

## NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

MEMORANDUM

**TO:** Chairman Martin E. Nohe and Members  
Northern Virginia Transportation Authority

**FROM:** Monica Backmon, Executive Director

**DATE:** November 4, 2016

**SUBJECT:** Approval of Reallocation of Congestion Mitigation and Air Quality (CMAQ) funds  
for the City of Alexandria

---

1. **Purpose.** To seek Northern Virginia Transportation Authority (NVTA) approval for Congestion Mitigation and Air Quality (CMAQ) funds Reallocation Request for the City of Alexandria.
2. **Suggested Motion:** *I move approval of the reallocation of Congestion Mitigation and Air Quality (CMAQ) funds for the City of Alexandria.*
3. **Background:** On September 11, 2008, the Authority delegated the authority to approve requests to reallocate Congestion Mitigation and Air Quality (CMAQ) and Regional Surface Transportation Program (RSTP) funding between projects that were previously approved by the NVTA to the Regional Jurisdiction and Agency Coordinating Committee (RJACC). However, the Authority will need to approve the transfer requests for new projects before any funds can be reallocated.

On October 21, 2016, the City of Alexandria requested the following reallocations:

- \$300,000 of previously allocated CMAQ funds from Landmark Transit (UPC 50431) to Van Dorn Metrorail Station Area Improvements (New Project).
- \$951,000 of previously allocated FY 2018 CMAQ funds from Purchase DASH Buses; (UPC 103935) to Van Dorn Metrorail Station Area Improvements (New Project).

The reallocation of these funds, in addition to local funds allocated by the City of Alexandria, will provide the funds needed to build the improvements at the Van Dorn Metrorail Kiss-and-ride and bus loading areas to enhance access to the station for all modes of transit.

At its meeting on October 27, 2016, the RJACC recommended approval of the reallocation request for Fairfax County.

**Attachment(s):** DRAFT Letter to VDOT NOVA District Administrator Cuervo  
Request Letter from the City of Alexandria

**Coordination:** Regional Jurisdiction and Agency Coordinating Committee



**Northern Virginia Transportation Authority**  
*The Authority for Transportation in Northern Virginia*

November 10, 2016

Ms. Helen Cuervo  
District Administrator  
Virginia Department of Transportation  
4975 Alliance Dr. Suite 4E-342  
Fairfax, Virginia 22030

Reference: Request to Reallocate Congestion Mitigation and Air Quality (CMAQ) funds for the City of Alexandria

Dear Ms. Cuervo:

On September 11, 2008, the Northern Virginia Transportation Authority (NVTA) delegated the authority to approve requests to reallocate Congestion Mitigation and Air Quality (CMAQ) and Regional Surface Transportation Program (RSTP) funding between projects that were previously approved by the NVTA to the Regional Jurisdiction and Agency Coordinating Committee (RJACC). However, since the receiving projects are new, the Authority needs to approve the transfer requests before any funds can be reallocated.

On October 21, 2016, the City of Alexandria requested the following reallocations:

- \$300,000 of previously allocated CMAQ funds from Landmark Transit (UPC 50431) to Van Dorn Metrorail Station Area Improvements (New Project).
- \$951,000 of previously allocated FY 2018 CMAQ funds from Purchase DASH Buses; (UPC 103935) to Van Dorn Metrorail Station Area Improvements (New Project).

The reallocation of these funds, in addition to local funds allocated by the City of Alexandria, will provide the funds needed to build the improvements at the Van Dorn Metrorail Kiss-and-ride and bus loading areas to enhance access to the station for all modes of transit.

On November 10, 2016, the Authority approved the request noted above. Please take the necessary steps to reallocate these funds in the Transportation Improvement Program and the State Transportation Improvement Program. Thank you very much.

Sincerely,

Martin E. Nohe  
Chairman

cc: Monica Backmon, Executive Director, NVTA  
Yon Lambert, Director, City of Alexandria Department of Transportation and Environmental Services



**DEPARTMENT OF TRANSPORTATION  
AND ENVIRONMENTAL SERVICES**

**P.O. Box 178 - City Hall  
Alexandria, Virginia 22313  
703.746.4025**

**alexandriava.gov**

Date: October 21, 2016

Noelle Dominguez, Chairperson  
Regional Jurisdiction and Agency Coordinating Committee (RJACC)  
Northern Virginia Transportation Authority (NVTa)  
3040 Williams Drive, Suite 200  
Fairfax, Virginia 22031

Reference: Request to Reallocate Congestion Mitigation and Air Quality (CMAQ) Funds for the City of Alexandria

Dear Ms. Dominguez,

The City of Alexandria requests the NVTa RJACC's recommendation and Authority's concurrence to reallocate:

- \$300,000 of previously allocated CMAQ funds from UPC # 50431 (Landmark Transit; Attachment 1) to Van Dorn Metrorail Station Area Improvements (New Project); and
- \$951,000 of previously allocated FY2018 CMAQ funds from UPC # 103935 (Purchase DASH Buses; Attachment 2) to Van Dorn Metrorail Station Area Improvements (New Project).

