

Appendix I – Baseline Project Cost Estimates

Kingsport 2045 Long Range Transportation Plan

Kingsport Metropolitan Transportation Planning Organization

Prepared for:

Kingsport Metropolitan Transportation Planning Organization



Prepared by:

AECOM

NOTE:

The following are initial project cost estimates that were used to support the LRTP fiscal constraint analysis. The project costs listed in this document may have changed during the course of the project. As such, any reference to the costs listed in this document should be verified with the MTPO staff to ensure that the most current estimates are being used/referenced.

Copyright © 2022 by AECOM

All rights reserved. No part of this copyrighted work may be reproduced, distributed, or transmitted in any form or by any means without the prior written permission of AECOM.

Appendix I - Baseline Project Cost Estimates

NOTE: Final project cost estimates may have changed in the 2045 MTPO LRTP as projects were being analyzed, reviewed, and updated as part of the Fiscal Constraint analysis.



Project Cost Estimates for 2045 LRTP

		Project Informat	ion	Fiscal Analysis									
Project ID	Route	From/To	Description	2040 LRTP Horizon Year	2040 LRTP Y Expenditure Cost	e (YOE)	2022 Baseline Planning Level Cost Estimate (calculated)	2022 Baseline Planning Level Cost Estimate (proposed for 2045 LRTP)	2022 Baseline Planning Level Cost Estimate (adjustment notes)	AECOM Engineer's Comments			
1	I-81	Buttermilk Road	Construct new interchange	-	\$	-	\$ -	\$ 15,000,000	Engineer's Notes	Probably a \$12 to 15m min. effort			
2	Center Street	Sullivan Street / Fairview Avenue	Reconfigure turning movements with roundabout	2040	\$ 1,8	310,000	\$ 1,063,184	\$ 1,500,000	Engineer's Notes	Say 1.5m because of road reconfigurations			
3	John B. Dennis (SR-93)	Lincoln Street	Upgrade intersection	2025	\$ 2	270,000	\$ 247,088	\$ 1,000,000	Engineer's Notes	this may cover signalization modifications. pavement modifications will run \$1m minimum			
4	John B. Dennis (SR-93)	Fort Henry Drive (SR-36)	Upgrade intersection	2025	\$ 2,5	30,000	\$ 2,315,308	\$ 8,000,000	Engineer's Notes	candidate for diverging diamond conversion. \$5to8m.			
5	John B. Dennis (SR-93)	Stone Drive (US-11W)	Upgrade intersection	2025	\$ 2,5	30,000	\$ 2,315,308	\$ 8,000,000	Engineer's Notes	candidate for DD conversion at \$5-8m			
6	John B. Dennis (SR-93)	Orebank Road	Construct new interchange exit ramp NB	2025	\$ 2,1	150,000	\$ 1,967,555	\$ 2,000,000	Engineer's Notes	say \$2m			
7	Lebanon Road	Kendricks Creek Road / Grove Drive	Replace signalized intersection with a roundabout	2040	\$ 1,4	140,000	\$ 845,848	\$ 1,000,000	Engineer's Notes	say \$1m min			
