

NORTHERN PACIFIC RAILWAY COMPANY  
VALUATION DEPARTMENT

CHARACTER OF SOIL BY VALUATION SECTIONS  
STATE OF WISCONSIN

VALUATION SECTION NO.

CHARACTER OF SOIL

Wis. 1	Hard Digging	(43 poles set in swamp)
" 2	Medium "	(27 " " " " " )
" 3	Hard "	( " " " " " )
" 4	" "	( 7 " " " " " )
" 5	Easy "	

STATE OF MINNESOTA

Minn. 1	Hard Digging	(11 poles in rock - 3 poles in swamp)
" 1-A (West Duluth to Carlton)	" "	(60 poles in rock)(61 poles on 10' banks)
" 2 (Carlton to Groningen (Groningen to end of Sec.)	" "	(17 " " " " ) 34 poles in swamp )
" 2-A	Medium "	(80 " " " " )
" 2-B	Hard "	
" 2-C	" "	(60 poles in rocks- 2 poles in swamp)
" 2-D	Medium "	
" 3	Hard "	(6 poles in swamp)
" 4	" "	(40 " " " " - 16 poles in rock)
" 5	" "	( 5 " " " " - 12 " " " " )
" 6	Medium "	
" 7	" "	
" 8	" "	
" 9 Elk River to Little Falls	Easy "	Balance Medium (145 poles set in swamp).
" 10	" "	(5 Medium 145 poles)
" 11 (55 poles on average 15' cuts)	" "	(56 " " " " )
" 12 (Carlton to Brainerd (Brainerd to Staples)	50% Medium & 50% hard digging	(163 poles in swamp)
" 12-A	90% " & 10% "	( 8 " " " " )
" 12-B	50% Medium 50% hard digging	
" 13 (264 poles on banks on (ave. height of 15' above (track.	50% " 50% "	
" 14	Medium Digging	(384 poles in swamp).
" 15	" "	(244 " " " " )
" 16	" "	(247 " " " " )
" 17	Hard "	(168 " " " " )
" 1 M & I	Hard "	( 48 " " " " ) (3 poles in rock)
" 1A M & I	75% medium, 25% hard	(148 " " " " )
" 1 B.P. & N.	Hard digging	( 27 poles in swamp - 3 poles in rock)

STATE OF NORTH DAKOTA

No. Dak. 1 (State Line to Jamestown (Jamestown to End of Sec.)	Medium Digging	(147 poles in swamp ) 318 poles set on banks ave. height
" 2 276 poles on banks, ave. ht. of 20' above tracks.	" "	(113 " " " " ) 10' above tracks.
" 3	Hard Digging	(66 poles in swamp, 19 poles in rock)
" 4 (Beginning of section (to M.P. 107 (M.P. 107 to Streeter	Medium "	(12 poles in swamp)
" 4-A	" "	
" 4-B	Hard "	(140 poles in swamp) 133 poles on banks at an ave. height
" 4-C	Medium "	( 93 " " " " ) of 10' above tracks.
" 5	" "	(53 poles in swamp)
" 5-A	" "	
" 5-B	" "	(184 poles in swamp - 22 in lake)
" 6	" "	
" 7	" "	(132 poles set in swamp)
" 8	" "	(120 " " " " )
" 9	" "	
" 10	" "	(141 poles set in swamp)
" 11	" "	(211 " " " " " - 23 set in lake)
" 12	" "	(164 " " " " " )
" 13	" "	(62 " " " " " )
" 14	" "	(26 " " " " " ) 11 set in rock)
" 15	" "	(43 " " " " " - 9 " " " " )
" 16	" "	(24 " " " " " -19 " " " " )
" 17	Hard "	(17 " " " " " )

NORTHERN PACIFIC RAILWAY COMPANY  
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CHARACTER OF SOIL BY VALUATION SECTIONS (CONTD)

VAL. SEC. NO.		STATE OF MONTANA CHARACTER OF SOIL.	
Mont. 1	(289 poles on ave. 30' banks)	Hard Digging	(734 poles set in rock - 10 set in swamp)
" 1-A		" "	(46 " " " " 6 " " " )
" 2	(146 poles on average 18' banks)	" "	(84 " " " " 98 " " " )
" 3	(427 " " " 25' " ) (32 poles on tunnels)	" "	(148 " " " " 86 " " " )
" 4	(516 poles set in road & track fill) (along river banks & mountain sides) (56 poles on tunnels)	Hard Digging	(193 poles set in rock- 65 set in swamp)
" 4-A		Hard Digging	
" 4-B		" "	(63 poles set in rock)
" 5	(725 poles on average 20' bank) (136 " " roadway fills )	" "	(357 poles set in rock - 4 set in swamp)
" 6	(214 poles on average 20' banks & cuts)	Hard digging	(14 poles set in rock)
" 7		Hard digging	
" 8		Medium digging	
" 9		" "	(18 poles set in swamp)
" 10		Hard digging	
" 11		" "	(187 poles set in rock, blasting necessary)
" 12		" "	
" 13		" "	(198 poles set in swamp)
" 14		" "	(28 poles set in swamp, 6 poles in rock)
" 14-A		" "	(18 poles set in swamp)
" 15		" "	(217 poles set in swamp)
" 16		" "	(216 poles set in swamp - 30 poles in rock)
" 16-A		" "	(32 poles set in swamp - 7 " " " )
" 16-B		" "	
" 17		" "	(74 poles set in swamp)
" 18	(35 poles on average 16' banks)	" "	(87 poles " " " )
" 19	(116 poles on average 20' banks) (591 poles set in road & track (fills along river banks & (mountain sides. )	" "	(50 " " " rock ) ( blasting necessary)
" 19-A	(12 poles on top of tunnels ) (191 " " average 25' banks)	Hard digging	(129 poles set in rock - blasting necessary)
" 20		Hard digging	
" 21		" "	

