NEW JERSEY DEPARTMENT OF
ENVIRONMENTAL PROTECTION
Division of Air Quality

VOLKSWAGEN SETTLEMENT PROJECT PROPOSAL

Community

MOORESTOWN TOWNSHIP

111 West Second Street
Moorestown, New Jersey 08057

Contact: Thomas J. Merchel, Township Manager/Finance Officer
Phone: (856) 914-3001
Email: tmerchel@moorestown.nj.us

Project

Second Street Parking Lot Electric Vehicle Charging Station

The Alaimo Group prepared this application.
200 High Street Mount Holly, NJ 08060
Phone: (609) 267-8310
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To enter information electronically use Adobe Reader

CONTACT INFORMATION

Organization Name	Township of Moorestown
Organization Address	111 West Second Street
City, State Zip Code	Moorestown, NJ 08057
Contact Person	Mr. Thomas J. Merchel
Title/Position	Township Manager/ Finance Officer
Phone	(856) 914-3001
E-mail	tmerchel@moorestown.nj.us

PROJECT NAME	Second Street Parking Lot EV Charging Station

PROJECT CATEGORY OR CATEGORIES (choose from 1-9 in "Eligible Projects" section above)

1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐ 9☑

PROJECT PRIORITY Priority # 1 of 2 proposals

If submitting more than one proposal, what is the sponsor's priority of this proposal?

PROJECT BUDGET $ 57,168.00

Provide total estimated project budget, include source and amount of cost share if applicable.

The grant would cover $47,640; Moorestown would cover $9,528.(See attached Estimate).

PROJECT DESCRIPTION (Briefly describe the project by completing the following questions)

Geographic area where emissions reductions will occur? Moorestown Township

Estimated size of population benefitting from the emission reductions? 20,899

Estimated useful life of the project? 10 plus years

Number of engines/vehicles/vessels/equipment included in the project? 1

Estimated emission benefits should be expressed in tons per year (TPY) of emission reduced for NOx and for PM 2.5 over the lifetime of the project. Identify methodology used.

Estimated NOx benefits? 0.73 TPY

Methodology Used? Unrest. Access Alt. Fuel Infrastructure Calculator

Particulate matter (PM 2.5) benefits? 0.01 TPY

Methodology Used? Unrest. Access Alt. Fuel Infrastructure Calculator

Will the project benefit one or more communities that are disproportionately impacted by air pollution? If so, please describe.

Moorestown Township is located in the Philadelphia/Camden Metropolitan Area, which is the 20th ranked area in the USA for putting people at risk by short term particulate pollution (24 hour PM 2.5).

Project partners, if any? Moorestown Township will be undertaking this project by itself.
Explain how the project will provide cost effective and technically feasible emission reductions. Cost effectiveness should be expressed in dollars per ton per year of emissions reduced for NOx and for PM 2.5. Emissions reductions would be provided by use of electricity to power vehicles in lieu of gasoline. The cost per ton of reduced NOx would be $78,312 and the cost per ton of reduced PM 2.5 would be $4,083,429.
Estimated timeframe for implementation? Include a project timeline that identifies start and end dates, as well as the timeframe for key milestones. After receiving the grant money, engineering design will be completed within 90 days. Once the design is completed, the project will be advertised and awarded within 30 days. Post bid procedures will then be accomplished within 30 days. The construction phase will be 120 days and the project closeout will be 60 days.
Demonstrated success in implementing similar projects? Moorestown Township has successfully completed numerous transportation related projects that received grants through the New Jersey Department of Transportation and the Community Development Block Grant Program.
If your proposed project involves alternative fuels, provide a demonstration of current or future plans to provide adequate refueling infrastructure. This project proposes to construct single unit electric vehicle charging station at the Township owned parking lot on 2nd Street in Moorestown. The proposed charging station would provide refueling infrastructure for electric vehicles.
Has your organization been approved to receive and expend any other grant funds related to this project? If so, please provide details. No other grants have been applied for or received to date for this project.
Please provide any additional information that supports this project. See attached.

Two additional pages have been provided as supplemental space to answer any of the questions above.

PROJECT IMPLEMENTATION SCHEDULE
APPLICANT: Moorestown Township
PROJECT: Electric Vehicle Charging Stations

Engineering	X--90 days--X				
Advertise/Award		X-30 days-X			
Post Bid Procedures			X-30 days-X		
Construction				X--120 days--X	
Project Closeout					X-60 days-X

Estimated NOx benefits:

From Unrestricted Access Alternative Fuel Infrastructure Calculator, Emission Reduction for NOx would be 1.8133 kg/day. Multiplying by 365 days and converting to Tons, the reduction would be 0.73 Tons.

