



INDEX

- AREA OF EXPERTISE ([slide 3](#))
- PRELIMINARY DESIGN:
 - MONITORAGGIO DELLA PORTATA DI UN TORRENTE PER IL RIEMPIIMENTO DI UN NUOVO INVASO –ITALIA ([slide 4](#))
 - INVASO A CIELO APERTO PER LO STOCCAGGIO D’ACQUA AD USO INNEVAMENTO PROGRAMMATO NORESUND – NORVEGIA ([slide 5](#))
 - INVASO A CIELO APERTO PER LO STOCCAGGIO D’ACQUA AD USO INNEVAMENTO PROGRAMMATO CERRO CASTOR – ARGENTINA ([slide 6](#))
 - INVASO A CIELO APERTO PER LO STOCCAGGIO D’ACQUA AD USO INNEVAMENTO PROGRAMMATO MONTE BONDONE – ITALIA ([slide 7](#))
 - INVASO A CIELO APERTO PER LO STOCCAGGIO D’ACQUA AD USO INNEVAMENTO PROGRAMMATO MONTE PANAROTTA – ITALIA ([slide 8](#))
 - DIDVELI AND KOKTHA-MITARBI ARTIFICIAL SNOW PRODUCTION SYSTEM AND ARTIFICIAL LAKES- BAKURIANI- GEORGIA ([slide 9-10-11-12](#))
- WORKING PLAN
 - INVASO A CIELO APERTO PER LO STOCCAGGIO D’ACQUA AD USO INNEVAMENTO PROGRAMMATO IN LOC. MONTAGNOLI – ITALIA ([slide 13-14-15](#))
 - INVASO A CIELO APERTO PER LO STOCCAGGIO D’ACQUA AD USO INNEVAMENTO PROGRAMMATO IN LOC. VALBIOLO – ITALIA ([slide 16-17](#))
 - INVASO A CIELO APERTO PER LO STOCCAGGIO D’ACQUA AD USO INNEVAMENTO PROGRAMMATO IN LOC. BUSA DI GRUAL – ITALIA ([slide 18-19](#))
 - INVASO A CIELO APERTO PER LO STOCCAGGIO D’ACQUA AD USO INNEVAMENTO PROGRAMMATO IN LOC. PRADEL- ITALIA ([slide 20](#))
 - INVASO A CIELO APERTO PER LO STOCCAGGIO D’ACQUA AD USO INNEVAMENTO PROGRAMMATO SKIAREA FOLGARIDA-MARILLEVA- ITALIA ([slide 21](#))
 - REALIZZAZIONE NUOVA PISTA DA SCI “PUZA DEI FOI-PLAZA” – PINZOLO – ITALIA ([slide 22](#))
 - APPROVVIGIONAMENTO IDRICO PER IMPIANTI DI INNEVAMENTO PROGRAMMATO PER LE PISTE DA SCI TRATTO LAGO DI MOLVENO – LOC. PIAN DOSSON ([slide 22](#))
 - AMPLIAMENTO E SISTEMAZIONE PISTA CIOCA 2 – PINZOLO –ITALIA ([slide 23](#))
 - AMPLIAMENTO E SISTEMAZIONE PISTA ‘LA ROCCA’ CON SOSTITUZIONE DELL’IMPIANTO DI INNEVAMENTO – PAGANELLA –ITALIA ([slide 23](#))
 - SISTEMAZIONE PISTA POLSA 1 E CAMPO SCUOLA –BRENTONICO –ITALIA ([slide 24](#))
 - SISTEMAZIONE E ALLARGAMENTO PISTA RODODENDRO –PINZOLO –ITALIA ([slide 24](#))
 - SISTEMAZIONE PISTE MASTELLINA, PANORAMICA E ROCCE- SKIAREA FOLGARIDA-MARILLEVA- ITALIA ([slide 25](#))
 - DIDVELI AND KOKTHA-MITARBI SKI RESORT AND SLOPE DESIGN WSC BAKURIANI 2023 – GEORGIA ([slide 26-27-28-29](#))
 - REALIZZAZIONE NUOVA TELECABINA AMMORSAMENTO AUTOMATICO 10 posti CASTELIR –LE FASSANE –LA MOREA ([slide 30](#))
 - REALIZZAZIONE DI DUE NUOVI IMPIANTI DI RISALITA (SEGGIOVIA BIPOSTO E CESTOVIA BIPOSTO) – PRADA – ITALIA ([slide 31](#))
 - REALIZZAZIONE DELLA NUOVA SEGGIOVIA ESAPOSTO FOSSADEI-MALGA CIOCA – PINZOLO –ITALIA ([slide 31](#))
 - REALIZZAZIONE TELECABINA A.A. CON STAZIONE INTERMEDIA “ANDALO –DOSS PELÀ” CON ANNESSO DEPOSITO BATTIPISTA ([slide 32](#))
 - SOSTITUZIONE DELLA SEGGIOVIA MONOPOSTO ATTACCO FISSO “ROSA DEL SOLE” CON UNA SEGGIOVIA QUADRIPOSTO ATTACCO FISSO ED ALLARGAMENTO DELLA PISTA “ROSA DEL SOLE” -POLSA –ITALIA ([slide 32](#))

INDEX BY TYPE OF WORK

LAKE FOR ARTIFICIAL SNOWMAKING

- RETAINING WALL ([slide 13-14-17-19](#))
- SURFACE SPILLWAY ([slide 8-14-19](#))
- DISCHARGE ([slide 18](#))
- PUMP STATION ([slide 14-20- 21](#))
- AERATION SYSTEM ([slide 17](#))
- IMPEREMEABILIZATION SYSTEM ([slide 18](#))
- FLOW MEASURING WEIR ([slide 4](#))

SNOW-MAKING SYSTEMS

([slide 22-23](#))

ROPEWAYS

([slide DA 30 A 32](#))

SKI SLOPES

([slide DA 23 A 29](#))

AREA OF EXPERTISE :

Our activities cover three main areas of interest::

1. Ski areas for which is implemented:
 - Design of new skilifts and ancillary works;
 - Ski slopes (with their field schools and children's areas);
 - Redevelopment and expansion of existing ski slopes;
 - Sizing and design of artificial snow making system with related pumping station and electrical substations;
 - Artificial reservoirs for snowmaking that are designed to fit in with the morphology of the mountain territory;
 - Alternative mobility focusing on the summer value of lifts such as cable cars, gondolas and chair lifts;
 - Design of accommodation facilities (civil works) at the service of ski lifts both in winter that in summer;
 - Operating direction of ropeways.
2. Hygienic and sanitary works as Aqueducts and Sewer
3. Civil and industrial works.

For each area of expertise the levels of intervention of ProAlpe are the following:

- Feasibility study, fact-finding investigations, strategic evaluations;
- Environmental Impact Assessment according to the law n. 28 29 august 1988 "Disciplina della Valutazione dell'impatto ambientale ed ulteriori norme di tutela dell'ambiente"; [For specialist reports (geological, snow science, forestry) we make use of tried and tested collaboration of external professionals]
- Surveying;
- Final design and compilation of practices for the acquisition of any water concessions, cableway, power lines and ski slopes. The design is intended architectural, structural and engineering;
- Working plan (architectural and engineering), preparation of documents for the completion of tenders for the construction of works;
- Support for commissioning in the preparation of tender dossiers and contracts with the Contractors;
- Realization of Security Plans and Coordination according to the law 81/2008;
- Construction management both for civil works that electromechanical works;
- Safety coordination in the executive phase and Accounting Jobs Stime,
- Preparation of practices for testing of the proposed works;
- Operating direction of ropeways.



PRELIMINARY DESIGN

MONITORAGGIO DELLA PORTATA DI UN TORRENTE PER IL RIEMPIIMENTO DI UN NUOVO INVASO - ITALIA

CUSTOMER: Turismo Lavaorne S.p.a

DATE: 2016

CALCOLO PORTATA

Calcolo della portata Q (l/s) per stramazzo triangolare con angolo di apertura pari a 90° in funzione dell'altezza h (m).

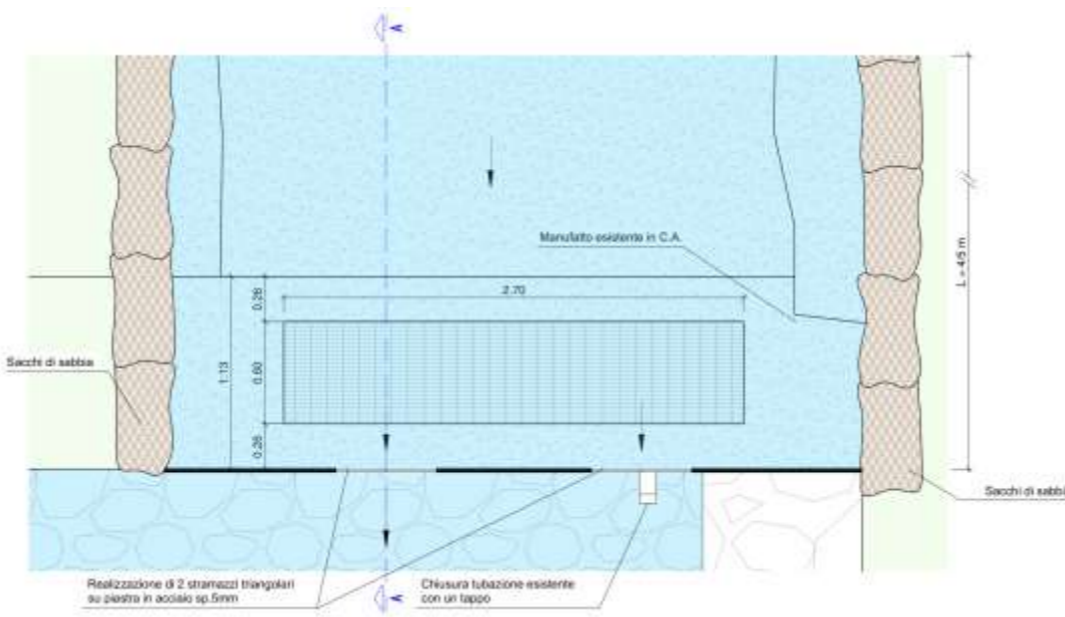
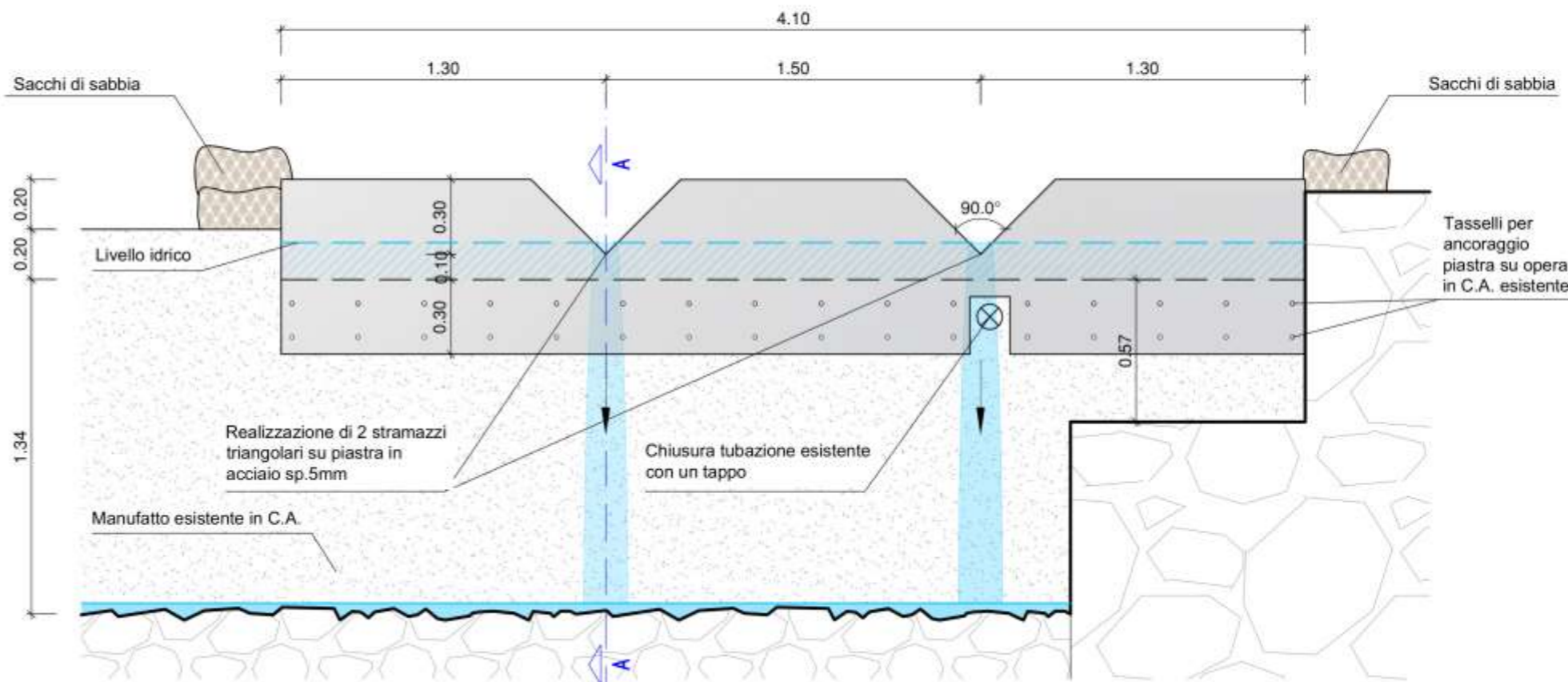
Formula di Thomson

$$Q = 1.40 h^{5/2}$$

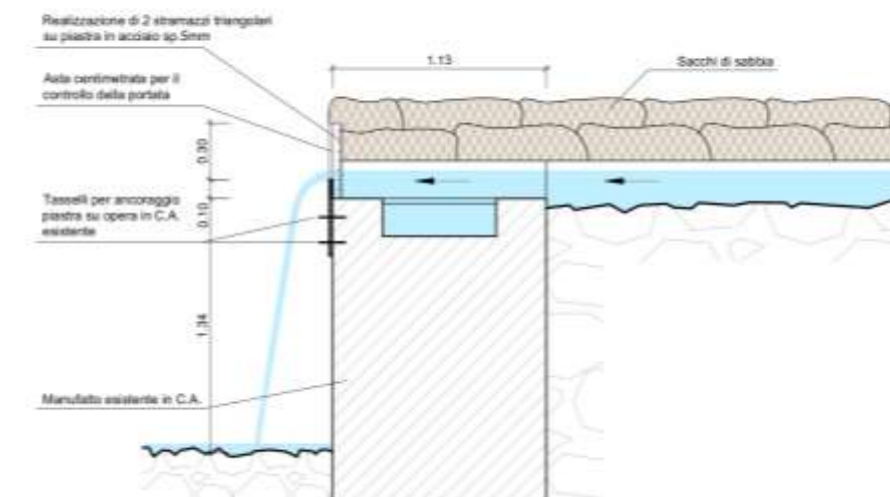


h (m)	Q (l/s) n°1 stramazzo	Q (l/s) n°2 stramazzi	h (m)	Q (l/s) n°1 stramazzo	Q (l/s) n°2 stramazzi
0,01	0,0	0,0	0,16	14,3	28,7
0,02	0,1	0,2	0,17	16,7	33,4
0,03	0,2	0,4	0,18	19,2	38,5
0,04	0,4	0,9	0,19	22,0	44,1
0,05	0,8	1,6	0,20	25,0	50,1
0,06	1,2	2,5	0,21	28,3	56,6
0,07	1,8	3,6	0,22	31,8	63,6
0,08	2,5	5,1	0,23	35,5	71,0
0,09	3,4	6,8	0,24	39,5	79,0
0,10	4,4	8,9	0,25	43,8	87,5
0,11	5,6	11,2	0,26	48,3	96,5
0,12	7,0	14,0	0,27	53,0	106,1
0,13	8,5	17,1	0,28	58,1	116,2
0,14	10,3	20,5	0,29	63,4	126,8
0,15	12,2	24,4	0,30	69,0	138,0

VISTA A VALLE - scala 1:25 -



SEZIONE A-A - scala 1:25 -



PRELIMINARY DESIGN

INVASO A CIELO APERTO PER LO STOCCAGGIO D'ACQUA AD USO INNEVAMENTO PROGRAMMATO NORESUND - NORVEGIA

CUSTOMER: Norefjell Skicenter

(Norway)

DATE: 2015

CAPACITY: 100.000 m³

DEPTH: 10 m

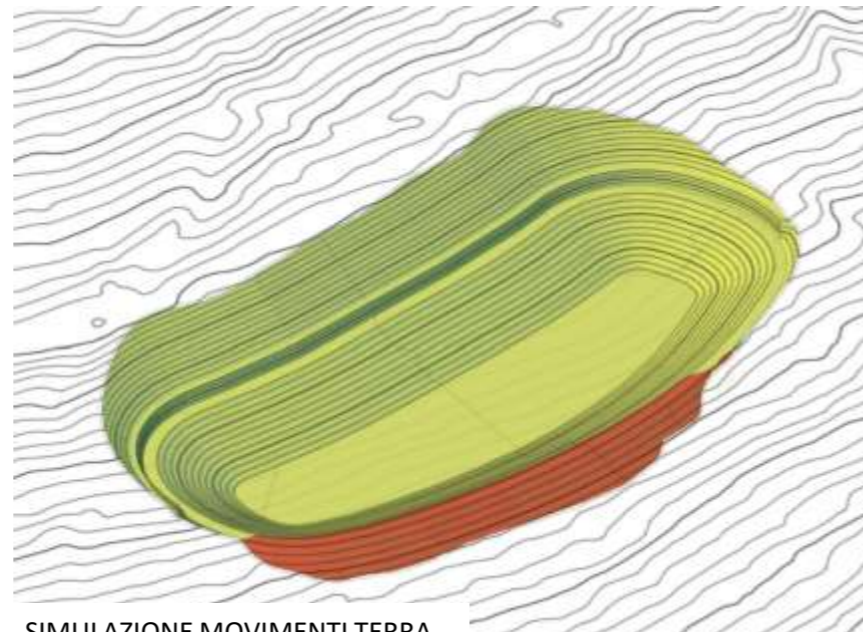
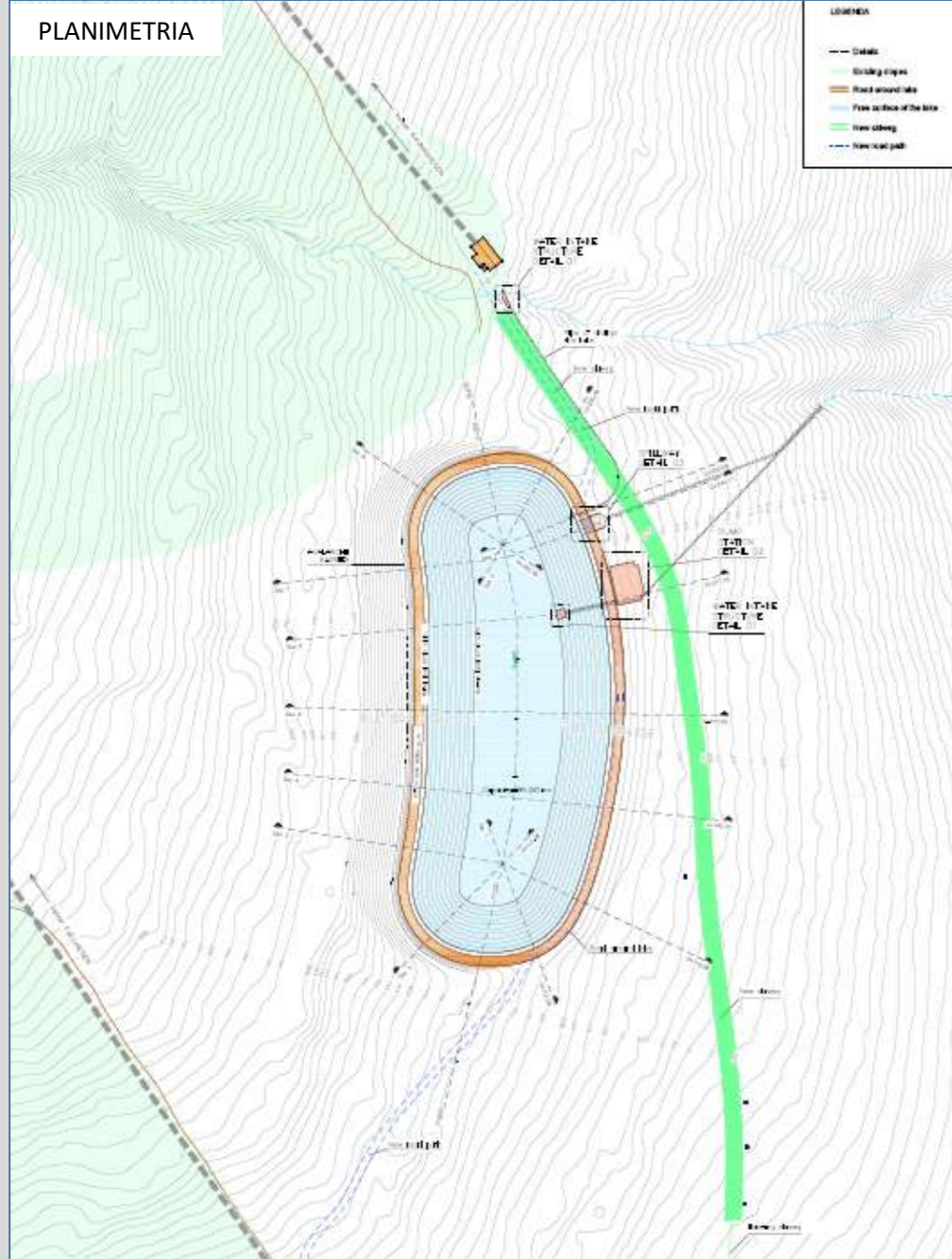


