



# *Appendix D*

## Route Option Evaluation Summary

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Lubbock Outer Route Study

**Table D-1: Detailed Evaluation of Segment Options (June 2014)**

Criteria	Segments																
	1				2				3					4			
	US 84 (North) to SH 114				SH 114 to US 62/82				US 62/82 to US 87					US 87 to US 84 (South)			
	A	B	C	D	A	B	C	D	A	B	C	D	E	A	B	C	D
<b>Congestion/Mobility</b>																	
Average Daily Traffic (2040)	5,100				11,300				24,400					15,100			
Population Served (2 mile buffer)	6,000	6,000	7,000	6,000	10,000	10,000	9,000	9,000	14,000	15,000	26,000	16,000	18,000	5,000	4,000	5,000	4,000
<b>Safety</b>																	
Annual potential for reduction in crashes (2040)	Low				Low				High					Medium			
<b>Socio-economic</b>																	
Potential impact to tax rolls (Reduction in taxable value, based on 2012 data)	\$3,352,000	\$1,787,000	\$3,442,000	\$1,785,000	\$2,321,000	\$317,000	\$2,457,000	\$291,000	\$2,204,000	\$2,198,000	\$7,392,000	\$3,341,000	\$3,336,000	\$2,715,000	\$1,565,000	\$443,000	\$2,037,000
Number of intersecting parcels	88	52	88	53	43	22	41	21	83	106	151	83	108	112	72	33	70
Potential residential displacements	16	15	16	14	6	0	6	0	15	17	29	32	33	15	7	3	9
Land Use (acreage impacted by segment)																	
Residential	21	27	21	27	7	0	7	0	54	58	29	47	51	24	16	0	16
Commercial	23	18	23	18	7	0	7	0	3	3	28	2	2	10	4	1	4
Agricultural	342	364	348	370	295	313	285	303	522	522	421	536	536	322	369	452	359
<b>Environmental Factors</b>																	
Floodplains (in acres)	47.0	38.0	47.0	38.0	39.1	31.8	34.0	26.7	57.7	57.6	37.8	36.6	36.5	20.5	33.2	17.2	16.0
Additional impervious cover (Interim Buildout, square yards)	346,000	387,000	359,000	400,000	273,000	275,000	265,000	266,000	520,000	510,000	266,000	525,000	515,000	133,000	214,000	397,000	206,000
Additional impervious cover (Ultimate Buildout, square yards)	752,000	795,000	779,000	823,000	561,000	565,000	545,000	547,000	1,069,000	1,066,000	798,000	1,080,000	1,077,000	494,000	589,000	816,000	573,000
National Wetlands Inventory (in acres)	9.2	0.8	9.1	0.8	0	0	0	0	19.1	22.4	12.3	7.1	10.3	3.6	0.3	1.3	0.3
Playa Lakes (Acreage)	11.2	6.8	11.2	6.8	0	0	0	0	17.5	19.6	13.3	8.1	10.2	2.7	0.2	0.7	0.2
Potential wildlife habitat (in acres)	310.4	312.6	324.7	326.5	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of potential historic sites	23	19	23	19	9	4	8	3	16	20	45	25	28	26	17	6	18
Number of parks affected	1	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0
Number of acres with an elevated potential for archaeological resources	29.1	17.3	28.9	17.2	1.7	1.1	0.7	0.0	46.1	55.6	29.8	23.0	32.4	20.1	12.2	10.7	8.7
Number of potential hazmat sites	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
Prime Farmland (in acres)	280	293	277	290	185	182	184	180	358	343	344	362	347	111	189	254	164
Number of potential traffic noise receptors	37	25	48	31	94	42	94	42	174	180	206	183	189	79	48	18	45
Number of oil/gas wells	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	2	0
Oil/Gas Pipeline Crossings	12	12	12	13	3	3	2	2	2	2	2	2	2	4	4	4	4
<b>Engineering</b>																	
Amount of existing pavement utilized (square yards)	39,000	0	39,000	0	0	0	0	0	0	17,000	238,000	0	17,000	209,000	142,000		142,000
Total right-of-way required (acres)	442	444	457	460	314	315	304	305	597	605	578	603	611	392	408	455	399
Construction cost (entire corridor, 2013 Dollars)																	
Interim	\$49 - \$52 Million				\$36 - \$37 Million				\$54 - \$72 Million					\$32 - \$49 Million			
Ultimate	\$181 - \$186 Million				\$116 - \$120 Million				\$198 - \$220 Million					\$141 - \$168 Million			
Number of stream crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Segment length (in miles)	9.1	9.2	9.4	9.5	6.5	6.5	6.3	6.3	12.3	12.5	11.9	12.4	12.6	8.1	8.4	9.4	8.2

