Michael Sypolt
6801 McPherson Blvd
Apartment 1
Pittsburgh, PA 15208

David Wohlwill, Lead Transit Planner
345 Sixth Avenue, Third Floor
Pittsburgh, PA 15222

Proposal for Bus Routing in the Pittsburgh Area

The proposal that I drafted previously, which is in the possession of Fred Mergner, was a response to proposed service reductions that were planned in early 2007. The goal of the proposal was to encourage creative discussion on how to improve the connectivity of the system while increasing efficiency. In response to the Connect '09 initiative, I continued to work on the proposal to refine some of the concepts.

Designed as a trunk and feeder system, the new transit system would rely on feeder routes that connect outlying areas to a main line, or trunk line. In most cases, the routes that act as feeders connect at trunk lines at either end of its route to increase the effectiveness of this route. This strategy is highly dependent on "timed transfers" and regular schedule intervals, usually every hour or half hour for most of the feeders. Trunk lines often run at 15 minute or more frequent headways most of the day and even on weekends and holidays. The busways and light rail are perfect candidates for trunk lines as well as major surface street corridors such as the Forbes/Fifth Corridor.

The current transit network, as of January 2008, is primarily radial with downtown as the focus with a moderate amount of cross-town routes as well as a few feeder routes at secondary foci outside of downtown. Much of the scheduling of the lines is independent of each other, even along common trunks. However, some recent changes by the Port Authority have been implemented to address the scheduling along a common trunk, namely the 61A and 61B scheduling on the weekends and 77A and 77B scheduling on Weekdays and Saturdays. Also, timing of some routes has been standardized to allow for easier transfers from local bus to busway or light rail service.

The proposal includes a multi-focal system with the main focus remaining downtown and radial routes connecting Downtown with the foci that are located throughout the county. Many of these routes would be major corridors with frequent service. The foci would serve as convenient transfer points while an increased number of feeder and cross-town routes would serve these centers. Most of the transfer points would not only be connected to downtown, but also would be connected with other transfer points by feeder routes that connect one transfer point to the next, acting as a bi-directional feeder. This ensures that in each direction of service, the bus line would have an effective passenger load for most of service hours of the route, as well as providing connection to outlying points without the need to travel downtown for a transfer.

The transfer points would normally be located at areas of higher activity such as malls, busway/rail stations, and areas close to the center of a neighborhood. There is typically enough room for a recovery area for buses that would permit synchronized departure and arrival of buses to permit timed transfers as well as standard headways. Timed transfers would reduce waiting time for passengers going in *any* direction through the transfer point and if multiple transfers are needed for a certain trip, the system would accommodate that through timed transfers at the designated transfer points.

The greatest challenge to a timed transfer system is establishing Downtown as an *effective* transfer point where transfers are also timed. Due to the space constraints downtown, it is nearly impossible for *all* routes to converge on one specific location and to provide a timed transfer by building in recovery time for the buses entering and leaving downtown. Penn Park Station would have been a good candidate, but the limited space for recovery of the buses as well as the 20 second green signal for a 2 ½ minute light cycle is a major obstacle for buses exiting the facility during peak periods. As well, by having every bus that enters downtown travel on either Grant Street or Liberty Avenue would cause major congestion which would be exasperated by the bus traffic that would be generated by the new Greyhound station when it opens.

A possible solution to this problem is to establish a transfer point at the Wood Street T station. In reality, about ten or so bus stops (counting inbound and outbound separately) would be established within a block radius of the T station to allow buses to travel on different streets to avoid over-crowding of a specific street. The routes would pass by the designated stop within the one block radius of the T station and continue past it to a point near the opposite end of Downtown of the entry point of the route. This point near the end of downtown would serve as the Downtown timepoint for that route before it turns around and travels outbound. This route would then travel past the designated transfer point bus stop to pick up riders who transferred from other routes then continue on its outbound run. Since all routes would pass within a block of the designated Transfer Point, the maximum walking distance would be two blocks. As a result of the buses running *past* the transfer point, the time expended for the bus to return to the transfer point on the outbound run would create additional time for passengers to transfer to other routes without having the buses park for a layover. These routes can all have the same scheduled arrival and departure time at their timeponts as a result of this overlap of routing.

Several different configurations of this and similar downtown routing schemes will be included in the drawings that will be provided at the meeting on Friday, February 1.