

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

**Dockets UE-190529 & UG-190530
Puget Sound Energy
2019 General Rate Case**

AWEC DATA REQUEST NO. 003:

Please reference the Direct Testimony of Margaret Hopkins. When evaluating the potential for the initial development of the Bothell data center, what specific efforts did the Company take to determine the suitability of the Bothell location with respect to protection from flooding incidents?

Response:

Prior to siting the data center at the North Creek campus in Bothell, Puget Sound Energy ("PSE") required the landlord to address the flood risk. Section 7 of the Second Amended Lease, dated October 15, 2009, provided for "Flood Control Improvements" to be completed by the landlord as a condition to PSE entering into the Second Amended Lease and locating its data center at the North Creek campus. Attached as Attachment A to PSE's Response to AWEC Data Request No. 003 is the Second Amended Lease. Attached as Attachment B to PSE's Response to AWEC Data Request No. 003 is a letter dated November 13, 2009, from the landlord relating to flood control improvements performed by the landlord.

The landlord also retained GeoEngineers to undertake levee raising and maintenance for the North Creek levee system to address the flooding risks. Attached as Attachment C to PSE's Response to AWEC Data Request No. 003 is a letter dated July 21, 2009, from GeoEngineers documenting the flood control work.

**ATTACHMENTS A-C to
PSE's Response to
AWEC Data Request No. 003**

SECOND AMENDMENT TO LEASE

THIS SECOND AMENDMENT TO LEASE (this "Amendment") is dated for reference purposes as of the 15th day of October, 2009, by and between S/I NORTHCREEK III, LLC, a Washington limited liability company ("Landlord") and PUGET SOUND ENERGY, INC., a Washington corporation ("Tenant").

RECITALS

A. Landlord's predecessor in interest, S/I North Creek II, LLC, and Tenant entered into that certain Lease dated March 21, 1999 (the "Original Lease"), as amended by a First Amendment to Lease dated May 19, 2006 (the "First Amendment"; the Original Lease and First Amendment are collectively referred to herein as the "Lease"), for the lease of certain premises consisting of approximately 75,408 rentable square feet located in Buildings G and H at Schnitzer North Creek Technology Campus I in Bothell, Washington. Unless otherwise defined herein, all capitalized terms used in this Amendment shall have the same meaning as they are given in the Lease.

B. Landlord and Tenant desire to amend the Lease to, among other things, expand the Premises and extend the Term of the Lease, subject to the terms and conditions set forth in this Amendment.

NOW, THEREFORE, the parties agree as follows:

1. Expansion Premises. Effective as of the earlier of (a) May 1, 2010, or (b) the date Tenant elects to occupy the Expansion Premises (defined below) (the earlier of which is referred to herein as the "Expansion Premises Commencement Date"), the Premises shall be expanded to include approximately 16,097 rentable square feet located on the second floor of Building H (the "Expansion Premises") as shown on the Floor Plan attached hereto as Exhibit A. Thus, effective as of the Expansion Premises Commencement Date, the total rentable area of the Premises will be 91,505 rentable square feet. Notwithstanding the above, Tenant may have access to the Expansion Premises upon the mutual execution of this Amendment for the purposes of constructing and installing improvements to the Expansion Premises pursuant to Section 5 below and installing Tenant's furniture, fixtures and equipment. Such access shall be subject to all of the terms of the Lease (other than the obligation to pay Base Rent or Operating Expenses) but shall not constitute occupation of the Expansion Premises for purposes of triggering the Expansion Premises Commencement Date.

2. Term. The Term of the Lease as set forth in Section 1.01 of the Lease shall be extended to and through June 30, 2021.

3. Expansion Premises Base Rent. Effective as of the Expansion Premises Commencement Date, the Base Rent payable under Section 1.01(a) of the Lease shall be revised to be as follows:

<u>Period</u> <u>(Months after the Expansion</u> <u>Premises Commencement Date)</u>	<u>Monthly Rental Installments</u>
1 – 15	\$0.00, NNN
16 – 24	\$137,258.00, NNN
25 – 48	\$144,883.00, NNN
49 – 72	\$152,508.00, NNN
73 – 96	\$160,134.00, NNN
97 – 120	\$167,759.00, NNN
121 – 6/30/21	\$175,385.00, NNN

4. Section 1.01 Terms. Effective as of the Expansion Premises Commencement Date, the following Terms set forth in Section 1.01 of the Lease shall be amended to reflect the addition of the Expansion Premises as follows:

- Premises:** Approximately 47,123 rentable square feet of first and second floor office area in Building G, and approximately 44,382 rentable square feet of first and second floor office area in Building H, for a total of 91,505 rentable square feet.
- Tenant's Share of Building G:** 100%
- Tenant's Share of Building H:** 75.2%
- Tenants Share of Project:** 28.1%
- Surface Parking Spaces:** Landlord shall provide Tenant with a total of Three Hundred and Twenty (320) stalls, for the entire Premises throughout the Term of the Lease. All stalls will be surface parking stalls adjacent to the Buildings and shared on a non-exclusive basis in common with other tenants and customers at no additional charge to Tenant through June 30, 2021 (with any charge for an Extended Term being determined in accordance with Section 7 of the First Amendment). Tenant shall be allowed to store its

service vans and pickup truck in the parking areas designated by Landlord during non-business hours and weekends. Except as aforesaid, Landlord shall not have any obligation to provide additional parking for Tenant.

5. Tenant Improvement of Expansion Premises. Except as provided herein, Landlord shall provide the Expansion Premises to Tenant in their current AS-IS condition. Subject to Landlord providing Tenant the Improvement Allowance (as defined below), any improvements to the Expansion Premises shall be completed by Tenant at Tenant's sole cost and expense and in accordance with the terms and conditions of 9.02 of the Lease provided, however, Tenant shall use Landlord's pre-selected design/build mechanical, electrical, fire protection, and plumbing subcontractors that have performed other tenant improvements for Tenant at the Project in performing any work in the Premises.

