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4/9/2008 Page 1 of 10 2:52PM

COVER SHEET
OPERATION & MAINTNEANCE MAUNAL

GRANTOR: Aloha Lumber Corporation

GRANTEE: Skagit County

LEGAL DESCRIPTION

Parcel A:

The South $\frac{1}{2}$ of the Northeast $\frac{1}{4}$ and the North $\frac{1}{2}$ of the Northeast $\frac{1}{4}$ of the Southeast $\frac{1}{4}$ of Section 8, Township 35 North, Range 7 East, W.M. Situate in the County of Skagit, State of Washington.

Parcel B:

The South $\frac{1}{2}$ of the Northeast $\frac{1}{4}$ of the Southeast $\frac{1}{4}$ of Section 8, Township 35 North, Range 7 East, W.M. Situate in the County of Skagit, State of Washington.

ASSESSOR'S PROPERTY TAX PARCEL NUMBER: P42280, P42296, P42295 and P42294



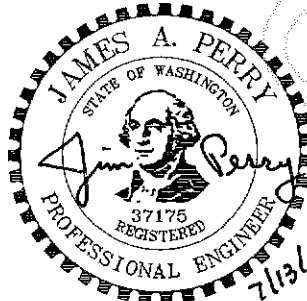
WINDSONG RANCH

OPERATION AND MAINTENANCE MANUAL

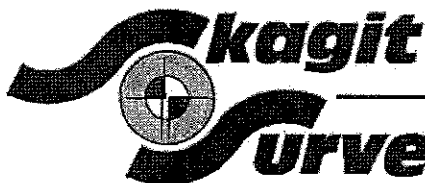
FOR THE STORMWATER COLLECTION SYSTEM AND DETENTION SYSTEM

July 12, 2007

PREPARED BY



EXPIRES 7/18/2009



Jim Perry 4/1/08

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OPERATION AND MAINTENANCE MANUAL

For

WINDSONG RANCH

STORMWATER COLLECTION SYSTEM AND DETENTION SYSTEM

TABLE OF CONTENTS

I.	PURPOSE OF MANUAL.....	2
II.	PURPOSE OF FACILITY.....	2
III.	LAYOUT OF FACILITY.....	2
IV.	FUNCTION OF UNITS.....	2
V.	NORMAL OPERATING PROCEDURES.....	4
VI.	MAINTENANCE OF FACILITY.....	4
VII.	RECORD KEEPING.....	4
VIII.	EMERGENCIES.....	5

EXHIBITS:

- A. SITE LAYOUT
- B. FLOW CONTROL STRUCTURE DETAIL
- C. MAINTENANCE LOG FORM



200804090085

Skagit County Auditor

4/9/2008 Page

3 of

10 2:52PM

I. PURPOSE OF MANUAL

The purpose of this manual is to outline the procedures for the proper operation and maintenance of the stormwater facilities for WINDSONG RANCH as required to be maintained by the WINDSONG RANCH lot owners.

Lot owners in WINDSONG RANCH have the responsibility for all reasonable and necessary maintenance and repairs of the stormwater facilities within the Long CaRD for WINDSONG RANCH.

This manual is the mechanism for the maintenance, repair and replacement of the stormwater, water detention and drainage facilities.

For the benefit of the owners of the lots in the WINDSONG RANCH Plat, conditions should not be allowed to deteriorate, nor maintenance not performed on-site, which would force the Skagit County Public Works Department to assume responsibility of the facility. The stormwater collection system and detention system should add to the beauty and ease of living in WINDSONG RANCH as much as possible.

II. PURPOSE OF FACILITY

In the development of the residential lots for WINDSONG RANCH, the natural drainage of the area was changed by the construction of the road and houses. Instead of rain falling on trees and grass and percolating into the soil, some of the rain will fall on paved roads and roofs and quickly run off and collect at low points.

Now with more water reaching the low point faster, this stormwater facility provides control of the quality, amount and rate at which stormwater is discharged.

III. LAYOUT OF FACILITY

The stormwater system for WINDSONG RANCH basically is comprised of two parts. First, the collection system and secondly, the detention system.

Exhibit "A" is a copy of the layout of the private road and lots for WINDSONG RANCH. Also shown are the drainage easements of which the lot owners have legal right of access for maintenance purposes.