Estimated PM2.5 benefits:

From Unrestricted Access Alternative Fuel Infrastructure Calculator, Emission Reduction for PM2.5 would be 0.0345 kg/day. Multiplying by 365 days and converting to Tons, the reduction would be 0.014 Tons.

Unrestricted Access Alternative Fuel Infrastructure

This calculator will estimate the reduction in emissions resulting from developing alternative fuel infrastructure with unrestricted access. The calculator does not consider lifecycle emissions, particularly it refrains from estimating any emissions that may occur outside of vehicle operations. Note that this calculator does not apply to transit buses, which are included in a separate tool.

INPUT

(1) What is your project evaluation year?

2018

(2) Please input the estimated number of vehicles in your study area

16,000

(3) Which alternative fuel will be supplied at this new infrastructure?

Battery Electric (BEV)

(4) Please enter the projected market share of replacement alternative fuel vehicles after construction of the new infrastructure

1.00 (% of 100%)

(5) Please unselect below any vehicle source type(s) that will not have alternative fuel vehicle purchases and then click the button to fill the table with default estimates for populations and activity per vehicle

	Vehicle Source Type	Average Annual Miles Traveled Per Vehicle	Number of Existing Conventional Fuel Vehicles	Number of Replacement Alternative Fuel Vehicles Projected
☑	Passenger Car	10745	8771	88
☑	Passenger Truck	12053	5809	58
☑	Light Commercial Truck	12123	1420	14
☐	School Bus	0	0	0
☐	Refuse Truck	0	0	0
☐	Single Unit Short-Haul Truck	0	0	0
☐	Single Unit Long-Haul Truck	0	0	0
☐	Combination Short-Haul Truck	0	0	0
☐	Combination Long-Haul Truck	0	0	0
	TOTAL		16000	160

Note: users may overwrite default values in the table with local estimates where applicable