Landlord shall provide to Tenant an allowance of \$1,457,704.00 (the "Improvement Allowance") for improvements made to the Expansion Premises or the Premises during the period commencing on the date of this Amendment and ending on the date that is eighteen (18) months after the Expansion Premises Commencement Date, including cabling and other costs incidental to the construction of a data center in the Premises (collectively, "Improvement Costs"). Landlord shall disburse amounts from the Improvement Allowance to Tenant not more than one time per month, within thirty (30) days of written request by Tenant together with substantiation of such incurred Improvement Costs and lien releases relating to the same. In the event that Landlord fails to timely disburse any portion of the Improvement Allowance requested by Tenant pursuant to the foregoing, Tenant may deliver written notice thereof to Landlord (the "Initial Notice"). If within fifteen (15) days of receiving Tenant's Initial Notice, Landlord fails to make such disbursement to Tenant, Tenant may deliver to Landlord a second notice (the "Reminder Notice"). The Reminder Notice must include a copy of the Initial Notice and specify that Tenant will have the rights granted under this Section if Landlord fails to make such disbursement to Tenant within ten (10) days of receipt of the Reminder Notice. If Landlord fails to make such disbursement to Tenant within ten (10) days of receipt of the Reminder Notice, then Tenant shall have the right at its option to offset such amount against Base Rent next coming due under the Lease provided, however, in no event shall Tenant offset more than the undisbursed portion of the Improvement Allowance and Tenant's offset rights under this Section cease upon the disbursement and/or offset of the full amount of the Improvement Allowance. Upon the earlier of (a) payment by Landlord of the Improvement Allowance in full, or (b) twenty (20) months after the Expansion Premises Commencement Date, provided that Landlord has performed all of its obligations under this Section, Landlord and Tenant shall, at Landlord's request, execute an amended and restated version of this Amendment with this sentence and the prior five sentences removed. Landlord shall have no obligation to fund, nor shall Tenant have any right to receive, any portion of the Improvement Allowance not requested by Tenant on or

before the date that is twenty (20) months after the Expansion Premises Commencement Date.

6. Standby Generator. The Building is currently served by a 300KVA standby generator (the "Generator"). Tenant currently has the right to draw 25KVA from the Generator. Subject to the terms of this paragraph, Tenant shall have the non-exclusive right to connect to the Generator at Tenant's sole cost and expense and draw up to a total of 50KVA (an additional 25KVA above what Tenant currently has the right to draw) from the Generator or such greater load as may be allowed by Landlord in its sole discretion. Landlord agrees that it will not allow other parties to connect to the Generator if such connection will reduce Tenant's share of the load from the Generator below the load set forth above. All work related to the connection by Tenant to the Generator shall be subject to Landlord's prior written approval and all work shall be performed using contractors approved by Landlord. Tenant shall pay, as Additional Rent, its pro rata share of the costs of the repair and maintenance of the Generator as reasonably determined by Landlord (unless the same costs are already charged through Operating Expenses, so that in no event will Landlord charge or collect more than its actual repair and maintenance costs). Landlord makes no representation or warranty regarding the reliability or operation of the Generator and shall have no liability whatsoever as the result the inadequacy of the Generator for Tenant's intended purposes.

7. Flood Control Improvements. Landlord acknowledges that Tenant has entered into this Amendment upon the condition that Landlord shall complete the construction of certain flood control improvements to the Project consisting of the "Wing Wall Work" described in **Exhibit B** attached hereto and incorporated herein by reference and the "Bridge Panel Work" described in **Exhibit C** attached hereto and incorporated herein by reference (collectively the "Flood Control Improvements"). On or before the date that is thirty (30) days after the mutual execution of this Amendment, Landlord shall deliver and store at the Project, at Landlord's sole cost and expense, an adequate quantity of materials that may be used for the construction of temporary wing walls at the Project to protect the Premises if severe weather or flooding is reasonably anticipated by Tenant. In addition to the foregoing, in the event that Landlord fails to complete the construction of the Flood Control Improvements on or before December 31, 2009, Tenant shall have the right to use any available or necessary means to protect the Premises from any damage from flood, including, but not limited to, purchasing available flood insurance, and Landlord shall reimburse Tenant for the reasonable, third party out-of-pocket costs incurred by Tenant up to the Reimbursement Limit (as defined below) within thirty (30) days after written notice thereof together with substantiation of such incurred costs.

In the event that Landlord fails to timely reimburse Tenant pursuant to the foregoing, Tenant may deliver written notice thereof to Landlord (the "Initial Notice"). If within fifteen (15) days of receiving Tenant's Initial Notice, Landlord fails to make such reimburse to Tenant, Tenant may deliver to Landlord a second notice (the "Reminder Notice"). The Reminder Notice must include a copy of the Initial Notice and specify that Tenant will have the rights granted under this Section if Landlord fails to make such reimburse to Tenant within ten (10) days of

receipt of the Reminder Notice. If Landlord fails to make such reimbursement within ten (10) days of receipt of the Reminder Notice, then Tenant shall have the right at its option to offset such amount against Base Rent next coming due under the Lease provided, however, in no event shall Tenant have the right to offset more than the Reimbursement Limit. Upon the earlier of the payment by Landlord of the reimbursements required hereunder in full or the completion of the Flood Control Improvements, Landlord and Tenant shall, at Landlord's request, execute an amended and restated version of this Amendment with this paragraph removed.

For the purposes of this Section, the Reimbursement Limit shall be an amount not to exceed \$50,000.00.

