

**AIR MANAGEMENT REGULATION X:
COMPLEX SOURCE REVIEW**

**GUIDELINES FOR
PREPARATION,
SUBMISSION, AND REVIEW**

**City of Philadelphia
Department of Public Health
Air Management Services**

INTRODUCTION

The purpose of this document is to provide guidance to developers and consultants regarding Air Management Regulation X: Complex Source Review (AMR X). AMR X provides a mechanism to assess, manage, and minimize air quality impacts from Complex Sources in the City of Philadelphia (City). Complex Sources are defined as:

[any] facility, building, structure or installation, or combination thereof which emits, or in connection with which secondary or adjunctive activity is conducted which may emit, an air pollutant for which there is a National Ambient Air Quality Standard. [NAAQS].
AMR X. § I.

An AMR X Complex Source Permit Application, Traffic Impact Study (TIS), and Air Quality Impact Statement (AQIS) must be completed for all Complex Sources listed in AMR X. § II.A:

1. New or modified Parking Facilities within the Philadelphia Metropolitan Center with a final total capacity greater than 250 motor vehicles and new or modified Parking Facilities outside of the Philadelphia Metropolitan Center with a final total capacity greater than 500 motor vehicles. Modifications to such Parking Facilities that have a de minimus impact on air quality, as determined by the Department with reference to the National Ambient Air Quality Standards (NAAQS), are exempt from the requirements set forth in Section II.A.
2. New or modified Complex Sources that are projected by the Department to generate peak rate traffic in excess of 100 motor vehicles per hour; 25 diesel buses per hour; or 12 heavy duty diesel vehicles per hour.

All applications for AMR X Complex Source Permit should be submitted to the City Department of Public Health, Air Management Services (AMS) before building permits from the City Department of Licenses and Inspections are obtained. A flowchart outlining the AMR X Complex Source Review process is attached as Appendix A. AMR X Complex Source Permit Application and Instructions are attached in Appendix B.

Each application must include the following:

1. Complex Source Permit Application (signed, two copies)
2. Traffic Impact Study (TIS) (one copy)
3. Air Quality Impact Statement (AQIS) (one copy)
4. \$430 application fee, payable to the “City of Philadelphia”
5. Electronic (pdf) version of the TIS and AQIS

Prior to issuance of an AMR X Complex Source Permit, the applicant must publish an AMS-approved public notice describing the proposed project in a newspaper of general circulation in the section of the city which the source is to be located. There will be a 30-day comment period from the date of publication for the submission of comments.

TRAFFIC IMPACT STUDY

The required Traffic Impact Study (TIS) assesses the effects that traffic generated by a new or modified Complex Source will have on the transportation network. A valid TIS must examine present traffic conditions and determine what changes, including but not limited to roadway system improvements, are needed to manage the increased traffic flow generated by a new or modified Complex Source.

AMS requires that a TIS be submitted for all new or modified Complex Sources. See e.g. AMR X. § II.A. Applicants should work with the City Streets Department to conduct the TIS. The City Streets Department Assistant Chief Traffic Engineer may be reached at:

Assistant Chief Traffic Engineer
Philadelphia Streets Department
Municipal Services Building, Room 900
1401 John F. Kennedy Boulevard
Philadelphia, PA 19102
Phone: 215-686-5572
Fax: 215-686-5067

Note: If the new or proposed Complex Source is located on a State Highway, the Pennsylvania Department of Transportation (PennDot) may require a TIS and Highway Occupancy Permit (HOP Permit). For such Complex Sources, the City Streets Department will work in conjunction with PennDot through the HOP Permitting Process to develop the TIS required for AMR X compliance.

