## STAFF REPORT

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| **Agenda Item:** | 16 | **Name:** | Paul Carlson |
| **Proposed No**.: | 2018-0547 | **Date:** | February 5, 2019 |

**SUBJECT**

Proposed Substitute Motion 2018-0547, relating to the King County Metro Strategic Plan for Public Transportation 2011-2021 and King County Metro Service Guidelines and accepting the King County Metro Transit 2018 System Evaluation.

**SUMMARY**

The 2018 System Evaluation, the eighth annual Service Guidelines Report, was transmitted to the Council in October 2018 along with Proposed Motion 2018-0547. Proposed Substitute Motion 2018-0547 and its Attachment A, the 2018 System Evaluation updated January 16, 2019, are Attachment 2 to the staff report.

On January 16, 2019, the Regional Transit Committee (RTC) heard a King County Metro presentation on the 2018 System Evaluation. The RTC approved Proposed Motion 2018-0547 with an amendment making corrections to the 2018 System Evaluation.

**BACKGROUND**

Transmittal of the Report responds to Section 5 of Ordinance 17143, approving the Strategic Plan for Public Transportation 2011-2021 (Transit Strategic Plan) and the King County Metro Service Guidelines (Service Guidelines). Section 5 requires transmittal of an annual service guidelines report and a motion to accept it for review by the RTC. Section 5, as amended by Ordinance 17597, is included as attachment 1 to the staff report. This includes the October 31 deadline for report transmittal, changed from March 31.

**Highlights** – the 2018 System Evaluation:

* Retains last year’s revised format.
* Uses performance data from March 2018 through June 2018[[1]](#footnote-1).
* Includes King County Water Taxi performance data as required by Ordinance 18413.
* Discusses concerns about reliability (Priority 2) investments.

**Executive Summary (pages 1-2)**

The Executive Summary provides a high-level overview of the System Evaluation, with comments on Findings, Investment Activities, Seattle Investments, Community Connections, the Marine Division, and “Our Future.” The identified number of service hours to address Priority 1 (Crowding), Priority 2 (Reliability), and Priority 3 (Underserved corridors) is summarized.

Table 1. Service Investment Priorities

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| --- | --- | --- |
| **Investment Priority** | **Hours** | **Notes** |
| Reduce passenger crowding (Priority 1) | 7,800 | List on page 62 |
| Improve schedule reliability (Priority 2) | 19,250 | List on page 62 |
| Increase service levels to meet All-Day and Peak Network Target levels (Priority 3) | 452,600 | List on pages 63-64 |
| Total hours for first three priorities | 479,650 |  |
| Add service on high-productivity routes (Priority 4) |  | Discussed on page 14 |
| King County Water Taxi |  | Discussed on pages 1, 2, 3, 5, 15, 36, 39, 42, 48 |

As in past years, the Priority 4 needs are discussed but specific routes are not identified. The METRO CONNECTS Long-Range Plan identifies an expanded 2025 transit network, and the policy discussion of how to implement METRO CONNECTS could lead to a change in the way Priority 3 needs are evaluated and implemented.

**Introduction (pages 3-4)**

The Introduction describes the System Evaluation and explains how Metro and members of the public can use it.

**Fixed-Route Service Evaluation (pages 5-14)**

This section describes the analysis of needs for the Metro transit network that generates the lists of routes needing investments for Crowding (Priority 1), Reliability (Priority 2), and Service Growth (Priority 3). For Priorities 1-3, the revised format defines the category and describes status, recent accomplishment and goals (“What We Found,” “What We’ve Done,” and “What’s Next”). Each of these categories has one or more maps, which have also been revised. Appendix A has more details about the methodology.

Crowding and reliability investments are planned for all four service changes in the 2019-2020 biennium (March and September in 2019 and 2020), on routes to be determined. After the 2018 System Evaluation was finalized, the adopted 2019-2020 budget added 25,000 service hours to be used for investments divided between the two September service changes per Expenditure Restriction ER9 to Section 109 of Ordinance 18835, the 2019-2020 biennium budget ordinance.

**Crowding (Priority 1) (pages 5-6)**

This section explains the Service Guidelines’ definition of crowding and discusses the 7,800 hours of identified investment need and the challenge of addressing peak period crowding. There is also a discussion of passenger capacity on the King County Water Taxi. Appendix J includes the list of routes needing crowding investments.

