

APPENDIX B1

ROAD TUNNELS LONGER THAN 2000m AUSTRALIA

ROAD TUNNELS LONGER THAN 2000 METRES IN AUSTRALIA

Tunnel	Length	Open	State	Notes	Road	Treatment Technology
1. Kuranda	7 000 m	PRJ	QLD	Atherton Tablelands from Cairns proposal		
2. Woolloongabba - University	5 000 m	2005	QLD	Brisbane		
3. Brisbane North Connection	5 000 m	2006	QLD	Brisbane		
4. Kangaroo Point – Fortitude Valley	5 000 m	2006	QLD			
5. M5 East	3 950 m	09.12.2001	NSW	2 tubes. Sydney Airport to Bexley	M5	
6. Burnley	3 400 m	22.12.2000	VIC	Melbourne City Link		
7. Lane Cove	3 400 m	2006	NSW	Will connect M2 to Gore Hill Freeway	M2	
8. Eastern Freeway extension	3 200 m	2004	VIC	Two tubes		
9. Hawthorne	3 000 m	2006	QLD	Immersed tunnel		
10. Paddington – West End	3 000 m	2006	QLD	Brisbane		
11. Sydney Harbour	2 280 m	31.08.1992	NSW	2 tubes, Immersed tunnel		
12. Cross City	2 250 m	2005	NSW	Two tubes: Kings Cross to Pyrmont		
13. Inner Northern	2 000 m	2004	QLD	Brisbane		
14. Eagle Farm - Morningside	2 000 m	2006	QLD			
15. City Valley bypass	2 000 m	2006	QLD	Brisbane		
16. M4 East		PRJ	NSW	North Strathfield to Haberfield	M4	
17. Eastern Distributor *	1 700 m	19.12.1999	NSW	N/A		
18. Domain *	1 600 m	16.04.2000	VIC	N/A		
19. Marsh street Ramp *	850 m	09.12.2001	NSW	Ramp, M5 East, Sydney	M5	
20. Princes Highway Ramp *	800 m	09.12.2001	NSW	Ramp, M5 East, Sydney	M5	

NOTES:

Red: under construction

Blue: in project

* Less than 2000m; included for reference purposes

APPENDIX B2

ROAD TUNNELS LONGER THAN 2000 METRES AUSTRIA

ROAD TUNNELS LONGER THAN 2000 METRES IN AUSTRIA

Tunnel	Length (m)	Open	Notes	Road	Treatment Technology
1. Arlberg	13 972	01.12.78	Two linked tunnels, 3566 + 10281 m. Toll: 9 €	S16	
2. Plabutsch (west tube)	9 919	11.2003	Shortest tube (east tube): 9755 m (27.06.87).	A9	ESP Pilot
3. Gleinalm	8 320	11.08.78	Toll : 7,95 €	A9	
4. Karawanken	7 864	01.06.91	Austria-Slovakia. 4 414 m in Austria. Toll: 6,50 €	A11	
5. Landeck	6 955	24.06.00	Landeck south-east ring	A12/B18 0	
6. Pfänder	6 718	10.12.80	Shortest tube (west): 6583 m (PRJ)	A14	
7. Tauern	6 401	21.06.75	Shortest tube: 6392 m (PRJ) Toll: 5 €	A10	
8. Strengen	5 851	12.2005	Shortest tube: 5775 m. Near Landeck. Breakthrough: 11.09.03	S16	
9. Erzberg	5 700	PRJ	Start of works: 2004. Flexenpass bypass.	B198	
10. Bosruck	5 500	21.10.83	Shortest tube: 5428 m (PRJ)	A9	
11. Katschberg	5 439	21.06.75	Shortest tube: 5414 m (start of works: 2003). Toll: 5 €	A10	ESP Pilot
12. Felbertauern	5 304	1967	Toll: 10 €	(B108)	
13. Schmitten	5 111	27.06.96	Near Zell am see	B311	
14. Roppen	5 095	06.07.90	Near Imst. Second tube planned (2006)	A12	
15. Unterweisersdorfer Berg	4 500	2009	Second tube: 4500 m	S10	
16. Tschirgant	4 310	PRJ	Planned Fernpass road connection to A12	B179	
17. Oswaldiberg	4 307	28.06.88	Shortest tube: 4297 m	A10	
18. Ganzstein - Semmering	3 489	06.2004	Shortest tube: 3414 m, start of works: 25.11.00	S6	
19. Pfaffenboden	3 430	2003	Near Molln. Gypsum mine tunnel containing a road and conveyer.	Private	
20. Ehrentalerberg	3 345	23.05.96	Shortest tube: 3330 m	A2	
21. Achrain	3 340	2007	Start of works: 11.1999	B200	
22. Lermoos	3 168	1984		B179	
23. Falkenberg	3 000	2009	Near Judenberg	S36	
24. Perjen	2 993	29.01.83	Natural part : 2880 m. Second tube: 2900 m (PRJ). Near Landeck	S16	

APPENDIX J
Road Tunnels Longer than 2000m – Norway

25. Schönberg	2 988	28.10.99	Near Schwarzach	B311	
26. Amberg	2 978	16.07.85	Shortest tube: 2969 m. Start of works: 02.05.2001. To open 03.2004	A14	
27. Linz Westring, Tunnel Nord	2 970	PRJ		B139	
28. Wald	2 924	26.05.93	Shortest tube: 2889 m	A9	
29. Spering	2 852	20.09.03	Second tube: 2852 m. Start of works: 2005	A9	
30. Kreuzberg I	2 823	PRJ	Klagenfurt northwest bypass	B83	
31. Kirchdorf	2 787	2008	Second tube: 2647 m. Start of works: 04/2005	S35	
32. Steinhaus/Taxlberg UT	2 720	25.08.03	Shortest tube: 2334 m	A8	
33. Linz Westring, Tunnel Süd	2 627	PRJ	Second tube: 2627 m	B139	
34. Letze	2 612	2007	Feldkirch southern bypass. Start of works: 2004	B191	
35. Spital	2 597	27.06.03	Shortest tube: 2514 m	S6	
36. Harpfnerwand	2 590	1965	Near Mayrhofen, 1 lane traffic light regulation. Private road pre 1988.	B169	
37. Tanzenberg	2 446	14.11.83	Shortest tube: 2384 m (562 + 1637 m)(1985)	S6	
38. Langen	2 433	22.11.91	Second tube: 2280 m. Natural parts: 2323 - 2090 m	S16	
39. Lainberg	2 278	08.11.97	Near Windischgarten. Shortest tube: 2278 m (PRJ)	A9	
40. Gräbern	2 148	04.2003	Shortest tube: 2144 m (26.07.86) Near Twimberg	A2	
41. Klaus	2 144	20.09.03	Second tube: 2144 m. Start of works: 2005	A9	
42. Ganzstein	2 135	25.06.80	Near Murzzuschlag. Shortest tube: 2100 m (PRJ)	S6	
43. Brandberg	2 130	1976	Near Mayrhofen/Zillertal. Private road til 1991	L 330	
44. Kaisermühlen UT	2 120	1986	Shortest tube: 2115 m (1992)	A22	
45. Geisswand (Traunkirchen)	2 102	2005	Start of works: 2002	B145	
46. Flötzersteig Nord	2 100	PRJ		B223	
47. Herzogberg	2 007	27.09.82	Second tube: 2007 m (10/2004)	A2	
48. Hiefler	2 004	10.10.74	Shortest tube: 1986 m (28.11.80)	A10	
49. Bartl-Kreuz	2 000	06.12.96		B145	

