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1. WHISPERING HTS STORM WATER REPORT
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GRANTOR(S) (Last name, first, then first name and initials)

1. WHISPERING HTS SHORT PLAT
2. BRIAN & JODY BEA
3.
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SECT. 26 T3N R7E

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03072530070000

[ ] Property Tax Parcel ID is not yet assigned.

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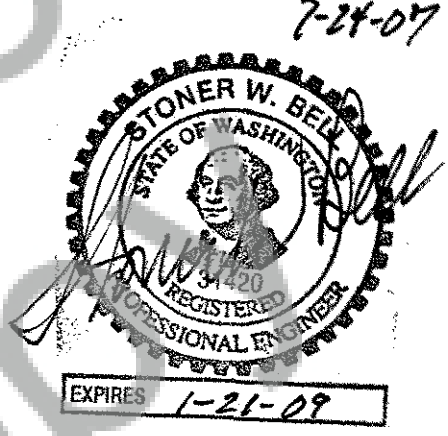
# Whispering Heights Short Plat Final Stormwater Report



7-24-07




*Prepared by:*

**BELL DESIGN COMPANY**

*CIVIL ENGINEERING & LAND SURVEYING*

*PO Box 308*
*1000 East Steuben*
*Bingen, WA 98605*

*Phone: (509) 493-3886*
*FAX: (509) 493-3885*

*July 18, 2007*

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## Project Description

The Whispering Heights Short Plat is a proposed single-family development, zoned Residential 2. The property size is 11.43 acres. The property is located in the northwest quarter of the southwest quarter of Section 25 and the northeast quarter of the southeast quarter of Township 3 North, Range 7 East of the Willamette Meridian. The property is served by Loop Road on its eastern boundary. Tax lot 600 is located along its northern boundary and tax lot 800 lies along its southern boundary. *Figure 1 – Proposed Whispering Heights Short Plat* shows the lot dimensions and areas

## Existing Conditions

### Existing Site Characteristics

The existing site consists of approximately 11.5-acres of recently logged timber land. Historic use has been timber land. *Figure 2 – Whispering Heights Short Plat Existing Conditions* shows the property, slopes and sub drainage areas. Six drainage areas exist within the property. A ridge runs in a west by northwest direction through the middle of Lot 1 and the northern portion of Lot 2. The north slope of this ridge creates drainage area 1. A creak exists at the bottom of this slope and runs under Loop road through a 24-inch CMP near the northwest corner of Lot 1. Storm runoff in drainage Subcatchment 2 flows to the east and is intercepted by Loop Road. Storm runoff within drainage Subcatchment 3 flows in a southerly direction to a low depression within the property where it is presumably infiltrated into the soil. Storm runoff from drainage Subcatchment 4 runs to the south where it enters into a well defined narrow channel. The upper portion of this drainage area is much wider with no discernable channel. Drainage Subcatchment 5 lies below the slide area. A well defined channel with several branches exists within this drainage Subcatchment. The channel leaves the property on the south boundary. Water seeping and flowing from the northern bluff/slide area feeds this creek. The Sixth drainage Subcatchment is approximately 0.26 acres of county right of way and Loop Road. This area drains across the road to the east or along ditches on the west side of the road.

The drainage Subcatchments are shown in Table 1 – *Pre-Developed Subcatchment Areas by Use.*

*Table 1 – Pre-Developed Subcatchment Areas*

| Area | Total (acres) |
|---|---|
| 1 | 1.33 |
| 2 | 1.45 |
| 3 | 2.22 |
| 4 | 2.14 |
| 5 | 4.02 |
| 6 | 0.26 |
| **Total** | **11.43** |

The Soil Conservation Service (SCS) soil mapping, maintained by the National Resource Conservation Service (NRCS), shows that the soils on the property belong to the Steever (123 and 124) soils group. SCS lists all these soils as being a hydrological group B soil. Group B soils are moderately drained soils and are considered candidates for infiltration best management practices (BMP).

