



CMAQ PROJECT APPLICATION

FOR NCDOT USE ONLY

APP ID

STIP ID

IN ORDER TO BE CONSIDERED A COMPLETE APPLICATION PACKAGE, ALL FIELDS MUST BE APPROPRIATELY COMPLETED & REQUIRED ADDITIONAL INFORMATION AS NOTED MUST BE ATTACHED. INCOMPLETE APPLICATIONS WILL BE RETURNED.

GENERAL PROJECT INFORMATION

1 SELECT CMAQ PROJECT TYPE

STATEWIDE REGIONAL SUBREGIONAL

2 SELECT MPO/RPO(S)

Burlington-Graham MPO Gaston-Cleveland-Lincoln MPO Land of Sky RPO Triangle RPO
 Cabarrus-Rowan MPO Greensboro MPO NW Piedmont RPO Unifour RPO
 Capital Area MPO Hickory MPO Rocky Mount MPO Upper Coastal Plain RPO
 Charlotte Regional TPO High Point MPO Rocky River RPO Winston-Salem MPO
 Durham-Chapel Hill-Carrboro MPO Kerr-Tar RPO Southwestern RPO

3 PROJECT SPONSOR INFORMATION

| | | | |
|---------------|---------------------------------|---------------|-------------------------|
| Agency | DCHC MPO | | |
| Contact Name | Aaron Cain | | |
| Contact Title | Senior Transportation Planner | | |
| Address | 101 City Hall Plaza, Durham, NC | | |
| Telephone | +1 (919) 560-4366 | Email Address | aaron.cain@durhamnc.gov |

4 PROJECT INFORMATION

| | |
|-------------|--------------------------------------------------------------------------------------------------------------------------|
| Title | Old Chapel Hill Road Bicycle and Pedestrian Improvements |
| Description | This project will install bike lanes and sidewalks on both sides of Old Chapel Hill Road from Garrett Road to Pope Road. |

Include project details, proposed improvements, purpose, need, how it will provide service, who are the primary stake holders & where it will operate & serve. Attach a sketch design plan of the proposed project which shows the general location.

PROJECT COSTS & DELIVERY SCHEDULE

5 APPLICABLE PROJECT PHASES, FUNDING & YEARS

- CMAQ projects are awarded by Federal Fiscal Years (FFY). FFY run from October 1st of the prior year through September 30th of the next year. For example, FFY 2016 runs from October 1, 2015 through September 30, 2016.
- Cost estimates should reflect anticipated inflation compounded annually at 5% from the current calendar year.
- Minimum 20% match is required for most projects. See 23 U.S.C. §120 paragraph (c) for listing of safety projects that may be funded at up to 100% Federal share.
- In the case of purchasing alternative fueled vehicles (AFV) for general governmental use, CMAQ funding is limited to the cost difference between standard and AFV vehicles. For example, a 2011 Ford Escape lists for \$27,000 and a 2011 Ford Escape Hybrid lists for \$33,000. The total CMAQ-eligible funding for purchase of this AFV would be: \$33,000 - \$27,000 = \$6,000 (subject to local match).

Check box if this project is not typical 80/20 split

| Phases(s) | CMAQ Amount | Matching Amount | Total | FFY |
|---------------------------------------------------------|-----------------------|---------------------|-----------------------|------|
| <input type="checkbox"/> Planning, Engineering & Design | | | | |
| <input type="checkbox"/> Right-of-Way | | | | |
| <input checked="" type="checkbox"/> Construction | \$1,710,393.00 | \$427,598.00 | \$2,137,991.00 | 2019 |
| <input type="checkbox"/> Transit Operation | | | | |
| <input type="checkbox"/> Transit Implementation | | | | |
| <input type="checkbox"/> Non-transit Implementation | | | | |
| Project Total | \$1,710,393.00 | \$427,598.00 | \$2,137,991.00 | |

6 ANTICIPATED PROJECT MILESTONE DATES

* Milestone dates must coordinate with funding schedule in Section 5.

