

# Deschutes County Geotechnical File

	SOURCE	PROJECT NAME	TOWNSHIP	RANGE	SECTION	DRILL HOLES	SUMMARY
1	ODOT	Crooked River Gorge Bridge (Jefferson County)	13S	13E	SE 1/4 SE1/4 SEC 32	7	Vesicular, microvesicular & dense basalt
2	Deschutes County Road Department	Squaw Creek (Camp Polk Rd) Bridge	14S	10E	NE 1/4 NE 1/4 34	3	Drill hole 21-42 ft; 17-26 ft fill gravel then vesicular basalt bedrock
3	Kleinfelder	VoiceStream Wireless, Redmond North Site	14S	13E	NW 1/4 NE 1/4 33	1	30.5 ft deep; silty sand, gravel to 5 ft; scoriaceous basalt 5-10 ft then cinders
4	Deschutes County Road Department	Deschutes County Bridges (11)	14S-22S	09E-13E		—	Individually listed below
5	Deschutes County Road Department	Squaw Creek (Three Creek Lake) Bridge	15S	10E	SE 1/4 NW 1/4 9	1	51ft drill hole in sand & gravel
6	Mark V. Herbert & Associates, Inc	Deschutes County Fairgrounds	15S	13E	SW 1/4 28	163	Air-track holes; variable-depth (up to 13ft) sandsoils overlying basalt with a few small voids and cinder intercepts
7	Mark V. Herbert & Associates, Inc	Becky Johnson Community Campus	15S	13E	SW 1/4 NE 1/4 16	—	5 test pits in natural soil & fill 3.5 to 5.1 ft underlain by basalt
8	City of Redmond Public Works (Report by Siemens)	Southwest 13th St, Redmond	15S	13E	SE 1/4 SW 1/4 21	—	Hammer seismic survey along ROW; no definite indication of lava tubes
9	City of Redmond Public Works (Report by Siemens)	Redmond Wastewater Plant - Dec. 1983; Century West/Carolla	15S	13E	NE 1/4 NE 1/4 05	21	2-9 ft. overburden, 3-11 ft basalt, locally fract'd & will small voids - drilled with airtrack rig
10	City of Redmond Public Works (Report by Siemens)	Redmond Wastewater Plant Expansion Dec. 1998 - report by Siemens	15S	13E	NE 1/4 NE 1/4 05	17	airtrack holes, 2 to 13 ft overburden; then basalt 12-40 ft; possible lava tubes
11	Morrison - Maierle, Helena, MT	Redmond Airport, A.R.F.F Building 1997	15S	13E	SW 1/4 NE 1/4 22	—	8TPits; 1-4.2 ft deep; 1.5 to 4.0 ft silty sand & fill; basalt bedrock
12	Morrison - Maierle, Helena, MT	Redmond Airport, Runway 4-22; deflector test 1993	15S	13E	SE 1/4 22 NW 1/4 23	15	5-15.5 ft; 3-10 ft overburden; basalt bedrock
13	Morrison - Maierle, Helena, MT	Redmond Airport, Runway 10-28 - 1993	15S	13E	N 1/2 22 S 1/2 23	28	1.5-15ft; 1.5-15 ft asphalt/fill/hard basalt bedrock
14	Morrison - Maierle, Helena, MT	Redmond Airport, Taxiway "P" - 1997	15S	13E	NW 1/4 23	20	1.5-7.0 ft; asphalt/fill/silt/sand/basalt bedrock at bottom
15	Carlson Testing, Inc.	Central Oregon District Hospital - Strategic Building Plan	15S	13E	NE 1/2 09	8	8 Bore Holes at 22 ft. deep
16	Morrison Maierle, In.	Redmond Airport Terminal Parking Expansion	15S	13E	W 1/2 22	20	20 Bore Holes from 1 ft. - 10 ft. deep
17	URS- Report Dated 1961	No Name	15S	13E	16	2	Lithic Logs of 2 holes
18	Century West Engineering, April 19, 2000	Subsurface Investigation of 40 Acre parcel NE 9th & Antler Ave	15S	13E	SE 1/4 SW 1/4 10	22 (trenches)	logs of trenches dug 0-6' deep, 1 exploratory pit
19	URS Corporation, January 17, 1961	Golf Maintenance Yard - Redmond	15S	13E	16	2	Test pit descriptions, graphs
20	Siemens & Associates Geotech Engineers, August, 1997	Tumalo Irrigation District c/o Davide Evans, Laidlaw Butte - SM Re-Zone	16S	11E	SW 1/4 SW 1/4 Sec 30	27	Technical Data regarding the quality and quantity of the construction materials that could be produced through surface mining