OUTPUT

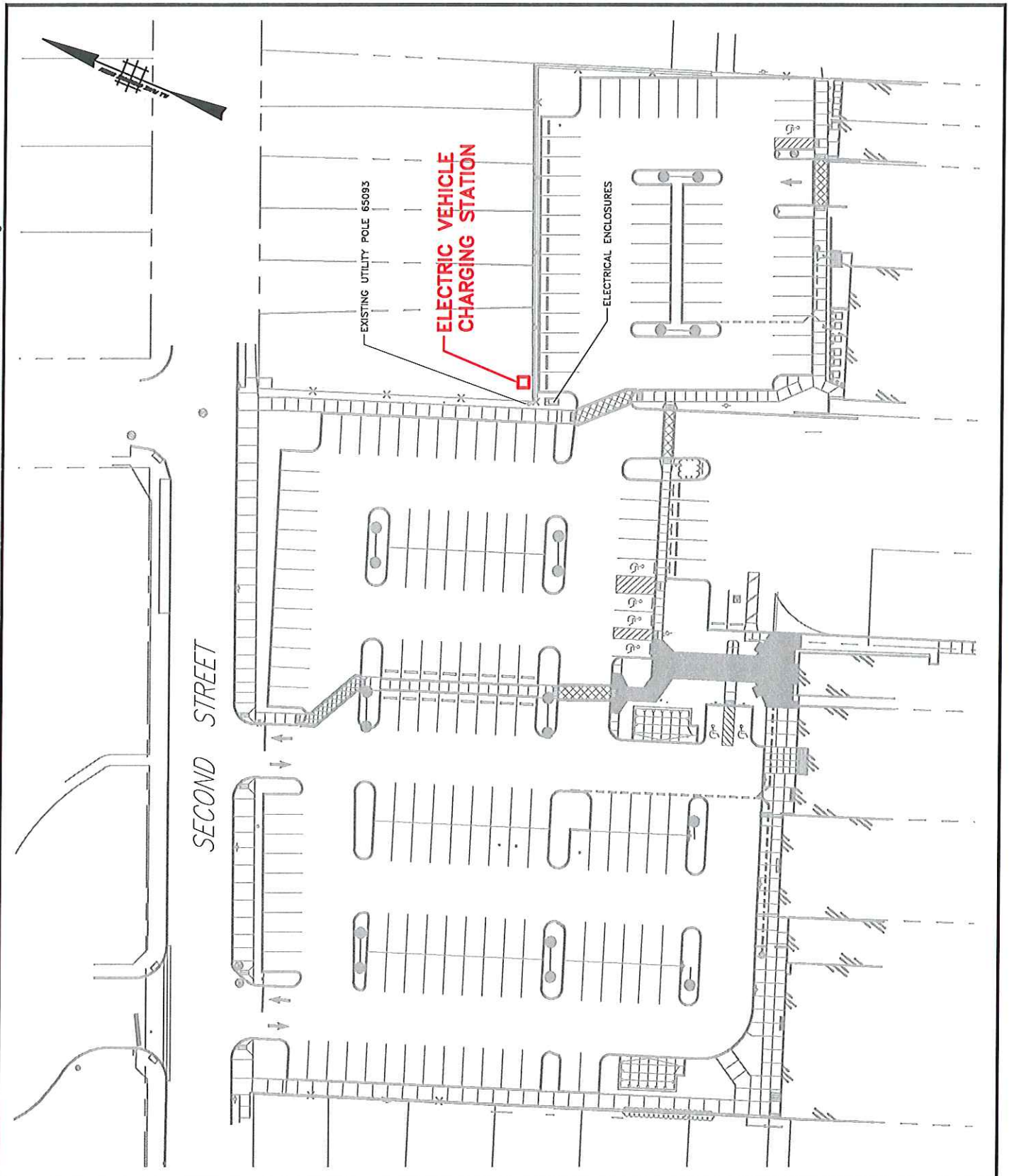
EMISSION REDUCTIONS

Pollutant	Total kg/day
Carbon Monoxide (CO)	19.1006
Nitrogen Oxide (NOx)	1.8133
Particulate Matter <2.5 µm ($PM_{2.5}$)	0.0345
Particulate Matter <10 µm (PM_{10})	0.0390
Volatile Organic Compounds (VOC)	1.0132

Alaimo Group 200 High Street Mount Holly, NJ 08060	**PRELIMINARY ENGINEER'S ESTIMATE**	File No. A-0730-0022-000 Date: January 26, 2018 Contract No.:

Owner:	Project:
Moorestown Township **111 West Second Street** **Moorestown, NJ 08057**	**Volkswagen Emissions Grant Application** **Electric Vehicle Charging Station** **Second Street Parking Lot**

ITEM	DESCRIPTION	QTY		UNIT PRICE	EXTENDED PRICE
BASE BID					
1	Temporary Soil Erosion and Sediment Control	1	LS	$500.00	$500.00
2	Site Clearing	1	LS	$500.00	$500.00
3	Single Port, Level 2 EV Charging Station	1	UN	$6,000.00	$6,000.00
4	EV Charging Station Installation	1	LS	$6,000.00	$6,000.00
5	Concrete Pad, 6" Thick, Reinforced	9	SF	$10.00	$90.00
6	Electric Service	1	LS	$10,000.00	$10,000.00
7	Traffic Signs	1	UN	$250.00	$250.00
8	Pavement Markings	1	UN	$360.00	$360.00
				Subtotal	**$23,700.00**
ALTERNATE NO. 1					
9	Solar	1	UN	$16,000.00	$16,000.00
				PROJECT TOTAL	**$39,700.00**
				20% Contingency	$7,940.00
				TOTAL CONSTRUCTION COST	**$47,640.00**
				20% Engineering	$9,528.00
				TOTAL PROJECT COST	$57,168.00



MOORESTOWN TOWNSHIP	ALAIMO GROUP Consulting Engineers 200 HIGH STREET, MOUNT HOLLY, N.J. 2 MARKET STREET, PATERSON, N.J.		**FIGURE 1**
VOLKSWAGEN EMISSIONS GRANT ELECTRIC VEHICLE CHARGING STATION SECOND STREET PARKING LOT			LOCATION MAP
			Date: JANUARY 2018
Scale: 1" = 60'	Drawn By: MAC	Check By: R.A.A.2	Project No.: A-0730-0022-000

Plotted: 1/30/2018 8:01 AM Last saved: 1/30/2018 8:01 AM File Name: Q:\Projects\A07300022000\Docs\Volkswagen Grant Application\Maps\1-Moorestown-2018-SecondStreet.dwg