

Steepest Grades

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Grade %	Elev (Feet)	Length (Feet)	Location-Country, State, City, Facility name			RR Name
74.0%			IA	Dubuque	Fenelon Place Elevator	
70.9%		896	PA	Johnstown	Johnstown Inclined	Johnstown Inclined Plane
37.0%	6,288	16,000	NH	Mt. Washington	Mt. Washington & Cog	Mt. Washington Cog Railway (Mt.
28.0%			PA	Mahanoy	Mahanoy Plane	Mahanoy Plane (1861-1932) (Schuylkill
26.0%			PA	Clearfield	Bigler Branch	R. J. Corman Railroad-Pennsylvania
26.0%			Switzerl	Rodi Fiesso	Freggio and Prato Spiral	
15.0%		2,805	PA	Philadelphia	Belmont Plane (Incline)	Philadelphia & Columbia Railroad
14.6%		13,020	PA	Ashley	Ashley Planes #1 & 2	Lehigh & Susquehanna Railroad
12.0%	3,307		Switzerl	Meiringen	Brunig Pass	Zentralbahn (Brunig Railway)
11.0%			Switzerl	Gletsch	Muttbach and the Furka	Dampfbahn Furka-Bergstrecke (Furka
10.8%	10,550		UT	Alta	Little Cottonwood	Little Cottonwood Transportation Co
9.5%			CA	Felton	Roaring Camp & Big	Roaring Camp & Big Trees Narrow
8.8%		810	MO	Kansas City	8th Street Tunnel (West	Kansas City Public Service Co.
8.2%	2,500		CA	Mill Valley	Mt. Tamalpais Gravity	Mill Valley & Mt. Tamalpais Scenic
8.0%			CO	Chattanooga	Chattanooga Loop	Silverton Railroad (Red Mountain &
7.5%	8,400		CO	Atchee	Baxter Pass	Uintah Railway (Unitah Ry)
7.3%	8,600		NM	Alamogordo	Cox Canyon Branch	Alamogordo & Sacramento Mountain
7.0%	10,000		CO	Waterton	Platte Canyon Pass	Denver, South Park & Pacific Railway
7.0%	9,990		CO	Webster	Kenosha Pass	Denver, South Park & Pacific Railway
7.0%			CO	Turret	Calumet Branch	Denver & Rio Grande Western Railroad
7.0%	6,789		NV	Reno	Geiger Grade	Virginia & Truckee Railroad (1869)
7.0%			UT	Bingham	Copper Belt Railroad	Copper Belt Railroad
7.0%		360	Switzerl	Brusio	Brusio Spirial Viaduct	Bernina Railway (Berninabahn)
6.7%		35,904	Japan	Karuizawa Station, Nagano	Usui Pass	East Japan Railway Company
6.0%	13,117		CO	Mt. McClellan	Mt. McClellan-terminus	Argentine & Grays Peak Railway
6.0%	13,117		CO	Silver Plume	Mt. McClellan	Argentine Central Railway
6.0%	7,622		NM	Raton	Raton Pass	Atchison, Topeka & Santa Fe Railway
6.0%	7,834		NM	Raton	Raton Pass (1878 line)	New Mexico & Southern Pacific
6.0%		8,500	NY	New York	Steinway Tunnels	New York & Long Island Railroad
6.0%			Italy	Masera	Domodossola-Locarno	Centovalli Railway - Locarno-
6.0%			Switzerl	Verdasio	Domodossola-Locarno	
5.9%			IN	Madison	Madison Hill	Madison & Indianapolis Railroad
5.8%	10,015		CO	Cumbres	Cumbres Pass	Denver & Rio Grande Railroad
5.8%	10,015		CO	Cumbres	Cumbres Pass	Cumbres & Toltec Scenic Railroad
5.8%	10,015		CO	Cumbres	Cumbres Pass	Denver & Rio Grande Railroad
5.6%	3,678		WA	Yakima	Stampede Pass Line	Northern Pacific Railroad
5.6%	3,678		WA	Snoqualmie	Stampede Pass	Northern Pacific Railroad
5.6%			WA	Everett	Boeing aircraft plant	Burlington Northern & Santa Fe
5.5%	11,841		Ecuador	Guayaquil, Guayas	Devil's Nose	Guayaquil & Quito Railway (Devil's
