



---

## **BUILDER'S PACKET**

By submitting a signed building permit application, the applicant acknowledges that he/she has read the builder's packet as supplied by the Town of Steilacoom and is aware of the building and zoning requirements described throughout this packet. Questions regarding the information presented in this packet should be directed to the Town building official before submitting the signed application.

The omission of data or information deemed necessary to process the building permit application will delay the application process.

The issuance of a permit shall not be construed to be a permit for any violation of the Building Code or the Steilacoom Municipal Code. Permits presuming to give authority to violate or cancel the provisions of this code or other Steilacoom requirements are not valid.

The building official may suspend or revoke a permit or approval whenever it is issued in error on the basis of incorrect information supplied, or in violation of any Steilacoom ordinance or regulation or any provision of the Building Code. This means that if errors or violations are discovered, the Town may suspend or revoke any issued permit until corrections are made.

## **BUILDING CODE**

Buildings permitted after July 1, 2016 shall conform to the 2015 version of the International Building Code as adopted by the State Building Code Council.

## **STREET & UTILITY CONSTRUCTION**

**Your project may require extending streets and/or Town utilities.** All lots require access to a public or private street that is improved to Town standards prior to construction on the lot. Applicants are responsible for constructing streets and utilities to Town standards. Applicants should review the Utility Extension Agreement for more information.

## **CONSTRUCTION HOURS**

Construction hours are from 7:00 AM to 10:00 PM Monday through Friday, and 8:00 AM to 5:00 PM Saturday and Sunday. Violators are subject to a \$250.00 fine.

## **General Building Permit Requirements**

### **No site work shall begin until the permit is issued and all fees are paid**

- An application for a building permit shall not be accepted unless accompanied by the applicant's proposal, including plans and specifications where appropriate, for providing required street and utility services to the property. The director of public works or designee shall review each proposal and report to the building official. No permit shall be issued unless provisions are made for all required dedications, improvements and extensions of right of way, streets, curbs, gutters, sidewalks, water, sanitary sewer, storm drainage and electrical lines, facilities and connections.
- Duplexes, multifamily houses, commercial, industrial and all construction within the Historic District must conform to all requirements of Chapter 2.14 of the Steilacoom Municipal Code. See attached map to determine whether the proposed building falls within the Historic District. Applicants should review the Building in the Historic District handout.
- Any building proposed within a critical area shall obtain a critical land areas permit. See attached map to determine whether the proposed building falls within a critical area.
- No grading is allowed before a building permit is issued unless a separate site development permit is issued. A permit application form can be obtained at the public works building.
- Plumbing, mechanical, and general construction shall be installed in strict accordance with the current Town Building Code, Fire Code, and the applicable Energy Conservation Code. Sprinklers are required in residences that exceed 5,000 square feet.
- The person or entity issued the permit shall be responsible for the repair of any damage to streets, curbs, sidewalks, utilities and other improvements of the Town of Steilacoom, which their contractors, material person or other employees may cause.
- If the building official determines that a building site is unstable or may cause an unstable condition, the building official may require a soils report from a qualified Washington State licensed engineer.
- No deviation from the plans will be permitted unless permission is granted by the building official.
- Private covenants may be in effect in the development in which you are locating. These measures are enforceable by the developer or other owners, not the Town.
- Issuance of a building permit in violation of any building or municipal code requirement does not grant approval of that condition. Any permit issued in violation of any building or municipal code requirement may be revoked or suspended, and modifications required before construction may continue.

## Instruction to Builders

### Preliminary Requirements

Prior to submitting your application for a residential building permit, you must have the following documents:

- Complete the attached Building Permit Application Form and the Energy Conservation Code and Ventilation and Indoor Air Quality Form. All spaces on the Forms must be filled out AND ALL FORMS SIGNED. If the section does not apply, please put N/A in the space. **Completion of the forms is the responsibility of the applicant, not Town staff.**
- A State of Washington contractor's registration card or photocopy of the same must be presented before a permit can be issued. This is not required if you are acting as owner/builder, building a residence you will be occupying.
- A Town of Steilacoom business license must be presented before a building permit can be issued.
- A survey of the lot may be required by the building official to verify that the structure is located in accordance with the approved plans. Staked property corners marked by a licensed surveyor are required for new residences.
- A signed and dated Erosion and Sediment Control Plan.
- A completed Cross Connection Questionnaire, if applicable

*Note:* If it is necessary to remove or relocate any Town-owned public utilities, either on the public right-of-way or on private property, the owner may request relocation of the utility by the Town. Removal or relocation will be done at the owner's expense.

**Plot Plan** – Submit two (2) copies with the following information:

- Scale used and a marker showing the direction north;
- Address and assessor's parcel number of property;
- Location and dimensions of all property lines;
- Street, rear, and side setbacks;
- Location, dimensions and types of easements (i.e., utilities, access);
- Location, dimensions and use of all existing and proposed buildings and structures on the site, showing distances from property lines;
- Coverage of all structures on the site in square feet and the total percentage of the lot covered by the structures;
- Location of on-site parking and driveways;
- Approximate surface elevation at each corner of the site. On sites with slopes greater than 15% (a change of 15 vertical feet in a horizontal distance of 100 feet), show existing and proposed contours at maximum five-foot intervals. Also provide elevation at highest and lowest points within 5 feet of foundation.
- All structures on adjacent lots within five (5) feet of the property line.

**Building Plan** - Submit two (2) copies with the following information:

- Elevations - Show front, sides, and rear;
- Foundation Plan - Show the sizes of footings and foundation wall, vents and access location; show pier sizes and location, beam size and location, joist size and spacing;
- Floor plan;
- Framing plans for floors, walls, ceilings and roof;
- Typical Section - Sectional cut of building showing various spacing, types and grades of material used;
- Trusses - If trusses are to be used, submit manufacturer's details showing spacing;
- Fireplace - If a fireplace is to be installed, show typical section;
- Utilities - Show where connection to Town's utilities will be, either on the Plot
- Plan or on the Floor Plan.
  1. The minimum size water connection shall be 1" and with a polyethylene 160 PSI pipe
  2. Sewer connections shall be 4" minimum with a 4" cleanout readily accessible outside of the residence and a 6" cleanout at the property line that extends up to grade
- Thermal insulation - Thermal insulation shall meet the minimum requirements of the applicable Energy Conservation Code.
  1. Walls R-21 (intermediate framing)
  2. Floor R-30
  3. Ceilings R-49, single rafter or joist-vaulted R-38
  4. All slabs in heated areas R-10
  5. Windows shall meet the u-value requirements of the applicable Energy Conservation Code
- The building official may require plans, computations and specifications prepared and designed by a Washington State licensed architect. All buildings over 2,000 square feet must have plans, computations and specifications prepared and designed by a Washington State licensed engineer.
- Add any information that might involve special requirements for your particular project.
- One reduced size copy of the building plans on 18 X 24 inch paper.

### **Height Verification**

Applicants shall provide a surveyed drawing demonstrating compliance with the Town's 26-foot building limitation with the submittal. See page 9 for more details. Following installation of the roof framing, applicants shall provide verification from a licensed surveyor of compliance with the height limitation.

### **Energy Conservation Code**

Prescriptive worksheets from the WSU Energy Program are available at <http://www.energy.wsu.edu/BuildingEfficiency/EnergyCode.aspx> to assist you in calculating insulation, glazing and heating requirements.

### **Tacoma Smelter Plume Information**

The Tacoma Asarco Smelter Plume is a 1,000 square mile area that includes the Town of Steilacoom. The soil within this area may be contaminated with lead and arsenic from the operations of the Asarco copper smelter in Ruston.

The State Department of Ecology recommends that all soil within Steilacoom be tested for the presence of arsenic and lead prior to grading. More information can be obtained from the Department of Ecology's website: <http://www.ecy.wa.gov/toxics/tacoma-smelter.html>

## **SITE DEVELOPMENT PERMITS**

Site development (clearing and grading) permits **are required** for required for removal, displacement, or deposit of more than a total of 50 cubic yards of material. The following activities are exempt:

1. Any emergency activity which is immediately necessary for the protection of life, property or natural resources.
2. Existing nursery and agricultural operations conducted as a permitted principal or accessory use.
3. Stockpiling or broadcasting of less than 100 cubic yards of topsoil, peat, sawdust, mulch, bark, chips or solid nutrients on a lot, tract, or parcel of land, per year.

An approved erosion and sediment control plan is required for issuance of a site development permit. The requirements for the erosion and sediment control plan are on the reverse of the site development permit application, attached to this packet.

### **STANDARDS:**

- Critical areas and buffers shall not be cleared or graded without specific authorization pursuant to Chapter 16.16 SMC.
- Clearing, except that necessary to establish sediment control devices, shall not begin until all sediment control devices have been installed, stabilized, inspected by the Town and approved.
- Cut and fill slopes shall be no greater than 2:1, except as specifically approved by the Town.
- From October 1 through April 30, no soils shall remain exposed and unworked for more than two days. From May 1 through September 30, no soils shall remain exposed and unworked for more than seven days. This requirement applies to all soils on site, whether at final grade or not. The Town may adjust the time limits if the average time between storm events justifies a different standard.
- Soils shall be stabilized at the end of the work shift before a holiday or weekend if needed based on the weather forecast.
- If vegetative erosion control methods, such as seeding, have not become established within two weeks, the Town may require that the site be reseeded, or that a non-vegetative option be employed.
- On steep slopes or in drainage ways, special techniques that meet the design criteria outlined in the stormwater management manual shall be used to ensure stabilization.
- Soil stockpiles must be stabilized or covered at the end of each work day.
- At the close of the construction season, the entire site must be stabilized, using a heavy mulch layer, or another method that does not require germination to control erosion.
- Techniques shall be employed to prevent the blowing of dust or sediment from the site.
- Techniques that divert upland runoff past disturbed slopes shall be employed.
- Sediment controls shall be provided in the form of settling basins or sediment traps or tanks, and perimeter controls.
- Where possible, settling basins shall be designed in a manner that allows adaptation to provide long term stormwater management.

- Adjacent properties shall be protected by the use of a vegetated buffer strip, in combination with perimeter controls.
- When a wet watercourse must be crossed regularly during construction, a temporary stream crossing shall be provided. The stream crossing shall be expressly approved by Town, the state fish and wildlife department, and any other agency with jurisdiction.
- When in-channel work is conducted, the channel shall be stabilized before, during and after work.
- All on-site stormwater conveyance channels shall be designed according to the criteria outlined in the stormwater management manual.
- Stabilization adequate to prevent erosion must be provided at the inlets and outlets of all pipes and paved channels.
- At least one temporary access road or driveway meeting the requirements of the stormwater manual shall be provided at all sites.
- Other measures may be required at the discretion of the Town in order to ensure that sediment is not tracked onto public streets by construction vehicles, or washed into storm drains.
- **No dirt, mud or other material shall be permitted to leave the construction site. If material does leave the site, the permittee is responsible for promptly cleaning all material on Town streets and in all affected stormwater drains.**

### Information

FOR PARCEL LEGAL DESCRIPTION, TAX PARCEL NUMBER AND LOT SIZE  
Pierce County Assessor-Treasurer's webpage [WWW.PIERCECOUNTYWA.ORG/PC](http://WWW.PIERCECOUNTYWA.ORG/PC)

#### FOR ZONING

The Town Zoning Map is located on the Town's website [www.townofsteilacoom.org](http://www.townofsteilacoom.org) . Point to Government on the top ribbon then select Community Development from the drop down menu. The link to the map is listed under Subdivisions and Land Use Permits.

**Building Set-Back Requirements**

No portion of any principal building over forty-two (42) inches above the finished grade shall extend into a required setback. Eaves may extend four feet into any of the setbacks; however, they shall not come closer than five (5) feet of any property line.

Yard	Minimum Principal Setback
Street	20 feet
Rear	20 feet
Side	The total of both setback sides must equal at least twenty (20) feet. The minimum setback of either side is five (5) feet and no part of the building shall encroach on the five (5) feet minimum setback.
Corner Lots	20 feet from each street, one 20 foot rear yard, one 5 foot side yard

No portion of any accessory building or structure shall extend into a required setback. Accessory buildings include, but are not limited to, carports, garages, green houses, storage units and other small buildings customarily incidental and subordinate to the principal building on the same lot. Accessory structures include decks less than thirty (30) inches in height, satellite dishes and antennae serving the principal use, patios, swimming pool, household composting facilities, and recreational equipment.

Yard	Minimum Accessory Setback
Street	An accessory building or structure greater than eighteen (18) inches in height shall not come closer than twenty (20) feet of the street lot line. If the structure is less than eighteen (18) inches in height it shall not come closer than five (5) feet of the street lot line.
Rear	5 feet
Side	5 feet

**Lot Coverage limitation**

The combined total building footprint area of the principal building, structures greater than forty-two (42) inches in height, and any accessory buildings over forty-two (42) inches in height shall not exceed 30% of the lot.