**Reliability (Priority 2) – (pages 7-8)**

This section describes the evaluation of reliability problems and discusses recent reliability investments and the additional 19,250 hours of identified investment need. Appendix F summarizes the route-level reliability data; Appendix J includes the list of routes needing reliability investments.

Worth noting are the comments on the service hour investments to address reliability:

“We can invest by adding running time to schedules, but we also partner with cities on infrastructure improvements. These improvements help buses move faster and more reliably, saving money and providing a better customer experience.”

“[A]dding running time to schedules to deal with increased congestion is not always the best way to improve reliability – it just acknowledges that it takes longer than before to make the same trip. … As we seek to expand our infrastructure work to improve bus speed and reliability, we highly value partnerships with jurisdictions to help us make these improvements.”

METRO CONNECTS implementation, with its focus on corridor efficiency improvements, is an opportunity to expand the use of infrastructure work to address reliability by speeding up trips.

**Service Growth (Priority 3) – (pages 9-13)**

This section recaps the Service Guidelines policies that identify target service frequencies on the transit corridors served by Metro buses. 2018 Priority 3 investments are described. There are three maps showing the identified investment needs for the Peak, Off-Peak, and Night periods.

The list of corridors found to have unmet needs is in Appendix J. These are listed in priority order and include the primary bus route serving the corridor and the estimated service hours to meet the target. A total of 452,600 hours on 54 corridors is identified.

**Integration with Sound Transit – (page 10)**

This page discusses Metro and Sound Transit integration and includes a table showing the 10 corridors in King County for which the primary two-way, all-day transit service is provided by Sound Transit, whether Link Light Rail or Regional Expresses buses.

**Route Productivity (Priority 4) – (page 14)**

This section discusses the way productivity is defined and measured the analysis of route productivity by (1) rides/platform hour and (2) passenger miles/platform mile. This analysis generates the lists of 25% highest performing and 25% lowest performing routes. The current decrease in productivity is attributed to the expansion of bus service, including route revisions and expansions that need time to build ridership, and the expansion of Link Light Rail, which replaced some productive bus routes.

Starting on page 30, Appendix C contains the list of all bus routes and their rides/platform hour and passenger miles/platform mile. On page 39, Appendix D defines the changes in thresholds to determine the higher-performing 25 percent of bus routes and lower-performing 25 percent of routes in each service category for the peak, off-peak, and night time periods. Combining the two performance measures (rides/platform hour and passenger miles/platform mile), the three categories of bus routes and the three time periods, there are 18 upper performance thresholds and 18 lower performance thresholds in total.

**Peak Analysis – (page 14)**

This section describes peak-only bus routes and how their travel time and ridership are compared to the other bus service on the same corridor. The peak route goals are to have: (1) at least 90 percent of the rides per trip as the all-day counterpart route has during the peak; and (2) be 20 percent faster than the all-day bus. Eight of 64 peak-only routes do not meet either criterion. Appendix E contains the analysis of peak-only bus routes.

**Community Connections Annual Report (pages 15-18)**

This section is the annual performance progress report on Community Connections, as the alternative services project has been branded, required by Motion 13736. The report includes a description of the different products that the Community Connections is promoting, cost and performance information for routes that are now in the evaluation phase, and maps showing current services and areas where projects are being developed. Appendix A includes more detailed information about the Community Connections performance measures

**METRO CONNECTS Progress Report (page 19)**

This is the second annual METRO CONNECTS Progress Report, an addition to the annual System Evaluation that the RTC and County Council identified as an important means of monitoring progress. Its sections include Overview, Making Progress, and a table listing METRO CONNECTS Performance Metrics.

**Potential Changes to the Service Guidelines and Strategic Plan (page 20)**

This section of the System Evaluation is required by Ordinance 17143. This year’s note is that Metro is developing updates to integrate METRO CONNECTS into the Service Guidelines, with Partnerships and Service Network as two areas to be updated.

**Appendices A through J** are on pages 22 through 64.

A. Methodologies and Process Descriptions (pages 22-26)

 Appendix A includes descriptions of:

* + - 1. The process used to identify crowded routes (Priority 1),
			2. The process used to identify routes needing reliability investments (Priority 2),
			3. Service Growth (target service levels for corridors – Priority 3),
			4. Measures of Route Productivity (Priority 4),
			5. Peak Route Analysis,
			6. Community Connections (Community Shuttle and TripPool).

