



CITY OF
**West
Linn**

LAND USE PRE-APP CONFERENCE MEETING

Thursday, February 4, 2010

**CITY HALL
22500 SALAMO RD
WILLAMETTE CONFERENCE ROOM**

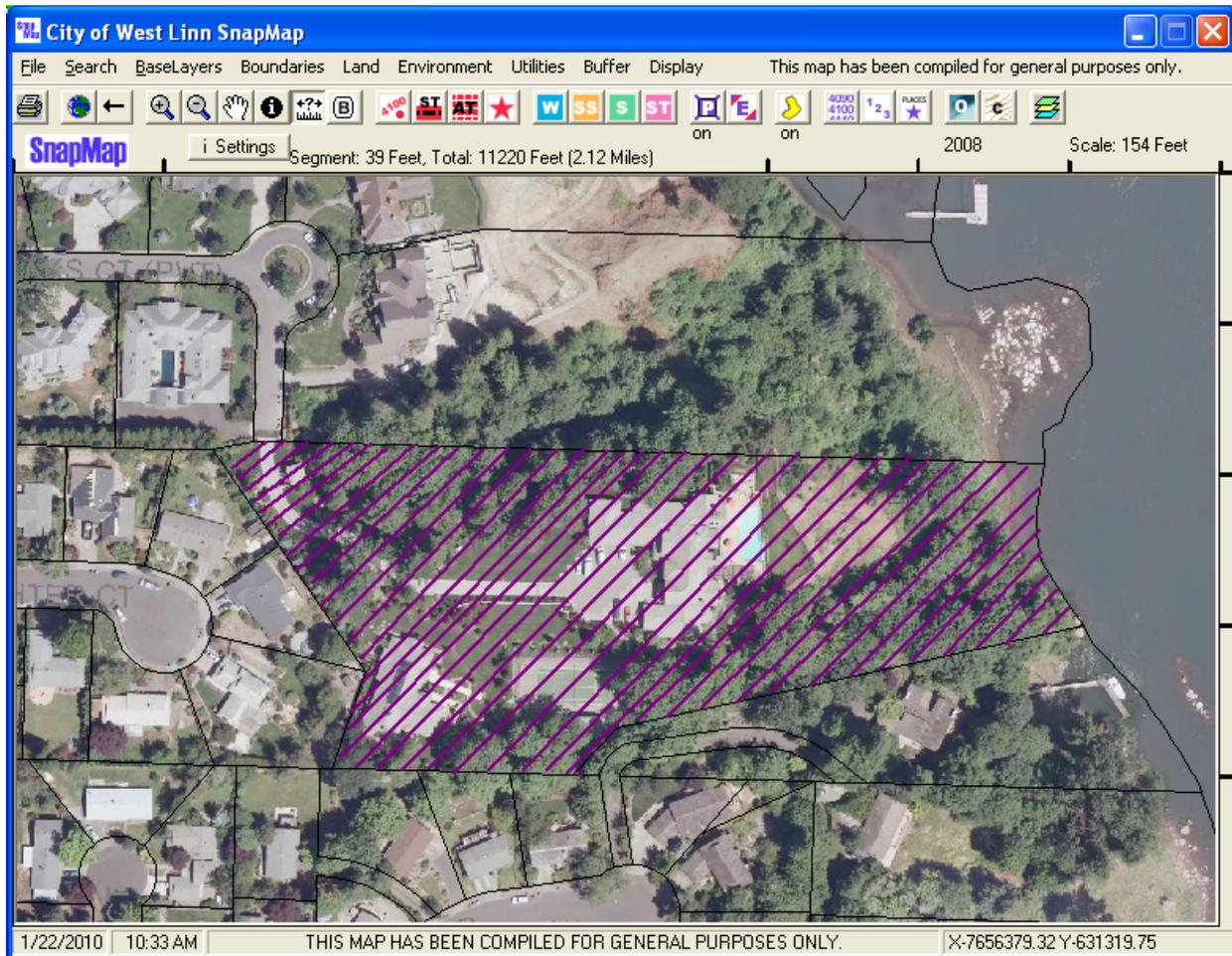
10:00am **Water Resource Area Protection - Landslide mitigation.
Installation of horizontal drains located downslope of the pool
area to stabilize the hillside.**

Applicant: **GeoDesign, Inc. (Tacia Miller/Scott Mills)**

Address: **2130 Windham Oaks Ct.**

Neighborhood Assn: *Bolton*

PA-10-01 Planner: P. Spir



CITY OF WEST LINN
PRE-APPLICATION CONFERENCE

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DATE OF CONFERENCE Thurs 2/4/10 TIME OF CONFERENCE 10 AM
FEE \$1000⁰⁰ PROJECT # PA-10-01 STAFF CONTACT Peter
(This section to be filled in by staff)

Pre-application conferences occur on the first and third Thursdays of each month. In order to be scheduled for a conference, this form including property owner's signature, the pre-application fee, and accompanying materials must be submitted at least 14 days in advance of the conference date. Twenty-four-hour notice is required to reschedule.

