SMART SCALE REPORT

IMPROVING THE TRANSPORTATION PRIORITIZATION PROGRAM

MARCH 2026

OUTLINE

SMART SCALE FORMULA

      - ONE-LINE FORMULA

   - EXPANDED FORMULA

PAST DISTRIBUTIONS

MADRUS

ONE-LINE FORMULA

$$\frac{\{[Cw_{A,B,C,D}(Cw_1 \times Cv_1 + Cw_2 \times Cv_2)] + [Sw_{A,B,C,D}(Sw_1 \times Sv_1 + Sw_2 \times Sv_2)] + [Aw_{A,B,C,D}(Aw_1 \times Av_1 + Aw_2 \times Av_2 + Aw_3 \times Av_3)] + [EDw_{A,B,C,D}(EDw_1 \times EDv_1 + EDw_2 \times EDv_2 + EDw_3 \times EDv_3)] \times [Ew_{A,B,C,D}(Ew_1 \times Ev_1 + Ew_2 \times Ev_2)]\} \times \left(1 + \frac{Lw_1 \times Lv_1 + Lw_2 \times Lv_2}{100}\right)}{\underline{Funding\ Request}\ \ \$10,000,000}$$

Formula Terms:
- CV_1: Person Throughput, CV_2: Person Hours of Delay
- SV_1: EPDO Fatal & Injury Crashes, SV_2: EPDO Rate of Fatal & Injury Crashes
- AV_1: Access to Jobs, AV_2: Access to Jobs (Disadvantaged), AV_3: Multimodal Choices
- EDV_1: Economic Development Support, EDV_2: Intermodal Access & Efficiency, EDV_2: Travel Time Reliability
- EV_1: Air Quality & Energy, EV_2: Natural/Cultural Resources Penalty
- LV_1: Future Transportation Efficient Land Use, LV_2: Increase in Transportation Efficient Land Use
- $CW_{A,B,C,D}$, $SW_{A,B,C,D}$, $AW_{A,B,C,D}$, $EDW_{A,B,C,D}$, $EW_{A,B,C,D}$, $LW_{A,B,C,D}$: Factor weights by regional typology (A-D).

The one-line formula is based on the SMART SCALE technical guidebook, updated December 2025 and has been reviewed by OIPI staff.
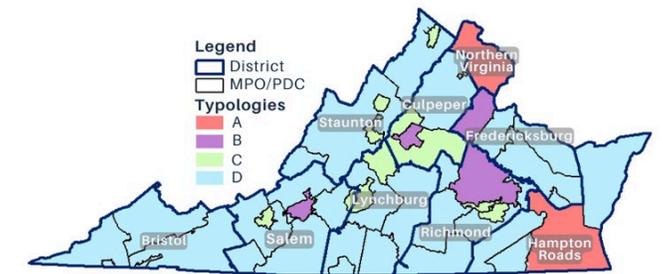
Factor	Safety		Congestion		Accessibility		Land Use		Economic Development	Environment
Round	6	5	6	5	6	5	6	5	No Change	No Change
Type A	15%	5%	45%	45%	25%	15%		20%	5%	10%
Type B	20%	20%	25%	15%	25%	20%	Up to 100% Added	15%	20%	Up to -5 Points	10%
Type C	30%	25%	20%	15%	15%	15%		10%	25%	10%
Type D	40%	30%	10%	10%	10%	10%		10%	30%	10%

EXPANDED FORMULA

$$\frac{N \times \left(1 + \frac{(Lw_1 \times Lv_1 [\textit{OIPI GIS Assessment: Existing Transportation Efficient Land Use}]) + Lw_2 \times Lv_2 [\textit{OIPI GIS Assessment: Planned Transportation Efficient Land Use})}{100}\right)}{\frac{\textit{Funding Request}}{\$10,000,000}}$$

Where N =

$$S_w^{A,B,C,D} \times \left\{ Sv_1 \left(\frac{[([(2019 - 2023 \textit{ VA Roads Data Number of Crashes}_{K,A,B,C \textit{ Injury Type}}) - PDO \textit{ Crashes}] \times EPDO [\textit{Crash Value Conversion } K + A = 170, B = 20, C = 10, O = 0])) \times (CMF_1 [\textit{range of } 0.2 - 0.86] + CMF_2 [\textit{range of } 0.2 - 0.86] + CMF_3 [\textit{range of } 0.2 - 0.86])]}{5 \textit{ years}} \right) \right.$$

$$\left. + Sv_2 \left[\frac{(2019 - 2023 \textit{ VA Roads Data Number of Crashes}_{K,A,B,C \textit{ Injury Type}} \times EPDO [\textit{Crash Value Conversion } K + A = 170, B = 20, C = 10, O = 0])}{(\textit{Total Vehicle Miles Traveled} \times 100,000,000)} \right] \right\}$$

$+ C_w^{A,B,C,D \textit{ Typology}} \times [Cv_1 [\text{Regional 7yr Person Throughput}] + Cv_2 [\text{Regional 7yr Person Hours of Delay}]]$

$+ A_w^{A,B,C,D \textit{ Typology}} \times [Av_1 [\text{GIS Cumul. Opp.: Jobs} \leq 45\text{min}] + Av_2 [\text{GIS: Jobs, Disadvantaged Pop.}] + Av_3 [\text{Multimodal Access Index}]]$

$+ ED_w^{A,B,C,D \textit{ Typology}} \times [EDv_1 [\text{VEDP Economic Impact Model}] + EDv_2 [\text{Freight Network Model: Intermodal Access}] + EDv_3 [\text{Reliability Model: Travel Time Variability}]]$

$+ E_w^{A,B,C,D \textit{ Typology}} \times [Ev_1 [\text{Emissions Model: VMT} \times \text{Emissions Factors from Congestion Output}]] - \frac{EV2_{GIS}}{100} \times 5$

*The formula is evolving as sub-calculations and variables are incorporated

SMART SCALE FUNDING DISTRIBUTIONS (HPP)

HPP Funding Results by District

District	Round 1	% of Total	Round 2	% of Total	Round 3	% of Total	Round 4	% of Total	Round 5	% of Total	Round 6	% of Total
Bristol	8.93	1%	2.82	0%	9.78	2%	16.82	3%	49.65	9%	0.00	0%
Culpeper	25.60	3%	36.67	6%	7.01	2%	51.31	10%	35.86	6%	36.41	10%
Fredericksburg	144.12	17%	23.53	4%	21.50	5%	40.13	8%	50.88	9%	16.80	4%
Hampton Roads	154.38	19%	150.33	23%	229.67	53%	50.94	10%	8.48	2%	27.33	7%
Lynchburg	22.67	3%	12.63	2%	8.18	2%	38.66	8%	6.67	1%	0.00	0%
Northern Virginia	339.80	41%	287.63	44%	107.01	25%	113.92	23%	38.55	7%	0.00	0%
Richmond	72.40	9%	90.40	14%	24.90	6%	62.77	13%	74.36	13%	255.84	67%
Salem	28.57	3%	38.34	6%	13.12	3%	38.33	8%	61.87	11%	0.00	0%
Staunton	36.86	4%	16.43	2%	14.01	3%	27.10	6%	67.00	12%	44.65	12%
Statewide	0.00	0%	0.00	0%	0.00	0%	50.00	10%	161.40	29%	0.00	0%
Total	833.33		658.78		435.18		489.98		554.72		381.03	