

From: [Jeffrey Delapena](#)
To: hcpheidi@yahoo.com
Cc: [Oliver Orjiako](#); [Jose Alvarez](#)
Subject: FW: 2025 Comprehensive Plan Transportation Comments
Date: Tuesday, July 28, 2026 11:56:00 AM
Attachments: [Comp Plan Comment Letter to Transportation.pdf](#)
[tm-1-multimodal-standard_final-8-13-25.pdf](#)

Good day, Heidi,

Thank you for providing feedback related to Comp Plan Chapters discussed at the July 15th Council Work Session.

Your comments will be added to the Comprehensive Plan Index of Record.

Best,

Jeff Delapena
Program Assistant
COMMUNITY PLANNING

564.397.4558

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From: Heidi Pozzo <hcpheidi@yahoo.com>
Sent: Tuesday, July 21, 2026 4:48 PM
To: Sue Marshall <Sue.Marshall@clark.wa.gov>; Glen Yung <Glen.Yung@clark.wa.gov>; Matt Little <Matt.Little@clark.wa.gov>; Michelle Belkot <Michelle.Belkot@clark.wa.gov>; Wil Fuentes <Wil.Fuentes@clark.wa.gov>
Cc: Kathleen Otto <Kathleen.Otto@clark.wa.gov>; April Furth <April.Furth@clark.wa.gov>; Rebecca Messinger <Rebecca.Messinger@clark.wa.gov>; Oliver Orjiako <Oliver.Orjiako@clark.wa.gov>; Jose Alvarez <Jose.Alvarez@clark.wa.gov>; Jeffrey Delapena <Jeffrey.Delapena@clark.wa.gov>
Subject: 2025 Comprehensive Plan Transportation Comments

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Dear Chair and Members of the County Council:

Please find attached my written comments for the record on the 2025 Comprehensive Plan Update, addressing the Transportation Element (Chapter 5), the Capital Facilities and Utilities Element (Chapter 6), and their supporting appendices.

Thank you for your time and consideration.

Heidi

July 21, 2026

To: Clark County Council

From: Heidi Pozzo

Re: Written comment for the record — 2025 Comprehensive Plan Update, Transportation Element (Chapter 5), Capital Facilities and Utilities Element (Chapter 6), and Appendices A, E, G, and L; transportation finance, concurrency, capital facilities adequacy, and public participation

Dear Chair and Members of the County Council:

I submit these written comments for the record on the Transportation Element (Chapter 5) and the Capital Facilities and Utilities Element (Chapter 6) of the 2025 Comprehensive Plan Update, together with their supporting appendices: the Transportation Capital Facilities Plan (Appendix A), the Capital Facility Plans Review and Analysis (Appendix E), the Capital Facilities Financial Plan (Appendix G), and the ADA Transition Plan (Appendix L). Citations are to the draft chapters and appendices identified above, the adopted County Code, and the Growth Management Act, RCW 36.70A.

The County is finalizing this update on a compressed schedule, and that timeline shapes the comments below. Large volumes of material were released with little time to review before the Council work sessions; significant portions of the record were still being completed as those sessions were held; and the chapters and appendices are being transmitted to the Department of Commerce to begin the 60-day review whether or not that work is finished. Whatever is completed will go forward without the Council having reviewed it in an open session or the public having seen it, so the document that receives the statutory review is not one the public or their elected representatives have had a meaningful opportunity to examine, as RCW 36.70A.035 and RCW 36.70A.140 require. The specific comments below identify what was still unfinished or unreconciled; they share that common origin in the schedule, not in the work of staff.

RCW 36.70A.070 requires that the comprehensive plan be an internally consistent document, with all elements consistent with the future land use map, adopted with public participation under RCW 36.70A.140. WAC 365-196-500(2) implements that requirement by directing the County to use compatible assumptions across the elements; and where the County relies on forecasts or plans prepared by other entities on different time horizons, WAC 365-196-500(2)(b) directs it to include an analysis reconciling those differences so the plan rests on compatible assumptions. Several of the comments below rest on that internal-consistency requirement; others rest on the specific finance-plan and concurrency provisions of RCW 36.70A.070(6) and on the capital-facilities requirements of RCW 36.70A.070(3).

Transportation Element (Chapter 5) and Appendix A

The Transportation Element and its supporting Appendix A do not, as drafted, demonstrate that the development the plan allocates can be served at the County's adopted levels of service, and they are not consistent with the multimodal element the County is adopting. The plan was developed on its original, pre-multimodal basis, and neither the transportation analysis nor the capital facilities project list was revisited to reflect the multimodal element and complete-streets standards later added. The comments in this Part address that failure, the impossibility of the only performance table the chapter contains, and the financing defects that compound them.

1. The plan adopts a multimodal network but adds bicycle and pedestrian facilities without accounting for the roadway space they require, so it understates either its cost or its congestion.

The plan adopts complete streets standards (CCC 40.350.010) and commits to a multimodal network of shared-use paths and protected and buffered bicycle facilities. Those standards and the multimodal element were added late in the process, after the transportation analysis and the Appendix A capital facilities project list had been developed on the plan's original, auto-oriented basis, and neither was revisited to reflect them. The County concedes the analysis has not caught up: the July 8, 2026 draft still carries the notation, on page 45, that the County is awaiting additional analysis on the Preferred Alternative from consultants, so the project list has not been evaluated against the multimodal network the plan adopts. It shows: across the Appendix A project tables, the projects uniformly widen roadways and add bicycle lanes, shared-use paths, and sidewalks — bicycle facilities and sidewalks appear dozens of times — but not one project removes, narrows, or reallocates a vehicle travel lane.

In corridors with fixed right-of-way, protected and buffered bicycle facilities and shared-use paths are built by taking space from vehicles — by widening the roadway, which requires additional right-of-way, or by removing or narrowing travel lanes. The County's own consultant confirms the tradeoff: the DKS Associates Multimodal Level of Service memo (Technical Memorandum #1, August 13, 2025) states that applying the recommended LTS 2 standard will create increased right-of-way needs and moderate increases for project cost estimates, highly dependent on available right-of-way, and that retrofit corridors in developed areas will require flexible cross-section design standards. That memo also identifies roughly 490 miles of county roadways within the urban growth areas and rural centers that currently lack sidewalks — the retrofit network to which the standard applies. Yet the Appendix A project list shows the added facilities with none of the offsetting lane reductions, and neither the project list nor the analysis accounts for the right-of-way or the capacity effects. That leaves two possibilities, and each is a defect. If the facilities are added by widening, the additional right-of-way and cost the consultant flags are not reflected in Appendix A — a shortfall that compounds the blank cost columns and the funding gap addressed below. If instead they come from existing travel lanes, then vehicle capacity falls, volume-to-capacity ratios rise, and the congestion the chapter reports — including the 12.2 lane-miles it

already concedes exceed the adopted 0.90 standard — is understated. Either way, the analysis does not reflect the multimodal network the County is adopting, and the transportation, land use, and capital facilities elements are not the internally consistent set that RCW 36.70A.070(6)(b) and WAC 365-196-500(2) require.

2. The only quantified performance table in Chapter 5 is internally impossible and does not reflect the adopted preferred alternative, so the plan contains no valid measurement of per-capita VMT.

Table 5.10, the only table in Chapter 5 quantifying the preferred alternative's system performance, reports Vehicle-Miles Traveled of 768,505 and Vehicle-Hours Traveled of 1,172,620. The implied average network speed — miles traveled divided by hours traveled — is approximately 0.66 miles per hour, which is not physically possible for a functioning road network. The table is also internally inconsistent on its face, reporting 782 vehicle-hours of delay against 1,172,620 vehicle-hours traveled (roughly 0.067 percent), which cannot coexist with a sub-one-mile-per-hour network.

Beyond its internal impossibility, Table 5.10 is not expressed in the units the statute uses. RCW 36.70A.070(9)(d) and RCW 47.01.440 frame the requirement in terms of annual per-capita vehicle miles traveled, measured against a baseline toward benchmark years of 2035 and 2050 (a thirty percent reduction by 2035 and fifty percent by 2050). Table 5.10 instead reports a single daily system total of 768,505 vehicle-miles, tied to no baseline and no benchmark year. That figure is not merely in the wrong units; it is facially implausible at any scale. Across a county of 542,400 residents — the plan's April 1, 2025 population estimate — 768,505 daily vehicle-miles is on the order of a mile and a half per resident per day; and because the County's own consultant reports that about 29 percent of residents are nondrivers (DKS Associates, Technical Memorandum #1, August 13, 2025), the figure implies roughly two miles per driver per day, a fraction of any real travel day. The chapter's state-and-local-needs section, moreover, remains expressly incomplete pending the updated Preferred-Alternative analysis, which the July 8, 2026 draft states on page 45 the County is still awaiting from its consultants. Because the only quantified forecast is internally impossible and is not stated as the annual per-capita metric tied to the statutory benchmark years, the record contains no valid measurement of whether the plan raises or lowers per-capita VMT — the precise question RCW 36.70A.070(9)(d) requires the plan to address.

3. The finance plan compares costs stated in 2026 dollars against revenues escalated to 2045, understating the funding shortfall.

The transportation finance analysis presents 20-year expenditures of approximately \$1,605,800,000 (Appendix A, Table 12) against 20-year revenue of approximately \$1,021,300,000 (Appendix A, Table 11), yielding an admitted shortfall of approximately \$584.5 million, or 36 percent of projected capital cost. The two sides of that comparison are not measured on the same basis.

