

District Four

Doddridge County Harrison County
 Marion County Monongalia County
 Preston County Taylor County

Total Road Miles in District: 4,761.44
 (excluding Interstate/Expressway)

Paved Primaries (US & WV Routes): 534.44 miles

Paved Secondaries: 1,614.26 miles

Surface Treated: 846.02 miles

Stone Stabilized: 1,389.84 miles

Other (primitive, unimproved, etc.): 376.88 miles

Interstate/Expressway: 117.78 miles

Employee Quota for Entire District: 489*

**this number includes all counties, interstate and expressways, District Sign Shop, District Bridge Department, District Construction, District Comptrollers Office, District Right of Way, District Equipment Shop, District Heavy Maintenance Crews, District Maintenance Office, and District Administration including Human Resources.*

Quota: 249 (six counties only)**

Current Staffing: 213 (six counties only)**

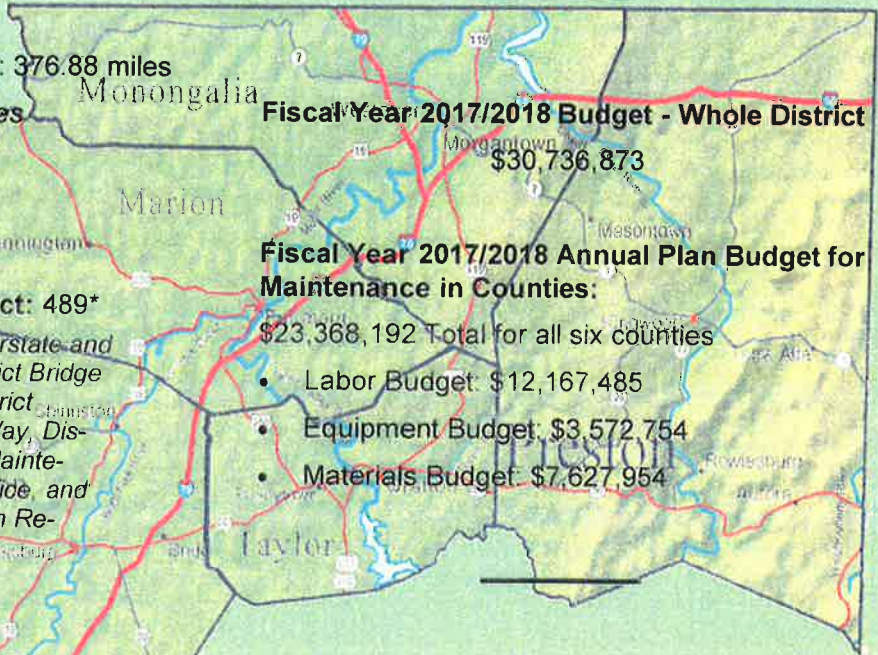
Equipment Operator 3: 25
 Equipment Operator 2: 112
 Craftworker: 5
 Laborer: 24
 Mechanic 3: 6
 Mechanic 2: 6
 Storekeeper: 6
 Office Assistant: 6
 Crew Leader: 23

***does not include Interstate and Expressway maintenance organizations, District Heavy Maintenance and Bridge Maintenance forces, District Shop, District Administration & other support organizations, etc.*

Bridges (over 20') and Less Than 20' Drainage Structures throughout the District:

Bridges: 1,052 Less Than 20' Structures: 1,782

- Bridges may also include city and county owned bridges which fall under the Bridge Inspection Program. All Bridges are inspected but only State-owned bridges can be maintained by State Forces.
- Less Than 20' Drainage Structures are smaller than bridges (horizontal waterway is less than 20') but are greater than 60" in diameter. All structures in the program are State owned.



