		1.50	0.971	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	1900	70 3	12.0	1.00	0.959	1.00	2085
Ramp	ON 1260	50 1	12.0	1.00	0.971	1.00	1366

Estimation of V12:

-----  
 PFM = 0.614 Using Equation: 2 V12 = 1281

Capacity Checks:

-----  
 VFO = 3451 VR12 = 2647

LOS, Speed, and Density:

-----  
 Level of Service (LOS) B  
 Computed Density (pc/mi/ln) 17  
 Computed Speed (mph) 63

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=====  
 File Name ..... ISBONP.HC5  
 Location..... I-75 SB ON RAMP @ SR52  
 Analyst..... AJK  
 Time of Analysis..... 2008 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 10/18/99  
 Other Information..... ENHANCED DIAMOND  
 =====

A. Ramp Configuration Input Data

	Analysis	
	Freeway	Ramp
Traffic Volume	1590	1050
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	6.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 1312 ft.

File Name ..... ISBONP.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway LEVEL	1.50		0.959	1.00	1.00
Ramp	1.50		0.971	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	1590	70	3 12.0	1.00	0.959	1.00	1745
Ramp	ON 1050	50	1 12.0	1.00	0.971	1.00	1138

Estimation of V12:

PFM = 0.614 Using Equation: 2 V12 = 1072

Capacity Checks:

VFO = 2883 VR12 = 2210

LOS, Speed, and Density:

Level of Service (LOS) B  
 Computed Density (pc/mi/ln) 14  
 Computed Speed (mph) 64

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=====  
 File Name ..... INBONA.HC5  
 Location..... I-75 NB ON RAMP @ SR 52  
 Analyst..... WFB  
 Time of Analysis..... 2028 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 11/8/99  
 Other Information..... ENHANCED DIAMOND  
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2462	678
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 1181 ft.





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=====  
 File Name ..... INBONP.HC5  
 Location..... I-75 NB ON RAMP @ SR 52  
 Analyst..... WFB  
 Time of Analysis..... 2028 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 11/8/99  
 Other Information..... ENHANCED DIAMOND  
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2938	899
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 1181 ft.

=====  
 File Name ..... INBQNP.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway	LEVEL	1.50	0.957	1.00	1.00
Ramp		1.50	0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2938	70	3	12.0	1.00	0.957	1.00	3232
Ramp	ON 899	50	1	12.0	1.00	0.985	1.00	961

Estimation of V12:

-----  
 PFM = 0.611      Using Equation: 2      V12 = 1973

Capacity Checks:

-----  
 VFO = 4193      VR12 = 2934

LOS, Speed, and Density:

-----  
 Level of Service (LOS)      C  
 Computed Density (pc/mi/ln)      21  
 Computed Speed (mph)      62

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=====  
 File Name ..... INBOFFA.HC5  
 Location..... I75 NB OFF RAMP @ SR 52  
 Analyst..... WFB  
 Time of Analysis..... 2028 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 11/8/99  
 Other Information..... ENHANCED DIAMOND  
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	3902	1440
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 525 ft.

=====  
 File Name ..... INBOFFA.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)	
Freeway	3902	70	3	12.0	1.00	0.959	1.00	4282
Ramp	OFF 1440	50	1	12.0	1.00	0.959	1.00	1580

Estimation of V12:

PFD = 0.580 Using Equation: 7 V12 = 3148

Capacity Checks:

VFO+VR = 4282 V12 = 3148

LOS, Speed, and Density:

Level of Service (LOS)	C
Computed Density (pc/mi/ln)	27
Computed Speed (mph)	59

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=====  
 File Name ..... INBOFFP.HC5  
 Location..... I-75 NB OFF RAMP @ SR 52  
 Analyst..... WFB  
 Time of Analysis..... 2028 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 11/8/99  
 Other Information..... ENHANCED DIAMOND  
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	4580	1642
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 525 ft.

=====  
 File Name ..... INBOFFP.HC5  
 =====

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)	
Freeway	4580	70	3	12.0	1.00	0.959	1.00	5026
Ramp	OFF 1642	50	1	12.0	1.00	0.959	1.00	1802

Estimation of V12:

-----  
 PFD = 0.551                  Using Equation:    7                  V12 = 3580

Capacity Checks:

-----  
 VFO+VR = 5026                  V12 = 3580

LOS, Speed, and Density:

-----  
 Level of Service (LOS)                                  D  
 Computed Density (pc/mi/ln)                              30  
 Computed Speed (mph)                                      59

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=====  
 File Name ..... ISBONA.HC5  
 Location..... I-75 SB ON RAMP @ SR52  
 Analyst..... WFB  
 Time of Analysis..... 2028 AM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 11/8/99  
 Other Information..... ENHANCED DIAMOND  
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2938	1642
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	6.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 1312 ft.