SOPRALLUOGO CON DRONE



RENDERING

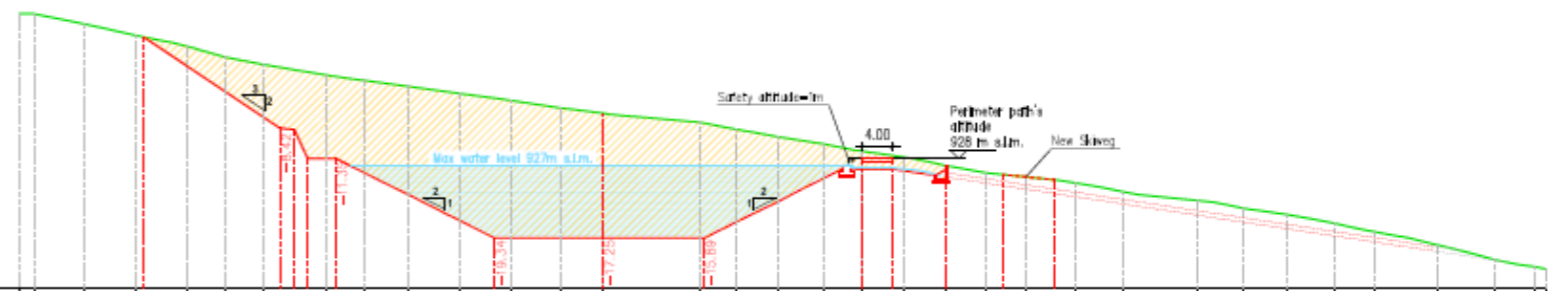
PLANIMETRIA



SIMULAZIONE MOVIMENTI TERRA

SEZIONE DI PROGETTO

Sec. 7
 Progr : 0+244.17
 Scale : 1000:1000
 El.Ref. : 910.00



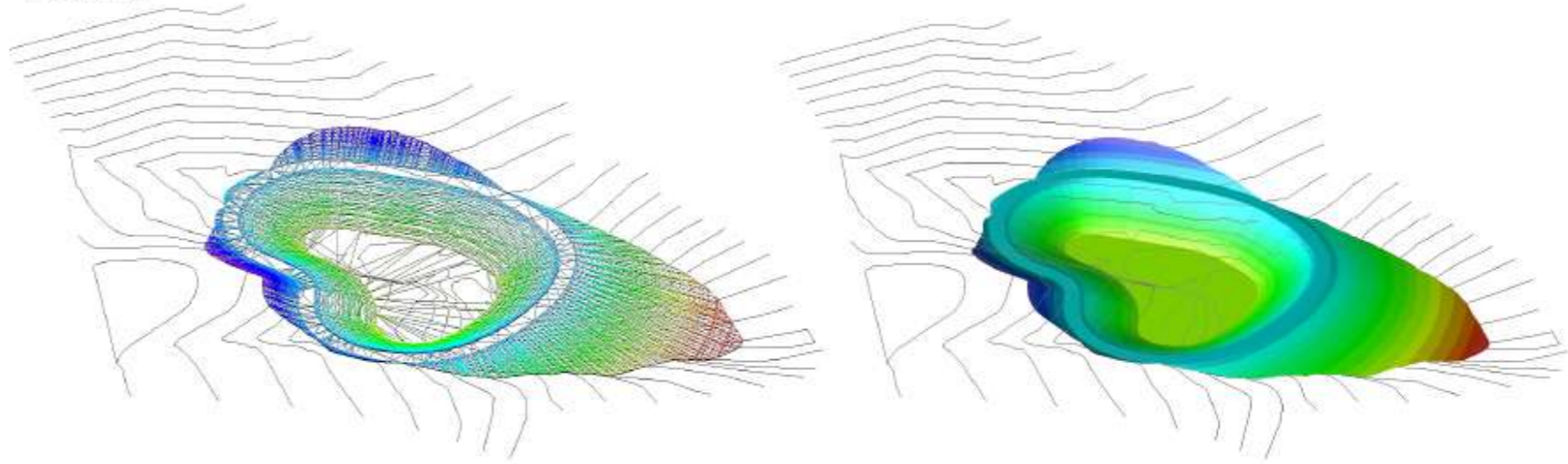
GROUND PROGRESSIVE DISTANCE	GROUND ELEVATION	PROJECT PROGRESSIVE DISTANCE	PROJECT ELEVATION	PROJECT PARTIAL DISTANCE
78.86	947.97			
72.10	946.02			
64.86	943.55	83.72	944.18	18.83
57.85	942.00	47.06	932.20	2.00
50.40	941.00	47.06	932.00	1.86
38.53	939.58	30.53	930.00	3.92
33.12	938.77	30.53	928.00	22.06
27.19	938.00	30.53	917.00	15.06
19.79	936.07	30.53	917.00	14.03
12.87	936.00	30.53	917.00	22.02
5.81	935.00	30.53	917.00	4.07
0.00	934.25	30.53	917.00	7.51
13.50	933.00	30.53	917.00	7.79
18.55	932.00	30.53	917.00	7.16
24.23	931.00	30.53	917.00	
30.74	930.00	30.53	917.00	
35.85	929.00	30.53	917.00	
41.84	928.16	30.53	917.00	
47.82	927.00	30.53	917.00	
53.19	926.00	30.53	917.00	
58.08	925.47	30.53	917.00	
63.56	924.62	30.53	917.00	
69.23	923.40	30.53	917.00	
75.02	922.20	30.53	917.00	
80.75	921.13	30.53	917.00	
86.63	920.23	30.53	917.00	
92.58	919.00	30.53	917.00	
98.19	917.82	30.53	917.00	
103.84	916.02	30.53	917.00	
109.37	914.00	30.53	917.00	
115.84	913.00	30.53	917.00	

PRELIMINARY DESIGN

INVASO A CIELO APERTO PER LO STOCCAGGIO D'ACQUA AD USO INNEVAMENTO PROGRAMMATO CERRO CASTOR - ARGENTINA

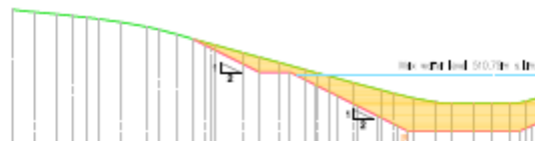
CUSTOMER: Cerro Castor Ski Resort
(Argentina)
DATE: 2014
CAPACITY: 9.000 m³
DEPTH: 5,5 m

VIEW FROM THE SOUTH



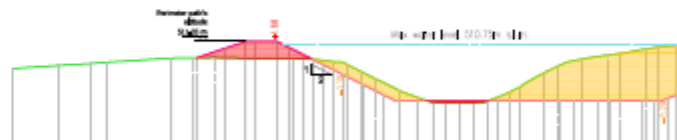
RENDER

Sez. 1
Scale: 250:250
Q.P.T.: 500.00



GROUND PROGRESSIVE DISTANCE	GROUND ELEVATION	GROUND PARTIAL DISTANCE	PROJECT PROGRESSIVE DISTANCE	PROJECT ELEVATION	PROJECT PARTIAL DISTANCE
0.00	2175.00	0.00	0.00	2175.00	0.00
0.50	2174.50	0.50	0.50	2174.50	0.50
1.00	2174.00	1.00	1.00	2174.00	1.00
1.50	2173.50	1.50	1.50	2173.50	1.50
2.00	2173.00	2.00	2.00	2173.00	2.00
2.50	2172.50	2.50	2.50	2172.50	2.50
3.00	2172.00	3.00	3.00	2172.00	3.00
3.50	2171.50	3.50	3.50	2171.50	3.50
4.00	2171.00	4.00	4.00	2171.00	4.00
4.50	2170.50	4.50	4.50	2170.50	4.50
5.00	2170.00	5.00	5.00	2170.00	5.00
5.50	2169.50	5.50	5.50	2169.50	5.50
6.00	2169.00	6.00	6.00	2169.00	6.00
6.50	2168.50	6.50	6.50	2168.50	6.50
7.00	2168.00	7.00	7.00	2168.00	7.00
7.50	2167.50	7.50	7.50	2167.50	7.50
8.00	2167.00	8.00	8.00	2167.00	8.00
8.50	2166.50	8.50	8.50	2166.50	8.50
9.00	2166.00	9.00	9.00	2166.00	9.00
9.50	2165.50	9.50	9.50	2165.50	9.50
10.00	2165.00	10.00	10.00	2165.00	10.00
10.50	2164.50	10.50	10.50	2164.50	10.50
11.00	2164.00	11.00	11.00	2164.00	11.00
11.50	2163.50	11.50	11.50	2163.50	11.50
12.00	2163.00	12.00	12.00	2163.00	12.00
12.50	2162.50	12.50	12.50	2162.50	12.50
13.00	2162.00	13.00	13.00	2162.00	13.00
13.50	2161.50	13.50	13.50	2161.50	13.50
14.00	2161.00	14.00	14.00	2161.00	14.00
14.50	2160.50	14.50	14.50	2160.50	14.50
15.00	2160.00	15.00	15.00	2160.00	15.00
15.50	2159.50	15.50	15.50	2159.50	15.50
16.00	2159.00	16.00	16.00	2159.00	16.00
16.50	2158.50	16.50	16.50	2158.50	16.50
17.00	2158.00	17.00	17.00	2158.00	17.00
17.50	2157.50	17.50	17.50	2157.50	17.50
18.00	2157.00	18.00	18.00	2157.00	18.00
18.50	2156.50	18.50	18.50	2156.50	18.50
19.00	2156.00	19.00	19.00	2156.00	19.00
19.50	2155.50	19.50	19.50	2155.50	19.50
20.00	2155.00	20.00	20.00	2155.00	20.00
20.50	2154.50	20.50	20.50	2154.50	20.50
21.00	2154.00	21.00	21.00	2154.00	21.00
21.50	2153.50	21.50	21.50	2153.50	21.50
22.00	2153.00	22.00	22.00	2153.00	22.00
22.50	2152.50	22.50	22.50	2152.50	22.50
23.00	2152.00	23.00	23.00	2152.00	23.00
23.50	2151.50	23.50	23.50	2151.50	23.50
24.00	2151.00	24.00	24.00	2151.00	24.00
24.50	2150.50	24.50	24.50	2150.50	24.50
25.00	2150.00	25.00	25.00	2150.00	25.00
25.50	2149.50	25.50	25.50	2149.50	25.50
26.00	2149.00	26.00	26.00	2149.00	26.00
26.50	2148.50	26.50	26.50	2148.50	26.50
27.00	2148.00	27.00	27.00	2148.00	27.00
27.50	2147.50	27.50	27.50	2147.50	27.50
28.00	2147.00	28.00	28.00	2147.00	28.00
28.50	2146.50	28.50	28.50	2146.50	28.50
29.00	2146.00	29.00	29.00	2146.00	29.00
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30.00	2145.00	30.00	30.00	2145.00	30.00

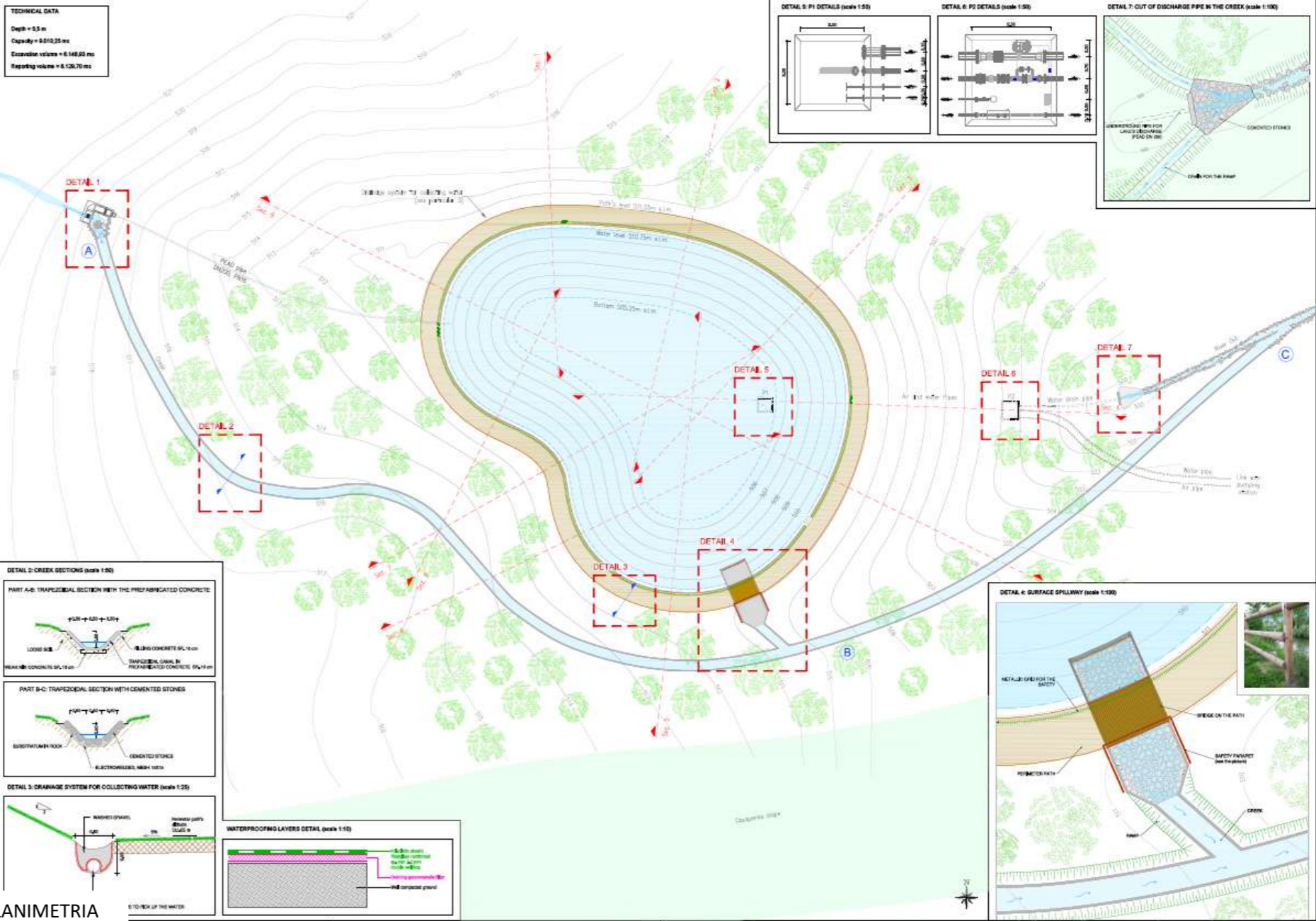
Sez. 3
Scale: 250:250
Q.P.T.: 500.00



GROUND PROGRESSIVE DISTANCE	GROUND ELEVATION	GROUND PARTIAL DISTANCE	PROJECT PROGRESSIVE DISTANCE	PROJECT ELEVATION	PROJECT PARTIAL DISTANCE
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0.50	2174.50	0.50	0.50	2174.50	0.50
1.00	2174.00	1.00	1.00	2174.00	1.00
1.50	2173.50	1.50	1.50	2173.50	1.50
2.00	2173.00	2.00	2.00	2173.00	2.00
2.50	2172.50	2.50	2.50	2172.50	2.50
3.00	2172.00	3.00	3.00	2172.00	3.00
3.50	2171.50	3.50	3.50	2171.50	3.50
4.00	2171.00	4.00	4.00	2171.00	4.00
4.50	2170.50	4.50	4.50	2170.50	4.50
5.00	2170.00	5.00	5.00	2170.00	5.00
5.50	2169.50	5.50	5.50	2169.50	5.50
6.00	2169.00	6.00	6.00	2169.00	6.00
6.50	2168.50	6.50	6.50	2168.50	6.50
7.00	2168.00	7.00	7.00	2168.00	7.00
7.50	2167.50	7.50	7.50	2167.50	7.50
8.00	2167.00	8.00	8.00	2167.00	8.00
8.50	2166.50	8.50	8.50	2166.50	8.50
9.00	2166.00	9.00	9.00	2166.00	9.00
9.50	2165.50	9.50	9.50	2165.50	9.50
10.00	2165.00	10.00	10.00	2165.00	10.00
10.50	2164.50	10.50	10.50	2164.50	10.50
11.00	2164.00	11.00	11.00	2164.00	11.00
11.50	2163.50	11.50	11.50	2163.50	11.50
12.00	2163.00	12.00	12.00	2163.00	12.00
12.50	2162.50	12.50	12.50	2162.50	12.50
13.00	2162.00	13.00	13.00	2162.00	13.00
13.50	2161.50	13.50	13.50	2161.50	13.50
14.00	2161.00	14.00	14.00	2161.00	14.00
14.50	2160.50	14.50	14.50	2160.50	14.50
15.00	2160.00	15.00	15.00	2160.00	15.00
15.50	2159.50	15.50	15.50	2159.50	15.50
16.00	2159.00	16.00	16.00	2159.00	16.00
16.50	2158.50	16.50	16.50	2158.50	16.50
17.00	2158.00	17.00	17.00	2158.00	17.00
17.50	2157.50	17.50	17.50	2157.50	17.50
18.00	2157.00	18.00	18.00	2157.00	18.00
18.50	2156.50	18.50	18.50	2156.50	18.50
19.00	2156.00	19.00	19.00	2156.00	19.00
19.50	2155.50	19.50	19.50	2155.50	19.50
20.00	2155.00	20.00	20.00	2155.00	20.00
20.50	2154.50	20.50	20.50	2154.50	20.50
21.00	2154.00	21.00	21.00	2154.00	21.00
21.50	2153.50	21.50	21.50	2153.50	21.50
22.00	2153.00	22.00	22.00	2153.00	22.00
22.50	2152.50	22.50	22.50	2152.50	22.50
23.00	2152.00	23.00	23.00	2152.00	23.00
23.50	2151.50	23.50	23.50	2151.50	23.50
24.00	2151.00	24.00	24.00	2151.00	24.00
24.50	2150.50	24.50	24.50	2150.50	24.50
25.00	2150.00	25.00	25.00	2150.00	25.00
25.50	2149.50	25.50	25.50	2149.50	25.50
26.00	2149.00	26.00	26.00	2149.00	26.00
26.50	2148.50	26.50	26.50	2148.50	26.50
27.00	2148.00	27.00	27.00	2148.00	27.00
27.50	2147.50	27.50	27.50	2147.50	27.50
28.00	2147.00	28.00	28.00	2147.00	28.00
28.50	2146.50	28.50	28.50	2146.50	28.50
29.00	2146.00	29.00	29.00	2146.00	29.00
29.50	2145.50	29.50	29.50	2145.50	29.50
30.00	2145.00	30.00	30.00	2145.00	30.00

SEZIONI

TECHNICAL DATA
Depth = 5.5 m
Capacity = 9,000 m³ m³
Excavation volume = 6,148.00 m³
Replanting volume = 6,126.70 m³



PLANIMETRIA

PRELIMINARY DESIGN
INVASO A CIELO APERTO PER LO STOCCAGGIO D'ACQUA AD USO INNEVAMENTO PROGRAMMATTO MONTE BONDONE - ITALIA

CUSTOMER: Trento Funivie S.p.a.

