3.0 INTRODUCTION

As part of the Airport Impact Analysis/Master Plan a forecast of aviation demand was prepared that projected enplaned passengers and aircraft operations through the year 2020. The forecast was unconstrained and represented the potential market demand for air service at Love Field (DAL) assuming that adequate facilities and procedures are provided. In terms of annual aircraft operations, the forecast projected the potential for over 476,000 operations by the year 2020. This compares to present levels of approximately 265,000 operations.

A key determinant of the ability of DAL to handle future traffic is the airside element. While the present runway layout would, under normal circumstances, be capable of providing a relatively high capacity, constraints posed by the proximity to DFW seriously affect the ability of the airport to process traffic. This working paper presents the analysis of airside capacity at DAL. As will be seen, the annual capacity of the present airfield is significantly less than the unconstrained forecast of aircraft operations. This capacity will be used as the basis for determining the Airport's constrained demand, which in turn will be used as the basis for developing the aircraft gate, terminal and landside facility requirements.

This report is one in a series of working papers being prepared as part of the Airport Impact Analysis/ Master Plan and documents an airside analysis that was conducted as part of the work program. Following this brief introductory section, the report provides an overview of the regional airspace environment including the basic air traffic jurisdictions, terminal airspace boundaries, and major arrival and departure routes in Section 3.1. Section 3.2 describes airfield capacity and aircraft delay analysis used to develop demand-delay curves for DAL under different operating scenarios. Results of these analyses provide estimates of practical airside capacity which reflect the constrained demand needed to determine aircraft gate requirements and, subsequently, terminal and landside facility requirements.

3.1 REGIONAL AIRSPACE CONSIDERATIONS

The purpose of this section is to provide an orientation to the Dallas Metroplex airspace and define terms that are used in the airside analysis presented in this section. A description of Metroplex airspace jurisdiction, focusing on how airspace is allocated to Dallas/Fort Worth International (DFW) and DAL is provided, followed by a discussion on the various air traffic control facilities in the Dallas/Fort Worth Metroplex and the primary airspace routes to and from DFW and DAL.

3.1.1 Airspace Jurisdictions

"Controlled airspace" is a generic term that encompasses the different classifications of airspace specified in Federal Aviation Regulations (FAR) Part 71 within which air traffic control service is provided. The controlled airspace surrounding DFW and DAL consists of Class B and Class D airspace jurisdictions. The FAA defines these jurisdictions as follows (a discussion of Class C airspace is also included for reference):

Class B Airspace. Class B airspace is defined as the airspace surrounding the nation's busiest airports in terms of aircraft operations or passenger enplanements. The configuration of Class B airspace is individually tailored, but generally consists of a surface layer and two or more additional layers