

Appendix I: Stage 1 ICE Documentation

Each intersection includes 4 sheets:

- Stage 1 screening summary
- CAP-X for 2045 AM peak
- CAP-X for 2045 PM peak
- Summary of SSI safety score components

Intersection	Pages
KY 78/KY 1194—Green, Red, or Blue Bypass	2-5
KY 78/Yellow Bypass	6-9
US 27/KY 1247 (Somerset Street)—Green or Yellow Bypass	10-13
US 27/Red Bypass	14-19
US 27/Blue Bypass	20-23

KYTC Intersection Control Evaluation Forms

Stage 1: Screening

Complete the following form and append all supporting documentation. Submit completed forms to the Location Engineer for the project's district.

Project Information									
District	8	County	Lincoln	Item No.	8-80203	No. of Intersection Legs	4		
	Prefix and Number	Functional Classification	Current AADT	No. of Lanes	Existing Multimodal Facilities				
Mainline Route	KY 78	Collector	4400	2	N/A				
Secondary Route	KY 1194 Bypass	Collector	1100	2	N/A				
Project Purpose and Need	Improving mobility and safety along the KY 1194 corridor								
Existing Intersection Control	Two-Way Stop-Controlled								
Context and Equity									
Context Classification	Rural Town	Likely Travel Needs			Freight on US 27 & US 127, local traffic				
Land Use Northwest Quadrant	undeveloped			Land Use Northeast Quadrant	residential				
Land Use Southwest Quadrant	residential			Land Use Southeast Quadrant	residential				
Intersection Control Alternative Screening									
Intersection or Interchange Alternative	a.) CAP-X V/c ratio *	b.) CAP-X Pedestrian Accommodation Score	c.) CAP-X Bicycle Accommodation Score	d.) SSI Score **	e.) Impractical to implement (considering cost, potential r/w and environmental impacts)?	f.) Meets the transportation purpose and need?	g.) Addresses the key system performance criteria (safety, all roadway users, operations, etc.)?	h.) Alternative is selected to advance to Stage 2 for further evaluation.	Justification:
Signalized Control	0.16	4.94	4.7	99	No	Yes	Yes	Yes	
Two-Way Stop-Controlled	0.13	2.75	3.95	98	No	Yes	Yes	Yes	
All-Way Stop-Controlled	0.35	3.62	4.7	100	No	Yes	Yes	Not Sure	
Roundabout (1-lane)	0.24	5.66	4.75	100	No	Yes	Yes	Not Sure	
*Attachments: CAP-X and SSI Files, last 5 years crash data for the existing intersection (if applicable)									
**If evaluating interchanges and using the Interchange Configuration Safety Tool, note the Expected KABC crash frequency.									
Comments:									
Prepared By:	Steven Trevino (Qk4)				Reviewed By:				

Capacity Analysis for Planning of Junctions

Detailed Results Worksheet

Project Name:	Stanford Bypass	<i>Estimated Volume-to-Capacity Ratio</i>			
Project Number:	KY 1194 (Long Bypass)	Number of Configurations			
Location	Stanford, Kentucky	< 0.750	0.750 - 0.875	0.875 - 1.00	≥ 1.00
Date	2045 AM	8	0	0	0

Results for Non-roundabout Intersections															
TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Traffic Signal	FULL	/	/	/	/	/	/	/	/	269	<u>0.16</u>	0.16	4.94	4.37	
Two-Way Stop Control	E-W	/	/	/	/	/	/	/	/	--	<u>0.13</u>	0.13	2.75	3.62	
All-Way Stop Control	FULL	/	/	/	/	/	/	/	/	622	<u>0.35</u>	0.35	3.62	4.37	
Unsignalized Restricted Crossing U-Turn	E-W	122	<u>0.12</u>	184	<u>0.09</u>	91	<u>0.06</u>	287	<u>0.09</u>	/	/	0.12	2.85	3.31	
Median U-Turn	E-W	/	/	/	/	169	<u>0.09</u>	351	<u>0.19</u>	264	<u>0.15</u>	0.19	4.67	4.37	
Partial Median U-Turn	E-W	/	/	/	/	92	<u>0.05</u>	300	<u>0.17</u>	259	<u>0.15</u>	0.17	4.59	4.37	

Results for Grade Separated Intersections																	
TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Zone 6 (Raised)		Overall v/c Ratio	Ped	Bike	Transit Accommo
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				

Capacity Analysis for Planning of Junctions

Detailed Results Worksheet

Results for Roundabouts																
TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3				
50 ICD	<u>0.13</u>	/	/	<u>0.32</u>	/	/	<u>0.10</u>	/	/	<u>0.10</u>	/	/	0.32	5.66	4.58	
75 ICD	<u>0.13</u>	/	/	<u>0.33</u>	/	/	<u>0.10</u>	/	/	<u>0.10</u>	/	/	0.33	5.66	4.58	
1 X 1	<u>0.09</u>	/	/	<u>0.24</u>	/	/	<u>0.07</u>	/	/	<u>0.07</u>	/	/	0.24	5.66	4.58	

Results for Interchanges																	
TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C														

Capacity Analysis for Planning of Junctions

Detailed Results Worksheet

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Date	2045 PM	8	0	0	0

Results for Non-roundabout Intersections															
TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Traffic Signal	FULL	/	/	/	/	/	/	/	/	252	0.15	0.15	4.94	4.42	
Two-Way Stop Control	E-W	/	/	/	/	/	/	/	/	--	0.17	0.17	2.75	3.67	
All-Way Stop Control	FULL	/	/	/	/	/	/	/	/	623	0.35	0.35	3.62	4.42	
Unsignalized Restricted Crossing U-Turn	E-W	214	0.07	91	0.17	143	0.13	154	0.04	/	/	0.17	2.85	3.31	
Median U-Turn	E-W	/	/	/	/	284	0.16	192	0.11	256	0.14	0.16	4.67	4.42	
Partial Median U-Turn	E-W	/	/	/	/	144	0.08	167	0.09	261	0.15	0.15	4.59	4.42	