The cost figures are stated in constant 2026 dollars, with no inflation applied over the 20-year horizon; staff confirmed at the work session that no inflationary factor is built into the projection. The revenue figures, by contrast, are escalated across the planning period, with grant revenue back-loaded to approximately \$339.8 million and impact-fee revenue to approximately \$318 million in the 2032–2045 window. Comparing expenditures frozen at 2026 against revenues grown to year-of-expenditure understates the gap, because the capital costs, if escalated to the years in which they would actually be incurred, would be materially higher while the revenue has already been grown.

RCW 36.70A.070(6)(a)(iv)(A) requires an analysis of funding capability sufficient to judge identified needs against probable funding resources. A comparison that expresses needs in one dollar basis and probable funding in another does not permit that judgment. The shortfall the County reports is a floor; the finance plan does not disclose the true relationship between needs and probable funding. The County should state costs and revenues on a common dollar basis.

4. The County admits a shortfall but defers the statutory reconciliation between additional funding and reassessment of land use assumptions.

Where probable funding falls short of the identified needs, RCW 36.70A.070(6)(a)(iv)(C) requires the finance plan to include a discussion of how additional funding will be raised, or how land use assumptions will be reassessed to ensure that level of service standards will be met. Appendix A does not perform that reconciliation. It states that the 20-year plan is not required to be balanced, that the projected shortfall would be considered significant in the absence of any strategies to close the gap, and defers action to a future review not to exceed five years — undertaking to reduce level-of-service standards or reassess the land use plan only if the potential shortfall increases and becomes critical.

This inverts the statutory logic. The reconciliation obligation is triggered by the shortfall the County has already identified; it is not contingent on a future point at which the shortfall becomes critical. The plan carried forward from the prior cycle committed to ensuring the gap would decline; the County's own figures show it rising from approximately \$158 million (23 percent) in 2016 to approximately \$584.5 million (36 percent) in the current draft.

The identified funding options do not close the gap, and staff acknowledged as much at the work session. The one-percent road-levy increase yields roughly \$450,000 to \$460,000 per year; the local-option gas tax requires voter approval and, staff noted, has no successful county precedent; and the transportation benefit district yields roughly \$3.4 to \$3.9 million, or about \$7 million combined. Staff stated that impact fees would not be sufficient. At their stated maxima, and including the option requiring a public vote, these sources cover well under half of the admitted shortfall, which is concentrated in the 2032–2045 period. A plan that identifies a shortfall, discusses options, and defers the required reconciliation to an undefined future contingency does not satisfy RCW 36.70A.070(6)(a)(iv)(C).

5. The County projects the Road Fund will have no money available for capital by approximately 2038, at which point the projects needed to meet adopted levels of service cannot be funded.

The Road Fund continues to collect revenue, principally the road levy; that revenue does not stop. But the County's own County Road Fund — Long-Term Trends exhibit shows operating expense rising to consume that revenue, so that the net funds available for capital decline from roughly \$15 million toward zero and reach it around 2038. A fund cannot spend money it does not have, so what the exhibit describes is not a deficit but a hard stop: when the capital-available balance is exhausted, capital projects stop, and the County can thereafter fund only the smaller work that the revenue arriving each year will support, on a pay-as-you-go basis. The County engineer described this as the point at which the County would face a challenge not only in funding capital but in maintaining existing levels of service on operations and maintenance.

The consequence is a level-of-service problem, not merely a bookkeeping one. The corridor and capacity projects on which the plan relies to serve the growth it allocates are concentrated in the 2032–2045 period — the same years in which the County projects the Road Fund will have nothing available for capital beyond what annual revenue supports pay-as-you-go. Those projects cannot be funded on that basis, so the plan does not demonstrate that the development it allocates can be served at the adopted levels of service, contrary to RCW 36.70A.070(6)(a) and the internal-consistency requirement of RCW 36.70A.070(6)(b). Compounding the point, Appendix A, Table 11 nonetheless books approximately \$42.7 million of County Road Fund capital revenue for 2032–2045 — the very window in which the County's own exhibit shows no funds available for capital — which the County should reconcile against that projection.

6. No project in Appendix A carries a cost estimate or priority, so the finance plan cannot judge needs against probable funding.

The Appendix A project tables — large capital road segments, intersections, active transportation, safety, and regional and partnership projects — each include a Project Cost Estimate column and a Priority column, and those columns are blank for the listed projects. The document confirms this: the impact-fee section states that further information will be forthcoming as project cost estimates are finalized, and the evaluation criteria for the CFP are described as being developed.

RCW 36.70A.070(6)(a)(iv)(A) requires an analysis of funding capability adequate to weigh identified needs against probable funding. Where no need carries a cost, that weighing cannot be performed, and the aggregate 20-year expenditure figure of approximately \$1,605,800,000 (Appendix A, Table 12) has no disclosed derivation from the project list. Appendix A further states that not all listed projects are included in the financial analysis, because information about certain projects is not yet available or no County financial commitment is expected — so the total is, by the document's own terms, incomplete on the cost side.

7. The plan's largest revenue source — competitive grants — requires local match from the Road Fund the plan projects to exhaustion.

Grant revenue is the single largest line in Table 11, at approximately \$426.3 million, or roughly 42 percent of all projected revenue, with approximately \$339.8 million assumed in the 2032–2045 period. That assumption rests on a stated premise that 25 percent of overall project costs will be recovered through grants, based on past funding trends.

Competitive state and federal transportation grants require local match, and staff identified the Road Fund as the principal source of that match, acknowledging that as the Road Fund declines the County's ability to pursue grants diminishes. As set out in paragraph 5, the County projects that the Road Fund will have no funds available for capital after operating costs by approximately 2038. The plan thus assumes its largest revenue source in 2032–2045 — grants requiring local match — while projecting that the match source will be gone in those same years, and does not identify what local match would fund the approximately \$339.8 million in grants assumed for that period.

A revenue assumption of this magnitude, back-loaded into the years the County's own match capacity is projected to be gone, built on historical averages without sensitivity analysis, is not an analysis of probable funding within the meaning of RCW 36.70A.070(6)(a)(iv)(A). Removing grant revenue from the projection raises the shortfall from approximately \$584.5 million to approximately \$1.01 billion. The County should identify the local match source for the back-loaded grant revenue and provide a sensitivity analysis for the grant assumption.

8. The impact-fee revenue assumes an ITE trip-generation rate that blends no-parking urban development with conventional development, and the County follows ITE as it moves to separate them — a separation that can sharply reduce the rate for the development this plan concentrates.

The plan assumes approximately \$356.2 million in transportation impact-fee revenue, roughly 35 percent of projected revenue, with approximately \$318 million back-loaded to the 2032–2045 period. That fee is calculated from the trip-generation rate published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, and the County applies whatever rate the manual sets. ITE's rates historically blend all development of a given land use into a single rate built largely from suburban, parking-rich sites, which overstates the vehicle trips generated by compact urban development built with little or no parking. ITE is progressively separating that development out — the 12th Edition (2025) began disaggregating residential land uses by urban and transit context — and the County's July 15, 2026 transportation presentation to the Council states, under Transportation Impact Fees, that it will update its land use trip-generation rates to the ITE Trip Generation Manual 12th Edition and calculate new fee rates.

The change from one edition to the next is modest; the risk is not. The direction of the standard is toward a full separation of no-parking urban development into its own category, and because such

development generates far fewer vehicle trips than the blended rate assumes, that separation can reduce the applicable rate substantially rather than marginally. The magnitude is not yet known, but over the 20-year horizon of this revenue projection the separation is where the governing standard is already heading, and the County applies whatever ITE publishes. This plan concentrates its growth in precisely the low- and no-parking urban development that separation would move to a lower rate, so a \$356.2 million assumption built on the current blended rate is exposed to a large, unquantified downward step in a program that is already behind — the County having admitted the transportation shortfall addressed in paragraph 3 and the Road Fund's exhaustion of capital funds addressed in paragraph 5. RCW 36.70A.070(6)(a)(iv)(A) requires an analysis of probable — not optimistic — funding; the unknown magnitude of this exposure is a reason to analyze its sensitivity, not to assume it away. The County should assess the sensitivity of the assumed impact-fee revenue to ITE's separation of urban, low-parking development into a lower-rate category over the planning period.

9. The plan quantifies approximately \$739 million of ADA sidewalk and curb-ramp deficiency but does not show how it is funded, and adopts an implementation schedule that cannot achieve compliance.

The ADA Transition Plan (Appendix L) prices the County's identified pedestrian right-of-way deficiency at unit cost: approximately 5,784 curb ramps at \$7,340 each, totaling approximately \$42.5 million; and approximately 2,239,604 linear feet of missing sidewalk at \$311 per linear foot, totaling approximately \$696.5 million — an aggregate of approximately \$739 million in 2026 dollars. By the plan's own terms this is a floor: staff confirmed that existing non-compliant sidewalk, though identified in the self-evaluation report, was excluded from the capital figure and treated as maintenance.

Against that deficiency, the plan does not disclose how much, if any, is funded, or separate what would be paid from a capital source from what is treated as maintenance; the only sidewalk-and-ADA figure traceable in Appendix A is a superseded legacy line of \$500,000 per year, or \$30 million over 20 years, in 2014 dollars, and no commensurate, identified capital funding for the quantified deficiency appears in the finance plan. The Appendix L implementation schedule programs, over 25 years, only a small fraction of the identified 2,239,604 linear feet of sidewalk and 5,784 curb ramps — a rate at which completing the network does not demonstrate it will achieve compliance. Such a schedule does not satisfy 28 CFR § 35.150(d)(2), which requires a schedule for achieving compliance; and because the ADA Transition Plan is folded into the Transportation Element as required content, its adequacy is reviewable within the transportation analysis under RCW 36.70A.070(6)(a). The County should disclose how much of the \$739 million deficiency is funded and from which source, capital or maintenance, and provide a schedule capable of achieving compliance.

