CHAPTER 16
AIR QUALITY ANALYSIS

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16. AIR QUALITY ANALYSIS

16-1 BACKGROUND

16-1.1 The Clean Air Act

The ***Clean Air Act*** as enacted in 1967, focused on technical information associated with air pollution, including research, grants, and the abatement of interstate air pollution issues. In 1970, the ***Clean Air Act*** was amended and the ***National Ambient Air Quality Standards (NAAQS)*** were established to protect public health and welfare. The 1970 Amendments also required states to prepare and implement control plans to show how they could achieve the ***NAAQS***. In 1990, the ***Clean Air Act*** was amended again. Included in the 1990 ***Clean Air Act Amendments*** were strategies to achieve and maintain the criteria air pollutant ***NAAQS***, to reduce air pollutant and pollutant precursor emissions from mobile sources, and to provide enforcement sanctions for not achieving and maintaining the ***NAAQS***.

16-1.2 National Ambient Air Quality Standards (NAAQS)

In 1970, the United States Environmental Protection Agency's (USEPA's) Office of Air Quality Planning and Standards (AQPS) established primary (protect public health) and secondary (protect public welfare) ***NAAQS*** for six pollutants (referred to as the criteria air pollutants). The pollutants are ozone, nitrogen dioxide, particulate matter, sulfur oxides, carbon monoxide, and lead. Notably, the AQPS has reviewed and revised certain standards since 1970. The current standards are provided in Table 16.1.

The following was excerpted from information provided by the USEPA for each of the criteria air pollutants.

16-1.2.1 Ozone

Ozone is not usually emitted directly into the air. At ground level, ozone is created by a chemical reaction between oxides of nitrogen and volatile organic compounds in the presence of sunlight. Motor vehicle exhaust and industrial emissions, gasoline vapors, and chemical solvents as well as natural sources emit oxides of nitrogen and volatile organic compounds.

16-1.2.2 Nitrogen Dioxide

Nitrogen oxides are a group of highly reactive gases. One of these gases, nitrogen dioxide, along with particles in the air, is often seen as a reddish brown layer over urban areas. The primary sources of nitrogen oxides are motor vehicles, electric utilities, and other industrial, commercial, and residential

sources that burn fuel. Motor vehicles emit approximately 49 percent of the national level of nitrogen oxides.

Table 16.1
National Ambient Air Quality Standards (NAAQS)

Pollutant		Averaging Time	Primary[6]	Secondary[7]
Ozone		8-hour[5]	0.08 ppm	0.08 ppm
Nitrogen Dioxide		Annual Arithmetic Mean	0.053 ppm	0.053 ppm
Particulate Matter	2.5 microns or less in size	24-hour[4]	65 µg/m^3	NA
		Annual Arithmetic Mean[3]	15.0 µg/m^3	15.0 µg/m^3
	10 microns or less in size	24-hour[1]	150 µg/m^3	NA
		Annual Arithmetic Mean[2]	50 µg/m^3	50 µg/m^3
Sulfur Oxides[8]		3-hour[1]	NA	0.5 ppm
		24-hour[1]	0.14 ppm	NA
		Annual Arithmetic Mean	0.03 ppm	NA
Carbon Monoxide		1-hour[1]	35 ppm	NA
		8-hour[1]	9 ppm	NA
Lead		Quarterly Average	1.5 µg/m^3	1.5 µg/m^3

[1] Not to be exceeded more than once a year.
[2] To attain this standard, the expected annual arithmetic mean concentration at each monitor within an area must not exceed 50 µg/m3.
[3] To attain this standard, the 3-year average of the annual arithmetic mean concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m3.
[4] To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 65 µg/m3.
[5] Notably, the standard that addressed 1-hour averages of ozone was revoked on June 15, 2005. To attain the 8-hour ozone standard, the 3-year average of the fourth highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.
[6] Primary standards are designed to establish limits to protect public health, including the health of "sensitive" individuals such as asthmatics, children, and the elderly.
[7] Secondary standards set limits to protect public welfare including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.
[8] Measured as sulfur dioxide.