### Height limitation

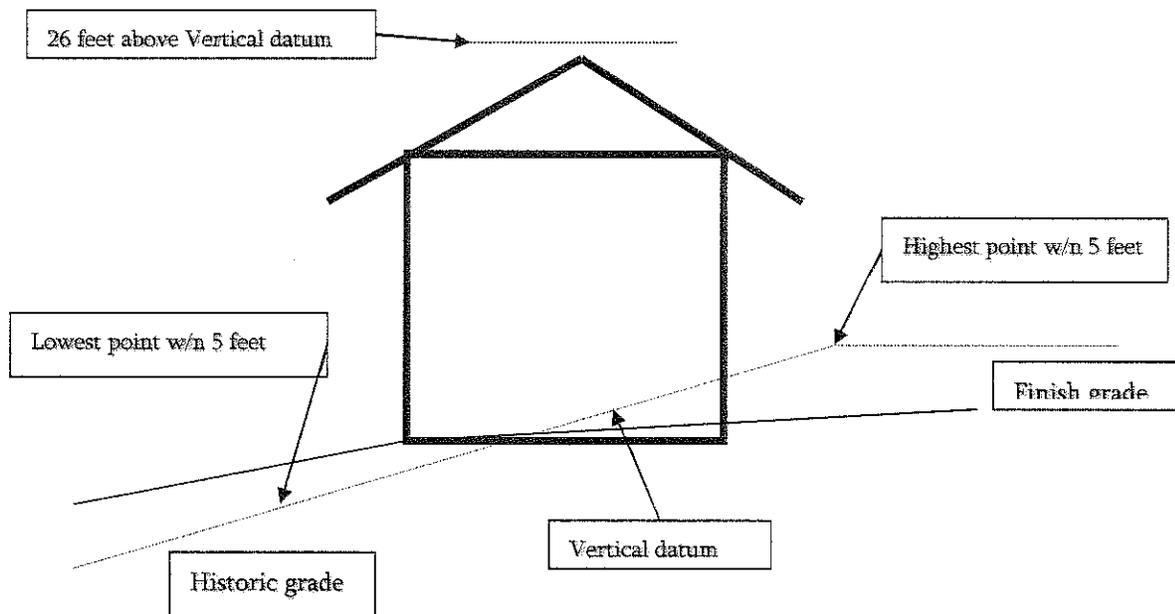
No building or structure shall exceed 26 feet in height. Height is measured from the vertical datum to the highest point of the building, excluding chimneys.

“Vertical datum” means the average of the lowest and highest point on the historical grade, as determined by the building official, within five (5) feet of the exterior walls of the building. The finished ground level shall not be more the two (2) feet above the original ground level. On any building constructed seaward of the high-tide, the low point of the vertical measurement shall be the elevation of the extreme high tide, as shown by the official United States tide table for the year in which the permit is issued.

### **Special Circumstances for Residences Only:**

When the vertical datum of a lot in a residential zone is lower than the level of the highest fronting improved street by 10 feet or more, the owner of the lot may choose to use this exception. The owner shall declare the intent to use this exception PRIOR to issuance of a building permit.

(1) The highest roof line of the structure shall not exceed sixteen (16) feet above the elevation of the highest fronting improved street. The measurement shall be made from the intersection of the fronting street centerline and the lot centerline.



## FEE SCHEDULES

All building and utility connection fees and charges are to be paid at the time the building permit is issued.

### **Building Permits**

The building official shall determine the value of the project using the current issue of the ICBO Building Standards publication. The value to be used in computing the construction work for which the permit is used as well as all finish work, painting, roofing, electrical, plumbing, heating, air-conditioning, elevators, fire extinguishing systems, and any other permanent equipment.

<b>Value</b>	<b>Permit Fee</b>
\$1.00 to \$500	\$34.00
\$501 to \$2,000	\$34.00 for the first \$500 plus \$4.35 for each additional \$100
\$2,001 to \$25,000	\$99.25 for the first \$2,000 plus \$20.00 for each additional \$1,000
\$25,001 to \$50,000	\$559.25 for the first \$25,000 plus \$14.50 for each additional \$1,000
\$50,001 to \$100,000	\$921.75 for the first \$50,000 plus \$10.00 for each additional \$1,000
\$100,001 to \$500,000	\$1421.75 for the first \$100,000 plus \$8.00 for each additional \$1,000
\$500,001 to \$1,000,000	\$4,621.75 for the first \$500,000 plus \$6.80 for each additional \$1,000
\$1,000,001 and up	\$8,021.75 for the first \$1,000,000 plus \$5.25 for each additional \$1,000

A plan review is charged at 65 percent of the building permit fee.

Building permits are required for re-roofing. Fees are determined on the basis of the value of the project on the above schedule, with a minimum of \$100.

Fees for Plumbing and Mechanical Permits will be added to the Building Permit fee as necessary. Please ask the Building Department for more details.

### Water Utility

Service billing will commence when the water meter has been installed at the customer's request.

Meter Size	Meter and service	Drop in Meter
5/8" x 3/4"	\$1,740.00	\$215.00
1"	\$1,790.00	\$260.00
1-1/2"	\$2,165.00	\$450.00
2"	\$2,415.00	\$475.00

Back flow device inspection fee \$205.00

### General Facilities -Single Family Dwelling

Meter Size	Water Volume (GPM) Based Fee
5/8" x 3/4"	\$1,155.00
1"	\$2,888.00
1-1/2"	\$5,776.00
2"	\$9,241.00

### Storm Drainage Utility

Service billing will commence when the water meter has been installed at the customer's request.

Service	Fee
Hookup fee (if requested)	\$1,200
General Facilities Fee Single Family	\$325
General Facilities Fee Duplex	\$650
General Facilities Fee other	\$325 for each 2,500 square feet of impervious service, or portion thereof
Inspection fee (if required)	\$60

### Sewer Utility

Service billing will commence when connection to the sewer at the customer's request is made and if applicable water service is activated. The customer is responsible for installing the entire sewer line, including to the sewer main in the right-of-way, if necessary.

Sewer Connections	Connection Fees
Sewer connection to property line	\$300.00
Sewer General Facility Fee	\$1,421 (single family)
Pierce County General Facility Fee	\$2,410 (single family)

Sewer Service inspection fee for a Single Family Dwelling Unit \$ 80.00

If Town inspection time exceeds 4 man-hours, the customer will be charged for the additional time.

### Electric Utility

Service billing will commence when the electric meter is installed at the customer's request. **The builder/customer will supply the Town with a continuous 2 ½ inch PVC Schedule 40 conduit from the meter base to the power supply source without gaps.** The continuous conduit run will have no more than four 90 degree bends. All bends will be a minimum of 36 inch radius. The conduit will have a minimum of two feet of cover. **Placement of conduit and electric meter base must be coordinated with Town staff prior to installation.**

Electrical Connections	Connection Fees
Electric General Facility Fee	\$1,850
Temporary Power	\$375.00
200 AMPS	\$850.00
320 AMPS	\$900.00
All others	Full cost of Town labor and materials
Shut off – customer requested	\$100 if disconnect/reconnect at meter \$250 if disconnect/reconnect at transformer

Services in excess of 50 feet will be billed actual costs incurred if more than 9-man hours of staff time required

All other information regarding billing and discontinuance of services can be obtained from the Town of Steilacoom finance department.

### School Impact Fees

Impact fees will be collected upon issuance of a building permit for new residential construction. As of December 6, 2011, the fees are:

Structure	Impact Fees
Detached single family, including manufactured and mobile homes	\$ 6,201.00
Multi-family	\$1,246.00 per unit

The following building permits are exempt from the impact fee:

- Alteration of an existing residential structure that does not expand the usable space or add any dwelling units;
- Miscellaneous improvements, including, but not limited to, fences, walls, swimming pools, and signs;
- Demolition or moving of a structure;
- Replacement of a structure with a new structure of the same size and use at the same site or lot when such replacement occurs within twelve (12) months of the demolition or destruction of the prior structure. Replacement of a structure with a new structure of the same size shall be interpreted to include any structure for which the gross square footage of the building will not be increased by more than one hundred (100) square feet.
- Any form of housing exclusively for adults, including nursing homes and retirement centers, shall be exempt from the payment of school impact fees so

long as those uses are maintained, and the necessary covenants or declaration of restrictions required to ensure the maintenance of such uses, are recorded on the property;

- The creation of an accessory dwelling unit within an existing single family structure
- A single room occupancy dwelling
- Any development activity that is exempt from the payment of an impact fee pursuant to RCW 82.02.100, due to mitigation of the same system improvement under the State Environmental Policy Act;
- Any development activity for which school impacts have been mitigated pursuant to a condition of plat or PAD
- Any development activity for which school impacts have been mitigated pursuant to a school funding agreement or a voluntary agreement entered into with the Steilacoom Historical School District.

### **Erosion Control**

Whenever traffic will be leaving a construction site and moving directly onto a public road or other paved areas, a temporary stone-established pad located at points of vehicular ingress and egress is required. If the action of the vehicle traveling over the gravel pad is not sufficient to remove the majority of the mud, then the tires must be washed before the vehicle enters a public road. If washing is used, provisions must be made to intercept the wash water and trap the sediment before it is carried off-site. Construction entrances should be used in conjunction with the stabilization of construction roads to reduce the amount of mud picked up by vehicles.

#### **Design Criteria**

- Material should be quarry spalls (where feasible), 4 inches to 8 inches size.
- The rock pad shall be at least 12 inches thick and 100 feet in length for sites less than 1 acre.
- A filter fabric fence should be installed down-gradient from the construction entrance in order to contain any sediment-laden runoff from the entrance.
- Width shall be the full width of the vehicle ingress and egress area (minimum 20 feet).
- Additional rock should be added periodically to maintain proper function of the pad.
- Tire washing should be done before the vehicle enters a paved street. Washing should be done on an area covered with crushed rock and the wash water should be drained to a sediment retention facility such as a sediment trap or basin.
- The volume of wash water produced by tire washing shall be included in calculating the sediment trap or basin size.
- The entrance shall be maintained in a condition that will prevent tracking or flow of mud onto public rights-of-way. This may require periodic top dressing with 2-inch stone, as conditions demand, and repair and/or cleanout of any structures used to trap sediment. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately.

- All temporary erosion and sediment control measure shall be removed within 30 days after final site stabilization is achieved. Trapped sediment shall be removed or stabilized on site. Disturbed soil areas resulting from removal shall be permanently stabilized.

### **Site Development**

The Town of Steilacoom has adopted the most current edition of the Department of Ecology's Stormwater Management Manual for Western Washington.

- All construction sites shall be developed in accordance with standards set out in the Manual.
- Town approval of erosion and sediment control measures are required prior to any site development.

**A Single Family Residence Infiltration System Application Worksheet and Design Guide are included in this Builder's Packet and must be included with the Building Permit Application. For commercial buildings, contact the Building Department.**



SINGLE FAMILY RESIDENTIAL  
INFILTRATION SYSTEM  
APPLICATION WORKSHEETS

Site Address: \_\_\_\_\_ Application No.: \_\_\_\_\_

Applicant: \_\_\_\_\_

### Instructions

This application worksheet package is designed to aid you in designing a single family residential infiltration system. Table 5.2 of the *Stormwater Management and Site Development Manual* has been simplified in this design guide to make the calculations easier. Using the simplified method may slightly increase the length of a trench. In most cases the difference is only several feet. As an alternative, you may use Table 5.2 of the Stormwater Management Manual.

Provide 3 copies of sheets 1-10. Incomplete submittals will not be accepted:

- **Calculation Sheets** – Pages 2.3. Complete all calculations for the roof and driveway.
- **Sizing Table** – Page 4. Designate multiplier used.
- **Sediment Control Structure Detail** – Page 5. Attach with any proposed changes.
- **Plan View of Infiltration Trench** – Page 6. Show length, width, and pipe sizes.
- **Profile** – Page 7. Show length of trench(s).
- **Trench Section** – Page 8. Show trench(s) width, depth, and pipe size.
- **Soils Evaluation Report Form** – Page 9. Complete all sections (See Page 16 for instructions).
- **Site Plan** – Draw to scale (1"=20'), show north arrow, date, parcel number, site address, property lines and dimensions, adjoining street names, driveway with flow direction toward catch basin, existing and proposed structures and other impervious surfaces such as patios, garages, barns, etc., easements, buffer areas, 2-foot contours (spot elevations are not acceptable), and reserve areas. Include the name, address, and telephone number of the contractor, if known, and the person preparing the site plan. Show the location and log number of the soil logs, legend (if symbols are used), natural drainage channels, wetlands, gullies, water bodies, etc., and areas to be graded or otherwise disturbed. Indicate the location of wells and underground storage tanks. Draw a line offset 10 feet inside the property line and the structure outline. Use the easement line if your lot fronts a private road. If you have a slope on or adjacent to your lot that is steeper than 25% (that's a slope that has a vertical rise of 1 foot in a run of 4 feet) draw another line located 25 feet from the top or toe of the 25% slope. In addition, show all catch basins, sediment control structures, and tight lines.