Staff acknowledged at the work session that the County had been ineligible for state sidewalk-funding programs because its bicycle and pedestrian master plan was a 2010 document that had

not been updated, and would only now become eligible. Measured against the Road Fund's capital-available balance — roughly \$15 million per year now and, per paragraph 5, nothing available for capital after operating costs by 2038 — the \$739 million deficiency is not fundable on any horizon the County has projected.

10. The growth assumption driving the plan's largest local revenue line is not stated in the written record.

The Road Fund revenue projection in Table 11 depends on an assumed growth rate for that fund. That assumption does not appear in the narrative of Appendix A, in Appendix G, or in the work-session materials. At the work session, staff described the projection as assuming approximately 2.5 percent growth over time with the levy and a smaller rate for other sources, while also stating that the projection did not account for any increases to the levy — an internal inconsistency within the explanation itself. A finance plan that does not disclose, in writing, the growth assumption underlying its largest local revenue line does not permit that assumption to be tested, as RCW 36.70A.070(6)(a)(iv)(A) contemplates. The County should state in Appendix A the exact Road Fund growth assumption used in Table 11 and reconcile the apparent conflict between assuming growth with the levy and assuming no levy increase.

Capital Facilities and Utilities Element (Chapter 6), Appendix E, and Appendix G

11. Chapter 6's capital-facilities summary carries a superseded six-year transportation figure in a table now labeled 20-year, and the aggregate expenditure total presented to Council appears nowhere in the chapter.

Table 6.2 has been retitled from a six-year to a 20-year summary of capital facilities expenditures, but its transportation row still reads 2016-2021 Transportation Improvement Program — a program that concluded five years ago — while the chapter text continues to describe the plan as a six-year financial plan and Table 6.2 as isolating costs over the next six years. The chapter thus mixes six-year and 20-year framings within a single table, in tension with the coherent capital-facilities plan that RCW 36.70A.070(3) requires and with the compatible-assumptions requirement of WAC 365-196-500(2).

Separately, the work-session presentation states a 20-year Clark County capital-facilities expenditure total of approximately \$2.78 billion, described as coinciding with Appendix E. That figure does not appear in the text of Chapter 6; Table 6.2 contains no total row, and the printed rows cannot be reconciled to it as presented. The County should provide the derivation of that figure and reconcile it to Chapter 6, and should conform Table 6.2's transportation row and the surrounding six-year and 20-year text.

12. Appendix E invokes the good-faith safe harbor to carry forward 2016-era analysis, including for the County's own Sheriff, and concedes its factual basis will change after Council acts.

Appendix E invokes the safe-harbor provision added by Chapter 228, Laws of 2023 — under which a county's good-faith but unsuccessful effort to gather capital-facilities information from other public entities cannot be grounds for a noncompliance finding — and then states that, to date, the following jurisdictions have not provided updated information: Camas, Clark County Sheriff, Washougal, Woodland and Yacolt, and that for those jurisdictions the appendix will continue to reference the 2016 comprehensive plan analysis.

This invocation is problematic in three respects, each bearing on whether the capital-facilities element rests on current information as RCW 36.70A.070(3) requires. First, the safe harbor by its terms addresses information a county is unable to gather from other public entities. The Clark County Sheriff is separately elected, but the office is funded through the County budget the Council adopts, and the County obtains the office's capital-facilities information through its own annual budget process; it cannot claim a good-faith inability to gather information from an office it funds. Second, the safe harbor excuses the omission of information; it does not authorize substituting decade-old 2016 analysis presented as the current basis for a provider's capital facilities. Third, Appendix E states that updated information is anticipated prior to the county submitting the 2025-2045 Comprehensive Plan update to Commerce and RTC — conceding that the factual basis of the appendix will change after these work sessions and before transmittal, such that the operative version will not be the version the public reviewed.

13. Appendix G is the six-year capital facilities financial plan, and its two summary tables state the six-year expenditure total inconsistently, differing by approximately \$535 million.

Appendix G is the Capital Facilities Financial Plan required by RCW 36.70A.070(3), and County staff described it at the work session as the document the County cannot spend on capital without following — the operative financing instrument for the capital facilities element. Its internal consistency therefore bears directly on whether the County has adopted a coherent six-year financing plan.

Appendix G contains two summary tables purporting to describe the same six-year plan. Table G.1, the executive-summary table on page 1, states total six-year expenditures of \$1,116,361,138, replacing a prior figure of \$580,858,481. Table G.8, the Total Financial Plan Summary on page 13, states total expenditures of \$580,858,481 — the earlier figure. The two summary tables of the same plan thus differ on total six-year expenditures by approximately \$535.5 million. In Table G.8, the revenue rows below the expenditure total were updated while the expenditure and General Purpose Funding Needed rows above were not, so the funding-needed figure is computed from an expenditure total that Table G.1 states is materially higher.

The capital facilities financial plan is reviewed as adopted, on its face, and RCW 36.70A.070(3) requires a coherent six-year financing plan. A financing plan whose two summary tables disagree by approximately \$535 million about the cost of the same plan does not, as drafted, present a reconciled six-year plan. The County should conform Table G.8 to the updated figures in Table G.1 before adoption. Corroborating the point, Appendix G's narrative and Table G.2 title continue to reference the superseded 2023-2028 six-year window, and the document footers still read Clark County Comprehensive Plan 2015-2035 — carrying differing time frames through the financing plan without the reconciliation WAC 365-196-500(2) requires.

14. Appendix A and Appendix G state the six-year transportation program inconsistently.

The same six-year transportation program is stated differently across the two appendices that jointly comprise the transportation financing plan. Appendix A states a 2026–2031 transportation total of \$246,765,000, while Appendix G states \$250,585,000 — a difference of \$3,820,000 — and the principal revenue lines differ between the two documents as well. Two documents in the same adoption package, purporting jointly to constitute the six-year financing plan, should not state that plan's total and its component revenues inconsistently. Because RCW 36.70A.070(3) and RCW 36.70A.070(6)(a)(iv) require a coherent and reconciled financing plan, and WAC 365-196-500(2) requires compatible assumptions across the plan's parts, the County should reconcile Appendix A and Appendix G on the six-year transportation program.

15. School capacity for the growth this plan allocates is not demonstrated, and the district plans it relies on are past due for update.

The plan directs substantial residential growth into the Ridgefield and Battle Ground school districts and adopts those districts' capital facilities plans by reference under School Element Policy 10.5.2, collecting school impact fees on them under CCC 40.620.030. Both are the districts' 2022 plans. CCC 40.620.030(A) requires each district to submit its plan and update it at least every four years; that four-year interval runs from the district's 2022 submittal, and the County's adoption of those plans by ordinance in 2023 — a separate step governed by the review provisions of CCC 40.620.030(B) — does not reset it. The plans are therefore past due for resubmittal regardless of when they were adopted. They also rest on pre-pandemic enrollment forecasts and superseded assumptions — the districts' own later enrollment work projects materially higher growth than the carried-forward plans assume — and their capital programs depend on bond and levy revenue the districts' voters have repeatedly refused. On that basis the plan does not demonstrate the funded, adequate school capacity that RCW 36.70A.070(3) requires to serve the growth it allocates.

Because the County relies on these districts' plans, prepared on an older time horizon and on stale assumptions, WAC 365-196-500(2) requires it to use compatible assumptions across the plan and to analyze and reconcile the differences rather than carry the outdated figures forward unexamined; and WAC 365-196-415(1)(e) requires reassessment of the land use element where probable funding falls short of existing needs. The County should require updated capital facilities plans before carrying them forward and calculating impact fees from them. These points, with the district

capital facilities plans and supporting documentation, are developed in my separately filed comments on the School Element (Chapter 10).

Adoption on an incomplete record; public participation

Across both elements, the County is advancing to adoption on a record its own staff describe as incomplete. At the work session, staff stated that the preferred-alternative model results were not yet available and the transportation performance analysis was based on the prior alternative's model run; that project cost estimates were still being refined and the numbers were preliminary and would likely change before the hearing; that transportation, school, and fire impact-fee rates would not be calculated until a later work session; that Appendix E could not evaluate several named jurisdictions, including the County's own Sheriff, and would carry forward 2016 analysis in the interim; and that the arterial atlas contains road alignments that do not match the land use decisions, which the County has deferred reconciling until after this Comprehensive Plan Update (July 15, 2026 transportation presentation, slide 9).

Staff further confirmed that the chapters and appendices would be transmitted to the Department of Commerce as drafts to begin the 60-day review, and that changes could be made after that period for the final decision. The defect is one of sequence as much as completeness: whatever the County finishes between the work sessions and transmittal goes to Commerce to start the statutory clock without the Council having reviewed it in an open session or the public having seen it. The more that is added at the end to fill the gaps described above, the more of the operative document escapes public and Council review entirely. A review conducted on financing analysis still being written, project costs left blank, and capital facility plans not yet received or reconciled does not afford the meaningful opportunity to review and comment that RCW 36.70A.035 and RCW 36.70A.140 require.

These comments accordingly object to adoption on a record that reaches Commerce without the public or the Council having reviewed it, and preserve for review every issue raised in this letter, notwithstanding the incomplete state of the County's submittal.

Thank you for your consideration of these comments and for entering them into the record of the 2025 Comprehensive Plan Update.



TECHNICAL MEMORANDUM #1

DATE: August 13, 2025

TO: Clark County Community Planning

FROM: Brianna Velasquez, EIT and Reah Flisakowski, PE | DKS Associates

SUBJECT: Clark County Capital Facilities Plan Update: Multimodal Level of Service Standards #24765-000

PURPOSE AND RECOMMENDATIONS

As part of the periodic review and update to the Clark County Comprehensive Plan and Capital Facilities Plan (CFP), multimodal levels of service (MMLOS) standards for all locally owned arterials and active transportation facilities must be adopted to comply with the latest requirements of the Growth Management Act (GMA) as mandated in [RCW 36.70A.130 \(5\)](#) and RCW 36.70A.070 (6)(iii)(B). The MMLOS standards will serve as a tool to gauge performance and help assess the adequacy of the transportation system, including sidewalks, bicycle lanes, transit, and vehicles and guide the current and future improvements projects in the transportation plan.

