

SUBSTANTIVE REVIEW COMMENTS
Green Cove Park, File No. 19-0330
August 8, 2019

Note: Please type your responses into the column title *Applicant Response* and include as much information needed to clearly respond to each comment. Please do not say “comment noted or acknowledged” without providing an explanation; doing so may delay resubmittal. Likewise, please avoid referring to the plans without a sheet number or explanation of how the plans were revised.

STAFF COMMENTS

APPLICANT RESPONSE

Provide detailed description of how staff comments are addressed and sheet/page numbers of plans and reports where changes have been made.

PLANNING - Comments prepared by Cari Hornbein, Senior Planner

Residential Development Standards – OMC 18.04

1. Maximum density calculations on sheet PP-C1 are based on total area less wetland buffers. Per OMC 18.04.080.A, maximum density is based on total site area, including associated and/or previously dedicated right-of-way, but not including critical areas and land to be dedicated or sold for public parks, schools, or similar non-residential uses. Please revise density calculations and update site statistics on PP-C1.

(Staff noted a discrepancy between total area based on County Assessor data and the total area noted on PP-C1 (53.66 vs. 52.28). Please verify the site area and if necessary, adjust density calculations.)

2. Minimum density calculations on sheet PP-C1 are based on total area less wetlands and wetland buffers. Per OMC 18.04.080.B, minimum density is based on total site area except critical areas and their associated buffers, stormwater tracts, tree tracts; existing, unopened street rights-of-way; and land to be sold or dedicated to the public in fee (e.g., school sites and public parks, but not street rights-of-way to be dedicated as part of the proposed development). Please revise density calculations and update site statistics.

3. Garage standards in OMC 18.04.060.EE apply to lots 5,000 square feet or less in size. These standards restrict the width of garage doors, which may be an issue on narrow lots. In order for staff to determine if lot widths are adequate, please provide typical building footprints and elevations demonstrating that these standards can be met at the time of construction.

Critical Areas Regulations – OMC 18.32

4. The Wetland and Fish and Wildlife Habitat Assessment (Assessment) was based upon interim critical area regulations that were superseded in May 2018. The report will need to be updated to address these requirements, including but not limited to:

a) OMC 18.32.114, Applicant Requirements, in particular:

- i. A description of the proposed stormwater management plan for the development and consideration of impacts to drainage alterations. This discussion will need to address impacts to offsite wetlands and streams (e.g., Green Cove Creek, Butler Creek) that will receive the project’s stormwater. At a minimum, address impacts to wetland hydroperiod and mud minnow.
- ii. Identification and characterization of off-site wetlands and buffers within 300 feet of the subject property (see OMC 18.32.500). Wetlands B, C, and potentially E extend off-site and will need to be delineated and accounted for in the rating for each wetland.
- iii. An assessment of cumulative impacts to critical areas resulting from development of the site and the proposed development. For example, the Parkside plat also proposes discharging stormwater into the same wetland as Green Cove Park; how will Green Cove’s stormwater impact wetland hydroperiod, as well as downstream impacts to fish habitat?
- iv. A description of how the project addresses mitigation sequencing pursuant to OMC 18.21.135.
- v. Plans for restoring/enhancing degraded wetland buffers (see next item). required per OMC 18.32.535 because some buffers are degraded). Mitigation standards in OMC 18.32.136 apply.

b) OMC 18.32.535.D, Wetland Buffers: Buffer widths in Table 32.1 presume the existence of a relatively intact native vegetation community in the buffer zone adequate to protect the wetland functions and values. If buffer conditions are inadequate, the buffer shall be planted with native trees to a density common to the buffer area, and an understory of native plants commonly found in riparian areas of Thurston County.

