



To: Mike Reid, Rio Vista, LLC

From: Lara Thomas, Planning Department
Boyd Benson, Public Works

Date: August 7, 2015

Re: Rio Vista Review (received on June 16, 2015; determined complete on July 8, 2015)

The City of Duvall reviewed the preliminary plat (SU15-001) for the proposed Rio Vista Development. Comments, questions, and corrections are summarized below and within the attached review letters. As of today, the regulatory clock stops and will recommence upon complete submittal of all items requested below.

Master Permit Application

1. The plan set proposes 68 lots, the Master Permit Application and SEPA state 69, and the Preliminary Long Subdivision checklist states 67. Please reconcile. (Cross reference review comments #15 and #18.)
2. Note: the Comprehensive Plan designation for the properties is R12, but this response was missing on the application; staff has included this information on the application.
3. Note: the project parcel numbers on the application are misidentified; staff has made the necessary changes.
4. Per the Master Permit Application submittal checklist, please submit an owner's notarized authorization of application for Stephen and Rebecca Thomas, owners of parcel 732580-0180. This information was missing from the original submittal.
5. Carolyn and Gary Willett, owners of parcel 732580-0150, were notarized as "applicants" rather "owners." Please resubmit a notarized form indicating their status as owners.
6. Per the Master Permit Application Checklist, owners' phone numbers must be included on the application. Please provide current telephone contact information for each owner.
7. Please provide a full certificate of title, dated within three months of application, in lieu of the abridged subdivision guarantee submitted with the application. Note that the "Names of

Assured” (Schedule A, #1) does not correspond to Master Permit Application owners/properties or King County Assessor’s Records owners/properties. (Lot 15 is omitted from reference and other property ownership is therefore misassigned.)

8. Per the Master Permit Application Checklist, please provide a legal description of the subject property (preferred location is on Sheet 1 of 18 of the plan set).

SEPA Checklist

9. Page 9, Item 8.b.: Agency comments have been added. The site has recently been used as residential property, not as working farmlands or working forest lands. (Vista Ranchettes, a residential plat, was recorded in 1968.) The proposal will not cause farmland or commercial forest land of long-term commercial significance to be converted to other uses.
10. Page 10, Item 8.1.f.: The current comprehensive plan designation is identified as “Mixed Use,” but the actual designation is R12. The correction has been made.
11. Page 10, Item 8.1.h.: Agency comment has been added to the margin for clarification. The site contains two mapped wetlands, “classified as a critical area by the city.”
12. Page 13, Item 14 f.: No response provided. Please provide the necessary information.
13. Per review comment #25.m., verify that the reported number of parking spaces is accurate.
14. Page 7, Item 5.C.: Add that the site is located within the Pacific Flyway.
15. Page 3, Item 11.: The response overreports the proposed number of lots as 69. Please correct. (Cross reference review comment #1 and #18.)

Preliminary Long Subdivision Checklist

16. The applicant address differs from that on the Master Permit Application and plan set. Please reconcile.
17. Street designations for the project address (general location) are incorrect. Please correct.
18. The description of proposal underreports the proposed number of lots as 67. Please correct. (Cross reference review comment #1 and #15.)
19. Question A.2.: Please explain how the project addresses the criterion, such as providing specificity regarding types, location, dimensions, construction materials, or other information demonstrating convenience and connectivity of proposed infrastructure.
20. Questions A.3. and A.4.: Address how the proposal can meet DMC 14.34.020(B)(3) and (4) for building types, assorted floor plans, elevations, and façade designs that complement the village character of Duvall. For reference, review DMC 14.34.060.

21. Question A.4.: Please specifically address how the project conforms to each of the principals listed, to include landscaping, usable open space and common amenities, screening, environmental mitigation, utilities and drainage. You may cross-reference code sections DMC 14.14, 14.38, 14.42, etc. If relief from street tree spacing standards is proposed (DMC 14.38.120), please provide specific information regarding location, justification (driveway, utility, sight lines, etc.), and degree of requested relief, and describe how the resulting proposal conforms to the principle outlined. If relief from other standards is proposed, please specifically address.