IV. FUNCTION OF UNITS

A. ROAD DITCHES

Culverts are placed, as shown on Exhibit "A", to convey land and road stormwater runoff along the roadside ditches. Ditches over 5% grade are rock-lined in order to prevent erosion and transport of sediment. The ditches convey most of this runoff to the detention swale along the road east of Lot 12.



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Runoff from Lots 7 through 12 sheet flows south to the interceptor ditch which also serves as a detention swale. This interceptor/detention swale is connected to the main detention swale by a culvert under the road (see Exhibit "A").

B. BIOFILTRATION SWALE

Prior to flowing into the detention pond, the collected stormwater flows along a biofiltration swale which are the grass-lined road ditches and the grassed interceptor/detention swales. This swale provides for water quality control of the stormwater. This control is provided by slowing down the velocity of the water and having it flow along these grass-lined swales. The flat slope and the grass provide for sediment to settle out along the length of the swale. The grass also removes (absorbs) some oil from the stormwater by having the globules of oil attach to the blades of grass.

C. DETENTION

The detention swale is designed and sized to store the increase in runoff as a result of the construction of the road and the construction of eleven new houses. This increase in runoff from "pre-developed" to "developed" conditions was calculated to be 53,910 cubic feet or 403,250 gallons. The only purpose of the detention swale is to store this volume of increased stormwater runoff while it is slowly discharged. Exhibit "A" shows the layout of the detention swale as included in the construction drawings.

D. FLOW CONTROL STRUCTURE (FCS)

The purpose of the flow control structure (FCS) is to release the stored water in the detention swale at a slow rate. This rate is regulated by the Skagit County Drainage Ordinance. The flow rate is basically similar to the "pre-developed" runoff rate from the site.

The flow is controlled by an orifice or hole in the discharge culvert. Excess stormwater flows over the top of the spillway. Exhibit "B" shows the details of the flow control structure as included in the construction plans.

It must be understood that the detention swale and discharge structure are designed to handle only the increase in the stormwater runoff as a result of this development. However, all the collected stormwater runoff is still being directed to the detention swale. Stormwater volume and flow rates in excess of the swale volume and FCS discharge rate will flow over the spillway. This is normal and how the detention system was designed.



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V. NORMAL OPERATING PROCEDURES

The stormwater collection and detention system is designed to function on its own. When a rainstorm comes, the water is collected and flows through the ditches and culverts to the detention swale. The only and main operating procedure is to once a month make sure nothing has plugged the culverts and the orifice in the flow control structure (FCS). It is important that this operating procedure be recorded.

Visually inspect the orifice to make sure it is not clogged.

The County may wish to see a record of operating and maintenance procedures actually performed. Keep a log of the date and what was observed and/or done. A copy of a master form for keeping this log is included as Exhibit "C". The person responsible for operating and maintaining the stormwater system for WINDSONG RANCH is to keep a copy of this manual in a ring binder with extra copies of the maintenance log form. This way the manual and the log will keep everything recorded and organized.

A "normal" operating procedure is to do the above mentioned inspection after a very heavy rain. This way you will make sure everything worked properly and the system is ready for the next rainstorm. Be sure to log all of your inspection items on the log form.

VI. MAINTENANCE OF FACILITY

The ditches and culverts should be inspected to remove any accumulated debris. This should be part of the monthly operating procedure.

When tall weeds or trees start to grow in the detention swale they should be removed. When this is necessary, record it on the maintenance log form.

One may think that tall weeds and trees do not affect the operation of the swale. Normally they may not, but silt will accumulate in the bottom of the swale and will need to be cleaned out. Thus the swale bottom should be kept in a "grass only" state.

VII. RECORD KEEPING

As explained in the previous sections, it is important to keep a log of all inspections and maintenance performed on your stormwater collection and detention system. This log is to be available for inspection by the Skagit County Public Works Department. By keeping this log up to date and kept in a binder, you will be ready for any unexpected inspection.

These maintenance procedures are required by Skagit County pursuant to the terms and conditions set forth on the face of the plat for WINDSONG RANCH.