Results for Grade Separated Intersections																	
TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Zone 6 (Raised)		Overall v/c Ratio	Ped	Bike	Transit Accommo
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				

Capacity Analysis for Planning of Junctions

Detailed Results Worksheet

Results for Roundabouts																
TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3				
50 ICD	0.08	/	/	0.17	/	/	0.18	/	/	0.17	/	/	0.18	5.70	4.67	
75 ICD	0.08	/	/	0.17	/	/	0.17	/	/	0.16	/	/	0.17	5.70	4.67	
1 X 1	0.06	/	/	0.12	/	/	0.13	/	/	0.12	/	/	0.13	5.70	4.67	

Results for Interchanges																	
TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C														

Results Summary

Existing alternative (drop down): Trad_MinorStop

Alt	Exposure (Relative to Existing)			Average P (FSI)			Average Complexity			SSI Score	SSI Conflict Type Score		
	Crossing	Merging	Diverging	Crossing	Merging	Diverging	Crossing	Merging	Diverging	Score	Crossing	Merging	Diverging
RAB1x1	1.59	1.51	1.38	0.00	0.00	0.00	0.27	0.27	1.00	100	100	100	100
RAB2x1	1.59	1.51	1.38	0.00	0.00	0.00	0.40	0.37	1.00	100	100	100	100
Trad_AllStop	1.00	1.00	1.00	0.01	0.00	0.00	1.67	0.64	1.00	100	99	100	100
MUT	0.64	6.11	2.23	0.08	0.02	0.01	0.44	0.44	1.00	99	99	99	99
RAB2x2	1.59	1.51	1.38	0.00	0.00	0.00	0.54	0.47	1.00	100	100	100	100
RCUT_Sig	0.30	3.32	2.22	0.16	0.02	0.02	0.44	0.44	1.00	100	99	100	100
Bowtie	1.14	5.06	3.18	0.08	0.01	0.01	0.89	0.74	1.00	99	98	100	100
QR	1.86	2.65	2.42	0.08	0.02	0.01	0.89	0.53	1.00	98	95	100	100
Jughandle	1.82	1.77	1.20	0.07	0.02	0.01	1.09	0.78	1.00	98	96	100	100
Trad_Sig	1.00	1.00	1.00	0.06	0.01	0.01	1.16	0.44	1.00	99	96	100	100
RCUT_Unsig	0.30	3.32	2.22	0.13	0.02	0.02	0.64	0.64	1.00	99	99	100	100
Trad_MinorStop	1.00	1.00	1.00	0.06	0.01	0.01	1.76	0.64	1.00	98	93	100	100
FDLT	0.97	1.00	1.00	0.08	0.02	0.01	0.74	0.88	1.00	99	99	100	100
PDLT	1.00	1.00	1.00	0.07	0.01	0.01	0.95	0.66	1.00	99	98	100	100

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Stage 1: Screening

Complete the following form and append all supporting documentation. Submit completed forms to the Location Engineer for the project's district.

Project Information									
District	8	County	Lincoln	Item No.	8-80203	No. of Intersection Legs	3		
	Prefix and Number	Functional Classification	Current AADT	No. of Lanes	Existing Multimodal Facilities				
Mainline Route	KY 78	Collector	4400	2	N/A				
Secondary Route	Short Bypass	Collector	N/A	2	N/A				
Project Purpose and Need	Improving mobility and safety along the KY 1194 corridor								
Existing Intersection Control	Not Applicable								
Context and Equity									
Context Classification	Rural Town	Likely Travel Needs			Freight on US 27 & US 127, local traffic				
Land Use Northwest Quadrant	residential			Land Use Northeast Quadrant	undeveloped				
Land Use Southwest Quadrant	agriculture			Land Use Southeast Quadrant	undeveloped				
Intersection Control Alternative Screening									
Intersection or Interchange Alternative	a.) CAP-X V/c ratio *	b.) CAP-X Pedestrian Accommodation Score	c.) CAP-X Bicycle Accommodation Score	d.) SSI Score **	e.) Impractical to implement (considering cost, potential r/w and environmental impacts)?	f.) Meets the transportation purpose and need?	g.) Addresses the key system performance criteria (safety, all roadway users, operations, etc.)?	h.) Alternative is selected to advance to Stage 2 for further evaluation.	Justification:
Signalized Control	0.16	4.94	4.5	98	No	Yes	Yes	Yes	
Two-Way Stop-Controlled	0.11	2.68	3.75	97	No	Yes	Yes	Yes	
All-Way Stop-Controlled	0.33	3.62	4.5	100	No	Yes	Yes	Not Sure	
Continuous Green Tee	0.15	2.8	4.05	98	No	Yes	Yes	Not Sure	
Roundabout (1-lane)	0.28	5.66	4.67	100	No	Yes	Yes	Not Sure	
*Attachments: CAP-X and SSI Files, last 5 years crash data for the existing intersection (if applicable)									
**If evaluating interchanges and using the Interchange Configuration Safety Tool, note the Expected KABC crash frequency.									
Comments:									
Prepared By:	Steven Trevino (Qk4)			Reviewed By:					

Capacity Analysis for Planning of Junctions

Detailed Results Worksheet

Project Name:	Stanford Bypass	<u>Estimated Volume-to-Capacity Ratio</u>			
Project Number:	KY 78 & Bypass	Number of Configurations			
Location	Stanford Kentucky	< 0.750	0.750 - 0.875	0.875 - 1.00	≥ 1.00
Date	2045 AM	7	0	0	0