(Italy)

DATE: 2017

CAPACITY: 150.000 m³

DEPTH: 12 m

ANALISI SITI ALTERNATIVI



OROTOFOTO

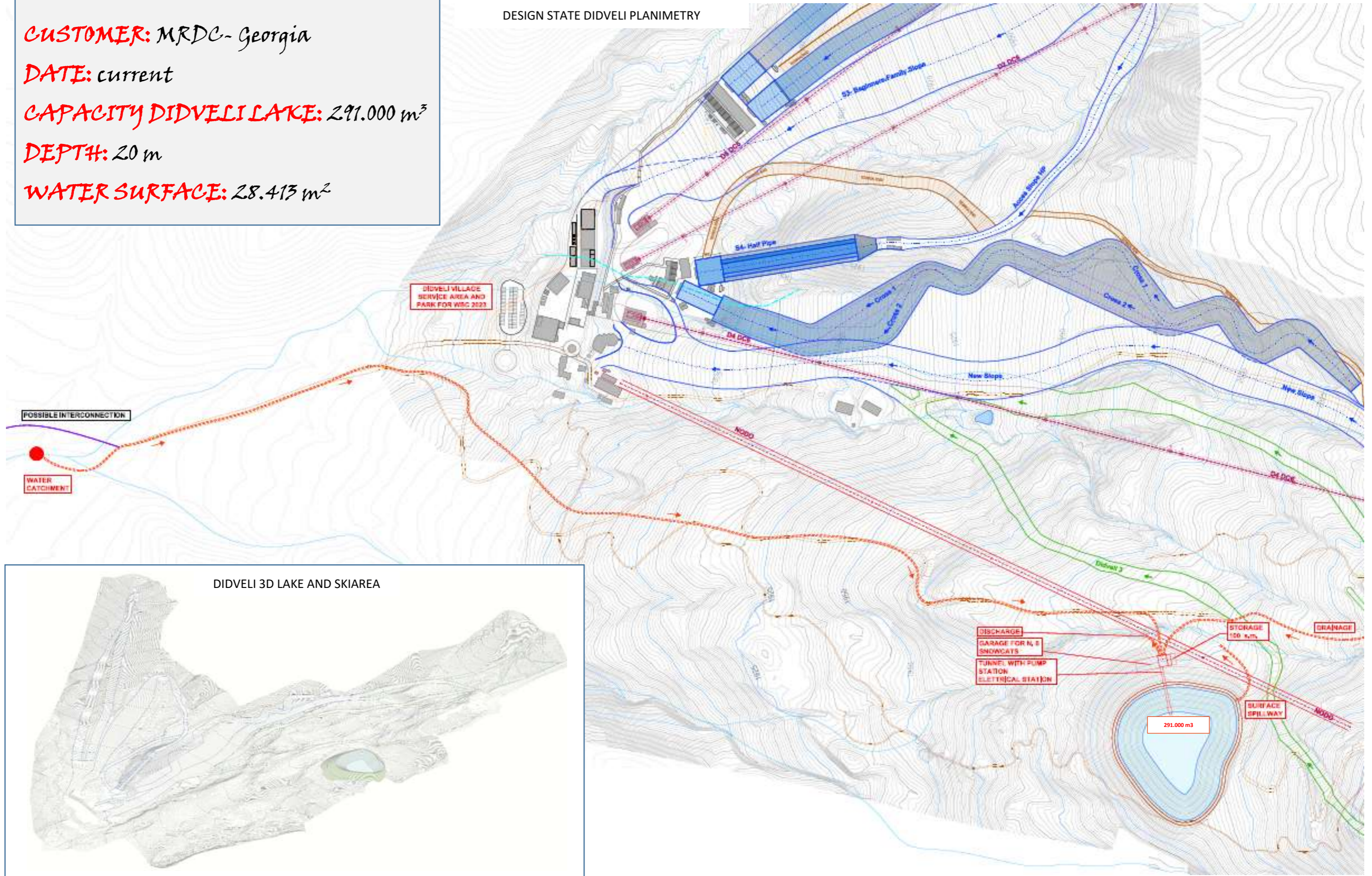


RENDER

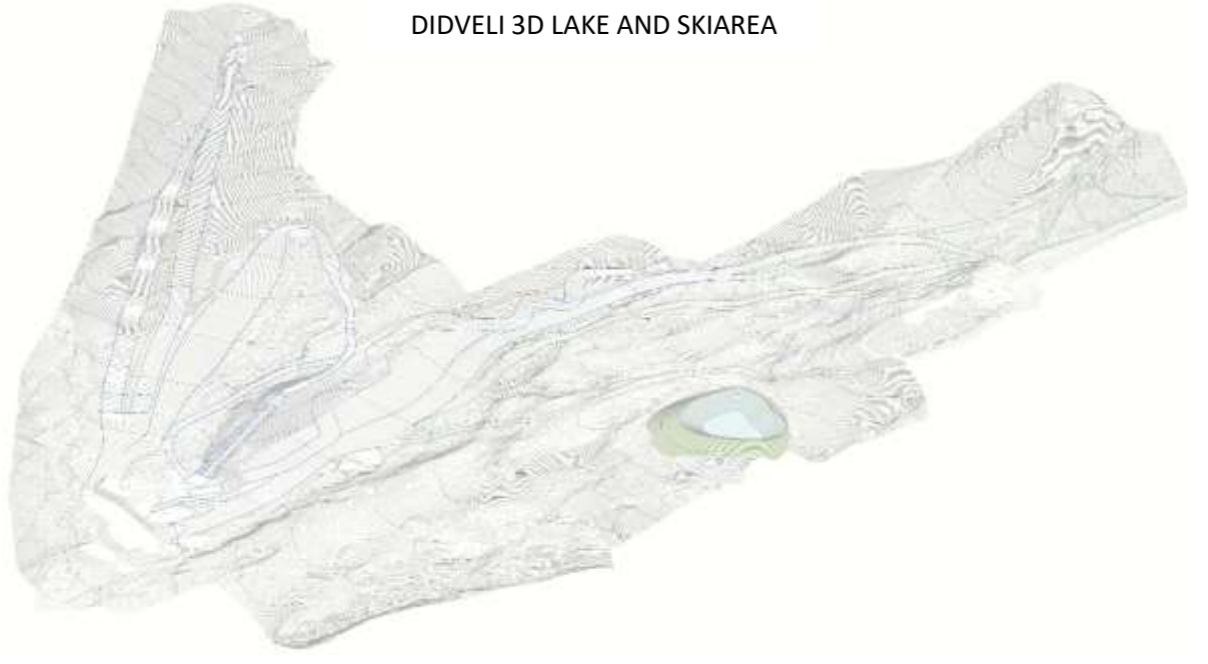
PRELIMINARY DESIGN DIDVELI AND KOKTHA-MITARBI ARTIFICIAL SNOW PRODUCTION SYSTEM AND ARTIFICIAL LAKES- BAKURIANI GEORGIA

CUSTOMER: MRDC- Georgia
DATE: current
CAPACITY DIDVELI LAKE: 291.000 m³
DEPTH: 20 m
WATER SURFACE: 28.413 m²

DESIGN STATE DIDVELI PLANIMETRY



DIDVELI 3D LAKE AND SKIAREA

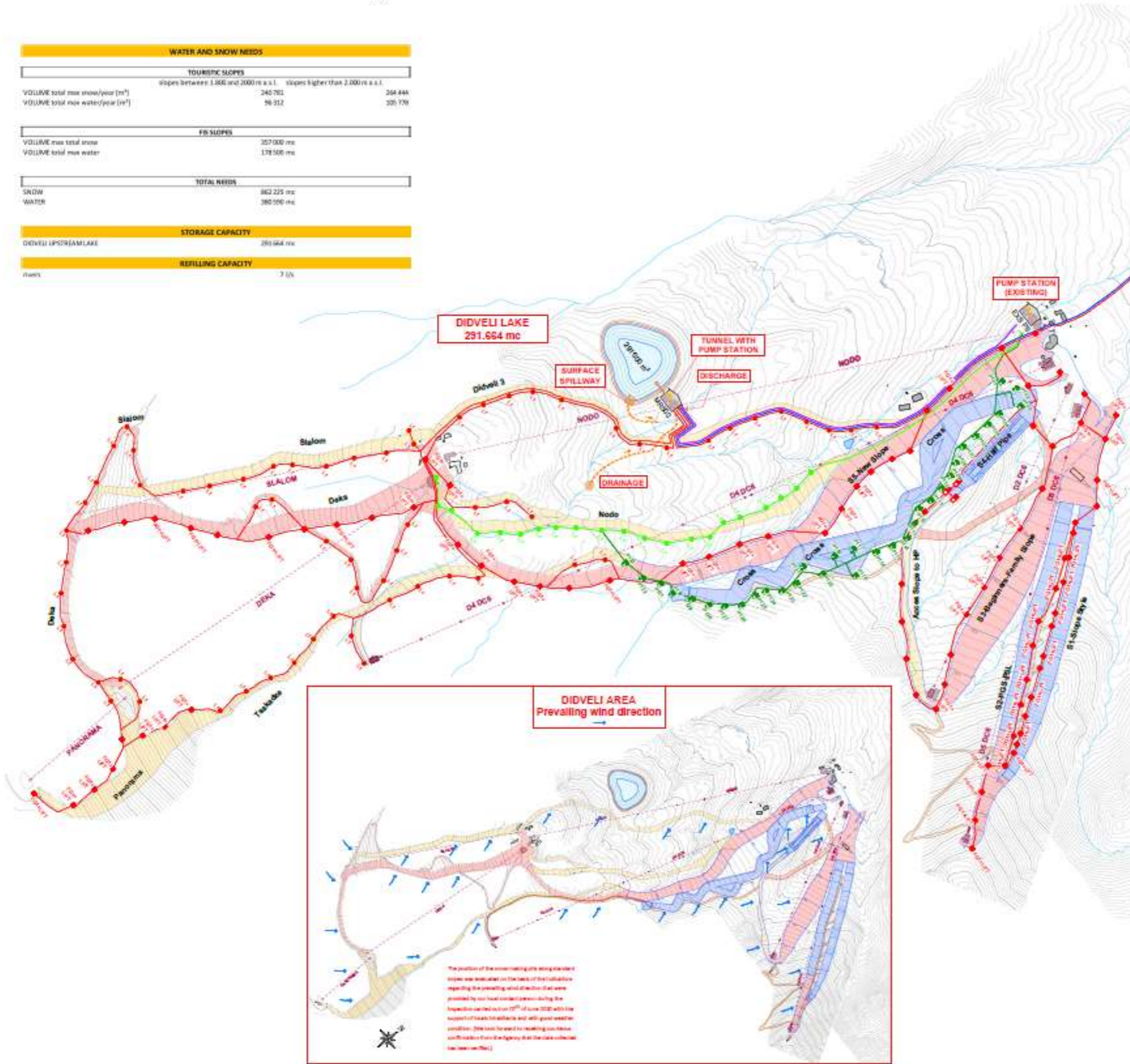


PRELIMINARY DESIGN DIDVELI AND KOKTHA-MITARBI SKI RESORT ARTIFICIAL SNOW PRODUCTION SYSTEM, ARTIFICIAL LAKE, NEW SKIING ROADS AND DEVELOPMENT OF THE INFRASTRUCTURE

DIDVELI SNOWMAKING SYSTEM



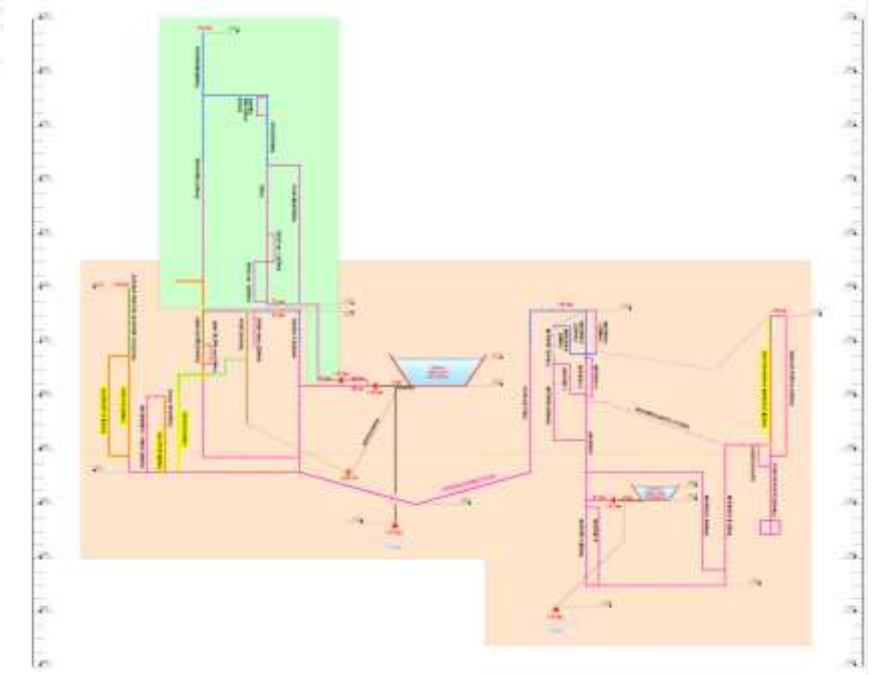
WATER AND SNOW NEEDS		
TOURISTIC SLOPES		
	slopes between 1.500 and 2000 m a.s.l.	slopes higher than 2.000 m a.s.l.
VOLUME total max snow/year [m ³]	240 702	264 444
VOLUME total max water/year [m ³]	96 312	326 776
FB SLOPES		
VOLUME max total snow	357 000 m ³	
VOLUME total max water	178 500 m ³	
TOTAL NEEDS		
SNOW	603 225 m ³	
WATER	380 200 m ³	
STORAGE CAPACITY		
DIDVELI UPSTREAM LAKE	291 664 m ³	
REFILLING CAPACITY		
days	7 (6)	



LEGEND

- EXISTING SLOPES
 - PROJECT SLOPES
 - LIFTS
 - CREEK
 - TECHNICAL ROAD
-
- ### SNOWMAKING SYSTEM
- COMPETITION SLOPES
 - SLOPES WITH SNOW PRIORITY 1
 - SLOPES WITH SNOW PRIORITY 2
 - CURRENT SNOWLINE - DEMACLENKO
 - CURRENT PIT WITH SNOW LANCE CURRENT - DEMACLENKO
 - PROJECT SNOWLINE - DEMACLENKO
 - PIT FOR SNOW GUNS/SNOW LANCE - DEMACLENKO
 - PROJECT SNOWLINE
 - PIT WITH SNOW LANCE
 - PIT WITH DOUBLE CONNECTION (ELECTRICAL AND WATER) FOR 2 PORTABLE SNOW GUNS
 - PIT WITH SINGLE CONNECTION (ELECTRICAL AND WATER) FOR 1 PORTABLE SNOW GUN
 - PIT WITH FIXED FAN GUN (LIFT-MOUNTED INSTALLATION)
 - WATER SUPPLY LINE
 - WATER SUPPLY GRAVITY LINE
 - PUMP STATION
 - WORKS CONNECTED TO THE LAKE

DIDVELI AND KOKHTA MITARBI SYSTEM FLOW DIAGRAM



PRELIMINARY DESIGN
DIDVELI AND KOKHTA-MITARBI SKI RESORT ARTIFICIAL SNOW PRODUCTION SYSTEM, ARTIFICIAL LAKE, NEW SKIING ROADS AND
DEVELOPMENT OF THE INFRASTRUCTURE

