



Community Development

125 NW Chehalis Avenue
Chehalis WA 98532

October 7, 2024

Merrlawski Investments LLC (sent electronically)
Chris Merritt
PO Box 562
Packwood, WA 98361
chris@olyeng.com

RE: Review 2 - Long Plat (Full Subdivision) Application – LP24-00001 – “Riverside”

Thank you for submitting your response document on July 30, 2024. The internal reviewers and Lewis County Fire District #10 have reviewed your submittal and determined the re-design is not needed for the road configuration. The requirement to access Cannon Road and the requirement to construct the Riverside Drive to County Public Road Standards has also been removed as proposed conditions.

The term “fire flow” has been modified to “fire suppression” as part of the Group B Water System design review. Public Health has coordinated their responses within the September 25, 2025 Group B Water System design review letter with the Lewis County Fire Marshal and the Fire Chief for Lewis County Fire District #10.

The remaining initial review comments, Review 2 comments, and comments from Ecology will be identified as proposed conditions of preliminary plat approval that will be included in the staff report to the hearing examiner. I will be scheduling a public hearing with the County’s Hearing Examiner, preparing the public hearing notice and preparing the staff report.

Sincerely,

Karen Witherspoon

Karen Witherspoon, AICP
Senior Project Planner

CC: Bracy Thomas Land Surveyors (sent electronically)

Enclosure: Review 2 internal comments (11 pages)



Long Plat Initial & Review 2 - Internal Review Comments

File Number: LP24-00001

Date Printed: October 4, 2024
(updated to include Review 2 comments in red italic and underline for new text and red italic and strikeout for deleted text)

Access Review:

- Add road #373371 to Crescent Drive, to be shown as "Crescent Drive #373371" on map face. Add road #73430 to Riverside Drive to be shown as "Riverside Drive #73430" on map face. Add the road file number to Silver Tip Lane on the map face.

Survey Review:

- Label the land division type and the associated file number on the face of the map in all standard locations (Riverside Subdivision LP24-00001).
- This parcel does not appear to be located in the noted Section 2, please verify. This is noted in the Auditor's index both pages and in the original legal description. Please correct all locations of the drawing.
- Move the dimensions along the Northerly line of lot 1 for clarity.
- All individual lot corners will need to be set per LCC 16.05.250
- Please verify that all the written data per LCC 16.05.240(2) is on the face of the map.
- Land division survey map requirements state that original and proposed legal descriptions are to be listed on the face of the map.

Traffic Review:

- Traffic under the threshold to require a TIA.

Building Official/ Fire Marshal Review:

- Fire suppression storage tank and Fire Department Connection (FDC) required for FD#10.
- Each lot shall have approved parcel and address

- Each lot shall have approved water and septic
- *Review 2 Comments: {DELETE} The main access point for the subdivision should be off Cannon Road to avoid the floodplain per LCC 15.35.320 (1). Secondary access could be off Riverside Drive.*
- Gates located on the private road will need to meet the minimum requirements of LCC Section 12.60.270.
- Knox Boxes keyed per Lewis County Fire District #10's specifications are required at each gate.
- The location of the private road gates shall be shown on the final plat drawing.
- The proposed lots shall show buildable area and the required setbacks for each lot on the final plat drawing
- Private/Public Roads within the proposed plat shall be named and included in the lot addresses. Proposed road names are required to be reviewed and approved before usage
- Access shall be constructed to Lewis County road standards, Road review/Stormwater and Fill and Grade permits required.
- The property is located in a SFHA, all future development and buildings shall obtain floodplain development permits and have their own Pre and Post Elevation certificate. Base flood evaluations for each lot are required to be shown on the final plat drawing.
- *Review 2 comments: Portions of the proposed access are located in a SFHA, the flooding looks like it would be shallow during an event per the current adopted FIRM. Access shall be elevated to or above the Base Flood Elevation (BFE).*
- *Review 2 comments: I am ok with this proposal only utilizing Riverside Drive for the access point, as access to Cannon Road would be difficult due to steep grades.*

Road/Utilities Review:

- See attached County Engineer's Final Report dated July 16, 2024

Stormwater Review:

- Road construction will require stormwater review application and engineered plans per LCC 15.45. See additional requirements in County Engineer's Final Report dated July 16, 2024.