### Downstream Description

The land use immediately downstream of the proposed subdivision consists of second growth timber land. Land use further downstream consists of a mix of timber, open space and rural development. The surface drainage from Subcatchment 1 drains to a small creek to the north. This creek crosses Loop road via a 24-inch CMP and flows in a southeasterly direction until it joins with Kanaka Creek. Drainage Subcatchment 2 drains to the east and is intercepted by Loop Road. Stormwater flows then travel along the western side of the road within the ditch until they are conveyed through a culvert to the east where they eventually join with Kanaka Creek. There is no offsite flows from drainage Subcatchment 3. Flow from drainage Subcatchment 4 flow across the property laying to the south of the development and then under Loop Road at culvert # 12. The stormwater then flows in a southeasterly direction where it eventually flows into Kanaka Creek. Drainage Subcatchment 5 flows to the south and south west where it eventually crosses Aalvick Road at culvert C1A. This drainage continues in a south by southwest direction where it eventually flows into Rock Creek.

## *Developed Conditions*

The proposed development contains 4 lots. One of these lots will be served by Loop Road, while the other 3 will be served by a new road called Whispering Heights Lane. This road will be build to Skamania County private road standards. Approximately the first 660 feet of this road will be paved while the remainder and all driveways will be gravel. *Figure 3 – Whispering Heights Short Plat Developed Conditions* shows the approximate locations of building sites and driveways along with the road servicing the lots. Local increased runoff will result from additional impervious area created by roads, driveways, and buildings. *Table 2 - Developed Land Areas by Use* shows the anticipated areas of roads, driveways, open space, and buildings.

*Table 2 – Developed Land Areas by Use*

| Land Use | Total Area (acres) | Portion of Total Area (%) |
|---|---|---|
| New Private Road | 0.498 | 4.4% |
| Estimated Driveways | 0.230 | 2.0% |
| Loop Road | 0.109 | 1.0% |
| Buildings | 0.275 | 2.4% |
| Remaining Pervious Area | 10.318 | 90.3% |
| **Totals** | **11.43** | **100%** |

The development of Whispering Heights Lane within drainage Subcatchment 1 will intercept the flows above the road and take them down a ditch to the road's entrance off of Loop Road. These subcatchment areas are shown in *Figure 3 – Whispering Heights Short Plat Developed Conditions*. The area that includes the road and the land above it is called Subcatchment 1A. The area lying below the road is called subcatchment 1B. Table 3 – *Developed Subcatchment Areas by Use* shows the breakdown of roads, driveways, open space and building that will occur in the various subcatchments. Subcatchment 6 is omitted because its impervious and pervious areas are identical to the pre-existing conditions.

*Table 3 – Developed Subcatchment Areas by Use*

| Land Development Components | Subcatchments | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1a | | 1b | | 2 | | 3 | |
| | Total Area (acres) | Portion of Total Area (%) | Total Area (acres) | Portion of Total Area (%) | Total Area (acres) | Total Area (acres) | Total Area (acres) | Portion of Total Area (%) |
| Private Roads | 0.246 | 25.1% | 0.000 | 0.0% | 0.000 | 0.0% | 0.176 | 7.9% |
| Driveways | 0.000 | 0.0% | 0.000 | 0.0% | 0.023 | 1.6% | 0.023 | 1.0% |
| Buildings | 0.000 | 0.0% | 0.000 | 0.0% | 0.069 | 4.8% | 0.069 | 3.1% |
| Pervious Area | 0.735 | 74.9% | 0.349 | 100% | 1.358 | 93.7% | 1.952 | 87.9% |
| **Totals** | **0.981** | **100%** | **0.349** | **100%** | **1.45** | **100%** | **2.22** | **100%** |

*Table 3 – Developed Subcatchment Areas by Use (continued)*

| Land Development Components | Subcatchments | | | |
|---|---|---|---|---|
| | 4 | | 5 | |
| | Total Area (acres) | Portion of Total Area (%) | Total Area (acres) | Portion of Total Area (%) |
| Private Roads | 0.063 | 2.9% | 0.009 | 0.2% |
| Driveways | 0.023 | 1.1% | 0.098 | 2.4% |
| Buildings | 0.069 | 3.2% | 0.069 | 1.7% |
| Pervious Area | 1.985 | 92.8% | 3.855 | 95.7% |
| **Totals** | **2.14** | **100%** | **4.03** | **100%** |

# Hydrological Modeling

## Statistical Storms

Existing condition hydrographs were developed for the Whispering Heights development using Hydroflow Hydrographs software by Intellisolve. This analysis utilizes the Santa Barbara Unit hydrograph (SBUH) method. A type 1A SCS storm shape was used to distribute the design statistical rainfall volumes over time. The precipitation rates are shown in *Table 4 – 24-hour Storm Event Precipitation Volumes*.