CUSTOMER: MRDC- Georgia

DATE: current

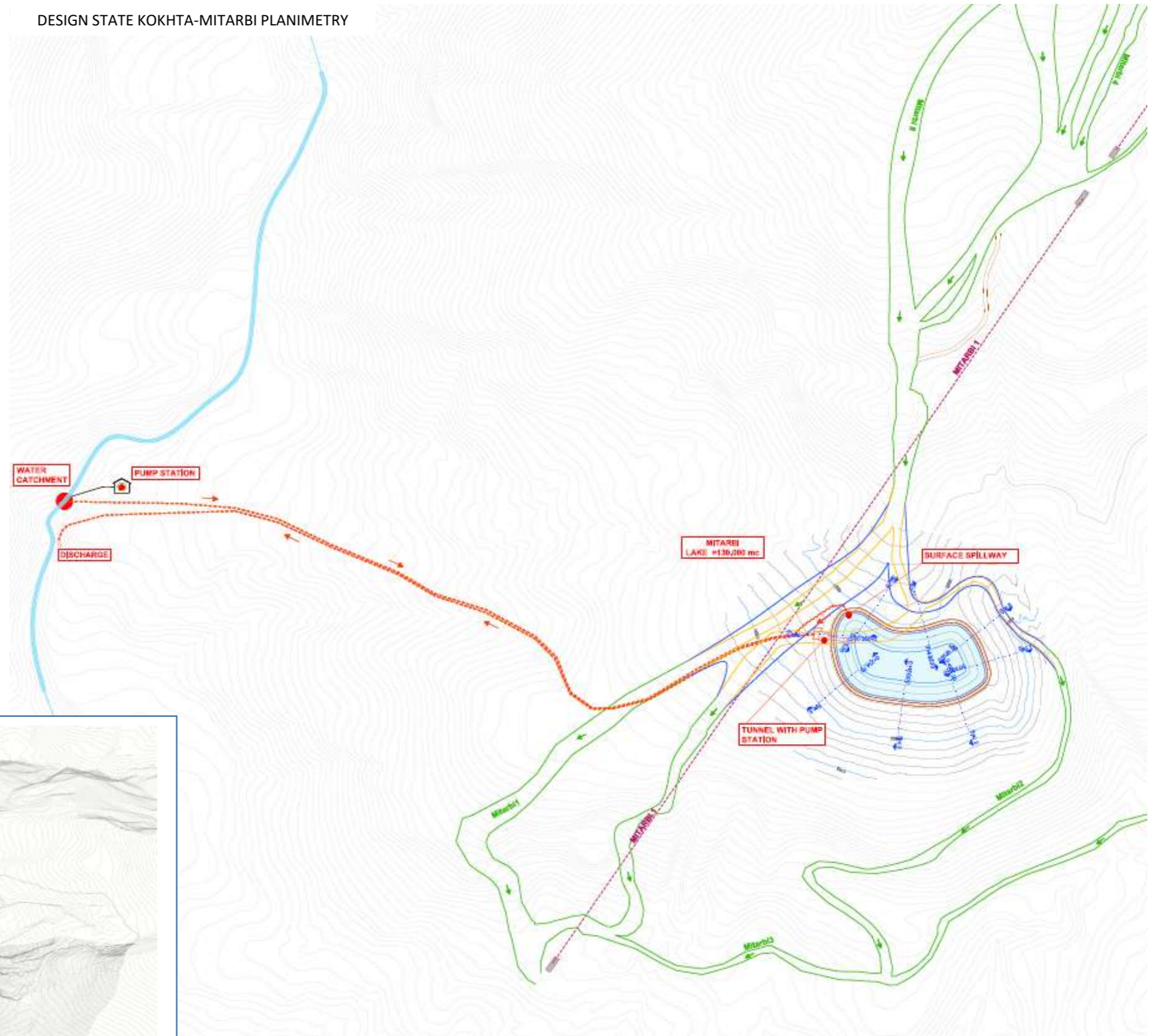
CAPACITY KOKHTA-MITARBI

LAKE: 130.000 m³

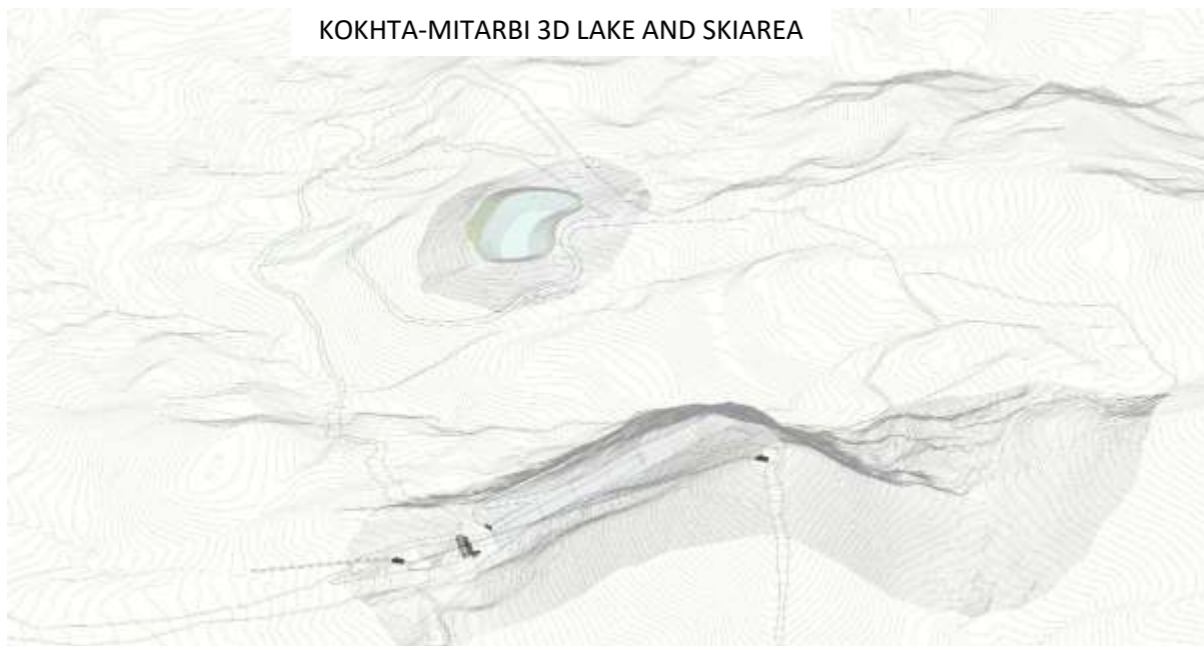
DEPTH: 12 m

WATER SURFACE: 16.630 m²

DESIGN STATE KOKHTA-MITARBI PLANIMETRY

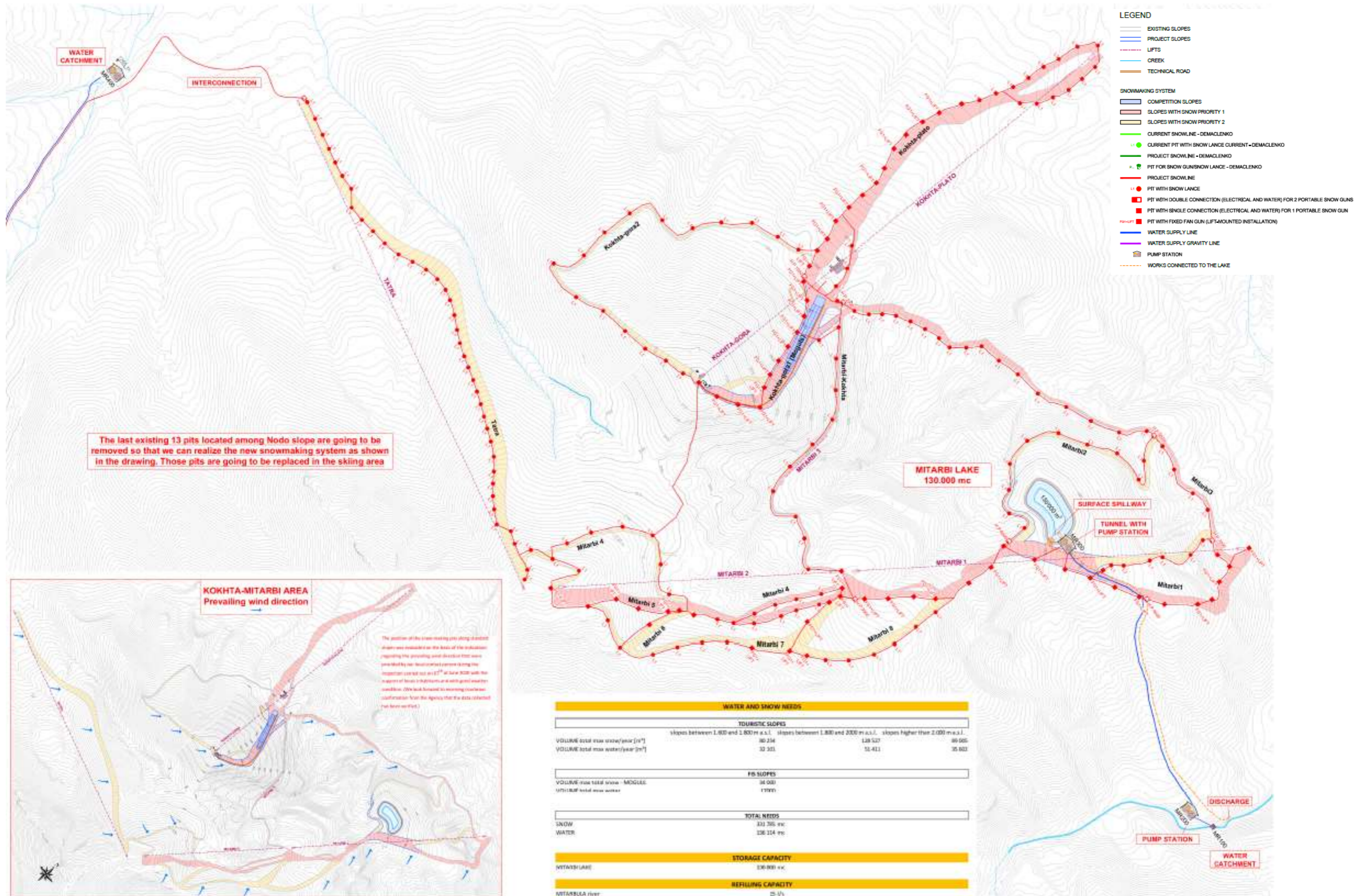


KOKHTA-MITARBI 3D LAKE AND SKIAREA



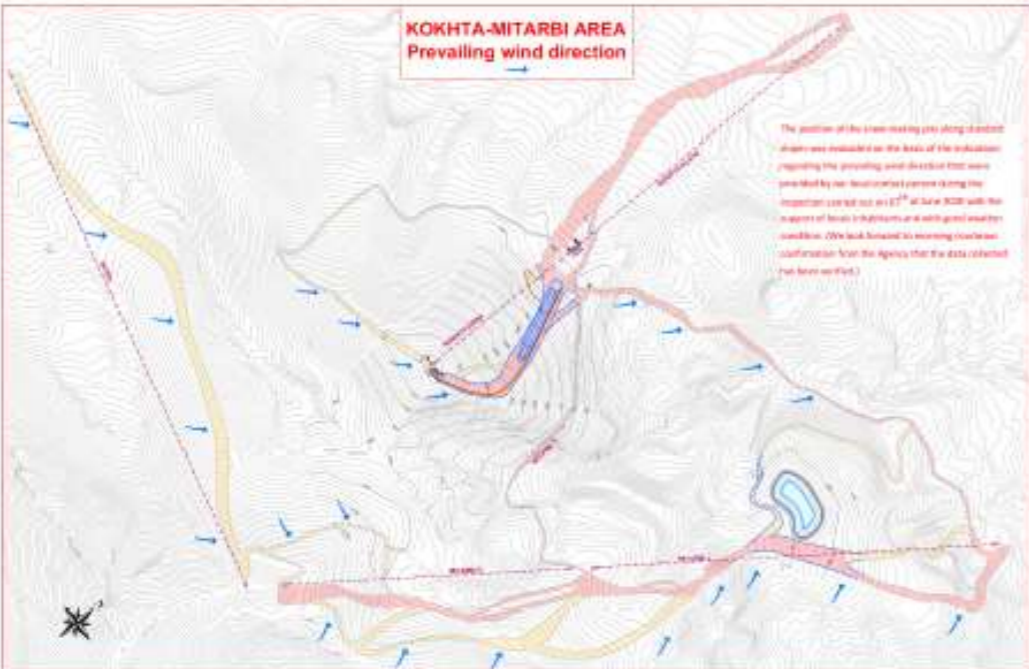
PRELIMINARY DESIGN DIDVELI AND KOKHTA-MITARBI SKI RESORT ARTIFICIAL SNOW PRODUCTION SYSTEM, ARTIFICIAL LAKE, NEW SKIING ROADS AND DEVELOPMENT OF THE INFRASTRUCTURE

KOKHTA-MITARBI SNOWMAKING SYSTEM



The last existing 13 pits located among Nodo slope are going to be removed so that we can realize the new snowmaking system as shown in the drawing. Those pits are going to be replaced in the skiing area

KOKHTA-MITARBI AREA Prevailing wind direction



WATER AND SNOW NEEDS			
TOURISTIC SLOPES			
	Slopes between 1.800 and 2.000 m a.s.l.	Slopes between 2.000 and 2.200 m a.s.l.	Slopes higher than 2.000 m a.s.l.
VOLUME total max snow/year [m ³]	30.234	128.527	49.005
VOLUME total max water/year [m ³]	32.351	51.411	35.602
FB SLOPES			
VOLUME max total snow - MODULS	34.000		
VOLUME total max water	17700		
TOTAL NEEDS			
SNOW	332.265 mc		
WATER	336.314 mc		
STORAGE CAPACITY			
MITARBI LAKE	130.000 mc		
REFILLING CAPACITY			
MITARBI LAKE	0-1/3		

WORKING PLAN

INVASO A CIELO APERTO PER LO STOCCAGGIO D'ACQUA AD USO INNEVAMENTO PROGRAMMATTO IN LOC. MONTAGNOLI - ITALIA

CUSTOMER: Funivie Madonna di Campiglio S.p.a (Italy)

DATE: 2011-2014

TOTAL AMOUNT FOR WORKS: 5.5Meuro

CAPACITY: 192.920 m³

SURFACE: 30.943 m²

DEPTH: 11,90 m



INVERNO



RENDER



BACINO SPERIMENTALE



MURO DI CONTENIMENTO



TELI IMPERMEABILIZZANTI



VISTA AEREA CANTIERE



ESTATE

WORKING PLAN

INVASO A CIELO APERTO PER LO STOCCAGGIO D'ACQUA AD USO INNEVAMENTO PROGRAMMATO IN LOC. MONTAGNOLI - ITALIA

CUSTOMER: Funivie Madonna di Campiglio S.p.a (Italy)

DATE: 2011-2014

TOTAL AMOUNT FOR WORKS: 5.5Meuro

CAPACITY: 192.920 m³

SURFACE: 30.943 m²

DEPTH: 11,90 m



VASCHE RACCOLTA DRENAGGI

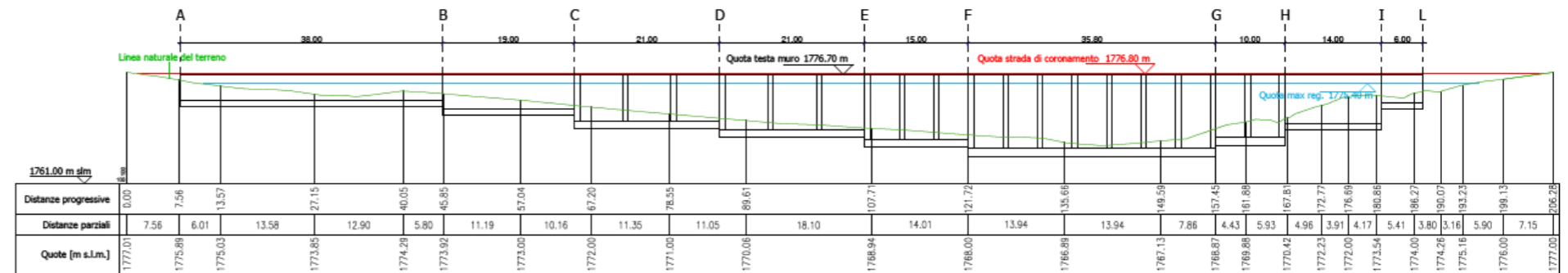


INGRESSO LOCALE POMPE

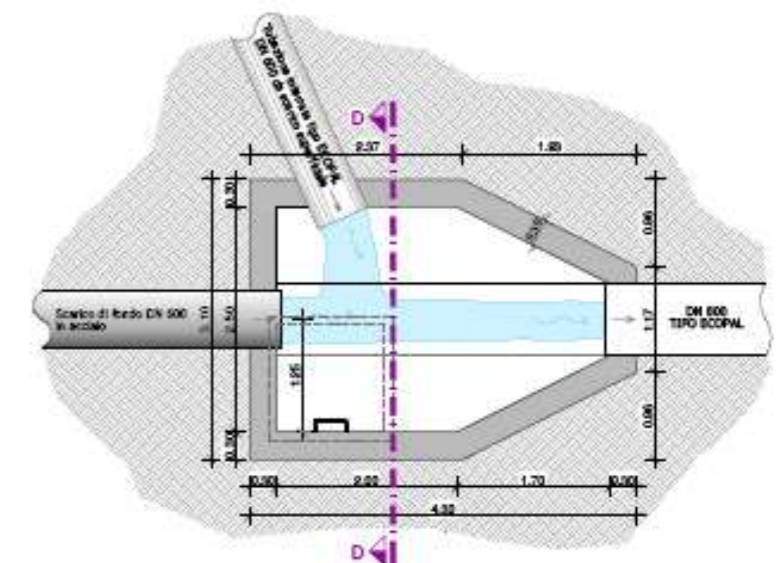
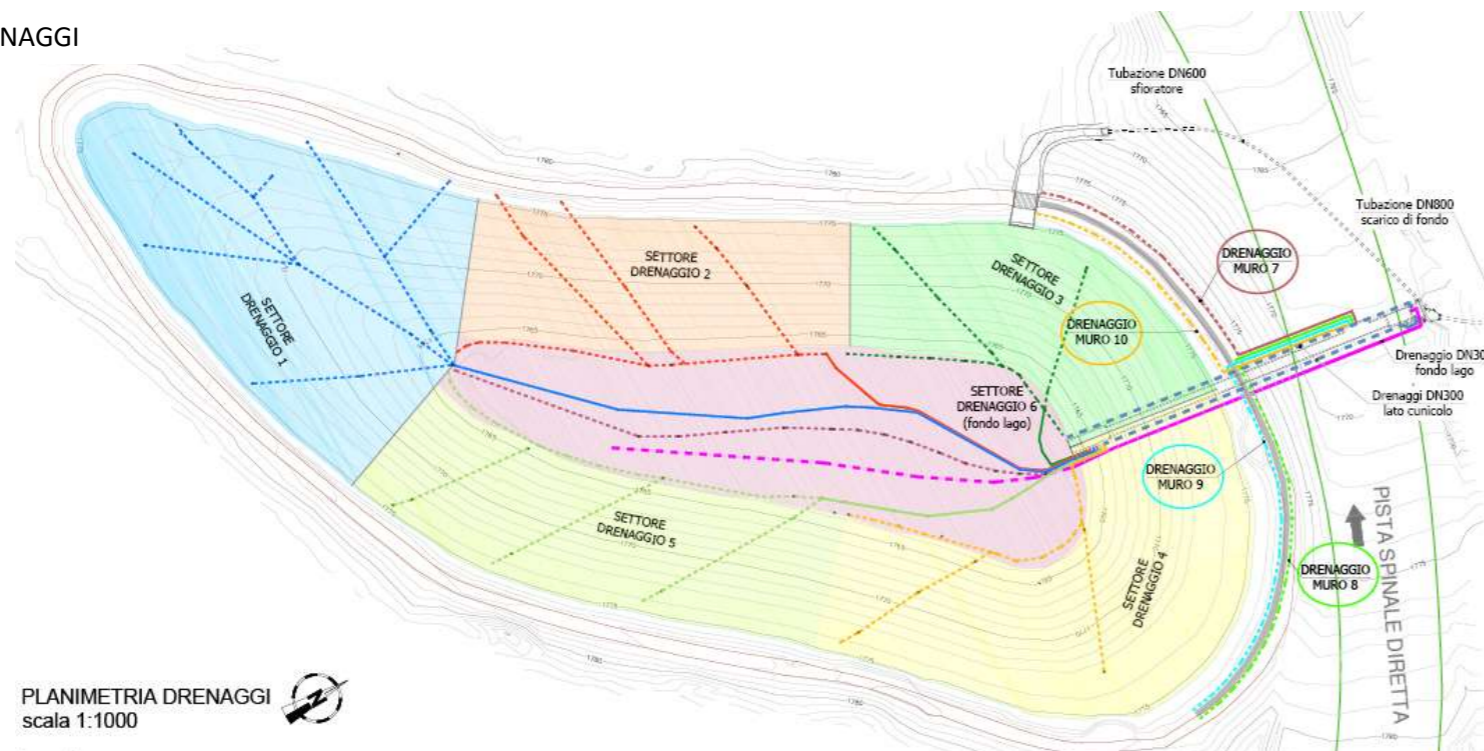
SFIORATORE



MURO DI CONTENIMENTO



DRENAGGI



PARTICOLARE VASCA DI RACCOLTA

WORKING PLAN

INVASO A CIELO APERTO PER LO STOCCAGGIO D'ACQUA AD USO INNEVAMENTO PROGRAMMATO IN LOC. MONTAGNOLI - ITALIA

CUSTOMER: Funivie Madonna di Campiglio S.p.a (Italy)