Clark County has previously only had level of service (LOS) standards established for vehicle travel, which are based on metrics that measure congestion and delay. With the passage of WA State House Bill 1181 (2023), the county is now required to also establish new standards for active travel modes such as walking, biking and transit.

This memorandum summarizes Clark County's current multimodal and vehicle performance policies and standards, provides examples of MMLOS standards at peer agencies for comparison, and recommends new standards for Clark County to consider for GMA compliance.

Based on the evaluation presented in this memo, Level of Traffic Stress (LTS) is the recommended metric to evaluate multimodal facility performance. The preferred LTS standards for multimodal facilities are listed below.

- LTS 2 or better within the Vancouver Urban Growth Area (UGA), but outside the city limits
- LTS 3 or better in rural areas outside the Vancouver UGA applied to corridors identified on RTC's Regional Active Transportation Network

These recommendations are consistent with state and regional MMLOS standards and support Clark County goals related to transportation and travel options.

ACTIVE TRANSPORTATION IN CLARK COUNTY

The term “active transportation” is used to describe human scaled and often person-powered modes of travel, which includes walking or running, the use of mobility devices such as wheelchairs and powered scooters, bicycling, and the use of personal devices such as foot scooter and skateboards.¹ Planning for active transportation is important to provide a wide range of travel options that promote health, improve safety, equity, and sustainability. Improvements to multimodal transportation options encourage physical activity and well-being, as well as reducing barriers for disadvantaged/marginalized communities to reach key destinations and services (e.g., jobs, schools, healthcare) and help build stronger local economies.

Demographic data shows that there is a need for travel options to support the Clark County community.

- A 2023 study by the Washington State Legislature estimated that, in Clark County, about 29% (140,807) of the population are nondrivers.² The non-driving population encompasses a wide range of individuals, including young people, students, older adults, people with disabilities, low-income individuals, and others who may not drive due to personal choice or economic factors.
- The annual cost of transportation for a typical household is about 18% of total expenses throughout the County while annual transit costs account for less than 1%.³
- Based on the 2022 American Community Survey (ACS), about 7.5% of Clark County’s population live under the poverty line.
- People under 18 years of age represent about 22.2% of Clark County residents while people 65 years of age or older represent 16.9%.⁴ People 65 years of age or older have been the fastest growing age group, increasing from 11.5% in 2010 to 16.9% in 2022.
- Approximately 9.2% of Clark County residents under the age of 65 years have a disability.
- In 2023, a travel study for Clark County evaluated travel behavior data and found that youth, seniors, and low-income residents rely more heavily on walking, transit, and shared rides.⁵ These households were disproportionately represented among lower-income groups and individuals living in urban areas. Of the 2,118 households surveyed, 104 (4.9%) reported owning no vehicles.

Applying MMLOS standards in Clark County would add an emphasis to the design of facilities that provide travel options for those that can’t or don’t want to drive a vehicle. MMLOS standards will

¹ WSDOT Active Transportation Plan, 2020 and Beyond

² Washington State Legislature Joint Transportation Committee, Nondrivers: Population, Demographics & Analysis (Jan. 2023), [interactive webmap](#) and [final summary report](#)

³ USAFacts, <https://usafacts.org/data/topics/people-society/population-and-demographics/our-changing-population/state/washington/county/clark-county/>

⁴ [QuickFacts](#), United States Census Bureau

⁵ RSG, Clark County Travel Study: Final Report (Dec. 2024) <https://rtc.wa.gov/wp-content/uploads/2025/01/10-CCTSFinalReport-draft.pdf>

provide improvements facilities that encourage choosing walking, biking, and transit to make daily trips and provide alternatives to the use of a single occupant motor vehicle.

COUNTY LEVEL OF SERVICE POLICIES AND STANDARDS

Currently, the County has mode-specific LOS standards outlined in corresponding planning documents in an effort to enhance the active transportation network as a practical alternative to vehicle travel. The Bicycle and Pedestrian Master Plan⁶ provides a vision and implementation strategy to improve conditions for bicycling and walking, while the County's Comprehensive Plan Transportation Element⁷ specifies LOS policies for transit and vehicles, and integrates policies aligned with the Bicycle and Pedestrian Master Plan. A summary of these plans is provided in the following sections.

CLARK COUNTY BICYCLE AND PEDESTRIAN MASTER PLAN

The County's Bicycle and Pedestrian Master Plan (2010) referenced federal and state bikeway and walkway design guidelines to identify the highest standard of safety, comfort, and convenience to strive for. These standards will be replaced with the new MMLOS standard developed as part of the Capital Facility Plan update.

CLARK COUNTY COMPREHENSIVE PLAN

Goals and policies related to multimodal and sustainable travel in the region were outlined within the County's Comprehensive Plan Transportation Element (amended 2023).

Clark County has been committed to establishing a regional transportation system which reduces reliance on single occupancy vehicle transportation. The County has cooperated with the Metropolitan Planning Organization (MPO) and the Regional Transportation Planning Organization (RTPO), state, bi-state, municipalities and C-TRAN to develop a balanced transportation system which emphasizes transit, high-capacity transit, bicycle and pedestrian improvements, and transportation demand management.

From these goals, performance standards for the regional arterial system and transit routes were set to direct growth to urban centers. LOS standards represent the minimum performance level desired for transportation facilities and services within the region. They are used as a gauge for evaluating the quality of service on the motor vehicle transportation system. The standards are used to identify deficient facilities and services in the existing transportation system. Table 1 summarizes the motor vehicle LOS criteria (defined by the Highway Capacity Manual) based on control delay (seconds per vehicle per hour) for signalized and unsignalized intersections.

⁶ Clark County Bicycle and Pedestrian Master Plan, 2010.

⁷ Clark County Comprehensive Plan, Transportation Element, 2016.

TABLE 1: INTERSECTION LEVEL OF SERVICE CRITERIA

LEVEL OF SERVICE	AVERAGE CONTROL DELAY (SEC/VEH)		DESCRIPTION
	SIGNALIZED INTERSECTION	UNSIGNALIZED INTERSECTION	
A	0 - 10	0 - 10	Free Flow, minimal delays
B	10 - 20	10 - 15	Stable Flow, slight delays
C	20 - 35	15 - 25	Stable Flow, acceptable delays
D	35 - 55	25 - 35	Approaching Unstable, tolerable delays
E	55 - 80	35 - 50	Unstable, significant delays
F	> 80	> 50	Forced Flow, excessive delays

The minimum acceptable level of service for intersections on the regional arterial system is LOS D, except where otherwise specified in adopted local jurisdiction standard.

Transit service LOS standards in the Comprehensive Plan were referenced from the C-Tran service standards approved in 2013 (see Figure 1). These standards are focused on service characteristics such as route frequency and stop locations that are controlled by C-Tran.

Planning Indicators							Supporting Factors	
SERVICE CLASSIFICATION	PASSENGERS PER REVENUE HOUR TARGET	PEAK/ NON-PEAK HEADWAYS	BUS STOP SPACING	ACCESSIBILITY (within service boundary)	MAXIMUM LOAD FACTOR (of seating capacity)	SERVICE SPAN (hours/day, days/week)	DENSITY	SUPPORTING FACTORS
COMMUTER EXPRESS SERVICE	27	10–15 minutes, peak only	Park & ride locations	Within 5 miles of 80% of population and employment	100%	M–F, peak only	High density employment district as destination	Near full cost recovery, parking mgmt., sufficient park & ride spaces/ transit connections
LOCAL URBAN AND LIMITED SERVICE	22–28	15–30 minutes, peak; 30–60 minutes non-peak	1/8 – 1/4 mile	Within 1/3 mile of 60% of population and 70% of employment within service area	125%	7 days, up to 19-hour span of service	8–15 residential dwelling units per acre, 80 or more employees per acre	Land use/zoning and development that supports transit use; trip generators/ destinations along corridor; pedestrian and bicycle facilities
INNOVATIVE TRANSIT SERVICE	6	Varies by area	Designated locations	Accessible to all households within Connector service area	100%	M–F, limited hour span of service	Lower density areas not supportive of fixed route	Pedestrian and bicycle facilities; connection to fixed route network
PARATRANSIT	3	N/A	N/A	Vancouver UGA and 3/4 mile of fixed route service outside the Vancouver UGA	100%	7 days, up to 19-hour span of service	N/A	Clear eligibility criteria for service; coordination with human services transportation providers; travel training
VANPOOL	5–12	N/A	N/A	Service available for commute trips that begin or end in Clark County	100%	Based on individual needs	N/A	Parking mgmt.; employer subsidies/tax credits; CTR program

FIGURE 1: C-TRAN LEVEL OF SERVICE INDICATORS

Source: C-TRAN

CLARK COUNTY CODE

The existing Clark County Code [Section 40.350.020](#) outlines the performance standards for the regional arterial system through its Transportation Concurrency Management System. This system ensures that new developments maintain efficient traffic flow and safety on arterial and collector roadways, as well as state highways of regional significance.

Clark County standards include LOS and volume to capacity ratio as intersection and roadway segment performance measures. Intersection LOS criteria are defined in Table 1. Volume to capacity ratio is a common measure for assessing the adequacy of a roadway's capacity to handle traffic demand. It's calculated by dividing the volume of traffic traveling on the roadway segment by its capacity.

