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February 19, 2008

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King County Parks and Recreation Division
201 S. Jackson Street, Ste. 700
Seattle, WA 98104

Kenny Booth
Associate Planner
The Watershed Company
750 6th Street South
Kirkland, WA 98033

Re: Technical Review for Burke-Gilman Trail Redevelopment Permit Applications: CU07-01, SA07-162, LC07-1384, TR07-23 and Shoreline Permit

Dear Ms. Auld and Mr Booth,

Comments 1) through 14) are from Huitt-Zollars' review of the BGT Redevelopment Application materials submitted on 10/11/07 and 11/20/07 related to the Conditional Use, Sensitive Areas Permit, Public Agency Exceptions, and Shoreline Compliance. This memo identifies some critical issues that should be discussed in revised/supplemental application materials. Carl Stixrood is the primary author of this part of the comment letter. Questions about these comments can be directed to me or to Mr. Stixrood at (206) 324-5500 or carls@huitt-zollars.com.

Conditional Use Permit (CUP):

1) "Deviations" from Standards and Guidelines - Proposed trail redevelopment does not meet applicable standards and guidelines¹ in all cases (some deviations identified through preliminary review are included in this memo). A description of proposed "Deviations" from adopted guidelines must be provided in order for the City to find whether the proposal is consistent with the City's CUP criteria per LFPMC 18.54.030. See discussion on page 11 of the City's DEIS comment letter (12/18/07).

Provide description of proposed "deviations":

- a) Identify locations where guidelines are not met;
- b) Justify why guidelines are not met;
- c) Identify any proposed mitigating measures;
- d) Identify the cost of meeting guidelines; and
- e) Indicate appropriate priority and funding for future corrections.

2) NE 165th Street/Beach Drive NE Crossing – Trail alignment does not meet applicable guidelines per Figure 22 of the 1999 AASHTO Guide for the Development of Bicycle Facilities (AASHTO Bike Guide). Please provide discussion requested in comment #1 so that the City will have the information to determine whether the proposal is consistent with the City's CUP criteria per LFPMC 18.54.030, including but not limited to:

18.54.030(G) – The proposed use is not in conflict with the health and safety of the community.

18.54.030(H) – The proposed use is such that pedestrian and vehicular traffic associated with the use will not be hazardous or conflict with existing and anticipated traffic in the neighborhood.

3) Shoulder Widths – Shoulder widths do not meet King County or AASHTO guidelines and appear to be in conflict with CUP criteria (H), "the proposed used is such that pedestrian and vehicular traffic associated with the use will not be hazardous..." Please provide discussion

¹ Applicable standards and guidelines to the proposed trail redevelopment design include, but are not limited to:

- 2004 King County *Regional Trail Inventory and Implementation Guidelines*
- 1999 American Association of State Highway and Transportation Officials (AASHTO) *Guide for the Development of Bicycle Facilities*
- 2004 AASHTO Green Book – A Policy on Geometric Design of Highways and Streets
- 2006 Washington State Department of Transportation (WSDOT) *Design Manual*
- 2003 Federal Highway Administration (FHWA) *Manual on Uniform Traffic Control Devices (MUTCD)*
- Applicable accessibility guidelines

requested in comment #1 so that the City will have the information to determine whether the proposal is consistent with the City's CUP criteria per LFPMC 18.54.030, including but not limited to:

18.54.030(E) – The proposed use is designed in a manner that is compatible with the physical characteristics of the subject property.

18.54.030(G) – The proposed use is not in conflict with the health and safety of the community.

18.54.030(H) – The proposed use is such that pedestrian and vehicular traffic associated with the use will not be hazardous or conflict with existing and anticipated traffic in the neighborhood.

- a) Sheet L5.2, Detail 1 – “Standard Trail Cross Sections” – Detail shows that a 1’ shoulder and 1’ edge is proposed on the west side of the trail adjacent to the existing ditch. This does not meet King County or AASHTO guidelines for 2-foot shoulders. Furthermore, AASHTO guidelines indicate that additional shoulder width should be considered when path is adjacent to ditches. See discussion on page 7 of the City’s DEIS comment letter (12/18/07).
- b) Sheet L5.2, Detail 1 – “Standard Trail Cross Sections” – Detail shows that 3’ shoulder and 1’ edge is proposed on the east side of the trail. This does not meet AASHTO guidelines for a minimum 5-foot separation from the edge of path pavement to the top of slope.
- 4) Trail Intersections with Driveways and Residential Crossings – Provide horizontal and vertical angles of approach at oblique intersections so that the City can review how intersection geometrics relate to guidelines.
- 5) Signage Plan – Signage Plan does not clearly show the proposal and existing conditions so it cannot be evaluated against CUP criteria. Signage plan does not indicate locations of sign removals and/or relocations. Signage plans shall indicate locations where removal of existing signs (including sign type, i.e. “Stop”, “10 MPH Speed Limit” signs) are required to accommodate new signs and proposed signing plan. Existing signs are not differentiated from proposed signs. Existing conditions plan sheets may help indicate which project elements will result in specific signage changes.