As was the case in 2017, Appendix A consolidates narrative that was previously included in the body of the report, resulting in a streamlined report text and an easy reference point for the more detailed explanation of how data is used to generate the lists and measures that identify progress and priorities.

B. King County Low-Income and Minority Census Tracts (page 27)

This census tract map has been a standard feature of the Report.

C. Route Productivity Data (pages 28-36)

Appendix C contains the performance data for each route, consisting of rides/platform hour and passenger miles/platform mile for the peak, off-peak, and night periods. Routes are listed in three categories, Suburban, Dial-a-Ride-Transit (DART)/Shuttle, and Urban routes. Route performance is compared within the categories. Before 2016, the Suburban and DART routes were in one group; the RTC split the old category to avoid disproportionate impacts on DART routes in a reduction scenario.

D. Changes to Route Productivity Thresholds (page 37)

This chart is updated from the previous year using the methodology described in Appendix A (Measures of Route Productivity).

E. Peak Route Analysis (pages 38-39)

Updated from prior year, evaluates peak-only routes according to the two criteria identified in Appendix A.

F. Route-level Reliability (pages 40-42)

Updated from prior year, showing lateness for routes as defined in Appendix A, Reliability.

G. Route-level Ridership (pages 43-48)

Updated from prior year using methodology described in Appendix A.

H. Service Changes and Corridor Changes (pages 49-55)

Appendix H describes all 2018 bus route changes as well as corridor revisions.

I. Corridor Analysis (pages 56-61

Appendix I contains the corridor analysis that generates the target service frequencies for the All-Day Network. Here you can see each corridor’s points awarded for productivity, social equity, and geographic value, followed by the second step that evaluates current ridership and results in a final score for each corridor.

J. Investment Needs (pages 62-64)

Appendix J consolidates in one place the lists of the Crowding (Priority 1), Reliability (Priority 2), and Underserved Corridor (Priority 3) bus service investment needs.

**CANCELLED BUS TRIPS**

Late last year, the Council approved Motion 15280, acknowledging receipt of a report, *Updating On-time Performance Measures to Incorporate Cancellations of Trips*, prepared in response to a budget proviso. The report discusses current on-time performance measures, standards, uses of data, and trip delivery/cancellation data.

The report states that: “Metro welcomes adding a measure of trip delivery / missed trips under a ‘reliability’ umbrella, once such a measure is fully developed.”[[2]](#footnote-2) Technical work by Metro and the findings of an expected audit of transit performance are cited as factors that could affect the addition of such a measure.

Chapter 3 of the Strategic Plan for Public Transportation lists performance measures that are reported on in the Strategic Plan Progress Report, issued in even-numbered years. The annual System Evaluation reports on measure that are derived from, and described in, the King County Metro Service Guidelines. Either could be amended to include a trip delivery / missed trips measure once developed.

Revisions to the Transit Strategic Plan and Service Guidelines are made by the Regional Transit Committee and full Council. When Metro prepared this report, the RTC was expected to consider updates to these transit planning documents in 2019. Metro has proposed to defer these updates pending the outcome of work on regional planning and a mobility framework requested by the Council through Motions 15252 and 15253, respectively.

**AMENDMENT**

Following transmittal of the 2018 System Evaluation to the County Council, Metro staff identified some corrections to Appendix C, Route Productivity. The Regional Transit Committee approved an amendment making the corrections.

Appendix C comprises a table of bus routes showing productivity. The revised version includes the proper shading for all cells (green shading for routes in the top 25 percent and black shading for routes in the bottom 25 percent for the productivity measure and time period).

**ATTACHMENTS**

1. Ordinance 17143, Section 5 (as amended by Ordinance 17597)
2. Proposed Substitute Motion 2018-0547 and its attachment
3. Transmittal Letter

**INVITED**

1. Andrew Brick, Transportation Planner, Metro Transit Department
1. For route productivity data in Appendix C and identifying Priority 1 and 2 investment needs; Priority 3 needs are identified using September 2017 – March 2018 data [↑](#footnote-ref-1)
2. As explained in the report (pages 9-10), Metro does not recommend combining a new trip delivery metric with current on-time performance metrics. [↑](#footnote-ref-2)