APPLICANT'S NAME GeoDesign, Inc. (Tacia Miller/Scott Mills) PHONE NO. (503) 968-8787

ADDRESS (or map/tax lot) OF SUBJECT PROPERTY 2130 Windham^{Dr} Court, West Linn 97068

APPLICANT'S MAILING ADDRESS 15575 SW Sequoia Pkwy, Suite 100, Portland, OR 97224

APPLICANT'S E-MAIL ADDRESS tmiller@geodesigninc.com; smills@geodesigninc.com

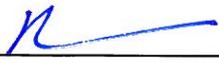
BRIEF DESCRIPTION OF PROPOSAL: Project will include installation of sets of horizontal drains that will be located downslope of the pool area (as shown on attached drawings) to relieve water on the hillside for landslide prevention. A more complete description is provided in memorandum attachment.

Please attach additional materials relating to your proposal including a site plan on paper up to 11 x 17 inches in size depicting the following items:

- North arrow
- Scale
- Property dimensions
- Streets abutting the property
- Conceptual layout, design and/or building elevations
- Access to and from the site, if applicable
- General location of existing trees
- Location of creeks and/or wetlands
- Location of existing utilities (water, sewer, etc.)
- Easements (access, utility, all others)

Please list any questions or issues that you may have for city staff regarding your proposal:

By my signature below, I grant city staff right of entry onto the subject property in order to prepare for the pre-application conference.

 *
Property owner's signature

01.21.10
Date

Property owner's mailing address (if different from above)

*Please coordinate date/time through GeoDesign, Inc. prior to site visit.

To:	City of West Linn Planning & Engineering	From:	Tacia C. Miller P.E. and Scott V. Mills, P.E., G.E.
		Date:	January 21, 2010
Address:	Planning and Building Department 22500 Salamo Road, #1000 West Linn, OR 97068		
cc:	n/a		
GDI Project:	simpL-5-06-02		
RE:	Donegan Residence, 2130 Windham Court, West Linn, Oregon Summary of Scope Work for Landslide Mitigation		

INTRODUCTION

This memorandum provides a summary of the scope of work for landslide mitigation at the Donegan residence located at Windham Court in West Linn, Oregon, and has been provided as an additional attachment to the pre-application form.

BACKGROUND

GeoDesign previously completed a geotechnical investigation and stability analysis of the landslide area located on the steep slope directly below the swimming pool, which is located on the eastern portion of the property and shown on the attached Figure 1. Significant movement of the landslide occurred last winter, and continued movement and failure of the slope could detrimentally impact the pool and cause extensive damage or failure. Mitigation of the landslide is limited by the steep slopes at the site, the location of the pile-supported pool, and the relatively deep slip surface of the controlling landslide.

It was determined that both flow and shallow block failures at the site can be mitigated in part by alleviating the increase of pore water pressures near the face of the slope that occur in response to recharge of the regional groundwater system by winter precipitation. In addition, we recommended that the likelihood of future landsliding failures can be reduced by alleviating the buildup of pore water pressure at the face of the slope by installing horizontal drains.

SITE ACCESS

Installation of horizontal drains has been awarded to Scheffler Northwest of Vancouver, Washington (CCB#168498). It has been determined that the most feasible method to access/mobilize installation equipment and materials to working areas along the steep slopes will be transported via helicopter. The helicopter will be used to place a tracked excavator-mounted drill rig and materials

to the southern-most working pad area shown on Figure 1. Prior to mobilization, erosion control consisting of silt fence as shown on Figure 1 will be installed. The track-mounted drill rig will crawl to the two other working pads. Equipment operators and workmen will access the working areas via foot from the southern property boundary.

The working pad areas are currently vegetated with non-native or intrusive species consisting of dense ivy and blackberry bushes. In addition, utilities are not present to the east of the pool. Upon completion of the work, Mr. Donegan's contract landscape company will replant the disturbed areas with native species and vegetation suited for erosion control or slope stabilization.

HORIZONTAL DRAINS

Horizontal drains will be installed to lower groundwater at the face of the slope in the vicinity of the landslides encountered at the site. Two to three tiers of horizontal drains have been recommended to intercept groundwater encountered in our subsurface investigation.

The general configuration of the horizontal drains is shown on Figure 2. To achieve an adequate fall in elevation, the horizontal drains will need to be installed at a slope of approximately 10 degrees to allow drainage of the collected groundwater. A fan of five horizontal drains will be extended from the locations shown on Figure 2. These drains will vary in length so that groundwater zones encountered at the site are intercepted and so that the drains do not encounter the existing pile foundation system of the pool. Water produced from these drains will be collected into tightline drains and directed to discharge points outside of the extent of the landslide area.

Horizontal drains will consist of 1-inch-diameter, slotted PVC piping or Titan Drill Drains and will be installed using an excavator-mounted drill rig at approximate locations shown. GeoDesign will conduct full-time observation during construction of the horizontal drains to ensure construction and installation methods. After installation of horizontal drains, periodic inspection and maintenance of the horizontal drains will be necessary to ensure their continued functionality.