The level of service standards apply to roadway segments and intersections are as follows:

- The maximum volume-to-capacity (v/c) ratio for each roadway segment must not exceed 0.9, measured independently for each direction of travel. Measurements shall be made for all collector and arterial roadway segments located within the Vancouver Urban Growth Area, but outside of the City of Vancouver. The standards for roadway capacities based on type and designation are shown in Figure 2.

Roadway Type			County Designation	Single Direction Capacity/Hour
Urban	Arterials	Parkway	Pa-4b	2000
		Principal	Pr-4cb	1800
		Minor, 4-lane	M-4cb	1800
		Minor, 2-lane	M-2cb	900
	Collector	Urban	C-2cb	900
		Urban	C-2	800
		Urban	C-2b	800
Rural	Arterial		RA	800
	Collector	Major	R-2	800
		Minor	Rm-2	800

FIGURE 2: COUNTY ROADWAY CAPACITY STANDARDS

Source: Clark County Code (CCC) 40.350.020.G

- For roadways not fully built out to county standards, the capacity shall be determined based on the current roadway condition. The roadway capacities for roadways not fully built out to county standards are shown in Figure 3.

Lane Widths	Single Direction Capacity/Hour
> 12 ft with paved shoulder widths 2 ft or greater	800
11 – 12 ft with paved shoulder widths 2 ft or greater	700
< 11 ft	600

FIGURE 3: ROADWAY CAPACITIES FOR ROADWAYS NOT BUILT OUT TO COUNTY STANDARDS

Source: Clark County Code (CCC) 40.350.020.G

- Individual movements at each signalized intersection of regional significance in the unincorporated county shall not exceed an average of two traffic signal cycle lengths or 240 seconds of delay (whichever is less).
- All unsignalized intersections (all-way or two-way stop controlled) of regional significance in the unincorporated county shall achieve LOS E standards or better (if warrants are not met). If warrants are met, unsignalized intersections of regional significance shall achieve LOS D standards or better.
- The County does not have a LOS standard specifically for roundabout intersection operations. The unsignalized intersection standard is applied to roundabout intersections operations.

OTHER AGENCY MMLOS STANDARDS

This section provides examples of MMLOS standards at peer agencies in Washington and Oregon to provide a comparison to Clark County standards.

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

The Washington State Department of Transportation (WSDOT) has developed MMLOS standards⁸ for state facilities. The following sections summarize the MMLOS interim guidance provided by WSDOT to assist local agencies updating comprehensive plans for the periodic update cycle which requires adoption of MMLOS standards for all locally owned arterials and active transportation facilities.

MULTIMODAL LOS

To satisfy one of the key tasks listed in the WSDOT Active Transportation Plan and help achieve goals in the GMA, WSDOT has adopted LTS⁹ as a tool for rating the performance of pedestrian and bicyclist facilities. A summary of the WSDOT level of traffic stress is shown in Figure 4.

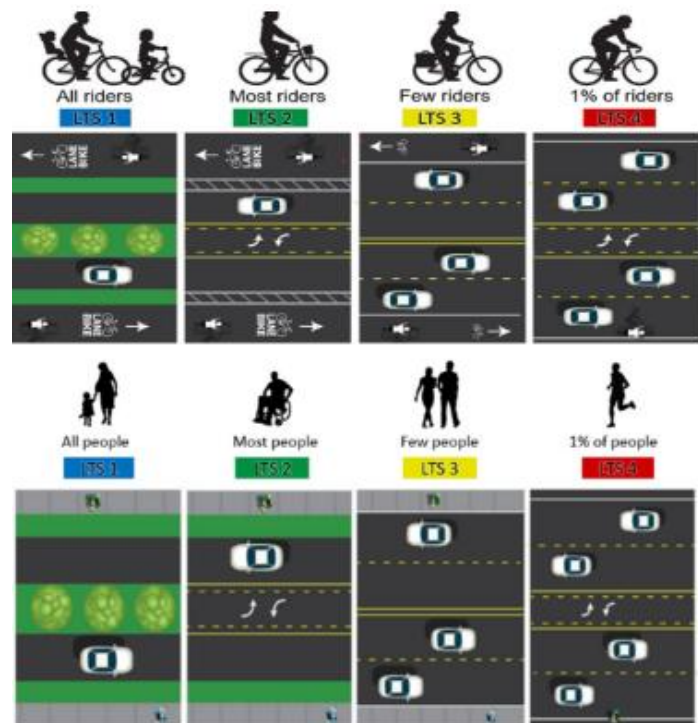


FIGURE 4: LEVEL OF TRAFFIC STRESS

SOURCE: WSDOT Level of Traffic Stress Flyer, August 2023

⁸ Washington State Department of Transportation, Multimodal Level of Service Interim Guidance (2024): https://wsdot.wa.gov/sites/default/files/2024-08/MMLOS_guidance_Aug2024.pdf

⁹ Washington State Department of Transportation, Level of Traffic Stress (2024): https://wsdot.wa.gov/sites/default/files/2024-07/LTS%20Level%20of%20Traffic%20Stress%20Flyer_0.pdf

WSDOT LTS levels and characteristics¹⁰ for walking and cycling are summarized below.

- **LTS 1:** Suitable for all ages and abilities; children could walk or bike here independently. Separated and/or barrier protected.
- **LTS 2:** Comfortable for most adults, including most adults experiencing disabilities. Some separation, no barrier.
- **LTS 3:** Tolerable for enthusiastic and/or confident adults. Little space, no separation.
- **LTS 4:** Only used by highly confident people, or those with no alternative. No dedicated space, no separation

A road with an LTS of 1 is best, being suitable for users of all ages and abilities. A road with an LTS of 4 presents the highest stress level. Only those who have a high level of confidence or who do not have other options will use LTS 4 roads. WSDOT's goal for Complete Streets projects is to provide facilities with LTS 2 (comfortable for most adults) or better.

The three biggest factors in determining comfort for people walking or cycling on state facilities are traffic volume, vehicle speeds, and the number of vehicle travel lanes. When these metrics increase, LTS increases, and so does the need for separation. 'Basic' LTS tables from the WSDOT Design Manual (Appendix A) help determine the appropriate type of active facility based on road characteristics.

In addition to the facility types, other travel stress issues considered in the design of bicycle and pedestrian facilities include route directness, crosswalks, driveways, turn lanes, freight and pinch points. Once these local conditions are addressed, the Basic LTS can be upgraded to the Refined (or final) LTS for the project.¹¹

TRANSIT LOS

The transit level of service was designed to align broadly with previous WSDOT reports and plans including the Human Services Transportation Plan (2022), Frequent Transit Service Study (2023), Highway System Plan (2024), Active Transportation Plan (2020), and Public Transportation Plan (2016).

Two qualitative levels were designed per place type:

1. "Minimum level of service" includes characteristics that can be generally met and achievable.
2. "Equitable level of service" describes characteristics which would provide a transit level of services which meets community needs.

The following characteristics are identified for each level of service:

- Relative access
- Fixed-route transit frequency and span/days

¹⁰ WSDOT Level of Traffic Stress Flyer, August 2023

¹¹ Washington State Department of Transportation, Design Bulletin: Designing for Level of Traffic Stress (2022), <https://wsdot.wa.gov/sites/default/files/2022-06/DesignBulletin2022-01.pdf>

- Fixed-route transit mode
- Paratransit wait time
- Public micromobility and rideshare
- Active transportation access to transit
- Stop amenities
- Inducements to mobility
- Trip booking, technology access
- Safety infrastructure

The County can support the development of reliable, high-capacity transit routes by ensuring MMLOS standards and guidelines are consistent and coordinating with local partners to ensure multimodal projects are aligned with regional growth and land use.

MOTOR VEHICLE LOS AT INTERSECTIONS

WSDOT set level of service performance standards for intersections (non-roundabout controlled) on highways of statewide significance (HSS) at LOS C for rural facilities and LOS D for urban facilities in Clark County.

For roundabouts, WSDOT uses a mix of performance measures in this order of importance: v/c (volume to capacity ratio), delay, stop rate, queue, and then LOS. The first goal is to achieve a balance where each lane group operates at a v/c below 0.85 or 0.9 with minimal queue lengths while also considering reasonable queues that are consistent with local conditions.

If the reported LOS is D or better, but the v/c or queues are considered unacceptable, WSDOT might consider the LOS as failing. In such situations, it's recommended to conduct sensitivity analyses by adjusting volumes and geometrics. If the v/c approaches or exceeds 0.9, WSDOT recommends examining the volume projections and considering microsimulation for a more detailed analysis.

CITY OF BELLEVUE, WASHINGTON

Bellevue adopted MMLOS standards in their 2017 MMLOS Metrics, Standards & Guidelines. It retains existing intersection-based LOS standards and establishes a new urban corridor travel time metric. Both intersection LOS and corridor travel speed consider the context with vehicle mobility favored where density is low. With higher densities and increased travel options, vehicle LOS standards allow for greater traffic congestion. The summary of MMLOS standards is listed below and shown in Figure 5.



Table 1. MMLoS Summary

Mode	LOS Metric	LOS Standard	LOS Guideline
Vehicle	Volume/Capacity at Intersections	LOS C-E+, Varies by land use context	N/A
	Typical Urban Travel Speed on Arterials	N/A	Percent of posted speed limit, LOS varies by neighborhood context
Pedestrian	Sidewalk plus Landscape buffer	12-20 feet for sidewalk+landscape Varies by land use context	N/A
	Pedestrian Comfort, Access and Safety at Intersections	N/A	Crosswalk and back-of-curb design varies by land use context
Bicycle	Level of Traffic Stress on Corridors	N/A	Design to achieve LTS/LOS varies by roadway traffic speed and volume
	Level of Traffic Stress at Intersections	N/A	Maintain corridor LTS/LOS at intersections. Design components vary by context
Transit	Passenger Comfort, Access and Safety	N/A	Varies by transit stop/station typology
	Transit Travel Speed on Corridors	N/A	14 mph on Frequent Transit Network corridors between activity centers

FIGURE 5: BELLEVUE MMLOS STANDARDS

- Bicycle LOS guidelines are based on the level of traffic stress on corridors and at intersections.
- Transit LOS are based on transit rider access, transit stop/station components, and some speed and reliability factors that are under the control of the city.