21	ODOT	Deshutes Market Road, Underpass	16S	12E	26	21	Short holes through overburden and into basalt bedrock
22	ODOT	Deschutes River (Tumalo) Bridge	16S	12E	SE 1/4 SE1/4 31	2	Stream gravels, silty sand and tuff
23	ODOT	Peterson Rock Garden (Young Pit) Borrow Source	16S	12E	SW 1/4 SE 1/4 11	16	discusses rippability & excavatability of different geologic units
24	ODOT	Bend Parkway	17-18S	12E	16-17	>46	Holes through overburden into basalt rock
25	Mark V. Herbert & Associates, Inc	Elementary School, Shelvin Park Road (W. Bend)	17S	11E	E 1/2 NW 1/4 W 1/2 NE 1/4 36	—	14 test pits 4-12.8 ft deep; sand, welded tuff, fill and basalt
26	Mark V. Herbert & Associates, Inc	Higher Ed. Classroom Bldg., C.O. Comm. College, Bend	17S	11E	SE 1/4 NE 1/4 25	5	Holes 17 1/2-27 1/2 ft deep, 5-10 ft clayey sand, then basalt at bottom
27	Kleinfelder	West Side High School - Bend	17S	11E	SW 1/4 36	4	16.5 -26 ft; silty sand, trace gravel/pumice; welded tuff 16-23 ft, red-brown, 34 test pits 4-18 ft;
28	Century West Engineering, July 19, 2000	Future Res. Site - City of Bend; Outback Reservoir Site 18900 Skyliner Rd	17S	11E	SW 1/4 SE 1/4 34	10	test pit descriptions, as well as site maps
29	Carlson Testing, Inc.	St. Charles Medical Center - Strategic Building Plan, October 2002	17S12e		SE 1/4 27	12	Bore Holes drilled from 22-45 ft deep
30	Carlson Testing, Inc.	St. Charles Medical Center - Heart Center / Parking Structure, January 2004	17S	12E	SE 1/4 27	14	Bore Holes drilled from 38-45 ft deep
31	M.V. HERBERT	Deschutes County Public Safety Center	17S	12E	NE 1/4 SE 1/4 17	63	+36 test pits; overburden soils, some fill & into basalt bedrock
32	Bend Building Department	Pilot Butte Reservoir, Bend OR	17S	12E	NW 1/4 SW 1/4 34	5	Holes 15 to 61.5 ft deep in toe of cinder cone
33	Bend Building Department	North Fire Station, Bend OR	17S	12E	NE 1/4 SE 1/4 17	—	8 test pits thin sandy soils, basalt bedrock
34	Mark V. Herbert & Associates, Inc	Middle School (Cooley Rd/NE 18th), Bend	17S	12E	NW 1/4 NW1/4 15	—	15 test pits, overburden 1.5-9.0 ft, underlain by basalt
35	Mark V. Herbert & Associates, Inc	Deschutes County Health and Human Services Bldg.	17S	12E	NE 1/4 SE 1/4 27	—	12 pits, fill overlying silty sand; basalt bedrock at 0.5 to 6.8 ft
36	Kleinfelder	Wild Wind Motorcycles	17S	12E	SE 1/4 SW 1/4 9	—	7 test pits; pumice fill 0.5-1.0 ft then silty sand; basalt at 1.0-6.5 ft
37	Kleinfelder	Brinson Business Park - Phase I	17S	12E	NW 1/4 SE 1/4 21	—	8 test pits 1.0-8.0 deep; silty sand 1-8 ft, then basalt bedrock
38	Kleinfelder	VoiceStream Wireless, Pilot Butte, Bend	17S	12E	SW 1/4 NW 1/4 34	1	31.5 ft; red cinders
39	David Evans & Associates, September 7, 1994	Cascade Pumice Water Well	17S	12E	NW 1/4 NW 1/4, NE 1/4 NW 1/4 Sec 7		State of Oregon Water Supply Well Report
40	DOGAMI	Geology of selected lava tubes	17S	13E		—	Descriptions of caves and collapsed lava tubes, maps only

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41	David Evans & Associates	Bend Waste Water Plant - Becon. Jan 1979	17S	13E	SEC 5 & SE 1/4 6	8	20-23 ft; 0.75-5.0 ft overburden, then basalt bedrock, then cinder zones
42	David Evans & Associates	Bend Waste Water Facility - Hydrogeologic Characterization -April 1996	17S	13E	NE 1/4 7 NW 1/4 8	—	Potentiometric surfaces; geologic x-section, no drill logs but refers to drilling
43	Kleinfelder	Mt. Bachelor Replacement Well	18S	09E	NW 1/4 20	1	1038 ft; alternating cinders, basalt & pumice; water at 725 ft