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VIII. EMERGENCIES

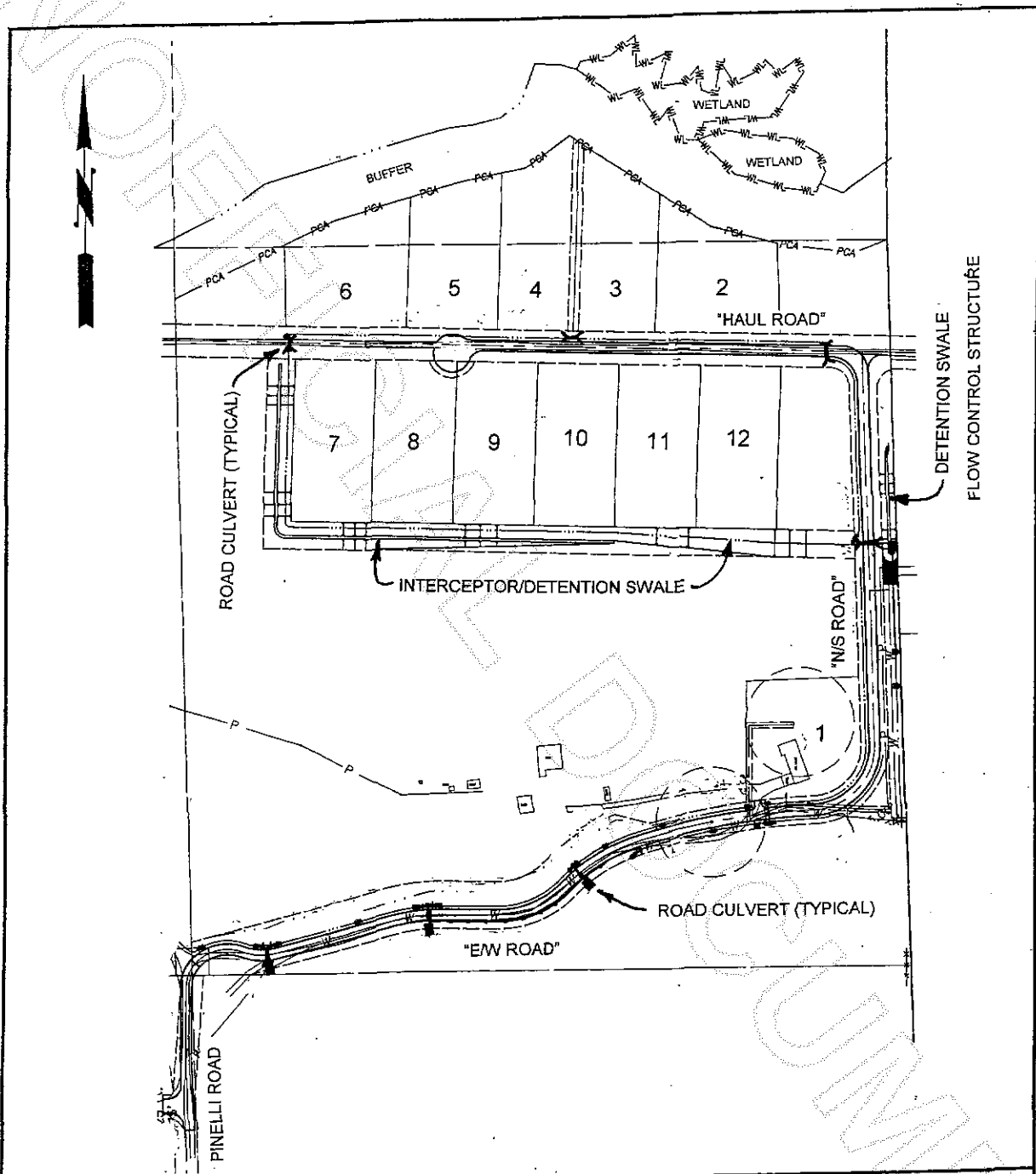
If there is a situation, such as a major oil spill into your collection system, or if there is any other type of major damage to the stormwater collection or detention system, be sure to call the Skagit County Public Works Department at 360-336-9400 and report it to them. Inform the County what happened, what you are doing about it, and solicit any help you may need.

If any major repairs are necessary make sure they are done consistent with the initial plans and construction of your facilities. A copy of the construction plans is to be readily available to the maintenance person at all times.