**Table D-2: Evaluation Summary of Segment Options (June 2014)**

Segments	1				2				3					4			
	US 84 (North) to SH 114				SH 114 to US 62/82				US 62/82 to US 87					US 87 to US 84 (South)			
Options within Segments	A	B	C	D	A	B	C	D	A	B	C	D	E	A	B	C	D
<b>Congestion/Mobility</b>																	
Average Daily Traffic (2040)	-				O				++					+			
Population Served (2 mile buffer)	+	+	++	+	++	++	+	+	-	O	++	O	O	++	+	++	+
<b>Safety</b>																	
Annual potential for reduction in crashes (2040)	O				O				++					+			
<b>Socio-economic</b>																	
Potential impact to tax rolls (Reduction in taxable value, based on 2012 data)	--	++	--	++	--	+	--	++	++	++	--	-	-	--	--	++	--
Number of intersecting parcels	--	++	--	++	--	++	--	++	++	O	--	++	O	--	--	++	--
Potential residential displacements	+	+	+	++	--	++	--	++	++	+	--	--	--	--	--	++	--
Land Use (acreage impacted by segment)																	
Residential	++	O	++	O	--	++	--	++	--	--	++	-	--	--	--	++	--
Commercial	O	++	O	++	--	++	--	++	-	-	--	++	++	--	--	++	--
Agricultural	++	+	++	+	++	+	++	+	+	+	++	O	O	++	+	O	+
<b>Environmental Factors</b>																	
Floodplains (in acres)	+	++	+	++	-	+	O	++	-	-	++	++	++	O	--	+	++
Additional impervious cover (Interim Buildout, square yards)	++	+	+	+	+	+	++	+	--	--	++	--	--	++	--	--	-
Additional impervious cover (Ultimate Buildout, square yards)	++	+	+	+	+	+	++	+	O	O	++	O	O	++	+	--	+
National Wetlands Inventory (in acres)	--	++	--	++	++	++	++	++	--	--	--	++	-	--	++	--	++
Playa Lakes (Acreage)	-	++	-	++	++	++	++	++	--	--	-	++	O	--	++	--	++
Potential wildlife habitat (in acres)	++	++	++	+	++	++	++	++	++	++	++	++	++	++	++	++	++
Number of potential historic sites	O	++	O	++	--	+	--	++	++	O	--	-	--	--	--	++	--
Number of acres with an elevated potential for archaeological resources	--	++	--	++	--	--	--	++	--	--	O	++	O	--	O	+	++
Number of potential hazmat sites	++	++	++	++	++	++	++	++	++	++	--	++	++	++	++	++	++
Prime Farmland (in acres)	++	+	++	++	++	++	++	++	++	++	++	+	++	++	--	--	-
Number of potential traffic noise receptors	-	++	--	+	--	++	--	++	++	++	+	+	+	--	--	++	--
Number of oil/gas wells	O	O	O	O	++	++	++	++	++	++	++	++	++	++	O	--	++
Oil/Gas Pipeline Crossings	++	++	++	+	-	-	++	++	++	++	++	++	++	++	++	++	++
<b>Engineering</b>																	
Amount of existing pavement utilized (square yards)	+	-	+	-	-	-	-	-	-	+	+	-	+	+	+	-	+
Total right-of-way required (acres)	++	+	+	+	+	+	++	++	+	+	++	+	+	++	+	+	+
Construction cost (entire corridor, 2013 Dollars)																	
Interim	+	++	+	+	+	+	++	+	O	O	++	O	O	++	+	-	+
Ultimate	+	++	+	+	+	+	++	+	+	+	++	+	+	++	+	O	+
Number of stream crossings	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Segment length (in miles)	++	+	+	+	+	+	++	++	+	+	++	+	+	++	+	+	+
<b>Overall Ranking</b>	<b>3rd</b>	<b>1st</b>	<b>4th</b>	<b>2nd</b>	<b>4th</b>	<b>2nd</b>	<b>3rd</b>	<b>1st</b>	<b>3rd</b>	<b>5th</b>	<b>2nd</b>	<b>1st</b>	<b>4th</b>	<b>3rd</b>	<b>4th</b>	<b>1st</b>	<b>2nd</b>