Intent of this comment is that the plans should clearly indicate changes in signage so the City can evaluate how proposed signage will affect needs for signage on City streets and may affect access across the trail.

The signage plan will be evaluated by staff to make a recommendation to the Hearing Examiner on the Conditional Use Permit criteria:

18.54.030(D) – The proposed use is designed in a manner which is compatible with the character and appearance with existing or proposed development in the vicinity of the subject property.

18.54.030(G) – The proposed use is not in conflict with the health and safety of the community.

18.54.030(H) – The proposed use is such that pedestrian and vehicular traffic associated with the use will not be hazardous or conflict with existing and anticipated traffic in the neighborhood.

The signage plan needs to clearly show what signage is proposed and how it is different from existing signage so the City can make their determination in relation to the CUP criteria.

- 6) Trail Planting Plan – The “Trail Planting Plan” should indicate plant heights so that the Hearing Examiner can efficiently determine how the project will be screened from existing development and how the planting plan will relate to safety issues. The plant heights indicated in the legend on Sheet L3.10, should be presented on the “Trail Planting Plan” sheets to reduce review costs.

18.54.030(B) – The proposed use is not materially detrimental to other property in the neighborhood.

18.54.030(D) – The proposed use is designed in a manner which is compatible with the character and appearance with existing or proposed development in the vicinity of the subject property.

- 7) Existing Conditions Plan – Demolition plans should be revised to more clearly indicate the existing conditions to be demolished. The hatching pattern on the demolition plan sheets makes it difficult to see the existing conditions. Provide separate “existing conditions” plan or survey to accurately depict existing conditions.
- 8) Drainage, see Wetlands comments. Discussion should be provided indicating how the three drainage options were evaluated (slope to ditch, slope to lakeside, pervious pavement) and why the selected option was chosen.

SENSITIVE AREAS PERMIT:

Steep Slopes/Landslide Hazard Areas:

- 9) Geotechnical Consultant recommendation will be needed on each specific code and decision item.

- 10) 5/30/06 ZZA Geotechnical Study, page 9 states that, “given the conceptual nature of the project and the lack of a grading plan, it is not geotechnically feasible to fully address these Steep Slope Hazard concerns.” 10/11/07 ZZA cover letter states that BGT will have no adverse effect on the uphill Steep Slope Hazard areas. Cover letter needs to indicate the additional information reviewed that led to conclusion of no adverse effect.
- 11) The 10/11/07 ZZA cover letter does not indicate that a design phase geotechnical evaluation has been completed. The 5/30/06 report recommends that a design phase geotechnical evaluation be completed, including geotechnical borings, to:
 - a) Develop design recommendations for a catchment wall system.
 - b) Determine the stability of the trail embankment and provide recommendations for embankment stabilization if the calculated stability is considered unacceptable.
 - c) Evaluate existing retaining walls to be completed once a trail layout and grading plan have been developed.
- 12) The Geotechnical Study needs to provide clear recommendations and conclusions demonstrating how specific Lake Forest Park sensitive area permit criteria are met for each action requested. See attached document on LFPMC 16.16 criteria for sensitive area permits related to landslide/steep slope hazard areas. Application materials indicate that the following approvals are being requested:
 - a) Administrative Approvals
 - i) Buffer Width Reductions:
 - (1) **Approval Criteria:** LFPMC 16.16.290(A) & 16.16.310(A) - Qualified professional needs to demonstrate to the planning director’s satisfaction that the buffer width reduction will adequately protect the proposed development, adjacent developments, uses and the landslide/steep slope hazard area.
 - (2) **General Comments:**
 - (a) Geotechnical study needs to demonstrate that above criteria are met.
 - (b) Qualified professional shall indicate locations or proposed buffer width reduction by station and plan references.
 - ii) Permitted Landslide Hazard Alteration Area – slopes < 40%
 - (1) **Approval Criteria:** LFPMC 16.16.290(D) (2) – Alteration of landslide hazard area located on slopes of less than 40% are permitted only under the following conditions or circumstances:
 - a. The development proposal will not decrease slope stability on the site or on adjoining properties;
 - b. A licensed geologists or geotechnical engineer certifies that the landslide hazard area can be safely modified or the development proposal designed so the landslide hazard risk to the property or adjacent property is eliminated or mitigated;
 - c. The alteration will not adversely impact other sensitive areas, such as streams; and

- d. The alteration will not result in an increase in peak surface water flow or sedimentations to adjacent properties.