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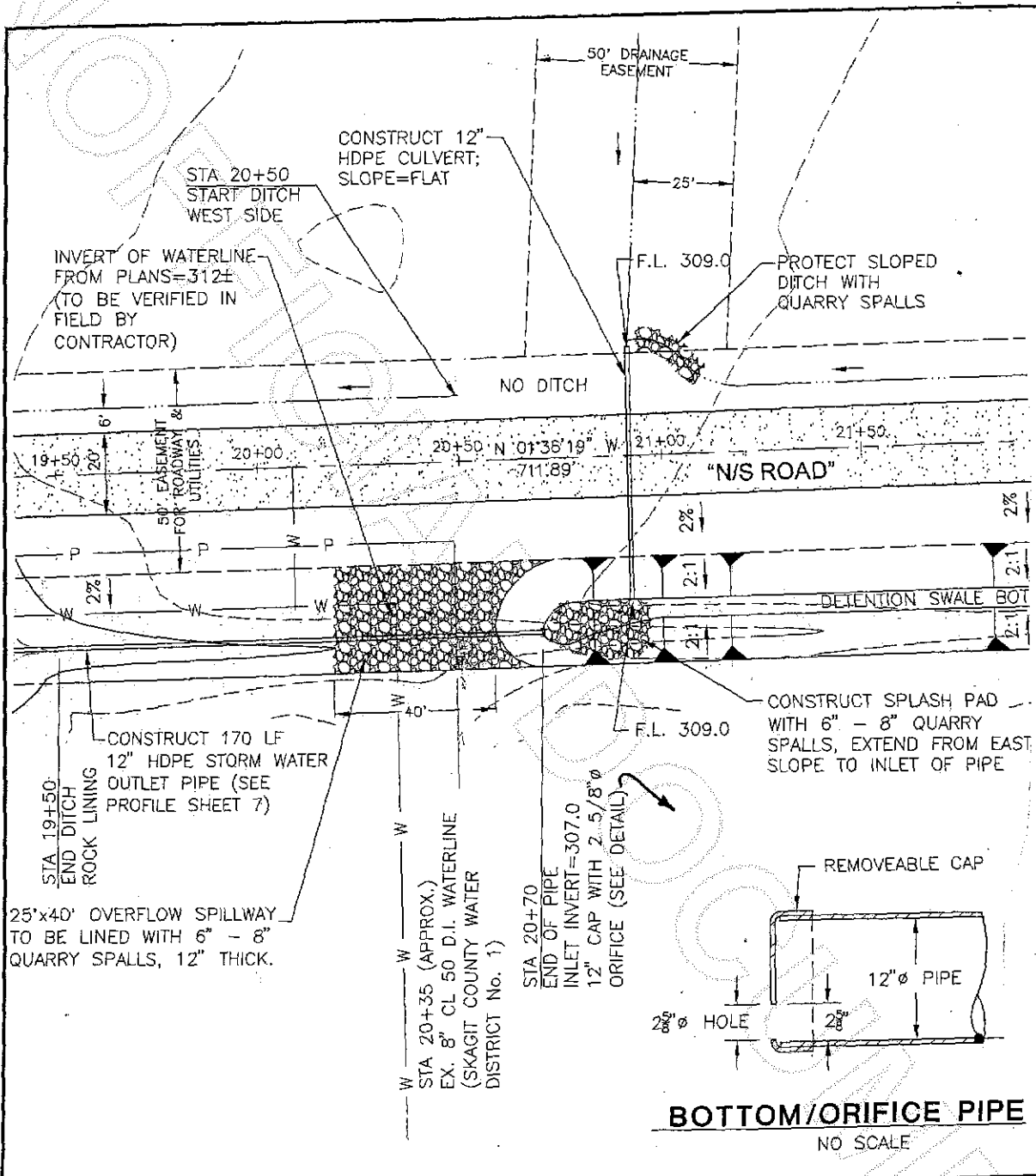


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WINDSONG RANCH
 STORMWATER O & M MANUAL
 SITE LAYOUT
 EXHIBIT "A"



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WINDSONG RANCH
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 FLOW CONTROL STRUCTURE

EXHIBIT "B"



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