This reallocation, in addition to local funds allocated by the City of Alexandria, will provide the funds needed to build the improvements at the Van Dorn Metrorail Kiss-and ride and bus loading areas to enhance access to the station for all modes of transit. This funding will be from CMAQ funds allocated to previously allocated projects. These funds require that the project be identified and approved as a new project, and that the attached TEEM air quality analysis be performed. (Attachment 3)

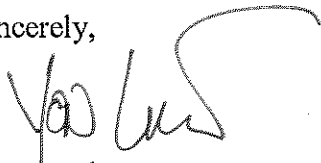
Noelle Dominguez, Chairperson

October 21, 2016

Page 2

Thank you for your assistance in this matter. Please feel free to contact Carrie Sanders, Deputy Director of Transportation & Environmental Services, at 703.746.4088 should you have further questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Yon Lambert', with a large, sweeping flourish extending from the end of the signature.

Yon Lambert

Director

Transportation & Environmental Services

Attachment (1) – CMAQ/RSTP Transfer Request Form – Landmark Transit (UPC 50431)

Attachment (2) – CMAQ/RSTP Transfer Request Form – DASH buses (UPC 103935)

Attachment (3) – TEEM Air Quality Analysis

cc: Carrie Sanders, Deputy Director, Transportation/Transit, Transportation and  
Environmental Services  
Allan Fye, Acting Division Chief, Transit, Transportation and Environmental Services

Attach Signed Request of Transfer Letter

Attach Signed Request of Transfer Letter

# Transportation Emissions Estimation Models (TEEM) © Report - Module 2, Daily Commuting

Sponsoring Jurisdiction or Agency: **City of Alexandria**

Project: **Van Dorn Metrorail Improvements**

Ver. 2016-04

Fiscal Year of CMAQ Funding: **2018**

Prepared by: **JEM**

## I. Project Assumptions (Input):

a. Number of SOV Vehicles eliminated per day:	<b>10</b>	
b. Average no. of non-commute 1-way trips by above vehicles/day:	<b>4</b>	
c. Avg. 1-way commute Vehicle Miles Traveled (VMT) per SOV:	<b>16</b>	(One way mileage saved by eliminating the SOV trip)
d. Avg. 1-way non-commute Vehicle Miles Traveled per SOV:	<b>4</b>	Regional Average: 10 miles
e. Average travel speed of VT (in miles per hour):	<b>35</b>	
f. Number of days in a year vehicle trips reduced	<b>255</b>	(Typically 320 days)
g. Total capital cost (in current year \$):	<b>\$2,135,000</b>	
h. Life span of the project / program (in years):	<b>25</b>	
i. Average annual maintenance cost (in current year \$):	<b>\$20,000</b>	comment here...
j. Average annual revenue (in current year \$):	<b>\$0</b>	
k. Anticipated total resale/salvage value (current year \$):	<b>\$0</b>	
l. Anticipated project / program completion date (2017 - 2030):	<b>2018</b>	
m. Year in which VT / VMT reductions ends (2018 - 2040):	<b>2041</b>	
n. Facility Type:	<b>Both</b>	Default: 2041 (If project affects operations on Arterial and Freeways: e.g. Park-and-ride lot)

Emissions factors corresponding to weighted speeds will be used. The weighted speeds represents 40% freeways & 60% arterial mix.

## II. Primary Calculations (Vehicle and Cost):

	2017	2020	2025	2030	2040
Emissions reductions in the year:	No	Yes	Yes	Yes	Yes
a. Total number of cold starts eliminated in a day	0	60	60	60	60
b. Total number of hot soaks eliminated in a day	0	60	60	60	60
c. Total miles of travel eliminated in a day	0	480	480	480	480
d. Annualized total cost (\$ / year)	\$0	\$105,400	\$105,400	\$105,400	\$105,400
e. Net daily project/program cost (\$/day)	\$0	\$413	\$413	\$413	\$413

## III. Emissions Reductions Calculations:

YEAR 2017	VOC In Grams / Day			NOx In Grams / Day			PM2.5 In Grams / Day ~	
	Arterial	Freeway	Weighted	Arterial	Freeway	Weighted	Direct	NOx
Cold Start Emissions	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00
Hot Soak Emissions	0.00	0.00	0.00	^	^	^	^	^
Running Emissions	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Trip Cycle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
YEAR 2020	VOC In Grams / Day			NOx In Grams / Day			PM2.5 In Grams / Day ~	
	Arterial	Freeway	Weighted	Arterial	Freeway	Weighted	Direct	NOx
Cold Start Emissions	0.00	0.00	33.26	0.00	0.00	14.87	-	11.85
Hot Soak Emissions	0.00	0.00	20.82	^	^	^	^	^
Running Emissions	0.00	0.00	59.83	0.00	0.00	122.73	5.42	57.60
Total Trip Cycle	0.00	0.00	113.91	0.00	0.00	137.61	5.42	69.45
YEAR 2025	VOC In Grams / Day			NOx In Grams / Day			PM2.5 In Grams / Day ~	
	Arterial	Freeway	Weighted	Arterial	Freeway	Weighted	Direct	NOx
Cold Start Emissions	0.00	0.00	30.25	0.00	0.00	12.19	-	9.81
Hot Soak Emissions	0.00	0.00	15.05	^	^	^	^	^
Running Emissions	0.00	0.00	57.46	0.00	0.00	93.23	5.42	52.60
Total Trip Cycle	0.00	0.00	102.76	0.00	0.00	105.42	5.42	62.41
YEAR 2030	VOC In Grams / Day			NOx In Grams / Day ^			PM2.5 In Grams / Day ~	
	Arterial	Freeway	Weighted	Arterial	Freeway	Weighted	Direct	NOx
Cold Start Emissions	0.00	0.00	27.68	0.00	0.00	10.00	-	8.16
Hot Soak Emissions	0.00	0.00	14.81	^	^	^	^	^
Running Emissions	0.00	0.00	54.96	0.00	0.00	76.68	5.42	46.95
Total Trip Cycle	0.00	0.00	97.45	0.00	0.00	86.68	5.42	55.11