* Planning & environmental document; plans, specifications & estimate package; and right of way certification must be complete prior to let date.

| Milestone(s) | Month/Year |
|----------------------------------------------------------------------------------------------------------------|------------|
| Planning & Environmental document to be complete: | Complete |
| Plans, Specifications & Estimate package to be complete: | Complete |
| Right-of-Way acquisition to begin: | Complete |
| Anticipated let date (opening of bids): | 05/2017 |
| Anticipated completion date of project (including project close-out & reimbursement of all eligible expenses): | 05/2019 |

7 LIST THE SOURCE(S) OF MATCHING FUNDS:

Local Revenues

8 TRANSIT START-UP INFORMATION

Operation assistance under CMAQ is intended to help start up viable new transportation services that will benefit air quality and eventually cover their own costs. This funding is limited to three years. Other funding sources should supplement & ultimately replace CMAQ funds for operation assistance. Briefly describe how funding will be secured to continue the program after year three.

(ATTACH ADDITIONAL SHEET(S) IF NEEDED)

GENERAL PROJECT INFORMATION

9 SELECT NC NONATTAINMENT/MAINTENANCE COUNTY(IES):

* Indicates partial county AQ designation

- | | | | | | | | |
|-----------------------------------|--------------------------------------------|------------------------------------|------------------------------------|-----------------------------------|--------------------------------------|---------------------------------|---------------------------------|
| <input type="checkbox"/> Cabarrus | <input type="checkbox"/> Davidson | <input type="checkbox"/> Edgecombe | <input type="checkbox"/> Gaston | <input type="checkbox"/> Haywood* | <input type="checkbox"/> Lincoln | <input type="checkbox"/> Orange | <input type="checkbox"/> Swain* |
| <input type="checkbox"/> Catawba | <input type="checkbox"/> Davie | <input type="checkbox"/> Forsyth | <input type="checkbox"/> Granville | <input type="checkbox"/> Iredell* | <input type="checkbox"/> Mecklenburg | <input type="checkbox"/> Person | <input type="checkbox"/> Union |
| <input type="checkbox"/> Chatham* | <input checked="" type="checkbox"/> Durham | <input type="checkbox"/> Franklin | <input type="checkbox"/> Guilford | <input type="checkbox"/> Johnston | <input type="checkbox"/> Nash | <input type="checkbox"/> Rowan | <input type="checkbox"/> Wake |

10 SELECT CMAQ-ELIGIBLE IMPROVEMENT TYPE (check all that apply):

- | | |
|-----------------------------------------------------------------|------------------------------------------------------------------------------|
| <input type="checkbox"/> Transportation Control Measures | <input type="checkbox"/> Extreme Low-Temperature Cold Start Programs |
| <input type="checkbox"/> Alternative Fuels | <input type="checkbox"/> Congestion Relief & Traffic Flow Improvements |
| <input type="checkbox"/> Transit Improvements | <input checked="" type="checkbox"/> Bicycle/Pedestrian Facilities & Programs |
| <input type="checkbox"/> Transportation Management Associations | <input type="checkbox"/> Carpooling & Vanpooling |
| <input type="checkbox"/> Freight/Intermodal | <input type="checkbox"/> Diesel Engine Retrofits |
| <input type="checkbox"/> Idle Reduction | <input type="checkbox"/> Training |
| <input type="checkbox"/> Travel Demand Management | <input type="checkbox"/> Public Education & Outreach Activities |
| <input type="checkbox"/> I/M Programs | <input type="checkbox"/> Experimental Pilot Projects |

11 IF TRANSPORTATION CONTROL METHOD, CHECK THE ALLOWABLE TYPE(S):

- | | |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | Programs/ordinances to facilitate non-automobile travel, provision/utilization of mass transit & general reduction of the need for SOV travel, as part of transportation planning & development efforts of a locality, including programs & ordinances applicable to new shopping centers, special events & other centers of vehicle activity |
| <input type="checkbox"/> | Programs for improved public transit |
| <input type="checkbox"/> | Restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or HOV |
| <input type="checkbox"/> | Employer-based transportation management plans, including incentives |
| <input type="checkbox"/> | Trip-reduction ordinances |
| <input type="checkbox"/> | Traffic flow improvement programs that reduce emissions |
| <input type="checkbox"/> | Fringe & transportation corridor parking facilities serving multiple-occupancy vehicle programs or transit services |
| <input type="checkbox"/> | Multiple-occupancy vehicle programs or transit service |
| <input type="checkbox"/> | Programs to limit/restrict vehicle use in downtown areas/other areas of emission concentration during peak periods |
| <input type="checkbox"/> | Programs for the provision of all forms of high-occupancy, shared-ride services |
| <input type="checkbox"/> | Programs to limit portions of road surfaces/certain sections of metro area to the use of non-motorized vehicles or pedestrian |