8	I-26	I-81	Improve cloverleaf geometry and add collector-distributor lanes	2040	\$ 6,3	320,000	\$ 3,712,334	\$ 20,000,000	Engineer's Notes	if no structure addition may get by with \$5m. This project will probably be \$15 to 20m done right			
9	Industry Drive	At CSX Railroad Overpass	Replace/widen railroad overpass	2040	\$ 7,2	220,000	\$ 4,240,989	\$ 7,000,000	Engineer's Notes	Widening would run \$4.5m. Total replacement would be \$7m			
10	John B. Dennis (SR-93)		Realign/combine commercial driveways for safety	2025	\$ 1,2	270,000	\$ 1,162,230	\$ 1,200,000	Engineer's Notes	Say 1.2m if no signalization or structures work			
11	Lynn Garden Drive	Stone Drive (US-11W)	Improve interchange ramps	2025	\$ 5	30,000	\$ 485,025	\$ 500,000	Engineer's Notes	not sure of scope but \$0.5m not going to go very far.			
12	John B. Dennis (SR-93)	Moreland Drive	Improve interchange ramps	2025	\$ 6	510,000	\$ 558,236	\$ 600,000	Engineer's Notes	not sure of scope but \$0.6m not going to go very far. candidate for DD @ \$5 to 7m			
13	Hammond Avenue		Replace/widen railroad overpass	2040	\$ 7,2	220,000	\$ 4,240,989	\$ 8,000,000	Engineer's Notes	Widening would run \$4.5m. Total replacement would be \$8m			
15	Fort Henry Drive (SR-36)	Wesley Road / Rock Springs Road	Bridge Replacement	2017	\$ 9,2	250,000	\$ 10,723,285	\$ 12,000,000	Engineer's Notes	Assuming just bridge replacement while detouring onto adjacent structure then \$12m is in ball. If structure replacement while detouring onto adjacent structure			
16	Stone Drive (US-11)	North Fork Holston River	Bridge Replacement	2017	\$ 1,7	745,000	\$ 2,022,933	\$ 5,000,000	Engineer's Notes	candidate for widening with replacement to establish uniform roadway. Est. \$6 to 10m. Discussed with client 9/1. See Engineer's note for #17			
17	Stone Drive (US-11)	North Fork Holston River	Bridge Replacement	2017	\$ 2,9	947,000	\$ 3,416,381	\$ 5,000,000	Engineer's Notes	combine with ID 16 for total cost of \$6 to \$10m			
18	Fordtown Road	CSX Railroad	Bridge Replacement	2017	\$ 1,5	505,000	\$ 1,744,707	\$ 2,000,000	Engineer's Notes	assuming CB Hall can be used as detour say \$2m			
19	Old Blair Gap Road	Walker Fort Creek	Bridge Replacement	2017	\$ 4	196,000	\$ 575,000	\$ 750,000	Engineer's Notes	If culvert replacement \$ ok If bridge, on-site detour will be required : \$750,000			
21	Meadow Brooke Lane	Reedy Creek	Bridge Replacement	2017	\$ 8	351,000	\$ 986,542	\$ 1,200,000	Engineer's Notes	This appears to be two crossings. If culverts can be used \$1m. If bridges required: \$1.2m			
22	Industry Drive	Reedy Creek	Bridge Replacement	2017	\$ 2,8	331,000	\$ 3,281,905	\$ 3,280,000	Escalated Estimate				