Results for Non-roundabout Intersections															
TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Traffic Signal	FULL	/	/	/	/	/	/	/	/	269	<u>0.16</u>	0.16	4.94	4.50	
Two-Way Stop Control	E-W	/	/	/	/	/	/	/	/	--	<u>0.11</u>	0.11	2.68	3.75	
All-Way Stop Control	FULL	/	/	/	/	/	/	/	/	587	<u>0.33</u>	0.33	3.62	4.50	
Continuous Green T	S	/	/	/	/	/	/	/	/	268	<u>0.15</u>	0.15	2.80	4.05	
Unsignalized Restricted Crossing U-Turn	E-W	143	<u>0.00</u>	205	<u>0.07</u>	103	<u>0.04</u>	378	<u>0.00</u>	/	/	0.07	2.85	3.43	

Results for Grade Separated Intersections																	
TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Zone 6 (Raised)		Overall v/c Ratio	Ped	Bike	Transit Accommo
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				

Capacity Analysis for Planning of Junctions

Detailed Results Worksheet

Results for Roundabouts																
TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3				
50 ICD	<u>0.00</u>	/	/	<u>0.39</u>	/	/	<u>0.08</u>	/	/	<u>0.11</u>	/	/	0.39	5.66	4.67	
75 ICD	<u>0.00</u>	/	/	<u>0.39</u>	/	/	<u>0.07</u>	/	/	<u>0.11</u>	/	/	0.39	5.66	4.67	
1 X 1	<u>0.00</u>	/	/	<u>0.28</u>	/	/	<u>0.06</u>	/	/	<u>0.08</u>	/	/	0.28	5.66	4.67	

Results for Interchanges																	
TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C														

Capacity Analysis for Planning of Junctions

Detailed Results Worksheet

Project Name:	Stanford Bypass	<u>Estimated Volume-to-Capacity Ratio</u>			
Project Number:	KY 78 & Bypass	Number of Configurations			
Location	Stanford Kentucky	< 0.750	0.750 - 0.875	0.875 - 1.00	≥ 1.00
Date	2045 PM	7	0	0	0

Results for Non-roundabout Intersections															
TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Traffic Signal	FULL	/	/	/	/	/	/	/	/	292	<u>0.17</u>	0.17	4.94	4.50	
Two-Way Stop Control	E-W	/	/	/	/	/	/	/	/	--	<u>0.14</u>	0.14	2.73	3.75	
All-Way Stop Control	FULL	/	/	/	/	/	/	/	/	588	<u>0.33</u>	0.33	3.62	4.50	
Continuous Green T	S	/	/	/	/	/	/	/	/	199	<u>0.11</u>	0.11	2.76	4.05	
Unsignalized Restricted Crossing U-Turn	E-W	286	<u>0.00</u>	103	<u>0.10</u>	215	<u>0.07</u>	205	<u>0.00</u>	/	/	0.10	2.83	3.43	

Results for Grade Separated Intersections																	
TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Zone 6 (Raised)		Overall v/c Ratio	Ped	Bike	Transit Accommo
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				

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Results for Roundabouts																
TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3				
50 ICD	<u>0.00</u>	/	/	<u>0.21</u>	/	/	<u>0.10</u>	/	/	<u>0.24</u>	/	/	0.24	5.66	4.67	
75 ICD	<u>0.00</u>	/	/	<u>0.22</u>	/	/	<u>0.10</u>	/	/	<u>0.23</u>	/	/	0.23	5.66	4.67	
1 X 1	<u>0.00</u>	/	/	<u>0.15</u>	/	/	<u>0.08</u>	/	/	<u>0.17</u>	/	/	0.17	5.66	4.67	

Results for Interchanges																	
TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C														

#

Results Summary

Existing alternative (drop down): Trad_MinorStop

Alt	Exposure (Relative to Existing)			Average P (FSI)			Average Complexity			SSI Score	SSI Conflict Type Score		
	Crossing	Merging	Diverging	Crossing	Merging	Diverging	Crossing	Merging	Diverging	Score	Crossing	Merging	Diverging
RAB1x1	0.98	1.03	1.20	0.00	0.00	0.00	0.27	0.27	1.00	100	100	100	100
RAB2x1	0.98	1.03	1.20	0.00	0.00	0.00	0.40	0.37	1.00	100	100	100	100
Trad_AllStop	1.00	1.00	1.00	0.01	0.00	0.00	1.25	0.64	1.00	100	99	100	100
MUT	0.86	1.64	2.67	0.08	0.02	0.01	0.44	0.44	1.00	99	98	99	99
RAB2x2	0.98	1.03	1.20	0.00	0.00	0.00	0.54	0.47	1.00	100	100	100	100
RCUT_Sig	0.00	2.08	3.54	0.16	0.02	0.02	0.44	0.44	1.00	99	100	99	99
Bowtie	1.16	1.14	1.21	0.08	0.01	0.01	0.89	0.74	1.00	98	96	100	100
QR	1.30	1.16	1.39	0.08	0.02	0.01	0.74	0.49	1.00	98	95	100	100
Jughandle	1.00	1.08	1.00	0.07	0.02	0.01	0.84	0.60	1.00	98	95	100	100
Trad_Sig	1.00	1.00	1.00	0.06	0.01	0.01	0.87	0.44	1.00	98	96	100	100
RCUT_Unsig	0.00	2.08	3.54	0.13	0.02	0.02	0.64	0.64	1.00	99	100	99	99
Trad_MinorStop	1.00	1.00	1.00	0.06	0.01	0.01	1.31	0.64	1.00	97	93	100	100
FDLT	0.98	1.00	1.00	0.08	0.02	0.01	0.66	0.77	1.00	99	97	99	100
PDLT	1.00	1.00	1.00	0.07	0.01	0.01	0.76	0.66	1.00	99	97	99	100