5.3%			CA	Auberry	Webstone Grade	San Joaquin & Eastern Railroad
5.2%	8,600		NM	Cloudcroft	Cox Canyon Switchback	Alamogordo & Sacramento Mountain
5.2%	8,600	300	NM	Cloudcroft	Cox Canyon Bridge	Alamogordo & Sacramento Mountain
5.1%	2,097	15,840	NC	Tyron	Saluda Grade	Spartanburg & Asheville Railroad
5.1%	8,247		WY	Sherman	Sherman Hill (1865 track	Union Pacific Railroad
5.0%	3,700		CA	Placerville	Gold Mining History and	Placerville & Lake Tahoe Railroad
5.0%	9,346		CO	Hartsel	Trout Creek Pass	Denver, South Park & Pacific Railway
5.0%			LA	Algiers	Gouldsboro Ferry	Texas & New Orleans Railroad
5.0%	835	25,081	MA	North Adams	Hoosac Tunnel	Troy & Greenfield Railroad & Hoosac
5.0%		7,500	MA	Boston	East Boston Tunnel	
5.0%			NJ	Greystone	Greystone Hill	Delaware, Lackawanna & Western
5.0%			VT	Montpelier	Montpelier Branch	Central Vermont Railway
4.8%	9,000		CO	Poncha Junction	Monarch Pass (Poncha	Denver & Rio Grande Railroad
4.8%	10,028		CO	Monarch/Garfield	Monarch Pass	Denver & Rio Grande Railroad
4.5%	5,064		CA	Hetch Hetchy Reservoir	Poopenaut Pass	Hetch Hetchy Railroad
4.5%			CA	Signal Butte	Signal Butte	McCloud River Railway
4.5%	11,493		CO	Como	High Line (Como-	Denver, South Park & Pacific Railway
4.5%	5,340	42,240	Canada	AB Jasper	Kicking Horse Pass Big	Canadian Pacific Railway

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Grade %	Elev (Feet)	Length (Feet)	Location-Country, State, City, Facility name			RR Name
4.0%			AR	Winslow	Boston Mountains	Missouri, Arkansas & Southern Railway
4.0%		3,700	CA	Oakland	Caldecott tunnel	Oakland, Antioch & Eastern Railway
4.0%			CA	Oakland	Oakland Hills-Rockridge	Oakland, Antioch & Eastern Railway
4.0%	9,242		CO	Walsenburg	La Veta Pass (original	Denver & Rio Grande Railroad
4.0%	11,530	2,060	CO	Leadville	Hagerman Pass (High	Colorado Midland Railroad
4.0%	11,612	1,772	CO	St. Elmo	Alpine Tunnel	Denver, South Park & Pacific Railway
4.0%	10,856		CO	Marshall Pass/Mt. Ouray/	Marshall Pass	Denver & Rio Grande Railroad
4.0%	9,393		CO	Walsenburg	La Veta Pass	Denver & Rio Grande Railroad
4.0%	11,482		CO	Como	Boreas Pass	Denver, South Park & Pacific Railway
4.0%	10,022		CO	Antonito	San Juan Extension	Denver & Rio Grande Railroad
4.0%	7,960		CO	Cimarron	D&RGW Locomotive	Denver & Rio Grande Railroad
4.0%	11,700	121,440	CO	Rollinsville	Rollins Pass (Corona	Denver, Northwestern & Pacific Railway
4.0%			CO	Gunnison	Curecanti Needle (Cerro	Denver & Rio Grande Railroad
4.0%	11,600		CO	Rollinsville	Moffat Road	Denver, Northwestern & Pacific Railway
4.0%			CO	Cimarron	Cerro Summit - Black	Denver & Rio Grande Railroad
4.0%	9,165		CO	Divide	Ute Pass	Colorado Midland Railroad
4.0%	9,300		CO	La Veta	Muleshoe Bend (Mule	Denver & Rio Grande Railroad
4.0%	11,700	121,440	CO	Rollinsville	Rollins Pass	Denver, Northwestern & Pacific Railway
4.0%	10,820		CO	Marshall Pass/Mt. Ouray/	Marshall Pass	Denver & Rio Grande Railroad