		Project Informati	Fiscal Analysis									
Project ID	Route	From/To	Description	2040 LRTP Horizon Year	2040 LRTP Yea Expenditure (Y Cost		2022 Baseline Planning Level Cost Estimate (calculated)	Plann Estima	22 Baseline ing Level Cost ate (proposed 2045 LRTP)	2022 Baseline Planning Level Cost Estimate (adjustment notes)	AECOM Engineer's Comments	
23	John B. Dennis (SR-93)	CSX Railroad	Bridge Replacement	2017	\$ 2,081	,000	\$ 2,412,449	\$	3,000,000	Engineer's Notes	Probably \$3m if relocation or staged construction.	
24	Rock Springs Road	Railroad Tunnel	Replace/widen railroad tunnel	2040	\$ 3,790	,000	\$ 2,226,226	\$	6,000,000	Engineer's Notes	assuming this is road under railroad means RR structure has to be replaced requiring detour of RR or permanent realignment of RR. Say \$6m min.	
29	Sevier Avenue	Poplar Street / Gibson Mill Rd	Realign	0	\$	-	\$ -	\$	2,500,000	Engineer's Notes	scope unclear but if RAB then \$2.5m	
36	Fort Robinson Bridge		Bridge Replacement	-	\$	-	-	\$	575,000	Engineer's Notes	Assume culvert and no onsite detour: \$575k	
101	Island Road Rebuild	Island Road	Memorial Boulevard / Golf Ridge Drive	2022	\$ 3,500	,000	\$ 3,500,000	\$	3,500,000	TIP		
102	Main Street Kingsport Rebuild	Main Street	Clinchfield Street / Sullivan Street	2020	\$ 6,000	,000	\$ 6,000,000	\$	6,000,000	TIP	OK, this must be sidewalks and/or MUP	
107	SR-93 (Sullivan Gardens Parkway)	SR-93 (Sullivan Gardens Parkway)	Derby Drive / Murrell Road	-	\$	-	\$ -	\$	3,000,000	Engineer's Notes	say \$3m	
110	SR-126 (Memorial Boulevard) – Phase I	SR-126 (Memorial Boulevard)	Harbor Chapel Road / Cooks Valley Road	-	\$	-	\$ -	\$	68,000,000	IMPROVE Act		
111	SR-126 (Memorial Boulevard) – Phase II	SR-126 (Memorial Boulevard)	Cooks Valley Road / I-81	-	\$	-	\$ -	\$	64,700,000	IMPROVE Act		
113	Indian Trail Drive	N Eastman Rd / Stone Drive	Construct new 2 lane roadway to divert traffic from Eastman Road to Stone Drive	0	\$	-	\$ -	\$	4,000,000	Engineer's Notes	Assume \$4m; \$3m roadway and \$1m for structure	
114	Mitchell Road Connector	Fordtown Road / Eastern Star Road	Construct new 3 lane roadway to link at I-26 interchange	Illustrative (2017)	\$ 5,100	,000	\$ 5,912,298	\$	6,000,000	Engineer's Notes	Assume grade separation of I-26 \$3m for roadway and \$3m for bridge	
115	l-81	Fort Henry Drive (SR-36) (MM 59) / Tri-Cities Crossing (MM 56)	Widen from 4 to 6 lanes	Illustrative (2017)	\$ 18,000	,000	\$ 20,866,933	\$	20,870,000	Escalated Estimate		
116	Stone Drive (US-11W)	Hammond Avenue / East Avenue	Widen from 4 to 6 lanes	Illustrative (2017)	\$ 22,000	,000	\$ 25,504,030	\$	25,500,000	Escalated Estimate		
117	SR-357 Extension	Memorial Boulevard (SR-126) / US- 11W	Extend Roadway (New Alignment)	Illustrative (2017)	\$ 19,000	,000	\$ 22,026,207	\$	22,000,000	Engineer's Notes	OK if structures are involved. Review TDOT study to confirm costs before moving forward.	
118	US-11W/SR-1 Frontage Road	Lewis Lane / Hammond Avenue	Develop in conjunction with economic development along US- 11W/SR-1	Illustrative (2017)	\$ 12,000	,000	\$ 13,911,289	\$	13,910,000	Escalated Estimate		
120	I-26	MM8 / MM10	Widen from 4 to 6 lanes	Illustrative (2017)	\$ 13,000	,000	\$ 15,070,563	\$	15,100,000	Escalated Estimate		
121	I-81 Buttermilk Road Connection	Buttermilk Road / Fall Creek Road	New 2-lane connector to link proposed interchange at Buttermilk Road	Illustrative (2017)	\$ 8,000	,000	\$ 9,274,193	\$	9,270,000	Escalated Estimate		
122	Jack White Drive	Current Terminus / Stone Drive	Extend west to connect to Stone Drive at Idle Hour Road	Illustrative (2017)	\$ 11,000	,000	\$ 12,752,015	\$	12,750,000	Escalated Estimate		
123	Netherland Inn Road/Stone Drive Connector	Union Street / Netherland Inn Road	Realign and reconstruct Union Street to improve access to Netherland Inn Road	Illustrative (2017)	\$ 5,000	,000	\$ 5,796,370	\$	5,800,000	Engineer's Notes	OK assuming at grade crossing. If structure over RR then \$8m	
124	Sullivan Garden Parkway (SR-93)	Lonestar Road / Derby Drive	Widen from 2 to 4 lanes	Illustrative (2017)	\$ 8,200	,000	\$ 9,506,047	\$	10,000,000	Engineer's Notes	assume one stream crossing and parallel stream impacts \$10m	