Wetland buffers have been heavily impacted by past activities on the site. Include a section in the Assessment that provides a detailed evaluation of buffer conditions and measures needed for their restoration, including but not limited to the removal of non-native vegetation, soil preparation, replanting, and monitoring/maintenance. A restoration plan prepared in accordance with OMC

<p>18.32.590 and the Washington State Department of Ecology mitigation guidance is required.</p>	
<p>5. Other revisions to the Wetland and Fish and Wildlife Habitat Assessment include:</p> <ul style="list-style-type: none"> a) Pages i-ii: The wetland consultant’s criticism of the Department of Ecology is not appropriate to include in the Assessment. Please revise the report to eliminate these references. Also see comments from the Department of Ecology regarding this matter. b) Page iii: list all maps and figures required in the rating sheets and provide page numbers. c) Page 3: Revise project description to include buffer restoration and description of construction sequencing. d) Page 6: The map referenced under section 4.3 is an exhibit from the City’s Comprehensive Plan and is not as accurate as the City’s GIS wetland layer. A copy of the map is attached for inclusion in the Assessment. e) Page 17, Section 6.1: Revise this section to reflect current regulations. f) Appendix B2, Topographic Map: Provide a more accurate topographic map, such as the one prepared by C.E.S. which shows better detail of the site’s terrain. g) Appendix C, Site Plan: Replace with current site layout. h) Appendix D, Wetland Determination Forms: Provide an exhibit showing the location of sampling points. i) Appendix E, Wetland Rating Forms: Make sure the date of site visits is included for each set of rating sheets and add figures numbers to Maps and Figures index. Also adjust formatting of the rating sheets so the page breaks above or below the row, not in the middle which makes it difficult to read. j) Include a section discussing how wetland hydrology will be maintained post construction. k) Make sure the Assessment shows the location of off-site critical areas such as streams and wetlands within 300 feet of the property, and off-site important habitat and species within 1000 feet of the property. For example, there are streams and wetlands to the west and south, and mud-minnow habitat is present in the Green Cove basin. 	

<p>6. Update the geotechnical report to comply with current critical area regulations. Provide an updated engineers stamp for the engineer of record (the engineer's stamp on page 2 expired in 2016). If the engineer is no longer involved, either an engineering geologist, geotechnical engineer, or qualified engineer shall prepare an update report.</p> <p>City GIS maps indicate the presence of slopes 40 percent or greater along the western portion of the site. Please provide an exhibit showing the location of these areas, and confirm if they are natural or artificially created. The geotechnical report does not provide a slope analysis exhibit, so one shall be include in the updated report.</p>	
<p>7. Based on Engineering's comments, additional roads within the plat will be required to meet City block sizing requirements. Further investigation will be needed in these areas to determine soil conditions. Also see the Robinson Noble Technical Memorandum for additional geotechnical work.</p>	
<p>8. Critical areas are subject to OMC 18.32.145 regarding signage and fencing, and OMC 18.32.150 regarding title notice. These items can be addressed at the time of engineering permit application.</p>	
<p>9. Stormwater facilities are administratively allowed in Category 3 and 4 buffers only when located in the outer 25 percent of the buffer on-site, and where the location of such facilities will not degrade or have significant, adverse impacts on the functions or values of the wetland or buffer. Where dispersion trenches are proposed within the inner 75 percent of the wetland buffers, relocate. Include in the Assessment a written analysis of how they will not adversely impact wetland and buffers. OMC 18.32.525.I</p>	
<p>Landscape Standards – OMC 18.36</p>	
<p>10. Per OMC 18.36.080, submit a landscape plan. For this project, the plan will need to show landscaping for stormwater facilities, street trees, common areas (e.g., along pathways) and areas that are disturbed during site construction outside of individual lots.</p>	
<p>11. Per OMC 18.36.080.E, street trees shall be selected and located to minimize conflicts with utilities (includes meters, hydrants, street lights). Because narrow lots are proposed, provide typical plans showing how street trees, curb cuts, utilities, lighting, and hydrants will be arranged. Typical plans should reflect different lot widths and driveway locations.</p>	

