Addendum Transmittal

To:	Rick Beason	From:	Viola Lai and Brett Shipton
Company:	CenterCal Properties, LLC	Date:	July 19, 2016
Address:	1600 East Franklin Avenue El Segundo, CA 90245		

cc:	Patrick Burns, CenterCal Properties, LLC (via email only) David Gildersleeve, CenterCal Properties, LLC (via email only)

GDI Project:	CenterCal-23-01
RE:	Totem Lake Mall

Original File Name	Date	Document Title
CenterCal-23-01-030215-geor	3/2/15	Report of Geotechnical Engineering Services; Totem Lake Mall; Kirkland, Washington

Addendum Number	Date	Description
1	11/13/15	Additional Explorations – Lower Mall
2	2/12/16	Additional Explorations – Lower Mall
3	4/26/16	Additional Explorations – Lower Mall
4	7/14/16	Additional Explorations – Lower Mall
4 (revised)	7/19/16	Additional Explorations – Lower Mall (attached)

kt

Attachment

One copy submitted (via email only)

Document ID: CenterCal-23-01-071916-geoat-4-rev.docx

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GEODESIGN INC

July 19, 2016

CenterCal Properties, LLC
1600 East Franklin Avenue
El Segundo, CA 90245

Attention: Rick Beason

Addendum 4 (Revised)
Additional Explorations – Lower Mall
Totem Lake Mall
Kirkland, Washington
GeoDesign Project: CenterCal-23-01

INTRODUCTION

It had been brought to our attention that an asphalt concrete section of between 1 and 3 feet thick was encountered on the southeast portion of the Lower Mall site near the intersection of Totem Lake Boulevard and 120th Avenue NE. Figure 1 shows the approximate location of where the thick asphalt section was observed. Figure 2 shows the thickened asphalt section.

GeoDesign requested to visit the site to observe subgrade conditions at the locations where the old mall buildings had been demolished at the locations of proposed Buildings A, B, and C; we visited the site on July 5, 2016.

We conducted various phases of subsurface exploration for this project. The information is presented in our geotechnical report and addenda:

- *Report of Geotechnical Engineering Services; Totem Lake Mall; Kirkland, Washington*, dated March 2, 2015
- *Addendum 1; Additional Explorations – Lower Mall; Totem Lake Mall; Kirkland, Washington*, dated November 13, 2015
- *Addendum 2; Additional Explorations – Lower Mall; Totem Lake Mall; Kirkland, Washington*, dated February 12, 2016
- *Addendum 3; Additional Explorations – Lower Mall; Totem Lake Mall; Kirkland, Washington*, dated April 26, 2016

These documents are available for download on the following FTP site: https://geodesigninc.egnyte.com/fl/lELKbUCSAG.

OBSERVATIONS

We observed voids between the structural floor slab of the Ross store where it will adjoin the proposed Building C to the southeast on July 5, 2016. The void appeared to vary in width up to approximately 10 inches. The approximate location of the void is shown on Figure 1; Figures 3 and 4 show the void.

GEOTECHNICAL EXPLORATION

Additional borings were drilled on July 18 and 19, 2016. The boring locations are shown on Figure 1. In general, peat (where encountered), is at depths between 2.5 and 19 feet below ground surface. Figure 1 shows the depth and extent of the peat soil that was encountered.

CONCLUSIONS

Peat was encountered during various phases of subsurface exploration at the site. The peat appears to be randomly located at various depths across the site. Since the Ross building is supported on piling, the peat appears to be causing settlement at the ground surface without any stress increase from foundation loads. We believe that the settlement can be attributed to the presence of shallow peat.

We understand that column footing for Buildings A, B, and C will be supported on ground that is improved with aggregate or rigid inclusions. These foundations are protected from settlement caused by the peat soil. In addition to supporting the column footings on improved ground, we recommend that the ground improvement also be extended beneath exterior wall footings. Slabs on grade are also susceptible to the type of settlement described above. To avoid repair of slabs on grade in the future, they should also be supported on improved ground.

GROUND IMPROVEMENT DESIGN REQUIREMENTS

PERIMETER WALLS

Ground improvement should extend beneath the perimeter walls. The maximum perimeter wall loads are 2,000 pounds per foot. The ground improvement design should provide a minimum allowable bearing capacity of 2,500 pounds per square foot.

SLABS ON GRADE

Ground improvement should also extend beneath the floor slabs to mitigate potential settlement. The slabs on grade have been designed as follows:

- 5 inches thick
- 3,000 pounds per square inch concrete
- No. 4 reinforcing bars at 18 inches on-center

The ground improvement design should be such that the current floor slab structural design can be maintained. The floor slab base rock should be crushed rock or crushed gravel and sand, meeting the requirements outlined in the March 2, 2015 geotechnical engineering report. The

imported granular material should be placed in one lift and compacted to not less than 95 percent of the maximum dry density, as determined by ASTM D 1557. Floor slab base rock contaminated with excessive fines (greater than 5 percent by dry weight passing the U.S. Standard No. 200 sieve) should be replaced.

The floor slab subgrade should be evaluated by a qualified geotechnical engineer after ground improvement has been installed. Any soft or loose soil should be scarified and compacted in place or replaced with structural fill.

♦ ♦ ♦

We appreciate the opportunity to be of continued service to you. Please call if you have questions concerning this addendum or if we can provide additional services.

Sincerely,

GeoDesign, Inc.