STATE OF IDAHO

Idaho 1	(207 poles on average 25' banks) ( 11 " " tunnels ) (178 " in fills of roadway )	Hard digging	(198 poles set in rock - 24 poles set
" 2		Medium digging	
" 3	(35 poles on average 20' banks)	Hard	"
" 3-A		" "	
" 3-B		" "	
" 4		Medium	" (195 poles set in rock)
" 5		" "	( 10 poles set in rock )
" 6	(178 poles on average 30' banks) (129 " set in roadway fills)	Hard	" (730 poles set in rock)
" 7	(297 poles on average 25' banks)	Hard	" (326 poles set in rock)

NORTHERN PACIFIC RAILWAY COMPANY  
VALUATION DEPARTMENT  
CHARACTER OF SOIL BY VALUATION SECTIONS  
STATE OF WASHINGTON

VAL. SEC. NO.	CHARACTER OF SOIL	
Wash. 1	(245 poles on average 20' bank) (101 " in fill	40% hard, 60% easy (644 poles set in rock)
" 1-A	(84 poles on average 20' banks)	Hard digging (30 poles set in rock)
" 1-B		Medium "
" 1-C		" "
" 2	(806 poles on average 25' banks) (1292 poles in roadway fills and on river banks)	40% medium, 60% hard (843 poles in rock, blasting necessary) (60 " " swamp (122 " " over tunnels)
" 2-A		Medium digging
" 2-B		" "
" 2-C		Hard "
" 2-D	(151 poles on average 20' banks)	" " (4 poles set in rock)
" 3	(90 poles set in fill)	50% medium, 50% hard (12 poles set in swamp)
" 4 & 5		Hard digging
" 6	95 poles on average 30' banks	50% medium, 50% hard (14 poles set in rock)
" 6-A		Hard digging (58 poles set in swamp)
" 7		Medium digging (15 " " " rock)
" 7-A		" "
" 8		Hard " (16 poles set in swamp)
" 8-A	(135 poles set on low cuts & hillside)	" " (17 " " " " )
" 9	(800 poles on hillside above track 20')	40% medium, 60% hard 4 poles set in rock - 3 in swamp)
" 9-A		50% medium, 50% hard (22 poles set in swamp)
" 10	(188 poles on average 20' cuts) (195 poles set 20' below track)	Hard digging
" 10-A		Hard digging
" 10-B	(56 poles on side hills above tracks)	" "
" 10-C	(35 " " " " " " " " )	" "
" 10-D	(Majority of poles below track on steep hillside)	" " (34 poles set in rock)
" 10-E		" "
" 11		Hard " (138 poles set in rock)
" 11-A		" "
" 11-B		" "
" 12	(113 poles on average 20' cuts)	40% hard, 60% medium (1027 poles set in rock - 10 set in swamp)
" 12-A		Hard digging
" 14		Medium digging
" 15	(160 poles on average 20' banks) (215 poles set in roadway fills)	Hard digging (207 poles set in rock)
" 16		Easy digging
" 17	(194 poles on average 16' banks)	" " (32 poles set in rock)
" 18		" " (8 " " " " " )
" 19		Medium "
" 20		" "
" 21		40% hard, 60% medium digging
" 23		15% medium, 85% hard " (11 poles set in rock, 11 set in swamp)
" 24		Hard digging (78 poles set in rock)
" 25		" "
" 26		" " (11 poles set in rocks)
" 27 (rough country fills & cuts)		" "
" 27-A		" "
" 28	(69 poles on average 20' cuts)	" " (2 poles set in rock, 39 set in swamp)
" 29	(75% mountainous)	15% medium, 85% hard (49 poles in rock - 55 in swamp)
" 30		Hard digging
" 31	(31 poles on 40' cut ) (71 " " " 20' cuts )	" "
" 32	(160 poles on cuts & side hills ) (average 20' above tracks )	60% easy, 15% medium, (20 poles set in rock) 25% hard digging.

STATE OF OREGON

Oregon 1	(80 poles on average 20' cut)	Hard digging (87 poles set in rock, 3 set in swamp)
" 2		" "
" 3		Easy " (44 poles set in rock)
" 3-A		" "

Office of Valuation Engineer,  
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Information furnished by C.A.P.