# Transportation Emissions Estimation Models (TEEM) © Report - Module 2, Daily Commuting

Sponsoring Jurisdiction or Agency: **City of Alexandria**

Project: **Van Dorn Metrorail Improvements**

Ver. 2016-04

Fiscal Year of CMAQ Funding: **2018**

Prepared by: **JEM**

YEAR 2040	VOC In Grams / Day			NOx In Grams / Day ^			PM2.5 In Grams / Day ~	
	Arterial	Freeway	Weighted	Arterial	Freeway	Weighted	Direct	NOx
Cold Start Emissions	0.00	0.00	27.07	0.00	0.00	9.72	-	10.69
Hot Soak Emissions	0.00	0.00	14.80	^	^	^	^	^
Running Emissions	0.00	0.00	54.77	0.00	0.00	73.00	5.42	62.25
Total Trip Cycle	0.00	0.00	96.63	0.00	0.00	82.72	5.42	72.95

**Note:**

^ Hot soak phase has no NOx emissions

~ Average of the four seasons No PM2.5 Direct emissions in this Phase

## IV. Estimated Cost Effectiveness

YEAR 2017	VOC		NOx		PM Direct		PM-NOx Precursor	
	Tons/Day	\$ / Ton	Tons/Day	\$ / Ton	Tons/Day	\$ / Ton	Tons/Day	\$ / Ton
Arterial	0.00E+00	N/A	0.00E+00	N/A	N/A	N/A	N/A	N/A
Highway	0.00E+00	N/A	0.00E+00	N/A	N/A	N/A	N/A	N/A
Weighted	0.00E+00	N/A	0.00E+00	N/A	0.00E+00	N/A	0.00E+00	N/A

YEAR 2020	VOC		NOx		PM Direct		PM-NOx Precursor	
	Tons/Day	\$ / Ton	Tons/Day	\$ / Ton	Tons/Day	\$ / Ton	Tons/Day	\$ / Ton
Arterial	0.00E+00	N/A	0.00E+00	N/A	N/A	N/A	N/A	N/A
Highway	0.00E+00	N/A	0.00E+00	N/A	N/A	N/A	N/A	N/A
Weighted	1.26E-04	\$12,910	1.52E-04	\$10,686	5.98E-06	\$271,107	7.66E-05	\$21,173

YEAR 2025	VOC		NOx		PM Direct		PM-NOx Precursor	
	Tons/Day	\$ / Ton	Tons/Day	\$ / Ton	Tons/Day	\$ / Ton	Tons/Day	\$ / Ton
Arterial	0.00E+00	N/A	0.00E+00	N/A	N/A	N/A	N/A	N/A
Highway	0.00E+00	N/A	0.00E+00	N/A	N/A	N/A	N/A	N/A
Weighted	1.13E-04	\$14,310	1.16E-04	\$13,949	5.98E-06	\$271,107	6.88E-05	\$23,562

YEAR 2030	VOC		NOx		PM Direct		PM-NOx Precursor	
	Tons/Day	\$ / Ton	Tons/Day	\$ / Ton	Tons/Day	\$ / Ton	Tons/Day	\$ / Ton
Arterial	0.00E+00	N/A	0.00E+00	N/A	N/A	N/A	N/A	N/A
Highway	0.00E+00	N/A	0.00E+00	N/A	N/A	N/A	N/A	N/A
Weighted	1.07E-04	\$15,090	9.55E-05	\$16,965	5.98E-06	\$271,107	6.07E-05	\$26,682

YEAR 2040	VOC		NOx		PM Direct		PM-NOx Precursor	
	Tons/Day	\$ / Ton	Tons/Day	\$ / Ton	Tons/Day	\$ / Ton	Tons/Day	\$ / Ton
Arterial	0.00E+00	N/A	0.00E+00	N/A	N/A	N/A	N/A	N/A
Highway	0.00E+00	N/A	0.00E+00	N/A	N/A	N/A	N/A	N/A
Weighted	1.07E-04	\$15,218	9.12E-05	\$17,777	5.98E-06	\$271,107	8.04E-05	\$20,158