Texas Department of Transportation Book 2 - Technical Provisions

IH 35E Managed Lanes Project

Attachment 8-1

ESALs and Traffic Data

Frontage Roads - 20 yrs

Total # of 18K ESAL Applications in One Direction Expected for a 20 Year Period (2012 to 2032)

							Expedic	a		
			Base	Year		% Tandem	(2012 t	o 2032)	
	Average Da	aily Traffic	Percen	t Truck		Axles in	Flexible	S	Rigid	SLAB
Location	2012	2032	ADT	DHV	ATHWLD	ATHWLD	Pavement	N	Pavement	SLAD
I-35E Frontage Roads Only Section 1										
From I-635 to Belt Line Road	43,600	58,100	8.8	6.6	17,500	40	13,197,000	3	17,052,000 17,500,000 17,719,000	10"
Dallas County									, , , , , , ,	

Data for Use in Air & Noise Analysis

	Base Year					
Vehicle Class	% of ADT	% of DHV				
Light Duty	91.2	93.4				
Medium Duty	2.3	1.7				
Heavy Duty	6.5	4.9				

Frontage Roads - 30 yrs			Base	Year]		% Tandem	Applicat Expecte	ions in	18K ESAL One Direction 30 Year Period o 2042)	
	Average D	aily Traffic	Percen	t Truck			Axles in	Flexible	S	Rigid	SLAB
Location	2012	2042	ADT	DHV		ATHWLD	ATHWLD	Pavement	N	Pavement	JLAD
I-35E Frontage Roads Only Section 1 From I-635 to Belt Line Road	43,600	65,100	8.8	6.6		17,600	40	21,158,000	3	27,339,000	8"
Dallas County	,	,				,		, ,		28,057,000 28,409,000	10"

Frontage Roads - 20 yrs

Total # of 18K ESAL Applications in One Direction Expected for a 20 Year Period

							EMPCOL			
			Base	Year		% Tandem		(2012 1	o 2032)	
	Average Da	aily Traffic	Percen	t Truck		Axles in	Flexible	S	Rigid	SLAB
Location	2012	2032	ADT	DHV	ATHWLD	ATHWLD	Pavement	N	Pavement	SLAD
I-35E Frontage Roads Only Section 2										
From Belt Line Road to US 377	68,200	90,900	5	3.8	17,300	40	11,808,000	3	15,208,000 15,607,000 15,802,000	10"
Dallas County										

Data for Use in Air & Noise Analysis

	Base Year					
Vehicle Class	% of ADT	% of DHV				
Light Duty	95	96.2				
Medium Duty	1.3	1				
Heavy Duty	3.7	2.8				

Frontage	Roads	- 30 vrs

Total # of 18K ESAL Applications in One Direction

Frontage Roads - 30 yrs		_					Expecte	d for a	30 Year Period	l
			Base	Year		% Tandem	((2012 t	o 2042)	
	Average Da	ily Traffic	Percen	t Truck		Axles in	Flexible	S	Rigid	SLAB
Location	2012	2042	ADT	DHV	ATHWLD	ATHWLD	Pavement	Ν	Pavement	SLAD
I-35E Frontage Roads Only Section 2 From Belt Line Road to US 377 Dallas County	68,200	101,900	5	3.8	17,400	40	18,937,000	3	24,390,000 25,029,000 25,341,000	10"

Frontage Roads - 20 yrs

Dallas County

Total # of 18K ESAL
Applications in One Direction
Expected for a 20 Year Period
(2012 to 2032)

Total # of 18K ESAL

								LAPCUL	u ioi u	20 1001 10100	
			Base	Year		% Tandem		((2012 t	o 2032)	
	Average Da	aily Traffic	Percen	t Truck		Axles in	Ī	Flexible	S	Rigid	SLAB
Location	2012	2032	ADT	DHV	ATHWLD	ATHWLD		Pavement	N	Pavement	SLAD
I-35E Frontage Roads Only Section 3											
From US 377 to US 380	43,600	58,100	5.6	4.2	16,700	50		8,440,000	3	10,879,000 11,164,000 11,304,000	10"
Dallas County											i

Data for Use in Air & Noise Analysis

	Base Year					
Vehicle Class	% of ADT	% of DHV				
Light Duty	94.4	95.8				
Medium Duty	1.4	1.1				
Heavy Duty	4.2	3.1				

Frontage Roads - 30 yrs		Ī	Base	Year		% Tandem	Expecte	d for a	One Direction 30 Year Period to 2042)	
Location	Average D 2012	aily Traffic 2042	Percen ADT	t Truck DHV	ATHWLD	Axles in ATHWLD	Flexible Pavement	S N	Rigid Pavement	SLAB
I-35E Frontage Roads Only Section 3	2012	20.12	7.5.	5	7,,,,,,,					
From US 377 to US 380	43,600	65,100	5.6	4.2	16,800	50	13,532,000	3	17,442,000 17,900,000 18,123,000	10"

Mainlane Roads - 20 yrs

Total # of 18K ESAL Applications in One Direction Expected for a 20 Year Period (2010 to 2030)

			Base	Year		%	,			
	_	e Daily ffic		cent uck		Tandem Axles in	Flexible	S	Rigid	SLAB
Location	2010	2030	ADT	DHV	ATHWLD	ATHWLD	Pavement	N	Pavement	
I-35E Mainlanes Only Section 1										
From I-635 to Belt Line Road Dallas County	245,800	338,400	5.9	2.7	16,500	30	61,219,000	3	84,456,000 86,324,000 86,985,000	8" 10" 12"

