

Materials Grading
(Database Columns P, Q, R, S)

Primary_Matl	Primary-Secondary Matl	Graded Coarse Matl	Graded Material	Description
SURF	SURF	SURF	SURF	Lith log Surface location and elevation Identifier
Fill	Fill	Fill	FILL	As stated in logs, materials vary
Topsoil	Topsoil	Topsoil	Topsoil	As stated in logs
SLOUGH	SLOUGH	SLOUGH	SLOUGH	As stated in logs, materials vary
NMA	NMA	NMA	NMA	As stated in logs
CL	CG	CG	CG	CLAY with Gravel; Clay and Gravel
CL	CG	CG	CG-CS	sandy, gravelly CLAY
CL	CG	CG	CL-CG	gravelly CLAY, lean CLAY some Gravel
CL	CH	CH	CH	fat CLAY ; CLAY with medium-high plasticity
CL	CH	CH	CH-CM	fat CLAY with Silt
CL	CL	CL	CL	CLAY
CL	CL	CL	CL-SP	CLAY with poorly graded Sand
CL	CM	CM	CL-SM	interbedded CLAY and silty SAND
CL	CM	CM	CL-ML	CLAY and SILT in nearly equal distribution; interbedded Clay and Silt
CL	CM	CM	CM	CLAY with Silt; CLAY and Silt
CL	CM	CM	CM-CG	silty CLAY with Gravel
CL	CM	CM	CM-CS	silty CLAY with Sand
CL	CM	CM	CM-SG	silty CLAY with Sand and Gravel
CL	CM	CM	CM-SP	silty CLAY with poorly graded Sand
CL	CS	CS	CL-CS	CLAY with some Sand
CL	CS	CS	CL-SP	CLAY with poorly graded Sand
CL	CS	CS	CS	sandy CLAY
CL	CS	CS	CS-CG	sandy, gravelly CLAY
CL	CS	CS	CS-CM	sandy, silty CLAY
Gr	Co	Co	Co	Cobble
Gr	GC	GC	GC	clayey GRAVEL; GRAVEL with Clay
Gr	GC	GC-GM	GC-GM	clayey, silty GRAVEL; GRAVEL with Clay and Silt
Gr	GC	GC-GS	GC-GS	clayey GRAVEL with Sand
Gr	GC	GC-MS	GC-MS	GRAVEL, Clay, Silt, and Sand
Gr	GC	GP-GC	GP-GC	poorly graded GRAVEL with Clay
Gr	GC	GW-GC	GW-GC	well graded GRAVEL with Clay; clayey, well graded GRAVEL
Gr	GM	GM	GM	silty GRAVEL
Gr	GM	GM-GC	GM-GC	GRAVEL with Silt and Clay
Gr	GM	GM-GS	GM-GS	sandy, silty GRAVEL
Gr	GM	GM-SC	GM-SC	sandy, clayey GRAVEL and Silt
Gr	GM	GM-SM	GM-SM	GRAVEL with Silt and Sand
Gr	GM	GP-GM	GP-GM	poorly graded silty Gravel
Gr	GM	GS-GM	GS-GM	sandy GRAVEL with Silt; silty, sandy GRAVEL
Gr	GM	GW-GM	GW-GM	well graded silty GRAVEL
Gr	GM	GW-ML	GW-ML	interbedded well graded GRAVEL and SILT
Gr	GM	GW-MS	GW-MS	well graded GRAVEL and sandy silt
Gr	GP	GP	GP	poorly graded GRAVEL
Gr	GP	GP-GS	GP-GS	poorly graded GRAVEL with some Sand
Gr	GP	GP-SM	GP-SM	poorly graded GRAVEL with silty Sand

Materials Grading
(Database Columns P, Q, R, S)