Planning Departures

22. Please submit a planning departure request for all retaining walls in excess of four feet per DMC 14.34.030(B)(2) in accordance with 14.34.010(E), or revise plans as necessary.
23. Submit a planning departure request to reduce landscape strip per comment 43.c. (and/or any other proposed reductions to required landscaping).

Engineering Departures

24. Please submit an administrative Engineering Variance request in order to exceed four units at Access Tracts A and B, as allowed with approval. (See Public Works Development Design Standards (PWDDS) Section 3-2.06E.7.) Staff supports this departure provided on-street parking is provided along 272nd St. SE from NE 143rd Pl. to the south limits of the property to satisfy Tract A parking requirements as summarized in 3-2.06E.8.a.

Preliminary Long Subdivision – Plan Set and Code Compliance

25. It appears that the plat on “Cover Sheet” 1 of 18 is intended to be the preliminary plat. Please provide a separate sheet in the plan set for the preliminary plat configuration with a corresponding legend, drawn to legible scale, and include the following:
- a. The legal description of the site to be subdivided.
 - b. Horizontal and vertical datum.
 - c. Number designation for each proposed lot.
 - d. Required 25’ R4 BSBL applicable to all lots adjacent to 272nd Pl. NE, per DMC 14.14.050(A).
 - e. Distinct building envelope for each proposed lot, per submittal checklist #4 and DMC 14.66.050(C)(5), in accordance with appropriate setback per DMC 14.64.
 - f. Demonstration or note that building envelope setback and dwelling unit size will be varied, per DMC 14.34.050(A)(3)(a).
 - g. Calculation demonstrating that 10% of net developable area has been allocated for common open space, per DMC 14.34.050(A)(5)(b)(ii) and DMC 14.64.240.
 - h. Proposed access/driveway to each garage, or clear demonstration that the required 20’ garage setback is met ((DMC 14.34.050(A)(6)(a)(i)).
 - i. Demonstration that all proposed lots access from the internal road network, per DMC 14.14.050(B).
 - j. Table or other method for illustrating the lot size of each proposed lot. Note that per DMC 14.34.050(A)(3)(a), lot size shall be varied.
 - k. Calculations demonstrating that the 2,500 square foot minimum lot size average for detached units is met (DMC Table 14.14.060.A).

- l. Calculations demonstrating that the 20% minimum attached versus detached dwelling unit ratio is met (DMC Table 14.14.060.A).
 - m. Number designation for each street parking stall (note: the SEPA checklist indicates that 94 are provided; if this number changes, please correct Item 14.c. of the SEPA checklist).
 - n. Please remove unnecessary information from the preliminary plat that detracts from readability (including some sewer, water and drainage layers, elements on plat that are not depicted in legend and vice versa, etc.), and ensure that all other information provided is legible. (For example, along the north property line a utility easement note is obstructed by a landscape buffer note).
26. Ensure consistency between all plans. (For example, an “8’ max” lock and load wall is shown along the north property line on Sheet L1.0, but is not reflected elsewhere in the grading, road and storm drainage plan; access for lots 13-21 and 63-68 is taken from NE 143rd Pl. on plan set Sheet 1 of 18, but is appropriately taken internally on L1.0, etc.)
27. Per the development agreement associated with this project, a portion of the site will be developed and preserved as a park. Remove the area dedicated to the park from the site area and density calculations on all submittal materials, and show calculations. Note that per DMC 14.14.060(A.), a minimum density of 8 dwelling units per gross usable acre, and a maximum density of 12 units per gross usable acre is required. Please demonstrate the proposal meets these requirements in your calculations.
28. Please record the development agreement associated with this project prior to project resubmittal.
29. It appears that the existing lots are served by on-site sewage systems. Note: Prior to construction, the systems shall be decommissioned and abandoned in accordance with Washington State Department of Health Rules and Regulations WAC 246-272A and King County Code Chapter 13.04.054.