County Engineer's Review:

- See attached County Engineer's Final Report dated July 16, 2024
- *Review 2 Comments: In rereviewing the code, I retract my previous requirement to upgrade Riverside Drive to "current county road standards..." While these are the standards we use internally for county roads, they are not what is defined in the code. The remainder of the comment stands.*
- *Review 2 Comments: The land division survey map requirements include: "The location of existing structures, fences, buildings and improvements." The road and culverts are not shown, and there is no reference to them or other approved permits associated with them in the application. My comments stand as is.*

Public Health & Social Services – Water Review:

- The project will be served by a drilled well, ID# BPH997. The well site location was initially approved as WS23-00049. The proposed Group B Water System Design documents were submitted as WA24-00002 for initial review on April 10, 2024. Submittals include a draft SCA covenant and preliminary plat map showing the well's SCA. *These submittals are sufficient for preliminary approval.*
- Prior to Final Approval, the proposed Group B Water Supply that will serve Lots 1 through 9 must be designed and constructed consistent with LCC 8.55 and must be approved by Lewis County Public Health & Social Services. Final construction must be certified by the design engineer and all conditions of approval completed including but not limited to installation of all system components; water lines to all properties, establishment of easements, installation of service meters, ongoing management by an approved Satellite Management Agency, and any well/pumphouse improvements under LCC 8.55.
- Prior to Final Approval, the proposed Group B Water Supply must be designed to provide fire flow and a backup generator as requested by LCFD10 and consistent with the water system design criteria of LCC 8.55.
- Prior to Final Approval, Signed Water Availability Notices must be submitted for Lots 1 through 9, from the approved Group B water supply indicating the system is in substantial compliance with LCC 8.55 and is adequate/approved to serve each connection.
- The following statement shall be shown as a Condition of Development on the face of the plat: "Per LCC 8.40.310 Lots 1 thru 9 shall be provided water from the approved public water supply designed and constructed to serve LP24-00001 Riverside."
- All Sanitary Control Area Covenants must be shown on the Final Plat drawing and the Auditor File Numbers referenced accordingly on the Final Plat drawing.
- *Review 2 comments: See response memo dated August 15, 2024, and Group B Water System Review letter dated September 25, 2024 which was completed in coordination with FD#10 and the County Fire Marshal.*

Public Health & Social Services – Onsite Septic Review:

- All lots will require engineered/designed on-site septic systems. Notes shall be included as conditions of development.
- The septic soil perk holes/ test pit locations from the Soil Evaluations shall be shown on the final plat drawing.
- Lot sizes are ok with an approved water system



Lewis County Department of Public Works

Josh S. Metcalf, PE, Director

Geoff Soderquist, PE, County Engineer

MEMORANDUM

Date: July 16, 2024
To: Lewis County Community Development
From: Geoff Soderquist, PE, County Engineer
Subject: LP24-00001 Riverside LCC 16.05.090 Review

a) Required Improvements:

The existing County Road, Riverside Drive, to the point where it connects with the new private road, will need to be improved to meet current county road standards of two 11' wide paved lanes with 1' paved shoulders. The section shall consist of 0.4' of HMA class 3/8" PG 58H-22 over 0.3' of crushed surfacing top course over 1.0' of crushed surfacing base course. Proposed private road will need to be designed in accordance with LCC 12.60 private roads serving 5-10 lots. To maintain the characteristics defined in LCC 12.60.270(1) of "allow[ing] more control, security, and sense of identity when public roads are not needed for public circulation," this shall be a gated private development. The gate shall be located beyond the County ROW and meet the requirements of LCC 12.60.670

b) Required Easements:

Private road easements appear to be sufficient width, in accordance with LCC 12.60. In accordance with LCC 12.60.270, the following statement needs to be added to the face of the plat:

WARNING: Lewis County has no responsibility to build, improve, maintain, or otherwise service the private roads contained within or providing access to the property described in this plat.

