



Incorporating Improvement into the STP local distribution

November 21, 2019

Review

How much of the region's annual allotment for improvement?

What is the definition of improvement?

**How much of the
region's annual
allotment should
be dedicated to
improvement?**

Options

A: Tie the amount of funding to be distributed to the amount of improvement realized

B: Tie the amount of funding to be distributed to the number of measures that improved

Set-aside % = improved %

Council	Units improved				
	Pavement condition	Congestion	Safety	Bridge condition	Multi-modal needs
A	(1)	3	2	8	(31)
B	7	(7)	(2)	47	12
C	4	(31)	18	34	(64)
D	(10)	(23)	37	49	(224)
E	(3)	389	44	964	819
Improved	11	392	101	1,102	831
Base total	664	6,985	3,236	37,012	17,435
% imp	1.6%	5.9%	3.2%	3.1%	4.9%

Total mark: \$100,000,000
Total improvement: 3.6%
Set-aside for improvement: \$3,626,695
 Set-aside for need: \$96,373,305

Set-aside based on # of measures improved

	Set-aside percentage per measure improved (12 councils x 5 measures = max of 60)					
# measures imp	1%		0.5%		0.25%	
5	5%	\$5,000,000	2.5%	\$2,500,000	1.25%	\$1,250,000
15	15%	\$15,000,000	7.5%	\$7,500,000	4%	\$3,750,000
60	60%	\$60,000,000	30.0%	\$30,000,000	15%	\$15,000,000

Based on regional mark = \$100 M

Staff recommendation

Tie set-aside % to improvement percentage

**What is the
definition of
improvement?**

Options to consider

A: Raw improvement to the performance factors

B: Improvement to the “% bad”

C: Cost effectiveness of A or B

Sample data

	Base Condition					Future Condition				
Council	Pavement condition	Congestion	Safety	Bridge condition	Multi-modal needs	Pavement condition	Congestion	Safety	Bridge condition	Multi-modal needs
A	24	173	115	136	1,049	25	170	113	128	1,080
B	85	361	204	585	1,243	78	368	206	538	1,231
C	108	447	302	1,692	3,222	104	478	284	1,658	3,286
D	102	453	413	2,453	3,727	112	476	376	2,404	3,951
E	345	5,551	2,202	32,146	8,194	348	5,162	2,158	31,182	7,375
Total	664	6,985	3,236	37,012	17,435	667	6,654	3,137	35,910	16,923

Raw improvement

Council	Bridge condition (sq ft of deck on bridges rated "poor")				Overall share – all measures		
	Base	Future	Imp	Share of imp	Base need	Future need	Share of imp
A	136	128	8	0.7%	3.2%	3.3%	0.7%
B	585	538	47	4.3%	6.6%	6.5%	13.9%
C	1,692	1,658	34	3.1%	11.0%	11.2%	11.5%
D	2,453	2,404	49	4.4%	12.5%	13.2%	8.2%
E	32,146	31,182	764	87.5%	66.7%	65.8%	65.8%
Total	37,012	35,910	1,102	100.0%	100.0%	100.0%	100.0%

Percent bad

	Bridge Condition				
Council	Base "poor"	Future "poor"	Total deck area	Base Poor/Total	Future Poor/Total
A	136	128	7,146	1.9%	1.8%
B	585	538	4,673	12.5%	11.5%
C	1,692	1,658	23,356	7.2%	7.1%
D	2,453	2,404	33,302	7.4%	7.2%
E	32,146	31,182	151,688	21.2%	20.6%
Total	37,012	35,910	220,165	16.8%	16.3%

Improvement to % bad

	Bridge condition (% poor)			Overall share – all measures		
Council	Base	Future	Share of imp	Base need	Future need	Share of imp
A	1.9	1.8	5.5%	3.2%	3.3%	2.7%
B	12.5	11.5	49.2%	6.6%	6.5%	36.2%
C	7.2	7.1	7.1%	11.0%	11.2%	13.8%
D	7.4	7.2	7.2%	12.5%	13.2%	15.5%
E	21.2	20.6	31.1%	66.7%	65.8%	31.8%
Total	50.2	48.2	100.0%	100.0%	100.0%	100.0%

Cost effectiveness of raw imp



Too many assumptions needed to produce a sample

- How much spent by council?
- What portion for each measure?

Comparison of improvement shares

	Share of need		Share of imp	
Council	Base need	Future need	Raw imp	Imp to % bad
A	3.2%	3.3%	0.7%	2.7%
B	6.6%	6.5%	13.9%	36.2%
C	11.0%	11.2%	11.5%	13.8%
D	12.5%	13.2%	8.2%	15.5%
E	66.7%	65.8%	65.8%	31.8%
Total	100.0%	100.0%	100.0%	100.0%

Staff recommendation

Improvement should be defined by the change to a council's "% bad".

Overall recommendation

Overall staff recommendation

Set aside a percentage of the region’s allotment for improvement that is equal to the percentage that the region improved the “% bad”, to be distributed based on each council’s proportional share of that improvement.

Council	Share of need	Share of imp	Needs-based mark	Imp-based mark	Total mark
A	3.3%	2.7%	\$3,221,157	\$86,906	\$3,308,063
B	6.5%	36.2%	\$6,302,361	\$1,169,976	\$7,472,337
C	11.2%	13.8%	\$10,811,782	\$444,328	\$11,256,110
D	13.2%	15.5%	\$12,768,281	\$501,680	\$13,269,960
E	65.8%	31.8%	\$63,665,980	\$1,027,549	\$64,693,529
Total	100%	100.0%	\$96,769,561	\$3,230,439	\$100,000,000

Overall regional improvement: 3.2%
 Improvement set-aside: \$3,230,439
 Needs-based set-aside: \$96,769,561

Final consideration

Council	Share of need	Share of imp	Total mark (need only)	Total mark (with imp)	Difference
A	3.3%	2.7%	\$3,328,688	\$3,308,063	-\$20,625
B	6.5%	36.2%	\$6,512,752	\$7,472,337	\$959,586
C	11.2%	13.8%	\$11,172,710	\$11,256,110	\$83,401
D	13.2%	15.5%	\$13,194,522	\$13,269,960	\$75,438
E	65.8%	31.8%	\$65,791,329	\$64,693,529	-\$1,097,800
Total	100%	100.0%	\$100,000,000	\$100,000,000	\$0



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