| | |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | Programs for secure bicycle storage facilities & other facilities, including bicycle lanes in both public & private areas |
| <input type="checkbox"/> | Programs to control extended idling of vehicles |
| <input type="checkbox"/> | Reducing emissions from extreme cold-start conditions |
| <input type="checkbox"/> | Employer-sponsored programs to permit flexible work schedules |
| <input type="checkbox"/> | Public Education & Outreach Activities |

12 IF TRANSIT IMPROVEMENT, SPECIFY HOW SERVICE WILL BE IMPROVED:

| | |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| <input type="checkbox"/> New facilities associated with a service increase | <input type="checkbox"/> New vehicles used to expand the transit fleet |
| <input type="checkbox"/> Operating assistance for new service (limit three years) | <input type="checkbox"/> Fare subsidies as part of program to limit exceedances of NAAQS |

13 EMISSIONS REDUCTION CRITERIA

QUANTATIVE analysis of air quality impacts is required for most project types. **QUALITATIVE** analysis is only allowable when it is not possible to accurately quantify emissions benefits, such as public education, marketing & other outreach efforts, which can include advertising alternatives to SOV travel, employer outreach & public education campaigns. The qualitative analysis should be based on a reasoned & logical determination that the project/program will decrease emissions & contribute to attainment or maintenance of NAAQS. The primary benefit of these activities enhanced communication & outreach that is expected to influence travel behavior & air quality.

• **Indicate the type of analysis completed:** Quantitative Qualitative

For QUANTATIVE analyses, list the expected daily emissions BEFORE and AFTER project implementation:

| Pollutant | Daily Emissions Before (kg) | Daily Emission After (kg) | Daily Emissions Reduction (kg) |
|-----------------------------------|-----------------------------|---------------------------|--------------------------------|
| Carbon Monoxide (CO) | 205.27 | 203.8 | 1.47 |
| Volatile Organic Compounds (VOC) | 8.96 | 8.9 | 0.06 |
| Oxides of Nitrogen (NOx) | 7.02 | 6.97 | 0.05 |
| Particulate Matter (PM2.5) | | | |
| Total Daily Emissions (kg) | 221.25 | 219.67 | 1.58 |

• **Describe the method used to estimate the emissions reduction and show calculations:**
(ATTACH ADDITIONAL SHEET(S) IF NEEDED)

The non-motorized trip component of the Triangle Regional Model was used to create an estimate of bicycle/pedestrian trips and the reduction in VMT. The model estimates 87 new bike/ped trips producing a VMT reduction of 149 miles. The emission factors for a Urban Minor Arterial were applied. Calculations are attached.

14 MISCELLANEOUS

| | | | |
|-----------------------------------------------------------------------------|---------------------------|--------------------------|--------------------------------------|
| For construction of trails, has the Department of Interior been contacted | <input type="radio"/> Yes | <input type="radio"/> No | <input checked="" type="radio"/> N/A |
| Is the fare/fee subsidy program part of a broad program to reduce emissions | <input type="radio"/> Yes | <input type="radio"/> No | <input checked="" type="radio"/> N/A |
| Will the ITS project conform to the National ITS architecture | <input type="radio"/> Yes | <input type="radio"/> No | <input checked="" type="radio"/> N/A |

15 SUPPORTING INFORMATION CHECK LIST

Check supporting information included as attachment(s) to this application:

| | |
|-------------------------------------|-----------------------------------------------------------------|
| <input type="checkbox"/> | MPO/RPO Support Resolution (Required for SUBREGIONAL proposals) |
| <input checked="" type="checkbox"/> | Additional project description and/or details |
| <input checked="" type="checkbox"/> | Map of general project location |
| <input checked="" type="checkbox"/> | Complete emissions calculations |
| <input checked="" type="checkbox"/> | Any assumptions used |
| <input type="checkbox"/> | Other, please specify: |