Landscape/Tree Retention Plan

30. Sheet L1.0, L1.2, L1.3: Please connect property pins along 272nd Pl. NE with a clearly defined property line.
31. Please show all landscaping required per DMC 14.38.090 and .100 on the plans. At a minimum, show required buffer types and locations (specific shrub, groundcover types, sizes not required at this time).
32. Show calculations that the minimum 25% landscaping requirement (excluding sensitive areas and buffers) for the R12 zone has been met, per DMC 14.38.060.
33. Per DMC 14.38.050, native vegetation shall be preserved to the extent possible. It appears that some trees located along 272nd Pl. NE and throughout the site are proposed for removal, but could be retained without impacting the layout. Please address. Note that per DMC 14.34.050(A)(3)(d), structures and parking areas may encroach into required setbacks if it can be shown that such an encroachment allows significant or landmark trees to be retained.

34. Sheet L1.0 indicates that a total of 462 significant trees exist on the site, but the “Existing Tree List” on Sheet L1.1 includes only 449 trees. Per DMC 14.40.040(A)(2), show calculations for existing number of trees and reconcile with L1.0.
35. Similarly, Sheet L1.0 indicates that “Actual Retained Significant Trees” will be 46, but Sheet L1.1 includes only 45 proposed for retention, and only 20 of these are significant. (Per DMC 14.40.020(C), a significant tree is a tree that measures a minimum of 16” in diameter at breast height.) Please reconcile and show calculations.
36. Provide a minimum of one street tree for each lot (on the lot or in the landscape strip, as required), per DMC 14.38.120(H).
37. Per DMC 14.40.040(A), the following calculations are also required: average number of trees per acre and the number of hazard, dead or dying trees.
38. Show calculations demonstrating compliance with DMC 14.40.050(B).
39. Per DMC 14.40.040(A)(1), trees on adjacent properties that have a dripline extending on to the property under application shall be identified. Please identify all such trees.
40. Per DMC 14.40.080(A)(1), all minimum required tree protection measures shall be shown on the tree plan and the site grading plan.
41. Deciduous street trees are required along all public streets at a minimum of 25’ to a maximum of 40’ on center, per DMC 14.38.120. Propose additional plantings, as necessary, to meet this requirement. Note: if the average spacing must be adjusted to allow for utilities and other interruptions in the planting area, submit a planning departure request and supplement the response to question #4 on the Preliminary Plat Checklist with specific information regarding location, justification (driveway, utility, sight lines, etc.), and degree of requested relief from this standard.
42. Minimum tree protection measures are required to be shown on the tree plan and the site grading plan, per DMC 14.40.080(1). Please incorporate into plan sets.
43. Construction activities are prohibited within root protection zones (measured 5’ outside of dripline) of protected trees, unless it can be demonstrated by arborist evaluation that the long-term viability of such trees is not affected (DMC 14.40.080(A). Ensure grading plans reflect this requirement.
44. Per DMC 14.40.070(E), please ensure, to the extent possible, that replacement trees are native species.

Preliminary Public Works Plan Review

45. Sheet 1 of 18:

- a. An approved supervised Automatic Sprinkler System is required in all multi-family units with three or more attached units, and/or greater than 5,000 square feet, and or where any portion of the structure is greater than 150 feet from Fire Department accessible right-of-way. (Based on preliminary review, Lots 1, 2, 5, 6, 36, 37, 38 and any multi-family units with three or more attached units, and/or greater than 5,000 square feet.)
- b. Open Space Tract R and the west vault access tract locations shall be revised to be adjacent and provide equal or equivalent additive frontage length.
- c. Frontage Improvements including parking, sidewalk, and landscaping shall extend along 272nd Pl. NE from NE 143rd Pl. to the south limits of the property. The landscape strip may be omitted south of NE 142nd Court intersection to minimize wetland buffer impacts.
- d. Frontage Improvements shall be installed along 272nd Pl. NE from NE 143rd Pl. to the north limits of the property in accordance with City standards.