8. Operating Expenses.

a. Section 6.01(b)(iii) of the Original Lease shall be superseded and replaced in its entirety by the following:

(iii) **Tenant's Share.** For purposes of this Lease, "Tenant's Share" with respect to any applicable Operating Expense means, as applicable, (a) the percentage obtained by dividing the Rentable Area of the Premises contained in the subject Building by the aggregate Rentable Area of all premises available for lease, whether leased or not, in the subject Building, or (b) the percentage obtained by dividing the Rentable Area of the Premises by the aggregate Rentable Area of all premises available for lease, whether leased or not, in the Project. Notwithstanding the above, Landlord shall have the right, but not the obligation, to reallocate Tenant's Share with respect to any applicable item of Operating Expense in the event Landlord determines, in the exercise of reasonable discretion, that such reallocation is necessary in order to equitably allocate such Operating Expense(s) among the parties benefited thereby.

b. Operating Expenses shall **not** include (i) any expenses or costs incurred by Landlord in connection with the design, construction and/or installation of any Flood Control Improvement or any portion thereof, (ii) any expenses or costs incurred by Landlord in connection with the failure of Landlord to timely complete the Flood Control Improvements as required under paragraph 6 of this Amendment, (iii) any expenses or costs incurred by Landlord as a result of Tenant's exercise of any remedies provided under paragraph 7 of this Amendment, or (iv) any costs or expenses related to flood insurance for the Project or any portion thereof to the extent such costs or expenses exceed commercially reasonable flood insurance costs or customary insurance costs for Class A office space in the market.

c. With respect to Section 6.01(b)(i)F of the Original Lease, the term "Property" is hereby amended to mean Schnitzer North Creek.

9. Alterations. Notwithstanding any conflicting provision of Section 9.02 of the Original Lease, Tenant may, without the consent of Landlord, make any alterations to the Premises that do not involve structural members or mechanical systems of the Buildings and whose cost does not exceed Forty Thousand Dollars (\$40,000.00) in any one instance or in any one twelve (12) month period, provided that Tenant provides Landlord advance notice of such

alterations.

10. Right of First Opportunity. Tenant currently has a Right of First Opportunity pursuant to the terms of Section 6 of the First Amendment. The Right of First Opportunity shall remain in full force and effect provided, however, that the term “Remaining Expansion Space” shall mean the portion of the second floor of Building H that is not included within the Premises.

11. Option to Extend Term of Lease. Tenant currently has the Option to Extend the Term of the Lease for two (2) periods of five (5) years each pursuant to the terms of Section 7 of the First Amendment. Tenant’s Option to Extend shall remain in full force and effect following this Amendment. For the avoidance of doubt, the parties acknowledge and agree that the first Extended Term would commence as of July 1, 2021.


12. Real Estate Agency. Landlord recognizes Met Partners as the exclusive broker of Tenant. Landlord shall pay such broker a commission with respect to this Amendment pursuant to separate agreement (which separate agreement shall be executed by broker and Landlord concurrently herewith). Tenant and Landlord warrant that neither party has had any discussions, negotiations and/or other dealings with any real estate broker or agent, other than Met Partners, and that it knows of no other real estate broker or agent who is or may be entitled to any commission or finder's fee in connection with this Amendment.

13. Full Force and Effect. Except as expressly modified by this Amendment, all terms and conditions of the Lease remain unchanged and in full force and effect.

IN WITNESS WHEREOF, the parties have executed this Amendment as of the date first written above.

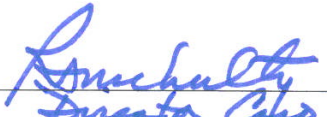
LANDLORD:

S/I NORTH CREEK III, LLC, a
Washington limited liability company

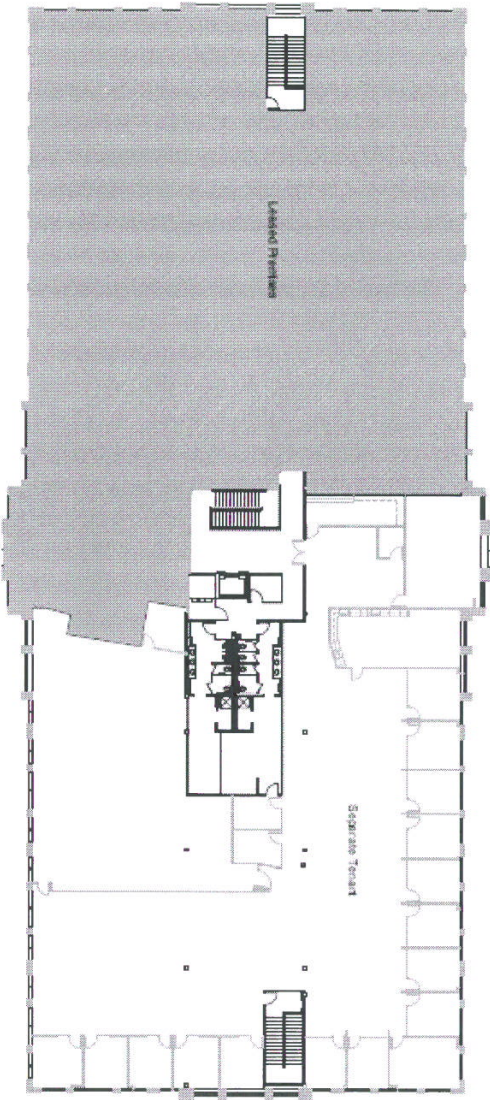
By: 
Its: Investment Director

TENANT:

PUGET SOUND ENERGY, INC., a
Washington corporation

By: 
Its: Director

**EXHIBIT A
LOCATION OF EXPANSION SPACE**

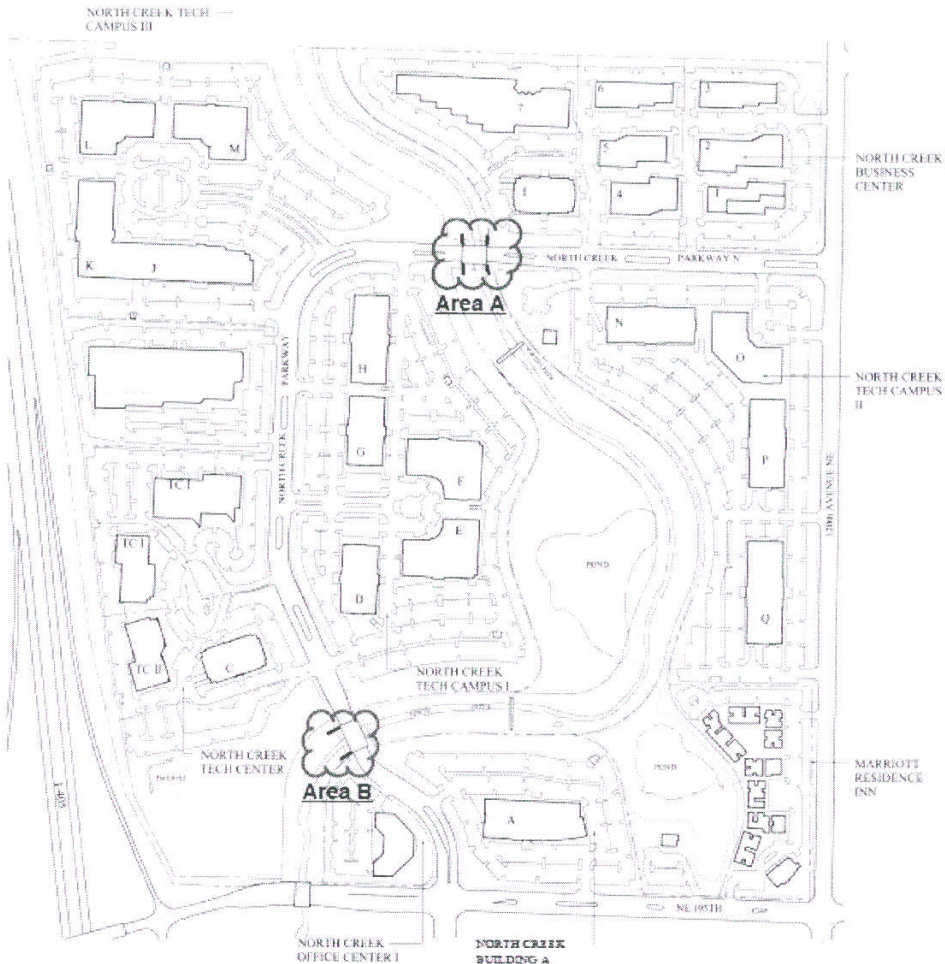


Building H
Suite 250

SCHNITZER NORTH CREEK
Puget Sound Energy Leased Premises Plan

16,097 RSF 

**EXHIBIT B
WING WALL WORK**



**FLOOD CONTROL IMPROVEMENTS
Wing Wall Work**

North Bridge - Area A

- * Install panels on top of existing wing walls to tie bridge back to new levee fill height
- * Work also includes custom angle pieces to tie bridge panels to wing walls

Central Bridge - Area B

- * Install panels on top of existing south wing wall

**EXHIBIT C
BRIDGE PANEL WORK**



**FLOOD CONTROL IMPROVEMENTS
Bridge Panel Work**

North Bridge - Area A

- * Install panels (2 on each side) on top of the existing bridge wall on both the north and south sides of the bridge.



November 13, 2009

Puget Sound Energy, Inc.
OBC IIN
P.O. Box 97034
Bellevue, Washington 98004-9734
Attn: Director Corporate Facilities

**Re: Schnitzer North Creek
Second Amendment to Lease dated October 15, 2009
Flood Control Improvements**

To Whom It May Concern:

Pursuant to Section 7 of the above-referenced lease amendment, "on or before thirty (30) days after the mutual execution of this Amendment, Landlord shall deliver and store at the Project, at Landlord's sole cost and expense, an adequate quantity of materials that may be used for the construction of temporary wing walls at the Project to protect the Premises if severe weather or flooding is reasonably anticipated by Tenant."

This letter is to inform you that the Landlord has fulfilled its duties in compliance with this requirement as of November 12, 2009, which is less than thirty (30) days after the mutual execution of the Amendment.

The following materials are currently stored at the Project:

- 26 each 4X8 @ 5/8" Plywood Sheathing
- 72 each 2X4 @ 10' length
- 1000 each sandbags ready for fill
- 5 each "GoBagger" sandbagging tools

Enclosed you will find photographs of these materials, as well as Delivery Confirmation from Home Depot for the lumber delivered November 12, 2009, and a specifications page with details regarding the sandbagging tools. For your reference, we have also enclosed a site map that shows the location where these materials are stored at North Creek, relative to Puget Sound Energy's leased premises.



Puget Sound Energy
November 13, 2009
Page 2

Please do not hesitate to contact me if you have any questions. I may be reached directly by calling 425-398-0500 or via electronic mail at JWilliams@SchnitzerWest.com.