APPENDIX B3

ROAD TUNNELS LONGER THAN 2000 METRES FRANCE

ROAD TUNNELS LONGER THAN 2000 METRES IN FRANCE

Tunnel	Length (m)	Open	Notes	Route	Treatment Technology
1. Ciriegia - Mercantour	17 300	PRJ	Works stopped for environmental oppositions		
2. Fréjus	12 895	12.07.19 80	In France 6575 m. Altitude: 1297 m. Safety and service tube (12895 m) in project	RN566	
3. Mont Blanc / Monte Bianco	11 611	19.07.19 65 09.03.20 02	In France: 7640 m. Altitude: 1395.5 m (at portals: I 1381 m, F 1274 m)	RN205	
4. Rueil – Jouy en Josas Tunnel Est	10 100	2006	First section (4500 m) under construction. Double deck configuration. Second section (5600 m): work start: 2004	A86	
5. Somport	8 608	17.01.20 03	In France: 2858 m, Altitude: (F portal: 1116 m)	RN134	
6. Rueil - Bailly Tunnel Ouest	7 420	PRJ	Work start: 2005	A86	
7. Maurice Lemaire	6 872	1976	1937-1976: Railway tunnel named St. Marie aux Mines. Emergency tunnel in project (2007)	RN159	
8. Puymorens	4 820	20.10.19 94	Altitude: 1515 m (northern portal) - 1560 m (southern portal). Near Spain border	RN20	
9. Defense	4 085	1996	Shortest tube: 3950 m	A14	
10. Caluire	3 728	1997	Second tube: 3728 m (1999). Lyon North Peripherique		
11. Orelle	3 692	2000	Two lanes direction Fréjus, one lane direction Chambéry	A43	
12. Roux	3 336	1930		RD160	
13. New Col di Tenda (Tende)	3 300	PRJ		RN204	
14. Chamoise	3 264	1995	Shortest tube: 3250 m (1986)	A40	
15. Col De Tende	3 186	1882	In France: 1487 m. Altitude: 1321 m. Old railway tunnel. In	RN204	

APPENDIX B3
ROAD TUNNELS LONGER THAN 2000M – FRANCE

			future: Emergency tunnel of the new tube		
16. L'Épine	3 182	1991	Shortest tube: 3092 m (1974)	A43	
17. Mont Sion	3 075	2005	Second tube: 3075 m. Annecy - Geneve	A41N	
18. Aragnouet - Bielsa	3 070	1976	In France: 1772 m. Altitude: 1821 m	RD173	
19. Toulon	2 969	19.09.20 02	Artificial parts: 1122 m, direction A50. Second tube: 3000 m (direction A57). Works start 2004 to end 2009	A57- A50	
20. Envalira	2 879	26.09.20 02	With law-project no 290 of 12/9/2000, France has changed with Andorra 15595 m ² of country to permit the realization of tunnel portal and viaduct	RN22	
21. Foret de Saint Germain	2 810	1996	Second tube: 2810 m	A14	
22. Prado - Carenage	2 455	18.09.19 93	Shortest tube: 2150 m. City of Marseille. Old railway tunnel		
23. Jocoü	2 350	PRJ	Grenoble – Sisteron / Croix haute pass	RN75	
24. Bastia ring 1*	2 300	PRJ	Feasibility study		
25. Bobigny - Drancy	2 220	1998	Also named "Repiquet-Prefecture". 2nd tube: 2220 m	A86	
26. de Foix	2 159	01.02.20 01	Second tube: in project. Ring of Foix	N20	

NOTES:

Red: under construction

Blue: in project

*: nickname

TC: Tranchée couverte (Cut-and-cover)

APPENDIX B4

ROAD TUNNELS LONGER THAN 2000 METRES GERMANY

APPENDIX B4
ROAD TUNNELS LONGER THAN 2000M – GERMANY

ROAD TUNNELS LONGER THAN 2000 METRES IN GERMANY

Tunnel	Length (m)	Open	Notes	Road	Treatment Technology
Christiane (Rennsteig)	7 916	07.07.2003	Shortest tube: 7878 m. Near Oberhof	A71	
Alleen	3 800	PRJ	Second tube: 2800 m	A66	
Königshainer Berge	3 281	1999	Second tube: 3 279 m. Near Görlitz	A4	
Elbtunnel, 4.Röhre	3 101	28.10.2002	Artificial part: 540 m. Hole ended: 02.03.2000 / Portals altitude: 8 -16 m	A7	
Neu Oberau	2 995	PRJ		B2	
Kirchholz	2 950	2012	Works start: 2005	B21	
Jagdberg	2 800	2008	Second tube: 2800 m	A4	
Berg Bock	2 750	20.12.2002	Shortest tube: 2729 m	A71	
Saukopf	2 715	1999	Near Weinheim	B38a	
Elbtunnel	2 653	1975	Three parallel tunnels (2653 m each)	A7	Wandlung Pilot
Engelberg basis	2 530	11.09.1998	Shortest tube: 2310 m (12.8.99). Near Leonberg	A8/A81	
Michaelstunnel	2 518	1990	In Baden Baden	B500	
Sudvorstadt	2 500		Second tube: 1500 m. Town Leipzig		
Tiergarten	2 410	2005	In Berlin	B96	
Coschutz	2 353	2004	Second tube: 2353 m	A17	
Farchant	2 326	29.05.2000	Near Garmish	A95/B2	
Heslach	2 290	1991	In Stuttgart	B14	
Schwabisch - Gmund	2 230	2006	Second tube: 2230 (artificial part: 543 m)	B29	
Hosbach	2 101	2004	Shortest tube: 1762 m	A3	
Bad Godesberg	2 000	1999	Near Bonn	B9	

NOTES:

APPENDIX B5

ROAD TUNNELS LONGER THAN 2000 METRES ITALY

APPENDIX B5
ROAD TUNNELS LONGER THAN 2000M – ITALY

ROAD TUNNELS LONGER THAN 2000 METRES IN ITALY

Tunnel	Length (m)	Open	Notes	Road	Treatment Technology
1. Ciriegia - Mercantour	17 300	PRJ	Stopped for Environmental Reasons		
2. Frejus	12 895	12.07.1980	In Italy: 6320 m. Altitude: 1297 m. Safety and service tube (12895 m) in project	T4	
3. Monte Bianco	11 611	19.07.1965 09.03.2002	In Italy: 3971 m. Altitude: 1395.5 m (Portals: I 1381 m, F 1274 m)	T1	
4. Gran Sasso d'Italia	10 176	01.12.1984	Shortest tube: 10173 m (1995). / Service tube (6000 m) in project	A 24	
5. Variante di valico	8 703	2007?	Shortest tube: 8693 m. Pilot holes started in 1999	A 1	
6. Mestre*	8 500	2006?	Two tubes / A4 bypass	A 4?	
7. Sant' Antonio - Morignone	7 960	18.02.2000	Three linked tunnels: S. Antonio (2360 m) + Tola (1757 m) + Cepina (3241 m) + Artificial part (602 m)	SS 38	
8. Pretunnel Gran San Bernardo Sud	6 150		Artificial tunnel. Covered road	T2	
9. Guinza	5 960	01.03.2004	Two tubes. Southbound breakthrough: 17.04.2003	E 78	
10. Gran San Bernardo	5 854	19.03.1964	Altitude: 1915 m	T2	
11. Colle dei Signori	5 500	PRJ	Bolzano bypass	A12	
12. Cels	5 245	08.12.1992	Shortest tube: 5141 m	A 32	
13. Capo di Ponte	5 200		Works stopped	SS 42	
14. Pozzano	5 000	2005	Also named: Seiano or Vico Equense, 1497 m, opened in 1989	SS145	
15. Lecco- San Martino	4 800	25.10.1999	Shortest tube: 4340 m Lecco section: double deck configuration	SS 36	
16. San Nazario	4 800	PRJ	Second tube: 4800 m	SS47	
17. Costa di Sorreley	4 722	19.12.1997	Two lanes dir. GSB- one lane dir. Aosta	A 5 -SS 27	
18. Schio Valdagno Pass	4 690	03.07.1999	Under M.Zovo	SC	
19. Monte di Mola (Formia)	4 670	PRJ	Second tube: 4670 m. Pedemontana di Formia	SS 7 var	
20. San Domenico (Carrito)	4 567	07.08.1978	Second tube: 4567 m	A 25	
21. San Benedetto	4 440	1998	Altitude: 1000 m	SP 477	
22. Prapontin	4 409	07.07.1995	Second tube: 4409m	A 32	
23. Barghe – Sabbio	4 405	06.2003		SS 237	
24. Colle Giardino	4 347	25.07.2003	Second tube: 4 242 m	SS 4	
25. San Colombano	4 300	PRJ	Bormio bypass / S.Lucia - Piandelvino	SS38-SS300	
26. San Rocco	4 181	14.09.1989	Second tube: 4181 m	A 24	
27. Forca di Cerro	4 030	12.12.1998	"Three Valli Umbra" road		

APPENDIX B5
ROAD TUNNELS LONGER THAN 2000M – ITALY

28. Comelico	4 000	31.07.1986		SS 52
29. Fara	3 964	1992		SS 251
30. Cave Ovest	3 790	28.06.1995	Shortest tube: Cave Est 3153 m	A 27
31. San Silvestro	3 765	2005?	Francavilla bypass	SS 16
32. Zogno	3 720	2006	Explorative Pilot hole start: 2001	SS 470
33. Agnese	3 600	1989		SS 240
34. Verduno	3 538	PRJ	Second tube: 3538 m / Asti - Cuneo motorway	A6/A21
35. Calozzo- Mianico (Dongo)	3 536	2003		SS 340 dir
36. Noasca - Ceresole	3 535	1991-93	Two linked tunnels. Gradient: 15%	SS 460
37. Lecco - Poggi	3 500	10/2003		SS36d
38. Omegna	3 427	1992		SS 229
39. Mezzolombardo bypass	3 400	U.C.	Works started: 4.3.2002. Pilot tunnel end: 09.2003	SS 43- SS 421
40. Furlo	3 391	1991	Shortest tube: 3391 m (1985)	R 05
41. Totoga	3 352			SP79
42. Petraro	3 345	05.08.1978	Shortest tube: 3327 m (1992)	A 20
43. Oria	3 314	02.2004	I-CH custom. Breakthrough: 16.04.2003	SS340
44. New Col di Tenda (Tende)	3 300	PRJ		SS 20
45. Monte Barro	3 300	25.10.1999	Second tube: 3300 m. With portals	SS 36
46. Solagna	3 300	PRJ	Second tube: 3300 m	SS47
47. Villeneuve	3 230	25.05.1994	Shortest tube: 3213 m	A 5
48. Regoledo	3 227	1987	Shortest tube: 3220 m	SS 36
49. Limina	3 200	1984	SGC Jonio - Tirreno	SS682
50. Col di Tenda (Tende)	3 186	1882	In Italy: 1699 m. Altitude: 1321 m. In future: emergency tunnel of the new tube	SS 20
51. Pre Saint Didier	3 162	13.08.2002	Shortest tube: 2890 m (29.06.01)	A 5
52. Calavà	3 160	05.08.1978	Shortest tube: 3114 m	A 20
53. Monte Mario (Passante NordOvest)	3 130	12.2004	Shortest tube: 3108 m. Town Roma. Pineta Sacchetti - V. Trionfale. Breakthrough 19.05.2003	
54. Avise	3 121	25.05.1994	Shortest tube: 3069 m (14.09.95)	A 5
55. Martignano	3 097	10.2005	Second tube: 3097 m. work start: 05.2002	SS 47
56. San Vito	3 047	1992	Near Arsìè	SS 50 bis var
57. Dolonne	3 033	03.2005	Shortest tube: 2975 m	A 5
58. San Giovanni Rotondo	3 000	PRJ	Two tubes	SS 272
59. Guncina	3 000	PRJ		
60. Tanaro	3 000	2005	Two tubes. Under river Tanaro. Asti – Cuneo motorway	A6/21

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ROAD TUNNELS LONGER THAN 2000M – ITALY

61. Madonna degli Angeli	3 000	PRJ		SS1bis
62. Laives (Leifers)	2 932	2006	Laives bypass. Works start: 08.2003	SS12
63. Armo - Cantarana	2 900	2007	Pilot hole realized in 90's, preliminary project for tunnel	SS28
64. Piano Paradiso	2 876	2004	Two tubes	A20
65. Lovere	2 860	1992		SS42
66. Carso	2 848	2007	Shortest tube: 2819 m. Town Trieste	
67. Ranzanico	2 825	PRJ		SS42
68. Tempio di Giove	2 800	1986	Shortest tube: 2720 m	SS7
69. Villaret	2 790	25.05.1994	Shortest tube: 2710 m	A5
70. Carbonara	2 784	28.07.1998	Second tube: 2784 m	A20
71. Massino Visconti	2 774	14.07.1995	Shortest tube: 2745 m	A26
72. Scoglio	2 759	1987	Shortest tube: 2626 m	SS36
73. Dervio	2 755	1987	Shortest tube: 2739 m	SS36
74. Bolladore	2 748	11.1999		SS38
75. Etroubles-St.Oyen 1	2 700	PRJ		SS27
76. Barritteri	2 634	PRJ	Shortest tube: 2592 m. C&C parts: 278 m - 298 m	A3
77. Gutturu Frascu	2 628	03.12.2003	Solanas-Castiadas	SS125
78. Quarto	2 600	1996	Second tube: 2600 m	SS3bis-E 45
79. Monte Romano	2 600	2004		SS1bis
80. Palombari	2 585	2001		SS89
81. Giaglione	2 542	08.12.1992	Shortest tube: 2481 m	A32
82. Monte Petrino	2 536	PRJ		SS7quat.
83. Monte Piazza	2 525	1987	Shortest tube: 2522 m	SS36
84. Vallegrande	2 500	1993	"Strada delle Gallerie", railways tunnel until 1993, one lane with traffic light (2 min. green, 18 red) Sestri Levante – Deiva M.	SC
85. Seminario	2 497	1998		SS63
86. Noceire – Lamberta -Cima di Rovere	2 490	1996	Three tunnels linked by 350 m artificial tunnel	SS20
87. Ronco Graziolo	2 480	30.04.2002		SPBS510
88. Cozzo Minneria	2 478	2004	Two tubes. Breakthrough 19.05.2003	A20
89. Alassio 1	2 472	2003		SS1bis
90. Campione	2 462	1967		SS45 bis
91. San Martino - Paganico	2 450	20.12.2001	"Pedemontana delle Marche" road	SS73 bis
92. Arvier	2 450	25.04.1994	Shortest tube: 2446 m	A5
93. Piana	2 435	2004	Shortest tube: 2435 m	A20