4.0%	10,820		CO	Shirley	Shirley Horsehoe Curve	Denver & Rio Grande Railroad
4.0%	10,820		CO	Marshall Pass/Mt. Ouray/	Marshall Pass	Denver & Rio Grande Railroad
4.0%	10,820		CO	Marshall Pass/Mt. Ouray/	Marshall Pass Depot	Denver & Rio Grande Railroad
4.0%	10,820		CO	Shirley	Shirley Switchbakcs	Denver & Rio Grande Railroad
4.0%	11,530	1,084	CO	Leadville	Hagerman Pass Trestle	Colorado Midland Railroad
4.0%	11,530	2,060	CO	Leadville	Hagerman Pass	Colorado Midland Railroad
4.0%	11,700		CO	Corona	Rollins Pass	Denver, Northwestern & Pacific Railway
4.0%	11,700		CO	Corona	Rollins Pass	Denver & Salt Lake Railway
4.0%	11,482		CO	Dillon	Boreas Pass	Denver, South Park & Pacific Railway
4.0%	11,676		CO	Rollinsville	Rollins Pass (Corona	Denver, Northwestern & Pacific Railway
4.0%	9,242		CO	La Veta	La Veta Pass	Denver & Rio Grande Railroad
4.0%	11,493		CO	Boreas Pass	Boreas Pass (originally	Denver, South Park & Pacific Railway
4.0%	11,612	1,772	CO	St. Elmo (Pitkin)	Alpine Tunnel	Denver, South Park & Pacific Railway
4.0%			ID	Wallace	Wallace Branch	Northern Pacific Railroad
4.0%			LA	Vidalia	Vidalia-Natchez Ferry	Missouri Pacific Railroad
4.0%			MI	Hancock	Hancock Hill	Duluth, South Shore & Atlantic Railway
4.0%	5,562		MT	Livingston	Bozeman Pass	Northern Pacific Railroad
4.0%			MT	Missoula	Lookout Pass	Northern Pacific Railroad
4.0%			NM	Cloudcroft (Russia)	Wills Canyon Switchback	Southwest Lumber Company
4.0%			NM	Cloudcroft (Russia)	Wills Canyon Switchback	Southwest Lumber Company
4.0%			NM	Embudo	Chili Line (Santa Fe	Denver & Rio Grande Western Railroad
4.0%			SD	Oblivion	Keystone Branch	Chicago, Burlington & Quincy Railroad
4.0%			SD	Hill City	Keystone Branch	Chicago, Burlington & Quincy Railroad
4.0%			SD	Keystone	Keystone Branch	Chicago, Burlington & Quincy Railroad
4.0%			TX	Richland Hills	Tehachacomanche Loop	Atchison, Topeka & Santa Fe Railway
4.0%			UT	Springville	Tintic Branch	Denver & Rio Grande Railroad
4.0%			VA	Smiley (Hagans)	Hagans Switchback	Louisville & Nashville Railroad
4.0%	4,027		WA	Wellington	Stevens Pass	Great Northern Railroad
4.0%		16,400	England	Liverpool	Mersey Railway Tunnel	
4.0%	5,850	575	Peru	Verrugas	Verrugas Viaduct	
4.0%	1,283		Switzerl	Giornico	Pianotondo and Travi	Swiss Federal Railways (SBB CFF FFS)
3.9%			CA	Los Angeles	Main Street Station	Pacific Electric Railway
3.9%	2,885		Canada	YT White Pass	White Pass	White Pass & Yukon Railway Co.,
3.7%	4,135		OR	Eugene (Springfield Jct)	Siskiyou Line	Oregon & California Railroad
3.7%			OR	Eugene (Springfield Jct)	Siskiyou Pass	Southern Pacific Railroad
3.7%	4,135		OR	Ashland	Siskiyou Pass	Southern Pacific Railroad
3.7%			OR	Portland	Shasta Route (Siskiyou	California & Oregon Railroad
3.6%			IL	Bement	Bement Hump over	Illinois Terminal Railroad

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Grade %	Elev (Feet)	Length (Feet)	Location-Country, State, City, Facility name			RR Name