File Name ..... ISBONA.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.971	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2938	70	3	12.0	1.00	0.959	1.00	3224
Ramp	ON 1642	50	1	12.0	1.00	0.971	1.00	1780

Estimation of V12:

PFM = 0.614      Using Equation: 2      V12 = 1980

Capacity Checks:

VFO = 5004      VR12 = 3760

LOS, Speed, and Density:

Level of Service (LOS)      C  
 Computed Density (pc/mi/ln)      26  
 Computed Speed (mph)      60



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=====  
 File Name ..... ISBONP.HC5  
 Location..... I-75 SB ON RAMP @ SR52  
 Analyst..... WFB  
 Time of Analysis..... 2028 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 11/8/99  
 Other Information..... ENHANCED DIAMOND  
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2462	1440
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	6.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.  
 Length of acceleration lane is 1312 ft.

=====  
 File Name ..... ISBONP.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway	LEVEL	1.50	0.959	1.00	1.00
Ramp		1.50	0.971	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2462	70	3	12.0	1.00	0.959	1.00	2702
Ramp	ON 1440	50	1	12.0	1.00	0.971	1.00	1561

Estimation of V12:

-----  
 PFM = 0.614      Using Equation:      2      V12 = 1660

Capacity Checks:

-----  
 VFO = 4263      VR12 = 3221

LOS, Speed, and Density:

-----  
 Level of Service (LOS)      C  
 Computed Density (pc/mi/ln)      22  
 Computed Speed (mph)      62

```

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=====
File Name ..... ISBOFFA.HC5
Location..... I-75 SB OFF RAMP @ SR52
Analyst..... WFB
Time of Analysis..... 2028 AM
Driver Population Factor..... 1.00
Date of Analysis..... 11/8/99
Other Information..... ENHANCED DIAMOND
=====

```

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	3837	899
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	9.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
Length of deceleration lane is 492 ft.

=====  
File Name ..... ISBOFFA.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.957	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	3837	70	3	12.0	1.00	0.957	1.00	4221
Ramp	OFF 899	50	1	12.0	1.00	0.957	1.00	989

Estimation of V12:

-----  
PFD = 0.609            Using Equation:    7            V12 = 2957

Capacity Checks:

-----  
VFO+VR = 4221            V12 = 2957

LOS, Speed, and Density:

-----  
Level of Service (LOS)            C  
Computed Density (pc/mi/ln)       25  
Computed Speed (mph)               61

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=====  
 File Name ..... ISBOFFP.HC5  
 Location..... I-75 SB OFF RAMP @ SR52  
 Analyst..... WFB  
 Time of Analysis..... 2028 PM  
 Driver Population Factor..... 1.00  
 Date of Analysis..... 11/8/99  
 Other Information..... ENHANCED DIAMOND  
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	3140	678
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	9.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.  
 Length of deceleration lane is 492 ft.

=====  
 File Name ..... ISBOFFP.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.957	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	3140	70	3	12.0	1.00	0.957	1.00	3454
Ramp	OFF 678	50	1	12.0	1.00	0.957	1.00	746

Estimation of V12:

-----  
 PFD = 0.639      Using Equation: 7      V12 = 2477

Capacity Checks:

-----  
 VFO+VR = 3454      V12 = 2477

LOS, Speed, and Density:

-----

Level of Service (LOS)	C
Computed Density (pc/mi/ln)	21
Computed Speed (mph)	62

**APPENDIX Oe**  
**Transyt-7F Queue Analyses**

\*\*\*\*\*

Release 7.10

(TRANSYT-7F)

15 March 1993

TRAFFIC SIGNAL SYSTEM OPTIMIZATION

PROGRAM

Sponsored by:

Developed by:

U.S. Department of Transportation

University of Florida

Federal Highway Administration

Transportation Research Center

Software Maintenance and User Support Furnished by:  
Center for Microcomputers in Transportation (McTrans)  
Transportation Research Center, University of Florida  
512 Weil Hall, Gainesville, FL 32611-2083 USA  
(904) 392-0378

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\*\*\*\*\*

Date of Run: 11/15/99 Start Time of Run: 13: 0:50 Data File: DIA08AM.TIN

-----  
INPUT DATA REPORT FOR RUN 1  
-----

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16  
-----

File: Dia08am.sy5, Date:Nov 15, 1999, Analyst:

1 95 130 5 3 1 0 0 -1 1 1 60 0 0 0 1

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE  
LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO  
ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

--- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC  
CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION.  
LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD  
TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

--- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH  
THE OPTIMIZED TIMING PLAN TO BE WRITTEN.





File: Dia08am.sy5, Date:Nov 15, 1999, Analyst:

FIELDS:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
28	510	704	1568	253	0	0	0	0	0	0	0	0	0	0	0	0
29	510	2	3	0	15	0	0	0	0	0	0	0	0	0	0	0

PLOT AND OPTION CARDS

52	1	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	-----	---	---	---	---	---	---	---	---	---	---	---	---	---

--- 72 --- NOTE - A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE  
 DEFAULT NORMAL OPTIMIZATION STEP SIZES.  
 IF CARD TYPE 4 WAS CODED, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE  
 LENGTH HAS BEEN SELECTED.