WVDOH District Workers per District Population

	District Staffing	Population in District	District Funding (2015)
District 1	487	301,336	\$29,513,581
District 2	431	215,766	\$23,743,436
District 3	415	159,609	\$26,363,269
District 4	427	288,769	\$29,168,134
District 5	414	262,740	\$26,728,871
District 6	303	151,230	\$18,668,756
District 7	380	88,666	\$23,442,174
District 8	300	51,508	\$17,173,007
District 9	408	131,368	\$25,466,132
District 10	388	177,645	\$23,110,708
	3953	1,828,637	\$243,378,068

OVERVIEW OF PROGRAMS FROM THE DISTRICT PERSPECTIVE

In October each year, the District Design Department receives a memorandum from the State Highway Engineer's Office describing the Scope of Work, Funding Levels for A10 (*Federal Aid Other Paving*) and A13 (*State and Local Service Paving*) Programs, along with bid timelines, requirements for programming projects, etc. A20 (*Tar and Chip*), B20 (*State Force Skip Paving*), B30 (*District Forces Slide Repair*), and B31 (*Contract Slide Repair*) program funds are confirmed with the District by the Regional Programming Coordinator prior to the District sending any programming information through for projects.

Any additional funding for Interstate/APD projects also comes out as memorandums from the State Highway Engineer's Office, as well as any funding for special projects that may not be covered under a specific program.

PROGRAM DESCRIPTIONS:

A10 - Fed Aid Other (80/20) - 80% Federal Participating Funding for paving used for Federal Aid eligible routes other than Interstates, APD's and Expressways. These projects require full PS&E (Plans, Standards, & Estimates) submittals for contractor bidding.

A13 - State Local Service Paving - Paving either via Contract Bidding or Purchase Order Contract. Generally used only on State Local Service Routes, but may be used for Fed Aid eligible routes with full PS&E submittal to contract.

A20 - Tar and Chip (Surface Treatment) - District wide Tar and Chip Program by District/County Forces.

B20 - State Skip Paving - District wide skip paving, either via Purchase Order Contract or by District Forces.

B30 - District Forces Slide Repair - Programmed for slide repairs via Purchase Order Contract repair or by District Forces.

B31 - Contract Slide Repair - Programmed for slide repairs via Contract PS&E, but may also be used for Purchase Order Contract repairs.

C23 - Bridge Renovations - varies yearly; District-wide bridge renovation program.

C26 - Small Bridge Replacement - funding to replace bridges between 20' and 200' long.

C28 - Spot Painting of Bridges - funding for spot painting bridge substructures.

TYPICAL FUNDING FOR EACH PROGRAM DISTRICT-WIDE:

PAVING:

A10 Fed Aid (est.)	\$3,000,000.00	
A13 Spring SLS	\$1,220,000.00	(Distribution of funds/county for paving is approximated using factors of $\frac{2}{3}$ population and $\frac{1}{3}$ paved road miles)
A13 Summer SLS	\$4,343,200.00	
A20	\$ 844,000.00	
B20	<u>\$1,340,000.00</u>	
	\$10,747,200.00	

SLIDES:

B30	\$ 400,000.00
B31	<u>\$1,000,000.00</u>
	\$1,400,000.00

BRIDGES:

C23 (varies yearly)	\$ 250,000.00
C26 (varies yearly)	\$1,400,000.00
C28	<u>\$ 120,000.00</u>
	\$1,770,000.00

WVDOH District 4

Monongalia County

June 5, 2018

Contract Cost Data Sheet

Resurfacing

Two-lane, 1" preservation overlay:	\$121,781.17* per mile
Two-lane, 1.5" standard overlay:	\$99,274.35* per mile
Two-lane high friction treatment:	\$617,869.23* per mile
Two-lane, 5/8" thin overlay :	\$80,441.42* per mile
Four-lane, 3/4" thin overlay w/ shoulder reconstruction:	\$523,000.77* per mile

*Prices include all ancillary work to complete project; such as, traffic control, tack coat, patch/level and scratch courses, ditching, shoulder reconstruction, permanent roadway markings, etc.