3.5%			CA	Ryan	Death Valley Railroad	Death Valley Railroad
3.5%	10,200		CO	Salida	Tennessee Pass	Denver & Rio Grande Railroad
3.5%	10,500		CO	Salida	Tennessee Pass	Denver & Rio Grande Railroad
3.3%			OR	Natron (Eugene)	Cascade Route/Natron	Southern Pacific Railroad
3.3%			WA	Tacoma	Tacoma Hill	Chicago, Milwaukee, St. Paul & Pacific
3.2%	7,453		NM	Glorieta	Glorieta Pass	Atchison, Topeka & Santa Fe Railway
3.0%			AK	Seward	Bartlett Glacier MP 48.2	Alaska Railroad
3.0%		6,100	AZ	Prieta	Ramsgate Hill Sierra	Santa Fe, Prescott & Phoenix Railroad
3.0%	8,200		AZ	Ashfork (Williams Junction)	Peavine Line (Phoenix	Santa Fe, Prescott & Phoenix Railroad
3.0%		325	AZ	Ash Fork	Johnson Canyon Tunnel	Atlantic & Pacific (Western Division)
3.0%	3,820		CA	Cajon	Cajon Pass and	Atchison, Topeka & Santa Fe Railway
3.0%			CO	Georgetown	Georgetown Loop	Colorado Central Railroad
3.0%	11,500	2,060	CO	Leadville	Hagerman Tunnel	Colorado Midland Railroad
3.0%	10,222		CO	Lizard Head Pass	Lizard Head Pass	Rio Grande Southern Railway
3.0%	10,250		CO	Ophir	Ophir Loop & Trestle	Rio Grande Southern Railway
3.0%	10,221		CO	Minturn	Tennessee Pass	Denver & Rio Grande Railroad
3.0%	10,223		CO	Minturn	Tennessee Pass	Denver & Rio Grande Railroad
3.0%			CO	Georgetown	Georgetown Loop	Georgetown Loop Railroad
3.0%			CO	Georgetown	Georgetown Loop	Georgetown, Breckenridge & Leadville
3.0%	10,250		CO	Ophir	Ophir Loop	Rio Grande Southern Railway
3.0%	1,358		KY	Mary Helen	Mary Helen Hill	Louisville & Nashville Railroad
3.0%			MI	Hancock	Quincy Hill	Chicago, Milwaukee, St. Paul & Pacific
3.0%			MO	Carondelet	Ivory Transfer	Missouri Pacific Railroad
3.0%	7,138		NV	Mt. Montgomery	Mt. Montgomery Pass	Carson & Colorado Railroad
3.0%	5,600		NV	Wendover	Arnold's Loop	Union Pacific Railroad
3.0%	6,240		SD	Edgemont (Deadwood	High Line (Edgemont-	Chicago, Burlington & Quincy Railroad
3.0%			SD	Deadwood	High Line	Chicago, Burlington & Quincy Railroad
3.0%			TN	Tracy City	Tracy City Branch	Nashville, Chattanooga & St. Louis
3.0%			UT	Eureka	Golden Circle Loop	Tintic Range Railway
3.0%	2,830	9,500	WA	Cle Elum	Stampede Tunnel	Northern Pacific Railroad
3.0%			WV	Coopers	Mill Creek Branch	Norfolk & Western Railway
3.0%		27,984	New	Otira	Otira Tunnel (Orita	New Zealand Government Railways
2.9%		4,295	IN	Georgetown	Duncan Tunnel	Louisville, New Albany & St. Louis
2.8%	7,085		CA	Placer	Donner Pass	Southern Pacific Railroad
2.8%			NC	Aberdeen	Sandhill Grade	Aberdeen, Carolina & Western Railroad
2.8%			WV	Terra Alta (Cranberry	Cranberry Grade (Salt	Baltimore & Ohio Railroad
2.8%			WV	Whitesville	Seng Creek Subdivision	Chesapeake & Ohio Railway
2.8%	3,773	47,520	Switzerl	UNI Göschenen	Gotthard Tunnel	Swiss Federal Railways (SBB CFF FFS)
2.8%	7,100	247	CA	Keeler	Montgomery Pass	Carson & Colorado Railroad
2.8%	2,564	11,890	WA	Hyak	Snoqualmie Tunnel	Chicago, Milwaukee, St. Paul & Pacific