44	Broken Top; Report by D. Newton 1995	Updated evaluation for existing SM 374	18S	11E	SW 1/4 02	—	review of previous work including Siements - 1994; Century West - 1980
45	Broken Top; Report by Century West 1990	Land Use Feasibility Study - Lundgren Property	18S	11E	ALL 01 & 02	—	18 test pits; 1/2-11 ft; sieve tests, chemical analysis
46	Broken Top; Report by D. Newton 1999	Preliminary Geotechnical Investigation - Skyliners Summit Develop.	18S	11E	SE 1/4 36	—	
47	Broken Top; Report by D. Newton 1999	Site rippability & excavatability investigation - Skyliners Summit Develop.	18S	11E	SE 1/4 36	—	discusses features of different geologic units; maps of distribution
48	ODOT	Murphy Road - Lava Butte	18S	12E	19 & 30	14	Through shallow overburden into basalt bedrock
		in the Bend area, OR	18S	12E		—	Bulletin on file
49	Bend Building Department	West Fire Station, Bend OR	18S	12E	NW 1/4 NE 1/4 6	—	10 test pits sandy soil (thin) tuff bedrock
50	Bend Building Department	South Fire Station, Bend OR	18S	12E	SW 1/4 NW 1/4 16	—	8 test pits thin sandy soils, basalt bedrock
51	C.O.I (Rept by Century West)	Central Oregon Irrigation District Siphon Power Project	18S	12E	NE 1/4 7	9 Core Holes, 7 Air Track	9 test pits along penstock route, DH's encountered talus, sand with cobbles, basalt, pumice and tuff, generally bottomed in basalt
52	Desch. County Solid Waste (Rept. By Siemens) 1996	Knott Landfill Upgrade & Closure	18S	12E	S 1/2 14	—	14 sections through pit showing lithologies, 8 seismic profiles
53	Desch. County Solid Waste (Rept. David Evans) 1995	Knott Landfill; Revised Phase II Site Characterization Study	18S	12E	S 1/2 14	3	Holes 400, 715 and 760 ft deep; mixed volcanoclastics & basalt
54	Deschutes County Road Department	C.O.I Canal Bridges - Arnold Rd.	18S	12E	NW 1/4 NW 1/4 11	1	Silt & basalt bedrock
55	Deschutes County Road Department	C.O.I Canal Bridges - Ward Rd.	18S	12E	SW 1/4 1	1	Sandy silt & basalt bedrock
56	Kleinfelder	Century Washington Center W. Comm.	18S	12E	SW 1/4 06	—	10 test pits; 1.5-3.0 ft silty sand & gravel; yellow-brown welded tuff bedrock
57	Kleinfelder	Columbia River Bank	18S	12E	SW 1/4 NW 1/4 05	—	4 test pits; 1-2 ft silty sand, 1-8 ft volcanic sand, buff welded tuff
58	ODOT	Reed Market Road Interchange	18S	12E	S1/2 SE 1/4 05	2	auger holes 7-30 ft deep; sands & gravels, cinders; some 1-6 ft sections basalt
59	Century West Engineering, December 18, 1998	Old Mill District Drill Hole Sites	18S	12E	5	5	drill holes, including descriptions of lithology for each drill hole; site map also
60	Siemens & Associates Geotech Engineers, March 2001	Knott Landfill Expansion Feasibility	18S	12E	SW 1/4 Sec 14	76	Geotechnical Investigation of On-Site Soils and Rock
61	Deschutes County Road Department	C.O.I Canal Bridges - Gosney Rd	18S	13E	N 1/2 8	2	Sandy silt & basalt bedrock
62		Dogami Bulletin 71	19S	13 & 14E		—	
63	Desch. County Solid Waste (Rept. Herbert Parametrix)	Potential Landfill Site - "Moon" Site "L" or (Matt Day/Hooker CRK)	19S	14E	E 1/2 2 - S 1/2 1	—	33 test pits, max 18.5 ft in gravel; drillers' logs of water wells in surrounding area
64	Desch. County Solid Waste (Rept. By Century West)	Potential Landfill - Site "M" Hap Taylor & Sons	19S	14E	SW 1/4 4	15	Auger holes, deepest 32.5 ft; sand and gravelly sand to basalt bedrock
65	Deschutes County Solid Waste (Rept. By Siemens)	Potential Landfill - Site "M" Jack Robison & Sons	19S	14E	S 1/4 4 - N 1/2 9	10	Airtrack holes, 12 to 58 ft; sand, cinders & basalt