NA = Not applicable
ppm = parts per million
µg/m^3 = microgram per cubic meter

Source: United States Environmental Protection Agency (http://epa.gov/air/criteria.html, accessed January 15, 2005)

16-1.2.3 Particulate Matter

Particulate matter is a term used to describe particles in the air including dust, dirt, soot, smoke, and liquid droplets. Sources that directly emit particulate matter include motor vehicles, construction activities, and unpaved roads. Sources of particles that form in the air from chemical processes involving sunlight and water vapor include fuel combustion in motor vehicles and at power plants, and industrial processes. Particulate matter is of increased interest because diesel vehicles emit significant levels of the pollutant and diesel particulate has been identified as a probable carcinogen (cancer causing substance) by the USEPA.

There are two standards for particulate matter – one for “coarse” particles (those 10 microns or less in size) and one for “fine” particles (those 2.5 microns or less in size). Coarse particles are typically formed by earth-based materials (brake and tire wear) contribute to particles of this size. Fine particles are a product of combustion.

16-1.2.4 Sulfur Dioxide

Sulfur dioxide belongs to a family of sulfur oxide gases. Approximately 65 percent of the sulfur dioxide released in to the air comes from electric utilities. Locomotives, large ships, and some non-road diesel equipment currently burn high sulfur fuel and emit sulfur dioxide. Overall, on-road motor vehicles are not considered to be a significant source of sulfur dioxide.

16-1.2.5 Carbon Monoxide

Carbon monoxide is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes approximately 56 percent of all carbon monoxide emissions nationally.

16-1.2.6 Lead

Lead is a metal found naturally in the environment. The major sources of lead emission were historically motor vehicles. However, due to a phase out of leaded gasoline in the 1970’s, metals processing is currently the major source of lead emissions.

16-1.2.7 NAAQS Designations

In accordance with the ***Clean Air Act***, all areas within the United States are designated with respect to the ***NAAQS*** as being “attainment”, “non-attainment”, “maintenance”, or “unclassifiable”. An area with air quality better than the ***NAAQS*** is designated attainment; an area with air quality conditions worse than the ***NAAQS*** is designated non-attainment. Maintenance areas are non-attainment areas that have been re-designated to attainment status. Finally,

an area may be designated unclassifiable when there is a lack of data to form a basis of attainment status (unclassifiable areas are typically treated as if they are attainment areas for the purpose of addressing the transportation conformity discussed in Section 16-1.4).

Current information on the status of areas within Florida with respect to the ***NAAQS*** is available with in ***USEPA's "Green Book***". The ***USEPA's Green Book*** can be reviewed at http://www.epa.gov/oar/oaqps/greenbk/.

16-1.3 State Implementation Plans

The control plans that States prepare to address how they will achieve the ***NAAQS*** are known as ***State Implementation Plans (SIPs)***. **SIPs** *are prepared for all areas designated non-attainment for the* ***NAAQS****. They are not prepared for areas designated attainment or unclassifiable.* Plans which detail how an area will continue to maintain ambient levels of pollutants below the ***NAAQS*** once attaining a standard are known as maintenance plans. ***SIPs*** (which can include maintenance plans) for areas of Florida that are or have been designated non-attainment for any of the ***NAAQS*** are available at http://www.epa.gov/region4/air/sips/ (at this writing--June 30, 2005--all areas of Florida are designated attainment).

Section 176 of the Clean Air Act (http://www.epa.gov/air/caa/caa176.txt) states that no department, agency, or instrumentality of the Federal government shall engage in, support in any way or provide financial assistance for, license or permit, or approve, any activity that does not conform to an approved ***SIP***. Conformity to a ***SIP*** means conforming to a ***SIP's*** purpose of eliminating or reducing the severity and number of violations of and achieving expeditious attainment of the ***NAAQS***.