At a minimum, the TIS must contain the following:

1. A description of the Traffic Impact Area, including its major roads and potential traffic generation rates to be determined by current acceptable traffic generation references. The Traffic Impact Area shall incorporate all roads that will be used by vehicles that will either originate or have a destination at the proposed Complex Source. Existing 24-hour and peak hour traffic volume data must be provided for all streets, including arterial and collector streets, that will provide access to the proposed Complex Source, as well as any major intersections within the Traffic Impact Area. The designation of the Traffic Impact Area, and the intersections and roads that it encompasses, shall be subject to review and approval by the Philadelphia Streets Department or Pennsylvania Department of Transportation.
2. Estimates of the total number of vehicle trips to be generated by the proposed Complex Source for a typical 24-hour period, typical A.M. and P.M. peak periods, and maximum 24-hour and peak-hour periods.

3. Assignment of future 24-hour and peak-hour volumes to the road network and other streets that will serve the proposed Complex Source based upon the projection of increased traffic volumes with the impact area.
4. Projected 24-hour and peak-hour turning movements for all access points to the proposed Complex Source at any major intersection used by traffic originating or destined there.
5. A capacity and level of service analysis on all approaches (traffic lights, intersections, or entrance/exit) within the Traffic Impact Area of the proposed Complex Source.
6. A plan and description on the proposed Complex Source's loading and unloading and parking procedures including size and location of curb cuts, driveway directions, reservoir spaces, parking lot or garage lay-out and size and location of all loading docks including turning radius.
7. The source of the standards used, a description of the procedures and analysis undertaken, and the recommendations and conclusions of the professionals who prepared the report.

If capacity and level of service analysis indicates that the average traffic delay for any approach (traffic light, intersection, or entrance/exit) within the Traffic Impact Area is greater than or equal to 55 seconds, then the Applicant must also:

1. Include, and subsequently agree to implement, a mitigation plan with the TIS that addresses the traffic delay at the affected approaches within the Traffic Impact Area. This mitigation plan must be separately approved by the Streets Department; **OR**
2. Conduct air quality modeling, as part of the Air Quality Impact Statement (AQIS), that demonstrates the proposed Complex Source's impact on the NAAQS.

AIR QUALITY IMPACT STATEMENT

The Air Quality Impact Statement (AQIS) assesses the emission of air pollution from a Complex Source. Such emissions include those generated by secondary or adjunctive activity, such as mobile sources, at a Complex Source. The AQIS should provide detailed information to show all actual and potential impacts on the existing air quality resulting directly, or indirectly, from the Complex Source, and in the area, neighborhood and region. See AMR X. § III.B.2

AMS requires that an AQIS be submitted for all Complex Sources. See e.g. AMR X. § II.A. At a minimum, the AQIS shall contain the following information:

1. Location and general description of the Complex Source, including information on its nature, design, construction, and operation.
2. The nature and amounts of air contaminants to be emitted directly from the Complex Source and from any associated secondary or adjunctive activity. This includes information on the emission sources at the Complex Source, how the emissions were derived, and the results of all background tests. Secondary or adjunctive activity includes, but is not limited to, operations of ground service or warehouse equipment. .

Air Quality Modeling

Air quality modeling must be included in the AQIS if (1) **OR** (2) below are true:

1. The emissions from the Complex Source exceed the facility emissions from 25 PA Code § 127.449 (d):

Pollutant	Emissions (tons/year)**
SO ₂	8.0
NO _x	5
PM ₁₀	3.0
PM _{2.5}	3.0
CO	20
VOC	5

** Accurate as of 11/8/2013

2. The average traffic delay at any intersection within the Traffic Impact Area of a Complex Source is greater than or equal to 55 seconds, and no mitigation plan to address the traffic delay has been approved by the Streets Department.