Data for Use in Air & Noise Analysis

	Base	Year
	% of	% of
Vehicle Class	ADT	DHV
Light Duty	94.1	97.3
Medium Duty	1.7	0.8
Heavy Duty	4.2	1.9

Mainlane Roads - 30 yrs

Total # of 18K ESAL
Applications in One Direction
Expected for a 30 Year Period
(2010 to 2040)

								•		201	J (U 2U+U)	
				Base	Year		%			•	•	
		_	ge Daily offic	_	cent uck		Tandem Axles in		Flexible	S	Rigid	SLAB
I	Location	2010	2040	ADT	DHV	ATHWLD	ATHWLD		Pavement	N	Pavement	
	I-35E Mainlanes Only Section 1											
	From I-635 to Belt Line Road Dallas County	245,800	363,500	5.9	2.7	16,600	30		95,770,000	3	132,120,000 135,043,000 136,078,000	8" 10" 12"

Total # of 18K ESAL Applications in One Direction Expected for a 20 Year Period (2010 to 2030)

Mainlane Roads - 20 yrs

			Base	Year		%	'	2010	7 (0 2030)	
	_	ge Daily Iffic		cent uck		Tandem Axles in	Flexible	S	Rigid	SLAB
Location	2010	2030	ADT	DHV	ATHWLD	ATHWLD	Pavement	Z	Pavement	
I-35E Mainlanes Only Section 2 From Belt Line Road To Valley Ridge	200,300	288,000	6.3	2.8	16,400	30	54,599,000	3	75,349,000 77,016,000 77,607,000	8" 10" 12"
Dallas & Denton Counties										

Data for Use in Air & Noise Analysis

	Base Year							
	% of	% of						
Vehicle Class	ADT	DHV						
Light Duty	93.7	97.2						
Medium Duty	1.8	0.8						
Heavy Duty	4.5	2						

Mainlane Roads - 30 yrs

Total # of 18K ESAL Applications in One Direction Expected for a 30 Year Period (2010 to 2040)

			Base	Year		%	,		,		
	_	ge Daily offic		cent uck		Tandem Axles in	Flexible	S	Rigid	SLAB	
Location	2010	2040	ADT	DHV	ATHWLD	ATHWLD	Pavement	N	Pavement		
<u>I-35E Mainlanes</u> <u>Only</u> <u>Section 2</u>											
From Belt Line Road To Valley Ridge	200,300	312,000	6.3	2.8	16,400	30	85,926,000	3	118,582,000 121,206,000 122,135,000	8" 10" 12"	
Dallas & Denton Counties											

Total # of 18K ESAL Applications in One Direction Expected for a 20 Year Period (2010 to 2030)

Mainlane Roads - 20 yrs

			Base	Year		%	,	(=0=	2 (3 2000)	
	_	ge Daily Iffic		cent uck		Tandem Axles in	Flexible	S	Rigid	SLAB
Location	2010	2030	ADT	DHV	ATHWLD	ATHWLD	Pavement	N	Pavement	
I-35E Mainlanes Only Section 3 From Valley Ridge To US 377	166,000	242,100	6.7	3.0	16,200	40	48,499,000	3	66,952,000 68,434,000 68,959,000	8" 10" 12"
Denton County										

Data for Use in Air & Noise Analysis

	Base	Year
	% of	% of
Vehicle Class	ADT	DHV
Light Duty	93.3	97
Medium Duty	1.9	0.9
Heavy Duty	4.8	2.1

Mainlane Roads - 30 yrs

Total # of 18K ESAL Applications in One Direction Expected for a 30 Year Period (2010 to 2040)

			Base	Year		%	·		,	
	_	ge Daily Iffic	_	cent uck		Tandem Axles in	Flexible	S	Rigid	SLAB
Location	2010	2040	ADT	DHV	ATHWLD	ATHWLD	Pavement	Z	Pavement	
I-35E Mainlanes Only Section 3 From Valley Ridge To US 377	166,000	262,900	6.7	3.0	16,300	40	76,459,000	3	105,551,000 107,887,000 108,715,000	8" 10" 12"
Denton County										

Total # of 18K ESAL Applications in One Direction Expected for a 20 Year Period (2010 to 2030)

Total # of 18K ESAL

Mainlane Roads - 20 yrs

			Base	Year		%	'	,_0_,	2 (3 2000)	
	_	ge Daily offic		cent uck		Tandem Axles in	Flexible	S	Rigid	SLAB
Location	2010	2030	ADT	DHV	ATHWLD	ATHWLD	Pavement	Ν	Pavement	
I-35E Mainlanes Only Section 4 From US 377 to US 380 Denton County	115,700	170,200	7.7	3.5	15,900	40	38,999,000	3	53,872,000 55,065,000 55,488,000	8" 10" 12"

Data for Use in Air & Noise Analysis

	Base	Year
	% of	% of
Vehicle Class	ADT	DHV
Light Duty	92.3	96.5
Medium Duty	2.2	1
Heavy Duty	5.5	2.5

Mainlane Roads - 30 yrs

Applications in One Direction
Expected for a 30 Year Period
(2010 to 2040)

			Base	Year		%				
	_	ge Daily Iffic		cent uck		Tandem Axles in	Flexible	S	Rigid	SLAB
Location	2010	2040	ADT	DHV	ATHWLD	ATHWLD	Pavement	Z	Pavement	
I-35E Mainlanes Only Section 4 From US 377 to US 380	115,700	185,000	7.7	3.5	15,900	40	61,531,000	3	84,998,000 86,880,000 87,547,000	8" 10" 12"
Denton County										