<p>12. Per OMC 18.36.060.J, stormwater ponds and swales must be attractively landscaped and integrated into the site design. As proposed, the ponds are geometric in form and involve significant alteration to existing terrain and tree removal. Redesign the stormwater system to meet this provision.</p>	
<p>Property Protection Standards – OMC 18.40</p>	
<p>13. Ensure that site triangle requirements in OMC 18.40.060.B will be met along Cooper Point Road and at the intersection of Grove Street and 20th Avenue (see related comment under Engineering).</p>	
<p>14. The grading plans show a retaining wall along the northern perimeter of the plat and significant grading along the Cooper Point frontage. Within required yard areas, no single retaining wall (nor combination of walls within 5 horizontal feet) shall exceed a height of 30 inches as measured from the lowest adjacent grade, nor shall any modification of grades or combination of retaining walls result in grade changes exceeding 30 inches within 5 feet of a property line nor 60 inches within 10 feet of a property line (OMC 18.40.060.C.6). Please confirm that these requirements can be met for the entire site.</p> <p>To avoid issues during construction, make sure that all retaining walls and grade modifications are accurately shown on the grading plans. A variance would be required to depart from the standards noted above.</p>	
<p>Environmental Checklist</p>	
<p>15. The environmental checklist does not provide enough information upon which to make a threshold determination. See the attached checklist for staff's comments. When revising the responses, provide more detailed information regarding existing conditions, project impacts, and specific mitigation measures. Refer to the Department of Ecology's SEPA guidance for instructions and resources to help answer questions:</p> <p>https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/</p>	
<p>16. The City is currently reviewing the C.E.S response to the Robinson Noble Technical Memorandum and anticipates providing a response by September 12, 2019.</p>	

Other	
17. Please be advised that the City expects the reclamation permit with the Department of Natural Resources to remain in force until such time that the requirements in RCW 78.44.390 are satisfied.	
18. A significant amount of site alteration is proposed. To help staff better understand the extent of these changes, please provide profiles of existing and proposed conditions. Given the large site area and extent of grading involved, provide a minimum of three north-south and three east-west transects. Extend transects at least 100 feet offsite (this distance is established in the preliminary plat checklist).	
19. Though not required in the City's development standards, please consider the following suggestions: a) Create sense of entry into the development off of Cooper Point and Grove Street, for example, provide landscape buffers between Cooper Point Road and Lots 1 and 177, signage, landscaping, and landscape elements such as arbors or trellises. Note that under OMC 18.36.060.H, fences and landscape plants at maturity shall not exceed 2 ½ feet in height within the clear site triangle. b) Incorporate tot lots and/or pocket parks into the plat layout, preferably in locations that are convenient to residents of the project. c) Given the narrow streets within the plat, provide areas for guest parking to avoid illegal on-street parking and conflicts with solid waste and emergency vehicles. d) Consider using side and rear loaded garages to provide variation of the streetscape and to address issues that arise with narrow lots, e.g., streets and yards dominated by curb cuts and driveways, increased conflicts between street trees and utilities, and monotonous design.	
20. Safe walking routes to Hansen Elementary and Marshal Middle School are required per RCW 58.17. Given the multiple access points, safe walking routes shall include Cooper Point Road, Grove Street, and 20 th Avenue (see attached City memorandum and Civil Review Exhibit for more information).	
21. In the digital version of the Stormwater Site Plan, appendix C and D are out of order. Please correct this in the next submittal.	
22. What is the purpose of the trail between lots 154 and 155? Either remove or extend through Tract M as an amenity.	
23. Several agencies have provided written comments; see attached comment letters and redlined plans. In addition, the City received numerous comments from	

<p>interested citizens, which can be found on the project's web-page: http://olympiawa.gov/search-results.aspx?q=Green Cove Park</p>	
<p>24. Knotweed is present on-site. It will need to be removed prior to any site work using methods approved by Thurston County. Contact the Thurston County Noxious Weed Control Board at 360-786-557 for more information.</p>	
<p>SURVEY - Comments prepared by Kristina Horton, City Surveyor</p>	
<p>25. Please submit a preliminary plat map separate from the civil plans (i.e., not part of the civil plans).</p>	
<p>26. The topographic survey must comply with WAC 332-130-145. It appears that requirements of Section 2 of this WAC are missing: (a), (b), (c), (e), (f), (f,) (g), and (h). Also, any applicable portions of Section 3 of this WAC must be addressed.</p>	
<p>ENGINEERING - Comments prepared by Jeff Fant, Engineering Plans Examiner; Steve Thompson, Stormwater Engineer; Dave Smith, Transportation Engineer; Ron Jones, Solid Waste; Steve Sperr, Assistant City Engineer</p>	
<p>Street Improvements 2.040A-E, 9.020.A&B (EDDS)</p>	
<p>27. All street block sizing, driveways and sidewalks shall meet the design and construction requirements detailed in Chapter 9, Green Cove Basin, of the 2018 Engineering Design and Development Standards (EDDS).</p> <p>a) Residential blocks bounded by streets will not exceed a walking perimeter of 1,700 feet. Three of the proposed blocks nominally exceed 1,700 feet (measured along the back of sidewalk); please meet this standard on the revised design.</p> <p>b) All streets, driveways and sidewalks shall constructed of permeable pavement materials if feasible (to be determined in the final Drainage Design Report)</p>	
<p>28. The City's Comprehensive Plan "Transportation 2030 Street Classification Map"; EDDS Chapter 2, Section 2.040; and Chapter 4, Table 2 & 3; identify the following four (4) required Neighborhood Collector streets on this plat (highlighted in red on the attached Civil Review Exhibit).</p> <p>c) From Cooper Point Rd at the northwest corner of the plat, eastward along the north boundary, to the northeast corner of the plat. A half-street design may begin approximately 200' east of Cooper Point Rd, and continue eastward; providing access to all large lots north of the plat.</p> <p>d) From Cooper Point Rd, as proposed, eastward to Grove Rd.</p> <p>e) From Grove Rd, at the southeast corner of the plat, northward to the north boundary of the plat, as proposed.</p>	

