

ROADSIDE DEVELOPMENT SHEET - NMP

PROJECT:
PPMS# _____ **DATE:** _____
ISSUED BY: _____

Project Number	Area	Fertilizer	Lime*	Fertilizer Quantities	Lime Quantities*
TOPSOIL 2" CLASS A	0				
TOPSOIL 2" CLASS B	0				
REGULAR SEED	0				
OVER SEEDING	0				
TEMPORARY SEEDING	0				

Active Construction Fertilizer Guidance
 Suggested Fertilizer Analysis based on NMP and Soil Tests

This table provides guidance for the amount of fertilizer that can be applied according to the NMP. These are examples of fertilizers and their rates (lb/A) that can be used to meet each N-P-K ratio as indicated from laboratory soil test levels. Other ratios may be used as long as the desired pounds of nutrients per acre of N and P₂O₅ applied are the same. There is no restriction on the amount of K₂O and lime that can be applied in addition to the quantity specified. No additional P₂O₅ can be applied for the term of the project without a new soil sample and calculation of the desired pounds of nutrients per acre are based on the soil test and this table. Remember to report all fertilizer and lime applications on a worksheet attached to the NMP.

P ₂ O ₅ Level ¹	Suggested Fertilizer Analysis	Desired Pounds of Nutrients per Acre (N-P ₂ O ₅ -K ₂ O)					Lime ⁴
		45-0-0	45-45-45	45-90-45	45-90-90	45-170-90	
Exception ²	5-10-10				900 ²		2 ton/A of lime at 85% or more CCE
L- to L	5-10-10 Plus 0-46-0				900 of 5-10-10 plus 175 of 0-46-0		Soil Test Rate
L+ to M-	15-30-15			300			Soil Test Rate
M to M+	10-10-10		450				Soil Test Rate
H- to VH	46-0-0	98 ³					Soil Test Rate

Nitrogen (N) application is limited to 45 lb/A of N (1 lbs/1000 ft²) at each application and separated by at least 30 days with a maximum of 90 lb/A (2 lbs/1000 ft²) per year. N application is limited to 120 lb/A per year if applied as a fertilizer with equal or greater than 4.5% water insoluble nitrogen (WIN) as indicated by the guaranteed analysis (provided by manufacturer). For example, a fertilizer with analysis of 15-15-15 and 4.5% WIN will supply 30% of the total amount of N as WIN [calculation (4.5/15) x 100=30%]. Use a slow release N product (i.e. 34-0-0) plus 0-0-60 to create a custom blend when P can't be used. Local farm cooperatives will custom mix fertilizers.

Organic Sources of nutrients may be used for only for Active Construction. They should be applied to supply 45-50 lbs/A of plant available nitrogen (PAN).

Nutrient application **set-backs** as set forth in Section 1B (e.g. 100 feet from wells or springs, 50 feet from surface water, 50 feet from sinkholes, 50 feet from naturally occurring limestone outcrops and 25 feet from all other naturally occurring rock outcrops) will be rigorously followed. However, nutrients may be applied closer to surface waters when appropriate erosion and sediment control BMP's are in place.

¹ These indicate the level of P₂O₅ reported in the soil test, i.e. L=Low, M=Medium, H=High, and VH=Very High. When the soil test level of P₂O₅ is at H- or greater, no P may be applied.

² The only time this rate is applied is if the total disturbed area for the project is less than 2 acres AND the subsol is exposed. This amount of N and P₂O₅ may be applied without a soil test as a one-time application.

³ This ratio may be used when P₂O₅ may not be applied OR when a soil test is not taken but N is required to improve turf quality for site less than 2 acres, as a one-time application.

⁴ Lime quantities will be calculated based on soil test buffer pH or use the laboratory's lime recommendation. A Virginia certified agricultural lime with the calcium carbonate equivalent (CCE) of 85% or more may be used; or a soil amendment with documented liming capacity (CCE determined by VDACS) may be used as long as it is applied at a rate equal to the neutralizing power of calcium carbonate (100% CCE). Either type must be on the VDOT Approved Agricultural Liming Materials List. Calculation example: if the CCE of the soil amendment is 55% and the soil test requires 2 tons/A of agricultural grade lime with 100% CCE, then [(100/55) x 2 = 3.63] 3.63 tons/acre of 55% CCE soil amendment will be required.

Updated 5/22/08

ROADSIDE DEVELOPMENT NMP SUMMARY

PROJECT NUMBERS	Tons of Fertilizer	Tons of Fertilizer	Tons of Fertilizer	Tons of Lime*	Tons of Lime*
	46-0-0	5-10-10	20-20-20	= or > 85% CCE	< 85% CCE
TOTAL					

±DENOTES ITEM(S) TO BE PAID FOR ON BASIS OF PLAN QUANTITIES IN ACCORDANCE WITH CURRENT ROAD AND BRIDGE SPECIFICATIONS.