		Project Informati	ion	Fiscal Analysis									
Project IC	Route	From/To	Description	2040 LRTP Horizon Year	2040 LRTP Year of Expenditure (YOE) Cost	2022 Baseline Planning Level Cost Estimate (calculated)	2022 Baseline Planning Level Cost Estimate (proposed for 2045 LRTP)	2022 Baseline Planning Level Cost Estimate (adjustment notes)	AECOM Engineer's Comments				
125	Fort Henry Drive (SR-36)	Lebanon Road / Wendover Drive	Improve vertical geometry	Illustrative (2017)	\$ 3,300,000	\$ 3,825,604	\$ 3,830,000	Escalated Estimate					
127	Stone Drive (US-11W)	Deneen Lane / East Avenue	Widen from 4 to 6 lanes	Illustrative (2017)	\$ 11,000,000	\$ 12,752,015	\$ 12,750,000	Escalated Estimate	major bridge over stream could add another \$6m. Need to verify				
128	Fort Henry Drive (SR-36)	Fort Henry Drive (SR-36)	I-81 / Airport Road (SR-75)	2021	\$ 88,600,000	\$ 88,600,000	\$ 88,600,000	TIP	seems little high but not knowing scope; OK				
129	Tri-Cities Crossing	Kendricks Creek Road / Fordtown Road	Widen from 2 to 3 lanes with economic development	2040	\$ 4,880,000	\$ 2,866,486	\$ 2,870,000	Escalated Estimate					
130	Eastern Star Road	Mitchell Road / Fordtown Road	Widen from 2 to 3 lanes with economic development	2040	\$ 4,150,000	\$ 2,437,688	\$ 2,440,000	Escalated Estimate					
131	Fort Henry Drive (SR-36)	Holston River Bridge / Hemlock Road	Safety improvements, install median, add turn lanes, widen bridge	2025	\$ 4,560,000	\$ 4,173,046	\$ 7,170,000	Engineer's Notes	If major bridge widening, add \$3m				
132	Netherland Inn Road	Center Street (SR-36) / Ridgefields Road	Widen from 2 to 3 lanes	2040	\$ 9,030,000	\$ 5,304,173	\$ 8,000,000	Engineer's Notes	assume bridge widening over I26; \$8m total				
134	Bloomingdale Pike	Stone Drive West (US-11W) / Shipp Springs Road	Widen from 2 to 3 lanes to include center turn lane and other safety improvements	2040	\$ 3,250,000	\$ 1,909,032	\$ 2,000,000	Engineer's Notes	Say \$2m				
136	Fort Henry Drive (SR-36)	Moreland Drive/Hemlock Road / I- 81	Improve intersections, coordinate signal timings, and evaluate driveway cuts	2025	\$ 1,900,000	\$ 1,738,769	\$ 1,740,000	Escalated Estimate					
137	Fairview Avenue	Stone Drive (US-11W) / Virgil Avenue	Improve shoulders and geometry with spot safety improvements	2025	\$ 790,000	\$ 722,962	\$ 720,000	Escalated Estimate					
138	Gravely Road	Lynn Garden Drive (SR-36) / Shipps Spring Road	Improve shoulders and geometry with spot safety improvements	2025	\$ 840,000	\$ 768,719	\$ 770,000	Escalated Estimate					
140	Bell Ridge Road/Drive	May Avenue / Harrison Avenue	Improve shoulders and geometry with spot safety improvements	2025	\$ 960,000	\$ 878,536	\$ 880,000	Escalated Estimate					
141	Tranbarger Drive	Lynn Garden Drive (SR-36) / Virgil Avenue	Improve shoulders and geometry with spot safety improvements	2025	\$ 920,000	\$ 841,930	\$ 840,000	Escalated Estimate					
142	Summerville Road	Fort Henry Drive (SR-36) / New Summerville Road	Improve shoulders and geometry with spot safety improvements	2040	\$ 2,170,000	\$ 1,274,646	\$ 1,270,000	Escalated Estimate					
143	Lebanon Road	Fort Henry Drive (SR-36) / Ashley Oaks Private Drive	Improve sight distance and extend left turn lanes	2025	\$ 440,000	\$ 402,662	\$ 400,000	Escalated Estimate					
145	IMay Avenue	Wampler Street / Lynn Garden Drive (SR-36)	Improve shoulders and geometry with spot safety improvements	2025	\$ 320,000	\$ 292,845	\$ 290,000	Escalated Estimate					
147	South Wilcox Drive Extension	John B. Dennis (SR-93) / Moreland Drive	Extend 4-lane roadway with economic development	2025	\$ 20,270,000	\$ 18,549,921	\$ 18,550,000	Escalated Estimate					
148	Moreland Drive - Lebanon Road Connector	Moreland Drive / Lebanon Road	New 3-lane bypass away from Fort Henry Drive	2040	\$ 8,670,000	\$ 5,092,711	\$ 6,500,000	Engineer's Notes	Stream crossing could add for total of \$6.5m				
149	SR-357 Extension	Memorial Boulevard (SR-126) / I- 81	Extend SR-357 northbound with limited access 2-lane cross section with wide shoulders	2040	\$ 14,450,000	\$ 8,487,852	\$ 50,000,000	Engineer's Notes	Average of 2 options identified in recent TDOT study.				
150	iFall Creek Road	Hemlock Road / Memorial Boulevard (SR-126)	Improve shoulders and geometry with spot safety improvements	2040	\$ 5,780,000	\$ 3,395,141	\$ 3,400,000	Engineer's Notes	Assume retaining existing structure; OK				