**CALCULATION SHEET**

**DESCRIPTION OF PROJECT:**

---

---

---

---

**DESIGN:**

**Step 1. Determine the roof and driveway areas and enter the saturated percolation rate the design is based on.**

Building Area: \_\_\_\_\_ sq. ft.  
Roof Area: \_\_\_\_\_ sq. ft.  
Driveway: \_\_\_\_\_ sq. ft.  
Roof Overhang: \_\_\_\_\_ feet  
  
Sat. Perc. Rate: \_\_\_\_\_ min./inch

**Step 2. Select a trench depth between 1 and 4 feet.**

Roof Trench Depth: \_\_\_\_\_ feet  
Driveway Trench Depth: \_\_\_\_\_ feet

**Step 3. Select the correct trench bottom multiplier using the Sizing Table.**

Roof Multiplier: \_\_\_\_\_  
Driveway Multiplier: \_\_\_\_\_

**Step 4. Select a trench width, the wider the trench (4 ft. max), the shorter the trench length.**

Roof Trench Width: \_\_\_\_\_ feet (2' min.- 4' max)  
Driveway Trench Width: \_\_\_\_\_ feet (2' min.- 4' max)

**Step 5. Calculate the required trench length.**

Trench length of the roof = roof area (Step 1) times the trench bottom multiplier (Step 3) divided by the trench width (Step 4).

\_\_\_\_\_ sq. ft. X \_\_\_\_\_ (multiplier) / \_\_\_\_\_ feet = \_\_\_\_\_ feet

Trench length of the driveway = driveway area (Step 1) times the trench bottom multiplier (Step 3) divided by the trench width (Step 4).

\_\_\_\_\_ sq. ft. X \_\_\_\_\_ (multiplier) / \_\_\_\_\_ feet = \_\_\_\_\_ feet

**Step 6. Summarize the trench dimensions:**

Roof: \_\_\_\_\_ ft. deep X \_\_\_\_\_ ft. wide X \_\_\_\_\_ ft. long  
Driveway: \_\_\_\_\_ ft. deep X \_\_\_\_\_ ft. wide X \_\_\_\_\_ ft. long

**Step 7. (optional). For a combined roof and driveway trench, summarize the trench dimensions:**

R & D: \_\_\_\_\_ ft. deep X \_\_\_\_\_ ft. wide X \_\_\_\_\_ ft. long

The above design meets the minimum requirements for stormwater control in accordance with Ordinance 99-24S, Chapter 5, Stormwater Management and Site Development Manual.

\_\_\_\_\_  
Designer's Name (print name)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

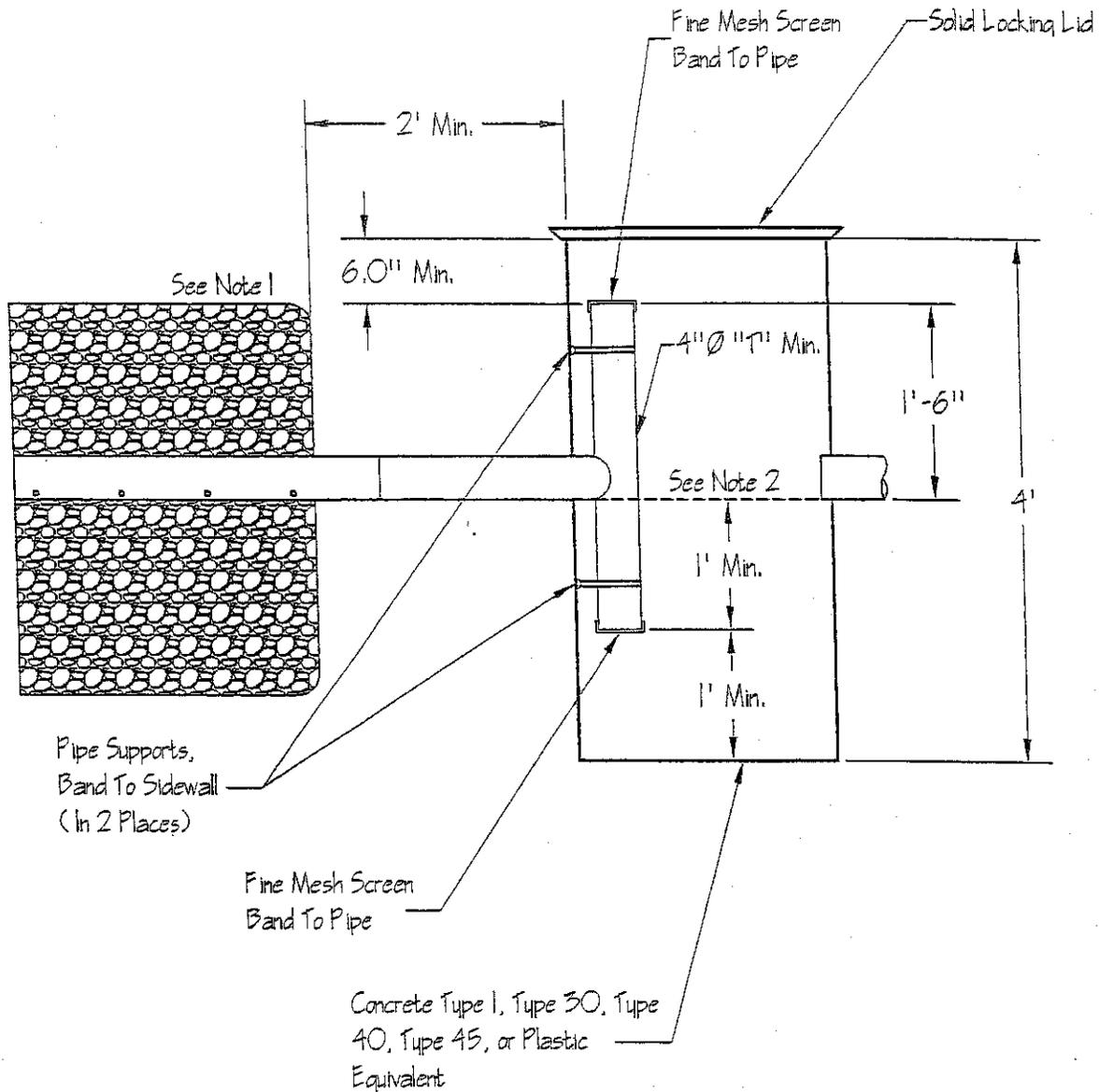
\_\_\_\_\_  
Registration No. (if applicable)

## SIZING TABLE

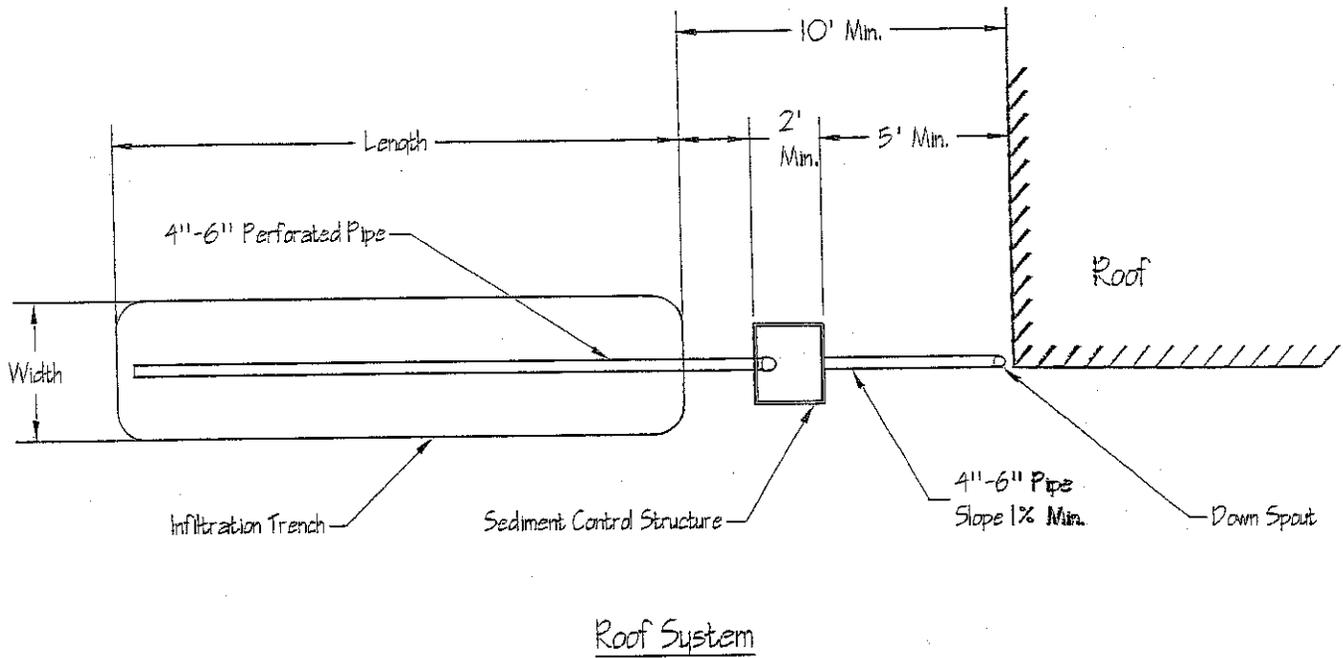
Saturated Percolation Rate	Depth	Trench Bottom Multiplier
1 minute / inch	1'	0.033
	1.5'	0.031
	2'	0.030
	2.5'	0.028
	3'	0.027
	3.5'	0.025
	4'	0.024
5 minute / inch	1'	0.085
	1.5'	0.081
	2'	0.076
	2.5'	0.072
	3'	0.067
	3.5'	0.063
	4'	0.058
15 minute / inch	1'	0.145
	1.5'	0.138
	2'	0.130
	2.5'	0.123
	3'	0.115
	3.5'	0.108
	4'	0.100
30 minute / inch	1'	0.220
	1.5'	0.209
	2'	0.198
	2.5'	0.187
	3'	0.176
	3.5'	0.165
	4'	0.154
60 minute / inch	1'	0.438
	1.5'	0.417
	2'	0.396
	2.5'	0.375
	3'	0.354
	3.5'	0.333
	4'	0.312

Notes:

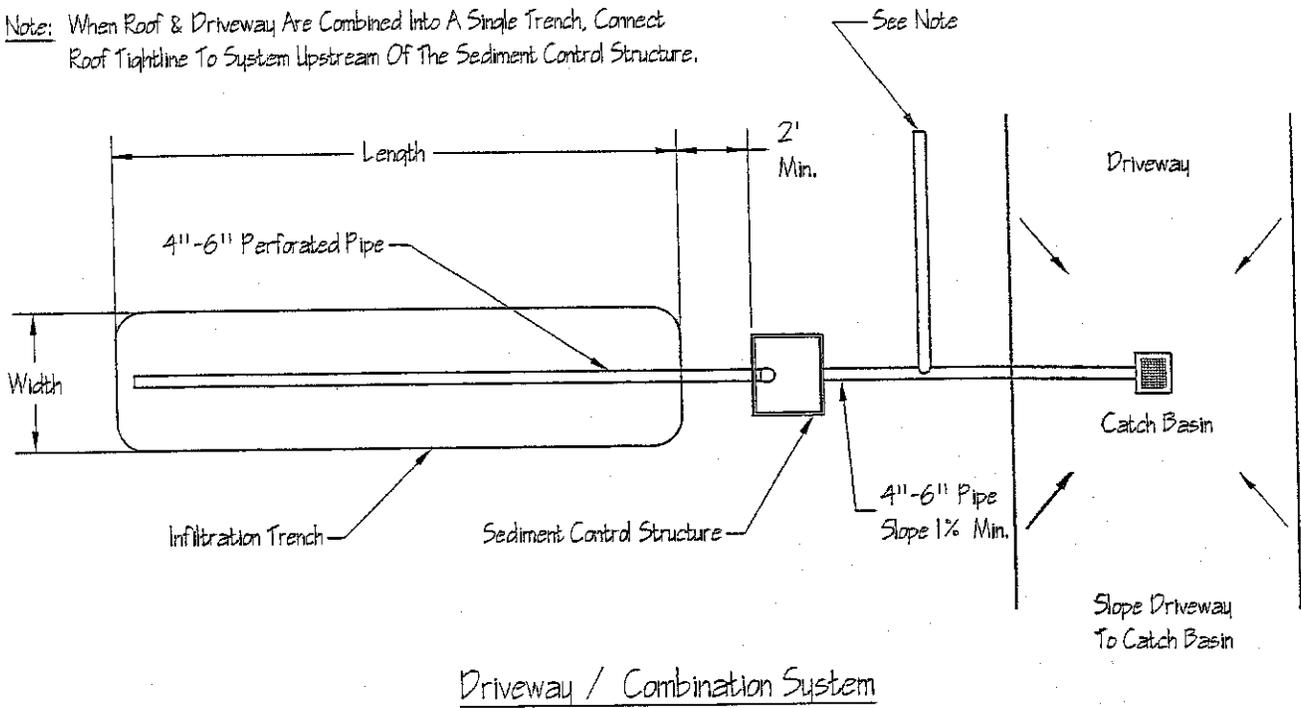
1. Set the top of the Tee Riser at or above the top elevation of the trench drain rock.
2. Set the bottom of the inlet pipe at the same elevation as the outlet pipe.