Viola C. Lai, P.E.
Project Engineer

Brett A. Shipton, P.E.
Principal Engineer

Signed 07/19/2016

cc: Patrick Burns, CenterCal Properties, LLC (via email only)
David Gildersleeve, CenterCal Properties, LLC (via email only)

VCL:BAS:kt
Attachments
One copy submitted (via email only)
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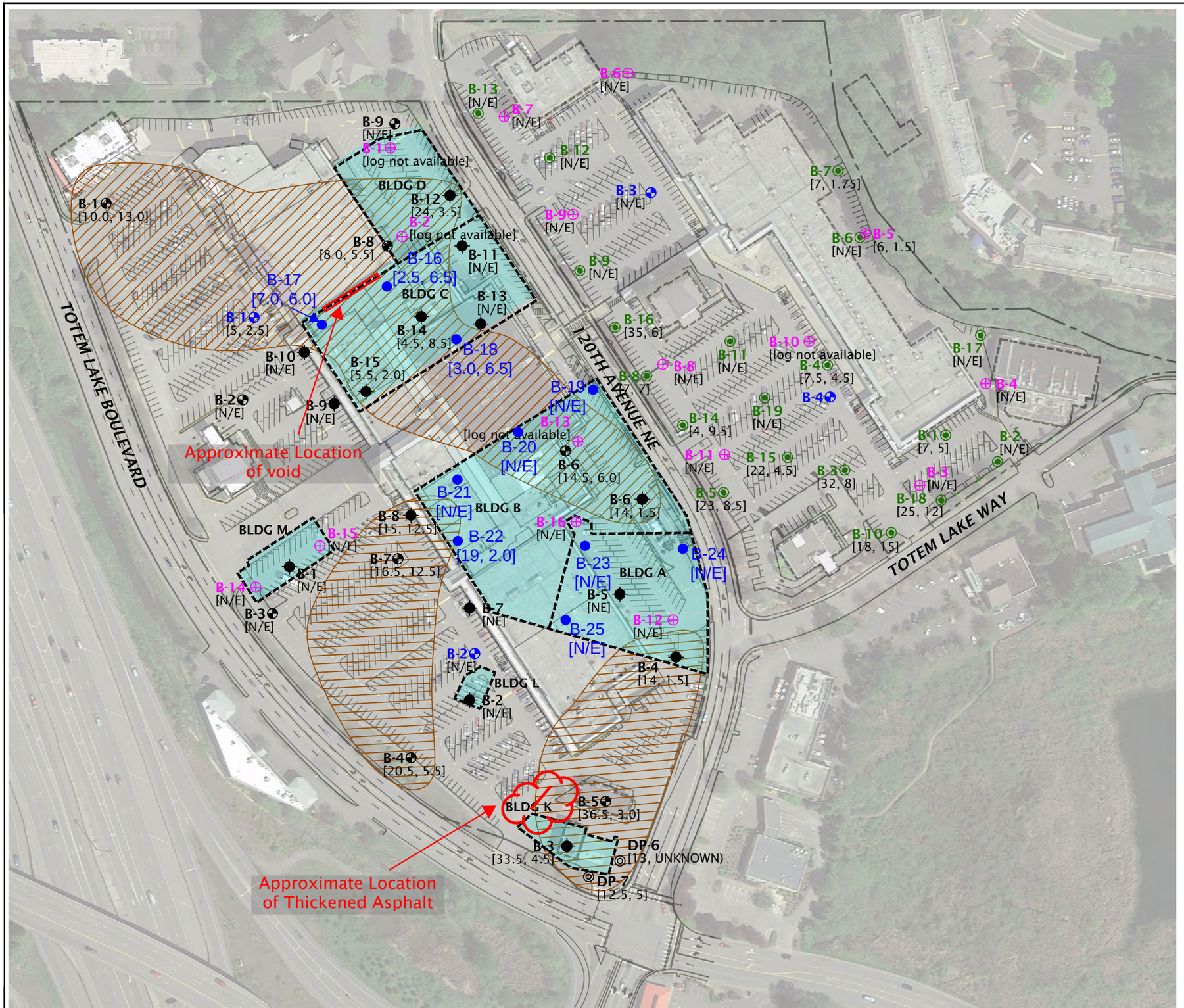
FIGURES



LEGEND:

B-1	BORING (GEODESIGN, 2016)
B-1	BORING (GEODESIGN, 2015)
DP-6	DIRECT-PUSH BORING (GEODESIGN, 2015)
B-1	BORING (GEODESIGN, 2014)
B-1	BORING (LANDAU ASSOCIATES, 2008)
B-1	BORING (PSI, 2004)
[5, 2.5]	PEAT AND WOOD ENCOUNTERED [DEPTH ENCOUNTERED, THICKNESS (FEET)]
[N/E]	NOT ENCOUNTERED
	APPROXIMATE ZONE OF POTENTIAL PEAT IN SUBSURFACE; DEEP FOUNDATIONS RECOMMENDED.
	APPROXIMATE BUILDING LOCATIONS (BUILDINGS A, B, C, D, K, L, AND M)
B-16	BORING (GEODESIGN, JULY 2016)

N

0 150 300

(SCALE IN FEET)

SITE PLAN BASED ON DRAWING PROVIDED BY CENTERCAL AND IMAGE OBTAINED FROM GOOGLE EARTH PRO®, DECEMBER 26, 2014

FIGURE 1

SITE PLAN

TOTEM LAKE MALL
KIRKLAND, WA

CENTERCAL-23-01

JULY 2016

GEODESIGN INC
15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

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15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

CENTERCAL-23-01	**THICKENED ASPHALT CONCRETE**	
JULY 2016	TOTEM LAKE MALL KIRKLAND, WA	**FIGURE 2**

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15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

CENTERCAL-23-01	**VOID BENEATH SLAB**	
JULY 2016	TOTEM LAKE MALL KIRKLAND, WA	**FIGURE 3**

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15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

CENTERCAL-23-01	**VOID BENEATH SLAB**	
JULY 2016	TOTEM LAKE MALL KIRKLAND, WA	**FIGURE 4**