16-1.4 Transportation Conformity

In 1993, the USEPA promulgated two sets of regulations to implement ***Section 176 of the Clean Air Act***. These are referred to as the ***Transportation Conformity and General Conformity Regulations***. ***The Transportation Conformity Regulations (40 CFR Part 93)*** *apply to transportation (highway) plans, programs, and projects within non-attainment or maintenance areas* that are developed, funded, or approved under ***U.S.C. Title 23 or the Federal Transit Act.*** The ***General Conformity Regulations*** are applicable to all other Federal actions.

A transportation conformity determination (or demonstration of conformity) shows that the estimated pollutant/precursor emissions associated with highway plans or programs are within the emission limits (budgets) specified in a ***SIP***. Metropolitan Planning Organizations (MPOs) typically perform and make the initial conformity determinations in metropolitan areas while State DOTs typically do so in areas not governed by a MPO (rural areas). Conformity determinations

are also made at the Federal level by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA).

Transportation conformity determinations are made at least every three years or, when ***long range transportation plans (LRTPs)*** and ***transportation improvement plans (TIP)*** are updated. ***Under Titles 23 and 49 of the U.S.C***., MPOs must have ***LRTPs*** in place that present a 20-year perspective on their transportation investments. ***TIPs*** are multi-year prioritized lists of projects (typically three years). Transportation conformity determinations are made using estimates of the regional amount of an applicable pollutant/precursor emission for a ***TIP*** (the entire transportation network within a non-attainment or maintenance area) and forecast highway/transit operating conditions (volume and speed). If the projected emissions for a ***TIP*** do not exceed (and preferably are less than) the emission limit (budget) for this type of activity, the ***TIP*** can be found to conform to a SIP.

In areas designated non-attainment or maintenance for carbon monoxide and/or particulate matter, additional microscale (hot spot) analysis may be necessary to determine project-level conformity. These projects must also come from a currently conforming transportation plan and ***TIP***. There have been no areas within the State of Florida designated non-attainment for either carbon monoxide or the current particulate matter standards (for particulate matter 10 microns or less in size or particulate matter 2.5 microns or less in size).

Carbon monoxide is produced primarily by motor vehicles. Long term monitoring in Florida shows a significant reduction in carbon monoxide concentrations (Florida has not recorded a violation of the carbon monoxide standard since 1986). Recent designations with respect to particulate matter also suggest that levels of this pollutant are below the ***NAAQS***.

16-1.5 National Environmental Policy Act (NEPA)

Project-level air quality analysis is performed as part of the ***NEPA*** process for the purpose of identifying and disclosing project-related impacts, and to evaluate possible mitigation. The analysis performed as part of the environmental process in response to ***NEPA*** is not required in order to determine conformance in an area designated as non-attainment or maintenance area for any of the ***NAAQS***. The main difference between the analysis performed for the ***Clean Air Act*** (conformity) and the analysis performed in response to ***NEPA*** is that the analysis for the ***Clean Air Act*** is based on a comparison of predicted levels (with and without proposed improvements) while the analysis for ***NEPA*** estimates pollutant emissions/concentrations in the vicinity of a proposed project for direct comparison with the ***NAAQS***.

16-2 PROJECT LEVEL ANALYSIS

Both the ***Clean Air Act*** and the ***NEPA*** require that air quality be considered in the preparation of environmental documents. The ***Clean Air Act***

requires that transportation (motor vehicle-related) projects proposed in non-attainment areas that require Federal participation (approval, licensing, funding, etc.) conform to a ***SIP*** if there are provisions in the ***SIP*** for transportation conformity. The ***NEPA*** requires that project-related impacts in all areas (attainment and non-attainment) be disclosed, and if applicable, mitigation measures considered.

The level of project analysis will vary according to the size of the project, existing air quality conditions, and the degree of controversy regarding the project. In all cases, the only pollutants of concern should be those that would be directly affected by a project and, as a subset, those which citizens and/or local governments express some concern (i.e., a local government is concerned about the carbon monoxide concentrations that would result from a project improvement where traffic levels are forecast to increase with the improvements).