Residential Sediment Control Structure



Note: When Roof & Driveway Are Combined Into A Single Trench, Connect Roof Tightline To System Upstream Of The Sediment Control Structure.



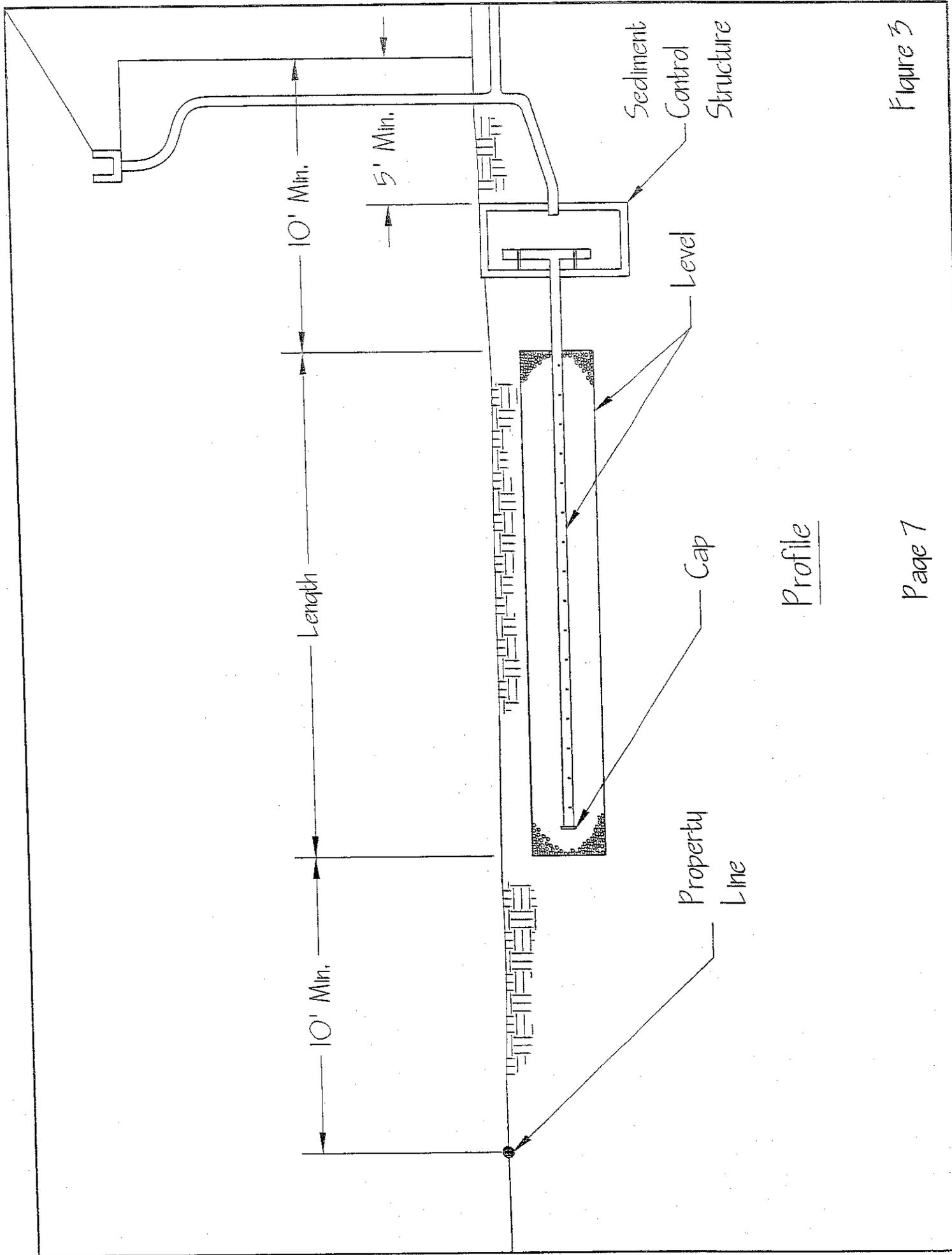
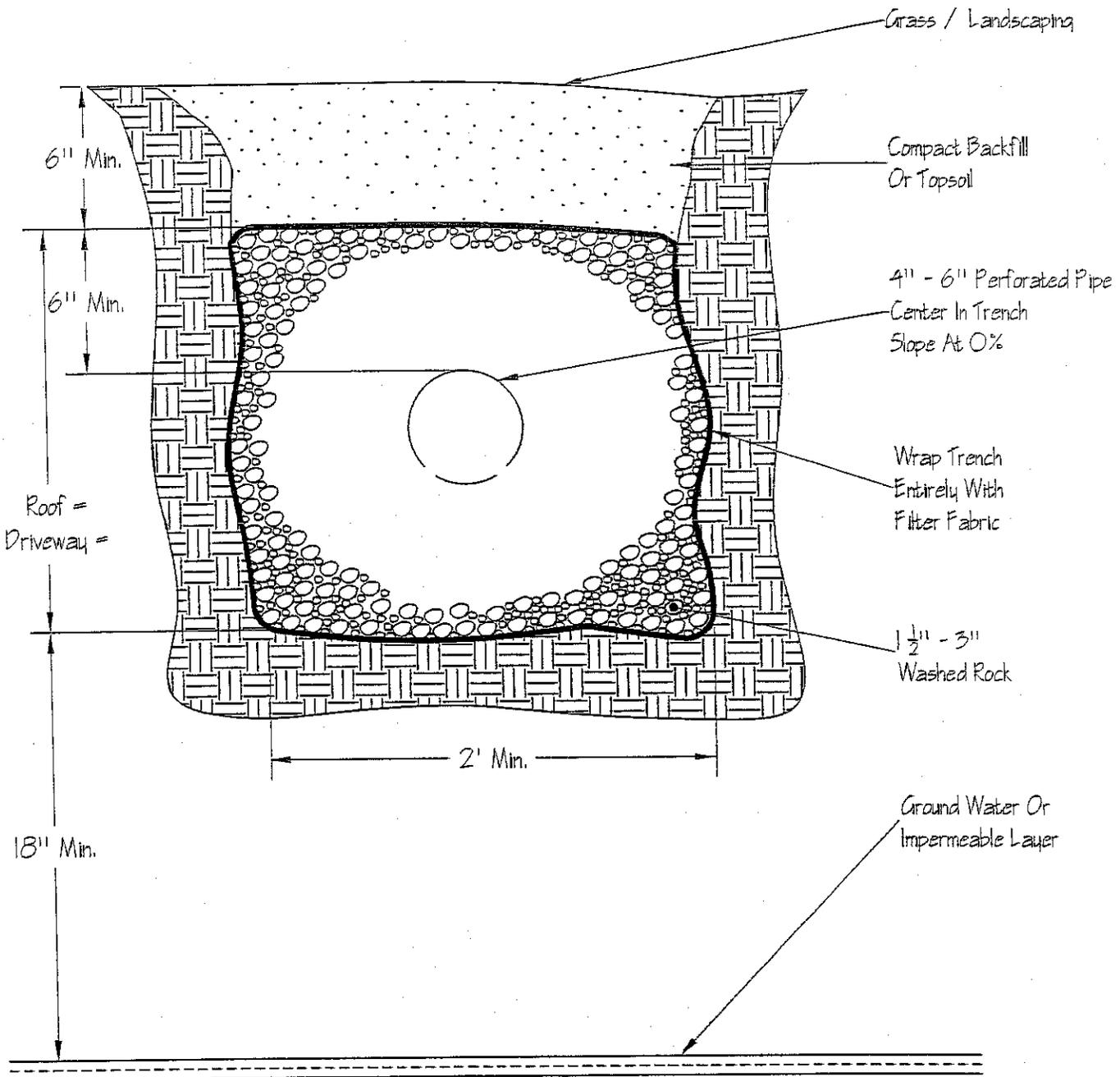


Figure 3



Trench Section

## SFR INFILTRATION SYSTEM SOIL LOG EVALUATION REPORT

SOIL LOG NUMBER (Number shall match site plan)		Sheet ___ of ___		
1. SITE ADDRESS:				
2. PARCEL NUMBER: _____				
3. SITE DESCRIPTION:				
4. LIST METHODS USED TO EXPOSE, SAMPLE, AND TEST SOILS:				
5. NUMBER OF TEST HOLES LOGGED: _____				
6. SATURATED PERCOLATION RATE  MINUTES / INCH			7. HAS FILL MATERIAL BEEN PLACED OVER THE PROPOSED INFILTRATION TRENCH AREA? NO YES	
8. SCS SOIL SERIES	9. HYDROLOGIC SOIL GROUP (circle one)  A      B      C      D			10. DEPTH TO SEASONAL HIGH WATER:
11. CURRENT WATER DEPTH:	12. DEPTH TO IMPERVIOUS LAYER:		13. SOIL PROFILE DESCRIPTION:	
HORIZON	DEPTH	TEXTURAL CLASS	MOTTLING	INDURATION
<p>I hereby state that I prepared this report, and conducted or supervised the performance of related work. I state that I am qualified to do this work. I represent my work to be complete and accurate within the bounds of uncertainty inherent to the practice of soil science, and to be suitable for its intended use.</p> <p>SIGNED: _____</p> <p>DATE: _____ REGISTRATION NO.: _____</p>				

**REPLACE THIS PAGE WITH YOUR SITE PLAN**



## SINGLE FAMILY RESIDENTIAL INFILTRATION SYSTEM DESIGN GUIDE

### Introduction

This guide is designed to aid you in designing a single family residence infiltration system. A number of the most commonly asked questions are included. Table 5.2 of the *Stormwater Management and Site Development Manual* has been simplified, in this design guide, to make the calculations easier. Using the simplified method may slightly increase the length of a trench. In most cases, the difference is only several feet. As an alternative, you may use Table 5.2 of the Stormwater Management Manual.

**What is an infiltration system?** Infiltration is the soaking of surface water into the ground. An infiltration system is similar to the septic tanks and drain fields that are used to dispose of wastewater from your house. The system is composed of several elements that convey runoff (gutters and downspouts) to a sediment control structure (similar to a septic tank, but much smaller) which filters out debris and finally to a gravel-filled trench where the runoff percolates into the soil.

**Why is an infiltration system required?** Single family residential construction often has a negative effect on the environment. Typical construction practice consists of stripping the building site of all vegetation and, in many cases, the topsoil. This practice reduces the amount of vegetation and topsoil that is available on a site to absorb rainfall. The construction project adds impervious surfaces, such as roofs and driveways, which prevent natural infiltration.

It is necessary to control this extra runoff to prevent flooding and erosion, and to recharge groundwaters that supply water to wetlands, streams and wells. A properly designed, constructed, and maintained infiltration system is one of the most effective ways of managing runoff from single family construction projects.

**Who can design an infiltration system?** A homeowner or contractor may, use this design packet to design an infiltration system with help from a Soils Professional. A Soils Professional is required to verify the soil type and determine the appropriate infiltration rate. The infiltration rate is determined using the falling head test method, per Appendix M of the *Stormwater Management and Site Development Manual*. For sites with proposed on-site sewage disposal systems, the same Soils Professional designing that system can provide the on-site soil type(s) and design the infiltration system.

**What is a Soils Professional?** A licensed professional in the State of Washington (geologist, civil engineer, geotechnical engineer, septic designer) who demonstrates proficiency in the practice of the science of soils, including their origin, character, and utilization for stormwater treatment and disposal. This proficiency shall be demonstrated through the soils professional's ability to complete the Soils Evaluation Report form in a precise and accurate manner.

**I cannot design a system per the regulations. What do I do?** Contact a professional engineer licensed in the State of Washington. They can design alternative systems that meet the requirements of the Pierce County Site Development and Storm Drainage Manual.

**Requesting an inspection:** All inspections should be requested at least 24 hours in advance through the Town of Steilacoom at (253) 581-1912.

**When to call for an inspection:** The drainage system must be completely constructed but not yet backfilled at the time of inspection. All pipe connections must be in place, properly coupled or glued, and exposed. A clean, smooth stake (preferably PVC) shall be placed in every trench prior to filling with washed rock. The inspector will remove this stake to check the depth of washed rock. All accessory structures such as driveway basins, residential sump structures, clean outs, and/or inspection wells, depicted on the approved plan, must be in place.

**What is required to get a final inspection on my building permit?** Prior to final inspection approval of construction, the contractor or applicant needs to have the infiltration system inspected and approved by the Town of Steilacoom.