- c) Effects of subdivision development on drainage in the general area:

Stormwater will need to be addressed in accordance with LCC 15.45 for the onsite improvements and the improvements to Riverside Drive. An unpermitted road appears to have been constructed on site beyond the limits of approved road approach, RA23-00367, that has disturbed existing drainage patterns and redirected stormwater onto County ROW. This will need to be addressed by restoring the pre-existing flow paths.

- d) Effects of the proposed subdivision on other public improvements under the jurisdiction of the county engineer/public works division:

There is no concern regarding effects to public improvements under the jurisdiction of the county engineer. Applicant will need a modification of existing approach permit based on the proposed land division.

- e) Accuracy of the technical information submitted:

The county surveyor will provide comments regarding the accuracy of the technical information.

- f) Adequacy of lot arrangement and dimensions for providing driveway access to buildings on such lots from an approved street:

Lot arrangement and dimensions appear to be sufficient.

- g) Adequacy of any proposed public and private roadways:

See item "a" for required improvements.

- h) Adequacy of transit stops, parks and recreation, playgrounds, schools and school grounds and all other relevant facts, including sidewalks and other planning features that assure safe walking conditions for students who only walk to and from school.

Not applicable since there are no schools within walking distance of the proposed site.



MEMO

Date: August 15, 2024

To: Lewis County Community Development

From: Jeff Landrum, RS, LG, Public Health & Social Services - Water

RE: LP24-00001 Riverside LCC 16.05.090 Review

Domestic water supply requirements under LCC 16.05.090 (3)(b) were provided in the Long Plat Initial Internal Review Comments, LP24-00001, dated July 18, 2024. Those comments included a water system requirement of fire suppression capabilities and a back-up generator. Both are required for final approval of the domestic water supply to guarantee fire suppression response per the review comments of Lewis County Fire District #10.

An initial Group B Public Water System design was submitted on April 8, 2024. Following the Fire District's requirements for fire suppression response, a revised Group B water system design was submitted on June 20, 2024 addressing these requirements. Full Group B Water system design approval is pending a complete review of this design under LCC 8.55.110, however, we can provide limited comments on the fire flow and back up generator requirements at this time.

The applicant submitted a letter to Lewis County Community Development on July 29, 2024, requesting that 1) Lewis County remove the term "fire flow" from the water system requirements; and 2) to remove the back-up generator requirement. We do not think either of these variances are appropriate for this project. We will address them individually below.

- 1) In terms of the water system, "fire flow" is a functional term with specific implication for water system design criteria. In this case, fire flow conditions are defined as required by the local fire protection authority as filling a tender truck. The design indicates a 2.5-inch port from a 2,000 gallon reservoir located within the pumphouse with a back-up generator. Fire flow

does not specifically mean hydrants or sprinklers are required in the system. The definition of “fire flow” as it relates to Group B Water Systems can be found in *LCC8.55.040 (47)*:

“Fire flow” means the maximum rate and duration of water flow needed to suppress a fire under WAC [246-293-640](#) or as required under local fire protection authority standards.