APPENDIX B5
ROAD TUNNELS LONGER THAN 2000M – ITALY

94. Cernobbio	2 434	1985		SS340
95. Mori	2 432	12.2004	Shortest tube: 2410 m. Works start: 8.12.99	SS240
96. Costa Murtaous Artif.	2 420		Avalanches protection on Livigno – P.Gallo road	SP
97. Covelò	2 404	20.12.2003		SS510
98. Rapallo	2 380	2008		
99. Naturno	2 376	06.04.2003		SS38
100. Verzedo	2 376	12.1997		SS38
101. Fopel II Artif.	2 375		Avalanches protection on Livigno – P.Gallo road	SP
102. Tarvisio	2 362	04.07.1986	Shortest tube: 2347 m	A23
103. Morgex	2 360	29.06.2001	Shortest tube: 2280 m (13.08.2002)	A5
104. Costa Volpino	2 315			SS42
105. Lenna	2 300		Val Brembana	SS470
106. Arcu Correboi	2 300			SS389
107. Passo della Morte	2 300			SS52
108. Massenzano	2 293	20.12.2003		SS510
109. Monte Pergola	2 287	1964	Shortest tube: 2254 m	R30
110. Pontebba	2 278	07.1986	Shortest tube: 2213 m	A23
111. Pozzolatico	2 255	PRJ		A1
112. Termine	2 253		Also named "Ospitale"	SS51
113. Monte Mario	2 250	08.2006	Second tube: 2250 m. Near Sasso Marconi	A1
114. Montecrevola	2 248	03.1990		SS33
115. San Giacomo (St.Jacob)	2 234	2006	Laives bypass (Pineta - Maso della Pieve). Works start: 08.2003	SS12
116. Faè	2 215	PRJ	Pilot hole. Near Cles	SS43
117. Melgone	2 200		Old tunnel: 461 m	SS583
118. Torricelle	2 200	PRJ	Second tube: 2200 m. Poiano – Ca' di Cozzi	
119. Vello I	2 180	20.12.2003		SS510
120. Collurania	2 175	24.05.1989	Second tube: 2175 m	A24
121. Montesaraceno	2 172			SS89
122. Montenero	2 150	1990	Second tube: 2150 (25.07.02)	SS1
123. Tindari	2 136	04.12.1973	Second tube: 2136 m	A20
124. Ronchi	2 130	30.04.2002		SPBS510
125. Casazza	2 130	PRJ		SS42
126. Madonna della Guardia	2 126	1981		SS523
127. Montelungo	2 116		Near Colli sul Velino	TR-RI

APPENDIX B5
ROAD TUNNELS LONGER THAN 2000M – ITALY

128. Dorio	2 108	1987	Shortest tube: 2050 m	SS36	
129. La Civita	2 100	1985	Under Castiglione Messer Marino town	SS86 var	
130. Antrodoco	2 100	U.C.	Antrodoco bypass	SS4	
131. Tusa	2 098	2004	Two tubes	A20	
132. Monte Due Mani	2 080	14.10.2004	Ballabio bypass. Breakthrough 18.12.2002	SP62	
133. Pinzano	2 076	PRJ	Cimpello - Gemona		
134. Valaverta	2 062	1992		SP232	
135. Fadalto Ovest	2 055	28.06.1995	Shortest tube: Fadalto Est 1016 m	A27	
136. Signayes	2 044	10.2001	(Natural part: 1709 m)	A5 / SS 27	
137. Valico (Cisa)	2 040	24.05.1975	Second tube: 2040 m	A15	
138. Bargagli Ferriere	2 031	15.06.1971		SS225	
139. Somana	2 024	1987	Shortest tube: 1995 m	SS36	
140. Capo d'Orlando	2 011	23.10.1977	Shortest tube: 1980 m	A20	
141. Monte Castelletto	2 006	02.08.1969	Shortest tube: 1907 m	A12	
142. Caronia	2 002	2004	Shortest tube: 1911 m	A20	
143. Fugona	2 000	1992	Two linked tunnels: Fugona and Ca' Bianca	SS29	
144. Cesena *	1 500	2003	EMR FC Town Cesena		ESP

NOTES:

Red: under construction

Blue: in project

* less than 200 metres – included for reference purposes
(installation of Aigner ESP technology in the Cesena Tunnel currently in progress)

Source: <http://home.no.net/lotsberg/> "The World's Longest Tunnel Page – February 2004

APPENDIX B6

ROAD TUNNELS LONGER THAN 2000 METRES JAPAN

APPENDIX B6
ROAD TUNNELS LONGER THAN 2000 METRES IN JAPAN

ROAD TUNNELS LONGER THAN 2000 METRES IN JAPAN

Tunnel	Length	Year of Opening	Prefecture	Notes	Expressway	Treatment Technology
1. Kan-etsu (south bound)	11 055 m	08.1991	NI-GU	North bound 10 926 m (First tube, 1985) Mizukami city.	Kan-etsu	ESP
2. Hida	10 748 m	2010	GI	One tube + emergency tunnel.	Tokai - Hokuriku	
3. Tokyo Aqua	9 583 m	18.12.1997	CH-KG	The World's longest subsea road tunnel, Tokyo bay aqualine. 2nd (in bound) tube : 9576 m		ESP
4. Enasan 1	8 498 m	1985	NA-GI		Chuo	ESP
5. Enasan 2	8 646 m	1991	NA-GI		Chuo	ESP
6. Shin-kobe	7 175 m	1988	HY	1st (in bound) tube: 6910 m (1976). Kobe city		
7. Karisaka	6 625 m	1998	YN-ST	National Highway		
8. Higo 1	6 340 m	1989	KU		Kyusyu	ESP
9. Higo 2	6 328 m	1995	KU		Kyusyu	ESP
10. Kakuto	6 255 m	1995	KS	2nd (out bound) tube under construction: 6251 m	Kyusyu	ESP
11. Hakamagishi	5 932 m	2000	TY		Tokai - Hokuriku	ESP
12. Hanna (To Nara)	5 578 m	1997	NR-OS	2nd tube (To Osaka): 5576 m	Daini Hanna	ESP
13. Kanpuzan	5 432 m	1999	EH-KO	Under Mt. Kanpu (Island of Shikoku)		
14. Sasago	4 784 m	1977	YN	2nd (out bound) tube: 4717 m	Chuo	
15. Koshirazu	4 563 m	1988	NI	2nd tube: 4555 m	Hokuriku	ESP
16. Gorigamine	4 474 m	1996	NA		Zyoshin-etus	ESP
17. Happusan 2	4 468 m	2001	GU		Kan-etsu	ESP
18. Abo	4 370 m	08.12.1997	GI-NA	2nd tube: 4313 m		
19. Uji	4 313 m	1988	KY	2nd tube: 4313 m	Keiji	ESP
20. Sasagamine	4 307 m	1992	EH-KO	Also named Mt. Otomi	Kochi	
21. Taroyama	4 303 m	1996	NA		Zyoshin-etus	ESP