### **Design Procedure and Tips**

1. The first step in designing an infiltration trench is to determine what you are trying to fit on your site. If you have a small lot and are trying to squeeze a house, driveway, etc. with reserve area and an infiltration trench(s), you might be in for a challenge. Reducing the footprint of the house and driveway can reduce infiltration trench system sizes.
2. Start by preparing an accurate, to scale site plan (see Figure 5, Page 17). Include the name, address, and telephone number of the contractor, if known, and the person preparing the site plan. Draw the site plan at a scale of 1" = 20'. Show north arrow, date, parcel number, site address, property lines and dimensions, legend (if symbols are used), natural drainage channels, wetlands, gullies, water bodies, areas to be graded or otherwise disturbed, wells and underground storage tanks, and driveway with flow direction toward catch basin. Show all easements, buffer areas and/or other areas where building activity is restricted. Show contour lines at 2-foot intervals. Draw a line offset 10 feet inside the property line. Use the easement line if your lot fronts a private road. If you have a slope on or adjacent to your lot that is steeper than 25% (that's a slope that has a vertical rise of 1 foot in a run of 4 feet) draw another line located 25 feet from the top or toe of the 25% slope. Infiltration systems must be 25 feet minimum from any slope steeper than 25% and 10 feet minimum from any property line.
3. Draw a preliminary location of the house foot print on the site plan, including other existing and proposed structures and other impervious surfaces such as patios. Draw a line offset 10 feet from the house outline. Infiltration systems must be 10 feet minimum from any structure. In addition, show adjoining street names, location and log number of soil logs (a minimum of one soil log shall be obtained for each proposed infiltration system location), sediment control structures, catch basins, and tight lines.
4. The remaining area is available for the infiltration system. If you are utilizing an on-site sewage system (septic system) you will have to coordinate the location of both systems. Infiltration systems must be located at least 10 feet from a septic drain field, reserve area, septic tank or pump chamber.

5. Locate an area for the infiltration system on the site plan. It needs to be located down slope from the driveway and house so the water drains to it. The trench needs to be oriented parallel to the site's contour lines. Have a Soils Professional determine the soil type and infiltration rate in minutes per inch. See the following section on soil evaluation reports. The soils determination must be consistent with the Sizing Table, see page 4.
6. Size the infiltration trench per the following steps.

Step 1 Determine the number of square feet of the roof and driveway. You do not have to worry about the pitch of the roof. Use the roof area and not the floor area. They will be different on a multi-story house. Be sure to include the roof overhang in your calculations. Note the soil type that is consistent with the Sizing Table (i.e. Fine - Loamy sand (15 min./in.)).

Step 2 Select a trench depth between 1 and 4 feet. A deeper trench will result in a shorter trench. This could be an issue in a design where space is limited. A deep trench may not be possible in soils with a high ground water elevation. The bottom of the trench must be located at least 18 inches above the seasonal high groundwater or impermeable layer. You will also need at least 6 inches of topsoil over the top of the trench. As an example, if your site has an impermeable layer at 5 feet below the surface, the maximum trench depth possible is 3 feet (6 inches cover + 3 foot trench + 18 inches separation = 5 feet). Your Soils Professional can help with the trench depth selection.

Step 3 Determine the correct trench bottom multiplier using the Sizing Table, see page 4. The table is divided into 5 infiltration rates ranging from 1 minute per inch to 60 minutes per inch. After you have selected the correct portion of the table, locate the multiplier that applies to your site. As an example, if your site has a Fine - Loamy sand (15 min./1 in.) and a trench depth of 2 feet, the correct multiplier is 0.130.

Step 4 Select a trench width. The wider the trench the shorter it will be. Selection of the trench is one of personal choice. The amount of room available and ease of construction may be used in determining the best width for your site. The width of the trench should be between 2 feet and 4 feet.

Step 5 Calculate the length of the trench by multiplying the area (Step 1) by the multiplier (Step 3) and dividing by the trench width (Step 4). The resulting number is the length of the trench in feet. For example, if we used a 2,000 square foot roof times a 0.130 multiplier divided by a 4-foot wide trench, the length would be 65 feet.

Step 6 Summarize the trench dimensions from steps 2, 4 and 5.

Step 7 If you are combining the roof runoff and the driveway runoff into a single trench, summarize dimensions from (Step 6) by adding the trench lengths. The combined length must be less than 100 feet. See the following section **The Trench** below, for more information.

7. Complete the final site plan incorporating the infiltration system (length(s), width(s), and location(s) on site) and accompanying sediment control structures and tight lines. Sediment control structures cannot be located within 5 feet of any structure.

## **Driveway Runoff**

The designer must consider runoff from the proposed driveway. The designer may choose to grade the proposed driveway towards a natural and/or landscape area in lieu of a separate infiltration trench. A fairly flat area (sloped at less than two percent) and good soils (Group A) are required. Sufficient detail must be shown to demonstrate to the satisfaction of the Town of Steilacoom that no runoff will leave the site. The Town must pre-approve discharge of driveway runoff to an off-site system.

## **Sediment Control Structures**

(See Figure 1, Page 5) Sediment control structures are important for keeping debris out of the infiltration trench. The "T" with its screens keeps leaves, needles, twigs, roofing gravel, etc., from clogging the perforated pipe and/or the washed rock. Several different types of structures can be used. Generally, a concrete catch basin that has a depth of at least 4 feet is used. Some installations utilize a plastic structure. When choosing a concrete structure, consider using a Type 1, Type 30, Type 40 or a 24 inch diameter Type 45 catch basin. Plastic equivalents are acceptable. The inlet pipe (from the house) should be set at the same elevation as the outlet pipe. If the inlet is set above the outlet pipe, the in-flowing water will splash and cause turbulence. This may suspend sediment and cause the suspended sediment to be deposited in the perforated pipe or washed rock.

## **The Trench**

(See Figures 2, 3, and 4, Pages 6, 7, and 8 respectively) Infiltration systems cannot be constructed in fill or severely compacted soils (an area that has been driven over repeatedly). Infiltration systems shall be a minimum of 25 feet from any slope steeper than 25%. Trench bottoms shall be a minimum of 18 inches above seasonal high groundwater or impermeable layer (hard pan). The end of the trench must be located within 100 feet of the sediment control structure. If your calculations show a trench longer than 100 feet, you will need to split it into two separate trenches. There is no minimum spacing between trench center lines; however flow distribution lines shall be installed at a minimum spacing of 10 feet or less between pipes. The elevation of both trenches must be the same to ensure equal distribution of flows. All infiltration trenches must be located downstream of the sediment control structure. The trench shall be wrapped entirely with filter fabric. Geotextile fabric or roofing felt shall be placed on top of the drain rock prior to back filling.

## **Soil Evaluation Reports**

A Soils Professional (engineer, soil scientist or septic designer) must be utilized to verify if on-site soils are adequate. A minimum of one soil log shall be obtained for each proposed infiltration system location. It shall extend a minimum of 18 inches below the bottom of the trench. Each soil log shall be shown on a separate Soil Evaluation Form. Soil log locations need to be shown on the site plan. You must hire a civil engineer to design systems in areas with a hydrologic Group D soil.

## THE CARE AND FEEDING OF AN INFILTRATION SYSTEM

If an infiltration system is not properly maintained, it can fail after a few short years. When properly maintained, they can function for 20 to 50 years. The most important factor is to prevent anything other than clean water from entering the trench portion of the system. Leaves, fir needles, grass clippings, plastic bags, toys, oil/grease, mud roofing gravel, etc. can clog a system and necessitate costly repairs or replacement of the system. The following is a list of hints to keep your system in good working order:

- Inspect the sediment control structure several times a year. The most important time is in the fall before the heavy rains of winter begin. If there is less than 6 inches of clearance between the debris and the bottom of the outlet tee, clean the sump. A wet/dry shop vacuum may be useful as a cleaning device (See Figure 6, Page 18).
- Clean and inspect both screens. Replace corroded and/or damaged screens as necessary.
- Clean gutters several times a year. Do not flush debris into the system with a hose. Clean out gutters with a plastic scoop or shop vacuum.
- Sweep driveways with a broom several times a year. Do not flush debris into the system with a hose.

## HOW TO TELL IF YOUR SYSTEM IS WORKING PROPERLY

The simple answer is if you put water in, and it goes away, it's probably working. For the most part, the first statement is correct; however, listed below are several ways to troubleshoot the system if it is not working properly:

- Is water bubbling out of the connection where the downspout connects to the drain line? If it is, the screens may be clogged, the infiltration trench may be clogged, or a pipe may be plugged or broken. Check and clean the screens if necessary. If the screens are clean, check to see that the pipes from the downspout to the sediment control structure are clear. A plumber's "snake" or garden hose may be helpful to check and/or clean out the pipe.
- If you have a catch basin located in the driveway, is it backed up? Check to make sure the catch basin outlet is not clogged. Also check to make sure that the pipe from the catch basin to the sediment control structure is clear.
- Are the screens and pipe leading to the sediment control structure clean and clear? Check the perforated pipe in the infiltration trench. Is it clogged?
- So far nothing is clogged, but the system will not drain. Try digging a hole about 1 or 2 feet away from the edge of the trench, at about midpoint. Dig it as deep as the infiltration trench. If it is full of water as you dig, you may have a high groundwater problem. Contact an engineer for further advice.

### Soil Evaluation Report Instructions:

The following instructions should give you the guidance to complete the Soil Log Evaluation Report:

1. Provide the site address, including house number and street name.
2. Provide the 10 digit parcel number.
3. Describe site topography and natural cover.
4. List methods used to expose, sample, and test soils, including the required falling head test method.
5. Note the number of test holes logged (a minimum of one soil log shall be obtained for each proposed infiltration system location).
6. Describe the saturation percolation rate for the infiltration trench.
7. Indicate whether fill material has been placed over the infiltration trench area. Circle the correct response.
8. Indicate the Soil Conservation Service (SCS) soils series observed as a result of the soils testing done. Example: "Alderwood."
9. Circle the appropriate DOE hydrological soil group. A civil engineer must design systems in a hydrologic Group D soil (silty clay loam, clay loam, or a percolation rate slower than 60 min/in).
10. Indicate seasonal high water depth base upon the presence of mottling, gleying or other evidence. If information available is inadequate, state value to be "greater than" the bottom of the hole depth.
11. Indicate current water table depth based upon observation. If saturation conditions are not observed, state value to be "greater than" bottom of the hole depth.
12. Indicate depth to impervious layer (e.g., basal till). If information is inadequate, state value to be "greater than" bottom of hole depth.
13. The profile description provides the *minimum* information on the physical attributes of the soil. All information provided for the profile shall utilize standard SCS nomenclature and abbreviations. The following are the factors to be addressed, with brief examples of the acceptable responses. Further information on most of these is provided in the SCS *Soil Survey of Pierce County*. Use additional sheets if necessary.
  - a. Horizon: A layer of soil with distinct characteristics, labeled A, AB, B, C, Ccw, etc.
  - b. Depth: Starting a 0" (surface), depth and interval of horizon.
  - c. Textural class: Class that best describes relative percentages of sand, silt, and clay in horizon, such as sand loam (SL).
  - d. Mottling: Where present, describe using three-letter abbreviation to indicate abundance, size, and contrast, such as CFD (common, fine, distinct).
  - e. Induration: Physical compaction of a single layer such as a glacial till. Where present, describe as weak, mod(erate) or str(ong).

Sign the form and affix the relevant professional seal (e.g. P.E., Licensed Geologist, or Onsite Wastewater Treatment System Licensed Designer).