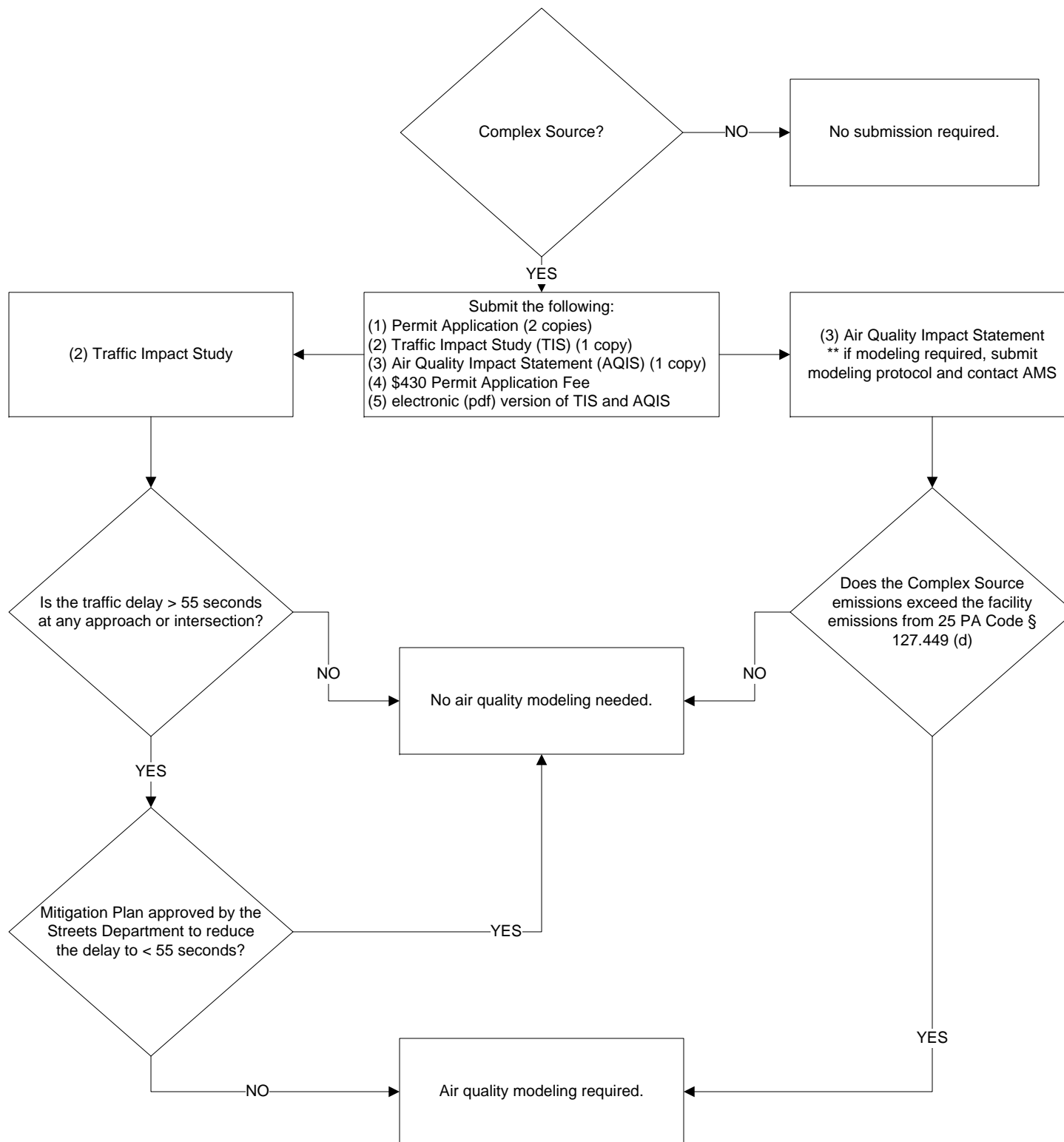
A modeling protocol addressing the air quality models, methods, and assumptions should be provided to AMS in advance of any final air quality modeling analysis. In general, all modeling should be consistent with recommendations as listed in 40 CFR Part 51, Appendix W. Note, model selection is dependent on the type of air pollution emissions from the Complex Source:

Type of Air Pollution Emissions	Recommended Model
Air Pollution Emissions from Highway / Intersections in Traffic Impact Area Only	AERMOD, CAL3QHCR
Air Pollution Emissions from Highway / Intersections in Traffic Impact Area, and directly from the Complex Source	AERMOD

The latest approved EPA model should be used to estimate emissions from on-road vehicles and non-road sources.