--- 70 --- NOTE - NO ERRORS DETECTED. TRANSYT-7F PERFORMS FINAL PROCESSING.  
 IF ANY ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

--- 74 --- NOTE - THERE ARE A TOTAL OF 2 NODES AND 12 LINKS,  
 INCLUDING BOTTLENECKS, IF ANY, IN THIS RUN.

--- 77 --- NOTE - THERE WERE A TOTAL OF 1 WARNING MESSAGES ISSUED  
 IN THE ABOVE REPORT.

File: Dia08am.sy5, Date:Nov 15, 1999, Analyst:

-----  
 CYCLE EVALUATION SUMMARY PERFORMANCE  
 -----

CYCLE LENGTH (sec)	STEP SIZE (steps)	AVERAGE DELAY (sec/veh)	PERCENT STOPS (%)	FUEL CONSUMPTION (gal/hr)	DISUTILITY INDEX	NUMBER SATURATED LINKS	PERFORMANCE INDEX
--------------------	-------------------	-------------------------	-------------------	---------------------------	------------------	------------------------	-------------------

95	32	21.15	59	94.5	53.3	0	53.2726
----	----	-------	----	------	------	---	---------

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

100	33	22.14	60	95.9	54.6	0	54.6415
-----	----	-------	----	------	------	---	---------

105	35	23.27	60	96.8	55.6	0	55.6155
-----	----	-------	----	------	------	---	---------

110	37	24.47	60	98.4	57.2	0	57.1791
-----	----	-------	----	------	------	---	---------

115	38	24.80	61	99.0	57.8	0	57.8071
-----	----	-------	----	------	------	---	---------

120	40	26.17	61	100.9	59.6	0	59.6319
-----	----	-------	----	-------	------	---	---------

125	42	26.32	60	100.6	59.4	0	59.3835
-----	----	-------	----	-------	------	---	---------

130	43	27.74	60	102.2	60.9	0	60.9464
-----	----	-------	----	-------	------	---	---------

BEST CYCLE LENGTH = 95 SEC. CYCLE SENSITIVITY = 4.6 %

--- 80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS INDICATED BY CARD TYPE 52.

File: Dia08am.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

<PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL AVG. (v-hr)(sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST.CAP.	FUEL CONS. (gal)	
SB LEFT : 48	106.23	6.50	74.1	2.94	33.5	265.( 84)	7	142	7.99
RGHT : 85	85.05	7.02	99.9	4.17	59.3	233.( 92)	6	71	7.84
EB THRU : 15	41.85	2.89	28.3	1.49	14.5	200.( 54)	6	72	3.91
RGHT : 89	69.48	8.78	51.7	6.45	38.0	523.( 86)	15	24	10.45
WB THRU : 18	51.06	1.24	9.0	.31	2.3	84.( 17)	2	44	3.51
LEFT : 81	73.85	7.72	38.8	6.39	32.1	537.( 75)	16	44	17.23
NODE 2:	89	427.51	34.15	21.74	28.4	1842.( 67)			50.92
NB LEFT : 50	130.34	7.66	74.9	3.29	32.2	305.( 83)	8	150	9.45
RGHT : 68	261.03	14.06	68.7	5.31	25.9	580.( 79)	16	150	17.84
EB THRU : 23	47.76	1.28	9.9	.41	3.2	152.( 33)	4	44	4.75
LEFT : 35	22.80	.47	7.6	.05	.9	30.( 14)	2	22	1.37
WB THRU : 20	112.49	5.97	25.5	2.20	9.4	371.( 44)	10	113	8.28
RGHT : 28	33.80	1.83	26.1	.70	10.0	116.( 46)	3	28	2.55
NODE 5:	68	608.21	31.27	11.97	14.9	1554.( 54)			44.24

All MOEs are in units per hour.

File: Dia08am.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

-----

PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	1036
Total Travel Time	veh-hr/hr	65
Total Uniform Delay	veh-hr/hr	28
Total Random Delay	veh-hr/hr	6
Total Delay	veh-hr/hr	34
Average Delay	sec/veh	21.5
Passenger Delay	pax-hr/hr	40
Stops: Total	veh/hr	3396
Percentage	%	60
System Speed	mph	15.8
Fuel Consumption	gal/hr	95
Operating Cost	\$/hr	605
Performance Index	DI	53.9

-----

Performance Index (PI): Disutility Index (DI):  
Disutility Index      Excess Fuel Consumption

No. of Simulations = 87, Links = 726 Elapsed Time = 2.8 sec.