Projects evaluated as CE's are projects which by definition do not involve significant environmental impacts (including air quality impacts). These types of projects typically have no affect on area-wide air quality levels, but may provide some air quality benefits on a local basis. As such, FHWA has indicated that an air quality analysis is generally not necessary. (See the ***FHWA Discussion Paper: Appropriate Level of Highway Air Quality Analysis for a CE, EA/FONSI, and EIS, March 1986***.) If there is some question as to whether a particular project normally processed as a CE would have an air quality impact, this may be resolved by comparing the project to previous analyses of similar projects or by performing a screening analysis. If the analysis indicates that the project will not create a new violation or exacerbate an existing exceedance of the carbon monoxide standard, the project may be processed as a CE.

An EA/FONSI may also not need any analytical backup. Such judgment could be based on previous analyses for similar projects or previous general analysis for various classes of projects. Low volume roads in rural area would be an example of one class of project not normally requiring any analysis to make a judgment of air quality impacts. If there is any question whether or not there is a chance for an air quality impact, the procedures for an EIS should be followed. In general, a screening analysis should be adequate for most projects processed with an EA/FONSI.

The air quality discussion in EIS's should normally include at least the results of a screening level analysis. Each alternative, including the no-build alternative, should be analyzed rather than only the preferred alternative. In most circumstances, the build alternatives will indicate an improvement in carbon monoxide concentrations. The EIS should include a statement that indicates that there will not be any violations of the ***NAAQS*** for carbon monoxide.

A flow chart illustrating the project evaluation process is provided in Figure 16.1.

16-2.1 Ozone

Attainment - Project level analysis is not required for the air pollutant ozone.

Non-attainment/Maintenance Areas - Ozone is considered an area-wide pollutant. This pollutant is evaluated in system wide planning efforts only within areas designated non-attainment or maintenance. It is not practical, nor a requirement, that an evaluation be performed to evaluate the effect of an individual project on regional ozone levels.

16-2.2 Nitrogen Dioxide

Attainment/Non-attainment/Maintenance Areas – Project level analysis is not required for nitrogen dioxide.

16-2.3 Particulate Matter

Attainment Areas - Particulate matter related to on-road motor vehicles does not need to be addressed in environmental documents. However, there may be a need to address particulate emissions associated with construction activity (control of dust). If this is the case, the following statement should be included in the Technical Memorandum for the project:

"Construction activities will cause short-term air quality impacts in the form of dust from earthwork and unpaved roads. There impacts will be minimized by adherence to all applicable State and local regulations and to the ***FDOT standard Specifications for Road and Bridge Construction***."

Non-attainment/Maintenance Areas - The USEPA has not provided modeling guidance on how to perform quantitative hot spot analysis for this pollutant, therefore a quantitative analysis is not currently required unless there is serious concern expressed by a local government or the public. Should any area within the State of Florida be designated non-attainment with respect to the particulate matter ***NAAQS*** in the future, the FDOT will prepare and distribute guidance on the appropriate evaluation methodologies to satisfy the requirements of the ***Clean Air Act***.

16-2.4 Sulfur Dioxide

Attainment/Non-attainment/Maintenance Areas – Sulfur dioxide emissions are not currently addressed, nor are they required to be addressed, in environmental documents related to motor vehicles.

16-2.5 Carbon Monoxide

Attainment/Non-attainment/Maintenance Areas – Levels of carbon monoxide tend to be the highest immediately adjacent to roadways and

intersections. Therefore, the FDOT evaluates levels of this pollutant for all projects.