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	Prefix and Number	Functional Classification	Current AADT	No. of Lanes	Existing Multimodal Facilities		
Mainline Route	US 27	Arterial	11000	4	N/A		
Secondary Route	Somerset St (Short Bypass)	Collector	3000	2	N/A		
Project Purpose and Need	Improving mobility and safety along the KY 1194 corridor						
Existing Intersection Control	Two-Way Stop-Controlled						

Context and Equity			
Context Classification	Rural Town	Likely Travel Needs	Freight on US 27 & US 127, local traffic
Land Use Northwest Quadrant	warehousing	Land Use Northeast Quadrant	undeveloped
Land Use Southwest Quadrant	agriculture	Land Use Southeast Quadrant	undeveloped

Intersection Control Alternative Screening										
Intersection or Interchange Alternative	a.) CAP-X V/c ratio *	b.) CAP-X Pedestrian Accommodation Score	c.) CAP-X Bicycle Accommodation Score	d.) SSI Score **	e.) Impractical to implement (considering cost, potential r/w and environmental impacts)?	f.) Meets the transportation purpose and need?	g.) Addresses the key system performance criteria (safety, all roadway users, operations, etc.)?	h.) Alternative is selected to advance to Stage 2 for further evaluation.	Justification:	
Two-Way Stop-Controlled	0.4	2.59	3.58	91	No	Yes	Yes	Yes		
Signalized Control	0.35	4.72	4.25	95	No	Yes	Yes	Yes		
RCUT (Unsignalized)	0.63	2.66	2.87	98	No	Yes	Yes	Not Sure		
Continuous Green Tee	0.28	2.47	3.77	95	No	Yes	Yes	Not Sure		

*Attachments: CAP-X and SSI Files, last 5 years crash data for the existing intersection (if applicable)

**If evaluating interchanges and using the Interchange Configuration Safety Tool, note the Expected KABC crash frequency.

Comments:											
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Project Name:	Stanford Bypass	<u>Estimated Volume-to-Capacity Ratio</u>			
Project Number:	Short Bypass	Number of Configurations			
Location	Stanford Kentucky	< 0.750	0.750 - 0.875	0.875 - 1.00	≥ 1.00
Date	2045 AM	3	0	0	1

Results for Non-roundabout Intersections

TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations	
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C					
Traffic Signal	FULL											618	0.35	0.35	4.72	4.25
Two-Way Stop Control	N-S											--	0.40	0.40	2.59	3.58
Continuous Green T	W											485	0.28	0.28	2.47	3.77
Unsignalized Restricted Crossing U-Turn	N-S	572	0.00	1123	0.02	950	0.00	561	0.63			0.63	0.63	2.66	2.87	

Results for Grade Separated Intersections

TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Zone 6 (Raised)		Overall v/c Ratio	Ped	Bike	Transit Accommo
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				

Capacity Analysis for Planning of Junctions

Detailed Results Worksheet

Results for Roundabouts

TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3				

Results for Interchanges

TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C														

Capacity Analysis for Planning of Junctions

Detailed Results Worksheet

Project Name:	Stanford Bypass	<u>Estimated Volume-to-Capacity Ratio</u>			
Project Number:	Short Bypass	Number of Configurations			
Location	Stanford Kentucky	< 0.750	0.750 - 0.875	0.875 - 1.00	≥ 1.00
Date	2045 PM	2	1	0	1

Results for Non-roundabout Intersections																
TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations	
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C					
Traffic Signal	FULL											693	0.40	4.72	4.25	
Two-Way Stop Control	N-S											--	0.39	2.65	3.58	
Continuous Green T	W											654	0.37	2.49	3.77	
Unsignalized Restricted Crossing U-Turn	N-S	868	0.00	899	0.02	706	0.00	857	0.78			0.78	2.66	2.87		

Results for Grade Separated Intersections																	
TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Zone 6 (Raised)		Overall v/c Ratio	Ped	Bike	Transit Accommo
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				

Capacity Analysis for Planning of Junctions

Detailed Results Worksheet

Results for Roundabouts																
TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3				

Results for Interchanges																	
TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C														

Results Summary

Existing alternative (drop down): Trad_MinorStop

Alt	Exposure (Relative to Existing)			Average P (FSI)			Average Complexity			SSI Score	SSI Conflict Type Score		
	Crossing	Merging	Diverging	Crossing	Merging	Diverging	Crossing	Merging	Diverging	Score	Crossing	Merging	Diverging
RAB1x1	0.99	1.01	1.03	0.00	0.00	0.00	0.27	0.27	1.00	100	100	100	100
RAB2x1	0.99	1.01	1.03	0.00	0.00	0.00	0.40	0.37	1.00	100	100	100	100
Trad_AllStop	1.00	1.00	1.00	0.01	0.00	0.00	2.78	0.87	1.00	99	98	100	100
MUT	0.00	1.53	1.37	0.08	0.02	0.01	0.89	0.66	1.00	98	100	96	99
RAB2x2	0.99	1.01	1.03	0.00	0.00	0.00	0.54	0.47	1.00	100	100	100	100
RCUT_Sig	0.00	1.03	1.07	0.16	0.02	0.02	0.89	0.66	1.00	99	100	97	99
Bowtie	1.82	1.12	1.33	0.08	0.01	0.01	1.77	1.14	1.00	95	88	97	99
QR	1.07	1.12	1.40	0.08	0.02	0.01	1.44	0.74	1.00	96	91	97	99
Jughandle	1.00	1.01	1.00	0.07	0.02	0.01	1.82	1.11	1.00	95	89	97	99
Trad_Sig	1.00	1.00	1.00	0.06	0.01	0.01	1.94	0.61	1.00	95	88	97	99
RCUT_Unsig	0.00	1.03	1.07	0.13	0.02	0.02	1.27	0.95	1.00	98	100	96	99
Trad_MinorStop	1.00	1.00	1.00	0.06	0.01	0.01	2.90	0.87	1.00	91	79	96	99
FDLT	0.99	1.00	1.00	0.08	0.02	0.01	1.24	1.24	1.00	96	95	95	99
PDLT	1.00	1.00	1.00	0.07	0.01	0.01	1.66	0.91	1.00	96	94	95	99

KYTC Intersection Control Evaluation Forms

Stage 1: Screening

Complete the following form and append all supporting documentation. Submit completed forms to the Location Engineer for the project's district.

