

## NCDOT Portable Vehicle Classification Count Validation Rules (13 Vehicle Class Scheme)

### Configuration Check

Data was collected on all lanes  
 Data was collected for the same 48 hours for all lanes  
 All data was collected on weekdays

### Hourly Count By Lane Checks

<u>Attribute</u>	<u>Type</u>	<u>Criteria</u>	<u>Qualification</u>
Total Volume	No Data	= 0	Between 7AM and 8PM
Class 14	High Errors	> 10% of Hourly Total + Class 14	Hourly Total > 200
Class 15	High Errors	> 10% of Hourly Total + Class 15	Hourly Total > 200
Cars vs. 2A4T	Unusual Pattern	Class 3 > Class 2	Hourly Total > 200
MC	Extreme Class	> 10% of Hourly Total	Hourly Total > 200 and Between 7AM and 8PM
Bus	Extreme Class	> 10% of Hourly Total	Hourly Total > 200 and Between 7AM and 8PM
SU	Extreme Class	Sum Class 4 - 7 > 20% Hourly Total	Hourly Total > 200 and Between 7AM and 8PM
MU	Extreme Class	Sum Class 8 - 13 > 33% Hourly Total	Hourly Total > 200 and Between 7AM and 8PM

### Daily Counts by Lane Checks

<u>Attribute</u>	<u>Type</u>	<u>Criteria</u>	<u>Qualification</u>
Total Volume	No Data	= 0	None
Class 14	High Errors	> 10% of Total + Class 14	None
Class 15	High Errors	> 10% of Total + Class 15	None
Cars vs. 2A4T	Unusual Pattern	2A4T > Cars	None
MC	Extreme Class	> 4% of Total	None
Bus	Extreme Class	> 4% of Total	None
SU	Extreme Class	Sum Class 4 - 7 > 15% Total	None
MU Low Volume	Extreme Class	Sum Class 8 - 13 > 15% Total	Total < 2000
MU	Extreme Class	Sum Class 8 - 13 > 35% Total	Total >= 2000

### Directional Daily Total Comparisons

<u>Attribute</u>	<u>Type</u>	<u>Criteria</u>	<u>Qualification</u>
Directional Volume	Imbalanced Flow	DV1 > 135% DV2 or DV1 < 65% DV2	Lowest Dir Volume < 3000
Directional Volume	Imbalanced Flow	DV1 > 115% DV2 or DV1 < 85% DV2	Lowest Dir Volume >= 3000
Passenger Vehicles	Imbalanced Flow	PV1 > 135% PV2 or PV1 < 65% PV2	Lowest Dir Volume < 3000
Passenger Vehicles	Imbalanced Flow	PV1 > 115% PV2 or PV1 < 85% PV2	Lowest Dir Volume >= 3000
Single Unit Trucks	Imbalanced Flow	SU1 > 165% SU2 or SU1 < 35% SU2	Lowest Dir Volume < 3000
Single Unit Trucks	Imbalanced Flow	SU1 > 125% SU2 or SU1 < 75% SU2	Lowest Dir Volume >= 3000
Multi Unit Trucks	Imbalanced Flow	MU1 > 165% MU2 or MU1 < 35% MU2	Lowest Dir Volume < 3000
Multi Unit Trucks	Imbalanced Flow	MU1 > 125% MU2 or MU1 < 75% MU2	Lowest Dir Volume >= 3000

### Daily Two Way Total Comparisons

<u>Attribute</u>	<u>Type</u>	<u>Criteria</u>	<u>Qualification</u>
Directional Volume	Inconsistent Pattern	DV1 > 120% DV2 or DV1 < 80% DV2	None
Passenger Vehicles	Inconsistent Pattern	PV1 > 120% PV2 or PV1 < 80% PV2	None
Single Unit Trucks	Inconsistent Pattern	SU1 > 135% SU2 or SU1 < 65% SU2	None
Multi Unit Trucks	Inconsistent Pattern	MU1 > 135% MU2 or MU1 < 65% MU2	None

### Total Volume Class Distribution Checks

<u>Attribute</u>	<u>Type</u>	<u>Criteria</u>	<u>Qualification</u>
Cars vs. 2A4T	Unusual Pattern	2A4T > 50% Cars	None
MC	Extreme Class	> 3% of Total	None
Bus	Extreme Class	> 3% of Total	None
SU	Extreme Class	Sum Class 4 - 7 > 10% Total	None
ST	Extreme Class	Sum Class 8 - 10 > 16% Total	None
MT	Extreme Class	Sum Class 11 - 13 > 2% Total	None