Legend:

- $\Delta_1$  - Soil Log 1
- $\Delta_2$  - Soil Log 2

Contractor:

Percolation Infiltration  
8118 Morgan Avenue East  
Bonney Lake, WA 98391  
253-123-4567

Site Address:

12119 Martin Drive East  
Bonney Lake, WA 98391  
Parcel No. 2925111523

Prepared By: John Doe

4511 Murray Way  
Murphy, WA 98003  
253-867-5309

Date: 12-27-05

Drawn By: ALF

Scale: 1" = 20'

Example Residence  
Infiltration System

Dwg. 1 of 1

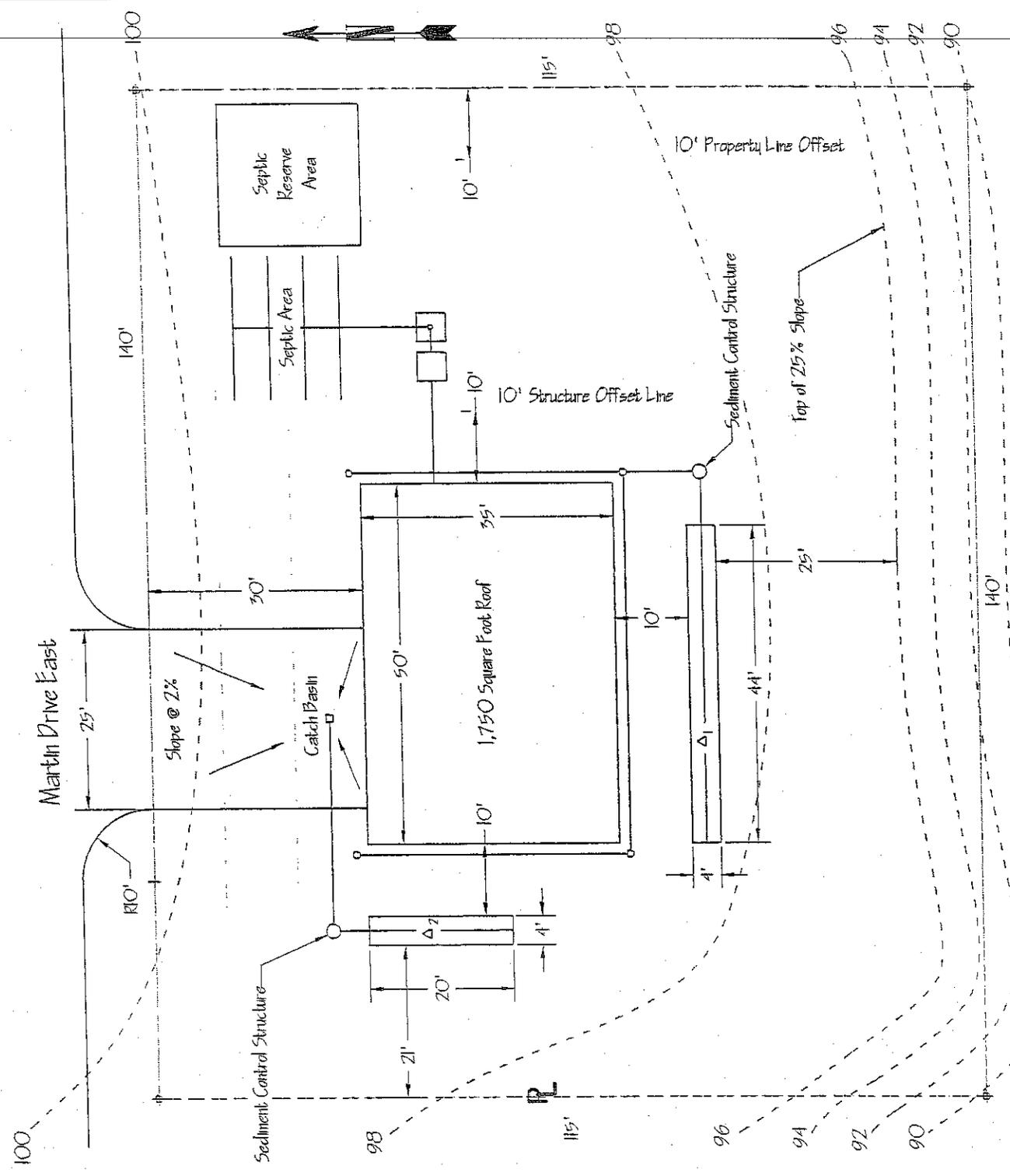
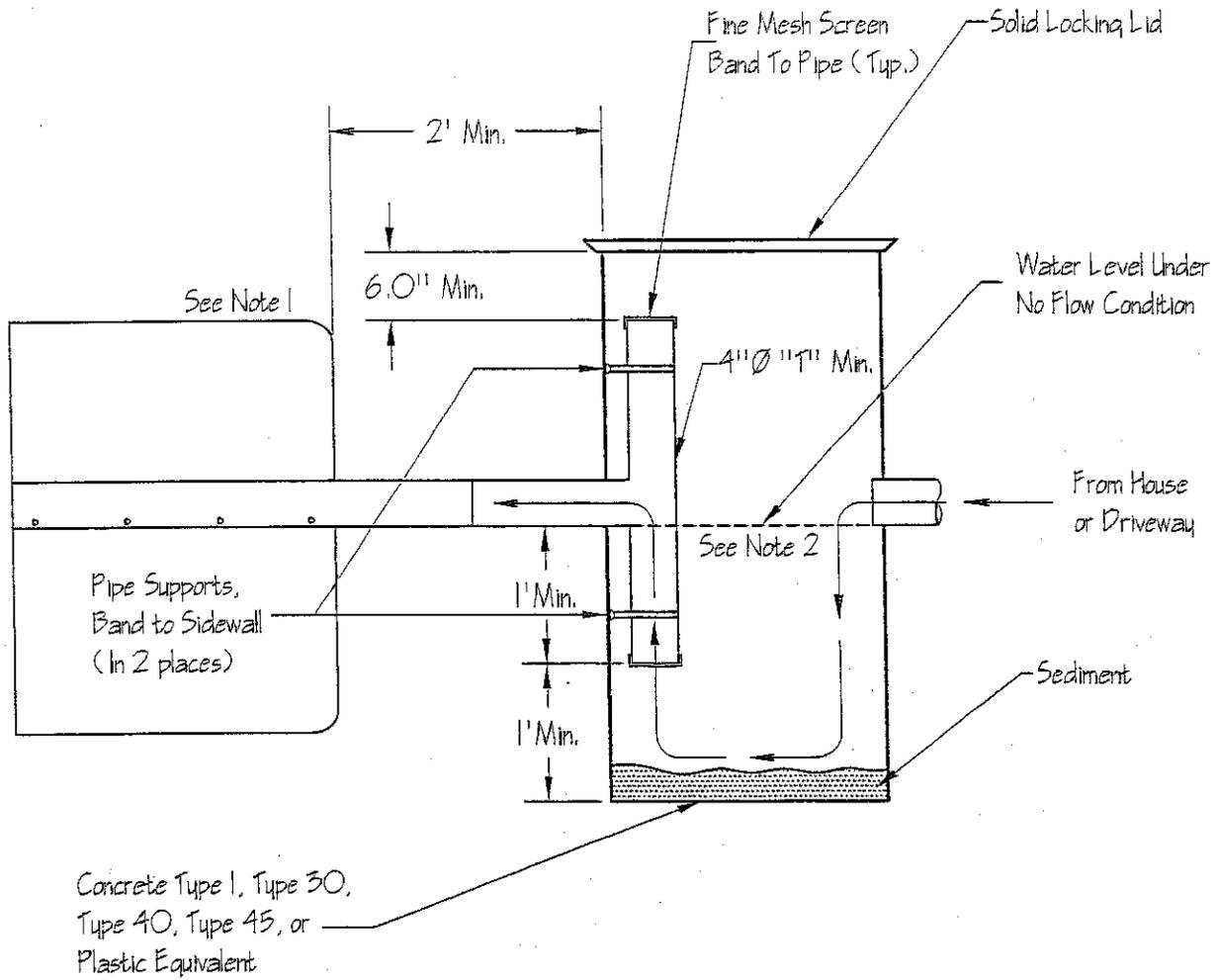


Figure 5

Notes:

1. Set the top of the Tee Riser at or above the top elevation of the trench drain rock.
2. Set the bottom of the inlet pipe at the same elevation as the outlet pipe.



## Residential Sediment Control Structure Inspection

Note: The following information was produced by Comcast Corporation, and is provided as a convenience to builders and contractors. The Town of Steilacoom does not inspect or approve television cable or telephone conduit installation.

---

## Comcast Cable CATV Service Trench Requirements

---

This specification is being provided as a guideline to assist builders and developers in standardizing the installation of cable TV conduit in service utility trenches. Please follow these simple steps to ensure that each new home has a serviceable conduit available for cable television services including high-speed Internet, and possibly Comcast digital telephone service. It is anticipated that utilizing this specification will afford builders and developers the flexibility of coordinating installation of conduit for CATV services in a manner that meets their schedule and coincides with power and telephone service placement.

### When to Install CATV Conduit

- ❖ At the time the trench is dug for electric and telephone services.

### Materials Needed

- ❖ Trenches 400' or Less
  - 1" Poly Pipe at Least 13 mil. (Sold by the roll) or 1" PVC Schedule 40 (Stick Pipe) with 12" Sweeps.
- ❖ Trenches over 400' and Non-Residential
  - 2" PVC Schedule 40 (Stick Pipe) with at least 24" Sweeps

**\*Absolutely NO  
Direct-Buried Wire will  
be Allowed!**

### Placement of Conduit

- ❖ Place the appropriate conduit from the service point of the house or building out to the Cable TV pedestal or service box. If a pedestal or service box has not been installed, extend the conduit to the stubbed up TV pipe which will typically be located at the property corner near the street or right-of-way. Occasionally it will be necessary to extend the conduit to a power pole. (See attached drawings.)

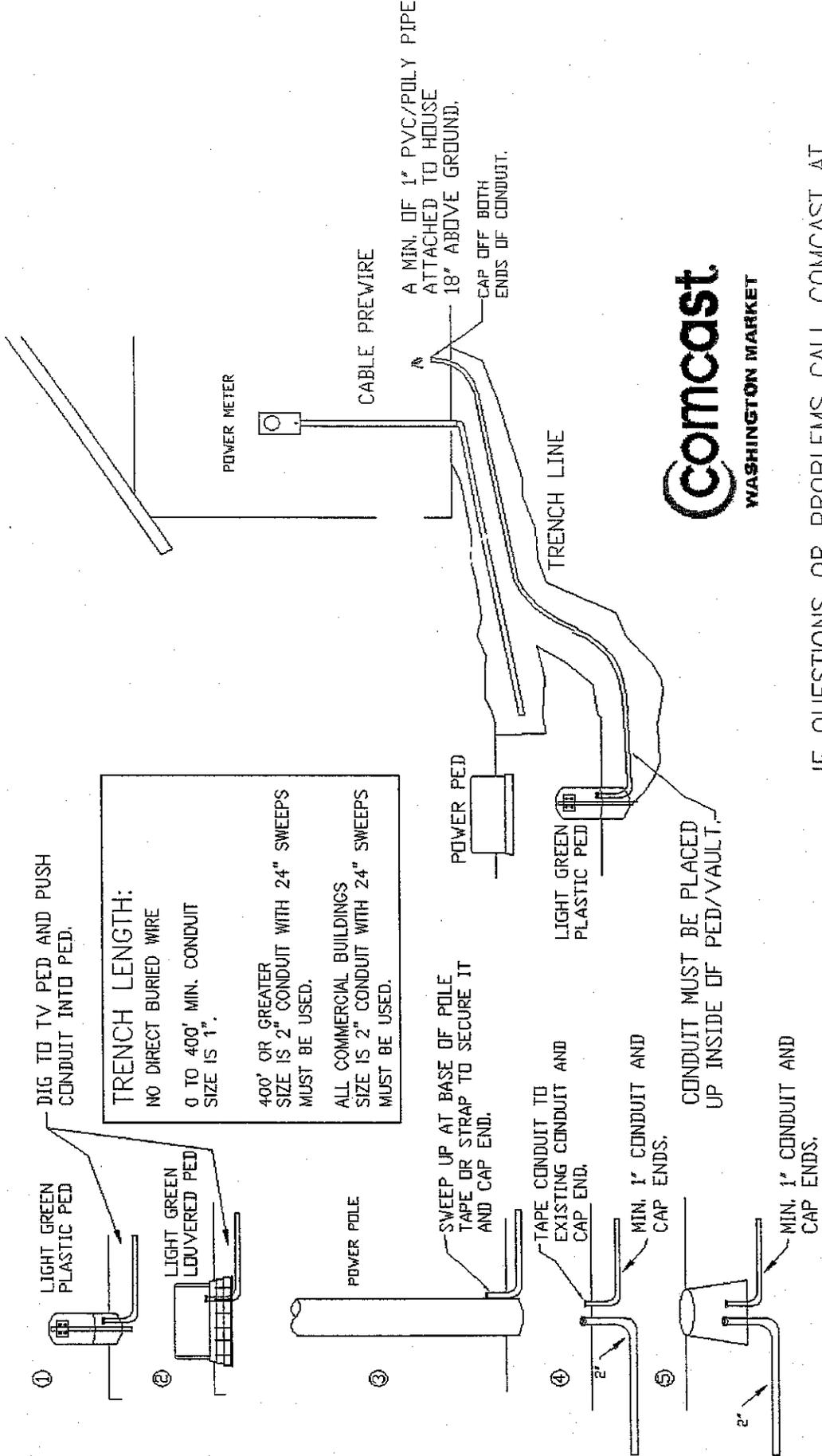
### Important Things to Remember

1. The conduit must be swept up and attached to the building with at least 18" of conduit above ground. Cap or tape the ends. Installation of a pull string is desirable.
2. The conduit must be placed up inside the Cable TV box or pedestal. (Cap the end and push the conduit in from the bottom). Do not stub it outside the box. If service is from a power pole, place within 10" from the base of the pole.
3. If you have questions about where the service point is located, or questions on any other related issues please call our construction department at (866) 771-2281, Option 3.