Project Information									
District	8	County	Lincoln	Item No.	8-80203	No. of Intersection Legs	3		
	Prefix and Number	Functional Classification	Current AADT	No. of Lanes	Existing Multimodal Facilities				
Mainline Route	US 27	Arterial	11000	4	N/A				
Secondary Route	KY 1194 (Red Bypass)	Collector	N/A	2	N/A				
Project Purpose and Need	Improving mobility and safety along the KY 1194 corridor								
Existing Intersection Control	Two-Way Stop-Controlled								
Context and Equity									
Context Classification	Rural Town	Likely Travel Needs			Freight on US 27 & US 127, local traffic				
Land Use Northwest Quadrant	undeveloped			Land Use Northeast Quadrant	school				
Land Use Southwest Quadrant	undeveloped			Land Use Southeast Quadrant	school				
Intersection Control Alternative Screening									
Intersection or Interchange Alternative	a.) CAP-X V/c ratio *	b.) CAP-X Pedestrian Accommodation Score	c.) CAP-X Bicycle Accommodation Score	d.) SSI Score **	e.) Impractical to implement (considering cost, potential r/w and environmental impacts)?	f.) Meets the transportation purpose and need?	g.) Addresses the key system performance criteria (safety, all roadway users, operations, etc.)?	h.) Alternative is selected to advance to Stage 2 for further evaluation.	Justification:
Signalized Control	0.59	4.79	4.58	79	No	Yes	Yes	Yes	
RCUT (Signalized)	0.46	2.97	4.23	86	No	Yes	Yes	Yes	
RCUT (Unsignalized)	0.81	2.67	3.16	84	No	Yes	Yes	Not Sure	
Roundabout (2-lane)	0.67	4.71	4.41	100	No	Yes	Yes	Yes	
Two-Way Stop-Controlled	>10	2.55	3.83	66	No	No	No	No	
*Attachments: CAP-X and SSI Files, last 5 years crash data for the existing intersection (if applicable)									
**If evaluating interchanges and using the Interchange Configuration Safety Tool, note the Expected KABC crash frequency.									
Comments:									
Prepared By:	Steven Trevino (Qk4)			Reviewed By:					

Capacity Analysis for Planning of Junctions

Detailed Results Worksheet

Project Name:	Stanford Bypass	<i>Estimated Volume-to-Capacity Ratio</i>			
Project Number:	Long Bypass (Red)	Number of Configurations			
Location	Stanford, Kentucky	< 0.750	0.750 - 0.875	0.875 - 1.00	≥ 1.00
Date	2045 AM	15	1	0	4

Results for Non-roundabout Intersections															
TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Traffic Signal	FULL	/	/	/	/	/	/	/	/	1006	<u>0.59</u>	0.59	4.79	4.58	
Two-Way Stop Control	N-S	/	/	/	/	/	/	/	/	--	>10	>10	2.55	3.83	
All-Way Stop Control	FULL	/	/	/	/	/	/	/	/	2111	1.17	1.17	3.50	4.58	
Quadrant Roadway	S-W	/	/	755	<u>0.43</u>	/	/	547	<u>0.31</u>	643	<u>0.36</u>	0.43	4.38	4.49	
	N-E	878	<u>0.50</u>	/	/	493	<u>0.28</u>	/	/	671	<u>0.37</u>	0.50	4.36	4.49	
	S-E	/	/	878	<u>0.50</u>	681	<u>0.39</u>	/	/	641	<u>0.36</u>	0.50	4.38	4.49	
	N-W	511	<u>0.29</u>	/	/	/	/	467	<u>0.27</u>	671	<u>0.37</u>	0.37	4.34	4.49	
Partial Displaced Left Turn	N-S	819	<u>0.46</u>	370	<u>0.21</u>	/	/	/	/	641	<u>0.37</u>	0.46	2.86	3.40	
Displaced Left Turn	FULL	819	<u>0.46</u>	370	<u>0.21</u>	640	<u>0.36</u>	134	<u>0.07</u>	577	<u>0.32</u>	0.46	3.01	3.91	
Signalized Restricted Crossing U-Turn	N-S	479	<u>0.27</u>	650	<u>0.36</u>	819	<u>0.46</u>	430	<u>0.24</u>	/	/	0.46	2.97	4.23	
Unsignalized Restricted Crossing U-Turn	N-S	653	<u>0.16</u>	1173	<u>0.11</u>	908	<u>0.81</u>	357	<u>0.33</u>	/	/	0.81	2.67	3.16	
	Median U-Turn	N-S	479	<u>0.27</u>	1033	<u>0.57</u>	/	/	/	/	864	<u>0.48</u>	0.57	4.48	4.58
Partial Median U-Turn	N-S	403	<u>0.22</u>	1020	<u>0.57</u>	/	/	/	/	852	<u>0.49</u>	0.57	4.31	4.58	
Bowtie	N-S	408	<u>0.29</u>	469	<u>0.35</u>	133	<u>0.10</u>	214	<u>0.24</u>	1296	<u>0.72</u>	0.72	4.41	4.66	
Split Intersection	N-S	/	/	/	/	1286	<u>0.73</u>	621	<u>0.35</u>	/	/	0.73	4.85	4.49	