When it is necessary to subject a project to a screening test (see Section 16-2 to determine if a screening test is appropriate), all intersections within the project corridor should be reviewed to evaluate the potential for a violation of the carbon monoxide ***NAAQS***. To perform the review, at least the intersection with a combination of the highest intersection approach volume and lowest approach speed should be subjected to the FDOT's latest Screening Model (currently CO Florida 2004). The screening test should be performed for future (opening year and design year) conditions with and without the proposed roadway improvements. For additional information on data requirements for the Screening Model, see the appropriate User's Manual for the screening methodology. Figure 16.2 is an example data requirement sheet that can facilitate collection of the appropriate data for the CO Screening Model.

Should the project fail the screening test, microscale dispersion analysis should be performed on the intersection failing the test and sufficient additional intersections to insure there will be no violations of the carbon monoxide ***NAAQS*** with or without the proposed improvements to the roadway. If required, the microscale dispersion analysis should be performed using the latest versions of the USEPA's ***CAL3QHC and MOBILE models***.

16-2.6 Lead

Attainment/Non-attainment/Maintenance Areas – Lead emissions are not currently addressed, nor are they required to be addressed, in environmental documents related to motor vehicles.

16-3 DOCUMENTATION

It is not necessary to prepare an extensive report to document the status of the project with respect to air quality. Rather, a brief technical memorandum should be prepared. When final, the memorandum should be placed in the project file.

1. A brief description of the project and the area in which the project is located (i.e., is the area primarily residential, commercial, industrial, etc.).

2. A brief description of air quality conditions within the area with respect to the ***NAAQS*** (the current USEPA designation (attainment, non-attainment, maintenance, or unclassifiable) for the area (for each of the criteria air pollutants)). It may be appropriate to cite published information regarding regional or local trend data, when such data is available and relevant to the project.

3. Relate that the project was reviewed for air quality impacts consistent with the guidance provided by FHWA. If the project was subjected to a carbon monoxide screening test, provide the results of the analysis for the project alternatives (Build and No-Build).

4. *In non-attainment/maintenance areas*: The memorandum should identify the specific ***LRTP/TIP*** in which the project is included (i.e., Fiscal Year 2005/2006), the project identification number, and date the conformity determination for the ***LRTP/TIP*** was approved. This and other required information can be provided by inserting the following statements in to the memorandum:

   "The project is located in an area that has been designated as *non-attainment/maintenance* for the *averaging time* ***National Ambient Air Quality Standard*** for *pollutant* under the criteria provided in the ***Clean Air Act***. This project is included in the urban area's current approved conforming ***Transportation Improvement Plan (TIP)***, the area's conforming long-range plan, and the area's ***Conformity Determination Report***. The project's design concept and scope are the same as that which were evaluated in the conforming ***TIP*** and long-range plan. A copy of FDOT's memorandum documenting conformity for the project is attached."

5. *In attainment areas*: The memorandum should include the following statements:

   "The project is located in an area which is designated attainment for all of the ***National Ambient Air Quality Standards*** under the criteria provided in the ***Clean Air Act***. Therefore, the ***Clean Air Act*** conformity requirements do not apply to the project."

An example Air Quality Technical Memorandum is provided as Figure 16.3.

16-4 REFERENCES

1. United States Code: Title 42 (The Public Health and Welfare), Chapter 85 (Air Pollution Prevention and Control), Subchapter I (Programs and Activities), Part A (Air Quality and Emission Limitations), Section 7401 (Congressional Findings and Declaration of Purpose); available at http://www.gpoaccess.gov/uscode/

2. Code of Federal Regulations: Title 40 (Environment), Chapter I (Environmental Protection Agency), Part 93 (Determining Conformity of Federal Actions to State or Federal Implementation Plans), Subpart A (Determining Conformity to State or Federal Implementation Plans of

Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Title 23 United States Code or the Federal Transit Laws); available at http://www.gpoaccess.gov/cfr/

3. Florida Department of Environmental Protection, Air Resource Management Rules, Chapter 62-204 (Air Pollution Control – General Provisions); available at http://www.dep.state.fl.us/legal/Rules/air/62-204.pdf