2.7%			KY	Olive Hill (Corey Hill)	Corey Hill Grade	Chesapeake & Ohio Railway
2.7%	1,886		NY	Pine Hill	Pine Hill Grade	Ulster & Delaware Railroad
2.7%	2,628		MD	Altamont	Seventeen Mile Grade	Baltimore & Ohio Railroad
2.6%			IL	Peoria	Caldwell Hill	Illinois Terminal Railroad
2.6%			KY	Erlanger	Erlanger Hill	Southern Railway
2.6%			OR	Meacham (Hilgard)	Pelican Canyon	Oregon-Washington Railway &
2.6%			OR	Nashville	Toledo Branch Summit	Southern Pacific Railroad
2.6%			PA	Keating	Keating Summit	Western New York & Pennsylvania
2.6%			PA	Bigler	Rosebud Coal	R. J. Corman Railroad-Pennsylvania
2.5%	3,793	147,840	CA	Walong	Tehachapi Pass and	Southern Pacific Railroad
2.5%	4,031	147,840	CA	Walong	Tehachapi Pass	Southern Pacific Railroad
2.5%		15,840	IN	Georgetown	Duncan Hill	Louisville, New Albany & St. Louis
2.5%			NH	Crawford Notch	Crawford Notch	Portland & Ogdensburg Railroad
2.5%		2,228	TN	Cowan	Cumberland Mountain	Nashville & Chattanooga Railroad
2.5%			TN	Cowan	Cowan Hill	Nashville & Chattanooga Railroad
2.5%		3,100	WV	Bluefield/Bramwell (Flat Top	Elkhorn Tunnel #1	Norfolk & Western Railway
2.5%			WV	Rowlesburg	Cheat River Grade	Baltimore & Ohio Railroad

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2.5%	8,000		Mexico		Creel	Copper Canyon	Ferrocarril del Chihuahua Al Pacifico,
2.4%	2,424			CA	Colfax	SP Freight House	Nevada County Narrow Gauge Railroad
2.4%	5,187			CA	Emigrant Gap	Emigrant Gap	Central Pacific Railroad
2.4%				CA	Colfax (Cape Horn to Dutch	Cape Horn	Central Pacific Railroad
2.4%	7,440			UT	Helper	Soldier Summit	Denver & Rio Grande Western Railroad
2.4%				WV	Huttonsville	Cheat Mountain Grade	Coal & Iron Railway
2.4%				WV	Elkins	Durbin Subdivision	Coal & Iron Railway
2.3%	7,138	247		CA	Bodie (Bridgeport)	Mt. Montgomery Pass	Carson & Colorado Railroad
2.3%				CA	Palmdale	Vincent Grade	Southern Pacific Railroad
2.3%				CA	San Diego	Miramar Hill	Atchison, Topeka & Santa Fe Railway
2.3%	2,630	89,760		PA	Hyndman	Sand Patch Grade	Baltimore & Ohio Railroad
2.2%	3,660			CA	Carrizo Gorge	Carrizo Gorge	San Diego & Arizona Railway
2.2%	7,085			CA	Placer	Donner Pass Tunnels	Southern Pacific Railroad
2.2%	4,164	4,224		CA	Cima	Cima Grade	Los Angeles & Salt Lake Railroad
2.2%				CA	Kelso	Cima Grade	Los Angeles & Salt Lake Railroad
2.2%	4,500			CA	Almanor	Almanor Greenville	Western Pacific Railroad
2.2%	1,340			CA	San Luis Obispo (Goldtree)	Cuesta Pass Horseshoe	Southern Pacific Railroad
2.2%				CA	San Luis Obispo	Cuesta Grade	Southern Pacific Railroad
2.2%				CA	Cima	Cima Grade	Los Angeles & Salt Lake Railroad
2.2%				CA	San Luis Obispo	Cuesta Grade	Southern Pacific Railroad
2.2%				MN	Proctor	Proctor Hill	Duluth, Missabe & Iron Range Railway
2.2%	5,548	5,280		MT	Helena	Mullan Pass & Tunnel	Northern Pacific Railroad
2.2%	6,356			MT	Butte	Homestake Pass	Northern Pacific Railroad
2.2%	5,566			MT	Helena	Mullan Pass	Northern Pacific Railroad
2.2%	3,915			MT	Evaro Hill	Evaro Hill Mountain	Northern Pacific Railroad