***Table 4 – 24-hour Storm Event Precipitation Volumes***

| **24-hour Storm Event Return Periods** | **WQ** | **2-yr** | **10-yr** | **100-yr** |
|---|---|---|---|---|
| **NOAA Frequency Atlas Precipitation (inches)** | 2.24 | 3.5 | 4.5 | 6.5 |

## Existing Conditions

The various existing land uses and their corresponding areas and SCS Curve Numbers (CN) are shown in *Table 4 - Existing Land Use by Area and SCS Curve Number*. Average slope and flow path length area also shown in Table 4. CN numbers were obtained from the 1992 Puget Sound Stormwater Manual for Hydrologic Group B Soils. No development is anticipated for Sub Area 6. It is assumed that this area will continue to function as it currently does. Therefore only drainage Subcatchments 1, 2, 3, 4, and 5 are shown in Table 4.

***Table 4 – Existing Land Use by Area and SCS Curve Number***

| **Land Use Description** | **Area 1a** | **Area 1b** | **Area 2** | **Area 3** | **Area 4** | **Area 5** |
|---|---|---|---|---|---|---|
| CN | 64 | 64 | 64 | 64 | 64 | 64 |
| Area (acres) | 0.981 | 0.349 | 1.45 | 2.22 | 2.14 | 4.03 |
| Average Slope (%) | 30 | 30 | 20 | 11 | 20 | 16 |
| Flow Path Length (feet) | 145 | 75 | 541 | 560 | 300 | 400 |

*Table 5- Existing Conditions Calculated Runoff Rates and Volumes* show the peak runoff rate and runoff volume for Subcatchments 1a, 1b, 2, 3, 4, and 5. The hydrological computations are presented in Appendix C-2 – *Predeveloped Conditions*.

*Table 5 – Existing Conditions Calculated Runoff Rates and Volumes*

| 24-hour Storm Return Period | Subcatchments | | | | | |
|---|---|---|---|---|---|---|
| | 1a | | 1b | | 2 | |
| | Peak Discharge (cfs) | Total Volume (cft) | Peak Discharge (cfs)) | Total Volume (cft) | Peak Discharge (cfs) | Total Volume (cft) |
| 2-yr | 0.063 | 2,511 | 0.025 | 893 | 0.078 | 3,711 |
| 10-yr | 0.183 | 4,507 | 0.071 | 1,603 | 0.216 | 6,662 |
| 100-yr | 0.506 | 9,353 | 0.193 | 3,327 | 0.615 | 13,824 |

*Table 5 – Existing Conditions Calculated Runoff Rates and Volumes (Continued)*

| 24-hour Storm Return Period | Subcatchments | | | | | |
|---|---|---|---|---|---|---|
| | 3 | | 4 | | 5 | |
| | Peak Discharge (cfs) | Total Volume (cft) | Peak Discharge (cfs)) | Total Volume (cft) | Peak Discharge (cfs) | Total Volume (cft) |
| 2-yr | 0.125 | 5,682 | 0.115 | 5,477 | 0.222 | 10,289 |
| 10-yr | 0.366 | 10,199 | 0.326 | 9,832 | 0.648 | 18,469 |
| 100-yr | 1.016 | 21,165 | 0.923 | 20,403 | 1.809 | 38,326 |

The combined offsite flows from drainage Area 1a and Area 1b are presented in *Table 6 – Subcatchment 1A and 1B Combined Pre-Developed Peak flows and Volumes*.

***Table 6 – Subcatchment 1A and 1B Combined Pre-Developed Peak Flows and Volumes***

| 24-hour Storm Return Period | Flow (cfs) | Volume (cft) |
|---|---|---|
| 2-yr | 0.088 | 3,404 |
| 10-yr | 0.251 | 6,110 |
| 100-yr | 0.698 | 12,680 |

## Developed Conditions

*Table 7 - Developed Land Use and Corresponding SCS Curve Number* presents the SCS Curve numbers used to calculate the runoff in each subcatchment.