Results for Grade Separated Intersections																	
TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Zone 6 (Raised)		Overall v/c Ratio	Ped	Bike	Transit Accommo
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Echelon	N-S	/	/	/	/	/	/	/	/	493	<u>0.27</u>	513	<u>0.29</u>	0.29	3.94	4.41	
Center Turn Overpass	FULL	/	/	/	/	/	/	/	/	641	<u>0.36</u>	429	<u>0.24</u>	0.36	4.87	4.58	

Capacity Analysis for Planning of Junctions

Detailed Results Worksheet

Results for Roundabouts																
TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3				
50 ICD	0.80	/	/	<u>0.73</u>	/	/	1.90	/	/	9.65	/	/	9.65	5.31	4.62	
75 ICD	0.78	/	/	<u>0.63</u>	/	/	1.79	/	/	1.95	/	/	1.95	5.31	4.62	

1 X 1	<u>0.58</u>			<u>0.32</u>			<u>1.30</u>			<u>0.45</u>			1.30	5.31	4.62	
2NS X 1EW	<u>0.32</u>	<u>0.28</u>		<u>0.30</u>			<u>0.61</u>	<u>0.69</u>		<u>0.40</u>			0.69	4.93	4.54	
2 X 2	<u>0.33</u>	<u>0.28</u>		<u>0.21</u>	<u>0.21</u>		<u>0.65</u>	<u>0.67</u>		<u>0.08</u>	<u>0.23</u>		0.67	4.71	4.41	
3 X 3	<u>0.33</u>	<u>0.07</u>	<u>0.21</u>	<u>0.14</u>	<u>0.10</u>	<u>0.18</u>	<u>0.44</u>	<u>0.44</u>	<u>0.46</u>	<u>0.11</u>	<u>-0.03</u>	<u>0.23</u>	0.46	4.11	4.04	

Results for Interchanges																	
TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C														

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Capacity Analysis for Planning of Junctions

Detailed Results Worksheet

Project Name:	Stanford Bypass	<i>Estimated Volume-to-Capacity Ratio</i>			
Project Number:	Long Bypass (Red)	Number of Configurations			
Location	Stanford, Kentucky	< 0.750	0.750 - 0.875	0.875 - 1.00	≥ 1.00
Date	2045 PM	16	0	2	2

Results for Non-roundabout Intersections															
TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Traffic Signal	FULL	/	/	/	/	/	/	/	/	781	<u>0.46</u>	0.46	4.79	4.58	
Two-Way Stop Control	N-S	/	/	/	/	/	/	/	/	--	>10	>10	2.55	3.83	
All-Way Stop Control	FULL	/	/	/	/	/	/	/	/	2224	1.24	1.24	3.50	4.58	
Quadrant Roadway	S-W	/	/	682	<u>0.39</u>	/	/	242	<u>0.14</u>	725	<u>0.40</u>	0.40	4.38	4.54	
	N-E	647	<u>0.37</u>	/	/	441	<u>0.25</u>	/	/	574	<u>0.32</u>	0.37	4.38	4.54	
	S-E	/	/	602	<u>0.34</u>	278	<u>0.16</u>	/	/	725	<u>0.40</u>	0.40	4.36	4.49	
	N-W	605	<u>0.35</u>	/	/	/	/	345	<u>0.20</u>	740	<u>0.41</u>	0.41	4.38	4.49	
Partial Displaced Left Turn	N-S	490	<u>0.27</u>	640	<u>0.36</u>	/	/	/	/	641	<u>0.37</u>	0.37	2.86	3.40	
Displaced Left Turn	FULL	490	<u>0.27</u>	640	<u>0.36</u>	168	<u>0.09</u>	216	<u>0.12</u>	630	<u>0.35</u>	0.36	3.01	3.91	
Signalized Restricted Crossing U-Turn	N-S	693	<u>0.39</u>	347	<u>0.19</u>	682	<u>0.38</u>	644	<u>0.36</u>	/	/	0.39	3.00	4.23	
Unsignalized Restricted Crossing U-Turn	N-S	979	<u>0.28</u>	643	<u>0.03</u>	500	<u>0.71</u>	1000	<u>0.51</u>	/	/	0.71	2.66	3.16	
	Median U-Turn	N-S	771	<u>0.43</u>	410	<u>0.23</u>	/	/	/	/	833	<u>0.46</u>	0.46	4.51	4.58
Partial Median U-Turn	N-S	656	<u>0.36</u>	398	<u>0.22</u>	/	/	/	/	735	<u>0.42</u>	0.42	4.37	4.58	
Bowtie	N-S	179	<u>0.13</u>	255	<u>0.19</u>	240	<u>0.19</u>	122	<u>0.10</u>	1204	<u>0.67</u>	0.67	4.41	4.66	
Split Intersection	N-S	/	/	/	/	741	<u>0.42</u>	1125	<u>0.64</u>	/	/	0.64	4.91	4.49	

Results for Grade Separated Intersections																	
TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Zone 6 (Raised)		Overall v/c Ratio	Ped	Bike	Transit Accommo
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Echelon	N-S	/	/	/	/	/	/	/	/	465	<u>0.26</u>	421	<u>0.23</u>	0.26	3.99	4.41	
Center Turn Overpass	FULL	/	/	/	/	/	/	/	/	694	<u>0.39</u>	237	<u>0.13</u>	0.39	4.87	4.62	

Capacity Analysis for Planning of Junctions

Detailed Results Worksheet

Results for Roundabouts																
TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3				
50 ICD	1.39	/	/	131.02	/	/	<u>0.69</u>	/	/	1.02	/	/	131.02	5.36	4.67	
75 ICD	1.33	/	/	5.38	/	/	<u>0.68</u>	/	/	<u>0.86</u>	/	/	5.38	5.36	4.67	