Your efforts in complying with these provisions will benefit all parties concerned. It will prevent us from impeding on your schedule, enable Comcast Cable to provide services as required by franchise agreements, and benefit the home and building owners that purchase the homes and commercial buildings you are building.

# COMCAST SERVICE CONDUIT PLACEMENT SPECIFICATIONS

THESE ARE THE 5 TYPES OF CABLE TV FACILITIES AT THE STREET. PLACE CONDUIT TO APPROPRIATE APPLICATION AT STREET.



**TRENCH LENGTH:**  
 NO DIRECT BURIED WIRE  
 0 TO 400' MIN. CONDUIT SIZE IS 1".  
 400' OR GREATER SIZE IS 2" CONDUIT WITH 24" SWEEPS MUST BE USED.  
 ALL COMMERCIAL BUILDINGS SIZE IS 2" CONDUIT WITH 24" SWEEPS MUST BE USED.



IF QUESTIONS OR PROBLEMS CALL COMCAST AT 866-771-2281 OPTION #3  
 Drawing Created by: Travis Ketcher

THE CONDUIT MUST ALWAYS BE PLACED UP INSIDE THE PED/VAULT.

## **Erosion and Sediment Control Notice**

- Erosion and sediment control measures must be in place before any clearing and grading is performed under a Town of Steilacoom building permit. The applicant/contractor is responsible for the construction, maintenance, and replacement of all erosion and sediment control measures.
- Erosion and sediment control measures must be installed to Town of Steilacoom standards. The Town has adopted the 2001 Department of Ecology Stormwater Management Manual for Western Washington. Additional site-specific measures may be necessary for your project. Winter site stabilization controls for erosion and sedimentation are in effect from October 1<sup>st</sup> to April 30<sup>th</sup>.
- Inspectors for erosion and sediment control will visit your site at random times during the construction phase to insure measures are in place and being properly maintained. If measures are not in place or need repair, a correction notice or "Stop Work" order will be issued. If adequate measures are not in place to prevent sediment from leaving your site, a "Stop Work" order will be issued.
- A person who fails to comply with a "Stop Work" order shall be subject to enforcement actions, including, but not limited to, the issuance of a civil penalty. The penalty shall be no less than \$250.00 nor exceed \$2,500.00 for each violation. Each day of continued violation or repeated violation shall constitute a separate violation. SMC 13.50.810.
- Corrections and additions to erosion and sediment control measures must be completed within 24 hours of notice. If corrections are not completed in that time frame, a "Stop Work" order will be issued.
- Erosion and sediment control measures must remain in place and be properly maintained throughout the construction process. Additionally, the site must be vegetated or otherwise permanently stabilized before final inspection approval.
- Contact the Building Official or Department of Public Works at (253) 582-1912 with any questions regarding erosion and sediment control measures.

I have read and understand the above conditions for erosion and sediment control measures.

Signature \_\_\_\_\_

Date \_\_\_\_\_

## Town of Steilacoom Cross Connection Control Program Questionnaire

Name: \_\_\_\_\_

Facility Address: \_\_\_\_\_ Date: \_\_\_\_\_

Item #	Check if applicable	Category of Premise or Use of Water (Mandatory Service Isolation) [1]	Assessed Health Hazard	Minimum Protection at Meter [2]
1		Radioactive material processing plants or nuclear reactors	severe	RPBA & AG
2		Sewer treatment plants or sewage pump station	severe	RPBA & AG
3		Hospitals, medical centers, medical/dental or vet clinics, plasma centers, blood plasma centers	high	RPBA
4		Mortuaries	high	RPBA
5		Laboratories	high	RPBA
6		Metal plating industries	high	RPBA
7		Petroleum processing or storage plants	high	RPBA
8		Food processing and beverage bottling plants, canneries, packing (slaughter) houses	high	RPBA
9		Film processing facilities	high	RPBA
10		Piers and docks, graving docks, boat marinas, dry docks	high	RPBA
11		Commercial laundries and dry cleaners	high	RPBA
12		Premises restricting inspection	high	RPBA
13		Premises with unapproved auxiliary supply (well), including reclaimed water		
		New	high	RPBA
		Existing	high	RPBA
		Interconnected with potable water supply	high	RPBA
		Not interconnected with potable water supply	low	DCVA
14		Premises with approved auxiliary supply (well)	low	DCVA
15		Car washes	high	RPBA
16		Premises with fire sprinkler systems and/or private hydrants		
		With chemical addition	high	RPBA/RPDA
		Without chemical addition	low	DCVA/DCDA
		Booster Pump	high	RPBA/RPDA
17		Tall buildings (over 30 feet elevation above the connection between the service line and the distribution system)	low	DCVA
18		Battery manufacturing or repair facilities	high	RPBA
19		Ice manufacturing and cold storage plants	high	RPBA
20		Residential Irrigation	low	DCVA

Item #	Check if applicable	Description of fixture, equipment, or use of water [1]	Assessed Health Hazard	Minimum Protection at Fixture	Additional Premise or Internal Isolation [2]
24		Air compressor	low	DCVA	
25		Air conditioning systems	high	RPBA	
26		Air washers	high	RPBA	
27		Aquarium make-up water	high	AG/RPBA	
28		Aspirators, medical/lob	high	AVB	RPBA
29		Aspirators, medical/lab	high	RPBA	
30		Aspirator, weedicide, herbicide, and pesticide	high	RPBA	
31		Aspirator, vault drain	high	RPBA	
32		Autoclave	high	RPBA	
33		Autopsy tables	high	RPBA	
34		Baptismal fountain	high/low	RPBA, AG/AVB	
35		Bathub, below rim filler	high	RPBA	
36		Bedpan washer	high	RPBA	
37		Post-mix beverage dispenser using CO2	high	RPBA	
38		Bidets	low	AVB	
39		Boiler feed lines	high	RPBA	
40		Bottle washing equipment	high	PVBA/AVB	RPBA
41		Box hydrant (irrigation)	high	PVBA/DCVA	
42		Brine tank	low	RPBA	
43		Can washing equipment	high	PVBA/AVB	RPBA
44		Chemical feed tank for industrial process	high	AG/RPBA	RPBA
45		Chemical feeder for commercial cleaners	high	AG/RPBA	
46		Chlorinators	high	AVB/PVBA	RPBA/DCVA
47		Commercial coffee urns	low	AG/AVB	
48		Computer cooling lines	high	RPBA	
49		Condensate tanks	high	RPBA	
50		Commercial cooling kettles	low	AG/AVB	
51		Cooling towers	high	AG/RPBA	
52		Decorative ponds	high	AG/RPBA	
53		Degreasing equipment	high	RPBA	
54		Dental equipment/cuspidors	high	RPBA	RPBA
55		Dialysis equipment	high	RPBA	
56		Dishwashers	low	AVB	
57		Drinking fountains	low	AG	
58		Dye vats and tanks	high	AG/RPBA	
59		Etching tanks	high	AG/RPBA	RPBA
60		Fermenting tanks	high	AG/RPBA	RPBA
61		Fertilizer injection	high	RPBA	
62		Film processors	high	RPBA	
63		Fire dept. connection	low	DCVA	
64		Fire sprinklers with out chemical addition	low	DCVA/DCDA	
65		Fire sprinklers with chemical addition	high	RPBA/RPDA	

Item #	Check if applicable	Description of fixture, equipment, or use of water [1]	Assessed Health Hazard	Minimum Protection at Fixture	Additional Premise or Internal Isolation [2]
66		Floor drains	low	AG	
67		Flushing floor drains	high	AVB	DCVA
68		Fume hoods (lab)	high	AVB	RPBA
69		Garbage can washers	high	RPBA	
70		Heat exchangers other than double wall with leak path	high	RPBA	
71		Heat pumps	high	RPBA	
72		High pressure washers with out chemical injection	low	DCVA	
73		Hose bibbs (residential)	low	AVB/HBVB	
74		Hose bibbs (industrial)	varies	AVB/HBVB	RPBA/DCVA
75		Hoses, kitchen rinse	low	AVB	
76		Hot tubs	high	AG/RPBA	
77		Commercial hot water heating boilers	high	RPBA	
78		Hydrotherapy baths	high	RPBA	
79		Ice makers	high	AG/RPBA	
80		Industrial fluid systems	high	RPBA	
81		Intertied (looped) services	low	DCVA	
82		Irrigation systems (Individually metered and supplied by domestic water supply)			
		Residential irrigation	low	DCVA	
		With chemical addition	high	RPBA	RPBA
		Without chemical addition	low	DCVA	DCVA
		Booster Pump	high	RPBA	RPBA
83		Janitor sinks	low	AVB/HBVA	
84		Kitchen equipment	low	AVB	
85		Laboratory equipment	high	AVB/LFBA	RPBA
86		Laundry machines, commercial	high	RPBA	
87		Livestock drinking tanks	high	AG/AVB	DCVA
88		Make-up tanks	high	AG/RPBA	
89		Mobile carpet cleaners	high	RPBA	
90		Pesticide applicator trucks	high	AG/RPBA	
91		Pressure booster pump	high	RPBA	RPBA
92		Photo developing sinks/tanks	high	RPBA	
93		Private fire hydrants	low	DCVA	
94		Pump prime lines	high	RPBA	
95		Radiant heating, or water used for heating	high	RPBA	RPBA
96		Radiator flushing equipment	high	RPBA	
97		Recreational vehicle dump station	severe	AG	RPBA
98		Sewer connected equipment	severe	AG	RPBA
99		Sewer Pump	high	AVB/HBVA	RPBA
100		Spas	high	AG/RPBA	

Item #	Check if applicable	Description of fixture, equipment, or use of water [1]	Assessed Health Hazard	Minimum Protection at Fixture	Additional Premise or Internal Isolation [2]
101		Steam generating equipment	high	RPBA	
102		Sterilizers	high	RPBA	
103		Stills	high	RPBA	
104		Sumps	high	AG	
105		Swimming pools	high	AG/RPBA	
106		Trap primers	high	AG	
107		Used or gray water systems	high	RPBA	
108		X-ray equipment	high	RPBA	

- [1] The information in these tables may differ from the backflow prevention requirements for individual plumbing fixtures found in plumbing codes. For public health protection within a customer's premise, the Uniform Plumbing Code governs. This table is provided to illustrate only some of the health hazards found in plumbing systems. This table will be used by the Town in assessing the degree of hazard a customer's plumbing system places upon the Town's water distribution system. Deficiencies in backflow prevention within the customer's premise will be compensated for through the selection of an appropriate assembly for premise isolation.
- [2] Where a high health hazard is assessed, the use of an atmospheric vacuum breaker or other backflow device for protection at a fixture should only be allowed when area or premise isolation is provided by an approved backflow assembly.

**Complete form on following page describing each item checked.**



Town of Steilacoom  
1030 Roe Street, Steilacoom WA 98388  
(253) 581-1912 FAX (253) 582-0651



## **SITE DEVELOPMENT PERMIT APPLICATION**

**FILL IN ALL SPACES  
INCOMPLETE APPLICATIONS WILL BE RETURNED**

**Applicant Information:**

**Owner:** \_\_\_\_\_  
Address: \_\_\_\_\_ City \_\_\_\_\_ Zip \_\_\_\_\_  
Phone: \_\_\_\_\_ Email: \_\_\_\_\_

**Contact Person:** \_\_\_\_\_  
Address: \_\_\_\_\_ City \_\_\_\_\_ Zip \_\_\_\_\_  
Phone: \_\_\_\_\_ Email: \_\_\_\_\_

**Consultant:** \_\_\_\_\_  
Address: \_\_\_\_\_ City \_\_\_\_\_ Zip \_\_\_\_\_  
Phone: \_\_\_\_\_ State Contractor's License # \_\_\_\_\_

**Property Information:**

**Property Address:** \_\_\_\_\_  
**Parcel Number:** \_\_\_\_\_

- **Attach a Proposed Erosion and Sediment Control Plan in accordance with SMC 13.70.050 (see reverse)**
- **Include \$150.00 fee**

***Any land clearing, construction, or development involving the movement of earth shall be in accordance with an approved erosion and sediment control plan, subject to inspection on all days where construction or grading activity takes place.***

I hereby certify that I have read and examined this application and know the same to be true and correct. All provisions of laws and ordinances governing this type of work will be complied with whether specified herein or not. The granting of a permit does not presume to give authority to violate or cancel the provisions of any other state or local law regulating site development.

Signature of Applicant: \_\_\_\_\_

Date: \_\_\_\_\_

### 13.70.050 Design Requirements

#### A. The erosion and sediment control plan shall include:

1. An accurate, legible drawing of the site, at a scale of 20 feet or fewer to the inch, or as determined by the Public Works Director. If more than one sheet is required, an index sheet shall be provided. Each sheet, including the index sheet, shall not exceed a size of twenty-four by thirty-six inches.