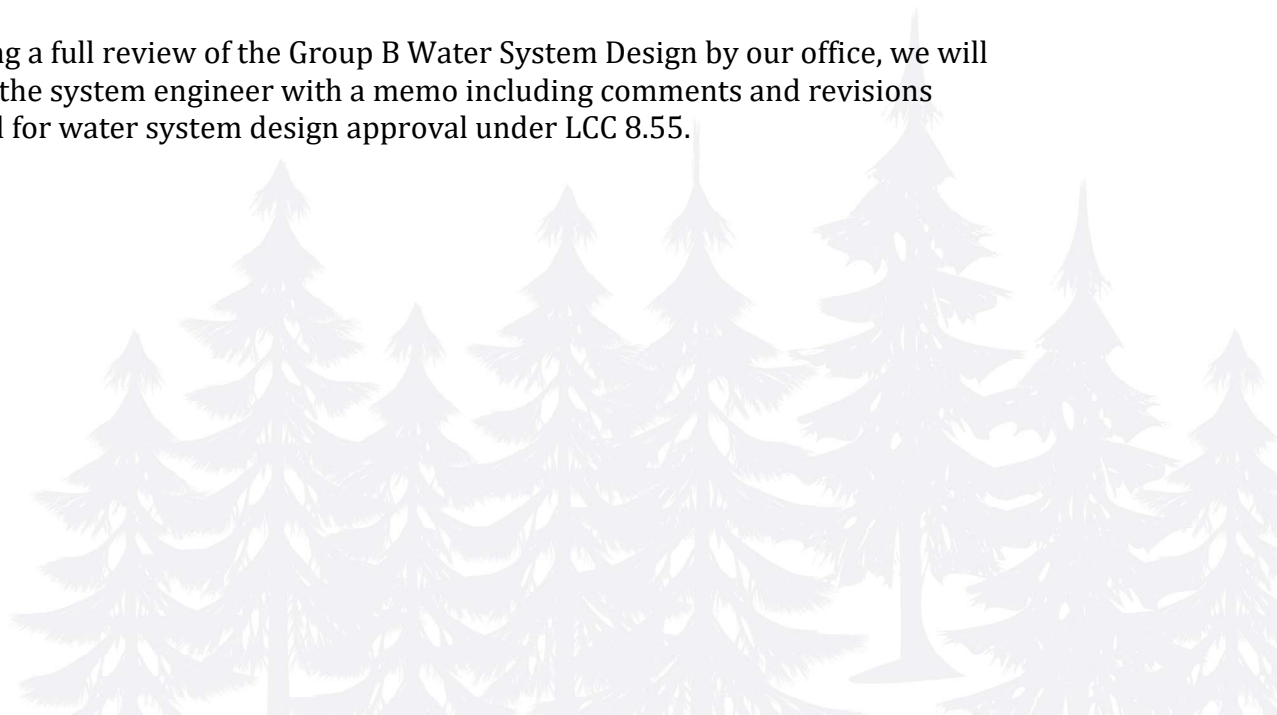
The distribution system must be able to maintain at least 20 psi pressure under “fire flow” conditions during maximum water demand periods. The purpose is to prevent introduction of contaminants into the water system during low pressure events. This requirement has important health implications for the water system design. See *LCC8.55.150(8)*:

“If fire flow is provided, the distribution system must be designed to provide the MDD for the entire Group B water system and the required fire flow at a pressure of at least 20 psi (140 kPa) at all points throughout the distribution system when the designed volume of fire suppression and equalizing storage has been depleted.

Fire flow/suppression capabilities of a water system are also considered in LCC8.55 in reference to hydraulic analysis, recorded notices to future property owners, as well as minimum flow design standards, as previously stated. We support the use of the term fire flow in defining the conditions for this proposed water system.

- 2) A back-up generator transfer switch is a requirement for all residential Group B systems, as described in LCC 8.55.150 design standards. The inclusion of a back-up generator in the pumphouse to aid in filling tender trucks was specifically requested by Fire District #10. We see no reason to provide for a variance from Fire District #10’s requirement of specific water system equipment needed to provide appropriate fire suppression response.

Following a full review of the Group B Water System Design by our office, we will provide the system engineer with a memo including comments and revisions required for water system design approval under LCC 8.55.





Robert Balmelli PE
PO Box 923
Chehalis, WA 98532

Re: Riverside Group B Water System
Initial Review - Engineering Documents WA24-00002 September 25, 2024

Dear Mr. Balmelli

Thank you for providing revisions to the Group B Project Application and Water System Plan (RBE No. 23092; June 2024). The water system will serve nine single-family dwelling connections in a proposed nine-lot residential development (LP24-00001).