File: Dia08am.sy5, Date:Nov 15, 1999, Analyst:  
CYCLE: 95 Seconds, 60 Steps

-----  
TRANSYT-7F TRAFFIC SIGNAL TIMING TABLES  
-----

-----  
NETWORK-WIDE SIGNAL TIMING PARAMETERS  
-----

SYSTEM CYCLE LENGTH = 95 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

F : Fixed green.

V : Variable green.

Y : Yellow.

R : All-red.

An 'M' by an interval length means this is the minimum time available.

-----  
INTERSECTION CONTROLLER SETTINGS  
-----

-----  
INTERSECTION 2 ACTUATED - SPLITS OPTIMIZED  
-----

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 23 4 42 4 18 4

Intvl Length (%): 24 4 45 4 19 4

Pin Settings (%): 100/0 24 28 73 77 96

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 27 46 22  
Splits (%): 28 49 23

LINKS MOVING : 206 202 212  
201 206 207  
209

Yield Point = 66 sec 69 %.

File: Dia08am.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

-----  
INTERSECTION 5 ACTUATED - SPLITS OPTIMIZED  
-----

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 10M 4 53 4 20M 4

Intvl Length (%): 11 4 56 4 21 4

Pin Settings (%): 100/0 11 15 71 75 96

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 14 57 24

Splits (%): 15 60 25

LINKS MOVING : 505 506 511  
511 510 503  
502  
-505

Yield Point = 0 sec 0 %.



TRANST-7F:

Page 9

File: Dia08am.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0

--- 92 --- NOTE - END OF JOB!

```

*****
*
* Release 7.10                (TRANSYT-7F)                15 March 1993  *
*
*
*          TRAFFIC SIGNAL SYSTEM OPTIMIZATION              *
*
*
*          PROGRAM                                          *
*
*
* Sponsored by:                Developed by:              *
*
* U.S. Department of Transportation      University of Florida *
* Federal Highway Administration        Transportation Research Center *
*
*
*          Software Maintenance and User Support Furnished by: *
*          Center for Microcomputers in Transportation (McTrans) *
*          Transportation Research Center, University of Florida *
*          512 Weil Hall, Gainesville, FL 32611-2083 USA *
*          (904) 392-0378 *
*
*
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*
*****

```

Date of Run: 11/15/99 Start Time of Run: 13:11: 6 Data File: DIA08PM.TIN

-----  
INPUT DATA REPORT FOR RUN 1  
-----

FIELDS:  
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16  
-----

File: Dia08pm.sy5, Date:Nov 15, 1999, Analyst:  
1 95 130 5 3 1 0 0 -1 1 1 60 0 0 0 1

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE  
LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO  
ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

--- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC  
CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION.  
LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD  
TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

--- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH  
THE OPTIMIZED TIMING PLAN TO BE WRITTEN.



File: Dia08pm.sy5, Date:Nov 15, 1999, Analyst:

FIELDS:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
28	510	704	1568	316	0	0	0	0	0	0	0	0	0	0	0	0
29	510	2	3	0	15	0	0	0	0	0	0	0	0	0	0	0

PLOT AND OPTION CARDS

52	1	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	-----	---	---	---	---	---	---	---	---	---	---	---	---	---

--- 72 --- NOTE - A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE  
 DEFAULT NORMAL OPTIMIZATION STEP SIZES.  
 IF CARD TYPE 4 WAS CODED, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE  
 LENGTH HAS BEEN SELECTED.

--- 70 --- NOTE - NO ERRORS DETECTED. TRANSYT-7F PERFORMS FINAL PROCESSING.  
 IF ANY ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

--- 74 --- NOTE - THERE ARE A TOTAL OF 2 NODES AND 12 LINKS,  
 INCLUDING BOTTLENECKS, IF ANY, IN THIS RUN.

--- 77 --- NOTE - THERE WERE A TOTAL OF 1 WARNING MESSAGES ISSUED  
 IN THE ABOVE REPORT.

File: Dia08pm.sy5, Date:Nov 15, 1999, Analyst:

-----  
 CYCLE EVALUATION SUMMARY PERFORMANCE  
 -----

CYCLE LENGTH (sec)	STEP SIZE (steps)	AVERAGE DELAY (sec/veh)	PERCENT STOPS (%)	FUEL CONSUMPTION (gal/hr)	DISUTILITY INDEX	NUMBER SATURATED LINKS	PERFORMANCE INDEX
--------------------	-------------------	-------------------------	-------------------	---------------------------	------------------	------------------------	-------------------

95	32	18.47	56	93.0	49.6	0	49.5513
----	----	-------	----	------	------	---	---------

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

100	33	19.72	55	93.5	50.0	0	50.0453
-----	----	-------	----	------	------	---	---------

105	35	20.08	56	95.0	51.5	0	51.5477
-----	----	-------	----	------	------	---	---------

110	37	21.41	55	95.7	52.3	0	52.2634
-----	----	-------	----	------	------	---	---------

115	38	22.02	55	96.6	53.1	0	53.1013
-----	----	-------	----	------	------	---	---------

120	40	23.36	56	98.8	55.3	0	55.3228
-----	----	-------	----	------	------	---	---------

125	42	23.52	56	99.2	55.8	0	55.7788
-----	----	-------	----	------	------	---	---------

130	43	24.52	56	100.1	56.6	0	56.6340
-----	----	-------	----	-------	------	---	---------

BEST CYCLE LENGTH = 95 SEC. CYCLE SENSITIVITY = 5.0 %

--- 80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS INDICATED BY CARD TYPE 52.