***Table 7 – Developed Land Use and Corresponding SCS Curve Number***

| Land Use Description | SCS Curve Number |
|---|---|
| Roads Paved | 98 |
| Roads Gravel | 85 |
| Driveways Gravel | 85 |
| Roofs | 98 |
| Open Space | 72 |
| Lawns | 72 |
| Forest | 64 |

The surface runoff peak rates and volumes for the statistical storm volumes are presented in *Table 8 - Developed Conditions Calculated Runoff Rates and Volumes*. Subcatchment 6 is omitted because no development will occur in that area. Thus the runoff will remain the same as pre-developed conditions. Subcatchment 1a is also expected to remain forest.

***Table 8 – Developed Conditions Calculated Runoff Rates and Volumes***

| 24-hour Storm Return Period | Subcatchments | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1a | | 1b | | 2 | | 3 | |
| | Peak Q (cfs) | Total Volume (cft) | Peak Q (cfs) | Total Volume (cft) | Peak Q (cfs) | Total Volume (cft) | Peak Q (cfs) | Total Volume (cft) |
| 2-yr | 0.337 | 5,908 | 0.025 | 893 | 0.299 | 6,615 | 0.509 | 10,336 |
| 10-yr | 0.523 | 8,664 | 0.071 | 1,603 | 0.536 | 10,396 | 0.899 | 16,204 |
| 100-yr | 0.939 | 14,681 | 0.193 | 3,327 | 1.087 | 18,883 | 1.795 | 29,316 |

***Table 8 – Developed Conditions Calculated Runoff Rates and Volumes (continued)***

| 24-hour Storm Return Period | Subcatchments | | | |
|---|---|---|---|---|
| | 4 | | 5 | |
| | Peak Q (cfs) | Total Volume (cft) | Peak Q (cfs) | Total Volume (cft) |
| 2-yr | 0.432 | 9,530 | 0.719 | 17,001 |
| 10-yr | 0.788 | 15,099 | 1.339 | 27,307 |
| 100-yr | 1.614 | 27,615 | 2.815 | 50,599 |

The hydrological computations are presented in Appendix C-3 – *Developed Conditions*

## *Flow Control Design*

A combination of best management practices (BMP)s will be employed to mitigate stormwater runoff from the Whispering Heights Short Plat. Figure 3 shows the locations of the stormwater improvements

### Whispering Heights Lane

A detention pond will be used to detain the runoff from the paved roadway in Subcatchment 1. Whispering Heights Lane will be constructed so that is will slope to the south and cross drain to a ditch located along the south side of the road. The stormwater will travel down the ditch toward loop road where it will be intercepted with a ditch inlet manhole structure. This structure will be used to direct the water into a detention system that will be half buried and half open.

Pond Details are shown in Sheet C 3.0 and Sheet C 4.0. The buried portion of the pond will use the void area within a gravel bed to create volume. The bed will be kept free from sediment by using the Stormtech isolator row which can be periodically cleaned using a hydro-vacuum truck.

*Table 9 – Subcatchment 1a Total Runoff after detention*

| 24-hour Storm Return Period | Subcatchment 1a | | Subcatchment 3a, 3b, and 4 Combined | |
|---|---|---|---|---|
| | Peak Q (cfs) | Total Volume (cft) | Peak Q (cfs) | Total Volume (cft) |
| 2-yr | 0.063 | 5,908 | 0.902 | 47,324 |
| 10-yr | 0.139 | 8,664 | 2.162 | 78,544 |
| 100-yr | 0.495 | 14,684 | 7.041 | 152,671 |

The area of Whispering Heights Lane that is within Subcatchment 2 shall be cross drained and allowed to flow into the basin area of that subcatchment.

The Full Dispersion BMP will be employed to handle stormwater runoff from Whispering Heights Lane and driveways within Subcatchments 4 and 5.