4. Federal Highway Administration memorandum, Discussion Paper on the Appropriate Level of Highway Air Quality Analysis for a CE, EA/FONSI, and EIS, April 7, 1986; available from the FHWA Environmental Guidebook; available at http://www.fhwa.dot.gov/environment/index.htm

5. Federal Highway Administration Advisory T6640.8A, Guidance for Preparing and Processing Environmental and Section 4(F) Documents, October 30, 1987; available from the FHWA Environmental Guidebook; available at http://www.fhwa.dot.gov/environment/index.htm

6. Florida Department of Environmental Protection, Division of Resource Management, December 2002, Air Quality Maintenance Plan (2005-2015) Hillsborough and Pinellas Counties; available at http://www/dep.state.fl.us/Air/rules/recent/TampaMaintenancePlan.pdf

7. Florida Department of Environmental Protection, Division of Resource Management, December 2002, Air Quality Maintenance Plan (2005-2015) Duval County; available at http://www/dep.state.fl.us/Air/rules/recent/JaxMaintenancePlan.pdf

8. Florida Department of Environmental Protection, Division of Resource Management, December 2002, Air Quality Maintenance Plan (2005-2015) Dade, Broward, and Palm Beach Counties; available at http://www/dep.state.fl.us/Air/rules/recent/SEMaintenancePlan.pdf

9. Federal Highway Administration, April 1, 2004, Survey of Screening Procedures for Project-Level Conformity Analysis; available at http://www.fhwa.dot/gov/resourcecenter/surscreenproc.pdf

10. Federal Highway Administration, Chapter 10 of the Transportation Conformity Reference Guide, May 2000; available at http://www.fhwa.dot.gov/environment/conformity/ref_guid/chap10.pdf

11. COFlorida2004 (a Florida-specific, MOBILE6-Based CO Screening Model for Air Quality Analyses of Transportation Projects); available at http://www.dot.state.fl.us/emo/software/software.htm

12. US Environmental Protection Agency, Green Book – http://www.epa.gov/oar/oaqps/greenbk/

13. Federal Highway Administration, Distribution of Particulate Matter Guidance Document, October 10, 1995; available at http://environment.fhwa.dot.gov/guidebook/vol1/doc1h.pdf

14. Federal Highway Administration, Guidance for Qualitative Project Level "Hot Spot" Analysis in PM-10 Nonattainment and Maintenance Areas, September 12, 2001; available at http://www.fhwa.dot.gov/environment//conformity/hspotmem.htm.

15. Federal Highway Administration, Discussion Paper: Appropriate Level of Highway Air Quality Analysis for a CE, EA/FONSI, and EIS. Office of Environmental Policy, Noise and Air Analysis Division (HEV-30); March 1986; available at http://environment.fhwa.dot.gov/guidebook/vol1/doc1r.pdf.

Webpage links to additional information on:

Criteria air pollutants - http://epa.gov/air/criteria.html.

Transportation conformity - http://www.fhwa.dot.gov/environment/conform.htm.

Florida Department of Transportation, Environmental Management Office., General information on FDOT policies, procedures, and practices – http://www.dot.state.fl.us/emo/