File: Dia08pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

<PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST.CAP.	FUEL CONS. (gal)	
SB LEFT : 40		85.05	5.19	73.9	2.34	33.3	210.( 83)	6	142	6.37
RGHT : 79		74.29	5.54	90.3	3.05	49.7	201.( 91)	5	71	6.40
EB THRU : 21		43.10	3.71	35.3	2.27	21.6	251.( 66)	7	72	4.81
RGHT : 72		41.85	4.61	45.1	3.20	31.4	303.( 82)	8	24	5.73
WB THRU : 27		78.19	1.80	8.5	.39	1.8	107.( 14)	3	44	4.91
LEFT : 55		76.02	5.41	26.4	4.04	19.7	421.( 57)	11	44	13.41
NODE 2: 79		398.49	26.27		15.29	20.3	1493.( 55)			41.63
NB LEFT : 83		216.40	14.50	85.5	7.25	42.7	554.( 91)	15	150	17.27
RGHT : 68		253.59	13.85	69.6	5.34	26.9	571.( 80)	16	150	17.50
EB THRU : 18		39.09	.74	7.0	.04	.3	3.( 1)	0	44	1.40
LEFT : 41		26.10	.79	11.2	.32	4.5	149.( 59)	3	22	3.90
WB THRU : 21		118.10	6.16	25.1	2.20	9.0	378.( 43)	10	113	8.55
RGHT : 35		42.22	2.30	26.1	.88	10.0	150.( 47)	4	28	3.20
NODE 5: 83		695.50	38.34		16.03	18.3	1805.( 57)			51.83

All MOEs are in units per hour.

File: Dia08pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	1094
Total Travel Time	veh-hr/hr	65
Total Uniform Delay	veh-hr/hr	28
Total Random Delay	veh-hr/hr	3
Total Delay	veh-hr/hr	31
Average Delay	sec/veh	19.2
Passenger Delay	pax-hr/hr	38
Stops: Total	veh/hr	3297
Percentage	%	56
System Speed	mph	16.9
Fuel Consumption	gal/hr	93
Operating Cost	\$/hr	594
Performance Index	DI	50.0

Performance Index (PI): Disutility Index (DI):  
 Disutility Index            Excess Fuel Consumption

No. of Simulations = 98, Links = 814 Elapsed Time = 2.8 sec.

File: Dia08pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

-----  
TRANSYT-7F TRAFFIC SIGNAL TIMING TABLES  
-----

-----  
NETWORK-WIDE SIGNAL TIMING PARAMETERS  
-----

SYSTEM CYCLE LENGTH = 95 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

F : Fixed green.

V : Variable green.

Y : Yellow.

R : All-red.

An 'M' by an interval length means this is the minimum time available.

-----  
INTERSECTION CONTROLLER SETTINGS  
-----

-----  
INTERSECTION 2 ACTUATED - SPLITS OPTIMIZED  
-----

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 35 4 31 4 17 4

Intvl Length (%): 37 4 33 4 18 4

Pin Settings (%): 100/0 37 41 74 78 96

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y



Splits (sec): 39 35 21  
Splits (%): 41 37 22

LINKS MOVING : 206 202 212  
201 206 207  
209

Yield Point = 65 sec 68 %.

File: Dia08pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

-----  
INTERSECTION 5 ACTUATED - SPLITS OPTIMIZED  
-----

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 9M 4 54 4 20 4

Intvl Length (%): 9 4 58 4 21 4

Pin Settings (%): 100/0 9 13 71 75 96

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 13 58 24

Splits (%): 13 62 25

LINKS MOVING : 505 506 511  
511 510 503  
502  
-505

Yield Point = 0 sec 0 %.

TRANSYT-7F:

Page 9

File: Dia08pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

--- 92 --- NOTE - END OF JOB!

\*\*\*\*\*

Release 7.10 (TRANSYT-7F) 15 March 1993

TRAFFIC SIGNAL SYSTEM OPTIMIZATION

PROGRAM

Sponsored by: Developed by:

U.S. Department of Transportation University of Florida

Federal Highway Administration Transportation Research Center

Software Maintenance and User Support Furnished by:
Center for Microcomputers in Transportation (McTrans)
Transportation Research Center, University of Florida
512 Weil Hall, Gainesville, FL 32611-2083 USA
(904) 392-0378

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\*\*\*\*\*

Date of Run: 11/15/99 Start Time of Run: 12:52:38 Data File: DIA28AM.TIN

INPUT DATA REPORT FOR RUN 1

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

File: Dia28am.sy5, Date:Nov 15, 1999, Analyst:

1 95 130 5 3 1 0 0 -1 1 1 60 0 0 0 1

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE
LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO
ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

--- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC
CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION.
LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD
TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

--- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH
THE OPTIMIZED TIMING PLAN TO BE WRITTEN.