<p>f) From Grove Rd, east along the north boundary of Tract M, to the east boundary of the plat. A half-street design may begin at the Grove Rd curb-return and continue eastward.</p>	
<p>29. Local Access streets in excess of 350 feet in length require a bulb-out as shown in Standard Drawing No. 4-13B. Add Standard Drawing No.4-13B, 4-2J, 4-2J1 and 4-2K-LID to the design and plans as applicable.</p>	
<p>30. All lots are required to abut an improved public street and have public right-of-way frontage with site access to one or more streets improved to comply with the standards. Only where it is determined that such improved street frontage is not available or feasible can access be allowed by a private access lane (Tracts B, C, I and N). In all cases, standard access appears feasible; therefore, please revise the plat design so that all lots have public right-of-way frontage; eliminate Tracts B, C, I and N.</p>	
<p>31. No vehicular access to Tract D is to be provided from Cooper Point Rd.</p>	
<p>32. The walking path traversing through Tract D from Street A to Cooper Point Rd must be built to the Neighborhood Connector Shared-Use Path standard (Standard Drawing No.4-2L, 10-foot AC pavement width, 20-foot easement width, and illumination.)</p>	
<p>33. Cooper Point Rd is a 2/3 lane Arterial with bike lanes (Standard Drawing No.4-2B). A two-way left-turn lane is required at the three new plat intersections, and left-turn lanes at 20th Ave. A taper-length design is needed to show that a two-way left-turn lane is not warranted across the entire Cooper Point Rd frontage.</p>	
<p>34. Existing Grove Rd is currently paved with a sub-standard “light-bite” treatment that is rated in fair condition. The additional traffic impact from Green Cove Park will further deteriorate this condition.</p> <p>a) Grove Rd shall be improved from 20th Ave northward to the plat with a structural section equivalent to the Neighborhood Collector pavement design outlined in Standard Drawing No.4-6A; and provide a minimum 22-foot roadway width to accommodate two 10-foot vehicle lanes and a one-foot shoulder.</p>	
<p>35. Existing Grove Rd has no sidewalks or pathways; pedestrians must walk and intermix with vehicle traffic in the street. Green Cove Park will add approximately 400 to 500 vehicles on Grove Rd and increase conflicts with existing homeowners and new pedestrians on Grove Rd. To mitigate and provide for pedestrian safety, a minimum 5-foot wide sidewalk with a 5-foot separation from the street shall be</p>	