2.2%				NC	Asheville	Piedmont Division ("Old	Southern Railway
2.2%		63,360		NE	Crawford	Crawford Hill	Chicago, Burlington & Quincy Railroad
2.2%				OR	Oakridge	Cascade Line	Southern Pacific Railroad
2.2%	4,205			OR	La Grande	Kamela Mountain	Union Pacific Railroad
2.2%		21,241,4		OR	Kamela (Meacham)	Meacham Canyon	Union Pacific Railroad
2.2%				OR	Encina (Baker)	Huntington-Baker line	Union Pacific Railroad
2.2%				OR	Sweet Home	Dollar Branch	Spokane, Portland & Seattle Railroad
2.2%				OR	Oakridge	Cascade Line	Southern Pacific Railroad
2.2%				UT	Promotory Summit	Promontory Grade	Central Pacific Railroad
2.2%	3,380	13,700		WA	Berne	Cascade Tunnel (1900)	Great Northern Railroad
2.2%	3,672	10,560		WA	Cle Elum	Stampede Pass	Northern Pacific Railroad
2.2%	2,880	13,183		WA	Wellington	Stevens Pass Tunnel	Great Northern Railroad
2.2%	2,460			WA	Bolyston (Kittitas)	Saddle Mountain Pass	Chicago, Milwaukee, St. Paul & Pacific
2.2%	1,678			WA	Warwick	Goldendale Branch	Spokane, Portland & Seattle Railroad
2.2%				Wv	Austen	Newburg Grade	Baltimore & Ohio Railroad
2.2%	2,500	4,138		WV	Tunnelton	Kingwood Tunnel	Baltimore & Ohio Railroad
2.2%	4,800	6,240	Canada	AB	Jasper	Spiral Tunnels	Canadian Pacific Railway
2.2%	5,340		Canada	AB	Jasper	Kicking Horse Pass	Canadian Pacific Railway
2.2%		6,240	Canada	AB	Jasper	Spiral Tunnels	Canadian Pacific Railway
2.2%	3,745	26,400	Canada	BC	Fraine (near Revelstoke)	Connaught Tunnel	Canadian Pacific Railway
2.2%			Canada	BC	Squamish	Cheakamus Canyon	British Columbia Railway (BC Rail)
2.2%	4,364		Canada	BC	Golden	Rogers Pass	Canadian Pacific Railway
2.2%		600	Canada	BC	Field	Stoney Creel Bridge	Canadian Pacific Railway
2.2%		656	Canada	BC	Golden	Stoney Creek Bridge	Canadian Pacific Railway
2.1%				WV	Mullens (Elmore/Clark's	Clark's Gap Grade	Virginian Railway
2.0%	2,500			CA	Loma Linda	Beaumont Hill (San	Southern Pacific Railroad
2.0%	1,591			CA	Beaumont	San Gorgonio Pass	Southern Pacific Railroad
2.0%	9,239	32,253		CO	Baltimore (East portal)	Moffat Tunnel	Denver & Salt Lake Railway
2.0%				CO	West Rocky	Big 10 Curve (Big Ten	Denver, Northwestern & Pacific Railway
2.0%				GA	Blue Ridge	Hook and Eye	Marietta & North Georgia Railway
2.0%				IL	Meredosia	Meredosia Grade	Wabash Railroad (1889)
2.0%	6,347			MT	Penfield	Pipestone Pass	Chicago, Milwaukee, St. Paul & Pacific

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2.0%			MT	Butte	Vendome Loop	Chicago, Milwaukee, St. Paul & Pacific	
2.0%			OH	Conneaut	Low Line	Bessemer & Lake Erie Railroad	
2.0%	2,167	3,612	PA	Gallitzin	Gallitzin Tunnel	Pennsylvania Railroad	
2.0%			TN	Erin	Tennessee Ridge	Louisville & Nashville Railroad	
2.0%			Canada	ON	Orangeville	Orangeville Grade	Toronto, Grey & Bruce Railway
2.0%			Canada	ON	Caledon	Caledon Hill Grade	Toronto, Grey & Bruce Railway
1.9%	6,891		CA	Norden	Norden	Central Pacific Railroad	