APPENDIX A

AMR X COMPLEX SOURCE FLOWCHART



APPENDIX B

**AMR X COMPLEX SOURCE
PERMIT APPLICATION AND INSTRUCTIONS**



CITY OF PHILADELPHIA
DEPARTMENT OF PUBLIC HEALTH
AIR MANAGEMENT SERVICES

Air Management Services
321 University Avenue
Philadelphia PA 19104-4543
Phone: (215) 685-7572
FAX: (215) 685-7593

COMPLEX SOURCE PERMIT APPLICATION

(Prepare all information completely in print or type in duplicate)

Facility Name	Location of Source (Street Address)	Tax ID No.
Owner Name	Owner Mailing Address	Phone
		Email
Contact Person	Contact Mailing Address	Phone
		Email

Is this project new construction? ☐ Yes ☐ No

Is this project an expansion of an existing facility? ☐ Yes ☐ No

What is the project completion date? _____

If the Complex Source has a Parking Garage:

What type of parking facility does the project have? ☐ Lot ☐ Garage How many parking spaces? _____

Will it be ☐ underground? ☐ enclosed? (check if applicable)

Will it have a mechanical ventilation system? ☐ Yes* ☐ No

* if Yes, Air Management Regulation XII is also applicable and you must submit an Installation Permit Application for Mechanical Ventilation Systems

Brief description of the Complex Source. Additional details should be provided in the Air Quality Impact Statement including nature, design, emission estimates, construction and operation.

I certify that I have the authority to submit this Permit Application on behalf of the applicant named herein and that the information provided in this application is true and correct to the best of my knowledge and information

Signature _____ Date _____ Address _____

Name & Title _____ Phone _____ Fax _____

Application No.	Plant ID	Health District	Census Tract	Fee
Approved by	Date	Conformance by	Date	

Instructions

AMR X COMPLEX SOURCE PERMIT APPLICATION FORM AND INSTRUCTIONS

1. Note: All information in the application is available to the public. If the applicant wishes to keep some information confidential, it must be stamped confidential and sent separately with a letter specifically requesting it be kept confidential and give a legal basis for doing so. AMS will review the confidential request and advise as appropriate.
2. The Complex Source Permit Application must include the following:
 - a. Complex Source Application Form (signed, two copies)
 - b. Traffic Impact Study (TIS) (one copy)
 - c. Air Quality Impact Statement (AQIS) (one copy)
 - d. \$430 application fee, payable to the "City of Philadelphia"
 - e. Electronic (pdf) version of the TIS and AQIS

These should be directed to:

Source Registration
Air Management Services (AMS)
321 University Avenue
Philadelphia, PA 19104-4543.
Phone: 215-685-7572

3. If the Complex Source will have a parking garage that is underground or enclosed, the parking garage is also applicable to AMR XII and must have a mechanical ventilation system. An Installation Permit Application for Mechanical Ventilation Systems for Enclosed Parking Garages must be submitted in addition to the Complex Source Permit Application. Please see the following for more information on this regulation:
 - a. Air Management Regulation XII
(<http://www.phila.gov/health/pdfs/Reg%20XII.pdf>)
 - b. Procedures and Guidelines
(http://www.phila.gov/health/pdfs/air/AMR-XII_Procedures.pdf)
 - c. Installation Permit Application
(http://www.phila.gov/health/pdfs/air/Parking_Garage_Application.pdf)
4. Definition of Terms:
 - a. Tax ID No.: This is the Federal Tax ID or Social Security Number. If the applicant has an Employer Identification Number (EIN), this number must be used.

Note: The issuance of a Complex Source Permit by AMS does not relieve the Applicant from the obligation to obtain any other permits required by the City or other Agencies prior to construction and/or operation of the source.