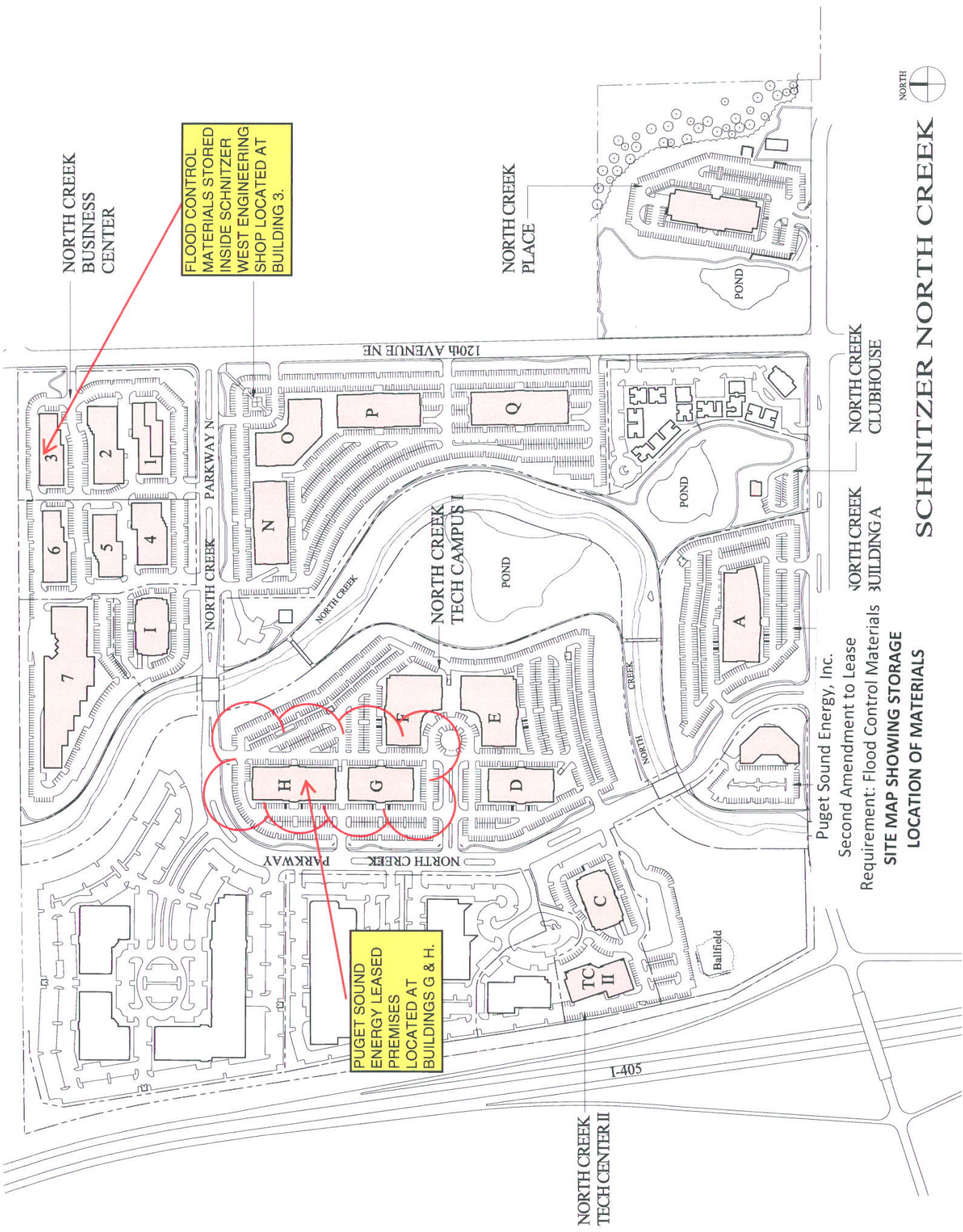
Thank you.

Sincerely,
S/I NORTHCREEK III, LLC
By its authorized agent Schnitzer West, LLC

A handwritten signature in purple ink, appearing to read "Jo Ann Williams".

Jo Ann Williams
Investment Manager

Enclosures: Site Map
Photograph: Flood Control Materials
Home Depot Delivery Confirmation dated November 12, 2009
Photograph: 1000 each sandbags
Photograph: "GoBagger" sandbagging tool
Specifications for "GoBagger" sandbagging tool



FLOOD CONTROL MATERIALS STORED INSIDE SCHNITZER WEST ENGINEERING SHOP LOCATED AT BUILDING 3.

PUGET SOUND ENERGY LEASED PREMISES LOCATED AT BUILDINGS G & H.

Puget Sound Energy, Inc.
Second Amendment to Lease
Requirement: Flood Control Materials
SITE MAP SHOWING STORAGE
LOCATION OF MATERIALS



SCHNITZER NORTH CREEK



Puget Sound Energy, Inc.
Second Amendment to Lease
Requirement: Flood Control Materials
FLOOD CONTROL MATERIALS

SCHNITZER NORTHWEST 4712-430087

dlr471a

HOME DEPOT, INC.
DELIVERY CONFIRMATION

PAGE: 2
DATE: 11/12/2009
TIME: 04:10

STORE: 4712 BOTHELL

4712-0007044-00-00-00----- DELIVERY NUMBER 4712-430087V03

REF #	SKU	ITEM DESCRIPTION	QUANTITY	
			ORDERED	DELIVERED
R01	439-606	19/32 OR 5/8 4X8 RTD SHEATHING-DF	26.00	26.00
R02	186-552	2X4-10FT. STD/BTR KD HEM FIR	72.00	72.00
V03		Cardinal Curbside De		

WAS THERE ANY DAMAGE TO PROPERTY OR PRODUCT? (Circle One) Yes No

IF YES, PLEASE CLARIFY:

I HEREBY ACKNOWLEDGE RECEIPT OF THE ABOVE ITEMS IN THE QUANTITIES SHOWN IN THE "DELIVERED" COLUMN ABOVE:

CUSTOMER'S NAME (PLEASE PRINT)