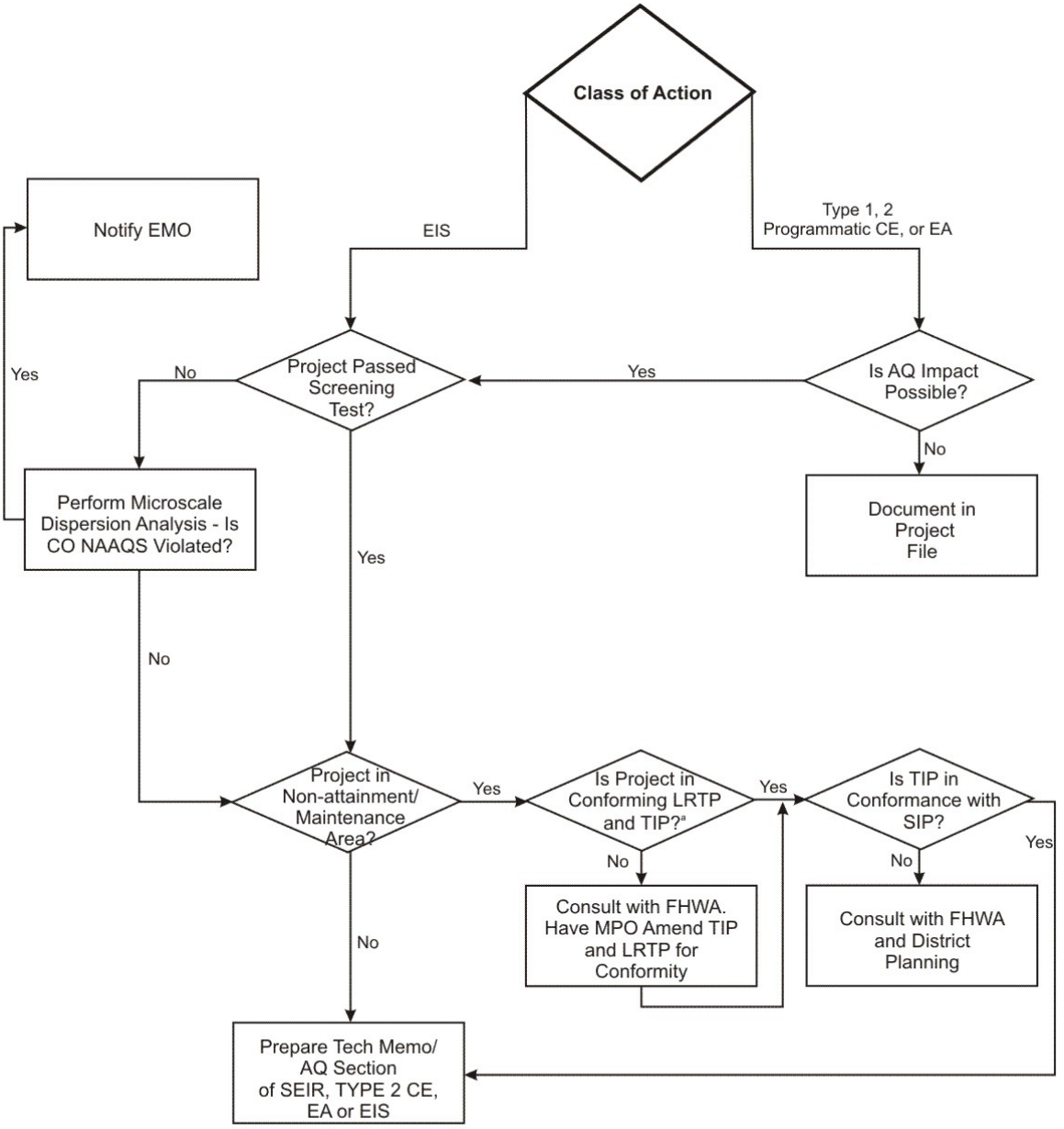
Florida Department of Environmental Protection (FDEP), Division of Air Resource Management (DARM): Air quality conditions in Florida – http://www.dep.state.fl.us/Air/default.htm.

FDEP's Clean Air Florida Publication - http://www.dep.state.fl.us/air/publications/cleanair/CleanAirFlorida.pdf.

FDEP's Real Time and Historic Air Pollutant Measurement Data – http://www.dep.state.fl.us/air/flaqs.htm.

USEPA's MOBILE model – http://www.epa.gov/otaq/mobile.htm

USEPA's CAL3QHC model – http://www.epa.gov/scram001/tt22.htm#screen



[a] Assumes that the project scope (concept and design) have not changed significantly from what is identified in the LRTP/TIP. If the scope has changed significantly, the MPO must reevaluate and re-conform their TIP.