66	ODOT	Fall River Bridge	20S	10E	NW 1/4 SE 1/4 31	2	~30 ft sandy material with some gravelly sand
67	Deschutes County Road Department	Deschutes River (General Patch) Bridge	20S	10E	NW 1/4 NE 1/4 26	2	58 & 70 ft deep; gravelly sand, silt & sandy silt, no bedrock
68	ODOT	Gas Station Quarry	20S	11E	21 & 28	13	Overburden, rubble flow and into massive basalt bedrock
69	Kleinfelder	VoiceStream Wireless, Sunriver	20S	11E	NE 1/4 05	1	24.5 ft; silty sand/some gravel; basalt bedrock at 14.5 ft
70	URS- Report Dated 1967	No Name: Probably in Conjunction with Sunriver Development	20S	11E	6	16	Plan Maps with Lithic Logs
71	URS Corporation, April 20, 1967	Sunriver Test Pit & Backhoe Excavations	20S	11E	6	16(pits) 7 (trenches)	test pit descriptions & Backhoe excavation descriptions, as well as site maps
72	US Bur. Rec.	Seismotectonic Study for Wickiup and Crane Prairie Dams - Aug. 1989	21S	08E	36	—	36 theses; 1938-1996
73	Deschutes County Road Department	Deschute River (Sheep) Bridge	21S	10E	SW 1/4 SE 1/4 3	2	50 & 70 ft deep; fill, silty sand, clayey silt
74	Deschutes County Road Department	Little Deschutes (La Pine State Rec Area Access Road) Bridge	21S	10E	N 1/2 12	2	70 & 100 ft deep; 4-6 ft soil, then silty sand
75	Deschutes County Road Department	Little Deschutes (Bridge Drive) Bridge	21S	10E	W 1/2 SEC 13	2	24 & 54 ft deep; sand, silty sand; wet below 2-4 ft
76	Deschutes County Road Department	Paulina Creek Bridge	21S	11E	NW 1/4 28	2	32 &46 ft deep; fill 4-7 ft then gravel & sand
77	USFS	Paulina - East Lake Quarry - Part 1	21S	11E	SW 1/4 28	40	in rock quarry; 5-18 ft oberburden, holes to 50 ft in rock
78	USFS	Paulina - East Lake Quarry - Part 2	21S	11E	SW 1/4 28	6	in rock quarry; 5-18 ft oberburden, holes to 50 ft in rock
			22S	08 & 09E	01 & 06	—	Summary of study; two maps with age dates
79	Deschutes County Road Department	Little Deschutes (Masten) Bridge	22S	09E	N 1/2 25	2	66 & 70 ft deep; loose sand upper approximately 10 ft then silty sand
80	Mark V. Herbert & Associates, Inc	La Pine Branch Library	22S	10E	NW 1/4 NW 1/4 14	—	5 test pits 6- to 8+ ft deep; sand, silty sand & sand and gravel at bottom

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81	Galli Group; Grants Pass OR	Geotechnical Investigation; 250,000 Gallon Reservoir Site, La Pine OR	22S	10E	SW 1/4 NE 1/4 14		3 Test pits, 6.5-9.5 ft; silty, yellow-tan to brown sand; dark gray to black sand 4.4-5.3 ft below surface to bottom
82	The Galli Group, March 27, 1998	250,000 Gallon Reservoir Site - La Pine	22s	10e	SW 1/4 NE 1/4 14	3	Test pit descriptions
83	ODOT	Little Deschutes River Bridge (Klamath County)	25S	08E	NW 1/4 29	2	Maximum 74 ft sandy gravel, silty sand - no bedrock
84	ODOT (Geomatrix Cons)	Seismic Design Mapping, State of Oregon 1995	OR	OR	Oregon	—	Presents assessment of seismic hazard in the State; 11 plates 1,2,3 a-c, 4 a-c, 5 a-c
85	USDA & OR Ag Experiment Station	General Soil Map with Soil Interp. for Deschutes Co. Planning			Countywide	—	Soil types and suitability for various purposes
							silty sand, pumice, cinder glass frags; clay total depth 22
					NE 1/4 01	—	94 test pits; 1-20 ft deep; 0-20 ft overburden, 0-17ft volcanics;
					NE 1/4 01	—	94 test pits; 1-20 ft deep; 0-20 ft overburden, 0-17ft volcanics;
86	DOGAMI	Theses			Deschutes County	—	10.82 - 10.37m; 0.79-1.74m overburden; basalt bedrock
							in cinder pit; holes 30 ft deep; in cinders
