

Knoxville Area Transit (KAT)

Transit Development Plan

Downtown Transit Plan



kat

KNOXVILLE
AREA TRANSIT

Submitted to:

**Knoxville Area Transit
and Knoxville Knox County
Metropolitan Planning Commission**

Submitted by:

Connetics Transportation Group

Under contract to:

The Corradino Group, Inc.

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1. Introduction

The Downtown Transit Plan is an important and fairly unique element of the KAT Transit Development Plan (TDP). KAT recognized even before beginning a full TDP effort that a downtown trolley study and bus routing analysis is needed to support the impending opening in 2010 of a new downtown transfer point, Knoxville Station. This report presents a Downtown Transit Plan that focuses on both the local/express fixed route bus service and trolley route configurations. Conceived as a stand-alone document from the TDP, it focuses on KAT's existing route structure. It does not attempt to incorporate modifications to local and/or express routes outside the downtown area that are being contemplated as part of the TDP. This plan was developed in a period of change for KAT and the recommendations herein will likely be modified during the final scheduling of the routes.

Section 2 of the report evaluates the current trolley routes operated by KAT, based on the results of the TDP survey efforts. This section gives an overview of the trolley system and presents detailed route profiles for each of the four trolley routes. Section 3 presents an evaluation of the existing downtown local and express bus operations. It summarizes the primary local route patterns used by KAT's local routes today to serve the existing downtown transfer point on Main Street, as well as existing express route patterns downtown.

Section 4 of the report describes the development of Knoxville Station access/egress options. These options were developed based on existing and possible future route access/egress patterns to the new Knoxville Station. Since the station is currently under construction and its design has been finalized, access/egress options that required physical changes to the existing design were not considered. Several options for local route configurations, as presented to KAT and TPO staff in December 2008, as well as a preferred alternative, are presented. New express route configurations are also identified. All local bus routes serving Knoxville Station were analyzed for schedule travel time impacts to determine optimal route interline combinations. Recommendations are made to modify route interline pairs so as to present a plan that would not result in additional buses or operating cost increases for the local routes. The plan continues to assume the use of pulse scheduling, utilizing 15 minute interval departures as currently in operation.

Section 5 of the report provides recommendations for modifying the trolley route system to support the opening of Knoxville Station and increase their effectiveness as downtown circulators. A frequent request of the public and stakeholders has been to re-design the trolley system as a series of linear routes, and was a key consideration during route planning. The extent to which trolley routes can be made linear in downtown Knoxville, however, is severely limited by one-way streets, narrow streets, limited turning radii, and the design of Knoxville Station with the trolley stop (requiring trolleys to travel westbound on Church Avenue).

Other planning considerations included 1) operating the trolley system without requiring additional vehicles (i.e., no more than eight required for maximum service), 2) establishing frequencies supporting timed transfers between local and trolley routes, 3) serving key origins and destinations, and 4) providing some level of trolley service between downtown and Knoxville Station until 12:15 a.m. when local service ends. The recommendations meet the goal of requiring no additional vehicles and would require only a modest increase in annual revenue-hours and operating costs.

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