Primary_Matl	Primary-Secondary Matl	Graded Coarse Matl	Graded Material	Description
Gr	GS	GC-SC	GC-SC	GRAVEL and SAND and CLAY
Gr	GS	GC-SM	GC-SM	GRAVEL and SAND with Silt and Clay
Gr	GS	GM-SW	GM-SW	silty, sandy GRAVEL, sand well Graded
Gr	GS	GP-SP	GP-SP	poorly graded GRAVEL and poorly graded SAND
Gr	GS	GS	GS	sandy GRAVEL
Gr	GS	GS-GC	GS-GC	clayey, sandy GRAVEL; sandy GRAVEL with Clay
Gr	GS	GS-MC	GS-MC	clayey, silty GRAVEL and SAND
Gr	GS	GS-ML	GS-ML	interbedded GRAVEL, SAND and SILT
Gr	GS	GS-SG	GS-SG	interbedded sandy GRAVEL and gravelly SAND
Gr	GS	GS-SP	GS-SP	sandy GRAVEL, sand poorly graded
Gr	GS	GS-SW	GS-SW	GRAVEL and well graded Sand, gravel size not defined; sandy GRAVEL, Sand well graded
Gr	GS	GW-CL	GW-CL	interbedded well graded GRAVEL and CLAY
Gr	GS	GW-GS	GW-GS	sandy, well graded GRAVEL; well graded GRAVEL some Sand
Gr	GS	GW-SP	GW-SP	well graded GRAVEL and/or with poorly graded SAND
Gr	GS	GW-SW	GW-SW	well graded GRAVEL and/or with well graded SAND
Gr	GW	GW	GW	well graded GRAVEL
Gr	GW	GW-SP	GW-SP	well graded GRAVEL with poorly graded SAND
LS	LS	LS	LS	LIMESTONE
LS	LS	LsFI	LsFI	LIMESTONE and FLINT
LS	LS	LsSh	LsSh	LIMESTONE and SHALE
LS	LS	LsSs	LsSs	LIMESTONE and SANDSTONE
ML	Li	Li	Li	LIGNITE (parsed with SILT materials)
ML	MC	MC	MC	clayey SILT; SILT with Clay
ML	MC	MC	MC-MG	SILT with Clay and Gravel
ML	MC	MC	MC-MS	clayey, sandy SILT
ML	MC	MC	ML-CL	interbedded CLAY and SILT
ML	MC	MC	ML-MC	SILT with some Clay
ML	MC	MC	MS-CS	sandy SILT interbedded with sandy CLAY
ML	MC	MC	MS-MC	sandy SILT interbedded with clayey SILT; SILT with some Sand and Clay
ML	MG	MG	MG	SILT with Gravel
ML	MG	MG	MG-MS	SILT with Gravel and Sand
ML	MG	MG	ML-MG	SILT with some Gravel
ML	MH	MH	MH	elastic SILT
ML	ML	ML	ML	SILT
ML	MS	MS	ML-MS	SILT with some Sand
ML	MS	MS	ML-SP	SILT interbedded with poorly graded Sand; SILT with poorly graded Sand
ML	MS	MS	ML-SW	SILT with well graded Sand
ML	MS	MS	MS	sandy SILT
ML	MS	MS	MS-MG	gravelly, sandy SILT
CL	OL	OL	OL	Organic CLAY
Sd	SC	SC	SC	clayey SAND

Materials Grading
(Database Columns P, Q, R, S)