File: Dia28am.sy5, Date:Nov 15, 1999, Analyst:

FIELDS:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
28	510	704	1568	373	0	0	0	0	0	0	0	0	0	0	0	0
29	510	2	3	0	15	0	0	0	0	0	0	0	0	0	0	0

PLOT AND OPTION CARDS

52	1	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	-----	---	---	---	---	---	---	---	---	---	---	---	---	---

--- 72 --- NOTE - A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE  
 DEFAULT NORMAL OPTIMIZATION STEP SIZES.  
 IF CARD TYPE 4 WAS CODED, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE  
 LENGTH HAS BEEN SELECTED.

--- 70 --- NOTE - NO ERRORS DETECTED. TRANSYT-7F PERFORMS FINAL PROCESSING.  
 IF ANY ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

--- 74 --- NOTE - THERE ARE A TOTAL OF 2 NODES AND 12 LINKS,  
 INCLUDING BOTTLENECKS, IF ANY, IN THIS RUN.

--- 77 --- NOTE - THERE WERE A TOTAL OF 1 WARNING MESSAGES ISSUED  
 IN THE ABOVE REPORT.

File: Dia28am.sy5, Date:Nov 15, 1999, Analyst:

-----  
 CYCLE EVALUATION SUMMARY PERFORMANCE  
 -----

CYCLE LENGTH (sec)	STEP SIZE (steps)	AVERAGE DELAY (sec/veh)	PERCENT STOPS (%)	FUEL CONSUMPTION (gal/hr)	DISUTILITY INDEX	NUMBER SATURATED LINKS	PERFORMANCE INDEX
--------------------	-------------------	-------------------------	-------------------	---------------------------	------------------	------------------------	-------------------

95	32	128.94	67	333.0	272.3	3	272.2881
----	----	--------	----	-------	-------	---	----------

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

100	33	126.04	67	328.4	267.7	3	267.6729
-----	----	--------	----	-------	-------	---	----------

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

105	35	119.65	67	317.6	257.3	3	257.3333
-----	----	--------	----	-------	-------	---	----------

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

110	37	119.06	67	316.2	255.5	3	255.5166
-----	----	--------	----	-------	-------	---	----------

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS

TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

115 38 117.30 67 313.0 252.4 3 252.3571

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

120 40 113.88 68 308.0 247.4 3 247.3624



File: Dia28am.sy5, Date:Nov 15, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

125 42 112.26 67 304.4 243.7 3 243.6850

86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

130 43 111.73 67 304.0 243.3 3 243.3483

86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

BEST CYCLE LENGTH = 130 SEC. CYCLE SENSITIVITY = 4.2 %

80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS INDICATED BY CARD TYPE 52.

File: Dia28am.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 130 Seconds, 60 Steps

<PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL AVG. (v-hr)(sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST.CAP.	FUEL CONS. (gal)	
SB LEFT : 66	174.80	12.52	86.7	6.66	46.1	452.( 87)	17	142	14.57
RGHT :121*	143.20	80.75	682.4	75.95	641.8	426.(100)	24	71	63.86
EB THRU : 28	71.87	6.57	37.4	4.16	23.7	392.( 62)	15	72	8.16
RGHT :117*	85.74	107.32	512.4	104.45	498.7	754.(100)	49	24C	84.16
WB THRU : 34	92.32	2.59	10.4	.92	3.7	166.( 19)	7	44	6.88
LEFT :103*	100.57	41.01	151.4	39.19	144.7	938.( 96)	40	44	49.69
NODE 2:121*	668.50	250.77		231.34	198.2	3128.( 74)			227.31
NB LEFT : 73	251.82	17.00	86.1	8.56	43.3	615.( 86)	23	150	20.02
RGHT : 67	285.12	16.64	74.4	7.09	31.7	619.( 77)	23	150	20.34
EB THRU : 41	83.65	2.98	13.2	1.47	6.5	343.( 42)	13	44	10.31
LEFT : 77	35.17	1.78	18.8	1.14	12.1	147.( 43)	6	22	4.78
WB THRU : 29	154.84	10.17	31.6	4.97	15.5	583.( 50)	22	113	13.22
RGHT : 44	49.83	3.47	33.5	1.80	17.4	208.( 56)	8	28	4.51
NODE 5: 77	860.43	52.04		25.02	21.4	2515.( 60)			73.18

All MOEs are in units per hour.