16 MPO/RPO PRIORITY INFORMATION

This project has been prioritized by the MPO/RPO and received the following ranking among all CMAQ requests (UNRANKED APPLICATIONS WILL NOT BE PROCESSED):

1

17 SUBMIT

- 1) SAVE APPLICATION AND ALL ATTACHMENTS IN A SINGLE PDF DOCUMENT
- 2) Upload application as single PDF document to CMAQ Sharepoint Website

Supplemental Information: Old Chapel Hill Road Bike/Ped (EB-4707B)

Background

The Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) proposes to program \$1,710,393 of DCHC-directed CMAQ funds to a current project, EB-4707B, Old Chapel Hill Road Bike-Ped in Durham County. This project is installing bicycle lanes and sidewalks on both sides of Old Chapel Hill Road in Durham from Garrett Road to Pope Road (see attached map). This is one portion of a larger project; EB-4707A, Old Durham Road Bike-Ped, is a Chapel Hill project that will use TAP-DA and STBGDA funding to install bicycle lanes on Old Chapel Hill Road from Pope Road in Durham County to US 15/501 in Orange County. EB-4707A is scheduled to be bid for construction in Fall 2018.

This project has been in development for over a decade. The Durham portion went to construction in 2017, and significant cost increases have required additional funding to complete the project.

Project Details

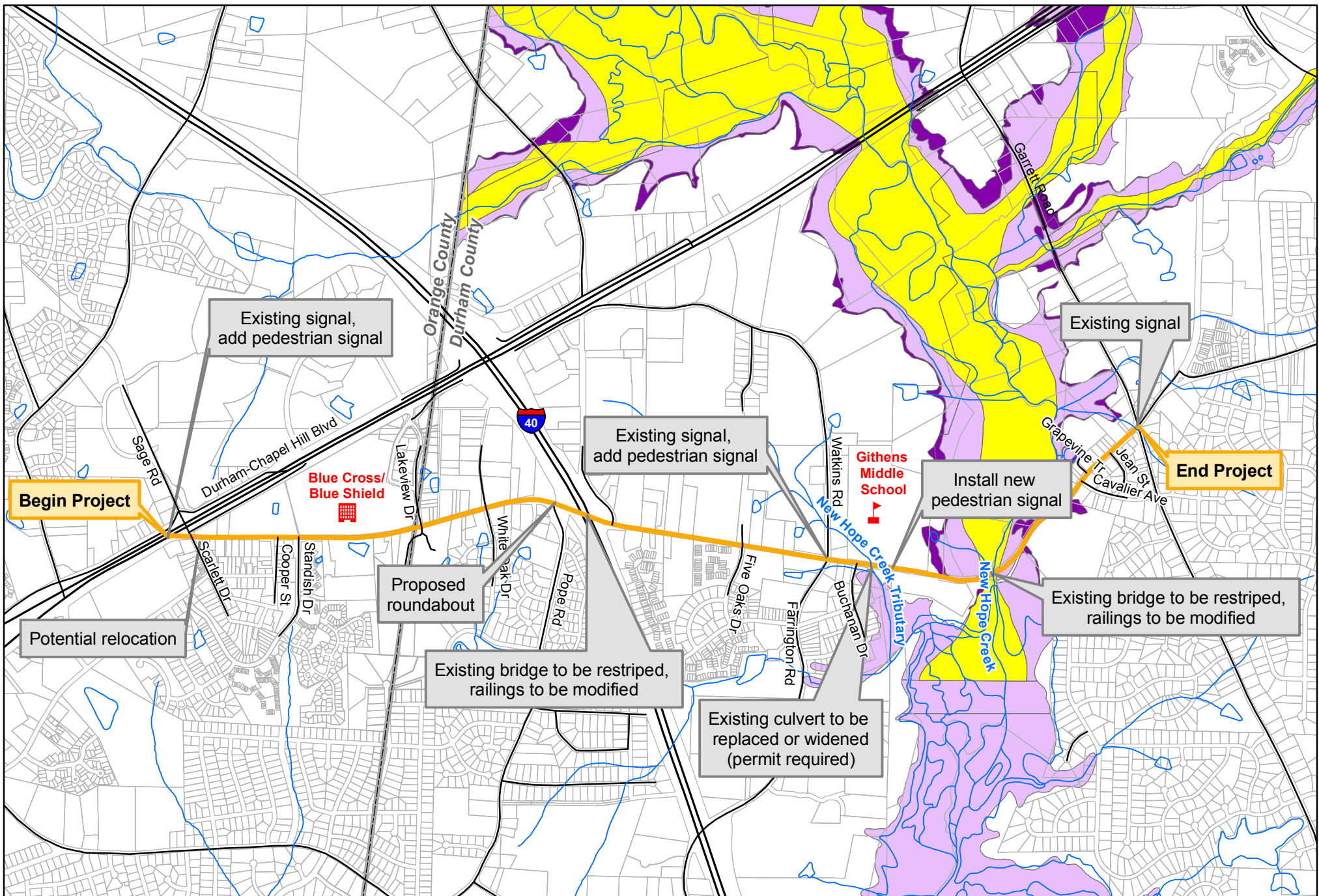
The entire project, including both EB-4707A and EB-4707B, will provide sidewalks and bike lanes on both sides for 2.7 miles of Old Durham-Chapel Hill Road. An 8-foot asphalt multi-use path will be constructed in front of the State Employee's Credit Union property and a 10-foot multi-use path will be constructed in front of Githens Middle School rather than a sidewalk. The project also includes the construction of a roundabout at the intersection with Pope Road. The existing road did not have curb and gutter, so that needed to be installed as well and several overhead and underground utilities have to be moved. Other project details are shown on the attached map. This project has a definable air quality benefit, as shown in the attached calculations.