DATE: 2011-2014

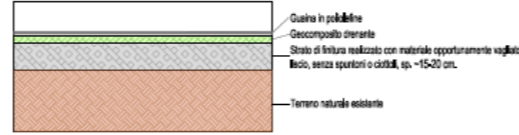
TOTAL AMOUNT FOR WORKS: 5.5Meuro

CAPACITY: 192.920 m³

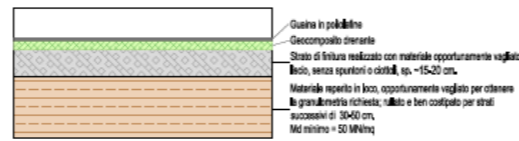
SURFACE: 30.943 m²

DEPTH: 11,90 m

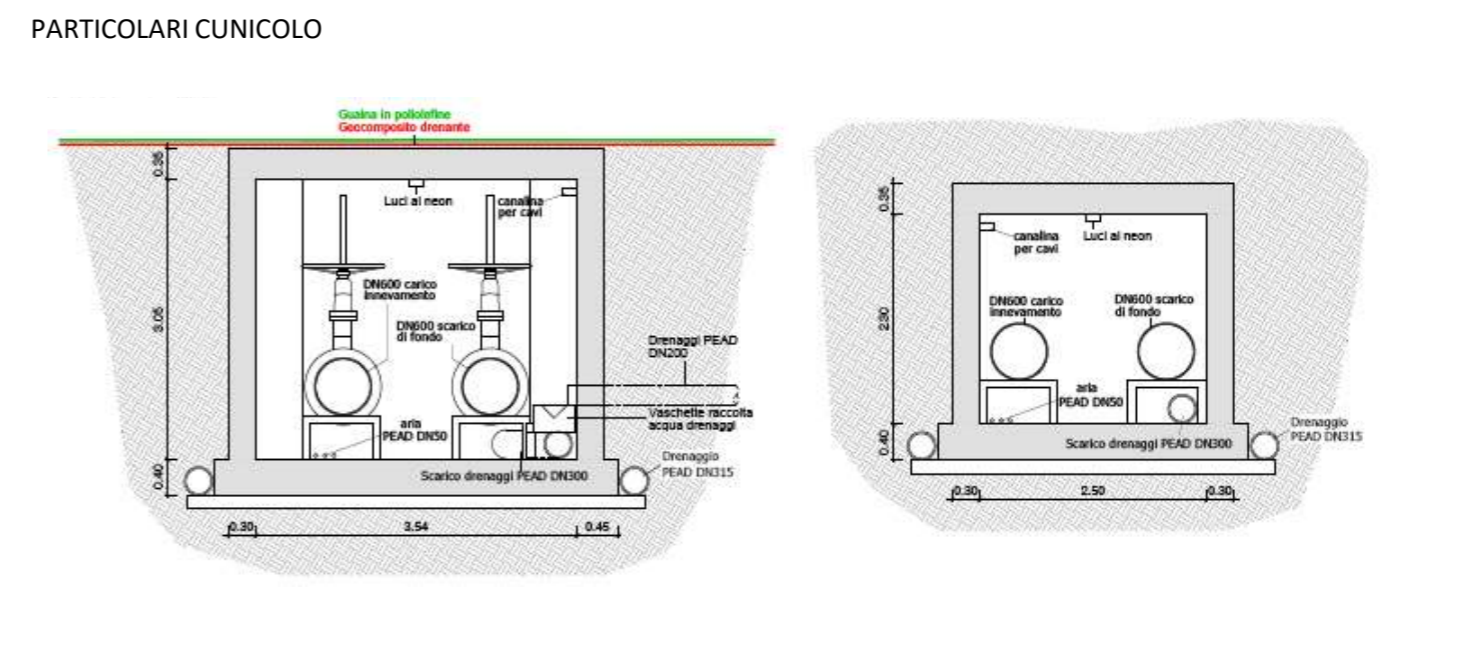
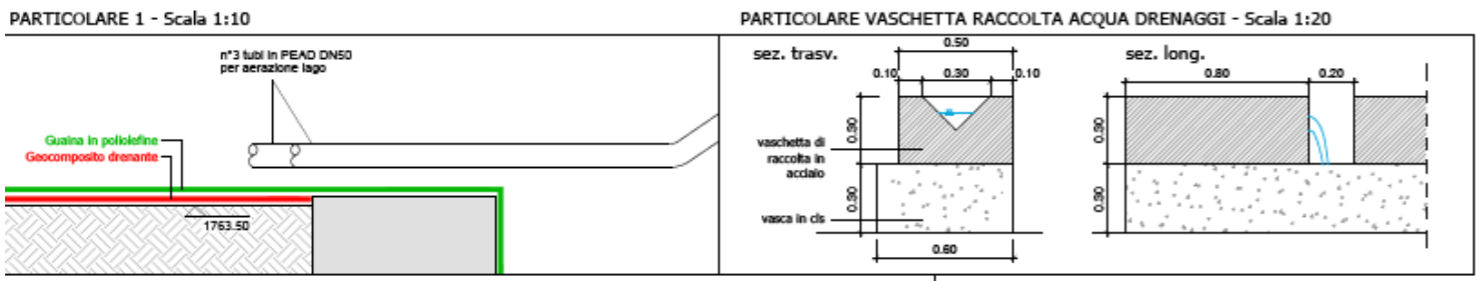
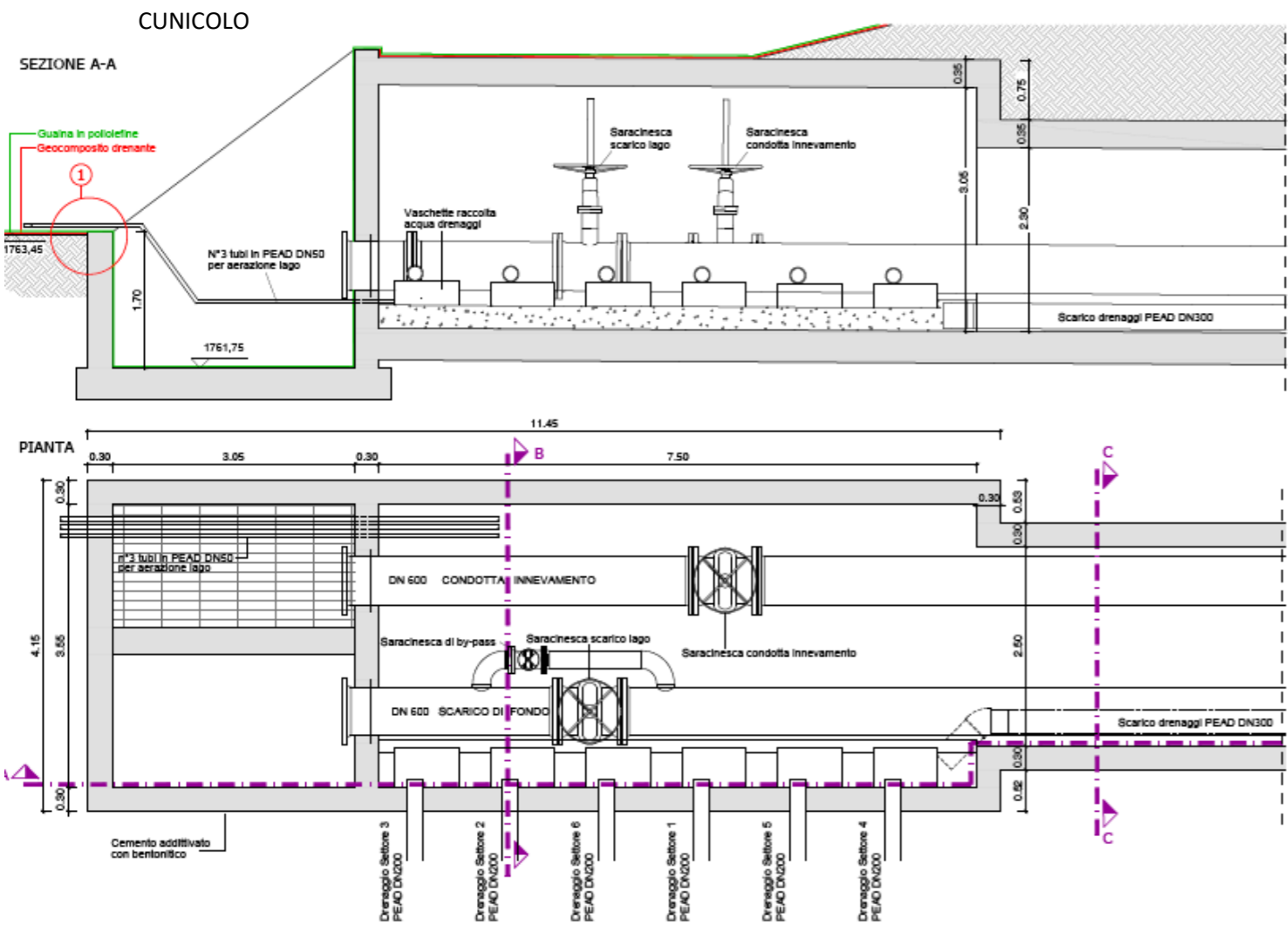
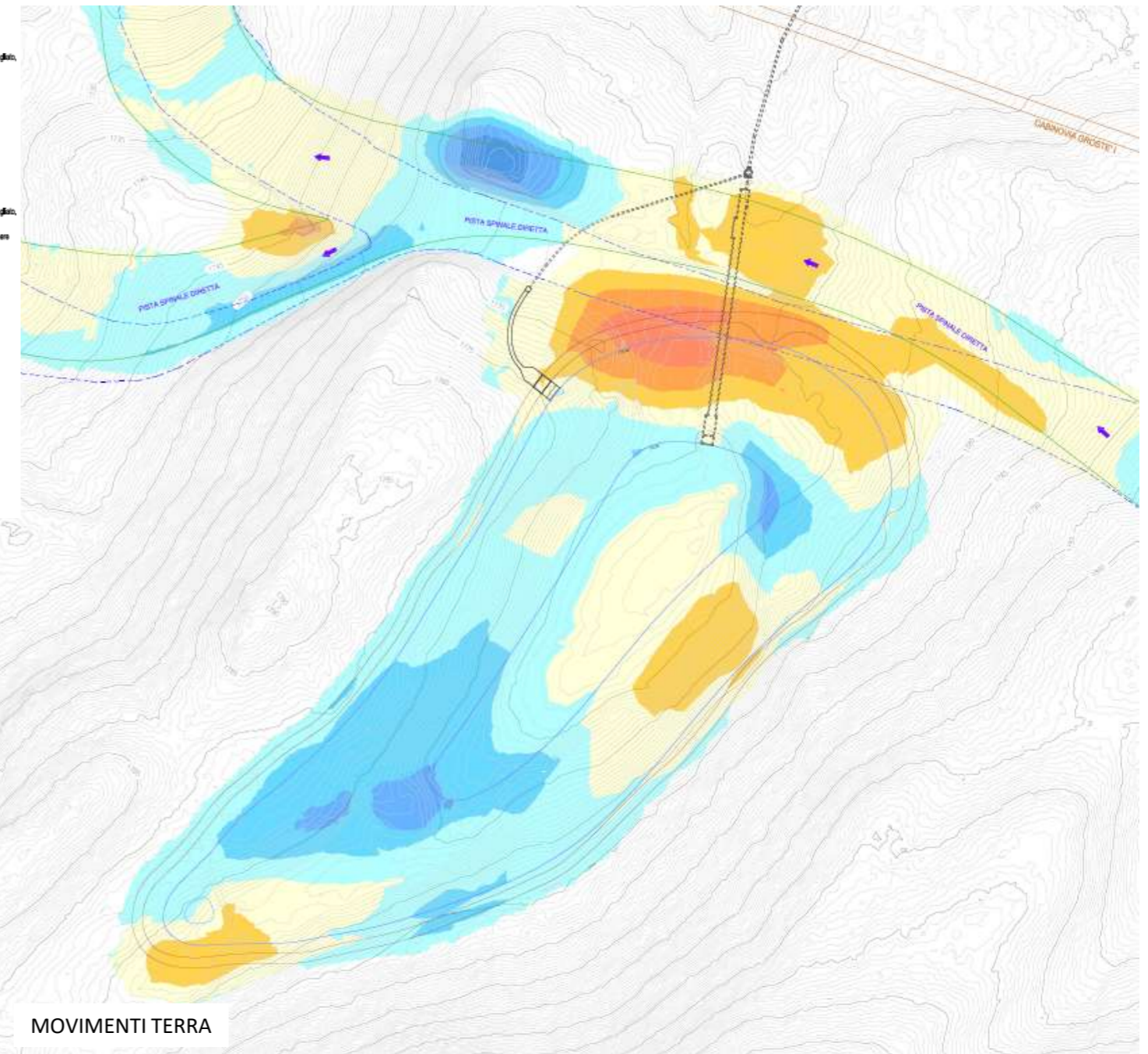
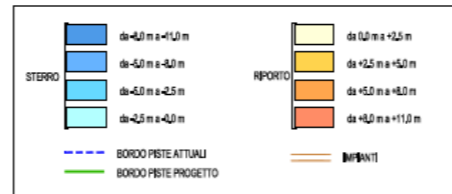
SEZIONE TIPO SPONDA - IN SCAVO



SEZIONE TIPO SPONDA - IN RIPIERTO



LEGENDA PLANIMETRIA



WORKING PLAN

INVASO A CIELO APERTO PER LO STOCCAGGIO D'ACQUA AD USO INNEVAMENTO PROGRAMMATO IN LOC. VALBIOLO - ITALIA

CUSTOMER: Società Carosello Tonale
S.p.a (Italy)

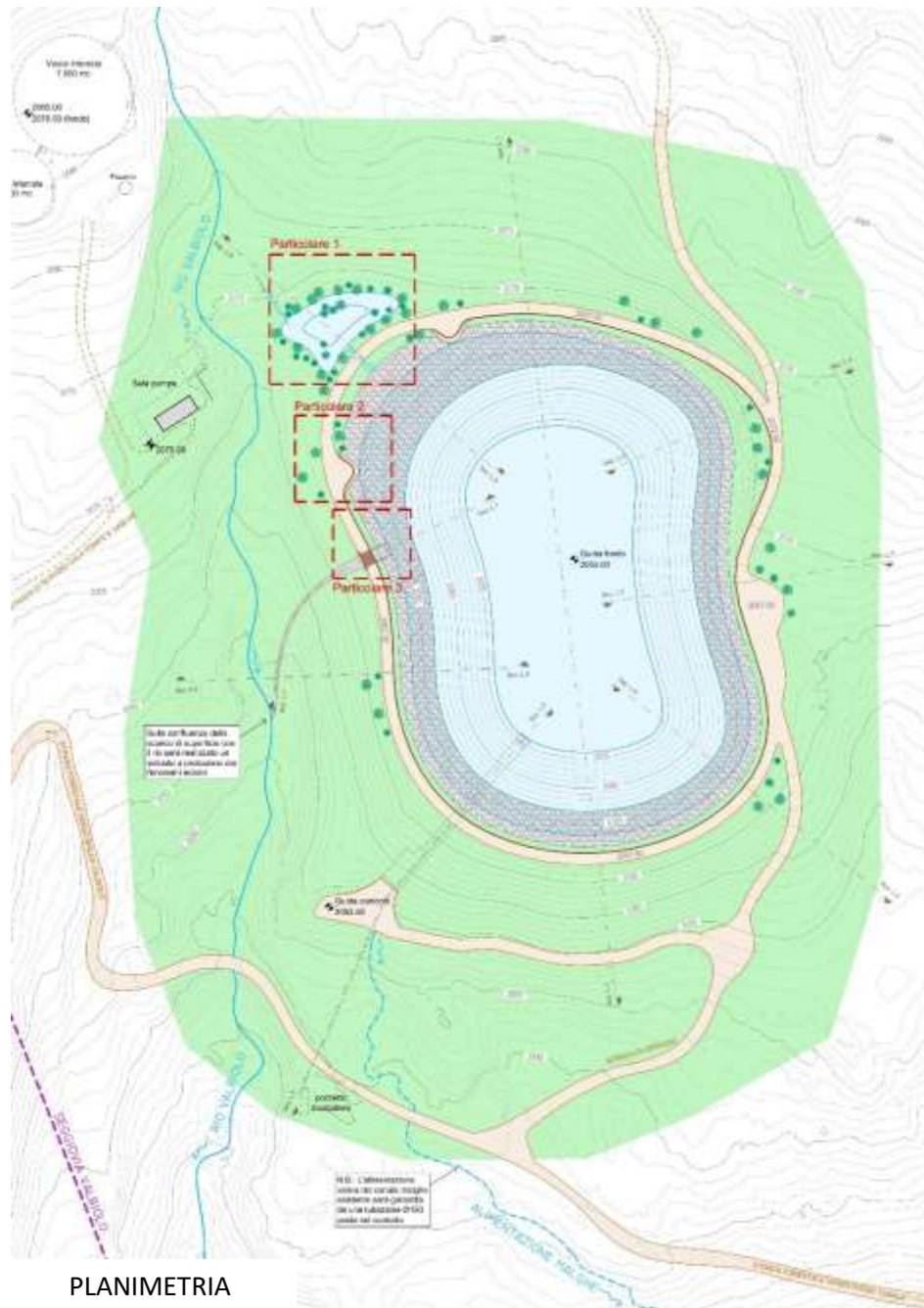
DATE: 2016-al presente

TOTAL AMOUNT FOR WORKS: 5 Meuro

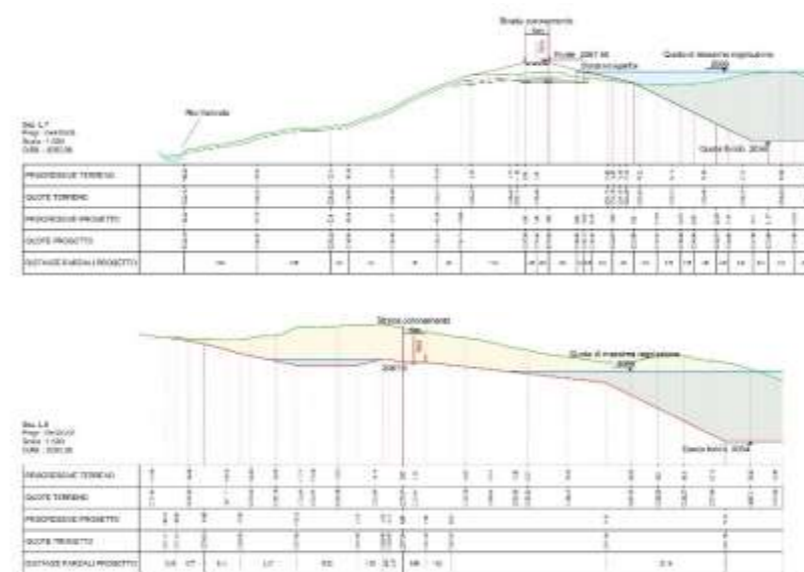
CAPACITY: 120.850 m³

SURFACE: 17.369 m²

DEPTH: 12 m



PLANIMETRIA



PARTICOLARI PROGETTUALI



RENDER

WORKING PLAN

INVASO A CIELO APERTO PER LO STOCCAGGIO D'ACQUA AD USO INNEVAMENTO PROGRAMMATO IN LOC. VALBIOLO - ITALIA

CUSTOMER: Società Carosello Tonale S.p.a (Italy)