46. Sheets 2, 3, and 4 of 18:

- a. For clarity provide a separate site plan showing the proposed road layout. There is too much information shown on Sheet 2 and the presentation is unclear. On the site plan label the pavements widths, right-of-way width, and the dimensions of the radii at the intersections.
- b. Add flow arrows to the storm water piping.
- c. Provide a vault volume summary table for each detention vault with detention volume required and detention volume provided.
- d. Remove the “BASIC” callout boxes from the plans.
- e. Show the water and sewer pipes shaded in the background for reference.
- f. Add a note to each of these sheets that the existing overhead power will need to be placed underground.
- g. The East Vault top of live storage elevation is higher than adjacent pipe systems and roadway. The East Vault top of live storage elevation shall be revised to remove all pipe surcharge at the inlet and outlet system.
- h. On the west vault, lower the lid elevation to reduce required wetland buffer grading.
- i. Catch basin location shall be revised to prevent ponding at curb extensions and elsewhere. Consider full road- super-elevation (as opposed to standard crown) to minimize catch basin and conveyance pipe. The west end of the storm system along NE 143rd Pl. shall terminate at a curb-line catch basin with outfall stub to accommodate future connection to the west.
- j. Delete side (wing) ramps at ADA ramp locations within landscaped areas and replace with lateral vertical curb. Minimize curb-extension length to maximize parking areas.
- k. A minimum full-width, 2-inch thick overlay is required along all road frontages and along the watermain extension to 144th St. NE in accordance with PWDDS Section 1-1.07 Plan Checklist (Roads). If, at the time of construction, the City determines the pavement is in good condition, the overlay may be reduced to a single lane.
- l. Road surfacing, base, and pavement type and thickness shall be in accordance with PWDDS 3-4.01 unless otherwise approved by the Public Works Department. Use of Asphalt Treated Base (ATB) is not allowed for permanent pavements.
- m. Joint Use Driveway Tracts D and F shall be constructed of Portland Cement Concrete (PCC).
- n. Private Access Tracts shall conform to PWDDS Section 3-2.06E. Full super-elevation or normal crown (no reverse crown) shall be required for Hot Mix Asphalt (HMA) pavements. All Private Access Tracts shall terminate at cast-in-place vertical PCC curb.

47. Sheets 5 through 10 of 18:
 - a. Label roadway vertical curves.
 - b. Add a note to the profiles that the storm drainage pipe shall be profile wall PVC in accordance with City of Duvall standards.
 - c. Catch basin inlet/outlet pipe(s) crowns elevations shall match (no drop structures allowed).
 - d. Note: storm drainage profiles will be verified at a later date following catch basin and conveyance revisions.

48. Sheets 11 through 13 of 18:
 - a. Add flow arrows to the sewer pipe.
 - b. Revise sewer and water main alignments to be within roadway (as opposed beneath sidewalks) unless there are no other feasible options.
 - c. Provide required Department of Health vertical and horizontal requirements between water and sewer mains.
 - d. Relocate Lot 34 through 38 sewer collection pipe to Tract E.
 - e. Relocate Lot 13 through 18 sewer collection pipes to Tract C and Road A.
 - f. Relocate Lot 27 water meter to edge of road ROW.
 - g. Delete in-line water main valve adjacent to Lot 24.
 - h. Provide 3 valves at water main “T” located at the Tract E/Road A intersection.
 - i. Revise fire hydrant locations to the following:
 - SW corner of 272nd/143rd (OK, leave as-is).
 - NE corner of Road A/143rd intersection.
 - SE corner of Road A/Tract E intersection.
 - NE corner of Road B (east leg) and 143rd.
 - j. Delete in-line valve on 450 main in 272nd P. NE (adjacent to Lot 26).
 - k. Delete 450 water main on 272nd Pl. NE south of NE 143rd Pl. Tract A shall be served with 555 pressure zone water main extending from the existing 272nd Pl. water main (“T” with three valves). Lots 9 through 12 may be served from the NE 143rd Pl. water main or a 555 zone main in Tract B.
 - l. Revise Tract A sewer main to delete SSMH 23.
 - m. Delete SSMH 31 drop structure (revise main from SSMH 14 to SSMH 31).
 - n. Note: sewer main profiles will be verified at a later date following revisions.