The bicycle LTS standard varies based on context and corridor type:

- LTS 1 for Priority Bicycle Corridors within Downtown and Activity Centers
- LTS 2 for Priority Bicycle Corridors outside of Activity Centers
- LTS 3 for Other Bicycle Network Corridors
- No LTS standard applies on identified Exempt Bicycle Network Corridors that would not be a comfortable bicycling environment due to traffic speed and volume conditions.

Bellevue's approach to bicycle LTS standards require designated activity centers and priority bicycle corridors to determine the level of protection and preferred treatments.

CITY OF BELLINGHAM, WASHINGTON

Bellingham implemented a multimodal transportation concurrency program in 2008 based on the number of person trips available (PTA) for all modes. PTA represents the capacity based on completeness of the transportation system, particularly for pedestrian and bicycle facilities, to accommodate the transportation impacts of new development within a specific area, called a concurrency service area (CSA). The total PTA is estimated for the planning horizon year based on existing and planned transportation facilities. Land use forecasts are tested to determine if growth and the future transportation system are in line with one another. Credits for PTA are awarded based on the degree of completeness of these facilities in each CSA. There are no explicit quantitative metrics guiding the long-range planning for the other modes.

The Comprehensive Plan includes LOS standards based on the PTA platform, as follows:

- Arterial Streets: LOS E
- Transit: LOS F which corresponds to 1-1.25 riders per seat
- No separate LOS thresholds are identified for pedestrians, bicycles, or trails; however, they are considered in the overall PTA measure.

PIERCE COUNTY, WASHINGTON

Pierce County adopted MMLOS standards as part of the latest update to their Comprehensive Plan (2025). Pierce County uses LTS as the multimodal measure and standard. However, the specific criteria and methodology to calculate the LTS for pedestrian and bicycle facilities are different than WSDOT's guidelines. The summary of the County's MMLOS standards is listed below.

To inform decision-making for active facilities, the level of comfort for people walking or cycling is rated based on speed limits, traffic volumes, and type of active transportation facility.

The pedestrian LTS standards vary based on corridor type and context with a focus on the network within the Pierce County Urban Growth Area (UGA) boundaries:

- LTS 1 for Separated Shared Use Paths/Regional Trails
- LTS 2 for Parallel Facilities to High Congestion Corridors within the UGA
- LTS 3 for Major/Secondary Arterials within UGA and within 0.5-mile buffer of high congestion corridors or along an identified facility running parallel to these corridors
- LTS 3 for select Collector Arterials within the UGA and within a 0.5-mile buffer of high congestion corridors, identified parallel facilities, and/or planned frequent transit facilities (15-minute frequency)

The bicycle LTS standards are also set according to corridor type and context:

- LTS 1 for Separated Shared Use Paths/Regional Trails and Parallel Facilities to High Congestion Corridors within UGA

- LTS 2 for select Major/Secondary Arterials within UGA that facilitate long-distance connections between key destinations, or parallel facilities to high congestion corridors
- LTS 3 for Parallel Facilities to High Congestion Corridors outside the UGA

Pierce Transit is currently finalizing performance standards for transit service through the Agency's long-range plan "Destination 2045". Pierce County is committed to collaborating with Pierce Transit to align service delivery.

LOS considerations typically include:

- Vehicle service hours
- Ridership trends
- Service area coverage
- Accessibility and user experience metrics

ADDITIONAL MOTOR VEHICLE LOS STANDARDS

WSDOT

THURSTON COUNTY, WA

LOS Standards: During the two-hour p.m. peak, the regional vehicle LOS standards are:

- LOS E or better in urban centers and corridors.
- LOS D or better elsewhere inside city limits, urban growth boundaries, and rural/urban transition areas.
- LOS C or better elsewhere in rural areas.

KING COUNTY, WA

- Urban Growth Area and Rural Mobility Areas: LOS E
- Rural Areas: LOS B
- Rural Neighborhood Commercial Centers: LOS D
- Average Travel Speeds on Arterials: LOS A: >35 mph to LOS F: ≤13 mph

MARION COUNTY, OR

- Signalized Intersections: LOS D or better with a V/C ratio of 0.85 or better
- Unsignalized Intersections: LOS E or better with a V/C ratio of 0.90 or better
- Road Segments: LOS D or better with a V/C ratio of 0.60 or better

LANE COUNTY, OR

- Freeways and Expressways: V/C ≤ 0.80 inside urban growth boundaries
- Other County Roads: V/C standards range from 0.70 to 0.85 depending on location and speed limits

WASHINGTON COUNTY, OR

- Regional Centers & Town Centers: Peak hour V/C ≤ 0.99 (LOS E)
- Other Urban & Rural Areas: V/C ≤ 0.90 (LOS D)

REDMOND, WA

- Downtown District: LOS E and V/C ≤ 0.95
- NE Redmond District: LOS D and V/C ≤ 0.85
- Key Arterials: LOS D and V/C ≤ 0.90

SHORELINE, WA

- Major Arterials: V/C ≤ 1.1 within countywide centers and highways of statewide significance.
- Other Arterials: V/C ≤ 0.90 .

MMLOS RECOMMENDATIONS FOR CLARK COUNTY

PREFERRED MMLOS METRIC

LTS offers a valuable framework for understanding and addressing the stress experienced by cyclists, enabling the creation of safer and well-connected pedestrian and bicycle networks that cater to a broader range of users. LTS was chosen as the recommended metric to evaluate multimodal facility performance in Clark County based on the following considerations.

- **Simplicity:** LTS provides a numerical rating to road segments and crossings based on factors like traffic speed, volume, number of lanes, and existing bicycle infrastructure. This straightforward evaluation makes it easy to understand and implement. This transparency allows for easier communication of findings to a wider audience, including the public.
- **Graphical Results:** By visualizing stress levels on a map, planners can pinpoint roadway segments that are low-street routes suitable for most cyclists and pedestrians and segments that need improvements.
- **Flexible and Adaptable:** LTS can be used to evaluate various types of multimodal facilities and crossings, and it's adaptable to different regional conditions. It is effective when applied to system-level analysis to identify key locations for deficiencies, which can then be further analyzed at a corridor level using more detailed methods.
- **Readily Available Data:** LTS relies on commonly available data, such as mapping tools and facility inventory, which reduces the need for extensive data collection.
- **Consistency with State and Regional Guidelines and Standards:** By aligning MMLOS standards with WSDOT and SWRTC, future County capital projects will have greater funding opportunities through various grant programs, including the Pedestrian and Bicycle Program and the Safe Routes to School Program.

PREFERRED MMLOS STANDARDS

For this CFP update, the recommended MMLOS standards to measure the performance of the County's transportation network and identify the need for future improvements and projects in the CFP are listed below. MMLOS standards are recommended for both active transportation and motor vehicle system performance.

ACTIVE TRANSPORTATION STANDARDS

Using LTS as the MMLOS metric, the standards below are recommended to identify system deficiencies and needed improvements.

- LTS 2 or better within the Vancouver Urban Growth Area (UGA), but outside the city limits
- LTS 3 or better in rural areas outside the Vancouver UGA applied to corridors identified on RTC's Regional Active Transportation Network

There's an estimated 490 miles of county roadways within the UGAs and Rural Centers that are currently lacking sidewalks. Implementing an LTS 2 standard would provide low-stress, protected facilities that are comfortable for most adults without requiring the wider right-of-way needed to attain LTS 1. LTS 3 lacks adequate protection in urban areas and would likely discourage some individuals from using facilities. On a multi-lane roadway with a posted speed limit of 30 miles per hour (MPH), basic LTS 2 could be provided with 5-foot-wide conventional facilities. On any roadway, a sidewalk with a physical barrier could be implemented to provide the highest standard of safety, comfort, and convenience for people walking or cycling. A physical barrier can consist of either a planting strip or other constructed buffer strip, a separated bicycle lane, a parking lane, or traffic barrier.

Transit LOS standards should be consistent with the WSDOT "minimum level of service" characteristics and C-Tran LOS standards, considering elements such as presence of stop amenities, transit speed, reliability and frequency, and transit-accommodating treatments.

MOTOR VEHICLE LEVEL OF SERVICE STANDARDS

Higher Congestion

The County should consider applying specific intersection and roadway standards that allow a higher level of congestion in areas designated as urban or commercial centers. A maximum v/c of 0.99 is typically applied as a peak hour standard for signalized intersections and roadway segments in an urban area.

Adjusting LOS standards to permit higher levels of congestion involves a complex trade-off between mobility, environmental sustainability, and urban development goals. While such changes can promote alternative transportation modes and cost savings, they may also lead to decreased mobility and public dissatisfaction.

Potential Benefits:

- Encourage Alternative Transportation Modes: Accepting higher congestion levels may incentivize the use of public transit, cycling, and walking, aligning with sustainability goals.

- **Cost Savings:** Reducing the emphasis on maintaining low congestion can reduce the need for costly roadway capacity projects.
- **Land Use Efficiency:** Higher congestion thresholds can support denser, mixed-use developments by reducing the requirement for extensive road infrastructure.

Potential Tradeoffs:

- **Potential Decrease in Vehicle Mobility:** Higher congestion can lead to longer travel times and reduced reliability for motorists during peak travel times.
- **Economic Impacts:** Increased congestion may affect goods movement and access to businesses, potentially impacting the local economy.
- **Public Perception:** Residents may view increased congestion as a tradeoff for travel options negatively.