1.9%	5,565	3,500	MT	Livingston	Bozeman Tunnel	Northern Pacific Railroad	
1.9%	5,562	3,000	MT	Livingston	Bozeman Tunnel #2	Northern Pacific Railroad	
1.9%		6,100	NJ	Bergen (North Bergen)	Bergen Hill Tunnel (North	Pennsylvania Railroad	
1.9%		6,100	NJ	Weehawken	Hudson Tubes (PRR-	Pennsylvania Railroad	
1.9%		6,100	NJ	Weehawken	North River Tunnels	Pennsylvania Railroad	
1.9%			OH	Cincinnati	Cheviot Hill	Chicago, Cincinnati & Louisville Railroad	
1.8%	4,169	8,771	ID	Roland	St. Paul Pass Tunnel (Taft	Chicago, Milwaukee, St. Paul & Pacific	
1.8%			KY	Turners Station	Campbellsburg Hill	Louisville & Nashville Railroad	
1.8%	5,213		MT	Essex	Marias Pass	Great Northern Railroad	
1.8%	5,600		MT	Livingston	Bozeman Pass	Northern Pacific Railroad	
1.8%	1,716	2,375	PA	Altoona	Horseshoe Curve	Pennsylvania Railroad	
1.8%		3,485	PA	Logan Township	Horseshoe Curve	Pennsylvania Railroad	
1.8%	1,716	2,375	PA	Altoona	Horseshoe Curve	Pennsylvania Railroad	
1.8%		8,000	MO	St. Louis	McKinley Bridge	Illinois Traction System	
1.7%		8,771	ID	Roland	Taft Tunnel	Chicago, Milwaukee, St. Paul & Pacific	
1.7%	4,170		ID	Avery	St. Paul Pass	Chicago, Milwaukee, St. Paul & Pacific	
1.7%			ID	Avery	Avery Roundhouse	Chicago, Milwaukee, St. Paul & Pacific	
1.7%			ID	Avery	Avery Yard	Chicago, Milwaukee, St. Paul & Pacific	
1.7%			MN	Lewiston	Lewiston Hill	Chicago & North Western Railway	
1.7%			NY	Richmondville	Richmondville Hill	Delaware & Hudson Railway	
1.7%	1,716	2,375	PA	Altoona	Horseshoe Curve	Pennsylvania Railroad	
1.7%	2,564	11,890	WA	Hyak	Snoqualmie Pass &	Chicago, Milwaukee, St. Paul & Pacific	
1.7%			WA	Cedar Falls	Cascade Line	Chicago, Milwaukee, St. Paul & Pacific	
1.7%	3,350	13,183	WA	Wellington	Stevens Pass Tunnel#1	Great Northern Railroad	
1.7%	3,350	13,183	WA	Wellington	Stevens Pass	Great Northern Railroad	
1.7%	3,380	13,700	WA	Berne	Cascade Tunnel	Great Northern Railroad	
1.7%			MA	Chester	Washington Hill	Western Railroad of Massachusetts	
1.6%	10,953	9,394	CO	Busk	Busk-Ivanho Tunnel	Colorado Midland Railroad	
1.6%			VA	Starkey (Roanoke)	Starkey Hill	Norfolk & Western Railway	
1.6%	2,880	41,200	WA	Berne	Cascade Tunnel (1929)	Great Northern Railroad	
1.6%	2,100		WA	Wellington	Stevens Pass Tunnel	Great Northern Railroad	
1.6%	8,014	221,760	WY	Sherman	Sherman Hill (Borie	Union Pacific Railroad	
1.6%			WV	Gladly	Shavers Mountain Tunnel	Coal & Iron Railway	
1.5%			AR	Mena	Rich Mountain	Kansas City, Pittsburg & Gulf Railroad	
1.5%			KY	Radnor	Radnor to Portland	Louisville & Nashville Railroad	
1.5%		4,550	MO	St. Louis	Merchants Bridge	Terminal Railroad Association of St. Louis	
1.5%			MO	Thayer	Thayer North Subdivision	Burlington Northern & Santa Fe Railroad	
1.5%	4,300	1,400	MT	Kalispell	Haskell Pass (Haskill	St. Paul, Minneapolis & Manitoba Railway	
1.5%	2,628	1,860	NC	Altapass (Spruce Pine)	Altapass Loops and	Carolina, Clinchfield & Ohio Railroad	
1.5%			NC	Altapass (Spruce Pine)	Clinchfield Route	Carolina, Clinchfield & Ohio Railroad	