File: Dia28am.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 130 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	1529
Total Travel Time	veh-hr/hr	303
Total Uniform Delay	veh-hr/hr	66
Total Random Delay	veh-hr/hr	191
Total Delay	veh-hr/hr	256
Average Delay	sec/veh	109.8
Passenger Delay	pax-hr/hr	308
Stops: Total	veh/hr	5643
Percentage	%	67
System Speed	mph	5.0
Fuel Consumption	gal/hr	300
Operating Cost	\$/hr	1495
Performance Index	DI	239.8

Performance Index (PI): Disutility Index (DI):  
 Disutility Index            Excess Fuel Consumption

No. of Simulations = 89, Links = 739 Elapsed Time = 2.9 sec.

File: Dia28am.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 130 Seconds, 60 Steps

-----  
TRANSYT-7F TRAFFIC SIGNAL TIMING TABLES  
-----

-----  
NETWORK-WIDE SIGNAL TIMING PARAMETERS  
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SYSTEM CYCLE LENGTH = 130 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

F : Fixed green.

V : Variable green.

Y : Yellow.

R : All-red.

An 'M' by an interval length means this is the minimum time available.

-----  
INTERSECTION CONTROLLER SETTINGS  
-----

-----  
INTERSECTION 2 ACTUATED - SPLITS OPTIMIZED  
-----

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 34 4 54 4 30 4

Intvl Length (%): 26 3 42 3 23 3

Pin Settings (%): 100/0 26 29 71 74 97

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits	(sec):	38	58	34
Splits	(%):	29	45	26

LINKS MOVING :	206	202	212
	201	206	207
		209	

Yield Point = 59 sec 45 %.

File: Dia28am.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 130 Seconds, 60 Steps

-----  
INTERSECTION 5 ACTUATED - SPLITS OPTIMIZED  
-----

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 11M 4 70 4 37 4

Intvl Length (%): 8 3 55 3 28 3

Pin Settings (%): 100/0 8 11 66 69 97

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 15 74 41

Splits (%): 11 58 31

LINKS MOVING : 505 506 511  
511 510 503  
502  
-505

Yield Point = 104 sec 80 %.

File: Dia28am.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 130 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

--- 92 --- NOTE - END OF JOB!

\*\*\*\*\*

\* Release 7.10 (TRANSYT-7F) 15 March 1993 \*

TRAFFIC SIGNAL SYSTEM OPTIMIZATION

PROGRAM

\* Sponsored by: Developed by: \*
\* U.S. Department of Transportation University of Florida \*
\* Federal Highway Administration Transportation Research Center \*

\* Software Maintenance and User Support Furnished by: \*
\* Center for Microcomputers in Transportation (McTrans) \*
\* Transportation Research Center, University of Florida \*
\* 512 Weil Hall, Gainesville, FL 32611-2083 USA \*
\* (904) 392-0378 \*

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\* All Rights Reserved. \*

\*\*\*\*\*

Date of Run: 11/15/99 Start Time of Run: 12:58:43 Data File: DIA28PM.TIN

INPUT DATA REPORT FOR RUN 1

FIELDS:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

File: Dia28pm.sy5, Date:Nov 15, 1999, Analyst:
1 95 130 5 3 1 0 0 -1 1 1 60 0 0 0 1

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE
LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO
ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

--- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC
CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION.
LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD
TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

--- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH
THE OPTIMIZED TIMING PLAN TO BE WRITTEN.





File: Dia28pm.sy5, Date:Nov 15, 1999, Analyst:

FIELDS:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
28	510	704	1568	520	0	0	0	0	0	0	0	0	0	0	0	0
29	510	2	3	0	15	0	0	0	0	0	0	0	0	0	0	0

PLOT AND OPTION CARDS

52	1	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	-----	---	---	---	---	---	---	---	---	---	---	---	---	---

--- 72 --- NOTE - A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE  
 DEFAULT NORMAL OPTIMIZATION STEP SIZES.  
 IF CARD TYPE 4 WAS CODED, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE  
 LENGTH HAS BEEN SELECTED.

--- 70 --- NOTE - NO ERRORS DETECTED. TRANSYT-7F PERFORMS FINAL PROCESSING.  
 IF ANY ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

--- 74 --- NOTE - THERE ARE A TOTAL OF 2 NODES AND 12 LINKS,  
 INCLUDING BOTTLENECKS, IF ANY, IN THIS RUN.

--- 77 --- NOTE - THERE WERE A TOTAL OF 1 WARNING MESSAGES ISSUED  
 IN THE ABOVE REPORT.

