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FINAL

AIR QUALITY REPORT RE-EVALUATION

US 41 (SR 45) WIDENING, RE-EVALUATION
PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

From SR 44 to SR 200

Citrus County, Florida

Financial Project Number: 257165 1
Federal Aid Project Number XL-332-1(14)

Prepared for:

District Seven
Florida Department of Transportation

By:

H.W. Lochner, Inc.

June, 1998

AIR QUALITY REPORT RE-EVALUATION

US 41 (SR 45)
From SR 44 To SR 200

Citrus County, Florida

Financial Project Number 257165 1
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This project re-evaluates the proposed upgrading of the existing facility to provide two through lanes for each direction of travel.

DISTRICT SEVEN
FLORIDA DEPARTMENT OF TRANSPORTATION
Tampa, Florida

June, 1998

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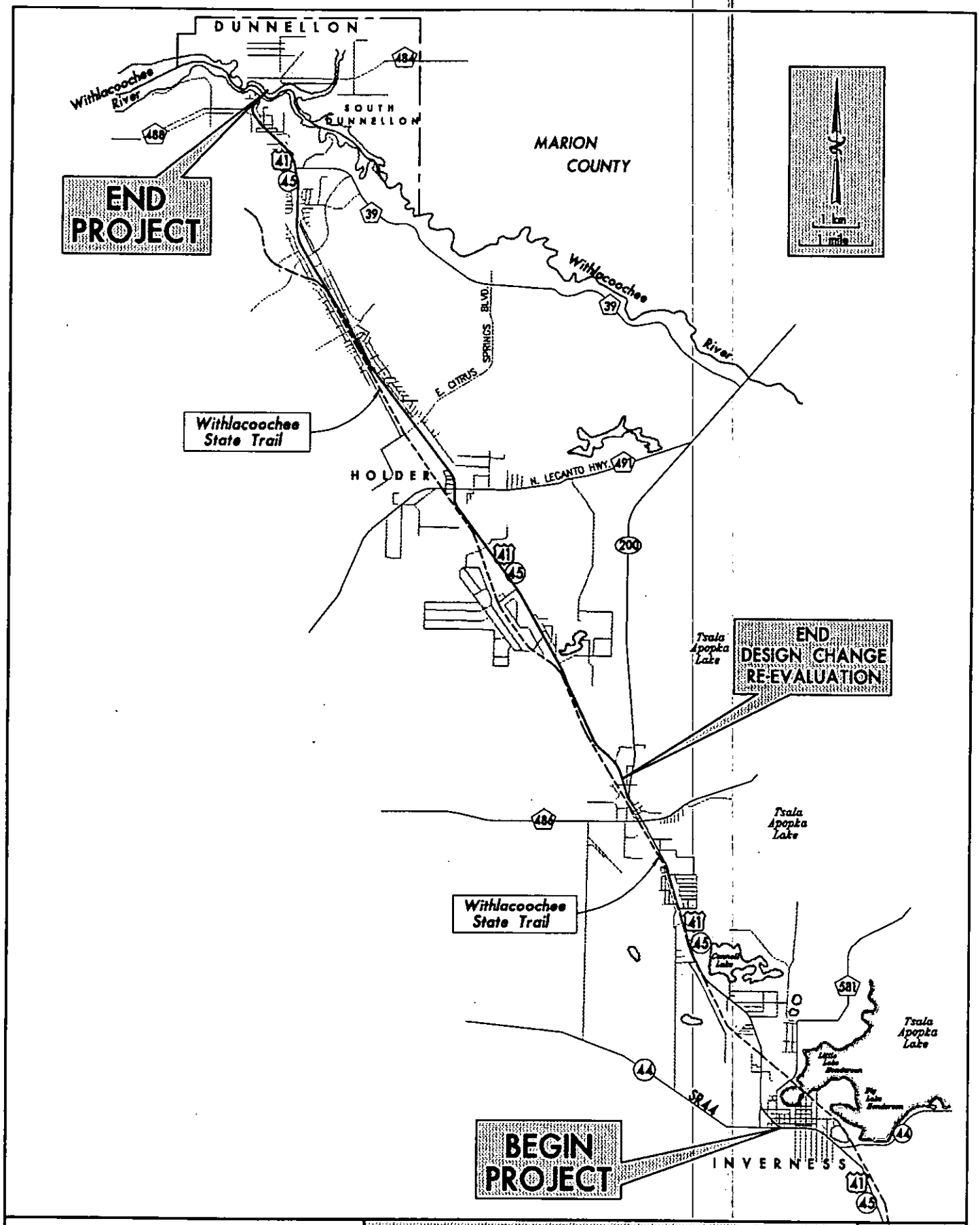
1.0 PROJECT DESCRIPTION