APPENDIX B6
ROAD TUNNELS LONGER THAN 2000 METRES IN JAPAN

22. Sakanashi	4 265 m	1986	AK-AO	2nd tube: 4264 m	Tohoku	
23. Nozuka	4 232 m		HK	Longest tunnel in Hokkaido		
24. Yahatsu	4 159 m	1986	NA			
25. Suribachiyama	4 099 m	1992	OY		Chugoku - Oudan	ESP
26. Happusan 1	3 998 m	1993	GU		Kan-etsu	ESP
27. Ohtohge	3 940 m	1992	FS-YA			
28. Junanago	3 920 m	1957	NI			
29. Nagamine	3 831 m	1984	WA		Kainan - Yuasa	
30. Chiyoda	3 761 m	1964	TO			
31. Sen-nin daiichi	3 744 m		IW		Akita	
32. Rittou	3 737 m	1997	SH	Three lanes	Daini - Tokai	
33. Myojin	3 728 m	1987	KO	2nd tube under construction: 3714 m	Shikoku - Oudan	
34. Sobu	3 692 m	U.C.	KY-TT			
35. Ryugatake	3 645 m	1992	NI		Ban-etsu	ESP
36. Aida	3 629 m	1993	NA	2nd tube: 3598 m	Chuo	
37. Fukuchiyama	3 596 m	1988	KY	2nd tube: 3589 m	Kyusyu	ESP
38. Ushizuyama	3 573 m	1983	HI	2nd tube: 3558 m (1992)	Chikoku - Oudan	
39. Onikoube	3 527 m		MG-AK			
40. Kanmon 2	3 500 m	2000	FK-YG	Subsea tunnel, Kanmon Strait		ESP
41. Kanmon 1	3 461 m	1997	FK-YG	Subsea tunnel, Kanmon Strait		ESP
42. Midoribashi	3 400 m	2003				ESP
43. Maiko	3 393 m	1997	HY	12.75 m wide access road (3 lanes) to the bridge between the islands of Honshu and Shikoku		
44. Ginga	3 388 m		HK	Hokkaido		
45. Sasaya	3 385 m	1990	MG-YA		Yamagata	
46. Kake Higashi	3 365 m	1983	HI	2nd tube: 3277 m	Chikoku - Oudan	

APPENDIX B6
ROAD TUNNELS LONGER THAN 2000 METRES IN JAPAN

47. Tsuchiyu	3 360 m	1989	FS			ESP
48. Ichiburi	3 342 m	1988	NI	2nd tube: 3326 m	Hokuriku	
49. Ukishima	3 332 m	1984	HK	Hokkaido		
50. Sekido 1	3 325 m	1985	YG		Sanyo	ESP
51. Hamamatsu	3 262 m		SZ		Daini - Tokai	
52. Yoneyama	3 260 m	1989	SM-YG	Second tube: 3154 m	Chugoku - Oudan	
53. Tsuruga 1 (Hokuriku)	3 225 m	1977	FU	Second tube: 3225 m (1980)	Hokuriku	
54. Sekido 2	3 217 m	1992	YG		Sanyo	ESP
55. Ipponmatsu	3 203 m	1993	NA		Chuo	
56. Kasaiyama	3 197 m	1993	OY	Second tube: 3181 m (1989)	Sanyo	
57. Johana	3 192 m	2000	TY		Tokai - Hokuriku	
58. Michinoku	3 178 m	1980	AO			
59. Jukyugo	3 130 m	1971	NI			
60. Hoh-oh	3 123 m	1992	EH-KO		Shikoku - Oudan	
61. Takanomine	3 097 m	1988	NI		Hokuriku	ESP
62. Gokayama	3 072 m		TY			
63. Juhachigo	3 057 m	1957	NI			
64. Kagamigahara	3 050 m	1986	GI		Tokai - Hokuriku	
65. Nunobiki 2	3 032 m		HY	Kobe city		
66. Shimizu 2	3 027 m		SZ		Daini - Tokai	
67. Yatsukusa	3 025 m		GI			
68. Shimizu 1	3 000 m	1997	SZ		Daini - Tokai	
69. Shin Sasago	2 953 m	1958			RN20	
70. Tsuruga 2	2 925 m	1980		Hokuriku Expressway		ESP
71. Rotsukouzan	2 843 m	1966				
72. Shin-Misaka	2 778 m	1967			RN137	
73. Nitsusoku	2 765 m	1978			RN122	
74. Imaziyoudaini	2 704 m	1977		Two tubes. Hokuriku Expressway		
75. Nishi-Kuriko	2 675 m	1966		Two tubes.	RN46	

APPENDIX B6
ROAD TUNNELS LONGER THAN 2000 METRES IN JAPAN

76. Gassan-Dauchi	2 620 m				RN13	
77. Toosaka	2 585 m	1976				
78. Sengan	2 544 m	1977			RN150	
79. Sennin	2 528 m	1959				
80. Misayama	2 511 m	1976			RN254	
81. Hirayu	2 400 m	1976			RN158	
82. Shinenoki	2 370 m				RN351	
83. Kuwadaï	2 305 m	1970			RN45	
84. Horikoshi	2 282 m	1974				
85. Ziyuusangou	2 252 m	1956				
86. Shin Toyohama	2 228 m	12.2000	HO	Setakamui and Toyohama tunnel + junction	229	
87. Shin Nihonzaka	2 205 m	1978			RN150	
88. Aobayama	2 200 m					
89. Osakaho Sakishima	2 200 m	12.1997	OS	Second tube: 2200 m. Immersed tunnel		
90. Tamagawa	2 170 m	1994	FU	Second tube: 2170 m. Immersed tunnel, three lanes each. Tokyo Bay expressway	305	ESP
91. Yoruhiru	2 145 m	1970			RN97	
92. Kuzs	2 130 m				RN303	
93. Oume	2 095 m		TO	Metropolitan Inter City Expressway		
94. Shin Karato	2 077 m	1998	HY	Shortest tube: 2071 m. Hanshin (Kita - Kobe) expressway	7	
95. Yanoko	2 076 m	1967			RN42	
96. Gamata	2 060 m				RN231	
97. Hihonzaka	2 045 m	1968		Two tubes		ESP
98. Kobotoke	2 002 m	1968				
99. Ryu-ozhan	2 000 m	1993				ESP
100. Komadome	2 000 m				RN289	
101. Futabuyama	2 000 m	2018	HI			
102. Kawasaki-koro	1 954 m	1994	KG	Second tube: 1954 m Immersed 3 lanes each way		ESP
103. Kuko-kita	1 487 m			Second tube: 1487 m. Immersed 3 lanes		Filter

APPENDIX B6
ROAD TUNNELS LONGER THAN 2000 METRES IN JAPAN

				each way		
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Note:

Red: under construction

Blue: in project

LEGEND: Regions in Japan

	Region
KIN	Kinki
KOK	Kyushu - Okinawa

	Region
TOH	Tohoku
CHB	Chubu

	Region
KAN	Kanto
CHK	Chugoku

	Region
KAN	Kanto
CHK	Chugoku

LEGEND: Prefectures in Japan

	Prefecture	Capital	Region
AI	Aichi	Nagoya	CHB
AK	Akita	Akita	TOH
AO	Aomori	Aomori	TOH
CH	Chiba	Chiba	KAN
EH	Ehime	Matsuyama	SHK
FU	Fukui	Fukui	CHB
FK	Fukuoka	Fukuoka	KOK
MG	Miyagi	Sendai	TOH
FS	Fukushima	Fukushima	TOH
GI	Gifu	Gifu	CHB
GU	Gunma	Maebashi	KAN
HI	Hiroshima	Hiroshima	CHK

	Prefecture	Capital	Region
IW	Iwate	Morioka	TOH
KA	Kagawa	Takamatsu	SHK
KS	Kagoshima	Kagoshima	KOK
KU	Kumamoto	Kumamoto	KOK
KG	Kanagawa	Yokohama	KAN
KO	Kochi	Kochi	SHK
KY	Kyoto	Kyoto	KIN
MI	Mie	Tsu	KIN
MY	Miyazaki	Miyazaki	KOK
NA	Nagano	Nagano	CHB
NS	Nagasaki	Nagasaki	KOK
NR	Nara	Nara	KIN

	Prefecture	Capital	Region
OS	Osaka	Osaka	KIN
SA	Saga	Saga	KOK
ST	Saitama	Urawa	KAN
SH	Shiga	Otsu	KIN
SM	Shimane	Matsue	CHK
SZ	Shizuoka	Shizuoka	CHB
TC	Tochigi	Utsunomiya	KAN
TK	Tokushima	Tokushima	SHK
TO	Tokyo	Tokyo	KAN
TT	Tottori	Tottori	CHK
TY	Toyama	Toyama	CHB
WA	Wakayama	Wakayama	KIN

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ROAD TUNNELS LONGER THAN 2000 METRES IN JAPAN

HK	Hokkaido	Sapporo	HOK
HY	Hyogo	Kobe	KIN
IB	Ibaraki	Mito	KAN
IS	Ishikawa	Kanazawa	CHB

NI	Niigata	Niigata	CHB
OI	Oita	Oita	KOK
OY	Okayama	Okayama	CHK
OK	Okinawa	Naha	KOK

YA	Yamagata	Yamagata	TOH
YG	Yamaguchi	Yamaguchi	CHK
YN	Yamanashi	Kofu	CHB

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APPENDIX B7

ROAD TUNNELS LONGER THAN 2000 METRES NORWAY

ROAD TUNNELS LONGER THAN 2 000 METRES - NORWAY

Tunnel	Length	Open	County	Notes	Road	Treatment Technology
1. Laerdal	24 510 m	27.11.2000	14	"World's longest" road tunnel	E 16	EP + DeNOX
2. Gudvanga	11 428 m	17.12.1991	14		E 16	
3. Folgefonn	11 150 m	15.06.2001	12		Rv 551	
4. Korgfjell	8 568 m	2005	18	Work started 09.2001	E 6	
5. Steigen	8 079 m	1990	18		Rv 835	
6. Bømlafjord	7 931 m	28.12.2000	12	Subsea tunnel (-262.5 m)	E 39	
7. Svartisen	7 615 m	1987	18		Rv 17	
8. Høyanger	7 543 m	25.05.1982	14		Rv 55	
9. Vallavik	7 510 m	1985	12		Rv 7	
10. Åkrafjord	7 400 m	15.07.2000	12		E 134	
11. Oslofjord	7 390 m	29.06.2000	1 - 6	Subsea tunnel (-134 m)	Rv 23	
12. Nordkapp	6 875 m	15.06.1999	20	Subsea tunnel (-150 m)	E 69	
13. Frudal	6 758 m	29.10.1995	14		Rv 5	
14. Fodnes	6 604 m	29.09.1995	14		Rv 5	
15. Innfjord	6 594 m	1991	15		E 136	
16. Fjaerland	6 397 m	31.05.1986	14		Rv 5	
17. Naustdal	5 970 m	18.08.1995	14		Rv 5	
18. Øksendal	5 965 m	28.10.2000	15		Rv 62	
19. Byfjord	5 875 m	1992	11	Subsea tunnel near Stavanger (-223 m)	E 39	
20. Tosen	5 857 m	1986	18		Rv 76	
21. Haukeli	5 682 m	1968	12	Mountain road	E 134	
22. Hitra	5 645 m	08.12.1994	16	Subsea tunnel (-264 m)	Rv 714	
23. Frøya	5 305 m	23.06.2000	16	Subsea tunnel (-164 m), Hitra - Frøya	Rv 714	
24. Heggur	5 277 m	1984	15	Tafjord	F 15-92	
25. Freifjord	5 086 m	1992	12	Subsea tunnel (-130 m) to Kristiansund	Rv 70	
26. Flenja	5 053 m	1986	14		E 16	
27. Eikefet	4 910 m	9.07.80	12		E 39	

APPENDIX B7
ROAD TUNNELS LONGER THAN 2000M – NORWAY

28. Røldal	4 657 m	1964	12		E 134	
29. Oppljøs	4 537 m	17.10.78	5 - 12		Rv 15	
30. Kobbskaret	4 457 m	1986	18		E 6	
31. Mastrafjord	4 424 m	1992	11	Subsea tunnel (-132 m) near Stavanger	E 39	
32. Honningsvåg	4 443 m	1999	20		E 69	
33. Berdal	4 270 m	1987	14		Rv 50	
34. Øksfjord	4 252 m	1988	20		Rv 882	
35. Valderøy	4 222 m	1987	15	Subsea tunnel (-137 m) to Ålesund airport	Rv 658	
36. Masfjord	4 110 m	7.12.95	12		E 39	
37. Rotsethorn	4 030 m	2004	15	Lengthening of old tunnel: 2 176 m (1999) (Future E 39)	Rv 651	
38. Toppen	3 986 m		19		F19-15	
39. Hell (Gjevingåsen)	3 928 m	18.10.1995	16 - 17		E 6	EP
40. Nordby	3 850 m	1993	2	2nd tube: 3 850 m	E 6	
41. Godøy	3 844 m	1988	15	Subsea tunnel (-153 m) near Ålesund	Rv 658	
42. Fløyfjell	3 825 m	07.07.1988	12	Shortest tube 3 195 m	E 39	
43. Frafjord	3 812 m	10.06.1999	11		F11-281	
44. Strømsås	3 800 m	16.10.2001	6	Drammen bypass	E 134	EP
45. Lunner	3 800 m	01.07.2003	2 - 5	Lunner - Nannestad	Rv 35	
46. Hvaler	3 751 m	1989	1	Subsea tunnel (-120 m)	Rv 108	
47. Grasdalen	3 720 m	17.10.78	5 - 14		Rv 15	
48. Brattli	3 606 m	1992	18	Kjøpsvik - Sætran	Rv 827	
49. Vike	3 535 m		15		F15-191	
50. Stordal	3 530 m	1998	15		Rv 650	
51. Ellingsøy	3 520 m	1987	15	Subsea tunnel (-144 m) to Ålesund airport	Rv 658	
52. Tromsøysund	3 500 m	03.12.1994	19	Subsea tunnel (-102 m). Shortest tube: 3386 m	E 8	
53. Bogs	3 482 m	06.2004	14	Near Vadheim, toll on ferry Lavik - Oppedal	E 39	
54. Modalen	3 451 m	03.07.1976	12		Rv 569	
55. Ibestad	3 396 m	02.12.2000	19	Subsea tunnel (-112 m)	Rv 848	
56. Sløverfjord	3 337 m	1997	18	Subsea tunnel (-120 m)	E 10	

