

**SELMON  
EXPRESSWAY**

Whiting Street PD&E Study

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**Air Quality Technical  
Memorandum**

January 2022

Date: January 7, 2022

To: Mark Easley (H.W. Lochner, Inc.)

From: Wayne Arner (Crawford, Murphy & Tilly, Inc.)

**Subject: Air Quality Technical Memorandum  
Whiting Street Project Development and Environment (PD&E) Study  
Hillsborough County, Florida**

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The proposed project is located in Hillsborough County, Florida (**Figure 1**) within an area currently designated by the U.S. Environmental Protection Agency (EPA) as being an attainment area for all of the pollutants for which there are National Ambient Air Quality Standards (NAAQS)—carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter, and sulfur dioxide (SO<sub>2</sub>). As such, the proposed project is not expected to create adverse impacts on air quality and a project level air quality analysis is generally not warranted. Nevertheless, a project level screening analysis was performed for CO since it is the pollutant of concern regarding motor vehicles. Also, since this is not a federally funded project, the project is exempt from a Mobile Source Air Toxics (MSAT) analysis.

The project alternatives were subjected to the Florida Department of Transportation's (FDOT's) CO screening model (CO Florida 2012) which makes various conservative worst-case assumptions related to site conditions, meteorology, and traffic. CO Florida 2012 uses the latest EPA-approved software to produce estimates of one-hour and eight-hour average CO concentrations at default air quality receptors located from 10 feet to 150 feet along the edge of an intersection approach leg(s). The one-hour and eight-hour estimates are then directly compared to the NAAQS for CO (35 and 9 parts per million [ppm], respectively).

The project alternatives (no-build and build), were evaluated for the design year of the proposed project. With and without the build alternative, the intersection forecasted to have the highest approach traffic volume is the Kennedy Boulevard and Meridian Avenue intersection. Because this intersection has the highest approach volume, the results of the analysis can be presumed to be worst-case.

The traffic data used in the analysis and the CO Florida 2012 output are provided in an attachment to this memorandum. Based on the results, the highest predicted CO one- and eight-hour concentrations would not exceed the NAAQS for this pollutant regardless of alternative (**Table 1**). Therefore, the project "passes" the screening test.

Because the project is in an attainment area for all pollutants for which there are NAAQS, the Clean Air Act conformity requirements are not applicable. Additionally, because the project is expected to improve traffic flow, which would reduce delay and congestion, it is anticipated that the project would reduce air pollutant emissions within the study area.

#### **Construction Impacts**

Construction activities may cause short-term air quality impacts in the form of dust from earthwork and unpaved roads. These impacts will be minimized by adherence to applicable state regulations and to the FDOT Standard Specifications for Road and Bridge Construction.

**Figure 1. Project Location Map**



**Table 1. Intersection CO Screening Results for the No-Build and Build Alternatives for the Design Year (2046)**

Scenario	Maximum CO Levels (ppm)		Passes Screening Test?
	NAAQS one-hr/ Project one-hr	NAAQS eight-hr/ Project eight-hr	
No-Build	35 / 8	9 / 5	Yes
Build	35 / 8	9 / 5	Yes

## **Attachments**

- 1. Traffic Data for Air Quality Analysis**
- 2. CO Florida 2012 Output Files**

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION  
**TRAFFIC DATA FOR AIR QUALITY ANALYSIS**

650-050-36  
 Environmental Management  
 07/20

Date: 12/14/2021      Prepared by: Caleb Van Nostrand, P.E.

Financial Management Number(s): Not Available

Federal Aid Number(s): Not Available

Project Description: Whiting Street PD&E

**NOTE:** Traffic data should be provided for the intersection that is forecast to have the highest total approach traffic volume. The intersection may not be the same for the Build and No-Build alternatives. The number of lanes should be the number of intersection approach through lanes. The traffic volumes should be representative of vehicles per hour (vph) and vehicle speeds should be representative of posted speeds if intersection approach speeds are unknown. This traffic data sheet was prepared to assist in obtaining appropriate traffic data for the FDOT CO Florida 2012 Intersection Screening Model. Additional traffic data is required for interchanges (see CO Florida 2012 User's Guide).

**Design Year:** 2046

Intersections: Build Kennedy Boulevard at Meridian Avenue (AM)

No-Build Kennedy Boulevard at Meridian Avenue (AM)

Land Use:    Urban                       Suburban                       Rural

Intersection/Ramps	EB			WB			NB			SB		
	No. of Lanes	VPH	Speed	No. of Lanes	VPH	Speed	No. of Lanes	VPH	Speed	No. of Lanes	VPH	Speed
Build	N/A	0	N/A	2	1,636	35	3	2,322	40	3	3,592	40
No-Build	N/A	0	N/A	2	1,697	35	3	2,407	40	3	3,592	40

CO Florida 2012 - Results  
Friday, January 7, 2022

Project Description

Project Title Whiting Street PD&E  
Facility Name Kennedy Blvd at Meridian Ave  
User's Name WHA  
Run Name No-Build  
FDOT District 7  
Year 2046  
Intersection Type E-W Freeway 4 X 4  
Arterial Speed 35 mph  
Max Approach Traffic 3592 vph

Environmental Data

Temperature 48.8 F  
Reid Vapor Pressure 13.3 psi  
Land Use Urban  
Stability Class D  
Surface Roughness 175 cm  
1 Hr. Background Concentration 5.0 ppm  
8 Hr. Background Concentration 3.0 ppm

Results

(ppm, including background CO)

Receptor Max 1-Hr Max 8-Hr

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1	7.4	4.4
2	7.7	4.6
3	8.1	4.9
4	7.5	4.5
5	7.1	4.3
6	7.4	4.4
7	7.7	4.6
8	8.0	4.8
9	7.5	4.5
10	7.1	4.3
11	7.4	4.4
12	7.7	4.6
13	8.1	4.9
14	7.5	4.5
15	7.1	4.3
16	7.4	4.4
17	7.8	4.7
18	8.0	4.8
19	7.6	4.6
20	7.1	4.3

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\*\*\*\*\*PROJECT PASSES\*\*\*\*\*  
\*NO EXCEEDANCES OF NAAQ STANDARDS ARE PREDICTED\*  
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CO Florida 2012 - Results  
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