(2) **General Comments:**

- (a) Geotechnical study needs to demonstrate that above criteria are met.
- (b) Geotechnical engineer shall indicate locations where alterations are proposed to landslide hazard areas with slopes < 40% by station and plan references.
- (c) The Technical Information Report (TIR) dated 8/27/07 indicates that surface water runoff from the redeveloped (and expanded) trail surface will not be conveyed to the ditch but is planned as sheet flow towards the shoreline. This is inconsistent with criterion (d) above. The TIR should also clearly indicate where existing surface water runoff from the trail currently drains.
- (d) Detail 1 on Sheet L5.2 – Sections A through D indicates a 1.5% to 2% max. cross slope towards the shoreline.

iii) Permitted Landslide/Steep Slope Hazard Alteration Area – slopes > 40%, vertical relief < 20'

(1) **Approval Criteria:** LFPMC 16.16.310(C) – The following may be permitted:

1. Alteration of slopes that are 40% or steeper with a vertical elevation change of up to 20'; provided, that a soils report prepared by a qualified professional satisfies the planning director that no adverse impact will result from the exception.
2. Any slope that was created through legal grading activity may be regarded as part of an approved development plan; provided, that any slope that remains 40% or steeper following site development shall be subject to all requirements for steep slopes.

(2) **Approval Criteria:** LFPMC 16.16.310(D) – When steep slope alterations are allowed by this section, the proposal shall:

1. Not decrease slope stability on the site or on adjoining properties; and
2. Be subject to certification by a qualified professional that the landslide hazard area can be modified safely or that the development proposal eliminates or mitigates the landslide hazard risk to the property or adjacent property; and
3. Not adversely impact other sensitive areas, such as streams; and
4. Not result in an increase in peak surface water flows or sedimentation to adjacent properties.

(3) **General Comments:**

- (a) Geotechnical study needs to demonstrate that above criteria are met.
- (b) Geotechnical engineer shall indicate locations where alterations are proposed to landslide hazard areas with slopes > 40% and vertical relief < 20' by station and plan references.

iv) Permitted alterations to landslide/steep slopes hazard areas and buffers for public and private trails

(1) **Approval Criteria:** LFPMC 16.16.230 (F) – Authorized exceptions to work in sensitive areas – Public and private pedestrian trails, except in wetland or streams, subject to the following:

- 1. The trail surface shall be made with pervious materials and meet all other requirement including city surface water management standards;
- 2. The mitigation may include increase of sensitive area and/or buffer widths equal to the width of the trail corridor, including disturbed areas, and
- 3. Trails proposed to be located in landslide or erosion hazard areas shall be constructed in a manner that does not increase the risk of landslide or erosion and in accordance with an approved geotechnical report.

(2) **Approval Criteria:** LFPMC 16.16.310(B) (2) – Approval of public and private trails may be allowed on steep slopes subject to compliance with recognized construction and maintenance standards. Construction of impervious surfaces, such as asphalt and concrete, that would contribute to surface water runoff is prohibited unless the applicant demonstrates to the satisfaction of the planning director such action is necessary for soil stabilization or prevention of soil erosion;

(3) **General Comments:**

- (a) Geotechnical study needs to demonstrate that above criteria are met.
- (b) Geotechnical engineer shall indicate locations where public trails are proposed in landslide/steep slope hazard areas and buffers.
- (c) Asphalt Trail appears to be proposed. This is not consistent will requirement for permeable pavement above. The 5/30/06 Geotechnical Study does not specifically address a recommendation against permeable pavements nor does it demonstrate that proposed impervious pavement is necessary for soil stabilization or prevention of soil erosion.
- (d) Sheet L5.2, Detail 1 – “Standard Trail Cross Sections” – Detail shows four different section types (permeable pavement shown as Section D). Plans need to specify which section type is proposed where callouts are provided.