Purpose and Need

This facility will provide an excellent bike commuting route as it parallels US 15/501, which is a multi-lane facility that is not suited for bike commuters. In Durham the project improves access to Githens Middle School, Chapel Hill Road Park, and the Patterson Place mixed use development area. In Chapel Hill it improves access to the new State Employees Credit Union building (formerly Blue Cross Blue Shield), as well as several shopping opportunities including a new Wegmans grocery store. There are also several residential neighborhoods along the route that can use the facilities to access shopping and employment opportunities.

Funding Availability

These CMAQ funds have come available due to a restructuring of CMAQ projects in the DCHC jurisdiction. The attached spreadsheet shows the currently funded projects that will now receive funding in FY20 or FY21, allowing FY18 and FY19 funding to be assigned to EB-4707B, as well as other projects. The projects now receiving FY18 and FY19 funding will be able to obligate all funds by September 2019. For purposes of the STIP, all of the funding for this project will be assigned to FY19.





NORTH CAROLINA
DEPARTMENT
OF
TRANSPORTATION

N



0 850 1,700 3,400
Feet



Legend

| | |
|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| — Streams | Floodway |
| County Boundary | 500-year floodplain |
| Parcels | 100-year floodplain |

Project EB-4707

Figure 2
Notable Features

EB-4707B Emissions Calculations

No-Build Emission Calculation

| Project ID | Project Name | Project Length (miles) | New Bike /Ped Trips | VMT Reduced | Functional Class | CO (g/Mile) | VOC (g/Mile) | NOx (g/Mile) | CO (Reduced Kg/Day) | VOC (Reduced Kg/Day) | NOx (Reduced Kg/Day) |
|------------|--------------|------------------------|---------------------|-------------|----------------------|-------------|--------------|--------------|---------------------|----------------------|----------------------|
| Prj | No-build | n/a | n/a | 20701 | Urban Minor Arterial | 9.916 | 0.433 | 0.339 | 205.27 | 8.96 | 7.02 |

Emission Reduction Calculation

| Project ID | Project Name | Project Length (miles) | New Bike /Ped Trips | VMT Reduced | Functional Class | CO (g/Mile) | VOC (g/Mile) | NOx (g/Mile) | CO (Reduced Kg/Day) | VOC (Reduced Kg/Day) | NOx (Reduced Kg/Day) |
|------------|------------------------------------------|------------------------|---------------------|-------------|----------------------|-------------|--------------|--------------|---------------------|----------------------|----------------------|
| Prj | Bike Lane/Sidewalk of Old Chapel Hill Rd | 1.690 | 87 | 149 | Urban Minor Arterial | 9.916 | 0.433 | 0.339 | 1.47 | 0.06 | 0.05 |

EMISSIONS AFTER PROJECT

203.80 8.90 6.97