Roundabouts

The County should consider developing LOS standards specifically for roundabout intersections. Using the existing LOS standard for unsignalized intersection does not adequately address unique operational characteristics and safety considerations for roundabouts. Roundabouts utilize a continuous flow of traffic, which is different from signalized or stop-controlled intersections where traffic is forced to stop. Specific LOS standards for roundabouts allow for a more accurate evaluation of traffic flow, delay, and capacity tailored to this unique operational approach.

For a roundabout controlled intersection, the most critical approach (i.e., approach with the highest v/c ratio) for a single-lane roundabout or the most critical lane (i.e., individual lane with the highest v/c ratio) for a multi-lane roundabout should operate with a v/c ratio less than 0.90.

PEDESTRIAN AND BICYCLE LTS ANALYSIS

A multimodal assessment for the existing County arterial and collector facilities was conducted following the evaluation methodology defined under the new multimodal LOS standard in the WSDOT Design Manual chapters 1510 and 1520¹². Table 2 summarizes the existing level of traffic stress conditions (minor discrepancies in the data result in five-mile difference in total roadway miles). As expected, the rural areas have more high stress facilities compared to urban areas. Development and road standards in the rural areas do not require sidewalks or bicycle lanes outside of rural centers, and roadway speeds tend to be higher. The majority of existing pedestrian and bicycle facilities of the overall network do not meet the proposed Figure 6: pedestrian LEVEL OF TRAFFIC STRESS ON ARTERIAL AND COLLECTOR NETWORKMMLOS standard. Figure 6: pedestrian LEVEL OF TRAFFIC STRESS ON ARTERIAL AND COLLECTOR NETWORK

TABLE 2: EXISTING PEDESTRIAN & BICYCLE LEVEL OF TRAFFIC STRESS

LTS	PEDESTRIAN				BICYCLE			
	Urban		Rural		Urban		Rural	
	Miles	Percent of Road Network	Miles	Percent of Road Network	Miles	Percent of Road Network	Miles	Percent of Road Network
1	6.8	4.5%	0.0	0.2%	0.0	0.0%	0.0	0.0%
2	21.7	14.5%	5.0	1.8%	13.5	9.1%	3.6	1.3%
3	37.6	25.1%	2.7	1.0%	12.1	8.1%	1.6	0.6%
4	83.5	55.8%	263.8	97.1%	122.6	82.7%	266.3	98.1%

Figures 6 and 7 present the LTS analysis for the existing pedestrian and bicycle networks. The analysis was limited to collector and arterial facilities in the unincorporated area of Clark County. The UGA boundary is included to show the rural and urban areas of the county.

¹² <https://wsdot.wa.gov/engineering-standards/all-manuals-and-standards/manuals/design-manual>