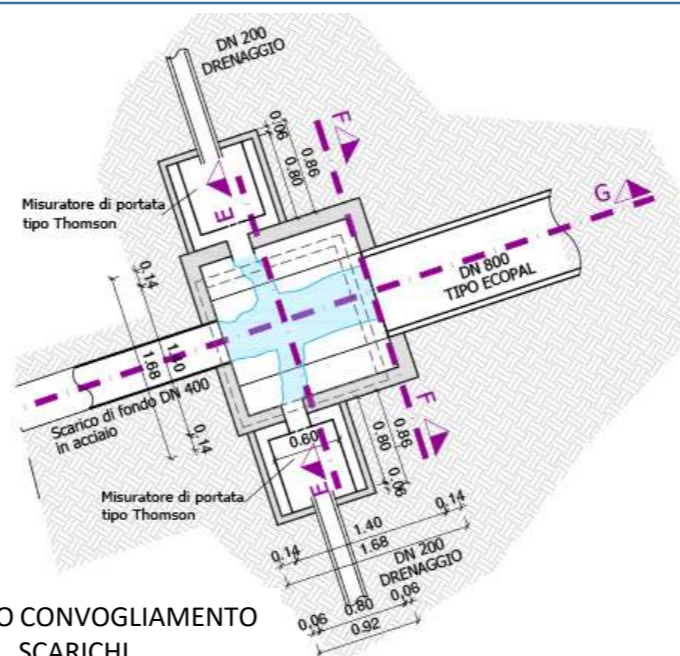
DATE: 2016-al presente

TOTAL AMOUNT FOR WORKS: 5 Meuro

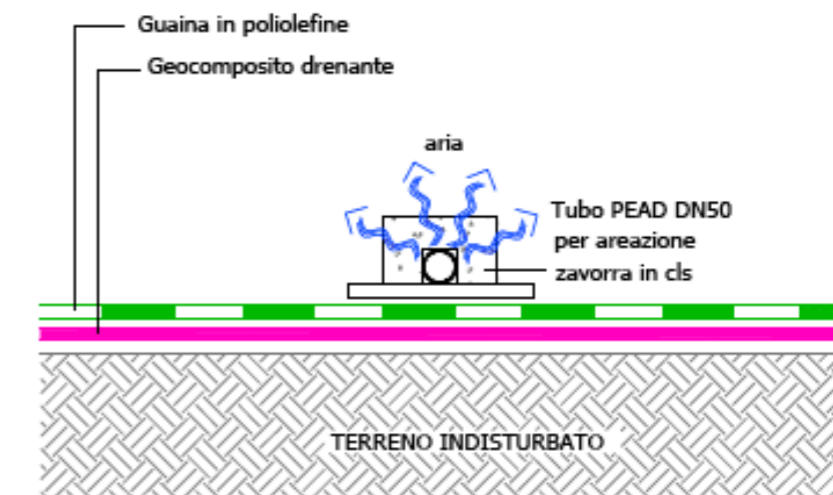
CAPACITY: 120.850 m³

SURFACE: 17.369 m²

DEPTH: 12 m

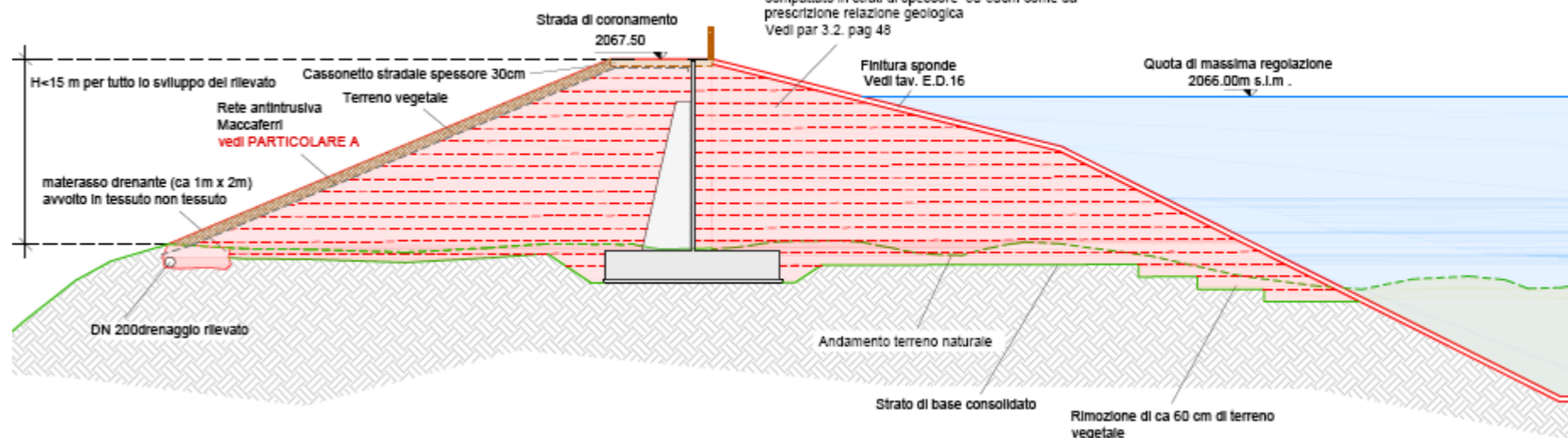


POZZETTO CONVOGLIAMENTO SCARICHI

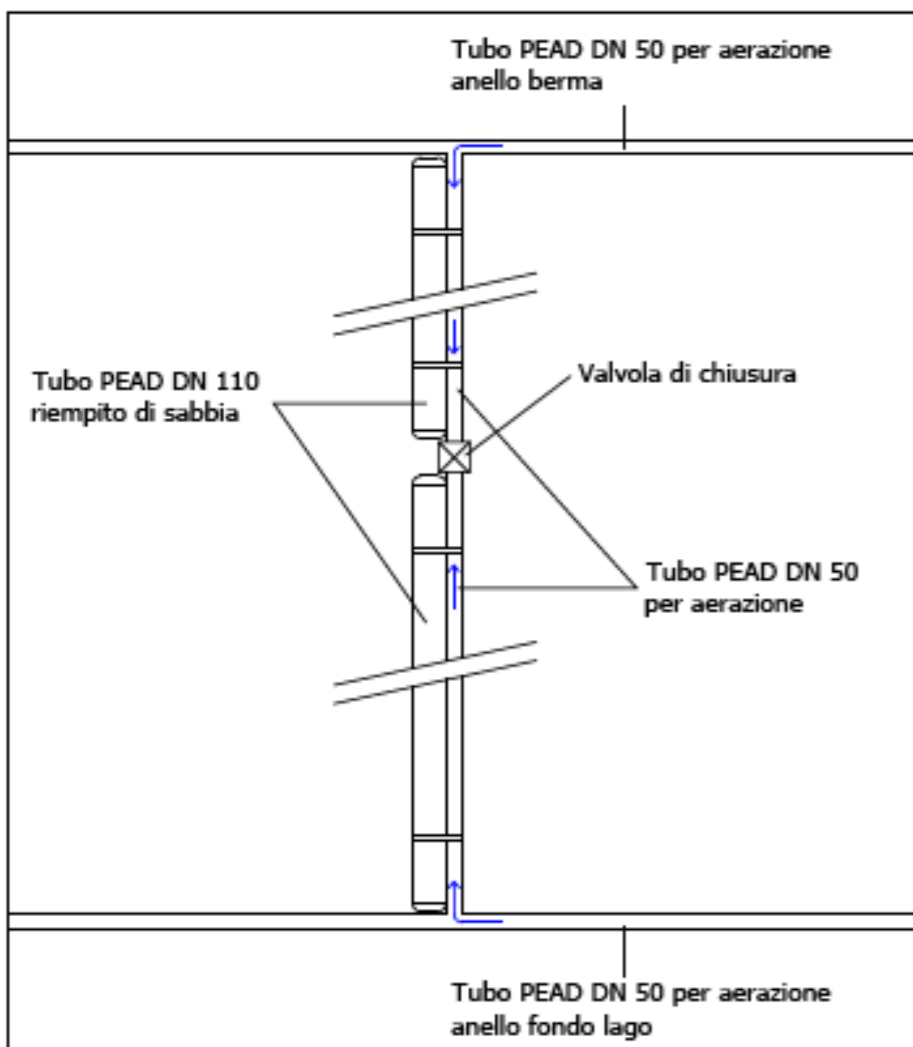


PARTICOLARE SISTEMA AEREAZIONE FONDO

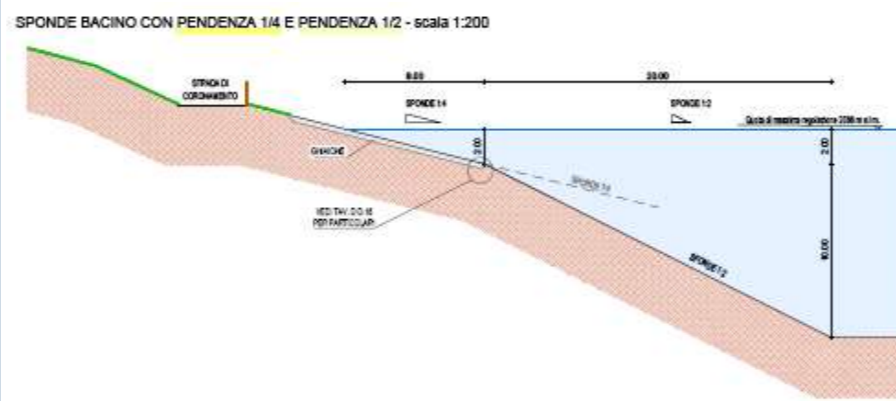
- MURO ARGINALE
- TRINCEA DRENANTE PIEDE RILEVATO
- PIANI DI POSA DEL RILEVATO



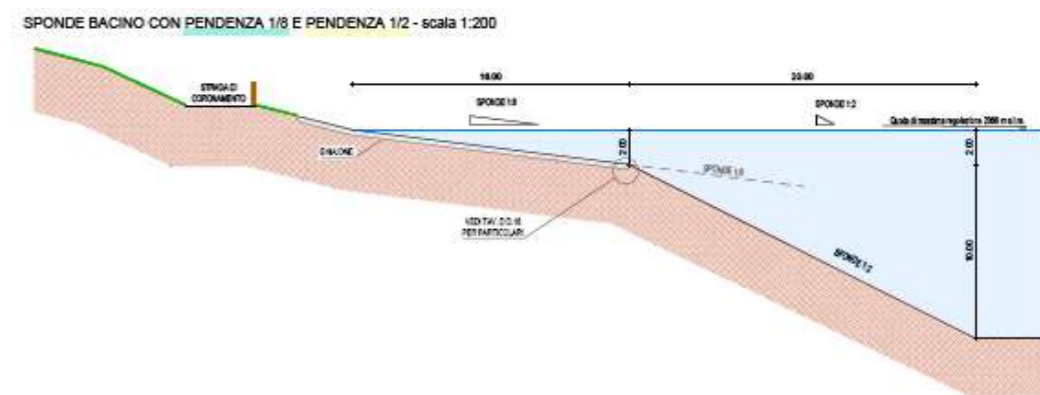
RILEVATO ARGINALE



PARTICOLARE SISTEMA AEREAZIONE SPONDA



PARTICOLARE SPONDE BACINO



WORKING PLAN

INVASO A CIELO APERTO PER LO STOCCAGGIO D'ACQUA AD USO INNEVAMENTO PROGRAMMATTO IN LOC. BUSA DI GRUAL - ITALIA

CUSTOMER: Funivie Pinzolo S.p.a
(Italy)

DATE: 2016-al presente

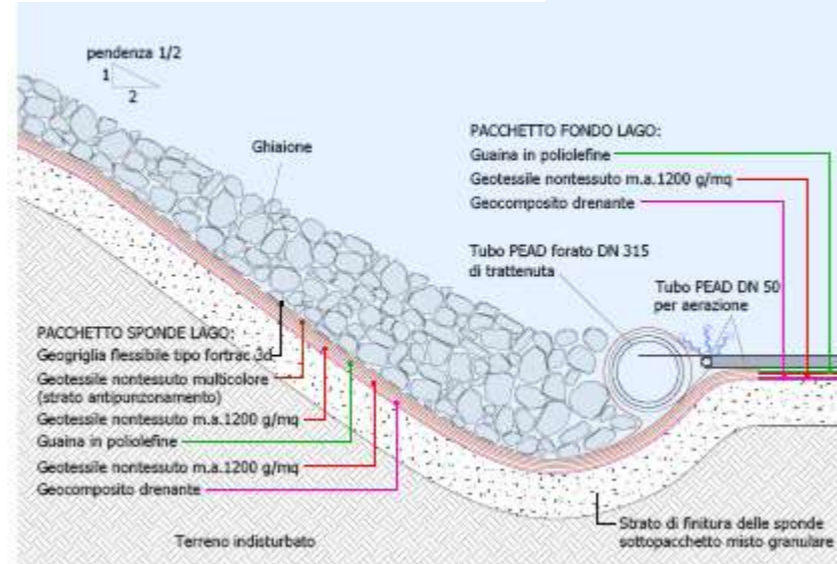
TOTAL AMOUNT FOR WORKS: 5 Meuro

CAPACITY: 92.690 m³

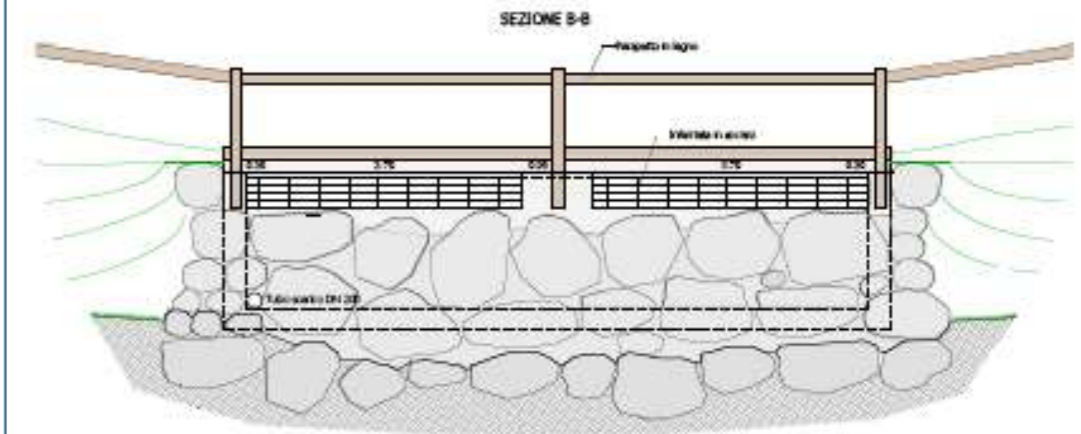
SURFACE: 14.045 m²

DEPTH: 12 m

PARTICOLARE IMPERMEABILIZZAZIONE

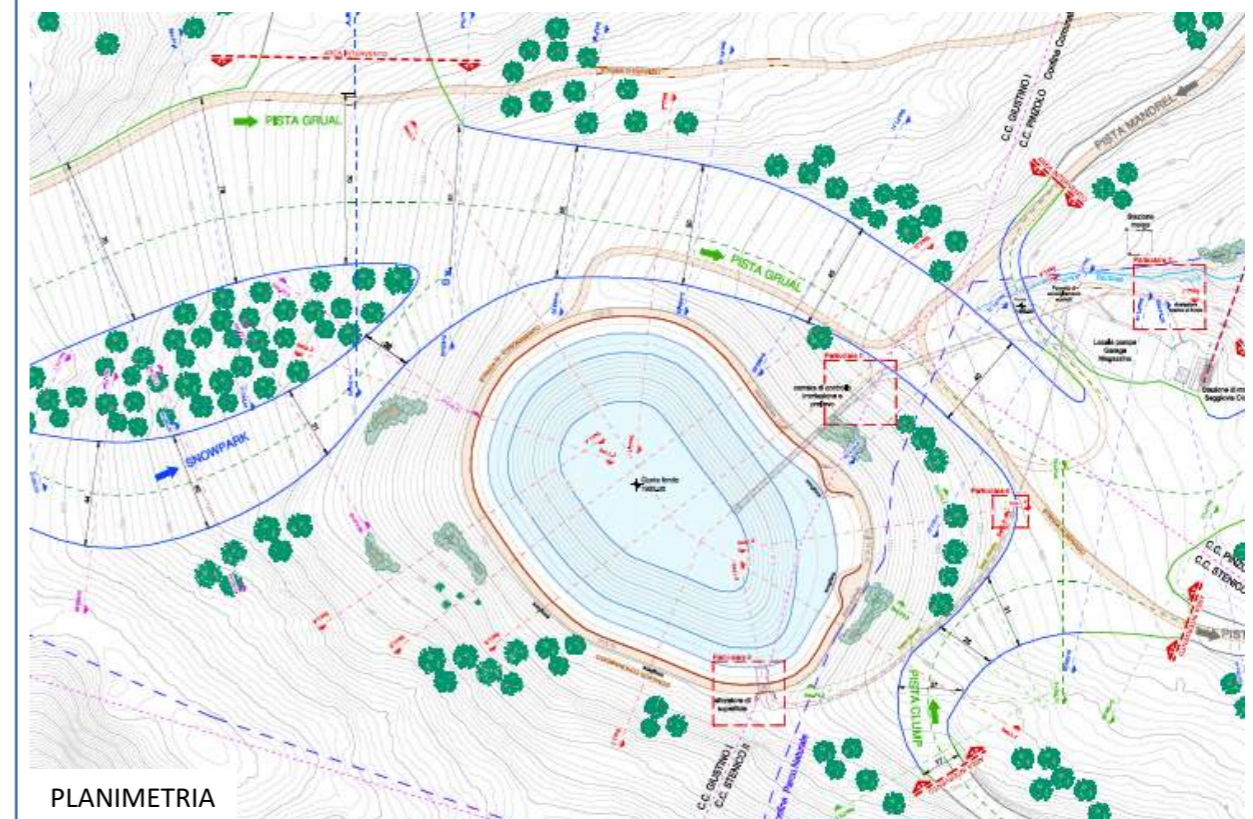
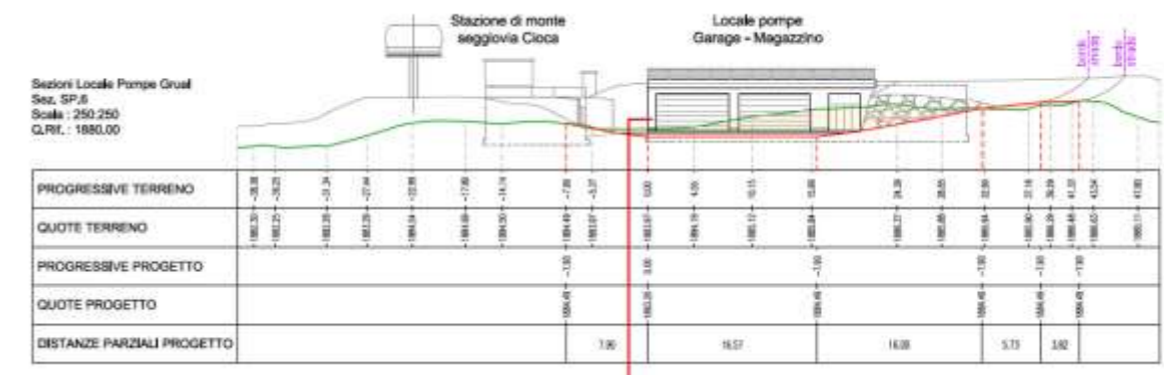


PARTICOLARE DISSIPATORE



RENDER

PARTICOLARE LOCALE POMPE



PLANIMETRIA

WORKING PLAN

INVASO A CIELO APERTO PER LO STOCCAGGIO D'ACQUA AD USO INNEVAMENTO PROGRAMMATO IN LOC. BUSA DI GRUAL - ITALIA

CUSTOMER: Funivie Pinzolo S.p.a
(Italy)