This Air Quality Report is one in a series of reports and technical memoranda prepared as a part of the re-evaluation of the Project Development and Environment (PD&E) study for the proposed improvements to US 41 (SR 45) in Citrus County, Florida undertaken by the Florida Department of Transportation (FDOT). The US 41 (SR 45) project begins at SR 44 in the City of Inverness, Citrus County, and ends in the vicinity of CR 488, within Citrus County. The project length is approximately 25 kilometers (15.6 miles). The project study location is depicted on Exhibit 1.

US 41 is a major arterial providing a north-south connection from the City of Dunnellon in Marion County to the area nearby the City of Inverness in Citrus County. It is intersected at various points by east-west roads, the major ones being SR 44, CR 486, CR 491, and CR 39. The existing facility consists of a three-lane undivided roadway with a center dual left turn lane from SR 44 to Montgomery Avenue and a two-lane undivided roadway from Montgomery Avenue to CR 488. This re-evaluation addresses design changes which are proposed for that portion of the project from SR 44 to north of SR 200. Included within that segment is the US 41 bridge over the Withlacoochee State Trail (WST).

The proposed improvements to US 41 involve widening the existing facility from SR 44 to SR 200 to a four-lane divided urban facility. The proposed facility would serve the higher future traffic volumes that are predicted as a result of high growth in the region. Constraints on development along US 41 have been imposed by the City of Inverness, in order to preserve the adopted Level of Service "E" for a principal arterial.

The purpose of this report is to present pertinent information regarding the proposed improvement's compliance with the Clean Air Act, as amended in 1990. The project is in an area which has been designated as attainment for the ozone standards under this criteria. This report is a re-evaluation of the original Air Quality Report prepared in August 1994, which assumed that the US 41 intersection with SR 200 was the worst-case intersection location. This re-evaluation includes the study of US 41 from SR 44 to SR 200 and assumes that the US 41 intersection with SR 44 is the worst-case intersection based on traffic volume and average link speed.



US 41 RE-EVALUATION
Project Development & Environment (PD&E) Study
Citrus County

PROJECT LOCATION

EXHIBIT 1

On December 2, 1997, the Citrus County Board of County Commissioners adopted the amendments to the Comprehensive Plan proposed within its Evaluation and Appraisal Report. The amended Comprehensive Plan indicates an existing need for two additional lanes on US 41 from SR 44 to SR 200.

The City of Inverness 1998 Comprehensive Plan includes policies stating that the City will control access by minimizing egress onto arterial and collector roads, and that curb cuts will be kept to a minimum along arterials. There are no specific recommendations regarding the design of US 41 in the City's Comprehensive Plan. However, access management is specifically addressed in the City's Land Development Regulations.

This report has been prepared using metric units of measure. For ease of reference, the English equivalent standard value and unit are shown in parentheses immediately following the metric values. The English conversions are nominal rather than exact.