(e) Plans do not appear to reference Sheet L5.2, Detail 4 – “Permeable Asphalt Paving” in locations where trail is proposed in steep slope hazard areas and/or buffers, per LFPMC 16.16.310(B) (2).

b) Hearing Examiner Approvals:

i) Public agency and utility exception

(1) **Approval Criteria:** LFPMC 16.16.260(C) – the hearing examiner shall review and decide upon the application pursuant to the provision of Chapter 16.26 LFPMC. The hearing examiner shall approve, approve with conditions, or deny the request according to the following criteria:

1. There is no other practical alternative to the proposed development with less impact on the sensitive areas;
2. The application of this chapter would unreasonably restrict the ability to provide utility services to the public;
3. The proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the development proposal site;
4. The proposal attempts to protect and mitigate impacts to the sensitive area functions and values consistent with the best available science with the objective of no net loss of critical area functions and values; and
5. The proposal is consistent with other applicable regulations and standards.

(2) **General Comment:**

(a) Geotechnical study needs to demonstrate that above criteria are met.

Wetlands/Streams:

13) The Sensitive Areas Study needs to provide clear recommendations and conclusions demonstrating how specific Lake Forest Park sensitive area permit criteria are met for each action requested. Application materials indicate that a Regular Sensitive Area Work Permit is being requested:

i) Permitted Alterations to wetlands, streams, and their buffers.

(1) **Approval Criteria** Per LFPMC 16.16.110.(3). The mitigation measures are shown in the Sensitive Areas Study, but the report should indicate how the mitigation measures are adequate. The Sensitive Areas Study should demonstrate that all reasonable efforts to avoid and minimize impacts to sensitive areas and buffers have been examined and that impacts have been avoided, minimized, or compensated for in the order of preference as outlined in LFPMC 16.16.130. The nature and extent of the impacts to the wetlands and streams should be discussed in the Sensitive Areas Study, along with the proposed mitigation measures to offset these impacts, per LFPMC 16.16.120

- (2) **Approval Criteria:** LFPMC 16.16.130 – Applicants shall demonstrate that all reasonable efforts to avoid and minimize impacts to sensitive areas and buffers have been examined and that impacts have been avoided, minimized, or compensated for in order of preference:

D. Minimizing impacts by limiting the degree or magnitude of the action by using the appropriate technology, or by taking affirmative steps to avoid or reduce the impact.

(3) **General Comment:**

- (a) The use of pervious asphalt for trail construction as a mitigating measure is not discussed. It would seem appropriate that this technology be discussed.
- (b) Changing the slope of the trail from the ditches to away from existing ditches may have adverse effects on wetland resources by decreasing flow into wetlands and adverse drainage impacts on downhill properties. The effect of this change in drainage and inflow into each wetland should be discussed and any adverse impacts mitigated or avoided.
- (c) Discussion should be provided indicating how the three drainage options were evaluated (slope to ditch, slope to lakeside, pervious pavement) and why the selected option was chosen.
- (4) **Approval Criteria:** LFPMC 16.16.130 – Applicants shall demonstrate that all reasonable efforts to avoid and minimize impacts to sensitive areas and buffers have been examined and that impacts have been avoided, minimized, or compensated for in order of preference:

B. Rectifying the impact by repairing, rehabilitating, or restoring the affected sensitive area(s) and/or buffers.

(5) **General Comment:**

- (a) The Sensitive Area Study states that the project will result in 2,169 square feet of wetland fill in Wetlands 1, 5, 6, and 8 will occur. The area of fill is shown on the plans, but only plantings are shown as mitigating measures. The Sensitive Areas Study indicates that all wetlands are at least somewhat associated with ditches adjacent to the trail (pg 4). The Sensitive Area Study states that the primary function of the wetlands is for the “limited storage and conveyance of storm water.” There is no discussion within the Sensitive Area Study that indicates that the proposed planting is the appropriate measure to rectify the impact, or if other measures are proposed or appropriate to rectify the impact of the fill.
- (6) **Approval Criteria:** **LFPMC 16.16.130** – Applicants shall demonstrate that all reasonable efforts to avoid and minimize impacts to sensitive areas and buffers

have been examined and that impacts have been avoided, minimized, or compensated for in order of preference:

- C. Reducing or eliminating the impact or hazard over time through preservation and/or maintenance operations.

(7) General Comment:

(a) If this action is proposed, the application materials should indicate how they are meeting this requirement.

- (8) Approval Criteria: LFPMC 16.16.130** – Applicants shall demonstrate that all reasonable efforts to avoid and minimize impacts to sensitive areas and buffers have been examined and that impacts have been avoided, minimized, or compensated for in order of preference:

- D. Compensating for the impact by replacing, enhancing, or providing substitute sensitive areas and/or buffers; and

(9) General Comment:

(a) From the plans, it appears that this is the only mitigation measure proposed. Some of the plantings being proposed as a mitigation measure are outside of the trail right of way; (see sheets W3.0, W3.2, W3.5, W3.6, for examples). Sensitive Area Report should indicate how the applicant intends to perform work outside right of way, is easement or property acquisition required?