constructed along Grove Rd from the plat south to 20th Ave. The SEPA checklist indicates that a sidewalk will be built; please show this on the plans.	
36. The intersection of Grove Rd and 20th Ave shall be improved with installation of curb-returns built to the Neighborhood Collector street standard; and any necessary grading to meet the minimum vehicle sight distance for the 35 MPH posted speed limit on 20th Ave.	
37. The proposed linear street design results in long stretches of street, unimpeded, allowing vehicle speeds greater than intended for a residential neighborhood. The street design should include some curvilinear design to limit this condition; and shall include traffic calming devices in accordance with the standard section 4B.210 (attached).	
38. Provide street stubs to adjacent under-developed property with a contiguous land area of one acre or more for future street connections (identified on the attached Civil Review Exhibit). a) Provide stub-road curb-returns (2) aligned with the platted street right-of-ways in the plat east of Grove Rd and north of Tract M. b) Provide a half-street Neighborhood Collector street from Grove Rd, eastward along the north boundary of Tract M, to the east boundary of the Plat; terminating with a temporary turnaround. c) Provide a Local Access street from 22nd Ave near Lot 174, southward to the south boundary of the plat; and then eastward to Grove Rd as either a Local Access street, or a Neighborhood Connector Shared-Use Path (Standard Drawing No.4-2L, 10-foot AC pavement width, 20-foot easement width, and illumination).	
39. To increase pedestrian safety to and from the existing transit stops on both sides of Cooper Point Road near 20th Ave, and for school walking routes that cross Cooper Point Road; the development shall install a compact roundabout at the intersection of Cooper Point Rd and 20th Ave to help slow/calm traffic for safer street crossings.	
40. Lighting will be required along all new streets and shared-use pathways.	
41. Provide transit facilities in accordance with the July 31, 2019 letter from Intercity Transit.	
Traffic Impact Analysis 2.040.G (EDDS), 15.20.060 (OMC)	
42. Revise the Traffic Impact Analysis as follows:	

<p>a) Provide a.m. peak hour analysis at the intersection of Cooper Point Road and Conger Avenue (see attached turning movement data). Include the daily traffic volumes (attached) and address associated traffic impacts.</p> <p>b) Reference the City's sidewalk project on Elliot Avenue between Division Street and Raft Avenue in Section 4, Future Traffic Conditions (see attached excerpt from the City's Capital Facility Plan).</p> <p>c) Traffic volume figures do not represent updated 2021 analysis. Missing study intersections on Cooper Point Rd include: Parkside Development, Capital Mall Drive, Haggen Drive, Black Lake Boulevard, and Black Lake Boulevard and SR-101.</p> <p>d) Provide a.m. peak hour analysis at the intersection of Copper Point Road & Conger (attached turning movement).</p> <p>e) Include the Daily Traffic Volumes (attached) and address associated traffic impacts.</p>	
<p>Water 2.060.B&F (EDDS)</p>	
<p>43. A city water main shall be looped on Grove Rd from the plat south to 20th Ave.</p>	
<p>44. A city water main shall be looped from Cooper Point Rd eastward along the north boundary of the plat.</p>	
<p>45. Water main stub-outs must be constructed for the unopened right of ways long the east side of Grove Rd north of Tract 'M' as well as south of Tract M for the two future streets east of Grove Rd.</p>	
<p>46. Water main extensions must be installed along the entire length of all streets in the plat.</p>	
<p>Sewer 2.060.A&F (EDDS)</p>	
<p>47. The minimum slope allowed for an 8" sewer pipe is 1%. Adjust design to maintain this minimum. The system design must remain at the minimum slope (maximum depth) to maximize the sewer basin area. If adjustments to meet these conditions result in a manhole depth of greater than 20 feet, then an application for a deviation to the standards will be required.</p>	
<p>48. Sewer must be extended across the frontage of Cooper Point Road unless the applicant can demonstrate that a full extension would not serve any other properties. A deviation from the EDDS will be required for a reduced extension.</p>	
<p>49. Sewer main extensions must be installed along the entire length of all streets in the plat.</p>	

50. County records indication that the septic drainfield for 2224 Grove St is located on the Green Cove Park plat, near Lot 147 & 165; please address this on the plan.

Stormwater Facilities 2.060 (EDDS & DDECM Vol.1, 1.2)

51. The following comments are based on a review of the Preliminary Stormwater Site Plan, dated December 2018, and Preliminary Civil Plans, dated January 2019, prepared by CES NW; the Revised Hydrogeologic Report, dated October 11, 2016, prepared by Earth Solutions NW; and the Preliminary Geotechnical Report, dated January 12, 2015, and prepared by AGES.

In addition to the above listed materials, staff also reviewed documents from previous review cycles including - Substantive Comments (File #04-0041) from the City of Olympia to Westbrook Investments, LLC, dated September 14, 2007; Storm Drainage Response to Substantive Review Comments (File #16-9025), from Eric Oehler of C.E.S. to Jake Lund of City of Olympia, dated January 30, 2017; and Jake Lund's response to Oehler, dated February 17, 2017.