Both the 2005 Storm Water Management Manual for Western Washington (SWMMWW) and the Storm Water Management Manual for Easter Washington (SWMMEW) allow "runoff credits" for low impact developments. These criteria are covered in SWMMWW Appendix III-C *Washington State Department of Ecology Low Impact Development Design and Flow Modeling Guidance, 7.2 Dispersion,* and in SWMMWW BMP 5.3.3 and in SWMMEW as BMP F6.42 *Full Dispersion.* The BMP allows full dispersion of developments on a sliding scale of area set aside as native-undisturbed area. *Table 10 – Ratio of Set Aside Area to Impervious Surface* shows the allowable percent impervious that may be dispersed for the percentage of land area set aside within a development or drainage.

*Table 10 – Ratio of Set Aside Area to Impervious Surface*

| % of Site with Impervious Surface that Drains into Native Vegetation Area | % of Site with Undisturbed Native Vegetation |
|---|---|
| 10 | 65 |
| 9.0 | 60 |
| 8.25 | 55 |
| 7.5 | 50 |
| 6.75 | 45 |
| 6.0 | 40 |
| 5.25 | 35 |
| 4.5 | 30 |
| 3.75 | 25 |
| 3.0 | 20 |

The BMP allows roof areas to be removed from the effective impervious area if the runoff originating from them is sent to dry-wells or infiltration trenches. The BMP requires driveways are to be constructed so that they cross drain and roads are to be constructed with ditches that do not concentrate more than 0.2 cfs. In areas where runoff concentrates naturally (streams or draws) flows added from the road should not increase the runoff by more then 0.5 cfs. Roads should have at least 100 feet of native vegetative flow path before the flow discharges off the site. If these requirements are met both flow control and water quality requirements of the DOE are considered satisfied by the development.

As can be seen in Table 3 the percent impervious estimated from roads in Subcatchment 4 is 4%. Therefore, from Table 10, 30% should be set aside as a native area within this basin or 0.624 acres. Also a 100 foot native flow path area should be created along the south side of the road. The road will be cross sloped without any ditches or culverts so that stormwater flows will not concentrate.

The runoff from the road/driveway in Subcatchment 5 will also be fully dispersed using the full dispersion BMP. This subcatchment will have approximately 86% of the area set aside as non buildable due to slide potential from above so, as per Table 10, up to 10 percent of the area could be impermeable and still be dispersed by this BMP. Table 3 shows that approximately 4.3 percent will be occupied by homes and driveways; well below 10%. Driveways will be cross sloped so that runoff will sheet flow across the roads without concentrating.

## Short Plat Lots

### Lot 1

Lot 1 lies within subcatchment 1 and 2. The building site and access to Lot1 is in the southeast corner of the lot directly off of Loop Road. Stormwater runoff created by the development of this Lot will be handled by infiltration beds. The size of the infiltration beds area is listed in *Table 11 – Roof Drain Infiltration Bed Dimensions Based on Roof Area*. These dimensions are based on the amount of impervious roof area the home will create. The size of the infiltration beds is based on 1-inch per hour infiltration rate and also assumes an additional 1000 sqft for driveways and patios. Roof drain infiltration bed details are shown on Sheet C 2.0.

***Table 11 – Roof Drain Infiltration Bed Dimensions Based on Roof Area***

| Roof Area Sqft | Infiltration Bed Dimensions | |
|---|---|---|
| | Length X Width X Bed Thickness (ft) | Area sqft X Bed Thickness (ft) |
| 1000 | 50 X 6 X 4 | 300 sqft X 4 |
| 2000 | 50 X 9 X 4 | 450 sqft X 4 |
| 3000 | 50 X 12 X 4 | 600 sqft X 4 |
| 4000 | 50 X 15 X 4 | 750 sqft X 40 |

**Lot 2**
Lot 2 lies within Subcatchment 1, 2, and 3. Most of the area is within Subcatchment 3 does not discharge off-site but into a basin that is contained on site within Subcatchment 3. Therefore, the runoff from the driveways and roof area will flow into this basin and infiltrate naturally into the soils If the home is build to the east within Subcatchment 2 then the stormwater generated by the driveway and roof area with need to be infiltrated into the ground using infiltration trenches. The sizing will be the same as for Lot 1

**Lot 3**
Lot 3 lies mostly within Subcatchment 4 with some of its northern portion in Subcatchment 3. The building site will most likely be on the north end of the property near the road. If the home is built in the northeast corner within Subcatchment 3, the stormwater will remain onsite within the basin. If the home is build within Subcatchment 4 the driveway and roof area will be need to be infiltrated via the use of infiltration beds. The sizing will be the same as for Lot 1