**Table D-3: Detailed Evaluation of Segment Options (August 2014)**

Criteria	Segments																	
	1				2				3					4				
	US 84 (North) to SH 114				SH 114 to US 62/82				US 62/82 to US 87					US 87 to US 84 (South)				
	A	B	C	D	A	B	C	D	A	B	C	D	E	A	B	C	D	E
<b>Congestion/Mobility</b>																		
Average Daily Traffic (2040)	5,100				11,300				24,400					15,100				
Population Served (2 mile buffer)	6,000	6,000	7,000	6,000	10,000	10,000	9,000	9,000	14,000	16,000	26,000	16,000	17,000	5,000	4,000	5,000	4,000	5,000
<b>Safety</b>																		
Annual potential for reduction in crashes (2040)	Low				Low				High					Medium				
<b>Socio-economic</b>																		
Potential impact to tax rolls (Reduction in taxable value, 2012 data)	\$2,972,000	\$1,422,000	\$3,038,000	\$1,420,000	\$2,321,000	\$317,000	\$2,457,000	\$291,000	\$2,120,000	\$2,117,000	\$7,399,000	\$3,224,000	\$3,220,000	\$2,712,000	\$1,563,000	\$442,000	\$2,035,000	\$1,424,000
Number of intersecting parcels	90	54	92	54	42	22	41	21	79	103	148	81	103	104	80	33	67	41
Potential residential displacements	15	14	15	13	6	0	6	0	14	16	29	31	32	15	7	5	9	6
Land Use (acreage impacted by segment)																		
Residential	18	24	18	24	7	0	7	0	51	55	29	44	48	24	16	0	16	2
Commercial	23	18	23	18	7	0	7	0	1	1	28	1	1	10	4	1	4	5
Agricultural	345	367	352	373	295	313	285	303	533	532	421	540	539	323	368	452	359	463
<b>Environmental Factors</b>																		
Floodplains (in acres)	46.1	37.1	47.3	38.2	39.1	31.8	34.0	26.7	58.0	57.9	37.4	35.9	35.9	20.0	32.7	16.9	15.8	1.5
Additional impervious cover (Interim Buildout, square yards)	356,000	387,000	370,000	401,000	273,000	275,000	265,000	266,000	522,000	517,000	282,000	524,000	531,000	133,000	214,000	397,000	206,000	414,000
Additional impervious cover (Ultimate Buildout, square yards)	762,000	796,000	791,000	824,000	561,000	565,000	545,000	547,000	1,073,000	1,075,000	814,000	1,077,000	1,091,000	494,000	589,000	816,000	573,000	851,000
National Wetlands Inventory (in acres)	9.0	0.7	9.1	0.8	0	0	0	0	19.0	22.1	12.2	7.0	10.2	3.6	0.4	1.2	0.4	1.2
Playa Lakes (Acreage)	11	6.6	11.1	6.6	0	0	0	0	17.2	19.2	13.1	8.1	9.8	2.8	0.2	0.6	0.2	0.7
Potential wildlife habitat (in acres)	311.9	314.4	327.4	330	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of potential historic sites	28	22	28	20	9	4	8	3	19	23	55	30	34	34	23	9	21	11
Number of parks affected	1	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Number of acres with elevated potential for archaeological resources	28.5	16.8	29.5	17.7	1.7	1.1	0.7	0.0	46.3	55.6	29.8	23.0	32.3	20.1	11.9	10.5	8.6	7.2
Number of potential hazmat sites	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Prime Farmland (in acres)	283	295	280	292	185	182	184	180	374	360	343	375	360	111	188	254	163	216
Number of potential traffic noise receptors	36	24	47	30	94	42	94	42	144	150	206	169	175	79	48	18	45	49
Number of oil/gas wells	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	2	0	1
Oil/Gas Pipeline Crossings	12	12	12	13	3	3	2	2	2	2	2	2	2	4	4	4	4	4
<b>Engineering</b>																		
Amount of existing pavement utilized (square yards)	29,000	0	29,000	0	0	0	0	0	0	11,000	222,000	0	11,000	209,000	142,000	0	142,000	0
Total right-of-way required (acres)	442	444	457	460	314	315	304	305	601	605	578	603	611	392	408	455	399	475
Construction cost (entire corridor, 2013 Dollars)																		
Interim	\$49 - \$52 Million				\$36 - \$37 Million				\$54 - \$72 Million					\$32 - \$51 Million				
Ultimate	\$181 - \$186 Million				\$117 - \$119 Million				\$198 - \$219 Million					\$142 - \$172 Million				
Number of stream crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Segment length (in miles)	9.1	9.2	9.4	9.5	6.5	6.5	6.3	6.3	12.4	12.5	11.9	12.4	12.6	8.1	8.4	9.4	8.2	9.8
<b>Public Input</b>																		
Public Support	Neutral	Neutral	High	High	Neutral	Neutral	Neutral	Neutral	Low	Low	High	Low	Low	Low	Low	High	Low	High
Stakeholder Support	Neutral	Neutral	High	High	Neutral	Neutral	Neutral	Neutral	Low	Low	High	Low	Low	Medium	Medium	High	Medium	High