CUSTOMER'S SIGNATURE

DRIVER'S SIGNATURE

4712-0007044-00-00-00----- END OF DELIVERY NUMBER 4712-430087V03

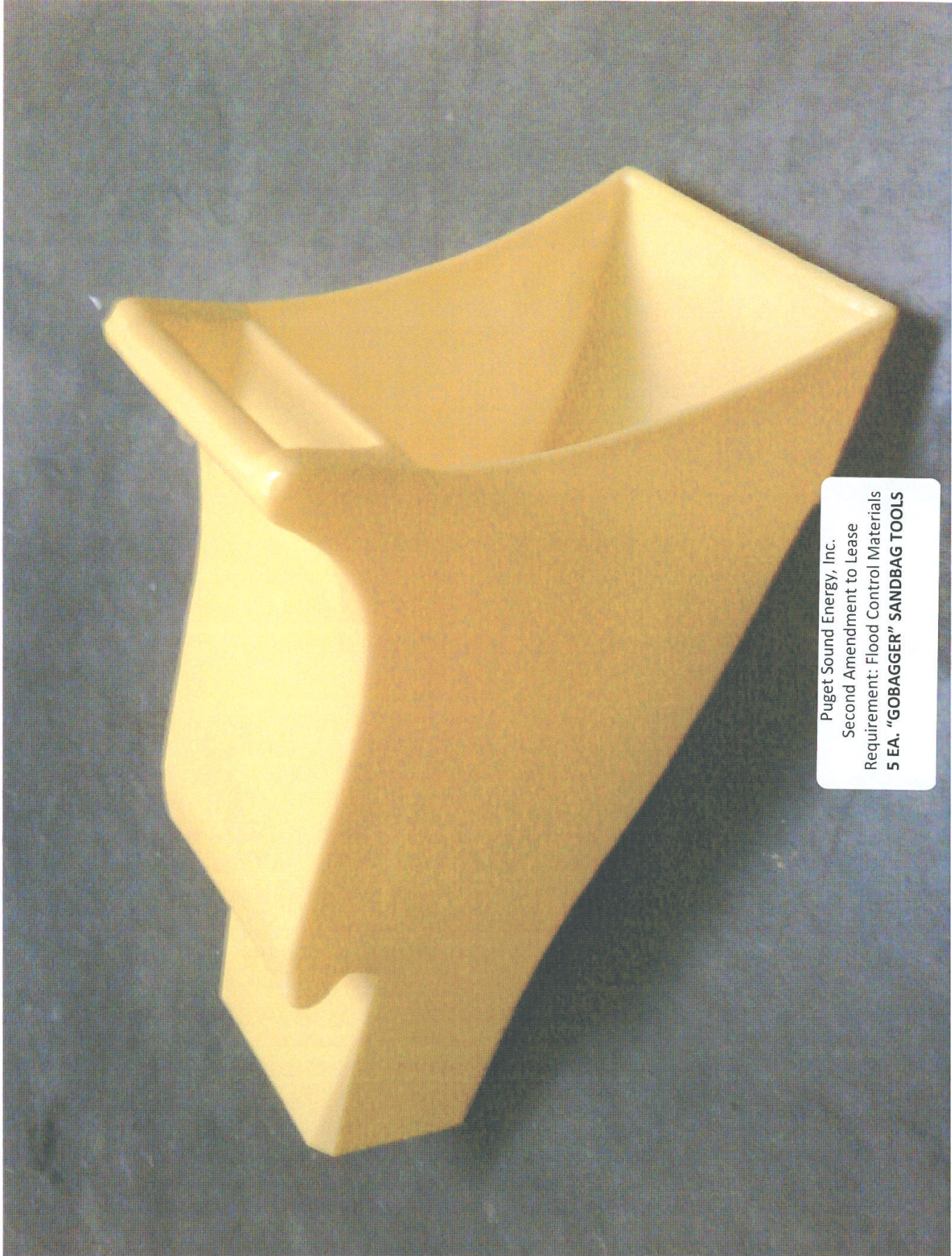
Puget Sound Energy, Inc.
Second Amendment to Lease
Requirement: Flood Control Materials
WOOD DELIVERY CONFIRMATION

WOOD FOR CONSTRUCTING
TEMPORARY WING WALLS
26 EA. 4x8 @ 5/8" Plywood Sheathing
72 EA. 2X4 @ 10' Length

CUSTOMER COPY



Puget Sound Energy, Inc.
Second Amendment to Lease
Requirement: Flood Control Materials
1000 EA. SAND BAGS




Puget Sound Energy, Inc.
Second Amendment to Lease
Requirement: Flood Control Materials
5 EA. "GOBAGGER" SANDBAG TOOLS

filling sandbags - the one man sandbag filler - sandbag filling - sandbagging - sand bag tool - sand bags fast - sandbag filler



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- 2) Scoop the sand into the unit
- 3) Lift, release and reload

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Puget Sound Energy, Inc.
Second Amendment to Lease
Requirement: Flood Control Materials
"GOBAGGER" SPECS

http://www.gobagger.com/how_to_use.html

11/12/2009

July 21, 2009

Schnitzer West
225 108th Avenue NE, Suite 400
Bellevue, Washington 98004

Attention: Stacy Amrine

Subject: Description of Levee Construction
North Creek Levee Raising and Maintenance
Bothell, Washington
GeoEngineers File No. 1460-007-27

INTRODUCTION

This letter presents a description of the levee raising and maintenance that is being completed for the North Creek Levees located in Schnitzer North Creek and Bothell Business Park in Bothell, Washington. The project area for North Creek levees is bounded on the north by the King-Snohomish County line and the Schnitzer North Creek property, and extends to the south of NE 195th Street and the Schnitzer North Creek property through the Bothell Business Park to I-405. A vicinity map showing the locations of the levees is provided as Figure 1.

For the purposes of discussion, the North Creek levee system is divided into five separate levees, the east and west levees that extend north-south on both sides of North Creek through the Schnitzer North Creek development, the northwest levee that serves as a tieback levee on the northwest property boundary, the northeast levee that also serves as a tieback levee, and the south levee located on the east side of the creek between the Bothell Business Park and North Creek, south of NE 195th Street. A site plan presenting the levee locations is provided as Figure 2.