2.0 AIR QUALITY ANALYSIS

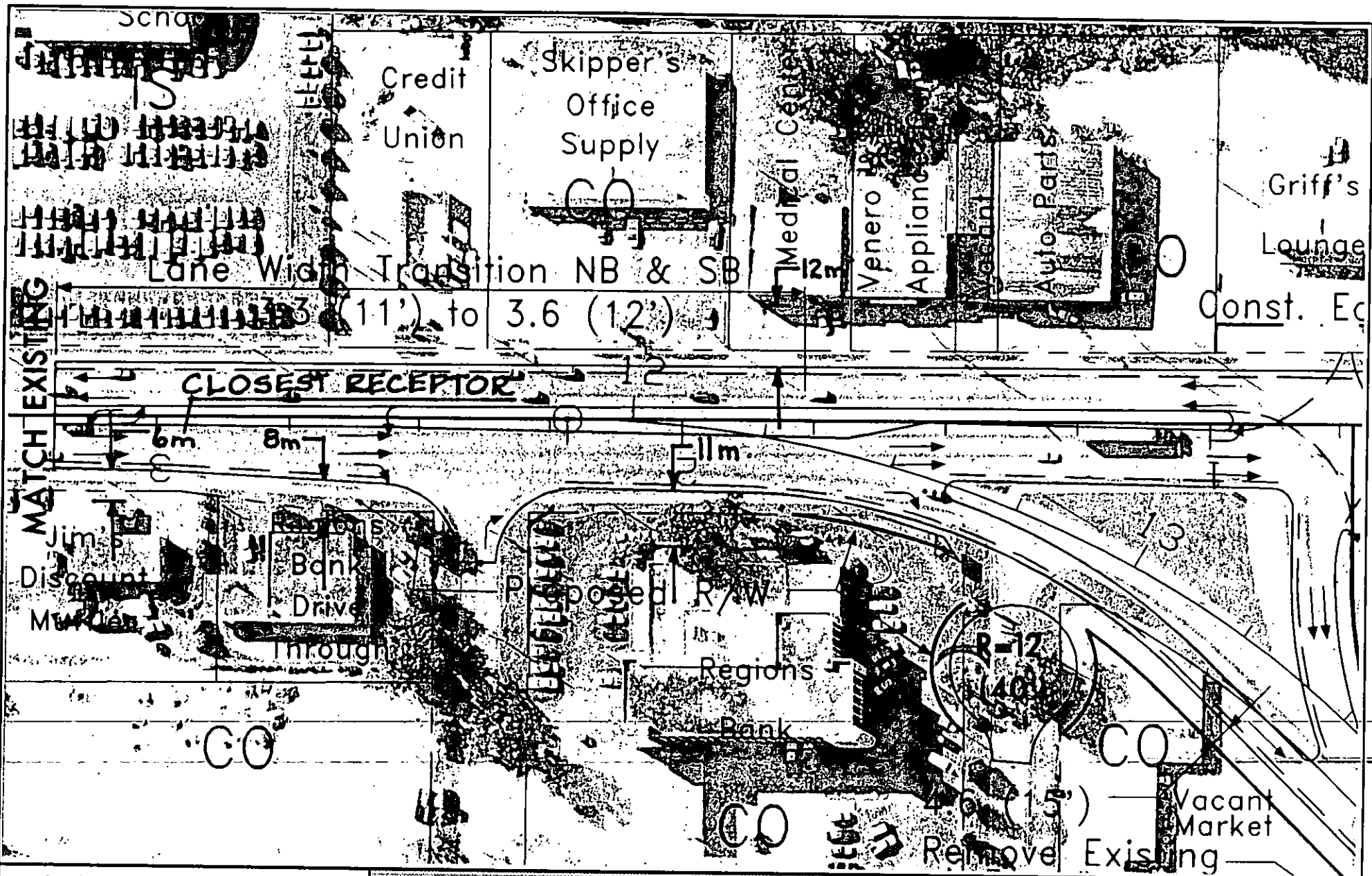
Air quality analysis is performed for the No-Build and Build alternatives, in the opening and design years. A receptor location for air quality impact is defined as a location where people can reasonably be expected to spend a significant amount of time. Since the combination of low operating speeds and high traffic volumes yields the highest impact to air quality, due to traffic, receptors near intersections were chosen for air quality analysis.

The project alternatives were subjected to a graphical Screening Test (COSCREEN) which makes various conservative worst-case assumptions about the meteorology, traffic, and site conditions. The Screening Test used these assumptions in the MOBILE Series Model and CALINE3 models to produce a series of curves which can be used to determine the critical distance. The critical distance is the closest a receptor can be to a given intersection without any chance of a significant air quality impact. The input data and results for the worst intersection, US 41 (SR 45) at SR 44, are shown below in Table 1. The Screening Test for Urban Areas was used. The year 2005 (year of project completion) and year 2020 (design year) data is from the westbound SR 44 eastern leg in each analysis so that the worst case is reported in each case. The closest receptor location is shown in Exhibit 2. The screening test output curves are attached in Appendix A.

Table 1. - INPUT DATA and RESULTS OF CO SCREENING TEST

Alternative	Year	Average Link Speed km/h (mph)	Peak Hour Traffic Volume (vph)	Critical Distance meters (feet)	Closest Receptor meters (feet)
No-Build	2005	60 (35)	1440	<3.0 (<10)	6 (20)
No-Build	2020	60 (35)	2215	<3.0 (<10)	6 (20)
Build	2005	70 (45)	1440	<3.0 (<10)	6 (20)
Build	2020	70 (45)	2215	<3.0 (<10)	6 (20)

Since the closest receptor (6 meters (20 feet), frequently used sidewalk for commercial buildings at the SR 44 intersection) is always farther away than the critical distance, this project will not have a significant impact on air quality.



