

VIRGINIA DEPARTMENT OF TRANSPORTATION

MATERIALS DIVISION

MEMORANDUM

GENERAL SUBJECT: Chapter 3 Manual of Instructions	NUMBER: MD 400-16
SPECIFIC SUBJECT: Supplemental requirements for rock core description.	DATE: June 24, 2016
	SUPERSEDES: N/A
APPROVED:	Charles A. Babish, PE State Materials Engineer Approved: _____

EFFECTIVE DATE

- This memorandum is effective upon receipt.
-

PURPOSE/NEED/SCOPE/REQUIREMENTS

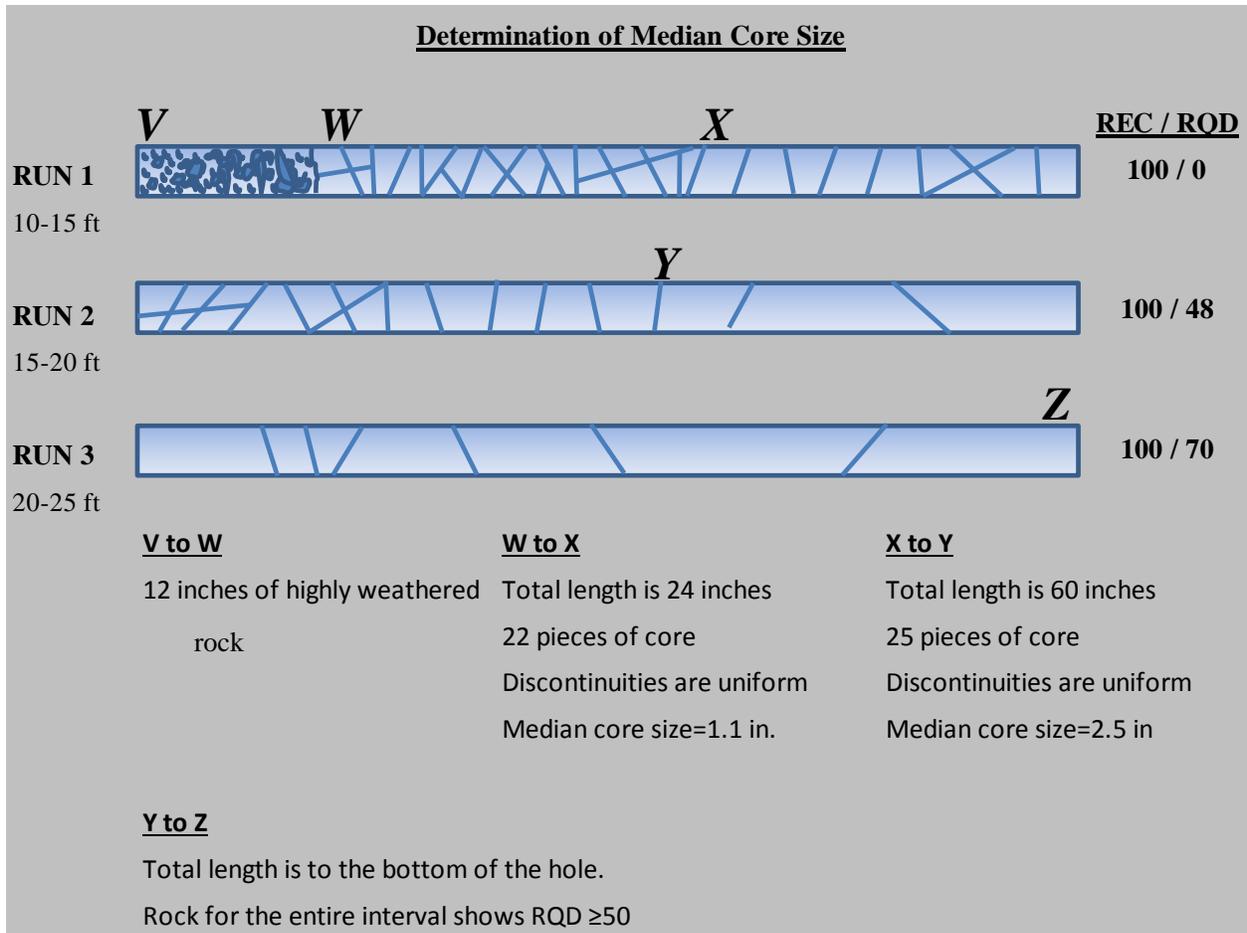
- To enhance the nature of our rock core description, Section 303.05 has been changed. The following text is added as the ultimate subsection of Section 303.05 (i.e., prior to Section 303.06)
-

Changes are **Shaded**

PROCEDURES

- **Median Core Size** – As an enhancement to the conventional determination of RQD, based on the driller’s machine run, field geologists/engineers shall calculate a median core size and determine the upper-most elevation where RQD \geq 50 is observed in the drill hole. The uppermost elevation of RQD \geq 50 is determined independent from the machine run. Intervals of rock core with RQD values less than 50, moderately hard to very hard and moderately weathered to unweathered shall be described by their median core size. Such intervals shall be determined based on observations of the rock core, irrespective of the machine run. Median core size shall be determined over an interval no less than 2-feet long. Median core size determinations shall be tabulated by interval depths and presented in the gINT boring

log descriptions. The top-most elevation of any 5-ft long rock-core interval showing RQD value greater than 50 shall also be presented in the gINT boring log description. Refer to illustration and example below.



Example:

Chopawamsic formation, Highly weathered to slightly weathered below 11.0 ft, soft to hard below 11.0 ft, gray and green QUARTZ MUSCOVITE SCHIST; thin foliation present with dip of 20 to 30 degrees, highly fractured to moderately fractured below 18 ft with primary joint set at 5 to 35 degrees, joints typically infilled with quartz and slightly rough.

- (11.0 to 13.0 ft, median core size 1.1 in)
- (13.0 to 18.0 ft, median core size 2.5 in)
- (18.0 ft to total depth, RQD≥50)

NOTES

- N/A

REFERENCES

- N/A

COPY DISTRIBUTION:

Deputy Chief Engineer
Division Administrators
District Administrators
District Location & Design Engineers
District Construction Engineers
District Maintenance Engineers
District Bridge Engineers
District Traffic Engineers

VDOT Resident Engineers
Federal Highway Administration
Virginia Ready Mix Association
Precast Concrete Association of Virginia
Virginia Transportation Construction Alliance
Virginia Asphalt Association
American Concrete Paving Association Mid-Atlantic Chapter
Old Dominion Highway Contractors Association