This project is subject to the requirements of the 2016 City of Olympia Drainage Design and Erosion Control Manual (DDECM) and must address Core Requirements 1 through 9. The project is also zoned Residential LID and subject to the Green Cove Basin standards for stormwater. Staff offer the following review comments.

- a) The applicant has been advised throughout this process that the City requires Low Impact Development (LID) and the Green Cove Basin standards to the fullest extent practicable. The applicant repeatedly submits plans that are nowhere close to meeting those standards and requests that the City accept a lesser standard. The City will not accept a lesser standard.
- b) The City disagrees with the applicant's justification that LID will not work anywhere on the site. The soils identified in some of the test pits indicate that LID might be feasible at those locations. For example, Test Pits 1 and 2 show that it might be possible to infiltrate roof drains to the shallow interflow layer going to Wetland C. Several of the soil borings east of the former pit face are outwash soils that might also infiltrate. Test Pits 7, 4, and 12 look like you could infiltrate to a shallow interflow layers that discharges to either Wetlands B, C or E. It is our opinion that infiltrating stormwater to the shallow interflow layers would do a better job of mimicking the current wetland hydrology than direct surface discharge.
- c) Where native outwash soils are present and groundwater is absent, we would expect that infiltration will work, unless a soil gain size analysis shows otherwise.

<p>d) Enhanced Water Quality Treatment shall be required for pavement runoff from Cooper Point Road. The trips generated by the project would put the traffic counts over 7,000 ADT and would trigger enhanced treatment. Consider using a LID bioretention swale – with underdrain (because of groundwater in the area) instead of a planter strip.</p> <p>e) Dispersion trenches should have maintenance access but have none, and some dispersion trenches are located inside of wetland buffers. Please provide maintenance access to dispersion trenches and move them outside of wetland buffers.</p> <p>f) The overland pipe proposed for the northwest corner of the site is not acceptable for the pond overflow. Overland pipes through forested areas are subject to damage from falling branches or falling trees during every windstorm. When these pipes break or a seam separates, the resulting erosion is often worse than if there was no pipe at all.</p> <p>g) To improve readability, please include sub-headings for each basin for Section 4. Permanent Stormwater Control Plan, pages 13-22, of the drainage report.</p>	
<p>Solid Waste 8.000 (EDDS)</p>	
<p>52. NOTE: Where one-sided street parking is allowed all solid waste carts must to be placed on the non-parking side for collection. The revised preliminary plat will be reviewed by Waste Resources will to determine the best drive path and side for cart placement.</p>	
<p>FIRE DEPARTMENT (Kevin Bossard, Fire Marshall)</p>	
<p>53. Fire hydrants shall be provided at maximum 300 foot spacing if home have less than 10 feet spacing between them.</p>	
<p>54. Minimum fire flow required for this development is 1,500 GPM from the nearest two fire hydrants. Provide a hydraulic analysis showing water system improvement will meet this fire flow requirement.</p>	
<p>55. NOTE: Residential fire sprinklers are required for all new homes. Design criteria is NFPA 13-D and Olympia Fire Department standards. "Flow-thru" design is required to eliminate need for backflow protection. Branch service lines shall be 1 1/2", single service shall be 1", and all meters shall be 1" minimum for sprinkler system function.</p>	

Ground Water – Comments provided by Donna Buxton, Groundwater Protection Program Manager, Public Works

Note: Comments 56 through 64 are to be addressed in conjunction with those provided in the Robinson Noble (June 5, 2019) Technical Memorandum. The potential environmental concerns identified in Robinson Noble’s tech memo are in line with my comments which are based on several of the same documents. I think RN’s recommendations would help clarify knowledge of site environmental conditions.

56. The four parcels comprising this project are located in areas of extreme and high (and moderate) aquifer recharge class designations on Thurston County’s critical aquifer recharge area (CARA) map. However, the project is not located within a City of Olympia drinking water (wellhead) protection area (DWPA).

The hydrogeologic report closely follows the format of Olympia Municipal Code (OMC) 18.32.230 DWPA’s – Hydrogeological Reports. To be consistent with OMC 18.32.230.C.14 (which references Department of Ecology’s CARA Guidance Document), the report should address the apparent discrepancy between 1) the location of the project in areas of extreme and high CARA aquifer recharge class designations and 2) the conclusion that onsite infiltration of storm water is not feasible given the low infiltration capacity of site soils (page 2).