US 41 RE-EVALUATION
Project Development & Environment (PD&E) Study
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CLOSEST RECEPTOR LOCATION

EXHIBIT 2

Construction activities will cause minor short-term air quality impacts in the form of dust form earthwork and unpaved roads and smoke from open burning. These impacts will be minimized by adherence to all State and local regulations and to the FDOT Standard Specifications for Road and Bridge Construction.

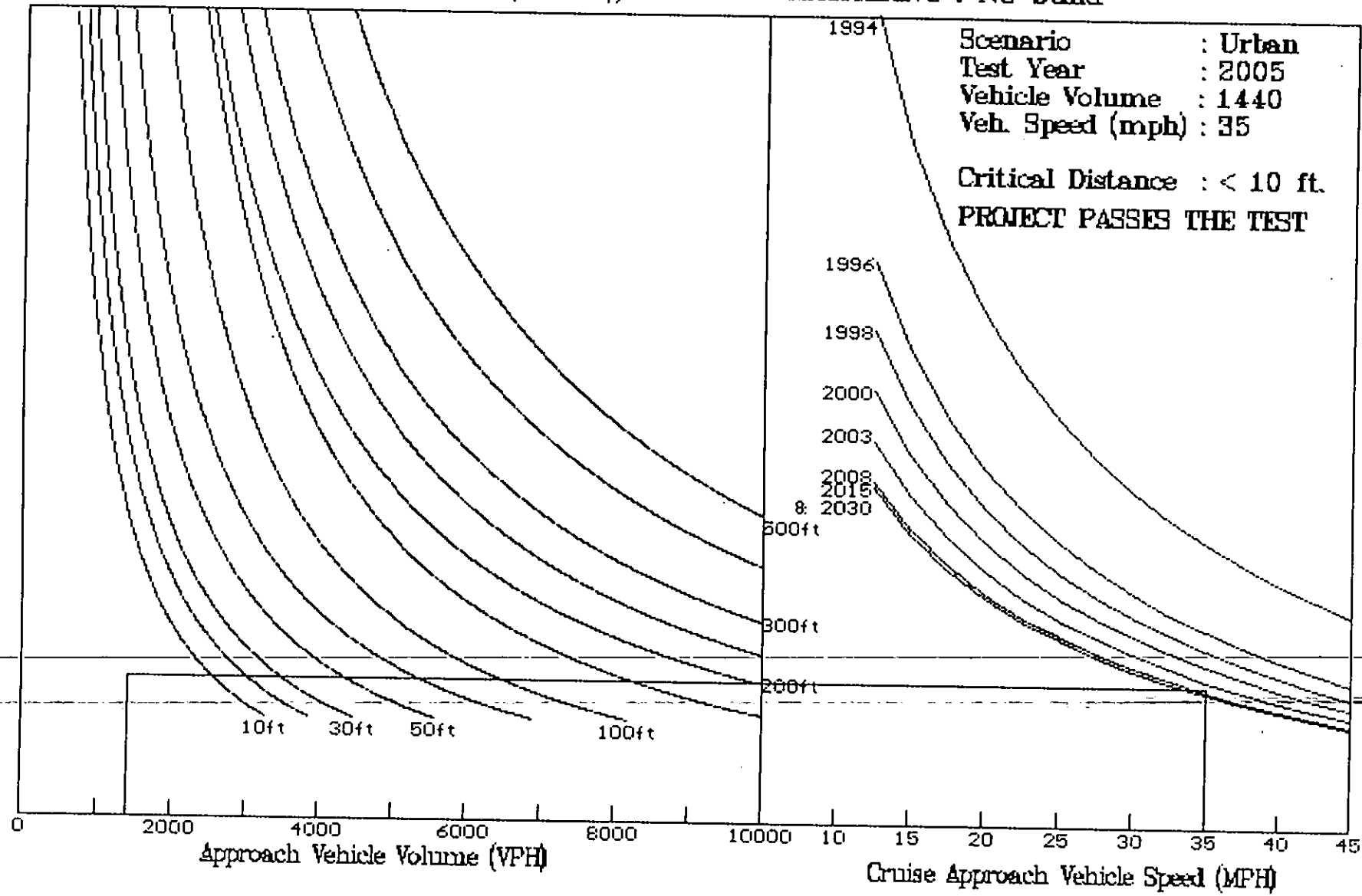
All State and local agencies were provided with an opportunity to comment on this project. There were no adverse comments regarding air quality.