GeoEngineers provided geotechnical evaluation of the levees including analyses of seepage, stability and settlement characteristics for inclusion in the CLOMAR (Conditional Letter of Map Revision) submittal as summarized in our report "Geotechnical Engineering Services, North Creek Levee Evaluations, Bothell, Washington" dated October 21, 2008, and recommendations for raising the levees in our report "Geotechnical Engineering Services, North Creek Levee Raising and Maintenance, Bothell, Washington" also dated October 21, 2008. The purpose of this letter is to provide a description of the levee raising activities.

BACKGROUND

The existing levees were constructed and certified in 1994 for the 1-percent chance flood of 1,400 cfs (cubic feet per second). Northwest Hydraulic Consultants completed additional modeling utilizing recent storm data and recommended the 1-percent chance flood be increased to 1,700 cfs. The results of the analyses indicated the northern portion of the levees had inadequate freeboard from the northern boundary of the site to a distance approximately 1,000 feet south. This portion of the levee system required 1½ to 2 feet of additional fill to provide the required 3 feet of freeboard given the new design 1-percent chance flood level. Additional levee fill above the 3-foot freeboard requirement was placed to provide additional

Schnitzer West
July 21, 2009
Page 2

protection above the minimum standard. Additional freeboard was selected to prolong the life of the levees given local restrictions on vegetation removal and to accommodate estimated long-term settlement. This resulted in new fill placement for roughly the northern 3,000 feet of the east and west levees, and along both levees at the northern property boundary.

DESCRIPTION OF LEVEE RAISING

EARTHWORK

Site Preparation

Vegetation removal was required in all areas receiving new fill. Areas were stripped and grubbed of all organic matter and loose topsoil. Roots larger than 2 inches in diameter were grubbed to at least 12 inches below finished subgrade. Stripped material was removed from the site or stockpiled for later use in landscaping areas outside the levee prism.

Additional excavation of loose soils was accomplished along the base of new walls. Existing pathways of asphalt concrete were ground up into 1-1/2 inch minus size pieces and compacted in place.

Fill Placement and Compaction

New fill placed to raise grades consists of sand and gravel with at least 15 percent fines (material passing the U.S. No. 200 sieve) and no more than 35 percent fines. The fill was placed in horizontal lifts and compacted to at least 90 percent of the maximum dry density obtained in general accordance with the ASTM D-1557 test procedure. Polystyrene (Geofoam) block was incorporated in the new levee prism where levees received more than 2 feet of new fill. In addition, the silty sand fill recommended above was mixed with fibrous wood chips in areas receiving more than 1 foot of new fill. A biodegradable erosion control mat, North American green SC150, was placed on all slopes that are inclined with a final grade of 1.75H:1V (horizontal:vertical).

Polystyrene (Geofoam) Block Fill

Polystyrene (Geofoam) block fill was placed outside the existing levee prism in levee widening areas where new fill heights were greater than 2 feet. The bottom block was placed on level subgrade, and subsequent blocks were placed in brick-laying fashion utilizing gripper plates. A granular drainage fill was placed behind the blocks and a 4-inch diameter PVC perforated pipe was embedded in the drainage material. Cross drains were installed using tightline PVC at approximate 100 foot intervals typically discharging above the adjacent curb of the parking lot. An impermeable membrane was placed around the creek side of the top block to reduce potential uplift of the blocks. The membrane extends vertically below the top block a minimum of 2 feet.

NORTHEAST LEVEE – SHEET PILE WALL

The northeast levee serves as a tie-back levee east of North Creek along the north border of the Schnitzer North Creek development. This levee was not improved during the 1990s and required significant fill to achieve crest height to provide protection (more than 6 feet). Raising the levee was not practical because of the proximity of existing development. For this reason, a sheet pile wall was constructed to provide adequate flood protection along the northeast levee.

Schnitzer West
July 21, 2009
Page 3

We recommended the tip of the sheet piles be driven not less than 2 feet into the sand layer below the organic silt and peat soils requiring tip depths ranging from approximately 18 to 24 feet below the existing levee crest. Because the design depth of the sheet piles was governed by the required embedment into the sand layer to advance the tip below the peat and organic soils, the potential for piping was also mitigated (factor of safety against piping greater than 8).

TOE DRAINAGE TRENCH

A toe drainage trench was constructed along the east levee between Stations 9+50 and 12+00. This area contained a small pond that was constructed lower than the adjacent creek. The pond has been filled and a drainage trench was designed for installation on the landslide toe per the U.S. Army Corps of Engineers standards.

MAINTENANCE INSPECTION AND SETTLEMENT MONITORING

A detailed maintenance schedule including tree inspection, vegetation control, mitigation of fallen or sawn trees, and control of rodents is presented in the "Operations and Maintenance Plan" prepared by PACE. Also included are maintenance operations for the levee crest surface, settlement monitoring to maintain the crest design elevation, and maintenance recommendations for stream side slopes, erosion control, and drainage features.

LIMITATIONS

We have prepared this letter for use by Schnitzer North Creek, Bothell Business Park, and members of the design team to summarize the levee maintenance and fill operations. A separate report detailing our construction observation services will be provided to FEMA.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted geotechnical practices in this area at the time the report was prepared. No warranty or other conditions, express or implied, should be understood.

This report is subject to the same limitations and guidelines provided in Appendix B of our October 21, 2008 report.

Schnitzer West
July 21, 2009
Page 4

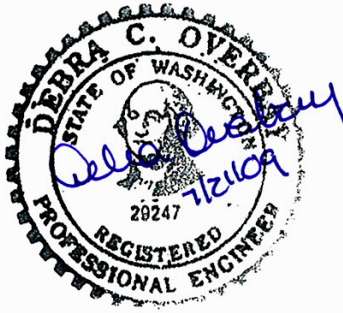
We trust this letter meets your current needs. Please call if you have any questions regarding the contents of this letter.