87	US Bureau of Reclamation	Geology Report - Central Oregon Canal System			All County		Geology along entire canal system; photos plus sections
		Upper Deschutes River Basin Water Conservation Project					
88	Portland District - Corps of Engineers	Eugene-Denio; Brothers and Sisters Capable Fault Zone					
	Report By Squire Assoc.	Investigations for the High Cascades, Lava Plains and Basein and Range Areas			All County		Literature review of geology (chiefly faults) of area, geologic maps, discussion of Faults, and recommendation for further work
89	US Dept. of the Interior	Liquid Waste Disposal in the LAVA terrane of Central Oregon			N 1/2 of County also Jefferson Co.	Many	Discussion of waste disposal, relationship to groundwater, recommendations for future disposal; drill logs & chemical analysis
90	US Bureau of Reclamation, August 4, 1934	Geology of Dammed Reservoirs, Deschutes Project			S 1/2 of County	2	Discussion of Geology of potential dam sites and proposed future work; 2 holes, one 141 ft. deep, other 143 ft. @Benham Falls
91	US Bureau of Reclamation; November 21, 1934	Geology of Dam and Reservoir sites Revisited Report No. 2			S 1/2 of County	16	plus 14 pits; discussion of geology of potential sites and further work drillings but no location maps
92	L.R. Squier Associates, Inc, December 1984	Eugen-Denio, Fault zone locations for the High Cascades and Lava Plains			All County		Fault Investigation for Deschutes County
93	US Dept. of the Interior, May 1968	Liquid Waste Disposal in the LAVA terrane of Central Oregon			All County		Water Quality degredation in Central Oregon due to drilled disposal wells for liquid waste disposal
94	US Dept. of the Interior, August 1934	Geology of Dam and Reservoir Sites			S 1/2 of County		Geology of Dam sites and reservoirs
95	US Dept. of the Interior Revisited Rpt 2, Nov 1934	Geology of Dam and Reservoir sites Revisited Report No. 2			S 1/2 County		Geology of Dam sites and reservoirs - Revisited
96	US Dept of the Interior BOR, December 1991	Central Oregon Canal System Upper Deschutes River Basin			All County		Defining basic foundation geology for 8 main canals in project area - help define areas of potential high water loss
97	References from Various Publications	Reference Material			All County		Reference Material from various USGS and Portland District Corps of Engineers Reports
					NW 1/4 NW 1/4 Sec 31		for the Cascade Pumice Company. Cascade Pumice exploring the feasibility of re-zoning property.
98	Kleinfelder	Geotechnical Exploration Report - Oregon Street Mall Parking Structure	17S	12E	NW 1/4 SE 1/4 Sec 32		Geotechnical Exploration of the subsurface conditions for proposed parking structure
99	PBS Engineering & Environmental	Geophysical Survey - Oregon Street Mall Complex	17S	12E	NW 1/4 SE 1/4 Sec 32		Geophysical Survey of parking lots and other paved surfaces
100	LSI Adapt, Inc., October 20, 2005	Fryrear Cell Tower Site - Verizon Wireless c/o Alcoa Wireless Services	15S	10E	24	1	Surface reconnaissance, subsurface exploration - 1 test pit, 10' in depth.
101	Carlson Testing, Inc., October 27, 2005	Lovejoy Residence - Macalpine Drive, Bend, Oregon (Highlands @ Broken Top)	18S	11E	2		Subsurface Condiition Exploration - Exploratory pits and trenches.
102	LSI Adapt, Inc., January 23, 2006	Shevlin Cell Tower Site - Verizon Wireless c/o Alcoa Wireless Services	17S	11E	14		Soil Resistivity Survey