



CITY OF KIRKLAND

Department of Public Works

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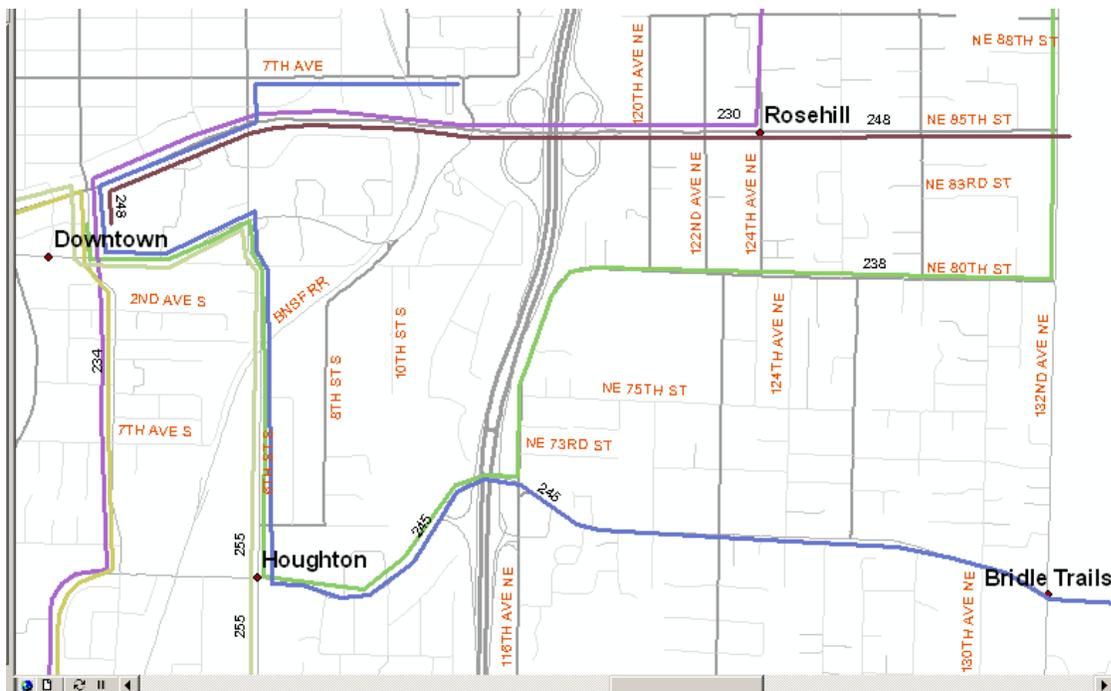
MEMORANDUM

To: Transportation Commission
From: David Godfrey, P.E., Transportation Engineering Manager
Date: January 20, 2011
Subject: Level of Service

Over the past few Transportation Commission meetings, we've reviewed the current level of service system, looked at some potential level of service measures, and thought about measures grouped by our transportation principles.

At the last commission meeting staff was directed to come back with some measures of what it's like to travel between nodes by mode.

To simplify things, four nodes were selected as a sample and evaluated for transit level of service. The nodes and bus routes are shown below:



Routes that connect the nodes, their frequency, difficulty of transferring and the span of service are shown in the matrix below.

		Downtown	Houghton	Rose Hill
Bridle Trails	Route	245	245	245-T-248,230
	Headways/ description	30/15/30-15/15/15-30	30/15/30-15/15/15-30	BT to RH transfer between 20 and 30 minutes for most of the day because 245 and 230 both leave KTC at about the same time on 30 minute headway. Can be less during peak periods when 245 and 248 leave at different times. RH to BT is a better transfer because 248/230 arrivals are staggered with 245 departures and 245 is 15 min frequency
	Service span	6:00 am 11:30 pm	6:00 am 11:30 pm	6:00 am 11:30 pm
Rose Hill	Route	230,248	230,248-T-255,234,245,238	
	Headways/ description	230 and 248 are both 30 minute headways throughout most of the day. 230 is 60 minutes after 7:00 PM. DT to RH, almost the same 30 min schedule with slightly better PM peak. RH to DT, schedules don't overlap as much. There is 7 to 12 minutes gap and a 23 to 19 minute gap	This is a combination of Downtown - Houghton and Downtown - Rose Hill. The hardest transfer is from Houghton to Downtown to RH. Most of the day this is a reasonable wait 1 to 10 minutes. In the evening (post 10:45 PM)it can get to 60 minutes.	
	Service span	5:30 am to 12:30 am	5:30 am to 12:30 am	
Houghton 49	Route	255, 234,245, 238		
	Headways/ description	The routes combine for about 20 min or better headways. Some of the routes arrive at KTC at the same time so they don't provide unique service. Will improve if 255 goes to 15 min all day headway.		
	Service span	6:00 am 11:30 pm		

There are many other ways of evaluating transit. We could look at the daily number of seats through the nodes, the number of routes through the node or some other measures of route quality like peak load or travel time.

A very simple level of service measure would say that we want certain routes to have frequent headways and broad coverage throughout the day. For example routes 255, 230 and 245 should have at least 30 minute frequency throughout most of the day, with 15 minute peak service in each direction during the peak periods and should operate from 5:00 AM to 1:00 AM.