1.5%			TN	Etowah	Hook & Eye Line	Atlanta, Knoxville & Northern Railway	
1.5%			TN	Ducktown (Copper Hill)	Hiwassee Loop	Atlanta, Knoxville & Northern Railway	
1.5%	2,601		WA	Chumstick	Chumstick Tunnel	Great Northern Railroad	
1.4%		2,872	PA	Pittsburgh	Schenley Tunnel	Baltimore & Ohio Railroad	
1.4%			PA	Union Dale	Ararat Summit	Delaware & Hudson Railway	
1.4%		6,336	WV	Cooper (Gallipolis Ferry)	Elkhorn Tunnel #2	Norfolk & Western Railway	
1.4%			KY	Corbin	Crooked Hill Grade	Louisville & Nashville Railroad	
1.4%			KY	Sinks	Lebanon branch	Louisville & Nashville Railroad	
1.4%			KY	Corbin	Kentucky Division	Louisville & Nashville Railroad	
1.3%			KY	West Point	Muldraugh Hill	Louisville & Nashville Railroad	

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Steepest Grades						
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Grade=max ruling grade at this place; Elevation-maximum elevation at this place; Length-Length mountain pass or route						
Grade %	Elev (Feet)	Length (Feet)	Location-Country, State, City, Facility name			RR Name
1.3%		7,669	MD	Baltimore	B&P (Baltimore &	Baltimore & Potomac Railroad
1.3%			WV	Bluestone Junction (Elkhorn	Bluestone Branch (Flat	Norfolk & Western Railway
1.3%			WY	Piedmont	Piedmont Hill Helper	Union Pacific Railroad
1.2%			AL	Wilhites	Sand Mountain	Louisville & Nashville Railroad
1.2%			WY	Parkman	Parkman Hill	Chicago, Burlington & Quincy Railroad
1.2%			KS	Ellinor (Emporia)	Belen Cutoff	Eastern Railway of New Mexico
1.2%		3,741	KY	Middlesborough	Cumberland Gap Tunnel	Powells Valley Railway Company
1.2%			KY	Gentry	Elkatawa Hill Eastern	Louisville & Nashville Railroad
1.2%	6,508		NM	Mountainair	Abo Pass	Atchison, Topeka & Santa Fe Railway
1.1%			KY	Louisville	South Louisville to	Louisville & Nashville Railroad
1.1%			TN	Knoxville	Knoxville Division	Louisville & Nashville Railroad
1.1%	6,800		UT	Wahsatch	Wahsatch Station	Union Pacific Railroad
1.1%			UT	Uintah	Wasatch Grade MP 985.1	Union Pacific Railroad
1.1%			UT	Echo	Helper Locomotives	Union Pacific Railroad
1.1%		8,953	England	Peak Forest Signal Box	Dove Holes Tunnel	
1.0%	5,220		CA	Oroville	Feather River Canyon	Western Pacific Railroad
1.0%			IA	Burlington	Burlington Hill	Chicago, Burlington & Quincy Railroad
1.0%			KS	Reading	Wakarusa Hill	Atchison, Topeka & Santa Fe Railway
1.0%			KY	Jackson (Elkatawa)	Elkatawa Hill	Kentucky Union Railway
1.0%			KY	Ford	Ford to Patio Grade	Louisville & Nashville Railroad
1.0%			KY	Corbin	Chaska Hill Grade	Louisville & Nashville Railroad
1.0%	5,793		MT	Ringling	Belt Mountains line	Montana Railroad (1894)
1.0%	1,373		NY	Deposit	Susquehanna Hill (Gulf	New York & Erie Railroad (aka Erie
1.0%			VA	Christiansburg (Blacksburg,	Christiansburg Hill	Norfolk & Western Railway
1.0%			WI	Byron	Byron Hill	Soo Line Railroad Company
1.0%	3,745	26,400	Canada	BC	Golden	Connaught Tunnel
						Canadian Pacific Railway