* Lime quantities will be calculated based on soil test buffer pH or use the laboratory's lime recommendation. A Virginia certified agricultural lime with the calcium carbonate equivalent (CCE) of 85% or more may be used; or a soil amendment with documented liming capacity (CCE determined by VDACS) may be used as long as it is applied at a rate equal to the neutralizing power of calcium carbonate (100% CCE). Either type must be on the VDOT Approved Agricultural Liming Materials List. Calculation example: if the CCE of the soil amendment is 55% and the soil test requires 2 tons/A of agricultural grade lime with 100% CCE, then [(100/55) x 2 = 3.63] 3.63 tons/acre of 55% CCE soil amendment will be required. Use Excel formula BELOW.

3.636 ton/A should be applied

Notes for Nutrient Management Plan(NMP):

Approximately _____ acres will be disturbed on this project and will require the establishment of grasses and/or legumes.

NOTES FOR FIELD USE ONLY

Soil sampling and testing shall be executed prior to lime and nutrient application for new construction or repair of previously vegetated areas.

All fertilizer will be applied between March 15th and November 1st. Fertilization outside of this window may result in lost nutrients. In the Fredericksburg, Hampton Roads and Richmond Districts, fertilizers may be applied from March 1 to November 15. If the Engineer request that fertilizer must be applied outside of this fertilization window then the fertilizer must be applied at the temporary seeding fertilizer rate.

The temporary seeding fertilizer rate is defined as 50% of the lbs/acre of the fertilizer ratio specified for regular seeding and lime at the rate of 1 tons/acre.

All fertilizer ratios given on an (N-P₂O₅-K₂) basis.

This NMP was developed based on soil test for this project. The NMP allows for one for one application of fertilizer with regular seeding and one application of fertilizer with over seeding. The fertilizer rate is limited to 45 lbs/acre of nitrogen (1 lbs/1000 ft²) at each application and separated by at least 30 days. A maximum of 90 lbs/acre (2 lbs/1000 ft²) of 100 % water soluble nitrogen (WSN) may be applied in accordance with this NMP. The addition of any additional fertilizer is forbidden unless a new NMP is developed based on a soil test of the area requiring fertilization. Please contact the District Roadside Manager to have a soil sample taken and NMP prepared.

For overseeding nitrogen can be applied at a rate of 98 lbs/acre of 46-0-0 (1 lbs/1000 ft²) and lime at the rate of 2 tons/acre if the overseeding is completed at least 30 days after the regular seeding. If overseeding is to be completed outside of the fertilization window the fertilization application rate shall be cut by 50% to 49 lbs/Ac of 46-0-0 and 2 ton/Ac lime.

If fertilizer is applied at the temporary seeding fertilization rate with a temporary seeding mix the nitrogen lbs/1000 ft² **is not included** in the calculations of the maximum of 90 lbs/acre because the area will be regraded when construction resumes.

If fertilizer is applied at the temporary seeding fertilization rate with a regular seeding mix, because the normal fertilization window is closed, on an area that is at final grade the nitrogen lbs/1000 ft² **is included** in the calculations of the maximum of 90 lbs/acre (2 lbs/1000 ft²) per year.

The Engineer will require the contractor to perform overseeding when less than 75% but greater than 50% uniform stand of the permanent grass specified in the mixture is obtained. (Annual species such as rye and millet are temporary varieties and require supplemental seeding). Recommendations for the application of seed mixtures, fertilizer, lime, etc. are to be obtained from the District Roadside Manager if less than 50% uniform stand of the permanent grass specified in the mixture is obtained. A new NMP will be developed based on a soil test of the area requiring fertilization. Please contact the District Roadside Manager to have a soil sample taken and NMP prepared.

VDOT will recognize environmentally sensitive sites as defined in Section 1A of the 2005 Virginia Nutrient Management Standards and Criteria and limit N and P applications appropriately. Nutrient application set-backs as set forth in Section 1B (e.g. 100 feet from wells or springs, 50 feet from surface water, 50 feet from sinkholes, 50 feet from naturally occurring limestone outcrops and 25 feet from all other naturally occurring rock outcrops) will be rigorously adhered to. However, rock cuts that are made during the construction of this project are not classified as naturally occurring rock outcrop and fertilizer can be applied within 50 feet of surface water if strict E&S controls are in place.

In order to maximize fertilizer effectiveness and uptake efficiency, soil pH **must be adjusted** to the optimal range of 6.0 to 6.5 whenever fertilizers are applied. For normal soil materials, liming recommendations will be based upon standard agronomic criteria to maintain soil pH between 6.0 and 6.5. Lime quantities will be calculated based on soil test buffer pH or use the laboratory's lime recommendation. A Virginia certified agricultural lime with the calcium carbonate equivalent (CCE) of 85% or more may be used; or a soil amendment with documented liming capacity (CCE determined by VDACS) may be used as long as it is applied at a rate equal to the neutralizing power of calcium carbonate (100% CCE). Either type must be on the VDOT Approved Agricultural Liming Materials List.