**Lot 4**
Lot 4 is entirely contained in Subcatchment 5. The building site will be located in the southeast corner of the lot. Stormwater generated from impervious roof will be dissipated and dispersed using dispersion trenches. The Full Dispersion BMP is being employed in Subcatchment 5. This requires a 25 foot native vegetation flow path to be present downstream of the dispersion trenches. This is provided within Lot 4.by the required set backs. Therefore the stormwater for this Lot will be completely mitigated by the Full Dispersion BMP. A dispersion trench details is shown on Sheet C2.0

## *Operation and Maintenance*

Storm runoff from roofs carries very little sediment, debris, oils, or litter. Due to this fact maintenance of the residential soaker trenches will be a rare event. However the soaker trench system was design so that it can be easily maintained. The maintenance procedures are included below.

**Catch Basins**

- Grates
  - Remove all debris and trash from grate when inletting capacity is restricted by 10% or more
- Sumps
  - Sumps should be cleaned when sediment levels exceed 60% of the sump depth as measured from the bottom of basin to invert of the lowest pipe into or out of the basin, but in no case less than a minimum of 6 inches clearance from the sediment surface to the invert of the lowest pipe.
- Inspection Schedule Quarterly
- Estimated Maintenance Schedule Yearly

**Control Manhole**

- Control manhole sump should be cleaned when sediment levels exceed 25% of the sump depth as measured from the bottom of basin to invert of the lowest pipe into or out of the basin, but in no case less than a minimum of 12 inches clearance from the sediment surface to the bottom orifice plate.
- Inspect internal control structure after every major storm to ensure:
  - cross is securely attached to manhole wall and in upright position.
  - bottom orifice place is attached and no other holes other than those shown in the original design exist.
  - orifice hole is not plugged or restricted and that upper weir (overflow) is not restricted by debris.
- Estimated Maintenance Schedule Yearly

**Detention Pond**

- Inspect detention pond to determine depth of accumulated sediment. If sediment exceeds 3-inches of accumulated depth near control structure, sediment should be removed.
- Inspect pond side slopes for signs of erosion. If damage over 2-inches deep is observed, repair with compacted soil and reseed.
- Inspect pond for growth of trees or brush, If growth is observed mow pond to eliminate growth. Remove all poisonous or nuisance vegetation which may constitute a hazard to maintenance personnel or the public.
- Inspect pond for any evidence of oil, gasoline, contaminants, or other pollutants. If present coordinate removal with local water quality response agency.
- Estimated Maintenance Schedule Yearly

**Stormtech System**

The Stormtech SC 310 chambers are designed to be able to be maintained periodically. A maintenance manhole is provided immediately upstream of the Stormtech chamber system so that the isolator row can be jet vacuumed and cleaned when sediment levels reach more than a few inches within the units. An inspection port is provided in the middle of the chamber to measure the depth of sediment accumulation. The Stormtech maintenance procedures are as follows:

Step 1: Inspection

Inspection Port

1. Remove lid from inspection port
2. Using flashlight and stadia rod, measure depth of sediment and record results on maintenance log.
3. If sediment is at or above 3-inch depth proceed to Step 2. If not, proceed to step 3.

Maintenance Manhole Basin

1. Remove grate from manhole.
2. Using a flashlight, inspect stormtech chamber through outlet pipe. Follow OSHA regulations for confined space entry if entering catch basin.

3. If sediment is at or above the lower row of sidewall holes (approximately 3-inches) proceed to Step 2. If not, proceed to Step 3.

Step 2: Clean out Stormtech chamber using JetVac process

4. A fixed culvert cleaning nozzle with rear facing nozzle spread of 45-inches or more is preferable
5. Apply multiple passes of JetVac until backflush water is clean
6. Vacuum manhole sump as required

Step 3: Replace all caps, lids and covers, record observations and actions

Step 4: Inspect and clean type 24 catch basin as needed.