		Project Informat	ion	Fiscal Analysis										
Project ID	Route	From/To	Description	2040 LRTP Horizon Year		LRTP Year of nditure (YOE) Cost	_		2022 Baseline Planning Level Cost Estimate (proposed for 2045 LRTP)	2022 Baseline Planning Level Cost Estimate (adjustment notes)	AECOM Engineer's Comments			
151	Hemlock Road	Fort Henry Drive / Fall Creek Road	Improve shoulders and geometry with spot safety improvements, add MUP	2040	\$	2,350,000	\$	1,380,377	\$ 1,380,000	Escalated Estimate				
152	Brickyard Bridge	Brickyard Bridge	MLK Extension / Cherokee Street	2023	\$	3,535,000	\$	3,535,000	\$ 3,535,000	TIP				
153	Cox Hollow Road	Snapps Ferry / Tri-Cities Crossing	Widen from 2 to 3 lanes with economic development	2040	\$	4,520,000	\$	2,655,024	\$ 2,660,000	Escalated Estimate				
154	East Sullivan Street	Church Circle / N Wilcox Drive	Widen from 2 to 3 lanes with multimodal and aesthetic improvements	2025	\$	6,330,000	\$	5,792,847	\$ 6,790,000	Engineer's Notes	run \$1million, cost mostly attributed to electric as they usually own the poles and			
155	Gibson Mill Road	Bloomingdale Pike / Stone Drive (US-11W)	Widen 2 to 3 lanes with improved left turns with economic development	2025	\$	2,410,000	\$	2,205,491	\$ 2,210,000	Escalated Estimate				
156	Huntington Hills Connector	Birchwood Road / Burke Drive	New 2-lane roadway to provide additional access	2040	\$	900,000	\$	528,655	\$ 530,000	Escalated Estimate				
157	Indian Trail Drive North	Pulitzer Place / John B. Dennis (SR- 93)	Re-alignment of existing horizontal curves and new two-lane roadway connection	2040	\$	2,350,000	\$	1,380,377	\$ 1,380,000	Escalated Estimate				
158	Jared Drive	Jared Drive	Moreland Drive / Riverport Road	2025	\$	2,280,000	\$	2,086,523	\$ 2,280,000	2040 LRTP Estimate				
159	Stone Drive (US-11W)	American Way / John B. Dennis (SR 93) NB Off-Ramp	Extend left turn lanes under John B. Dennis interchange	2025	\$	7,600,000	\$	6,955,077	\$ 6,960,000	Escalated Estimate				
160	Stone Drive (US-11W)	John B. Dennis (SR-93) / New Beason Well Road	Widen to 6 lanes	2040	\$	37,930,000	\$	22,279,877	\$ 22,280,000	Escalated Estimate				
161	Riverside Avenue Extension	Stone Drive (US-11W) / Center Street	New 3-lane roadway connecting Stone Drive to downtown Kingsport via Riverside Avenue	2040	\$	5,420,000	\$	3,183,679	\$ 3,184,000	Escalated Estimate				
162	West Sullivan Street	Roller Street / Lynn Garden Drive (SR-36)	Widen to 3 lanes	2025	\$	3,170,000	\$	2,900,999	\$ 2,900,000	Engineer's Notes	OK assuming existing stream structure retained and possibly widened			
163	Wilcox Drive (SR-126)	John B. Dennis (SR-93) / Industry Drive	Replace center turn lane with raised landscaped median providing left turn lanes	2040	\$	450,000	\$	264,328	\$ 1,000,000	Engineer's Notes	constructability will most likely raise costs to \$1m			
164	Airport Parkway (SR-357)	I-81 / SR-75	Access management improvements	2025	\$	570,000	\$	521,631	\$ 1,000,000	Engineer's Notes	Say \$1m to consider constructability			
165	Bloomingdale Road	John B. Dennis (SR-93) / Packinghouse Road	Improve shoulders and geometry with spot safety improvements	2025	\$	1,270,000	\$	1,162,230	\$ 1,160,000	Escalated Estimate				
166	Clinchfield Street	Center Street / Stone Drive (US- 11W)	Coordinate signal system to improve traffic flow	2025	\$	320,000	\$	292,845	\$ 500,000	Engineer's Notes	If interconnect signals say \$0.5m			
167	Fordtown Road	Eastern Star Road / Lebanon Road	Install left turn lanes at key intersections through industrial park	2040	\$	6,140,000	\$	3,606,603	\$ 3,610,000	Escalated Estimate				
168	Fort Henry Drive (SR-36)	Fort Henry Drive (SR-36)	Wesley Road / Rock Springs Road	2017	\$	12,829,000	\$	14,872,327	\$ 14,870,000	Escalated Estimate	OK assuming detour is other bridge			
169	John B. Dennis (SR-93)	Stone Drive (US-11W) / Bloomingdale Road	Implement access management	2025	\$	760,000	\$	695,508	\$ 1,000,000	Engineer's Notes	Constructability will push \$1m			
170	Lewis Lane	Rearden Lane / Ripley Street	Improve shoulders and geometry with spot safety improvements	2025	\$	1,040,000	\$	951,747	\$ 1,000,000	Engineer's Notes	round to \$1m			