The hydrogeologic report pulls together existing general information about onsite soil, wetland, and groundwater conditions, but it lacks a thorough analysis of local and site-specific conditions to describe the near-area water resource environment and evaluate potential impacts from development of the site. A detailed analysis would describe shallow soil and subsurface geological conditions, and surface water and groundwater flow regimes and water quality. Information sources could include surface water data, well logs, and nearby and onsite geotechnical and environmental investigations. Analysis would involve (for example) construction of geologic cross-sections (showing geologic formations and aquifer units, groundwater levels and any surface water interactions), plan-view mapping of surface water and groundwater flow direction and gradient, and tabulation of stream flows, groundwater levels, well locations, well construction details, soil/geologic information and well testing/water quality data.

The hydrogeologic report also doesn’t reveal whether the authors are aware of the Phase I Environmental Site Assessment, the Environmental Soil Sampling report, and the SEPA Environmental Checklist which indicate the presence of uncharacterized potentially hazardous conditions and which reference anecdotal citizen claims about these possible conditions. The report would be more informative if it addressed the susceptibility and vulnerability of onsite and offsite surface water and groundwater to potentially uncharacterized onsite

<p>contamination, especially in light of (and depending on) where the onsite wetlands may discharge if their capacity is exceeded.</p>	
<p>57. Regarding Background Water Quality (page 2), please provide “the documents provided to us” (other than the City’s 2016 Water Quality Report) that were used to evaluate background water quality. These documents were not attached as indicated. Also note that the City’s Allison Springs source wells are located near Eld Inlet and not near Lake Saint Clair.</p>	
<p>58. Neither the Background Water Quality nor the Location and Depth of Perched Water Tables sections (page 2) address the quality of shallow groundwater. Please provide the results of any samples of onsite groundwater collected.</p>	
<p>59. Regarding Groundwater Flow Direction and Gradient (page 3), please provide the information used, and any analyses and methodology applied, which supports the statement that groundwater flows northeast at a gradient of 8 percent. Were the three referenced well logs (which were not attached, as indicated) used in this analysis?</p>	
<p>60. Regarding Any Proposed Monitory (sic) Sampling Schedules (page 3) and Analysis of Possible Effects and Additional Information (page 4): Without proposing to monitor storm water quality, please explain how it will be determined that “clean water” will recharge the wetlands, especially considering comments related to the possibility of uncharacterized onsite contamination.</p>	
<p>61. Mitigation Measures (page 4): Please address where the wetlands may be expected to drain offsite (in times of excessive rainfall, surface water runoff, and shallow interflow) given the low infiltration capacity of remaining onsite soils.</p>	
<p>62. <u>Environmental Soil Sampling:</u></p> <ul style="list-style-type: none"> a) Please provide a clearer copy of Figure 1 Exploration Location Plan. b) Test Results (page 2): Please provide cleanup levels where available for parameters reported in the attached AMTEST Analysis Report: NWTPH-Dx (soil), minerals, and Total Metals. Please provide the “Federal and/or Washington State Environmental Protection Agency” cleanup levels used to demonstrate “the new stockpiles do not contain contaminated soil or hazardous waste.” The AMTEST Analysis Report provides D.L. (presumably an abbreviation for detection limits) and the analytical method used, but not the cleanup levels. 	