FIGURE 16.1 Air Quality Analysis Process (for carbon monoxide)

TRAFFIC DATA FOR AIR QUALITY ANALYSIS

Date: _____ Prepared by: _____

Financial Project ID Number(s): _____

Federal Aid Number(s): _____

Project Description: _____

NOTE: Traffic data should be provided for the intersection that is forecast to have the highest total approach traffic volume. Notably, 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 cruise approach speeds are unknown. This traffic data sheet was prepared to assist in obtaining appropriate traffic data for the FDOT CO Florida 2004 Intersection Screening Model. Notably, additional traffic data is required for diamond interchanges (see User's Guide).

==========

Opening Year: _____

Intersections: Build_____ No-Build_____

Land Use: Urban_____, Suburban_____, or Rural _____

Build/	EB			WB			NB			SB		
No-Build	No. of Lanes	VPH	Spd	No. of Lanes	VPH	Spd	No. of Lanes	VPH	Spd	No. of Lanes	VPH	Spd
Build												
No-Build												

==========

Design Year: _____

Intersections: Build_____ No-Build_____

Land Use: Urban_____, Suburban_____, or Rural _____

Build/	EB			WB			NB			SB		
No-Build	No. of Lanes	VPH	Spd	No. of Lanes	VPH	Spd	No. of Lanes	VPH	Spd	No. of Lanes	VPH	Spd
Build												
No-Build												

FIGURE 16.2 Example Traffic Data Input Sheet

MEMORANDUM

Date:
To: Name, Title

From: Name, Title

Subject: Financial Project ID Number(s)_____
Air Quality Screening Test
Project Description,
_____County
_____

The referenced proposed project is located in _____ County, an area currently designated as being *attainment/non-attainment/maintenance* for the following criteria air pollutant(s) *ozone/nitrogen dioxide/particulate matter (2.5 microns in size and 10 microns in size)/sulfur dioxide/carbon monoxide/lead*.

The project alternatives were subjected to a carbon monoxide (CO) screening model that makes various conservative worst-case assumptions related to site conditions, meteorology and traffic. The Florida Department of Transportation's (FDOT's) screening model, CO Florida 2004 (released September 7, 2004) uses the latest United States Environmental Protection Agency (USEPA)-approved software (***MOBILE6 and CAL3QHC***) to produce estimates of one-hour and eight-hour CO at default air quality receptor locations. The one-hour and eight-hour estimates can be directly compared to the one-and eight-hour ***National Ambient Air Quality Standards (NAAQS)*** for CO that are 35 parts per million (ppm) and 9 parts per million (ppm), respectively.

The roadway intersection forecast to have the highest total approach traffic volume was *name of intersection*. The Build and No-Build scenarios for both the opening year (*year*) and the design year (*year*) were evaluated. The traffic data input used in the evaluation is attached to this memorandum.

Estimates of CO were predicted for the default receptors which are located 10 feet to 150 feet from the edge of the roadway. Based on the results from the screening model, the highest project-related CO one- and eight-hour levels are not predicted to meet or exceed the one- or eight-hour ***National Ambient Air Quality Standards (NAAQS)*** for this pollutant with either the No-Build or Build alternatives. As such, the project "passes" the screening model. The results of the screening model are attached to this memorandum.

[For projects in non-attainment or maintenance areas also include the following paragraph]
The project is located in an area that has been designated as *non-attainment/maintenance* for the *averaging time* ***National Ambient Air Quality Standard*** for *pollutant* under the criteria provided in the Clean Air Act. This project is included in the urban area's current approved conforming ***Transportation Improvement Plan (TIP),*** the area's conforming long-range plan, and the area's ***Conformity Determination Report***. The project's design concept and scope are the same as that which were evaluated in the conforming ***TIP*** and long-range plan. A copy of FDOT's memorandum documenting conformity for the project is attached.

Figure 16.3 Example Air Quality Technical Memorandum