TCM;JDT:kt

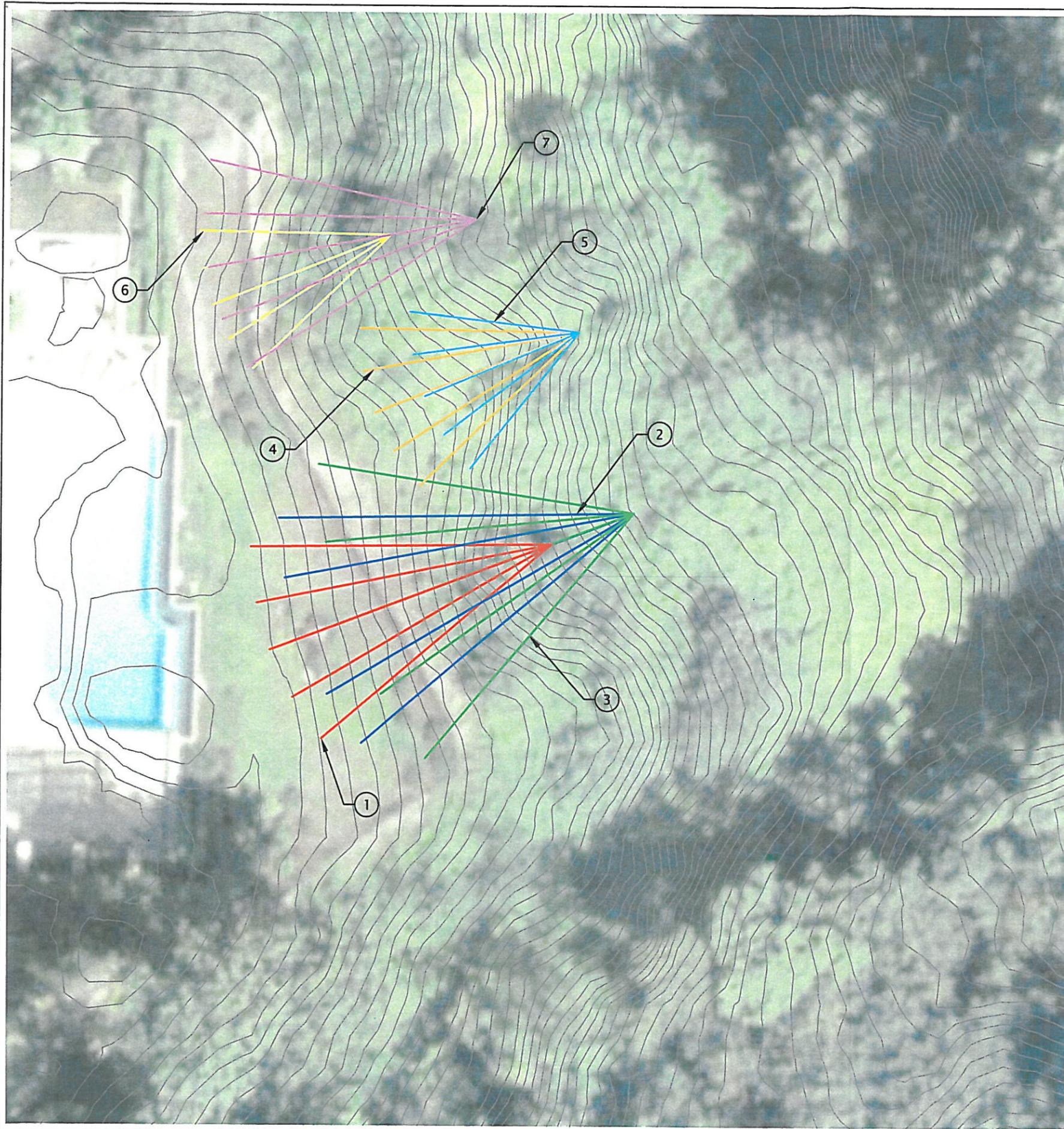
Attachments

Four copies submitted

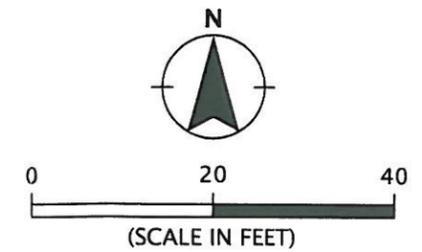
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FIGURES



HORIZONTAL DRAIN ARRAY	NUMBER OF DRAINS	ESTIMATED STARTING ELEVATION (FEET)	ESTIMATED LENGTH (FEET)	INCLINATION (DEGREES)
1	5	102	55	10
2	5	90	65	10
3	5	90	50	10
4	5	100	40	10
5	5	100	30	10
6	5	115	35	10
7	5	103	50	10



SITE PLAN BASED ON AERIAL PHOTOGRAPH
 OBTAINED FROM GOOGLE EARTH PRO®,
 AUGUST 10, 2009