

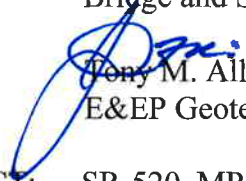


**Washington State
Department of Transportation**

MEMORANDUM

June 9, 2008

TO: Bijan Khaleghi /Mark Anderson
Bridge and Structures, MS 47340

FROM:  Tony M. Allen/Donald A. Williams
E&EP Geotechnical Division, MS 47365

SUBJECT: SR-520, MP 11.8, XL-2028
West Lake Sammamish Parkway to SR-202
RNE Bridge and Bridge 520/42 S Widening
Addendum 2 to Geotechnical Design Recommendations

As requested, we are supplying the reduced DFSAP values for the extreme limit state.



Donald A Williams

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Geotechnical Engineer



EXPIRES 03-13-10

Reviewed By: Jim Cuthbertson
Chief Foundation Engineer

Toni

Approval Authority: Tony Allen
State Geotechnical Engineer

TMA: DAW

cc: Brian Aldrich, Bridge and Structures, MS 4734
Arthur Chu, Bridge and Structures, MS 4734
Asad A. Bushnaq, Bridge and Structures, MS 4734

SIL-Shaft Input Data

Bridge No. or Name
Pier No(s).

SR-520 West Lake Sammamish Parkway - RNE Bridge

1

Ground Surface Elevation 68.0 (ft)

Layer	Soil Type	Layer Thickness (ft)	Btm. Elev. (ft)	Effective Unit Weight (pcf)	Friction ⁽¹⁾ Angle (deg)	ε ₅₀ (%)	Liq.	Soil Cohesion (psf)	s _u at Top of Layer (psf)	s _u at Bottom of Layer (psf)	Rock Comp. Stgth (psf)	SPT Corrected Blowcounts (bpf)	Fines Content (%)	Angularity
1	Sand	5	63.0	128	38	0.4	No							
2	Sand	10	53	115	33	1.1	No							
3	Sand	10	43	125	34	1.0	No							
4	Sand	5	38.0	130	38	0.4	No							
5	Sand	5	33.0	125	34	0.9	No							
6	Sand	6	27.0	105	28	1.5	No							
7	Sand	4	23.0	58	37	0.4	No							
8	Sand	5	18.0	53	36	1.2	No							
9	Sand	25	-7.0	78	45	0.2	No							
10	Sand	25	-32.0	78	45	0.2	No							

Bridge No. or Name
Pier No(s).

SR-520 West Lake Sammamish Parkway - RNE Bridge

2

Ground Surface Elevation 40.2 (ft)

Layer	Soil Type	Layer Thickness (ft)	Btm. Elev. (ft)	Effective Unit Weight (pcf)	Friction ⁽¹⁾ Angle (deg)	ε ₅₀ (%)	Liq.	Soil Cohesion (psf)	s _u at Top of Layer (psf)	s _u at Bottom of Layer (psf)	Rock Comp. Stgth (psf)	SPT Corrected Blowcounts (bpf)	Fines Content (%)	Angularity
1	Clay	12	28	105		1.2			600	1000				
2	Sand	2	26	52	16	0.8	No							
3	Sand	5	21	58	20	1.4	No							
4	Sand	5	16	58	40	0.8	No							
5	Sand	34	-18	78	42	0.2	No							
6	Sand	5	-23	68	16	0.4	No							
7	Sand	11	-34	68	21	0.3	No							
8	Sand	10	-44	48	10	1.4	No							
9	Sand	10	-54	73	43	0.6	No							
10	Sand	5	-59	68	40	0.4	No							

FIGURE D-16A: DFSAP Input Data - RNE Br. and Br. 520/42S Widening

SIL-Shaft Input Data

Bridge No. or Name
SR-520 West Lake Sammamish Parkway - RNE Bridge
Pier No(s)
3

Ground Surface Elevation 41.7 (ft)

Layer	Soil Type	Layer Thickness (ft)	Btm. Elev. (ft)	Effective Unit Weight (pcf)	Friction ⁽¹⁾ Angle (deg)	ε ₅₀ (%)	Liq.	Soil Cohesion (psf)	s _u at Top of Layer (psf)	s _u at Bottom of Layer (psf)	Rock Comp. Stgth (psf)	SPT Corrected Blowcounts (bpf)	Fines Content (%)	Angularity
1	Clay	13	29	105		1.3			600	1000				
2	Sand	7	22	38	28	1.5	No							
3	Sand	5	17	68	40	0.4	No							
4	Sand	15	2	72	42	0.3	No							
5	Sand	10	-8	78	43	0.3	No							
6	Sand	5	-13	48	12	0.7	No							
7	Sand	10	-23	78	45	0.2	No							
8	Sand	5	-28	73	40	0.4	No							
9	Sand	4	-32	53	33	1.5	No							
10	Sand	16	-48	63	39	1.0	No							

Bridge No. or Name
SR-520 West Lake Sammamish Parkway - RNE Bridge
Pier No(s)
4 & 5

Ground Surface Elevation 41.2 (ft)

Layer	Soil Type	Layer Thickness (ft)	Btm. Elev. (ft)	Effective Unit Weight (pcf)	Friction ⁽¹⁾ Angle (deg)	ε ₅₀ (%)	Liq.	Soil Cohesion (psf)	s _u at Top of Layer (psf)	s _u at Bottom of Layer (psf)	Rock Comp. Stgth (psf)	SPT Corrected Blowcounts (bpf)	Fines Content (%)	Angularity
1	Clay	13	28	105		1.2			600	1000				
2	Sand	7	21	43	28	1.5	No							
3	Sand	26	-5	73	30	0.6	No							
4	Sand	15	-20	73	38	0.6	No							
5	Sand	5	-25	68	38	0.7	No							
6	Sand	5	-30	63	22	1.0	No							
7	Sand	30	-60	68	40	0.6	No							

FIGURE D-17A: DFSAP Input Data - RNE Br. and Br. 520/42S Widening