Preliminary Technical Information Report

49. Revised TIR shall address Low Impact Development BMP’s in accordance with KCSWDM requirements and the NPDES Technical Appendix 1 requirements. Specifically, address development requirements (Figure 3.3, page 10, triggers all Minimum Requirements, #1 to #9). For reference, see:
 - <http://www.ecy.wa.gov/programs/wq/stormwater/municipal/phaseIIww/5YR/2014mod/WWAphaseII-App1.pdf>).

50. Provide additional documentation that the proposed vault outfall systems supply required wetland recharge and are in the correct location to provide appropriate wetland recharge.

51. The City of Duvall has received drainage complaints from the property owner at 27011 NE 144th St. (flooding and poor drainage associated with the project wetland area to the south).

Provide additional documentation that demonstrates that vault discharge will not adversely impact downstream properties to the north. Currently, vault overflow will discharge north to an unimproved channel. Revise overflow location to an appropriate discharge location (likely storm conveyance along NE 143rd Pl.).

Preliminary Technical Information Report

52. Section 2:

- a. The report states that the final TIR will analyze the 25-yr storm event for compliance with conveyance regulations. Please note that the 100-yr event must also be analyzed to conform with KCSWDM 1.2.4.1 (See Item #2 under “Pipe System”)

53. Section 4:

- a. The basin areas provided in Table 4.1 do not appear to be consistent with Figure 4.1. Please clarify how the historic basin areas were derived.
- b. Please revise the orifice dimensions to standard diameters that can be reliably fabricated (e.g. nearest 1/16th inch).
- c. Please explain the purpose or need for the 50-ft rectangular weir calculation.
- d. The report includes spreadsheet calculations that appear to be a Manning’s pipe flow analysis. These are presumably intended to demonstrate sufficient conveyance capacity. This is allowable for the preliminary design, but a backwater analysis will be required at the final design stage.
- e. Please provide a pervious/impervious surface breakdown of basins “Offsite 1”, “Offsite 2”, “NE1”, “W1”, and “Bypass”. Clearly depict the increase in impervious areas within these basins as a result of any proposed frontage improvements.
- f. It appears that the land cover conditions were based on some general assumptions. This is acceptable for preliminary sizing, but accurate land cover calculations should be provided during the final design. This should include maximum allowable lot coverage and measured impervious right-of-way areas.

54. KCRTS Calculations:

- a. It would be helpful to have all of the KCRTS calculations combined in one section, rather than having portions imbedded in the text, and other portions in an appendix. The KCRTS calculations in the report are incomplete. Please provide the following:
 - i. Input parameters used to generate the flow frequencies.
 - ii. NE/SE Vault design calculations (including two-outlet reservoir definition.
 - iii. KCRTS Routing Instructions for the NE/SE vault design.

55. Demonstrate how the orifice discharge rates for the two-outlet reservoir were derived.

56. Demonstrate that OUTNE.TSF and OUTSE.TSF account for upstream flow-through and bypass flows.

57. KCRTS Calculations – The TARGNE.TSF basin specifies 0.62 acres of impervious surface. This is more than 100% of the area in the “W1” and “Bypass” basins. Please clarify how this was derived.

Tree Report

58. See attached letter from Terra Firma Consulting dated July 23, 2015.
59. “Significant” and “non-significant” trees are not categorized per DMC 14.40.020. Please clearly distinguish and revise landscape plans accordingly.
60. The report erroneously mixes health status with the issue of safety. These are two separate factors and should be distinguished as such. Additionally, trees may have been tagged for removal for safety, although they appear to be in good health without major defects (for example, #5715). Please address.
61. Because of the closed canopy of the dense forest in the northeast property, I would reconsider the viability (as in survivability post-development) of any trees with a “fair” health rating, both significant and non-significant trees. Any trees in “good” health but are on a nurse log or stump, have a bowed trunk or forked or multiple tops would also not be good candidates for retention.
62. Note: the recommended limits of disturbance are purely academic, as they are based solely on dripline. In the dense forest, this is a poor indicator of actual or critical root zone. A new determination of limits of disturbance must be made when actual improvements, construction or clearing is proposed.
63. Demonstration of how the proposal meets minimum tree retention requirements is missing. Show how the proposed tree retention meets the minimum requirements both inside and outside of the sensitive areas (DMC 14.40.050). Calculation of tree density (average trees per acre) must also be included.
64. Many of the tree tags are missing or illegible making it extremely difficult to reconcile in the field. Please reestablish clearly labeled tags on the significant trees to be retained. Additionally, the significance of red flagging tape affixed on several trees is unclear. Please address.
65. A separate site survey for each parcel is requested, especially for the northeast and south parcels. Furthermore, please provide a better visual indicator of each significant tree’s health. (For example, a dark symbol for “good” or “better” and a faded symbol for fair, dead, dying, hazard. For non-significant trees that are good candidates to consider for retention, they could have circles around their symbols.)
66. Please provide an overlay with the proposed lots, setbacks, and improvements on the improved tree inventory to assist with the discussion of layout and tree retention opportunities.