Bridge

Complete replacement (Bridges < 100 ft):	\$505.15** per square foot of deck
Superstructure/deck rehabilitation (Bridges > 100 ft):	\$198.56** per square foot of deck
Deck surface overlay:	\$40.34** per square foot of deck

**Prices include all ancillary work to complete project; such as, traffic control, demolition of existing structure, detour installation and maintenance, approach roadways, roadway markings, etc.

Note: Values determined from average bid costs from Monongalia Co projects from 2017 and 2018 to date.

WVDOH District 4

Monongalia County

June 5, 2018

Contract Cost Data Sheet

Roadway Lighting

4 to 5 lane urban: \$552,652.78* per mile

*Includes costs of ancillary work: traffic control, erosion and environmental controls, electrical control stations/connections, etc.

Roadway Reconstruction

Add turning lanes, drainage (2-4 lane roads): \$3,606,642.58** per mile

Major interstate reconstruct w/ warranty: \$3,314,608.32** per mile

**Prices include all ancillary work to complete project; such as, traffic control, tack coat, ditching, shoulder reconstruction, permanent roadway markings, signal, signage and roadway marking alterations, etc.

Note: Values determined from average bid costs from Monongalia Co projects from 2017 and 2018 to date.

HOW A COUNTY'S ANNUAL PLAN BUDGET IS CALCULATED

An allocation formula has been established based on five (5) primary factors which have the greatest influence on maintenance expenses. These factors are:

- Climate (Snow Removal) = "C"
- Truck Density = "T"
- Vehicle (car) Density = "V"
- Cost of Hot Mix Asphalt (HMA) = "H"
- Cost of Aggregate (Stone) = "A"

These five (5) factors are multiplied by weighting factors (K_1 thru K_5) to come up with a Total County Factor (TCF), where:

$K_1 = 1.00$ (Climate)

$K_2 = 1.00$ (Truck Density)

$K_3 = 0.50$ (Vehicle/Car Density)

$K_4 = 1.00$ (HMA Activity Cost)

$K_5 = 0.35$ (Aggregate Activity Cost)

$$TCF = K_1C + K_2T + K_3V + K_4H + K_5A$$

The "TCF" is then multiplied by the weighted type of road miles to calculate the "Index" used in determining the percentage of budget allocation for each county:

- State Local Service (SLS) paved miles = "S" = 1.00
- Expressways, Trunklines, Feeders (XTF) miles = "X" = 1.20 *
- Traffic Bound Miles = "TB" = 1.30 **
- Unimproved miles = "U" = 0.20

*Interstate and APD miles are excluded from calculations for county computations.

**Traffic Bound Miles are all other travelled road miles in county not included in S, XTF, or U.

$$\text{Index} = TCF (1.20 X + 1.00 S + 1.30 TB + 0.20 U)$$

The county allocation formula determines the percentage of the total state budget for maintenance that a county will receive. In this way, the level of service will go up or down equally in each county as the total budget fluctuates. The county allocations are calculated by Central Office in Charleston and given to each District to then determine the best way to spend the allocations with guidance.

CURRENT ANNUAL PLAN BUDGETS FOR COUNTIES IN DISTRICT FOUR

<u>COUNTY</u>	<u>TOTAL BUDGET</u>	<u>PORTION OF BUDGET DEDICATED TO CORE PLAN (MOWING, DITCHING AND POTHOLE REPAIR)</u>	<u>PORTION OF BUDGET ESTIMATED FOR SRIC</u>	<u>PORTION OF BUDGET ESTIMATED FOR ALL OTHER NON-CORE PLAN MAINTENANCE ACTIVITIES*</u>
Doddridge	\$2,662,859.00	\$1,302,447.53	\$596,193.00	\$764,218.47
Harrison	\$4,261,075.00	\$2,346,177.82	\$741,359.80	\$1,173,537.38
Marion	\$3,795,753.00	\$2,250,849.73	\$610,132.00	\$934,771.27
Monongalia	\$4,353,619.00	\$2,600,067.27	\$685,018.00	\$1,068,533.73
Preston	\$5,695,367.00	\$2,332,511.82	\$2,008,384.20	\$1,354,470.98
Taylor	\$2,599,519.00	\$1,295,975.12	\$599,272.20	\$704,271.68

* Non-Core Plan Activities include, but are not limited to: Temporary Patching, Culvert Installation, Placing Dump Rock Ditches, Riprapping Embankments, Guardrail Maintenance, Dead Animal Pickup, Work Release Crew (when available) and Supervision, Sign Installation and Maintenance, Emergency Services, Equipment Transporting and Repairs, Supervision/Administration, Shop Expenses, Overhead, Leave Time, Training, Buildings and Grounds, etc.