Primary_Matl	Primary-Secondary Matl	Graded Coarse Matl	Graded Material	Description
Sd	SC	SC-CL	SC-CL	interbedded SAND and CLAY
Sd	SC	SC-CS	SC-CS	clayey SAND interbedded with sandy CLAY
Sd	SC	SC-GM	SC-GM	silty, clayey SAND and GRAVEL
Sd	SC	SC-GS	SC-GS	clayey SAND with sandy GRAVEL
Sd	SC	SC-MG	SC-MG	clayey SAND with Silt and Gravel
Sd	SC	SC-ML	SC-ML	interbedded clayey SAND and SILT
Sd	SC	SC-SG	SC-SG	clayey, gravelly SAND
Sd	SC	SC-SM	SC-SM	silty, clayey SAND: clayey, silty SAND
Sd	SC	SC-SP	SC-SP	interbedded poorly graded SAND and clayey SAND
Sd	SC	SP-CH	SP-CH	interbedded poorly graded SAND and fat CLAY
Sd	SC	SP-CL	SP-CL	interbedded poorly graded SAND and Clay
Sd	SC	SP-CM	SP-CM	poorly graded SAND with silty CLAY
Sd	SC	SP-SC	SP-SC	clayey, poorly graded SAND; poorly graded SAND with Clay
Sd	SC	SW-CL	SW-CL	interbedded well graded SAND and CLAY
Sd	SC	SW-SC	SW-SC	well graded SAND with Clay; clayey, well graded SAND
Sd	SG	SC-GC	SC-GC	SAND and GRAVEL and CLAY
Sd	SG	SG	SG	gravelly SAND; SAND and GRAVEL; SAND with Gravel
Sd	SG	SG-CM	SG-CM	gravelly SAND with Clay and Silt
Sd	SG	SG-GS	SG-GS	interbedded SAND with Gravel and sandy GRAVEL
Sd	SG	SG-GW	SG-GW	gravelly SAND, gravel well graded
Sd	SG	SG-MC	SG-MC	gravelly SAND with Silt and Clay
Sd	SG	SG-ML	SG-ML	interbedded gravelly SAND and SILT
Sd	SG	SG-SC	SG-SC	gravelly SAND with Clay; clayey, gravelly SAND
Sd	SG	SG-SM	SG-SM	silty, gravelly SAND; silty SAND and GRAVEL; gravelly SAND with Silt
Sd	SG	SG-SP	SG-SP	poorly graded SAND with Gravel
Sd	SG	SP-GM	SP-GM	poorly graded SAND with Gravel and Silt
Sd	SG	SP-GP	SP-GP	poorly graded SAND with poorly graded GRAVEL
Sd	SG	SP-GS	SP-GS	gravelly poorly graded SAND
Sd	SG	SP-GW	SP-GW	poorly graded SAND with well graded GRAVEL
Sd	SG	SP-SG	SP-SG	poorly graded SAND with undifferentiated Gravel
Sd	SG	SW-GP	SW-GP	well graded SAND with poorly graded GRAVEL
Sd	SG	SW-GW	SW-GW	well graded SAND with well graded GRAVEL
Sd	SG	SW-SG	SW-SG	well graded SAND with undifferentiated Gravel
SH	SH	SH	SH	SHALE
Sd	SM	SC-GM	SC-GM	SAND, SILT, GRAVEL and CLAY
Sd	SM	SM	SM	silty SAND
Sd	SM	SM-CL	SM-CL	interbedded silty SAND and CLAY

Materials Grading
(Database Columns P, Q, R, S)

Primary_Matl	Primary-Secondary Matl	Graded Coarse Matl	Graded Material	Description
Sd	SM	SM-GC	SM-GC	SAND, SILT, GRAVEL and CLAY; silty SAND with Clay and Gravel; SAND and GRAVEL some Silt
Sd	SM	SM-GM	SM-GM	silty SAND and Gravel; SAND and GRAVEL some Silt
Sd	SM	SM-GP	SM-GP	silty SAND with poorly graded GRAVEL
Sd	SM	SM-GW	SM-GW	interbedded poorly graded SAND and Clay
Sd	SM	SM-ML	SM-ML	interbedded silty SAND and SILT
Sd	SM	SM-MS	SM-MS	silty SAND to sandy SILT
Sd	SM	SM-SC	SM-SC	silty SAND with Clay; clayey, silty SAND
Sd	SM	SM-SG	SM-SG	silty SAND and Gravel; silty, gravelly SAND
Sd	SM	SM-SP	SM-SP	well graded, silty SAND
Sd	SM	SM-SW	SM-SW	silty, well graded SAND
Sd	SM	SP-MC	SP-MC	interbedded poorly graded SAND and clayey SILT
Sd	SM	SP-ML	SP-ML	interbedded poorly graded SAND and SILT
Sd	SM	SP-SM	SP-SM	poorly graded SAND with Silt
Sd	SM	SW-MC	SW-MC	interbedded well graded SAND with Clay and Silt
Sd	SM	SW-ML	SW-ML	well graded SAND interbedded with SILT
Sd	SM	SW-SM	SW-SM	silty well graded SAND
Sd	SP	SP	SP	poorly graded SAND
Sd	SP	SP-GC	SP-GC	poorly graded SAND with Clay and Gravel
SS	SS	SS	SS	SANDSTONE
Sd	SW	SW	SW	well graded SAND
Sd	SW	SW-CH	SW-CH	well graded SAND interbedded with fat Clay
Sd	SW	SW-Co	SW-Co	well graded SAND with Cobbles