1 X 1	0.98			0.27			0.52			0.52			0.98	5.36	4.67	
2NS X 1EW	0.47	0.53		0.23			0.25	0.28		0.49			0.53	4.97	4.58	
2 X 2	0.49	0.52		0.24	0.27		0.27	0.28		0.04	0.19		0.52	4.75	4.50	
3 X 3	0.33	0.33	0.35	0.17	0.07	0.27	0.18	0.18	0.19	0.08	-0.04	0.19	0.35	4.15	4.08	

Results for Interchanges																	
TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C														

##

Results Summary

Existing alternative (drop down): Trad_MinorStop

Alt	Exposure (Relative to Existing)			Average P (FSI)			Average Complexity			SSI Score	SSI Conflict Type Score		
	Crossing	Merging	Diverging	Crossing	Merging	Diverging	Crossing	Merging	Diverging	Score	Crossing	Merging	Diverging
RAB1x1	1.09	1.31	1.10	0.00	0.00	0.00	0.27	0.27	1.00	100	100	100	100
RAB2x1	1.09	1.31	1.10	0.00	0.00	0.00	0.40	0.37	1.00	100	100	100	100
Trad_AllStop	1.00	1.00	1.00	0.01	0.00	0.00	2.78	0.87	1.00	97	91	100	100
MUT	0.40	3.54	1.61	0.08	0.02	0.01	0.89	0.66	1.00	92	91	91	95
RAB2x2	1.09	1.31	1.10	0.00	0.00	0.00	0.54	0.47	1.00	100	99	100	100
RCUT_Sig	0.75	2.46	1.73	0.16	0.02	0.02	0.89	0.66	1.00	86	73	94	95
Bowtie	1.48	2.04	1.51	0.08	0.01	0.01	1.77	1.14	1.00	78	50	97	96
QR	1.45	1.40	1.28	0.08	0.02	0.01	1.44	0.74	1.00	78	50	97	96
Jughandle	1.44	1.35	1.12	0.07	0.02	0.01	1.82	1.11	1.00	78	51	97	96
Trad_Sig	1.00	1.00	1.00	0.06	0.01	0.01	1.94	0.61	1.00	79	52	98	97
RCUT_Unsig	0.75	2.46	1.73	0.13	0.02	0.02	1.27	0.95	1.00	84	69	91	95
Trad_MinorStop	1.00	1.00	1.00	0.06	0.01	0.01	2.90	0.87	1.00	66	30	97	97
FDLT	0.96	1.00	1.00	0.08	0.02	0.01	1.24	1.24	1.00	86	69	96	97
PDLT	1.00	1.00	1.00	0.07	0.01	0.01	1.66	0.91	1.00	84	64	96	96

KYTC Intersection Control Evaluation Forms

Stage 1: Screening

Complete the following form and append all supporting documentation. Submit completed forms to the Location Engineer for the project's district.

Project Information							
District	8	County	Lincoln	Item No.	8-80203	No. of Intersection Legs	3
	Prefix and Number	Functional Classification	Current AADT	No. of Lanes	Existing Multimodal Facilities		
Mainline Route	US 27	Arterial	11000	4	N/A		
Secondary Route	KY 1247 (Blue Bypass)	Collector	700	2	N/A		
Project Purpose and Need	Improving mobility and safety along the KY 1194 corridor						
Existing Intersection Control	Two-Way Stop-Controlled						

Context and Equity			
Context Classification	Rural Town	Likely Travel Needs	Freight on US 27 & US 127, local traffic
Land Use Northwest Quadrant	residential (single home)		Land Use Northeast Quadrant school field
Land Use Southwest Quadrant	undeveloped		Land Use Southeast Quadrant gas station

Intersection Control Alternative Screening

Intersection or Interchange Alternative	a.) CAP-X V/c ratio *	b.) CAP-X Pedestrian Accommodation Score	c.) CAP-X Bicycle Accommodation Score	d.) SSI Score **	e.) Impractical to implement (considering cost, potential r/w and environmental impacts)?	f.) Meets the transportation purpose and need?	g.) Addresses the key system performance criteria (safety, all roadway users, operations, etc.)?	h.) Alternative is selected to advance to Stage 2 for further evaluation.	Justification:
Signalized Control	0.41	4.79	4.29	85	No	Yes	Yes	Yes	
RCUT (Signalized)	0.39	3	3.96	94	No	Yes	Yes	Yes	
RCUT (Unsignalized)	0.65	2.71	2.87	93	No	Yes	Yes	Not Sure	
Median U-Turn	0.43	4.53	4.29	95	No	Yes	Yes	Yes	
Roundabout (2-lane)	0.48	4.79	4.21	100	No	Yes	Yes	Yes	

*Attachments: CAP-X and SSI Files, last 5 years crash data for the existing intersection (if applicable)

**If evaluating interchanges and using the Interchange Configuration Safety Tool, note the Expected KABC crash frequency.

Comments:	
Prepared By:	Steven Trevino (Qk4)
Reviewed By:	

Capacity Analysis for Planning of Junctions

Detailed Results Worksheet

Project Name:	Stanford Bypass	<i>Estimated Volume-to-Capacity Ratio</i>			
Project Number:	Long Bypass (Blue)	Number of Configurations			
Location	Stanford, Kentucky	< 0.750	0.750 - 0.875	0.875 - 1.00	≥ 1.00
Date	2045 AM	6	0	0	1