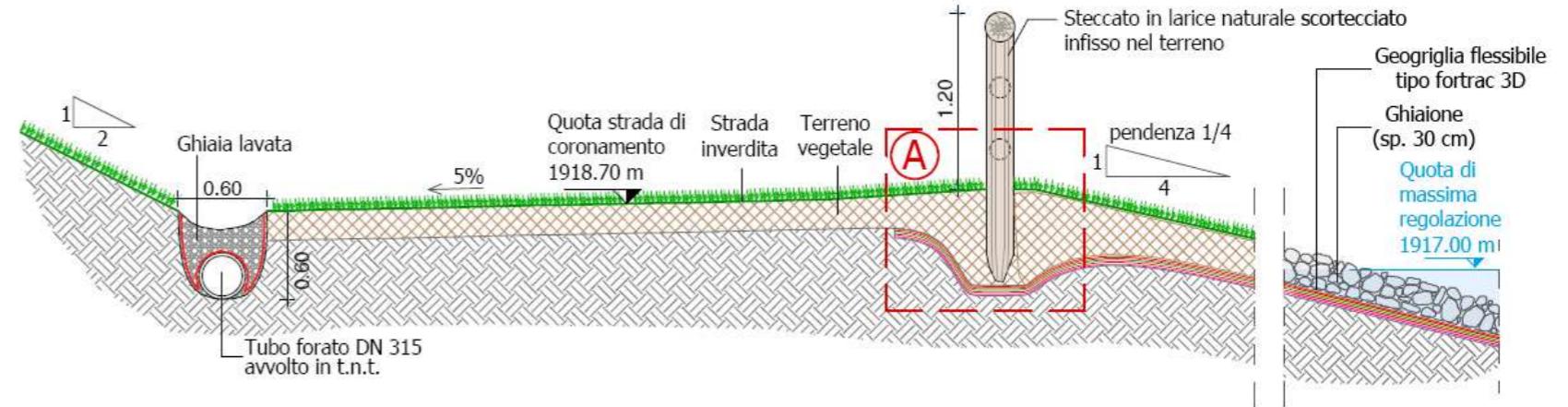
DATE: 2016-al presente

TOTAL AMOUNT FOR WORKS: 5 Meuro

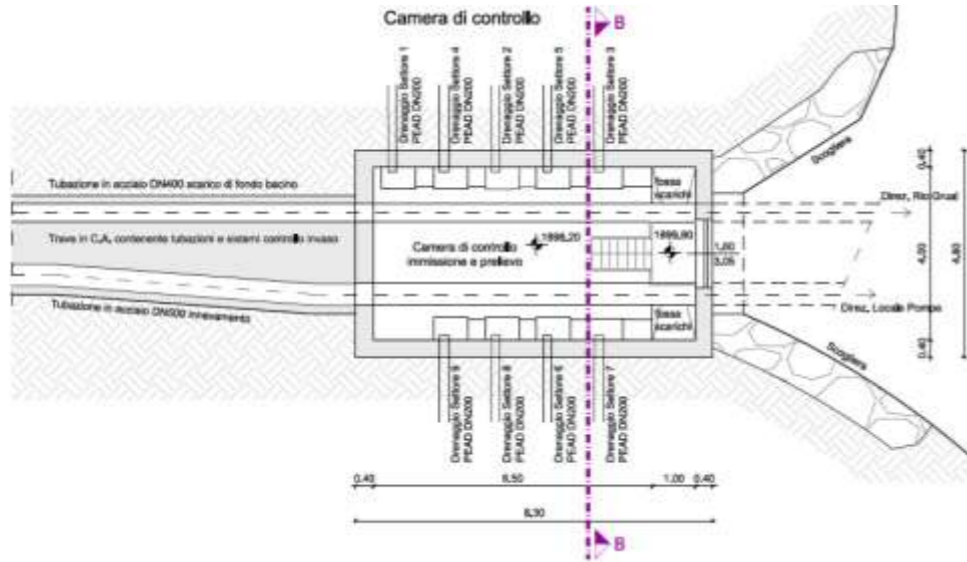
CAPACITY: 92.690 m³

SURFACE: 14.045 m²

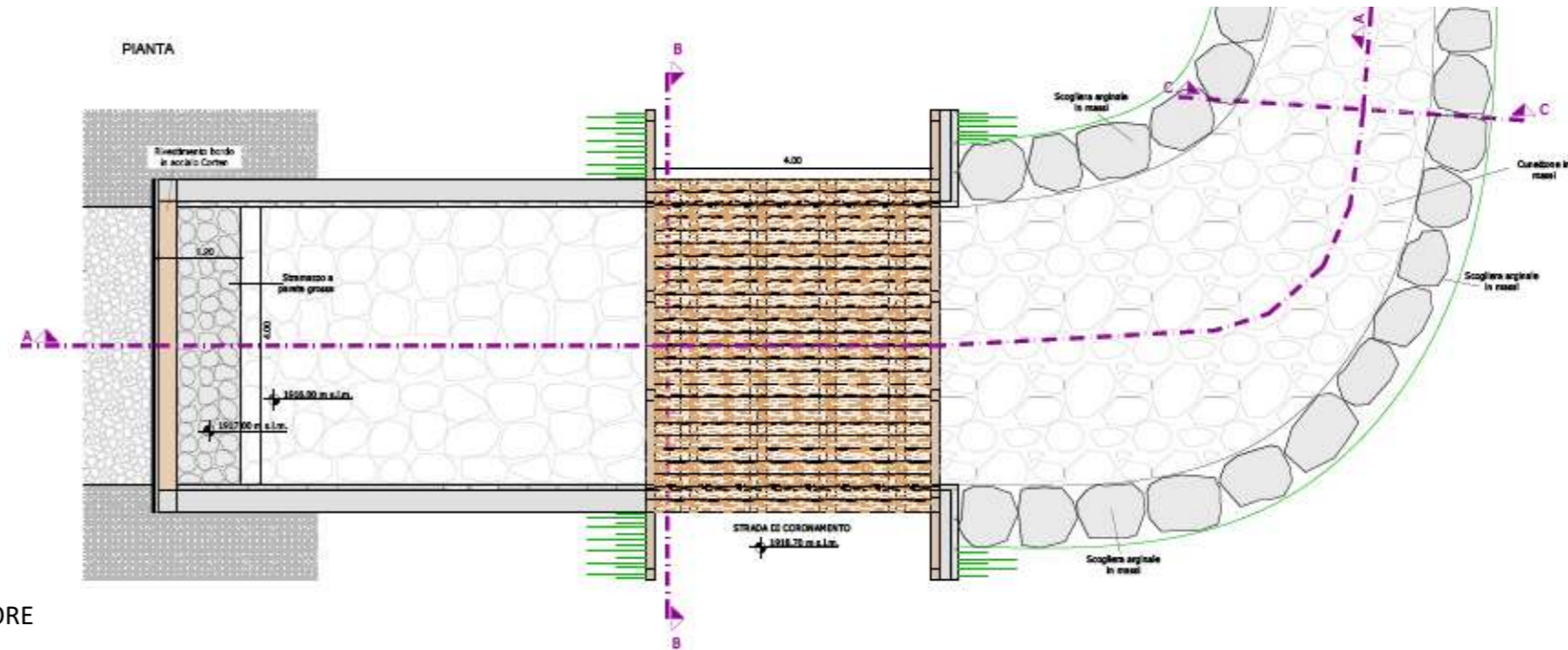
DEPTH: 12 m



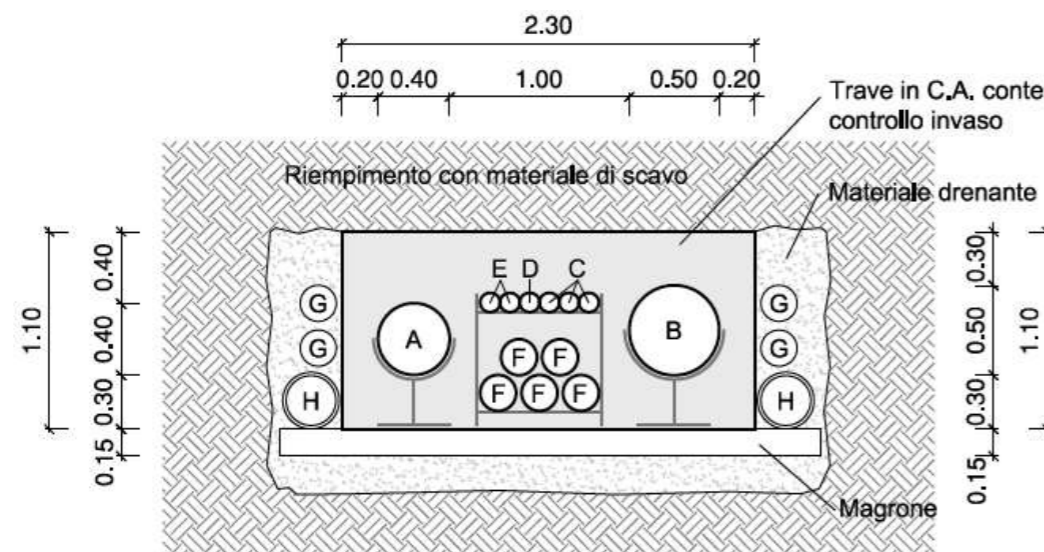
PARTICOLARE STRADA DI CORONAMENTO



CAMERA DI CONTROLLO



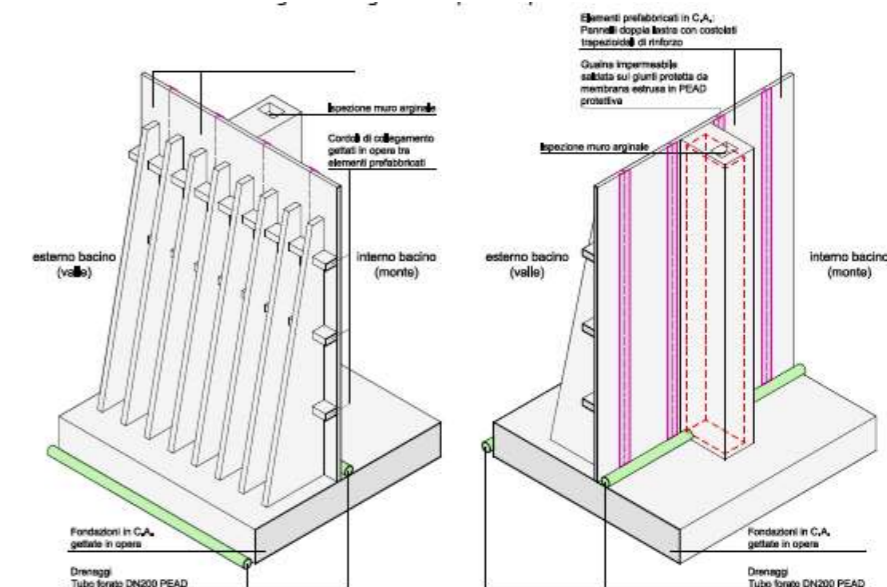
SFIORATORE



SEZIONE TRAVE CONTENENTE TUBAZIONI E SISTEMI DI CONTROLLO

Elenco tubazioni:

- A = acciaio DN 400 scarico di fondo
- B = acciaio DN 500 carico innevamento
- C = PEAD DN 110 cavidotti boullage
- D = PEAD DN 110 cavidotto sensore temperatura
- E = PEAD DN 110 cavidotti di scorta
- F = PEAD DN 200 drenaggi di controllo invaso
- G = PEAD DN 200 drenaggi di controllo muro
- H = PEAD DN315 forato - drenaggi laterali a trave



PARTICOLARE MURO ARGINALE

WORKING PLAN

INVASO A CIELO APERTO PER LO STOCCAGGIO D'ACQUA AD USO INNEVAMENTO PROGRAMMATO IN LOC. PRADEL-ITALIA

CUSTOMER: Funivie Molveno Pradel S.p.a (Italy)

DATE: 2013-al presente

TOTAL AMOUNT FOR WORKS: 1,5Meuro

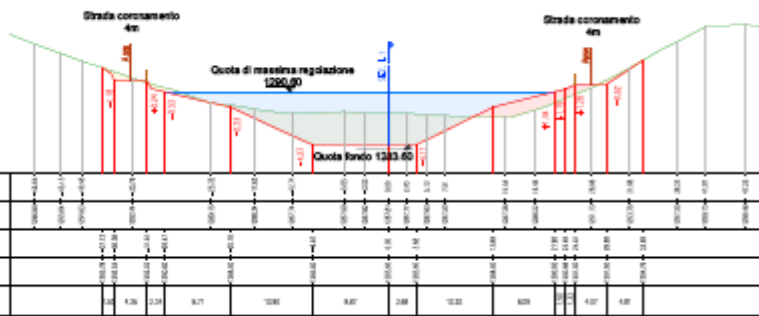
CAPACITY: 33.600 m³

SURFACE: 8.491 m²

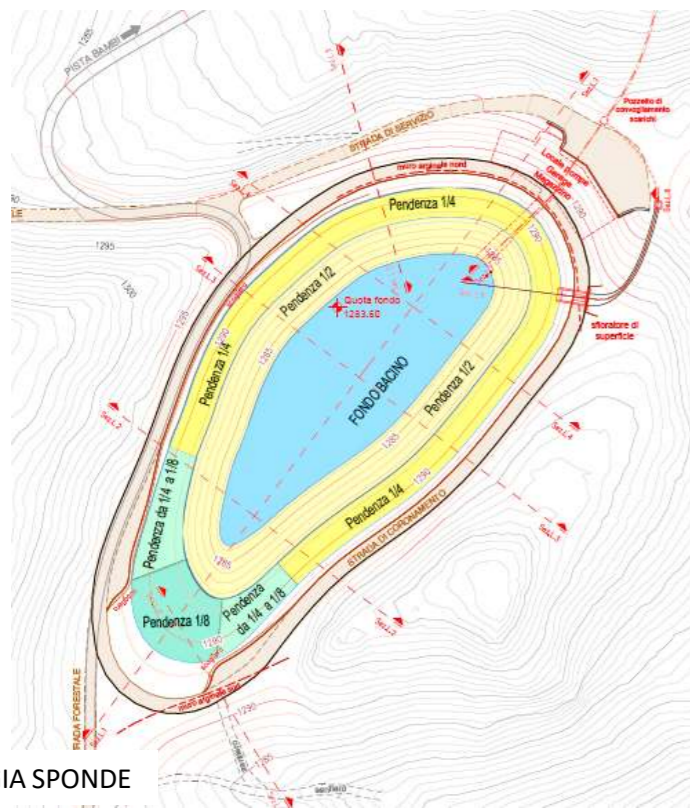
DEPTH: 7 m



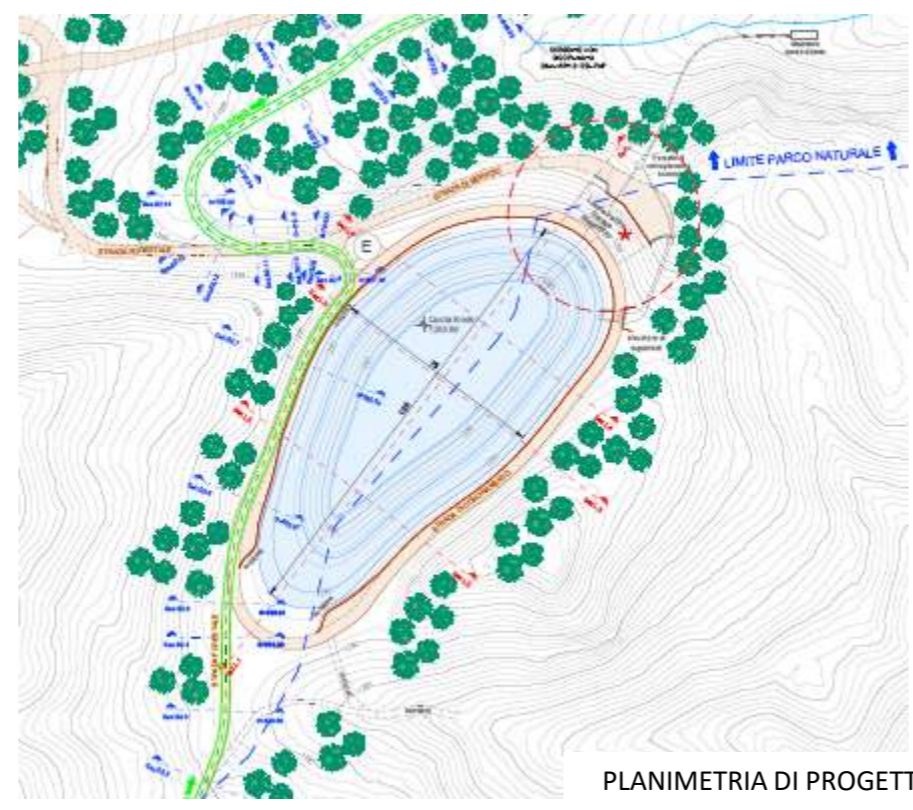
RENDER



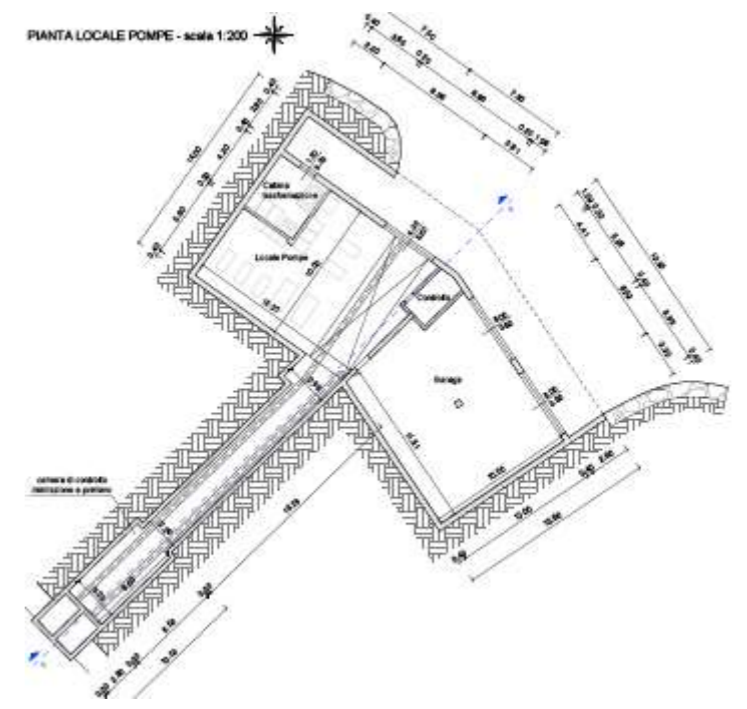
SEZIONE DI PROGETTO



TIPOLOGIA SPONDE



PLANIMETRIA DI PROGETTO



PARTICOLARE MURO ARGINALE

WORKING PLAN

NUOVO BACINO PER L'INNEVAMENTO PROGRAMMATO ARTIFICIALE SKIAREA DI FOLGARIDA MARILLEVA

CUSTOMER: Funivie Folgarida S.p.a
(Italy)