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ROAD TUNNELS LONGER THAN 2000M – NORWAY

57. Geiteryggen	3 281 m	1987	6		Rv. 50
58. Straumdal	3 232 m	10.1992	18	Jektvik - Ågskaret	Rv 17
59. Pollfjellet	3 230 m	1983	19		Rv 868
60. Storvikskaret	3 114 m	07.07.1995	18	Ørnes - Løding/Tverlandet	Rv 17
61. Ljønbibe - Hamregjøel	3 090 m	1962/63	15	Two connected tunnels	Rv 60
62. Borgund	3 030 m	2004	14	Bergen - Oslo. Breakthrough: 19.06.2003	E 16
63. Amla	2 969 m	29.09.1995	14		Rv. 5
64. Skarvberget	2 920 m	1968	19		E 69
65. Magnhildskar	2 895 m	1966	14		Rv 614
66. Vardø	2 890 m	1982	19	Norway's first subsea tunnel (-88 m)	E 75
67. Sila	2 870 m	08.07.1989	18	Utskarpen - Stokkvågen	Rv 17
68. Lote	2 857 m	1967	14		E 39
69. Sjønståfjell	2 830 m	1972	18		Rv 830
70. Grønnlifjell	2 811 m	1972	18		Rv 830
71. Sjona	2 782 m	1982	18	Utskarpen - Stokkvågen	Rv 17
72. Stavenes	2 771 m	1963	12		E 16
73. Storfjell	2 765 m		19		Rv 883
74. Fannefjord	2 743 m	1990	15	Subsea tunnel (-101 m)	Rv 64
75. Stetind	2 730 m	1982	18	Kjøpsvik - Sætran	Rv 827
76. Kalvik	2 729 m	1966	18		E 6
77. Elgskauås	2 645 m	29.06.2000	6		Rv 23
78. Breivik	2 634 m		19	Tunnel connection to Sentrumstangen tunnel and Tromsø city	Rv 862
79. Hagan	2 600 m	09.2003	2	Gjelleråsen - Slåttum. 2nd tube stopped	Rv 4
80. Bergs	2 595 m	29.10.1995	14		Rv 5
81. Hjelle	2 566 m		14		Rv 15
82. Ospeli	2 549 m	17.10.78	14		Rv 15
83. Nesbø	2 510 m	1987	14		Rv 50
84. Langnes	2 500 m	1984	19	Tunnel connection to Sentrumstangen tunnel, Tromsø city	

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ROAD TUNNELS LONGER THAN 2000M – NORWAY

85. Hårskolten	2 430 m	1972	18		Rv 830	
86. Finnsås	2 412 m		14		Rv 53	
87. Markhus	2 405 m		12		E 134	
88. Jernfjell	2 391 m		12-14		E 39	
89. Damsgård	2 360 m		12	Shortest tube 2 342 m	Rv 555	
90. Flekkerøy	2 327 m	1989	10	Subsea tunnel (-101 m) near Kristiansand	Rv 457	
91. Hysten	2 320 m	1980	11		Rv 13	
92. Bragernes	2 300 m	14.08.2002	6	Drammen north bypass. 560 m ventilation shaft. 320 m escape tunnel	Rv 283	EP
93. Melkøy	2 300 m	2003	19	Subsea tunnel (-62 m) near Hammerfest (Private road)		
94. Stallogargo	2 298 m	12.12.2002	19	Alta - Hammerfest	Rv 94	
95. Fjordgård	2 284 m		19		Fv 275	
96. Skardal	2 265 m	08.2003	18	Under Isfjellet, Kåfjord	E 6	
97. Stondal	2 240 m	1987	14		Rv 50	
98. Glomfjord	2 233 m		18		Rv 17	
99. Kjørholt	2 219 m		8		E 18	
100. Rotsethorn	2 176 m	1999	15	Lengthening to 4 030 m started 2002 (In future E 39)	Rv 651	
101. Fresvik	2 162 m		12		Rv 13	
102. Sigerfjord	2 136 m		18		E 10	
103. Arnanipa	2 133 m	1980	12		E 16	
104. Maursund	2 122 m	1991	19	Subsea tunnel (-92.5 m)	Rv 866	
105. Steinfjellet	2 114 m		17		Rv 773	
106. Geitskar	2 100 m	01.07.2004	19	Ersfjord - Senjahopen	Rv 864	
107. Måndals	2 080 m		15		E 136	
108. Fagernes	2 080 m	04.07.2003	17	Narvik centre	E 6	
109. Fugleberg	2 077 m		12		Rv 569	
110. Middagsfjellet	2 074 m		18		E 6	
111. Eidfjord	2 070 m	1976	12		Rv 7	

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ROAD TUNNELS LONGER THAN 2000M – NORWAY

112. Løvstakke n	2 045 m	1968	12	Fyllingsdalen - Bergen sentrum	Rv 540	
113. Boge	2 038 m	18.12.2002	12	Bergen - Voss	E 16	
114. Tirås	2 017 m	03.1998	12	Osterøy (Toll is collected on the bridge)	Rv 566	
115. Bjørøy	2 012 m	1996	12	Subsea tunnel (-88 m)	Fv 207	

LEGEND: Norwegian Counties

County : Administration Centre		County : Administration Centre	
1	Østfold Moss	11	Rogaland Stavanger
2	Akershus Oslo	12	Hordaland Bergen
3	Oslo Oslo	14	Sogn og Fjordane Leikanger
4	Hedmark Hamar	15	Møre og Romsdal Molde
5	Oppland Lillehammer	16	Sør-Trøndelag Trondheim
6	Buskerud Drammen	17	Nord-Trøndelag Steinkjer
7	Vestfold Tønsberg	18	Nordland Bodø
8	Telemark Skien	19	Troms Tromsø
9	Aust-Agder Arendal	20	Finnmark Vadsø
10	Vest-Agder Kristiansand S		

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APPENDIX B8

ROAD TUNNELS LONGER THAN 2000 METRES SOUTH KOREA

ROAD TUNNELS LONGER THAN 2000 METRES IN SOUTH KOREA

Tunnel	Length (m)	Opened	Province	Notes	Technology
1. Chang Su	6 400		CHB	Under construction. Taejon - Hamyang Expressway	
2. Jukreong	4 600	19.12.2001	CUB-KYB	Longest motorway tunnel. Artif.part: 4520 m Jungang Highway	
3. Neungdong	4 580	18.06.1906		Shortest tube: 4534 mN24 Sanwae – Sangbuk	
4. Ch'oup	4 400	2001	PUS	Ch'oup - MandukSeoul North beltway	
5. Sapaesan	3 993	06.2006	KWA	Shortest tube: 3971 m. 4 lanes each	
6. Sansung	3 500	2005	PUS	Hwanung - Jangjeondong. Work started: 1998	
7. Pusan - Koje-do	3 384	2009	PUS	World's deepest immersed tunnel (-50 m). Works start: 2004	
8. Chunma	2 920		PRJ PUS	North bridge road project	
9. Baygyang	2 340	1997	PUS		
10. Ssangyong - Kyobo	2 330		PRJ PUS		
11. Chimbu	2 312	1999			ESP