File: Dia28pm.sy5, Date:Nov 15, 1999, Analyst:

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 CYCLE EVALUATION SUMMARY PERFORMANCE  
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CYCLE LENGTH (sec)	STEP SIZE (steps)	AVERAGE DELAY (sec/veh)	PERCENT STOPS (%)	FUEL CONSUMPTION (gal/hr)	DISUTILITY INDEX	NUMBER SATURATED LINKS	PERFORMANCE INDEX
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95	32	45.18	66	183.5	123.4	3	123.3670
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--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

100	33	41.33	65	176.0	115.9	3	115.8803
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--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

105	35	40.80	66	175.6	115.5	3	115.4675
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--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

110	37	41.93	66	178.3	118.2	3	118.2071
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115	38	42.12	66	178.6	118.5	3	118.5230
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120	40	40.81	66	176.2	116.1	3	116.0944
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125	42	40.71	66	175.9	115.8	3	115.7687
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130	43	41.38	66	176.6	116.5	3	116.4999
-----	----	-------	----	-------	-------	---	----------

BEST CYCLE LENGTH = 105 SEC.    CYCLE SENSITIVITY = 2.2 %

80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST  
CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS  
INDICATED BY CARD TYPE 52.

File: Dia28pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 105 Seconds, 60 Steps

<PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST.CAP.	FUEL CONS. (gal)
SB LEFT : 49	125.39	7.89	76.1	3.68	35.5	310.( 83)	9	142	9.57
RGHT : 101*	114.63	17.69	186.8	13.85	146.2	330.( 97)	13	71	16.68
EB THRU : 25	69.48	5.19	30.6	2.86	16.9	348.( 57)	11	72	6.87
RGHT : 102*	80.85	26.97	136.6	24.26	122.8	688.( 97)	32>	24C	24.87
WB THRU : 40	107.69	2.81	9.7	.87	3.0	200.( 19)	7	44	8.00
LEFT : 100*	83.03	23.96	107.1	22.46	100.4	740.( 92)	24	44	33.13
NODE	2: 102*	581.07	84.52	67.98	63.0	2617.( 67)			99.11
NB LEFT : 80	267.05	17.00	81.2	8.04	38.4	662.( 88)	20	150	20.53
RGHT : 71	345.33	17.81	65.7	6.23	23.0	722.( 74)	22	150	22.76
EB THRU : 33	57.45	2.31	14.9	1.27	8.2	272.( 49)	8	44	7.96
LEFT : 78	43.94	2.23	18.8	1.43	12.1	181.( 42)	5	22	5.91
WB THRU : 31	146.42	9.93	32.6	5.02	16.5	632.( 58)	19	113	13.18
RGHT : 70	69.47	5.74	39.8	3.41	23.6	381.( 73)	12	28	7.45
NODE	5: 80	929.66	55.01	25.41	21.1	2849.( 66)			77.79

All MOEs are in units per hour.

File: Dia28pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 105 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

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PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	1511
Total Travel Time	veh-hr/hr	140
Total Uniform Delay	veh-hr/hr	47
Total Random Delay	veh-hr/hr	47
Total Delay	veh-hr/hr	93
Average Delay	sec/veh	40.9
Passenger Delay	pax-hr/hr	112
Stops: Total	veh/hr	5466
Percentage	%	67
System Speed	mph	10.8
Fuel Consumption	gal/hr	177
Operating Cost	\$/hr	1047
Performance Index	DI	116.8

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Performance Index (PI): Disutility Index (DI):  
Disutility Index            Excess Fuel Consumption

No. of Simulations = 94, Links = 782 Elapsed Time = 2.9 sec.

File: Dia28pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 105 Seconds, 60 Steps

-----  
TRANSYT-7F TRAFFIC SIGNAL TIMING TABLES  
-----

-----  
NETWORK-WIDE SIGNAL TIMING PARAMETERS  
-----

SYSTEM CYCLE LENGTH = 105 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

F : Fixed green.

V : Variable green.

Y : Yellow.

R : All-red.

An 'M' by an interval length means this is the minimum time available.

-----  
INTERSECTION CONTROLLER SETTINGS  
-----

-----  
INTERSECTION 2 ACTUATED - SPLITS OPTIMIZED  
-----

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 23 4 47 4 23 4

Intvl Length (%) : 22 4 44 4 22 4

Pin Settings (%) : 100/0 22 26 70 74 96

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 27 51 27  
Splits (%): 26 48 26

LINKS MOVING : 206 202 212  
201 206 207  
209

Yield Point = 76 sec 72 %.



File: Dia28pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 105 Seconds, 60 Steps

-----  
INTERSECTION 5 ACTUATED - SPLITS OPTIMIZED  
-----

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT  
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING  
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS  
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 15 4 49 4 29 4

Intvl Length (%): 14 4 46 4 28 4

Pin Settings (%): 100/0 14 18 64 68 96

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 19 53 33

Splits (%): 18 50 32

LINKS MOVING : 505 506 511  
511 510 503  
502  
-505

Yield Point = 0 sec 0 %.

File: Dia28pm.sy5, Date:Nov 15, 1999, Analyst:

CYCLE: 105 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

--- 92 --- NOTE - END OF JOB!