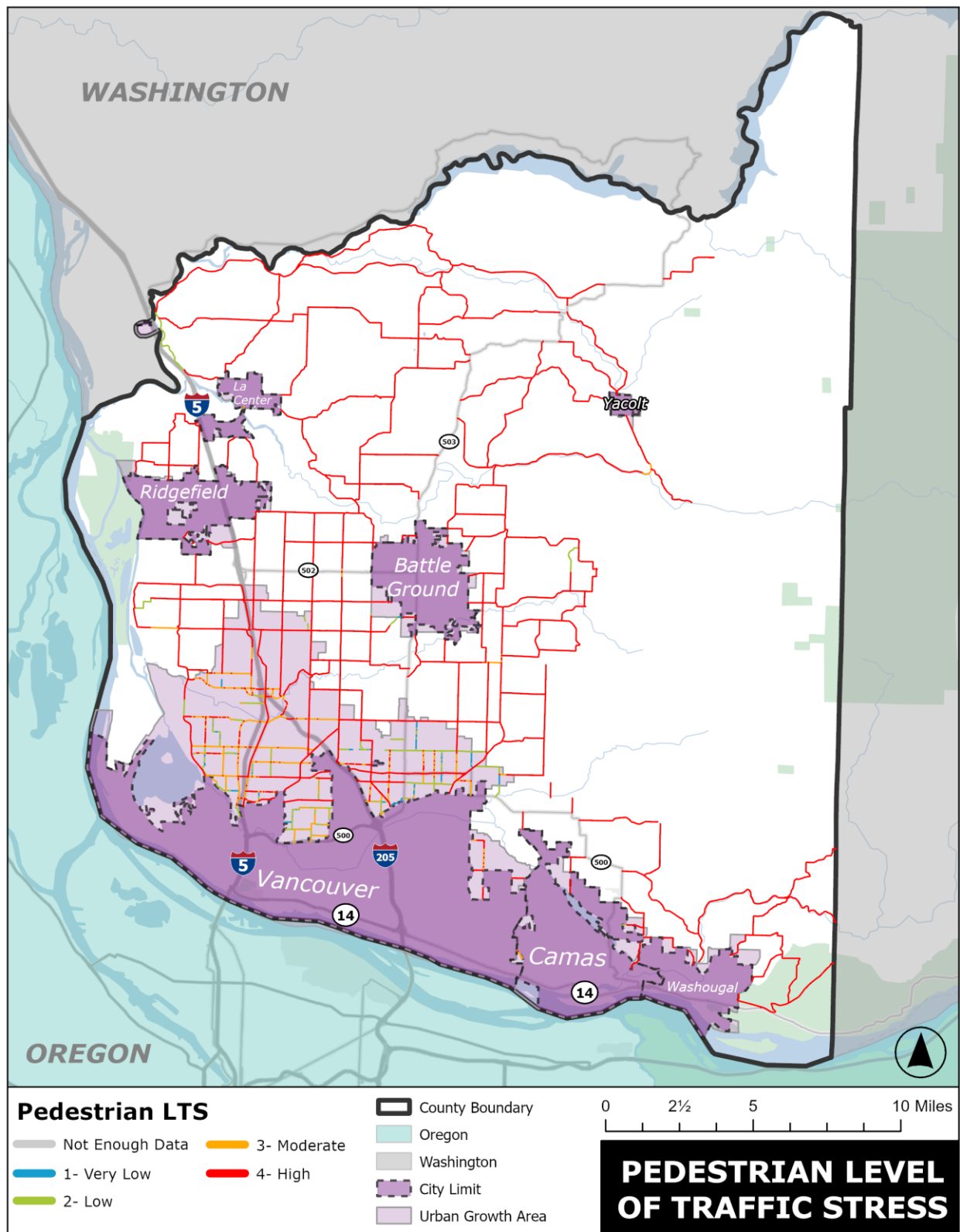


FIGURE 6: PEDESTRIAN LEVEL OF TRAFFIC STRESS ON ARTERIAL AND COLLECTOR NETWORK

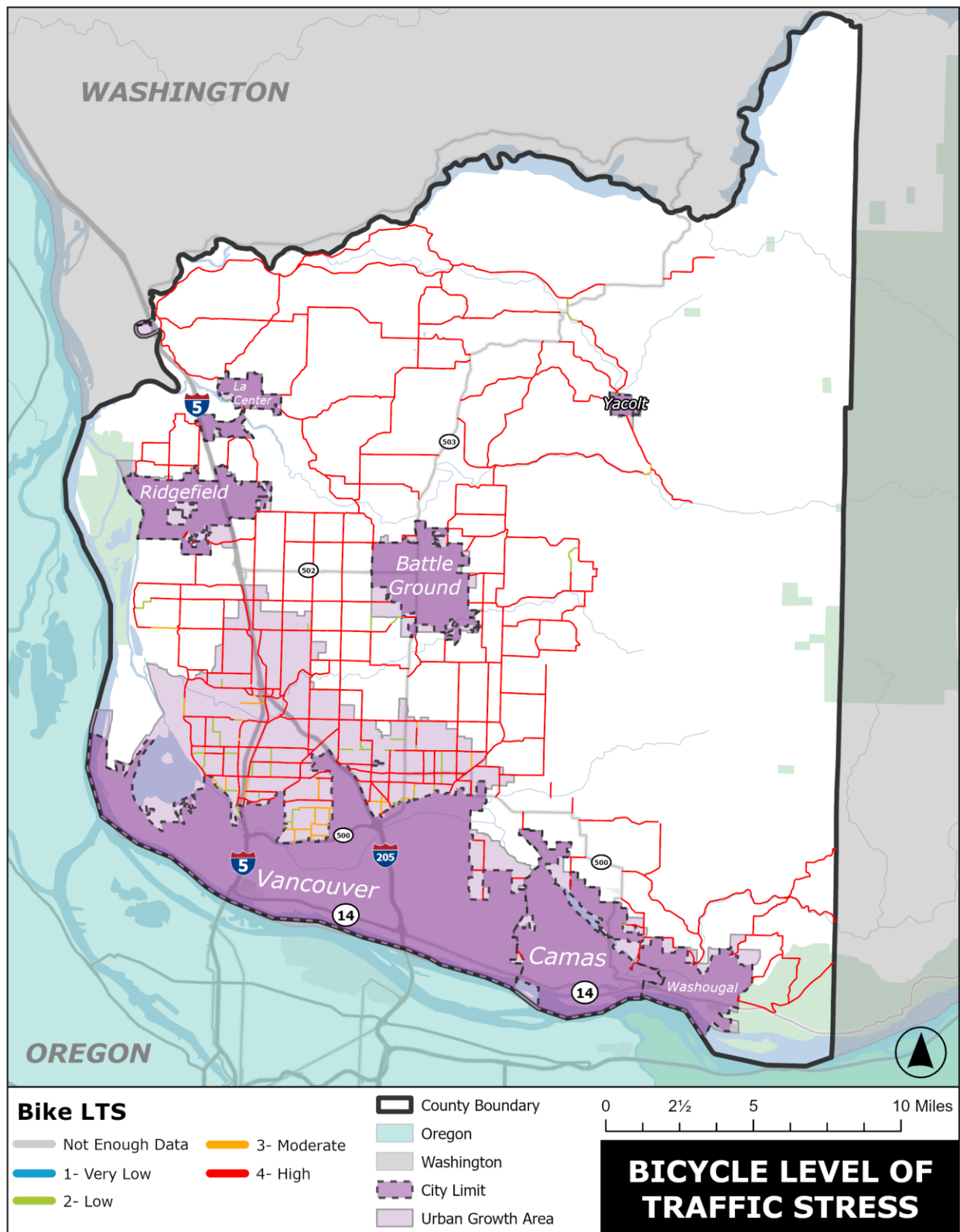


FIGURE 7: BICYCLE LEVEL OF TRAFFIC STRESS ON ARTERIAL AND COLLECTOR NETWORK

EXAMPLES OF LOW STRESS MULTIMODAL FACILITIES

The County has various examples of facilities that provide low stress options for walking and biking which meet the proposed LTS 2 or better standard. These include NE 99th Street (project completed) and NE 179th Street (project in design), shown in Figure 8 and Figure 9 respectively. Previously, both corridors had limited sidewalks and no existing bicycle facilities. To fill in these gaps and improve safety for all road users, shared use paths with a landscape buffer are on both sides of each corridor.



FIGURE 8: NE 99TH STREET CROSS-SECTION

SOURCE: GOOGLE STREETVIEW

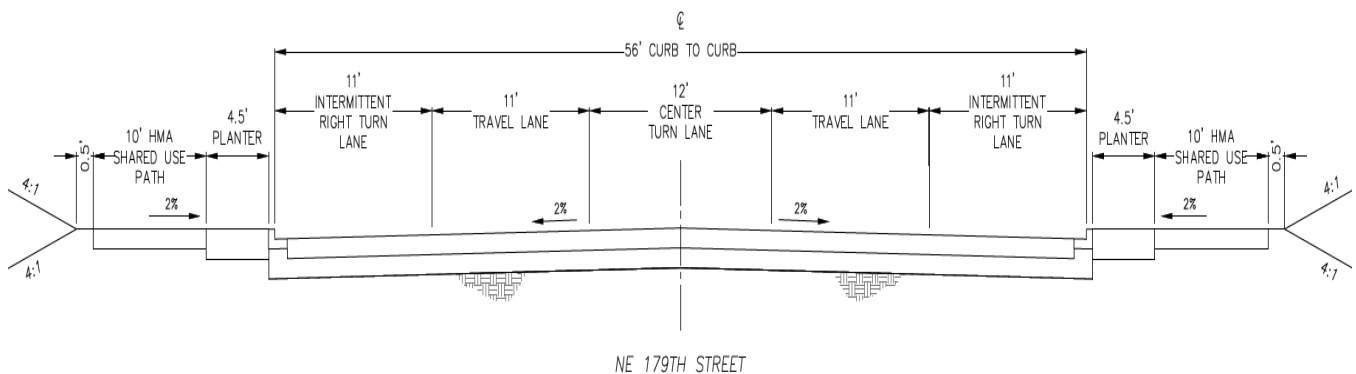


FIGURE 9: NE 179TH STREET PLANNED CROSS-SECTION

SOURCE: MAY 2024 OPEN HOUSE PRESENTATION

POTENTIAL OUTCOMES

The GMA requires that each jurisdiction demonstrate that it can pay for proposed improvement projects from reasonably available funding sources. Deficient roadways are defined as those links that exceed the adopted LOS standards. Therefore, the adopted MMLOS standards will determine the current and future improvements projects in the transportation plan. The capital facilities plan is comprised of projects necessary to maintain the defined standards through 20 years of growth.

If the preferred MMLOS standards were applied to Clark County, potential outcomes that are anticipated include:

- New or expanded projects in the CFP with walking and biking facilities to achieve LTS 2. Increasing the protection for pedestrians and bicyclists could result in moderate increases for project cost estimates, highly dependent on conditions such as available right-of-way, surrounding development and environmental constraints.
- Updated urban roadway design standards to incorporate the minimum allowable dimensions for LTS 2 active facilities. Standards would include separation elements such as planting strips, buffered bike lanes and separated multiuse paths.
- Greater systemic safety, from decreased motor vehicle speeds and increased physical space separating users. LTS 2 creates a safer and more comfortable environment for cyclists by providing separation, predictability, and lower stress levels, ultimately leading to a reduction in accidents and injuries on the road.
- Encourages more people to shift from vehicles to active travel and transit and supports lower cost travel options.
- Alignment with the adopted Bicycle and Pedestrian Master Plan which “provides a vision and implementation strategy for how Clark County can improve conditions for bicycling and walking over the next twenty years. The Plan envisions an interconnected bicycle and pedestrian network that provides routes to city centers, schools, transit, parks and recreational facilities. Once achieved, this Plan will improve Clark County residents’ health, enhance their quality of life, help improve and protect the County’s natural resources and be a source of pride to the community.”¹³
- Cross section standards will be developed to mitigate increased right-of-way needs to accommodate sidewalk and bike lane facilities to meet LTS 2. The 179th Street improvements is an example of a multi-use path with no increase in right-of-way needs. The cost impact for frontage improvements would be minimal. If certain restrictive conditions exist in developed areas that require retrofit improvements, flexible cross-section design standards should be adopted and included in the Clark County Code to accommodate LTS 2 active facilities.

¹³ Clark County Comprehensive Plan, Transportation Element, 2016.

APPENDIX

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APPENDIX A: WSDOT LEVEL OF TRAFFIC STRESS TABLES

Speed Limit	Number of Thru Lanes per Direction	Volume	Mixed Traffic (no facility)	Sidewalk (minimum 5')	Sidewalk (6' or >)	Sidewalk with Buffer	Sidewalk with Physical Barrier
20	1	0 - 750	1	1	1	1	1
		751 - 1500	1	1	1	1	1
		1501 - 3000	2	1	1	1	1
		> 3000	2	2	2	2	2
	2	0 - 6000	3	2	2	2	2
		> 6000	3	2	2	2	2
	3+	Any	4	2	2	2	2
25	1	0 - 750	1	1	1	1	1
		751 - 1500	2	1	1	1	1
		1501 - 3000	2	1	1	1	1
		> 3000	3	2	2	2	2
	2	0 - 6000	3	2	2	2	2
		> 6000	3	2	2	2	2
	3+	Any	4	2	2	2	2
30	1	0 - 750	3	2	2	2	1
		751 - 1500	3	2	2	2	1
		1501 - 3000	3	2	2	2	1
		> 3000	3	2	2	2	2
	2	0 - 6000	3	2	2	2	2
		> 6000	4	3	2	2	2
	3+	Any	4	3	2	2	2
35	1	0 - 750	4	4	2	2	2
		751 - 1500	4	4	2	2	2
		1501 - 3000	4	4	2	2	2
		> 3000	4	4	2	2	2
	2	0 - 6000	4	4	2	2	2
		> 6000	4	4	2	2	2
	3+	Any	4	4	3	2	2
40	1	0 - 750	4	4	3	3	2
		751 - 1500	4	4	3	3	2
		1501 - 3000	4	4	3	3	2
		> 3000	4	4	3	3	2
	2	0 - 6000	4	4	3	3	2
		> 6000	4	4	3	3	2
	3+	Any	4	4	3	3	2
45	1	0 - 750	4	4	4	3	2
		751 - 1500	4	4	4	3	2
		1501 - 3000	4	4	4	3	2
		> 3000	4	4	4	3	2
	2	0 - 6000	4	4	4	3	2
		> 6000	4	4	4	3	2
	3+	Any	4	4	4	3	2

Speed Limit	Number of Thru Lanes per Direction	Volume	Mixed Traffic (no facility)	Conventional Bike Lane (5' or >)	Buffered Bike Lane (2' painted buffer and 7' total width)	Separated Bike Lane
20	1	0 -750	1	1	1	1
		751 - 1500	1	1	1	1
		1501 - 3000	2	1	1	1
		> 3000	2	2	2	2
	2	0 - 6000	3	2	2	2
		> 6000	3	3	2	2
	3+	Any	4	3	3	2
25	1	0 -750	2	2	1	1
		751 - 1500	2	2	1	1
		1501 - 3000	2	2	1	1
		> 3000	3	2	2	2
	2	0 - 6000	3	2	2	2
		> 6000	3	3	2	2
	3+	Any	4	3	3	2
30	1	0 -750	3	2	2	1
		751 - 1500	3	2	2	1
		1501 - 3000	3	2	2	1
		> 3000	3	2	2	2
	2	0 - 6000	3	3	2	2
		> 6000	4	3	3	2
	3+	Any	4	4	3	2
35	1	0 -750	4	4	3	2
		751 - 1500	4	4	3	2
		1501 - 3000	4	4	3	2
		> 3000	4	4	3	2
	2	0 - 6000	4	4	3	2
		> 6000	4	4	3	2
	3+	Any	4	4	4	2
40	1	0 -750	4	4	4	2
		751 - 1500	4	4	4	2
		1501 - 3000	4	4	4	2
		> 3000	4	4	4	2
	2	0 - 6000	4	4	4	2
		> 6000	4	4	4	2
	3+	Any	4	4	4	2
45	1	0 -750	4	4	4	2
		751 - 1500	4	4	4	2
		1501 - 3000	4	4	4	2
		> 3000	4	4	4	2
	2	0 - 6000	4	4	4	2
		> 6000	4	4	4	2
	3+	Any	4	4	4	2