I have reviewed your submittal and have the following comments.

Chapter 1.

1. Checklist: Water Right Permit is addressed in the proposal as a permit exempt source under RCW 90.040.55 and should be marked as addressed in the Checklist.
2. Checklist: Booster pump design may need to be included (see Item 6).

Chapter 2.

3. Owner and Designer Certification: Final submittal will require signatures per LCC8.55.100(2)(f).

Chapter 3.

4. Project is WA24-00002. Please update.

Chapter 4.

5. The proposed water system will provide limited fire suppression capacity to fill a tender truck per request of the local fire district, Lewis County Fire District #10 (LCFD#10). The proposed design includes several of the required elements but needs revisions to meet public health and system reliability requirements. The following is a list of system needs consistent with Lewis County Code 8.55 and the requests from LCFD#10.

- The storage reservoir will contain stagnant, non-potable water and must be isolated from the potable water system. Please work with a cross-connection control specialist (CCCS) to determine and design appropriate backflow prevention measures (e.g. air gap and DCVA, RPPBA, etc).
- The system will include a 2.5-inch exterior, above-ground, self-flushing hydrant. LCFD#10 requests that the hydrant must be fully operable from outside of the pump house. Hydrant must be marked with permanent “non-potable” signage.
- The system design lacks pressurized tender filling capabilities. As designed, the system would be filling by gravity using only the head differential between the tender and the reservoir. The tenders have drafting pumps rated at 1500 gallons per minute (gpm). Drafting at this rate would critically damage the water system piping. Please ensure the system includes equipment (e.g. booster pump system) to allow pressurized output from the reservoir. Please note that the storage tank air vent needs to be large enough to compensate for drafting rate.
- System design lacks appurtenances to allow automatic storage tank refilling (well pump float switch controls in the reservoir). Please include an automatic tank re-filling system in the design. LCFD#10 recommends a re-fill rate consistent with proposed well pump’s capacity.
- The system lacks a backup generator in the pumphouse. System design must include a generator with suitable output to power both the well pump and the fire flow booster pump during a power outage.

Please note, the distribution system design must provide a pressure of at least 20 psi (140 kPa) at all points throughout the distribution system while the reservoir storage is refilling, LCC8.55.150(8).

Chapter 6.

6. Pump specification listed in Section 6.3 indicate 1.5 HP pump. Hydraulic analysis and pump curve suggest the 2 HP pump (P35S20) has been selected. Please clarify.
7. Bladder and reservoir tanks: Hydrant will require booster pump pressure. Please provide specification for booster pump protection bladder tanks, if applicable.
8. Backflow: The fire suppression storage reservoir water will become stagnant over time and must be isolated from the water system by approved backflow prevention as specified by a CCCS. Stagnant water in a reservoir is considered non-potable.

Chapter 9.

9. Please include inspection of the hydrant assembly, exercising valves, testing booster pump, and annual backflow assembly testing (if present) in the Operations and Maintenance section.

Appendix A

10. WFI – Line 23 should indicate current source capacity in gallons per minute (gpm) available to enter distribution system under operating conditions (i.e. design capacity of installed pump). See [WSDOH pub 331-621](#).