		Project Informat	ion	Fiscal Analysis							
Project IC	Route	From/To	Description	2040 LRTP Horizon Year	2040 LRT Expenditi Co	ure (YOE)	Planning Est	Baseline g Level Cost timate culated)	2022 Baselin Planning Level (Estimate (propo for 2045 LRTF	ost Planning Level sed Estimate	Cost AECOM Engineer's Comments
172	Reservoir Road	Saratoga Road / Hood Road	Improve shoulders and geometry with spot safety improvements	2025	\$	990,000	\$	905,990	\$ 1,000,	000 Engineer's No	tes round to \$1m
175	l-26	Wilcox Drive (MM 4) / Rock Springs Road/SR-347 (MM6)	Add EB truck climbing lane	2025	\$	2,790,000	\$	2,553,245	\$ 2,550,	000 Escalated Estir	nate
176	I-81 - ITS Expansion	I-81	I-26 / Virginia State Line	2023	\$	2,200,000	\$	2,200,000	\$ 8,100,	DOO TIP	Recently increased in late Fall 2021. TIP to be updated to exact figure.
179	SR-93	SR-93 (Sullivan Gardens Parkway)	Morgan Lane / Baileyton Road	2022	\$	5,063,500	\$	5,063,500	\$ 5,063,	500 TIP	
183	SR-347 (Rock Springs Road)	Rock Springs Road	Cox Hollow Road / Westfield Place	2020	\$ 1	0,500,000	\$	10,500,000	\$ 10,500,	DOO TIP	
184	SR-126 (Memorial Boulevard) – Phase I	SR-126 (Memorial Boulevard)	East Center Street / Harbor Chapel Road	-	\$	-	\$	-	\$ 30,000,	000 Engineer's No	tes assuming interchange and bridge replacement/widening: \$30m
185	SR-347 (Rock Springs Road)	Rock Springs Road	Westfield Place / I-26	2020	\$ 1	0,500,000	\$	10,500,000	\$ 10,500,	DOO TIP	
188	I-81 NB	Moody Rd / Link Rd	l-81 NB Truck Climbing Lane	-	\$	-	\$	-	\$ 8,000,	000 Engineer's No	tes If interchange modification, \$8m
191	US-23	Kane Street / W Carters Valley Rd	Access management improvements, pedestrian accommodations, and coordination of traffic signals	-	\$	-	\$	-	\$ 2,000,	000 Engineer's No	tes If sidewalk/MUP, say \$2m
192	US-11W SB	Fairmont Drive / I-26	Add a SB lane	=	\$	-	\$	-	\$ 5,000,	000 Engineer's No	tes Say \$5m
195	I-26	MM3 / MM10	Widen from 4 to 6 lanes	=	\$	-	\$	-	\$ 100,000,	000 Engineer's No	tes Say \$50m to \$100m including interchange