The drawing shall contain the following information:

- (a) Legal description of the property;
- (b) A vicinity sketch;
- (c) The location, width and name of all streets, alleys and other public ways within and adjacent to the property;
- (d) The location, width and purpose of all easements within the property;
- (e) Contour lines in areas to be developed shall be at two foot intervals, or as specified by the Public Works Director. Ten foot intervals may be used in areas not to be developed. All contour lines shall be extended into adjacent property a sufficient distance to show the topographical relationship of adjacent property to the property;
- (f) The location of all existing structures within the property and within twenty-five feet of the property;
- (g) A drainage plan consistent with the adopted stormwater manual showing existing and proposed drainage facilities for the site and the adjacent areas;
- (h) The location of known or suspected soil or geological hazard areas, water bodies, creeks and wetlands areas;
- (i) Location of existing and proposed utility lines, sewer and water mains adjacent to or within the property;
- (j) The proposed location of clearing limits and erosion control devices.

2. A sequence of construction of the development site, including grubbing and clearing, rough grading, construction of utilities infrastructure, construction of buildings, and final grading and landscaping.

Sequencing shall identify the expected date on which clearing will begin, the estimated duration of exposure of cleared areas, and the sequence of clearing, installation of temporary erosion and sediment measures, and establishment of permanent vegetation.

3. All erosion and sediment control measures necessary to meet the objectives of this chapter throughout all phases of construction and permanently, after completion of development of the site. Depending upon the complexity of the project, the drafting of intermediate plans may be required at the close of each season.

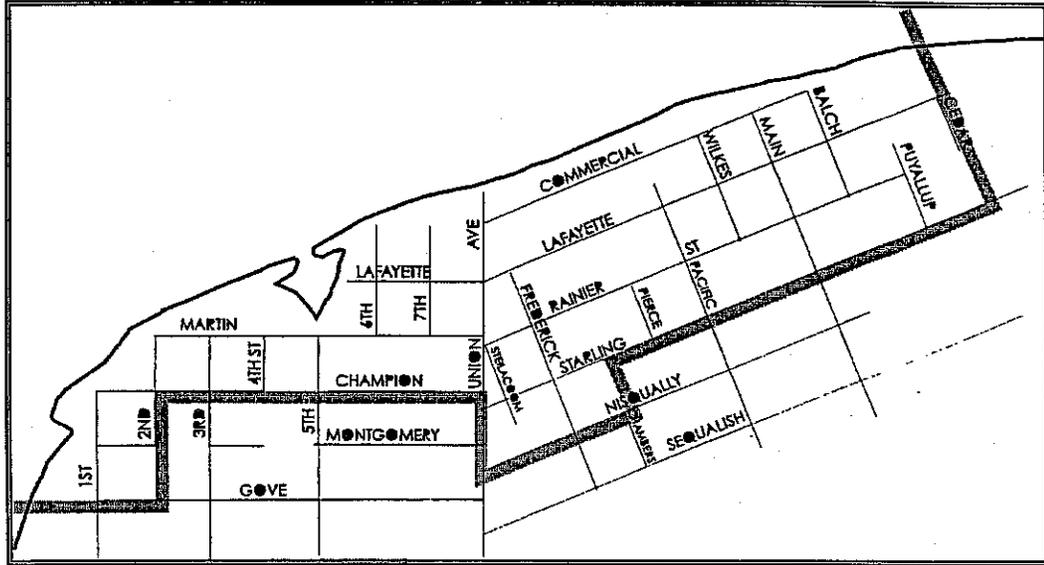
4. For sites of 20,000 square feet or larger, seeding mixtures and rates, types of sod, method of seedbed preparation, expected seeding dates, type and rate of lime and fertilizer application, and kind and quantity of mulching for both temporary and permanent vegetative control measures.

5. Provisions for maintenance of control facilities, including easements and estimates of the cost of maintenance.

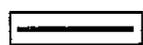
#### B. Modifications to the plan

1. Major amendments of the erosion and sediment control plan shall be submitted to the Town and shall be processed and approved, or disapproved, in the same manner as the original plans.
2. The Town may authorize field modifications of a minor nature.

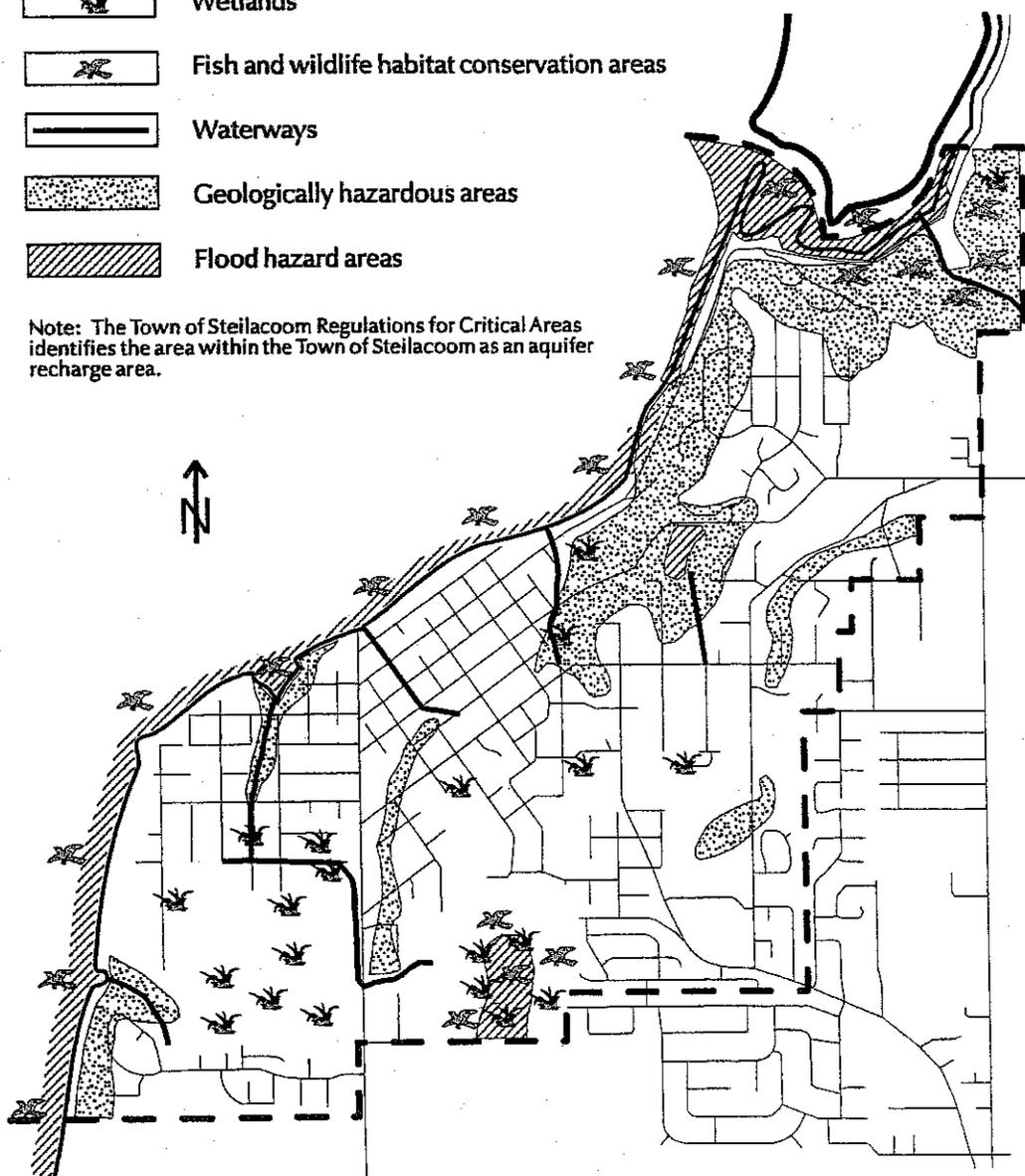
MAP OF STEILACOOM'S HISTORIC DISTRICT



## Critical Areas \*

-  Wetlands
-  Fish and wildlife habitat conservation areas
-  Waterways
-  Geologically hazardous areas
-  Flood hazard areas

Note: The Town of Steilacoom Regulations for Critical Areas identifies the area within the Town of Steilacoom as an aquifer recharge area.



\* Source: Steilacoom Comprehensive Plan and evidence on file with the town. This illustration provides approximate locations for each of the individual features; specific mapping and delineations will be the responsibility of individual applicants. Additional critical areas may be present and will be identified as development applications are submitted for review.

Town of Steilacoom  
Community Development  
1030 Roe Street, Steilacoom WA 98388  
(253) 581-1912 FAX (253) 582-0651



**BUILDING PERMIT APPLICATION**

**FILL IN ALL SPACES INCOMPLETE APPLICATIONS WILL BE RETURNED**

**\*Required by RCW 19.27.095**

Type of Permit:  Building  Plumbing  Mechanical  Demolition  Other

**Applicant Information**

**\*Owner:** \_\_\_\_\_

Address: \_\_\_\_\_ City \_\_\_\_\_ Zip \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

**Contact Person if not owner:** \_\_\_\_\_

Address: \_\_\_\_\_ City \_\_\_\_\_ Zip \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

**\*Contractor:** \_\_\_\_\_

Address: \_\_\_\_\_ City \_\_\_\_\_ Zip \_\_\_\_\_

Phone: \_\_\_\_\_ State Contractor's License # \_\_\_\_\_

**Plumbing Contractor:** \_\_\_\_\_

Address: \_\_\_\_\_ City \_\_\_\_\_ Zip \_\_\_\_\_

Phone: \_\_\_\_\_ State Contractor's License # \_\_\_\_\_

**Mechanical Contractor:** \_\_\_\_\_

Address: \_\_\_\_\_ City \_\_\_\_\_ Zip \_\_\_\_\_

Phone: \_\_\_\_\_ State Contractor's License # \_\_\_\_\_

**\*Lender/Issuer of Payment Bond:** \_\_\_\_\_

Address: \_\_\_\_\_ City \_\_\_\_\_ Zip \_\_\_\_\_

Phone: \_\_\_\_\_

**Property Information:**

**\*Property Address:** \_\_\_\_\_

**\*Parcel Number:** \_\_\_\_\_

Is this lot within the Historic District? Yes \_\_\_ No \_\_\_

**Project Information:**

Residential: SFR  Duplex  Multi-Family  Remodel  Addition  Deck  Other

Commercial/Industrial: New Building  Remodel  Addition  Other

Describe project: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Setbacks:** Front \_\_\_\_\_ Rear \_\_\_\_\_ Left \_\_\_\_\_ Right \_\_\_\_\_  
**Height** \_\_\_\_\_ **Stories** \_\_\_\_\_ **Dwelling Units** \_\_\_\_\_  
**Building size:** \_\_\_\_\_ X \_\_\_\_\_ **Lot size** \_\_\_\_\_ X \_\_\_\_\_  
**Square footage** first floor \_\_\_\_\_ second floor \_\_\_\_\_  
**Type of heat** (if available) Natural Gas  Electric   
 Heating/Model \_\_\_\_\_ Air Conditioning/Model \_\_\_\_\_ Misc. \_\_\_\_\_  
**Square Footage of Garage or Any Other Buildings Being Built** \_\_\_\_\_  
 Number of bedrooms \_\_\_\_\_ Number of baths \_\_\_\_\_  
 Number of plumbing fixtures \_\_\_\_\_ Number of fireplaces \_\_\_\_\_  
**Estimated value of Project:** \_\_\_\_\_

**Utility Information:**

**Public water** (circle one) Town of Steilacoom Lakewood Water District  
 Size of Water Meter Needed \_\_\_\_\_  
**Sewer** (circle one) Town of Steilacoom Other \_\_\_\_\_  
**Power Source** (circle one) Town of Steilacoom Other \_\_\_\_\_  
 Size of Electrical Service Needed \_\_\_\_\_

**For Manufactured and Modular Homes:**

**Make** \_\_\_\_\_ **Model** \_\_\_\_\_ **Year** \_\_\_\_\_  
**Size** \_\_\_\_\_

**For Commercial Projects:**

**Project name** \_\_\_\_\_ **Inspection date** \_\_\_\_\_  
**Inspection type** \_\_\_\_\_ **Inspection status** \_\_\_\_\_

I hereby certify that I have read and examined this application and know the same to be true and correct. I further certify that I have read the Town of Steilacoom Builder's Packet and know that this submittal is in accordance with the information supplied therein. All provisions of laws and ordinances governing this type of work will be complied with whether specified herein or not. The granting of a permit does not presume to give authority to violate or cancel the provisions of any other state or local law regulating construction or the performance of construction.

**Construction hours: 7 AM – 10 PM Mon-Fri; 8 AM – 5 PM Sat-Sun**

**Signature of Applicant:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Per RCW 19.27.095, applications must include information on the lender administering interim construction financing, if any, or information on the issuer of a payment bond on behalf of the prime contractor for the protection of the owner, if the bond is for an amount not less than 50% of the total amount of the construction project.**

**No site work shall begin until the permit is issued and all fees are paid**