<p>63. <u>Phase I Environmental Site Assessment:</u></p> <ul style="list-style-type: none"> a) Please provide any additional information about the “localized areas of staining” in the vicinity of the existing garage structure (page i), “a few chemical stains on the exposed soil” (page 13), and the possible disposal of “unknown chemical substances” in the septic system drain field area (page i and page 16). b) Interviews (page 14): Please provide the results of any interviews conducted with adjacent property owners. c) Previous Site Investigations (page 15): Please provide any additional information about the two test pits that smelled of diesel or oil adjacent to the north and south property lines. The northern test pit is indicated to be in a clean fill dump site area and the southern test pit was indicated to be in the wetland buffer. 	
<p>64. Preliminary Stormwater Site Plan (July 2016, revised December 2018):</p> <ul style="list-style-type: none"> a) A statement is made on page 8 about the existing site not being located within any known aquifer recharge area. I realize the context is with respect to the City’s Drinking Water (Wellhead) Protection Areas, but it is important to keep in mind the presence of domestic well use in the area and likely withdrawal of groundwater from the shallow aquifer system. In a sense, all of Thurston County (and Puget Lowlands for that matter) is in an aquifer recharge area. b) Also, reference is made on page 9 to an existing well and onsite septic system, slated to be decommissioned. With Robinson Noble’s recommendations in mind, as long as the well and septic system are still in the ground, they could provide information (such as drain field soil and groundwater conditions); once they’re decommissioned, the opportunity for sampling will either be lost or achievable only at additional expense. Therefore, we could consider conditioning these decommissionings on first resolving whether samples would be collected as part of possible future environmental investigation. 	
<p>URBAN FORESTRY - Comments prepared by Michelle Bentley, Urban Forester</p>	
<p>65. Based on the existing tree density provided within the Soil and Vegetation Report (dated Dec. 19, 2018) and the area of proposed public right-of-way acreage (Plan sheet labelled “Tree”, the number of trees to be planted is 834 rather than 914. Refer to the attached additions/deletions and corrections by City Forester to the Soil and Vegetation Report. The number of trees to be planted and tree protection requirements could change as the site layout is refined through preliminary plat and engineering review.</p>	

<p>66. Show the location of trees to be removed and planted in Areas 2,3,4,5 and 6 in the Soil and Vegetation Plan and on the Demolition/Clearing/Grading and landscape plans. This information is necessary to insure proper tree protection and planting standards.</p>	
<p>67. Add a section in the Soil and Vegetation Report addressing the existing soils on the property. Or summarize the various soil conditions, from an alternate document produced for the applicant, which describes the soils. Provide soil amendment requirements, within the proposed planting areas and street tree wells/planter strips, based on the existing soils in the particular planting areas. Provide additional ground cover and shrubs within the critical area buffer mitigation sites.</p>	
<p>68. Correct the number of trees and cost estimate totals in the Planting Plan Table 3. page 10 of the Soil and Vegetation report.</p>	
<p>69. Street trees are required in addition to the trees planted in the critical areas. Provide street tree locations, which allow for the maximum soil volume possible (400 cubic feet minimum) without being encumbered by utilities, driveways, street lights, alleys and intersections. Engineering, Design and Development Standards (EDDS) 4H.100 and Builders Guide to Olympia’s Tree, Soil and Native Vegetation handout (OMC 16.60).</p>	
<p>70. The trail in the proposed Wetland, Open Space, Stormwater, and SVPA Tract shall not impact the existing functionality of the SVPA.</p> <p>Per OMC 16.60.020 Soil and Vegetation Areas are intended to be “specifically set aside for the preservation of healthy soil and the preservation or planting of existing and/or native vegetation, including trees.” The purpose of these areas is “for preserving healthy soils and preserving and/or planting native vegetation”.</p> <p>The Urban Forestry Manual, Chapter 9 – Mitigation also stipulates :</p> <ul style="list-style-type: none"> • Mitigation is not intended to compensate for intentional impacts on existing soils, native vegetation, and mature trees. In other words, all intact understory ecosystems and mature trees on a site can’t be removed, with mitigation then used to establish required SVPAs. Existing healthy soils, native vegetation, and viable, mature trees have priority for preservation and protection. • And mitigation projects shall provide ‘functional equivalency or improvement of landscape functions lost’. • Areas on project sites with healthy soils, understory vegetation, and mature trees in good condition have priority for preservation during and after construction to meet the requirement of a SVPA and/or required tree units. 	

<ul style="list-style-type: none"> • And mitigation projects SHALL provide 'functional equivalency or improvement of landscape functions lost'. • SVPAs shall not be intended for active or passive recreation; designs shall not incorporate recreation amenities, such as trails, play structures, or benches. <p>The intent of SVPA is to provide a natural protected area without developed recreation amenities. When trails, benches, humans, etc. are incorporated into the SVPA, then management of the soil and vegetation is necessary and impacts to the soil and vegetation may occur. Hazard tree assessment is required, maintenance, monitoring removals, pruning, etc. is required.</p>	
<p>LAND MANAGEMENT - Comments prepared by Jennifer Lee, Records Program Assistant</p>	
<p>71. See attached map for proposed addressing. The Parks Department requests that the word "Park" not be included in the name of the development.</p>	