Appendix B. Notice to Titles on Future Properties Served (NTFPS)

11. Design is to be reviewed and approved under Lewis County Code 8.55, not under WAC 246-291. Please revise per [LCC8.55.130\(2\)\(c\)](#).
12. Please include current address or contact information of system owner per [LCC8.55.130\(2\)\(b\)](#).
13. The parcel number will change following recording of the subdivision. Please include the parent tax parcel number as well as an indicator for each of the nine proposed lots, such as:
 1. “TPN 035067002003 (Lot 1 of LP24-00001)”,
 2. “TPN 035067002003 (Lot 2 of LP24-00001)”,...
14. Total irrigation square footage is based on the permit exempt limit of ½ acre for the entire project. This is 2,420 sq ft per dwelling (21,780 sq ft divided by 9 dwellings), please revise. In addition, each dwelling’s domestic water use will be limited to 555 gallons per day.
15. The water system is designed to include some fire suppression capacity. Recommend revising this point to: (this system) “Is designed and constructed to provide *limited* fire suppression” and specify details of system with respect to function and capacity for fire suppression.
16. The NTFPS indicates that public notifications will be given by phone or email. As such, the SMA will be required to maintain current contact information records for each parcel owner and/or current renter of the development. It is recommended instead to physically post the doors of each residence. Otherwise, short-term or long-term renters may not become aware of any health issues impacting the water system.

Appendix B: SMA contract

17. SMA contract: Final submittal will require a signed and executed contract. If a backflow assembly is included in the design, system owner or SMA must also submit a draft contract for annual testing by a certified BAT.

Appendix C: Equipment Specification:

18. Pressure tank fittings: proposed Watts Poppet Type (LF3L) Pressure Relief Valves (PRV) is not ASME Section VIII rated (is ASME Section IV). Please revise the fittings to include a drain and adequately sized ASME approved, UV Stamped, Section VIII cold water rated pressure relief valves installed between the pressure tanks and the (recommended) tank shut-off valves.
19. Please provide confirming documentation that all potable water system fittings and components are ANSI/NSF 372 “lead-free” and/or ANSI/NSF 61 certified for potable water (see [LCC 8.55.160\(1\).\(2\)](#)). For example, many of the pages in the Campbell catalog indicate ANSI/NSF 61 or lead-free, but not all of them do. Some

valve models have an "LF" suffix (lead-free) not indicated on the cut sheet provided.

[campbell-product-catalog.pdf \(bakerwatersystems.com\)](http://campbell-product-catalog.pdf(bakerwatersystems.com)).

Appendix D:Hydraulic Analysis

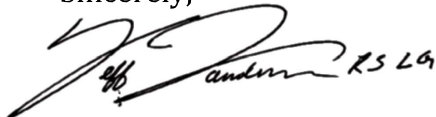
20. Does the head loss calculation account for the section of pipe between the wellhead and the pumphouse (360-lf 2" PVC)? If not, please include it. The additional head loss may decrease capacity of selected pump to below PHD (41 gpm).

Water System Plans

21. Sheet 1: Please include Well Tag ID# and AFN of recorded water system covenant and easements on final plan.
22. Sheet 2: Include permanent "non-potable" signage on hydrant (Item 10).
23. Sheet 3, well profile: Include 5-inch screen from 74'-79' (see well log for details).
24. Please note, the pumphouse floor must be 2-ft above 100-yr flood elevation.
25. Include a note for lock on pump house and that Satellite Management Agency shall be provided a key.
26. See fire suppression system specification in Item 6.
27. Check the pressure switch specifications (Construction Notes: 4). A VFD pump may require a different pressure sensor configuration and control.
28. Please ensure the selected spigots is lead-free (LF) and/or ANSI/ NSF 61, see Construction Notes 19.
29. Construction Notes 29- the gate valve to fire suppression storage tank is not operable from outside pumphouse and may not provide sufficient cross-connection control between the potable and non-potable system.

Certification of Construction must confirm well completion per WAC 173-160. All materials in substantial contact with potable water shall conform to the ANSI/NSF Standard 61. The plans will be reviewed again upon receipt of responses to Items 1 thru 29.

Sincerely,

Handwritten signature of Jeff Landrum in black ink, with the initials 'JL' and 'RS LG' written below it.

Jeff Landrum RS LG
Environmental Health Specialist, Water Program
2025 NE Kresky Ave. Chehalis, WA 98532

CC: Tri-County Water, 1286 Northwest Maryland, Chehalis, WA 98532