Results for Non-roundabout Intersections

TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Traffic Signal	FULL	/	/	/	/	/	/	/	/	692	<u>0.41</u>	0.41	4.79	4.29	
Two-Way Stop Control	N-S	/	/	/	/	/	/	/	/	--	5.87	5.87	2.65	3.58	
Signalized Restricted Crossing U-Turn	N-S	301	<u>0.17</u>	609	<u>0.34</u>	699	<u>0.39</u>	471	<u>0.26</u>	/	/	0.39	3.00	3.96	
Unsignalized Restricted Crossing U-Turn	N-S	499	<u>0.05</u>	1091	<u>0.10</u>	1061	<u>0.65</u>	439	<u>0.38</u>	/	/	0.65	2.71	2.87	
Median U-Turn	N-S	365	<u>0.20</u>	622	<u>0.35</u>	/	/	/	/	781	<u>0.43</u>	0.43	4.53	4.29	
Partial Median U-Turn	N-S	326	<u>0.18</u>	571	<u>0.32</u>	/	/	/	/	765	<u>0.44</u>	0.44	4.37	4.29	

Results for Grade Separated Intersections

TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Zone 6 (Raised)		Overall v/c Ratio	Ped	Bike	Transit Accommo
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				

Capacity Analysis for Planning of Junctions

Detailed Results Worksheet

Results for Roundabouts

TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3				
2NS X 1EW	<u>0.20</u>	<u>0.22</u>	/	<u>0.24</u>	/	/	<u>0.42</u>	<u>0.48</u>	/	<u>0.29</u>	/	/	0.48	5.00	4.33	
2 X 2	<u>0.21</u>	<u>0.22</u>	/	<u>0.09</u>	<u>0.20</u>	/	<u>0.45</u>	<u>0.48</u>	/	<u>0.06</u>	<u>0.19</u>	/	0.48	4.79	4.21	

Results for Interchanges

TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C														

Capacity Analysis for Planning of Junctions

Detailed Results Worksheet

Project Name:	Stanford Bypass	<i>Estimated Volume-to-Capacity Ratio</i>			
Project Number:	Long Bypass (Blue)	Number of Configurations			
Location	Stanford, Kentucky	< 0.750	0.750 - 0.875	0.875 - 1.00	≥ 1.00
Date	2045 PM	6	0	0	1

Results for Non-roundabout Intersections

TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Traffic Signal	FULL	/	/	/	/	/	/	/	/	630	<u>0.37</u>	0.37	4.79	4.29	
Two-Way Stop Control	N-S	/	/	/	/	/	/	/	/	--	2.31	2.31	2.65	3.58	
Signalized Restricted Crossing U-Turn	N-S	576	<u>0.32</u>	372	<u>0.21</u>	356	<u>0.20</u>	618	<u>0.34</u>	/	/	0.34	3.00	3.96	
Unsignalized Restricted Crossing U-Turn	N-S	1102	<u>0.04</u>	694	<u>0.03</u>	581	<u>0.08</u>	948	<u>0.47</u>	/	/	0.47	2.68	2.87	
Median U-Turn	N-S	730	<u>0.41</u>	462	<u>0.26</u>	/	/	/	/	642	<u>0.36</u>	0.41	4.53	4.29	
Partial Median U-Turn	N-S	717	<u>0.40</u>	450	<u>0.25</u>	/	/	/	/	641	<u>0.37</u>	0.40	4.37	4.29	

Results for Grade Separated Intersections

TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Zone 6 (Raised)		Overall v/c Ratio	Ped	Bike	Transit Accommo
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				

Capacity Analysis for Planning of Junctions

Detailed Results Worksheet

Results for Roundabouts

TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3				
2NS X 1EW	<u>0.46</u>	<u>0.52</u>	/	<u>0.23</u>	/	/	<u>0.28</u>	<u>0.31</u>	/	<u>0.05</u>	/	/	0.52	5.00	4.33	
2 X 2	<u>0.49</u>	<u>0.51</u>	/	<u>0.03</u>	<u>0.03</u>	/	<u>0.29</u>	<u>0.31</u>	/	<u>0.04</u>	<u>0.19</u>	/	0.51	4.79	4.21	

Results for Interchanges

TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C														

Results Summary

Existing alternative (drop down): Trad_MinorStop

Alt	Exposure (Relative to Existing)			Average P (FSI)			Average Complexity			SSI Score	SSI Conflict Type Score		
	Crossing	Merging	Diverging	Crossing	Merging	Diverging	Crossing	Merging	Diverging	Score	Crossing	Merging	Diverging
RAB1x1	1.00	1.15	1.18	0.00	0.00	0.00	0.27	0.27	1.00	100	100	100	100
RAB2x1	1.00	1.15	1.18	0.00	0.00	0.00	0.40	0.37	1.00	100	100	100	100
Trad_AllStop	1.00	1.00	1.00	0.01	0.00	0.00	2.78	0.87	1.00	98	94	100	100
MUT	0.24	2.24	1.79	0.08	0.02	0.01	0.89	0.66	1.00	95	97	92	96
RAB2x2	1.00	1.15	1.18	0.00	0.00	0.00	0.54	0.47	1.00	100	100	100	100
RCUT_Sig	0.29	1.83	1.86	0.16	0.02	0.02	0.89	0.66	1.00	94	93	94	96
Bowtie	1.63	1.38	1.38	0.08	0.01	0.01	1.77	1.14	1.00	84	64	96	97
QR	1.45	1.25	1.58	0.07	0.01	0.01	1.44	0.74	1.00	84	65	96	97
Jughandle	1.17	1.08	1.06	0.07	0.02	0.01	1.82	1.11	1.00	85	66	95	98
Trad_Sig	1.00	1.00	1.00	0.06	0.01	0.01	1.94	0.61	1.00	85	66	97	97
RCUT_Unsig	0.29	1.83	1.86	0.13	0.02	0.02	1.27	0.95	1.00	93	92	91	96
Trad_MinorStop	1.00	1.00	1.00	0.06	0.01	0.01	2.90	0.87	1.00	77	48	95	98
FDLT	0.94	1.00	1.00	0.08	0.02	0.01	1.24	1.24	1.00	89	77	94	98
PDLT	1.00	1.00	1.00	0.07	0.01	0.01	1.66	0.91	1.00	87	73	95	97