Yours very truly,

GeoEngineers, Inc.

Debra C. Overbay

Debra C. Overbay, PE
Senior Engineer



Gordon M. Denby

by
DCO

Gordon M. Denby, PE
Senior Principal

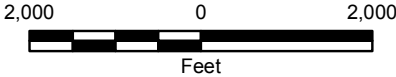
DCO:GMD:ta
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Attachments: Figure 1. Vicinity Map
Figure 2. Site Plan

One copy submitted

Disclaimer: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

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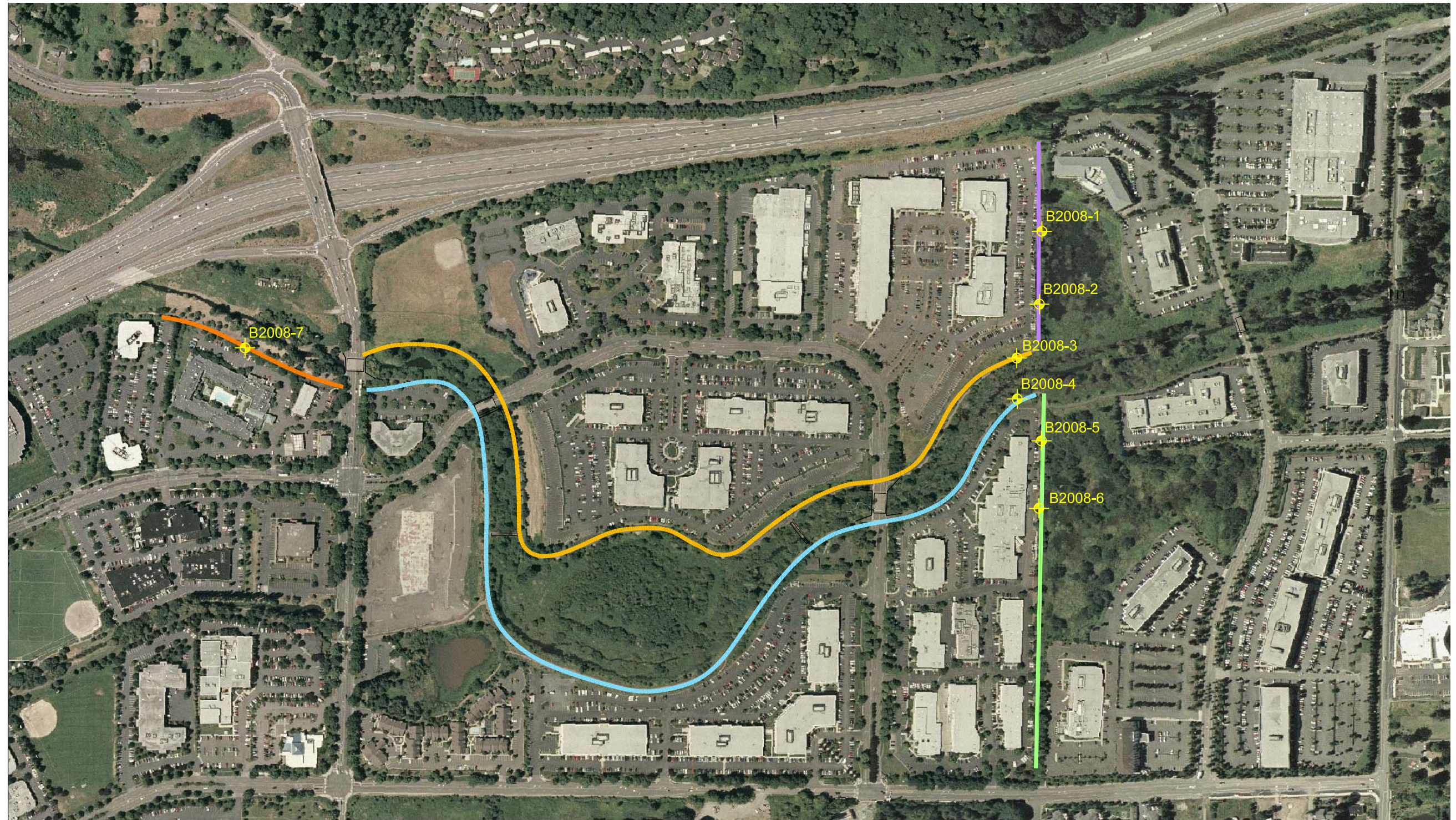
- Notes:
1. The locations of all features shown are approximate.
 2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
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Data Sources: ESRI Data & Maps, Street Maps 2005
 Transverse Mercator, Zone 10 N North, North American Datum 1983
 North arrow oriented to grid north

Vicinity Map	
North Creek Levee Evaluations Bothell, Washington	
GEOENGINEERS	Figure 1

Office: BELL
 Path: EVER:\11460-007\001460-007-25 Vicinity map
 DCO:IMS
 04/07/2008

W:\EVER\Projects\11460007\25\CAD\Figures\146000725F2.dwg DCO:LDK 10/16/2008 revised 10/20/2008



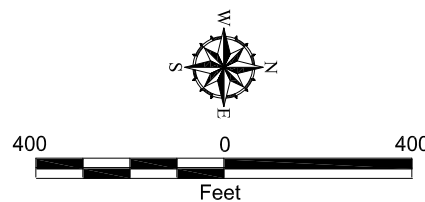
Notes

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Reference: Photo provided by PACE Engineering, Kirkland, Washington

Legend

- B2008-1 = Boring Number and Approximate Location
- Northwest Levee
- Northeast Levee
- West Levee
- East Levee
- South Levee



Site and Current Exploration Plan

North Creek Levee Evaluations
 Bothell, Washington



Figure 2