The project is in an area which has been designated as attainment for the ozone standards under the criteria provided in the Clean Air Act amendments of 1990. This project is in conformance with the State Implementation Plan because it will not cause violations of the National Ambient Air Quality Standards. Also, this project is in area where the State Implementation Plan does not contain any transportation control measures. Hence, the conformity procedures of 40 CFR Parts 51 and 93 do apply to this project.

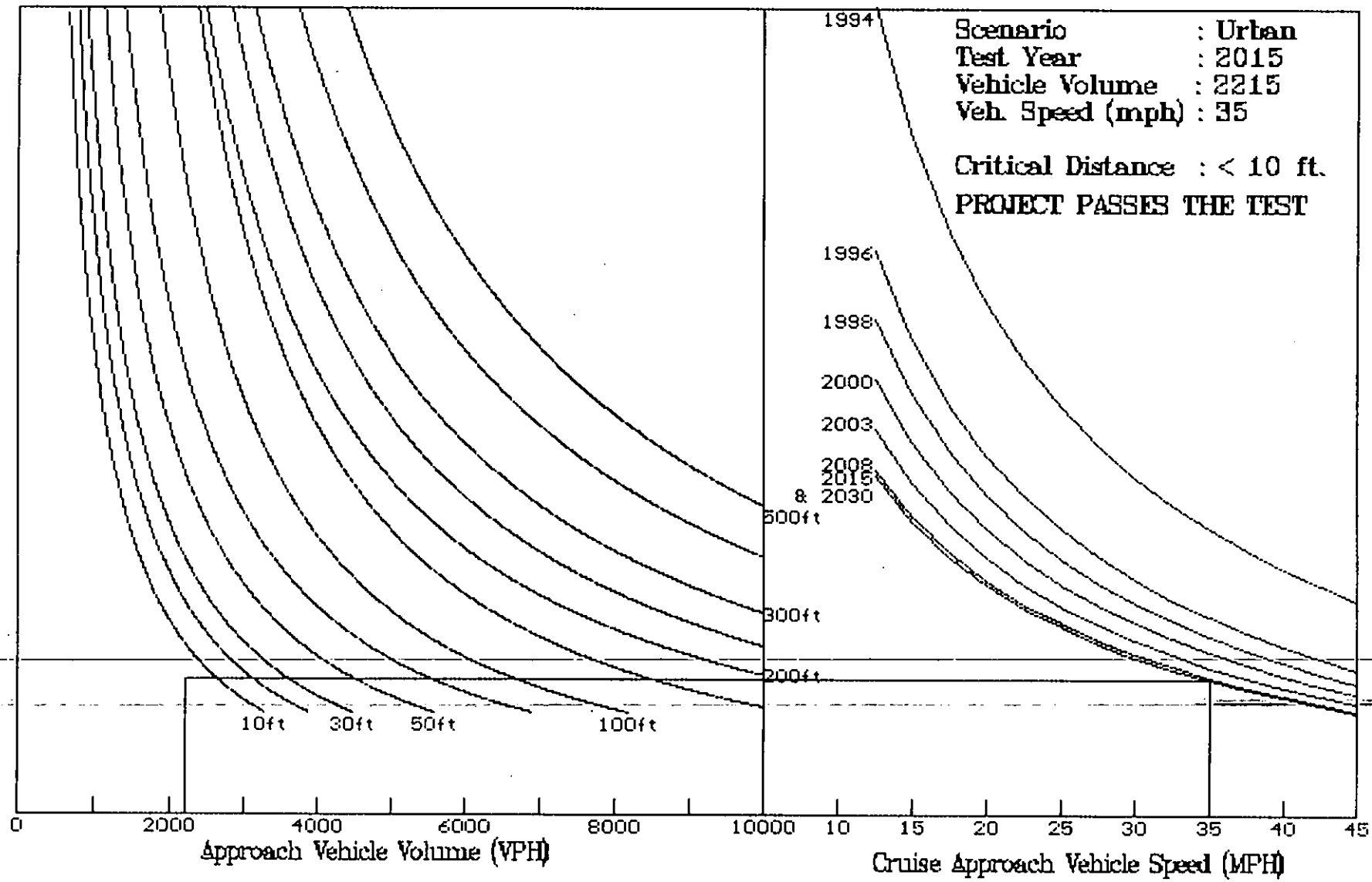
APPENDIX A

Screening Test Curves, COSCREEN Output

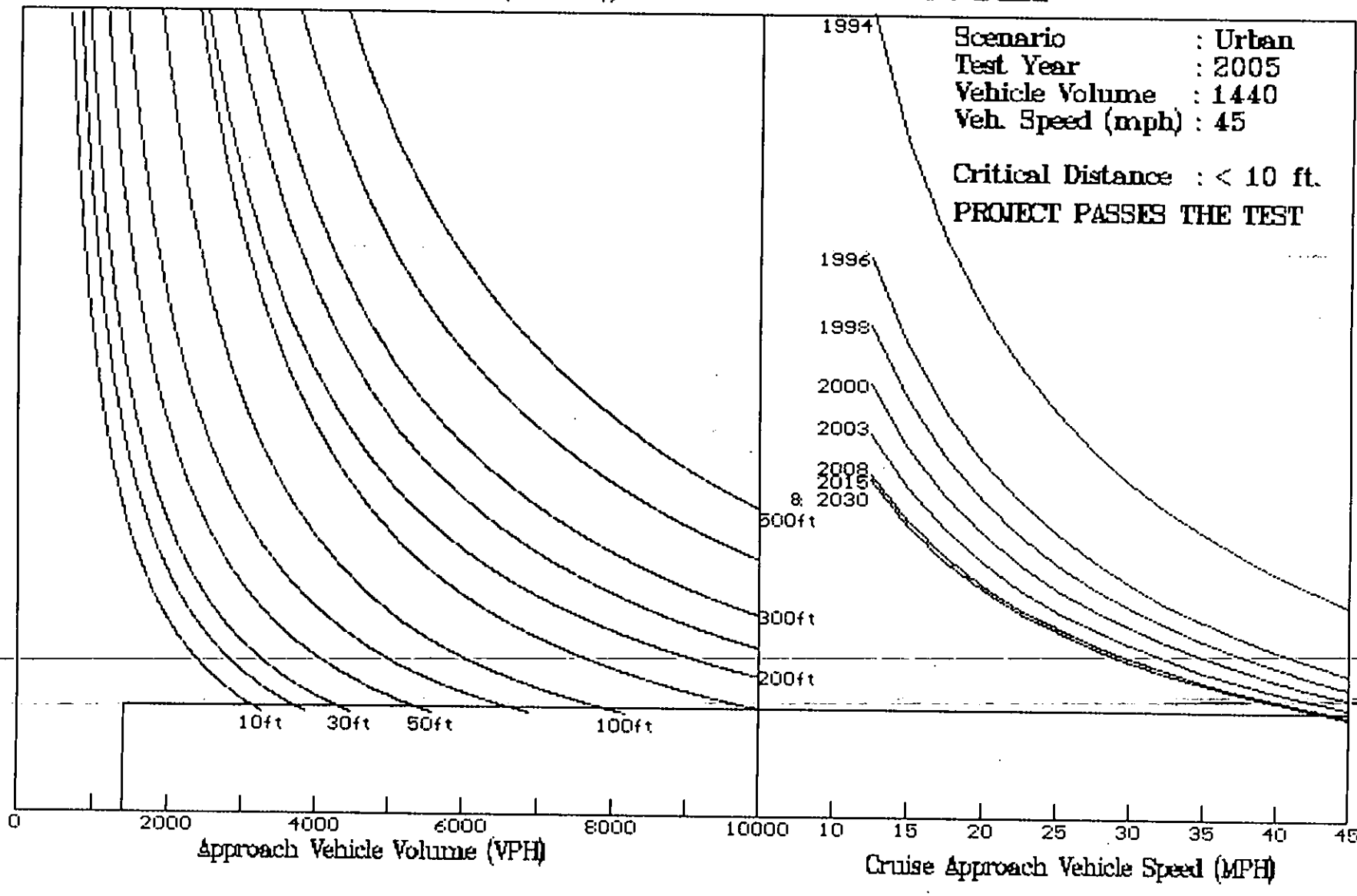
FDOT Screening Test *** US 41 (SR 45)/SR 44 *** Alternative : No build



FDOT Screening Test *** US 41 (SR 45)/SR 44 *** Alternative : No build



FDOT Screening Test *** US 41 (SR 45)/SR 44 *** Alternative : Build



FDOT Screening Test *** US 41 (SR 45)/SR 44 *** Alternative : Build