NOTES:

Red: under construction
Blue: in project
Green: abandoned
*: nickname

LEGEND: PROVINCES OF SOUTH KOREA

Province		Capital
SE U	Seoul	Seoul
CH B	Chollabuk	Chonju

Province		Capital
CU N	Ch'ungch'ongnam	Taejon
INC	Inch'on	Inch'on

Province		Capital
KY O	Kyonggi	Suwon
PU S	Pusan	Pusan

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ROAD TUNNELS LONGER THAN 2000M – SOUTH KOREA

CH E	Cheju	Cheju	KW A	Kwangiu	Kwangiu	TAE	Taegu	Taegu
CH N	Chollanam	Kwangiu	KYB	Kyongsangbuk	Taegu			
CU B	Ch'ungch'ongbuk	Ch'ongiu	KY N	Kyongsangnam	Ch'ang-Won			

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APPENDIX B9

ROAD TUNNELS LONGER THAN 2000 METRES SWITZERLAND

ROAD TUNNELS LONGER THAN 2000 METRES IN SWITZERLAND

Tunnel	Length (m)	Opened	Canton	Notes	Road	Tech.
1. St. Gotthard - San Gottardo	16 918	05.09.1980	TI - UR	Portals altitude: Goschonen: 1081 m, Airolo 1145 m	A2	
2. Seelisberg	9 292	12.12.1980	NW - UR	Shortest tube: 9250 m	A2	
3. San Bernardino	6 596	01.12.1967	GR	Redevelopment: 1998-2005	A13	
4. Gran San Bernardo	5 854	19.03.1964	VS	Altitude: 1915 m	N21	
5. Pretunnel Gran San Bernardo Nord	5 850		VS	Covered road	N21	
6. Kerenzer	5 760	09.04.1986	GL	Direction Sarganz	A3	
7. Mappo-Morettina	5 518	13.06.1996	TI	Locarno bypass	A13	
8. Sachseln	5 213	24.09.1997	OW	Near Sarnen	A8	
9. Islisberg	4 700	2012	ZH	Two tubes. Zürich west ring. Work started 06.2003.	A4	
10. Uetliberg	4 340	2012	ZH	Two tubes. Zürich west ring. Work started 2001. Pilot hole breakthrough: 20.02.2003	A4	
11. Staldbach - Grosshus	4 310	PRJ	VS	Visp ring, shortest tube: 4279 m	A9	
12. Gorwetsch - Pfyngut	4 220	2009	VS	Shortest tube: 4180 m. Three linked tunnels: Gorwetsch (1705 m), Ermitage (380 m), Pfyngut (2115 m)	A9	
13. Mont Terri	4 068	14.11.98	JU	Service tunnel: 3962 m (future second tube)	A16	
14. Gotschna	3 973	2007	GR	Near Klosters	A28	
15. Flims	3 770	2007	GR			
16. Boezberg	3 705	10.1996	AG	Second tube: 3705 m	A3	

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17. Mont Russelin	3 572	14.11.98	JU		A16
18. Munt La Schera	3 390	1965	GR	P.so del Gallo:1810 m, La Drossa: 1706 m	N28
19. Traversee de Neuchâtel	3 355	18.06.19 93	NE	Second tube: 3355 m (1995). E & W tubes: 2610 & 745 m	A5
20. Giessbach	3 340	18.05.19 88	BE		A8
21. Lungern	3 300	2009	OW	Pilot hole breakthrough: 02.2003	A8
22. Gubrist	3 273	21.06.19 85	ZH	Second tube: 3273 m. Zürich Nordring	A1
23. Vispताल	3 260	04.02.19 97	VS	Part of this tunnel to be used as tube of Schwarzer Graben	N212
24. Schwarzer Graben	3 260	PRJ	VS	Shortest tube: 2630 m, Visp bypass	A9
25. La Vue des Alpes	3 250	1995	NE		H20
26. Raimeux	3 211	2006	JU-BE	Pilot bore (3147 m) ended; will be used as safety tunnel.	A16
27. Belchen	3 180	23.10.19 70	SO-BL	Second tube: 3180 m	A2
28. du Bure	3 027	2008	JU	Near Delle - French border	A16
29. Pomy	3 005	05.04.20 01	VD	Second tube: 2958 m. Portals altitude: 540-450 m	A1
30. Arrissoules	2 987	05.04.20 01	VD - FR	Second tube: 2987 m	A1
31. Flimserstein / Crap da Flem	2 922	2007	GR		A19
32. Choindez	2 870	2008	JU		A16
33. Landwasser	2 802	1974	GR	Near Wiesen	N 417b
34. Eggflue	2 790	2000	BE - BL	Near Grellingen	A18
35. Gorgier	2 720	07.05.20 02	NE	Second tube: 2720 m. Portals altitude: 500-450 m	A5
36. Schwarzer Graben (northern tube)	2 630	PRJ	VS	Shortest tube (southern one): will be used as part of Vispताल tunnel, length unknown. Visp bypass.	A9
37. Vedeggio - Cassarate	2 630	2008	TI	Lugano north bypass	A9

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38. Flüelen	2 593		UR	Works started on 7.2000	A4	
39. Saaser	2 577	2011			A28	
40. Ligerz	2 510	07.05.19 91	BE		A5	
41. Kirchenwald	2 500		OW	Near Hergiswil, works started end 2000		
42. Graitery	2 420	2006	BE	Court-Moutier. Works start 2003	A16	
43. Alusuisse – Ancien Sierre	2 450	2008	VS	Two tubes, four linked tunnels: Alusuisse (1070 m), Geronde (620 m), Crete Plane (180m) (just opened on 18/11/99), and Ancien Sierre (580 m)	A9	
44. Isla Bella	2 449	11.11.19 83	GR	Near Rothenbrunnen	A13	
45. Hohtenn - Mittal	2 390	1985	VS	Road Gampel - Lötschberg	N509	
46. Langholz	2 360	2011	BE	Second tube: 2360 m. Biel bypass. Works start: 2003	A5	
47. Chienberg	2 290	2003	BL		J20	
48. Les Vignes	2 230	15.12.19 97	FR - BE	Second tube: 2230 m	A1	
49. Pierre Pertuis	2 208	19.12.19 97	BE	Shortest tube: 2050 m	A16	
50. Gleresse	2 200		JU - BE			
51. Cozz (Cianca Presella)	2 200	01.12.19 67	GR	Tunnels Trogli (Landrufe)+Brusei+Artificial parts	A13	
52. Leissigen	2 200	23.06.19 94	BE	Second tube: 2200 m	A8	
53. Aescher	2 176	2012	ZH	Shortest tube: 2142 m. Zürich west bypass.	A4	
54. Crapteig	2 171	24.10.19 96	GR		A13	
55. Cozz	2 100	01.12.19 67	GR	Partially artificial, near Pian S.Giacomo	A13	
56. Susten	2 070	2009	VS	Second tube: 2070 m	A9	
57. Acherli (Giswil)	2 066	2003	OW	Holing through 10/97	A8	
58. Trin	2 000	1995	GR	Other fonts: 1738 m	N19	