Labor is generally 50% to 55% of the budget costs

Equipment is generally 15% to 20% of the budget costs.

Materials are generally 30% to 35% of the budget costs.

THE CORE MAINTENANCE PLAN

The Core Maintenance Plan consists of three general operations: Mowing, Ditching and Pothole repair.

These three items, plus SRIC, must comprise at least 70% of a maintenance organization's Annual Plan Budget. This is their CORE work.

A Core Plan is developed by each County and Expressway organization twice a year (January 1 to June 30 and July 1 to December 31).

The Plan is typically submitted in early December for the first six-month cycle and near the end of the fiscal year, which is June 30, for the second six-month cycle. Any planned work not completed is generally moved to the next CORE PLAN.

Maintenance organizations use the Core Plan to build their weekly work schedules. The intent is to design a well thought out Plan to be able to better schedule crews so they are not jumping around from one area of the county to the next, but working in more logical, systematic pattern to best utilize resources. However, there should be time built in to handle those situations that arise that cannot be planned, as emergencies and other issues that may need an immediate temporary fix happen at any time.

The Core Plan is updated monthly and submitted to the Maintenance Engineer to ensure operations are progressing.

Each task a maintenance organization performs has an Activity Code, each Activity Code has an established Performance Standard. These Standards outline the description, purpose, general crew size, daily accomplishments, equipment required and performance criteria for each maintenance activity.

SNOW REMOVAL AND ICE CONTROL (SRIC)

SRIC Priorities are set based on factors such as Surface Type, ADT, use, etc.

PRIORITY 1

These are generally our Primary Routes, Paved Major Secondary Routes and Paved School Bus Routes. They have the same pavement types and conditions.

The same SRIC Material can be used on different First Priority Routes.

PRIORITY 2

Generally these are lower volume Paved Secondary Routes, Surface Treated / Tar & Chip Routes, and all other school bus routes that were not in Priority 1.

Paved Secondaries will normally receive a treatment consisting of plowing and an application of abrasive/chemical mix applied to hills, hazardous curves, intersections, railroad crossings, and other potential high accident areas.

Surface Treated Routes will normally receive plowing with abrasives only applied to hills, hazardous curves, intersections, railroad crossings and other potential high accident areas. Salt and other ice melting chemicals CANNOT BE APPLIED to these routes.

PRIORITY 3

These are usually Stone Stabilized Routes, Surface Treated, or very low volume Paved Routes.

Regardless of pavement type, Priority 3 Routes will receive plowing only, except abrasives may be used on steep grades, hazardous curves, intersections, railroad crossings, and other potential high accident areas. NO DEICING CHEMICALS ARE TO BE USED unless directed by management. Policy states these routes are to be treated for chain traffic only, however we obviously go above and beyond what policy dictates.

PRIORITY 4

Will receive SRIC treatment only in situations deemed necessary for the safety of the traveling public under special circumstances.

COUNTY	PRIORITY 1 ROAD MILES	PRIORITY 2 ROAD MILES	PRIORITY 3 ROAD MILES	PRIORITY 4 ROAD MILES
Doddridge	127.17	103.10	220.09	87.69
Harrison	129.94	247.68	363.00	26.99
Marion	220.01	294.31	285.29	26.99
Monongalia	246.93	213.94	355.53	83.62
Preston	302.51	447.42	503.37	50.42
Taylor	116.22	140.76	141.94	21.54