**Sample Maintenance Log**

| Date | Stadia Rod Readings | | Sediment Depth (1) – (2) | Observations/Actions |
|---|---|---|---|---|
| | Fixed point of Chamber Bottom (1) | Fixed point of tip of sediment (2) | | |
| 12/15/06 | 25" | none | 0" | New Installation. Fixed point is top of inspection pipe |
| 4/15/08 | 25" | 24" | 1" | Some grit felt |
| 4/15/12 | 25" | 20" | 5" | Mucky feel, debris visible in manhole and in stormtech unit. Maintenance due. |
| 5/03/12 | 25" | none | 0" | System jetted and vacuumed |

Stormtech 310 units to be used to infiltrate roof water from individual residences are wrapped. The roof water should be relatively free from sediment, but a catch basin is provided immediately upstream of the infiltrative trench to catch sediment. A jet vacuum may be used to wash out the sediment in the Stormtech SC 310 units if sedimentation should become a problem.

## *Erosion Control*

Good erosion control construction practices should strive to disturb as little ground as possible during the construction process. All ditch sides and bottoms should be vegetated to prevent erosion during storm events. Construction should be scheduled fro late spring, summer, and early fall to minimize erosion of bare soils. No soils should be left exposed during the wet period of the year. These areas should be covered or seeded before wet weather begins. All stockpiles of soil should be covered to prevent erosion during the winter months and before any rain events. Silt fencing should be placed at the lower portions of the property under construction to catch any sediment that might erode from the property during construction. Silt fences shall be installed in accordance with manufactures recommendations. Silt fences should be maintained until all disturbed surfaces are stabilized with vegetation. Straw bails or filter bags should be placed around the inlets of culverts or catch basins to prevent silt from entering.

Doc # 2005157594
Page 1 of 1
Date: 06/10/2005 09:46A
Filed by: SKAMANIA COUNTY TITLE
Filed & Recorded in Official Records
of SKAMANIA COUNTY
J. MICHAEL GARVISON
AUDITOR
Fee: $19.00

AFTER RECORDING MAIL TO:

Name Brian & Jody Bea

Address 262 miller Road

City, State, Zip washougal, wa 98671

Filed for Record at Request of:

SCTC 27974

## STATUTORY WARRANTY DEED

THE GRANTOR(S) JAMES SEXTON & DAWN SEXTON, HUSBAND AND WIFE
for and in consideration of TEN DOLLARS AND OTHER VALUABLE CONSIDERATIONS
in hand paid, conveys, and warrants to BRIAN BEA & JODY BEA, HUSBAND AND WIFE
the following described real estate, situated in the County of SKAMANIA, state of Washington:

The North Half of the Southeast Quarter of the Northeast Quarter of the Southeast Quarter of Section 26, Township 3 North, Range 7 East of the Willamette Meridian; and that portion of the North Half of the Southwest Quarter of the Northwest Quarter of the Southwest Quarter of Section 25, Township 3 North, Range 7 East of the Willamette Meridian lying Westerly of County Road No. 2028 designated as Loop Road in the County of Skamania, State of Washington.

"THIS CONEYANCE IS SUBJECT TO COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS, IF ANY, AFFECTING TITLE, WHICH MAY APPEAR IN THE PUBLIC RECORD, INCLUDING THOSE SHOWN ON ANY RECORDED PLAT OR SURVEY"

Gary H. Martin, Skamania County Assessor
Date 6-10-05 Parcel # 03-07-25-3-0-0700-00

Assessor's Property Tax Parcel/Account Number: 03-07-25-3-0-0700-00

Dated: June 10, 2005

James Sexton

Dawn Sexton

REAL ESTATE EXCISE TAX
24974
JUN 10 2005
PAID Fee. 4150. =918.00
Vickie Clelland Deputy
SKAMANIA COUNTY TREASURER

STATE OF Washington )
)ss
COUNTY OF Skamania )

I certify that I know or have satisfactory evidence that James Sexton & Dawn Sexton (is/are) the person(s) who appeared before me, and said person(s) acknowledged that (he/she/they) signed this instrument and acknowledged it to be (his/her/their) free and voluntary act for the uses and purposes mentioned in this instrument.

Dated: June 2, 2005

Julie A. Andersen
Notary Public in and for the state of Washington
My appointment expires: 7-17-2006

JULIE A. ANDERSEN NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES JULY 17, 2006

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