Sensitive Areas Study

67. See attached letter from ESA dated August 7, 2015.

68. Per ESA's October 18, 2013 review letter, the wetland delineation performed in June, 2007 is out-of-date (the Corps of Engineers typically requires wetlands to be re-delineated after 5 years to confirm that boundaries have not changed). Please apply the information obtained by WRI during the wetland verification and re-flagging performed in 2013 to the sensitive areas study.
69. Wetland A Rating Form:
- a. H 1.2. – Response indicates three types of water regimes are present (2 points), yet only two boxes are checked. Please address;
 - b. H 2.2. – Response indicates that the wetland is part of a relatively undisturbed and unbroken vegetated corridor that is at least 25 acres in size. It appears that NE 143rd Pl. located immediately to the south, and other surrounding development isolates Wetland B from areas meeting this criterion, and that response H.2.2.3 (within 3 miles of large field or pasture) is more accurate. Please address.
 - c. Document and provide results of groundwater monitoring that was completed within Wetland A.
70. Wetland B Rating Form:
- a. D 1.3 – Investigation of the wetland area on the Toll Brothers Jones Wald property revealed organic soils (4 points). Soil conditions in Wetland B should be verified.
 - b. D 1.4 – Response indicates that area of seasonal ponding is $< \frac{1}{4}$ of the total wetland; previous investigation suggested that the area of seasonal ponding is between $\frac{1}{4}$ and $\frac{1}{2}$ of the wetland area. Areas of seasonal ponding should be re-assessed, or the Wetland B rating form response should be revised to provide consistency with previous City-reviewed documentation.
 - c. D 3.2 - Response indicates that depth of storage (marks of ponding) is less than 0.5 feet; previous investigation identified marks between 0.5 and 2 feet from bottom of the outlet. Depth of storage during wet periods should be re-assessed, or the Wetland B rating form response should be revised to provide consistency with previous City-reviewed documentation.
 - d. Consider implications for wetland classification, including allowed buffer reduction.
71. The wetland buffer widths are inconsistent between text and plan sheets. Please address.
72. Investigate the possibility of relocating the dispersion trenches away from Wetland A's boundary.
73. Consider placement of two dispersion trenches on the east side of Wetland A.
74. Document and evaluate restoration opportunity associated with existing stormwater ditches / conveyances within Wetland A, as mapped on project plans.
75. Account for the permanent buffer impact associated with the dispersion trenches and provide appropriate wetland and/or buffer mitigation.

76. Reduce the width of the trail to 4 feet and increase the associated buffer by 4 feet or more, as needed, to account for disturbance around Wetland A.
77. Investigate the feasibility of discharging clean stormwater to dispersion trenches, bioswales, or other east of and adjacent to Wetland B.
78. Ensure stormwater facilities and discharge locations meet the requirements of the King County Surface Water Design Manual.
79. Update sensitive area study and CMP to document and characterize impacts of the existing ditch and stormwater pipes within Wetland A (as indicated on the plan set) since it is currently unclear what impact the system may have on drainage functions. Any impairment should be incorporated into the overall mitigation approach for project impacts.
80. Proceed with development of a final wetland mitigation plan (accounting for recommendations detailed in review letter), consistent with requirements of DMC 14.42.240 and .250.
81. Miscalculations were noted in the performance bond estimate (quantity of one-gallons, etc.). Please re-assess the line item calculations and correct, as necessary.