SHORELINE PERMIT:

14). No major issues identified, the use is allowed in the “Urban” Environment. We recommend that each segment of trail in the shoreline zone be reviewed separately against the Shoreline Code and that the application contain an evaluation of consistency with policies in the 1978 King County Shoreline Management Master Program.

TECHNICAL INFORMATION REPORT (DRAINAGE):

These comments 15) through 25) are from the City’s drainage review consulting engineer, Jason Henry, HCWL. He has reviewed the Burke Gilman Trail Redevelopment project with respect to compliance with the King County Surface Water Design Manual and City Code for grading, drainage and erosion and sediment control. Questions about these comments can be directed to me or to Mr. Henry at 206-732-2019.

15) The report states in several places that runoff patterns will not change and the project will improve over existing conditions. Reversing the super elevation of the trail from the west to

the east “lake side” drastically changes the runoff patterns from the site. Runoff from the trail that is currently being collected and conveyed in a ditch system to culverts that cross under the trail and extend to the lake will now flow uncollected onto adjacent property. Downslope from the trail there are retaining walls, steep slopes, private property, private roads with already overtaxed drainage systems. Sloping the trail to “sheet flow to the lake” needs to be clarified throughout the report and address the impacts to properties downstream (lakeside of the trail).

- 16) The downstream analysis is insufficient. There is no discussion as to where the runoff from the trail goes, where it is collected and where it is discharge. It identifies that existing systems are utilized. Much of the downslope area east of the trail consists of steep slopes, rockeries, retaining walls, and private property that will be adversely affected by the increase in runoff. The analysis shall address each and every system being used from the time the water leaves the project limits (trail right-of-way).
- 17) The flow control exemption needs additional information and is tied directly to the downstream analysis. The downstream system must consist of manmade conveyance channels in order to qualify for the exemption. Area near Ballinger Way NE and Beach Drive discharges to Lyon Creek prior to reaching Lake Washington.
- 18) The culvert table in section IV Findings, does not match up with the call outs on the plans. See culverts 9, 12A, 12B.
- 19) The typical sections shown in the report should not be considered typical as they do not represent the majority of the project. They do not show existing walls, rockeries and slopes east of the trail.

Drainage and Utility Plan

- 20) Again the drainage plan shows the trail sheet flowing runoff to the top of existing rockeries, steep slopes, and private property.
- 21) Drainage at road intersections needs to be addressed. Consider installing trench drains to collect runoff coming onto the trail and conveying to an appropriate tight line system.
- 22) There is no discharge location for the ditch on the west side of the trail north of 147th, sta. 8+25.
- 23) Plans need to identify where wall drains will discharge.
- 24) There is no detail or plan location for the trench drain referred to in the TIR Section III Offsite Analysis under task 5.

Grading Plan and Profile

- 25) Provide profiles of cross streets that are being regarded due to the minor changes in grade as well as the proposed widening and alignment of the trail.

Tree Removal and Replacement

After review of the tree removal application, Planning staff requests further clarification concerning the removal, retention, and replacement of trees on the site. To complete our review, we require the following information (contact me or Shana Restall, Associate Planner at 368-5440 regarding these tree permit-related comments):

- 26) The tree removal application submitted to the City on October 11, 2007 states that 61 trees will be removed from the trail right-of-way. The Arborist's report prepared by Tina Cohen, which was submitted to the City on November 20, 2008, evaluates 100 trees and/or tree groups. The plans submitted with the Arborist's report clearly identify the 100 trees and/or tree groups that were evaluated by Ms. Cohen. However, the plans do not indicate clearly the 61 trees to be removed from the trail right-of-way. Please revise the tree removal plans to specify which trees are slated for removal.
- 27) There is no tree replacement plan on file with the City. Please submit to the City a revised set of plans that indicate the exact locations and types of replacement trees.
- 28) The plans provided to the City with the Arborist's report do not show the locations of environmentally sensitive areas and their required buffers. In order to complete the permit review, please give to the City a revised set of tree removal plans showing all sensitive areas and associated buffers.

We look forward to working with you in a cooperative manner on the continued review of this important project. If you have any questions, concerns or ideas regarding this process, please contact me at 206/368-5440.

Sincerely,

Steve Bennett, AICP
Planning Director