**Table D-4: Evaluation Summary of Segment Options (August 2014)**

Segments	1				2				3					4				
	US 84 (North) to SH 114				SH 114 to US 62/82				US 62/82 to US 87					US 87 to US 84 (South)				
Options within Segments	A	B	C	D	A	B	C	D	A	B	C	D	E	A	B	C	D	E
<b>Congestion/Mobility</b>																		
Average Daily Traffic (2040)	-				O				++					+				
Population Served (2 mile buffer)	+	+	++	+	++	++	+	+	-	O	++	O	O	++	+	++	+	++
<b>Safety</b>																		
Annual potential for reduction in crashes (2040)	O				O				++					+				
<b>Socio-economic</b>																		
Potential impact to tax rolls (Reduction in taxable value, based on 2012 data)	--	++	--	++	--	+	--	++	++	++	--	-	-	--	--	++	--	--
Number of intersecting parcels	--	++	--	++	--	++	--	++	++	O	--	++	O	--	--	++	--	O
Potential residential displacements	+	+	+	++	--	++	--	++	++	+	--	--	--	--	O	++	--	+
Land Use (acreage impacted by segment)																		
Residential	++	O	++	O	--	++	--	++	--	--	++	-	--	--	--	++	--	+
Commercial	O	++	O	++	--	++	--	++	-	-	--	++	+	--	O	++	O	O
Agricultural	++	+	++	+	++	+	++	+	O	O	++	O	O	++	+	O	+	O
<b>Environmental Factors</b>																		
Floodplains (in acres)	O	++	O	++	-	+	O	++	-	-	++	++	++	--	--	--	--	++
Additional impervious cover (Interim Buildout, square yards)	++	+	++	+	++	++	++	++	--	--	++	--	--	++	-	--	-	--
Additional impervious cover (Ultimate Buildout, square yards)	++	++	++	+	++	++	++	++	O	O	++	O	O	++	+	--	+	--
National Wetlands Inventory (in acres)	--	++	--	++	++	++	++	++	--	--	--	++	-	--	++	--	++	--
Playa Lakes (Acreage)	-	++	-	++	++	++	++	++	--	--	-	++	O	--	++	--	++	--
Potential wildlife habitat (in acres) <sup>3</sup>	++	++	+	+	++	++	++	++	++	++	++	++	++	++	++	++	++	++
Number of potential historic sites	O	+	O	++	--	+	--	++	++	O	--	-	--	--	--	++	--	+
Number of parks affected	O	O	O	O	++	++	++	++	++	++	O	++	++	++	++	++	++	++
Number of acres with an elevated potential for archaeological resources	--	++	--	++	--	--	--	++	--	--	O	++	O	--	--	-	+	++
Number of potential hazmat sites	++	++	++	++	++	++	++	++	++	++	--	++	++	++	++	++	++	++
Prime Farmland (in acres)	++	+	++	++	++	++	++	++	+	++	++	+	++	++	--	--	-	--
Number of potential traffic noise receptors	-	++	--	O	--	++	--	++	++	++	-	+	O	--	--	++	--	--
Number of oil/gas wells	O	O	O	O	++	++	++	++	++	++	++	++	++	++	O	--	++	O
Oil/Gas Pipeline Crossings	++	++	++	+	-	-	++	++	++	++	++	++	++	++	++	++	++	++
<b>Engineering</b>																		
Amount of existing pavement utilized (square yards)	+	-	+	-	-	-	-	-	-	+	+	-	+	+	+	-	+	+
Total right-of-way required (acres)	++	++	++	++	+	+	++	++	+	+	++	+	+	++	++	+	++	+
Construction cost (entire corridor, 2013 Dollars)																		
Interim	++	++	+	++	++	++	++	++	O	O	++	O	O	++	+	-	+	-
Ultimate	++	++	++	++	++	++	++	++	+	+	++	+	+	++	+	+	++	+
Number of stream crossings	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Segment length (in miles)	++	++	++	++	++	++	++	++	++	+	++	++	+	++	++	+	++	+
<b>Public Input</b>																		
Public Support	O	O	++	++	O	O	O	O	--	--	++	--	--	--	--	++	--	++
Stakeholder Support	O	O	++	++	O	O	O	O	--	--	++	--	--	O	O	++	O	++
Overall Ranking	4th	2nd	3rd	1st	4th	2nd	3rd	1st	3rd	4th	1st	2nd	4th	3rd	4th	1st	2nd	2nd