TOTAL AMOUNT FOR WORKS: 10Meuro

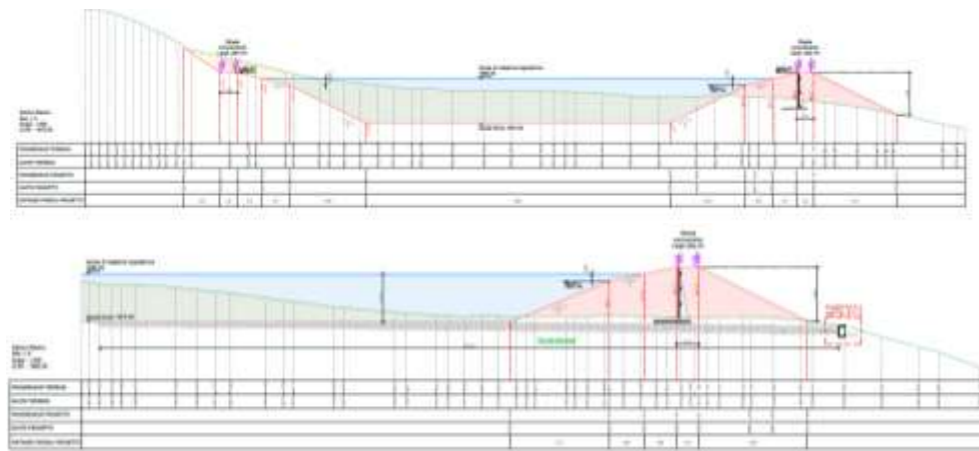
CAPACITY: 178.000 m³

SURFACE: 22.250 m²

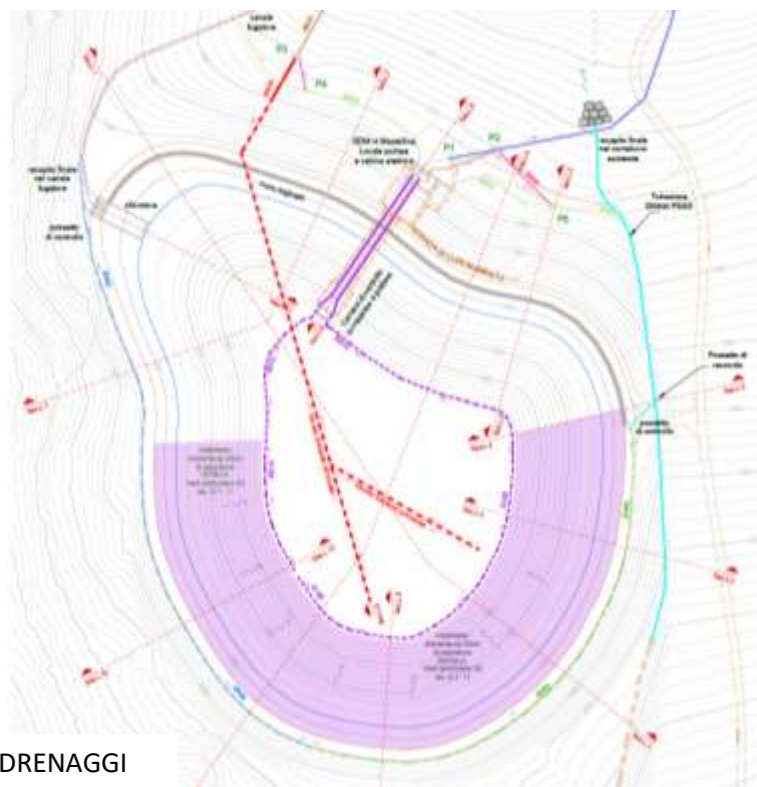
DEPTH: 13.1m



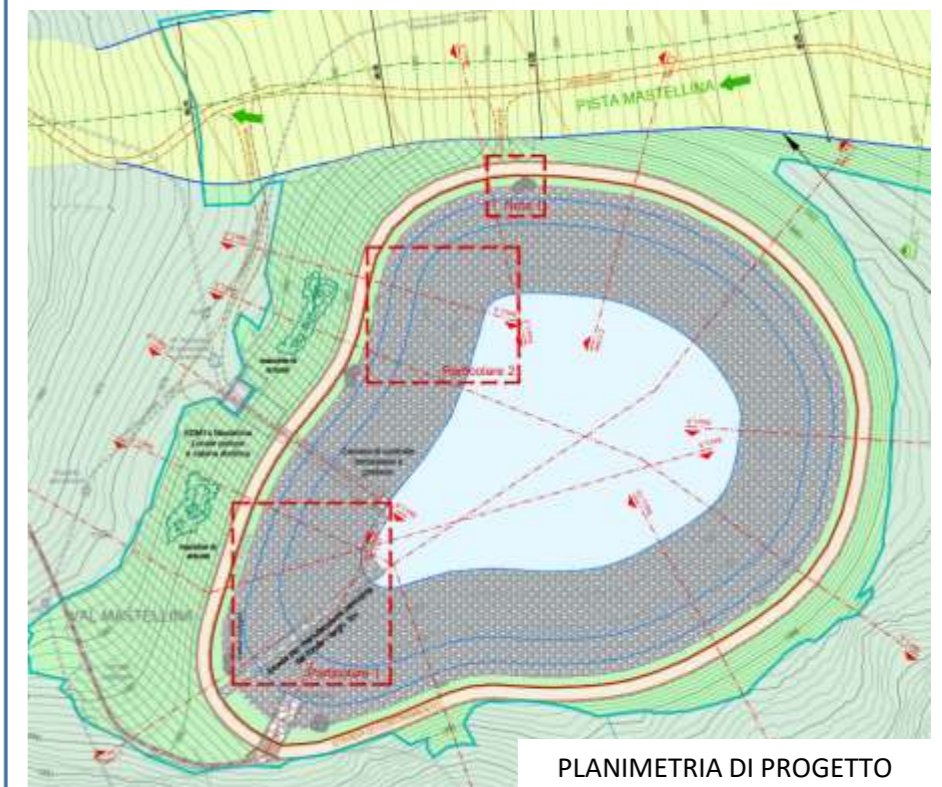
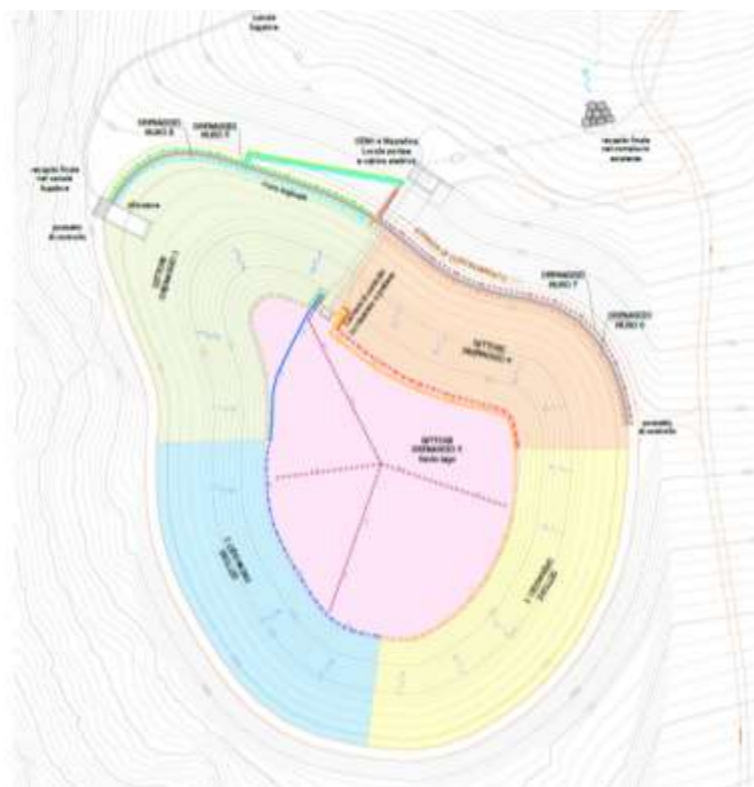
RENDER



SEZIONI DI PROGETTO



PLANIMETRIA DRENAGGI



PLANIMETRIA DI PROGETTO

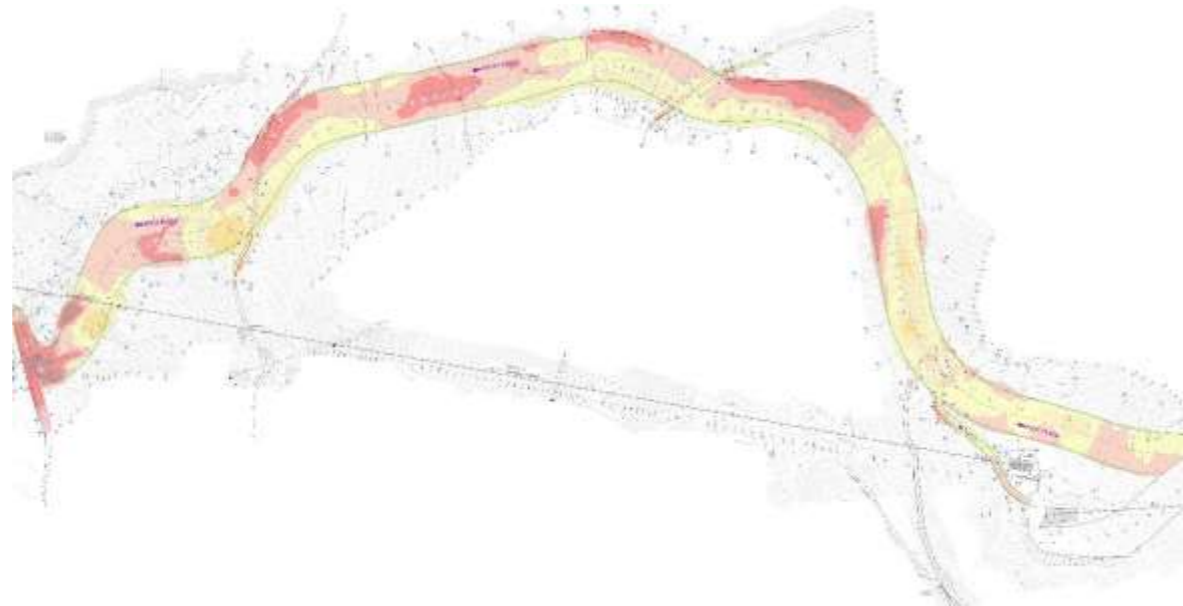
WORKING PLAN
REALIZZAZIONE NUOVA PISTA DA SCI "PUZA DEI FOI-PLAZA" - PINZOLO - ITALIA

CUSTOMER -
Funivie Pinzolo S.p.A.
(Italy)

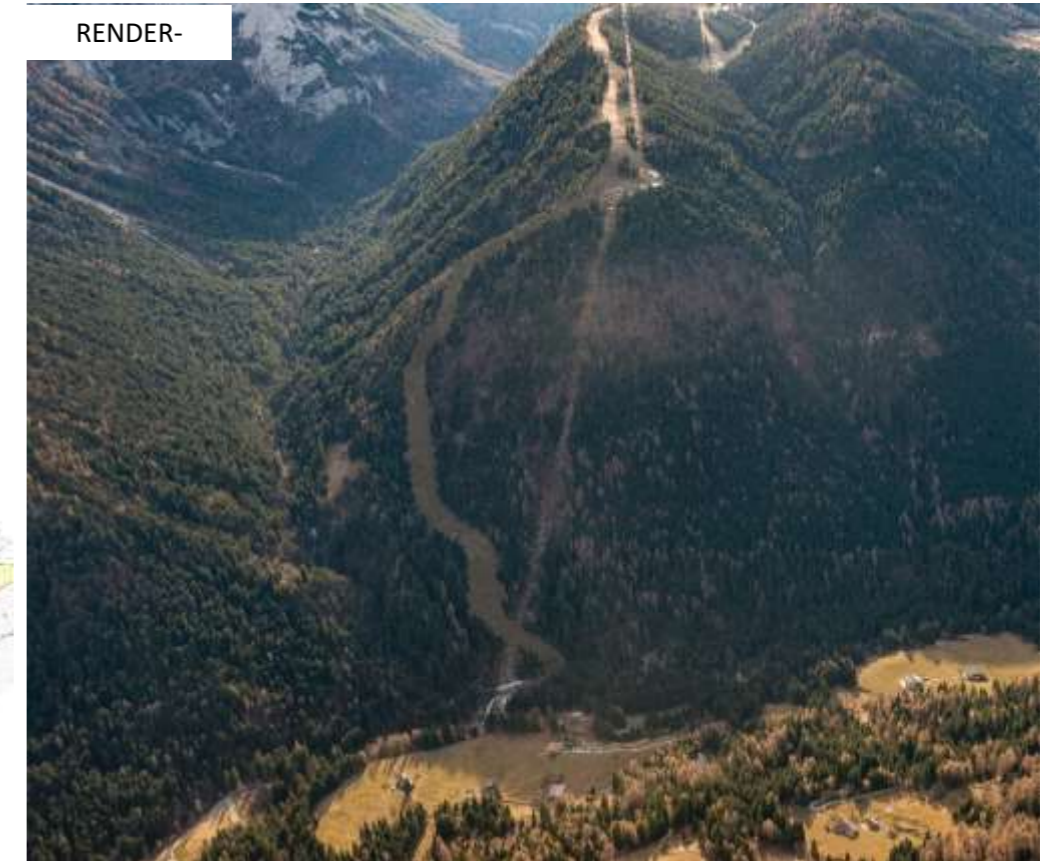
DATE
2015 - al presente

**TOTAL AMOUNT FOR
WORKS**
estimado 2.000.000 €

MOVIMENTI TERRA



RENDER-



WORKING PLAN
APPROVVIGIONAMENTO IDRICO PER IMPIANTI DI INNEVAMENTO PROGRAMMATO PER LE PISTE DA SCI TRATTO LAGO DI MOLVENO - LOC. PIANDOSSON -

CUSTOMER -
Paganella 2001 S.p.A.
(Italy)

DATE - DATE
2006 - 2008

**TOTAL AMOUNT FOR
WORKS**
4.600.000 €



CENTRALE DI POMPAGGIO



CENTRALE DI POMPAGGIO



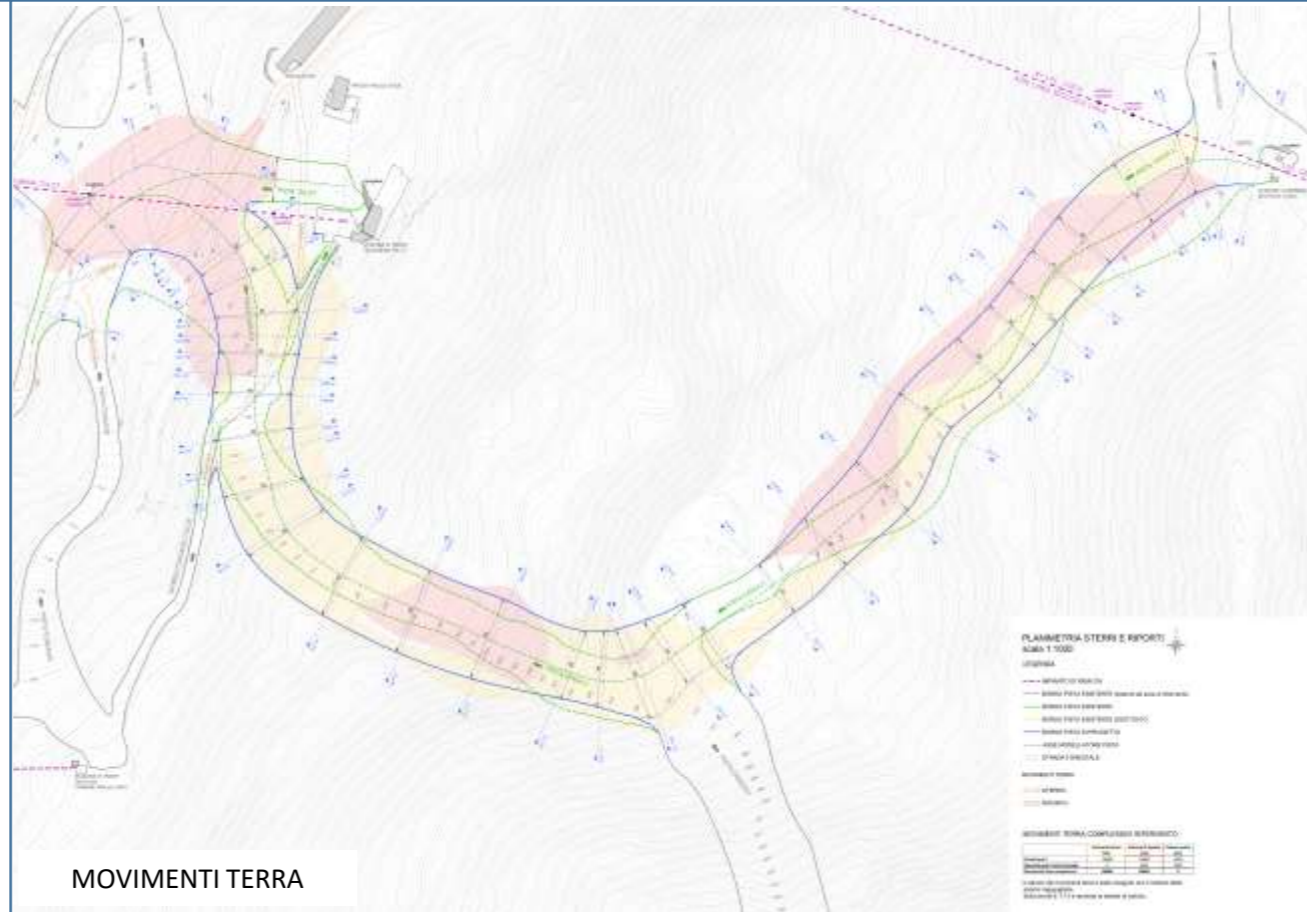
LOCALIZZAZIONE

WORKING PLAN AMPLIAMENTO E SISTEMAZIONE PISTA CIOCAZ - PINZOLO - ITALIA

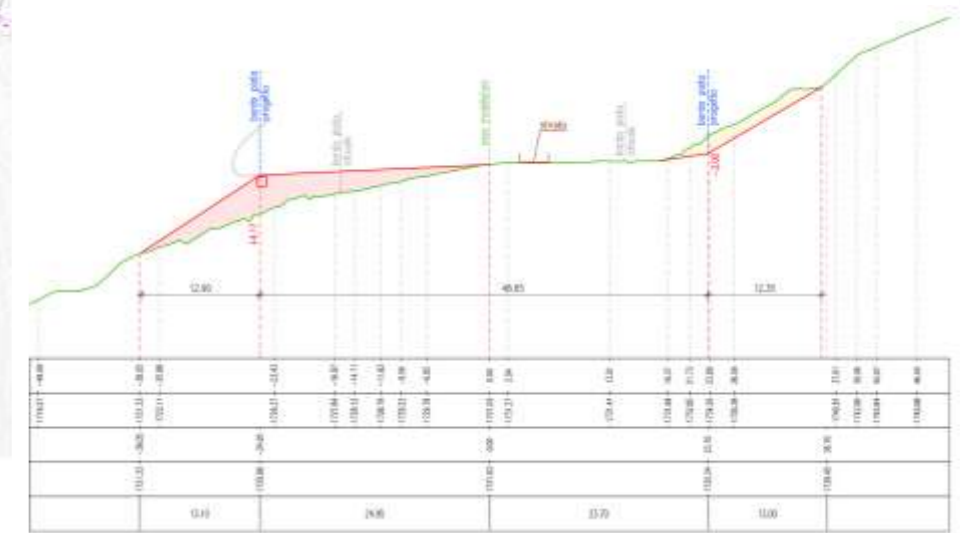
CUSTOMER -
Funivie Pinzolo S.p.A.
(Italy)

DATE
2017

**TOTAL AMOUNT FOR
WORKS**
1.500.000 €



MOVIMENTI TERRA



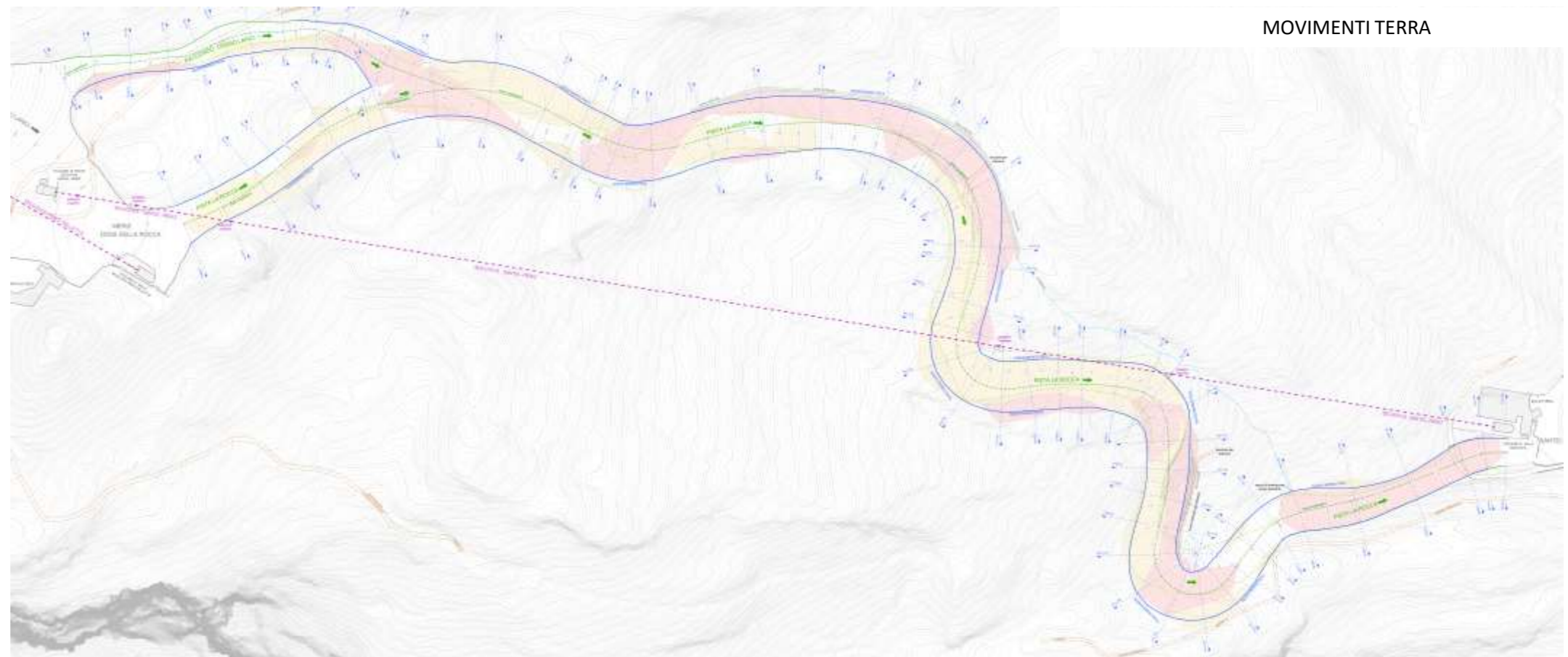
SEZIONE

WORKING PLAN AMPLIAMENTO E SISTEMAZIONE PISTA LA ROCCA CON SOSTITUZIONE DELL'IMPIANTO DI INNEVAMENTO - PAGANELLA - ITALIA

CUSTOMER -
Paganella 2001 S.p.A.
(Italy)

DATE
2017

**TOTAL AMOUNT FOR
WORKS**
2.000.000 €



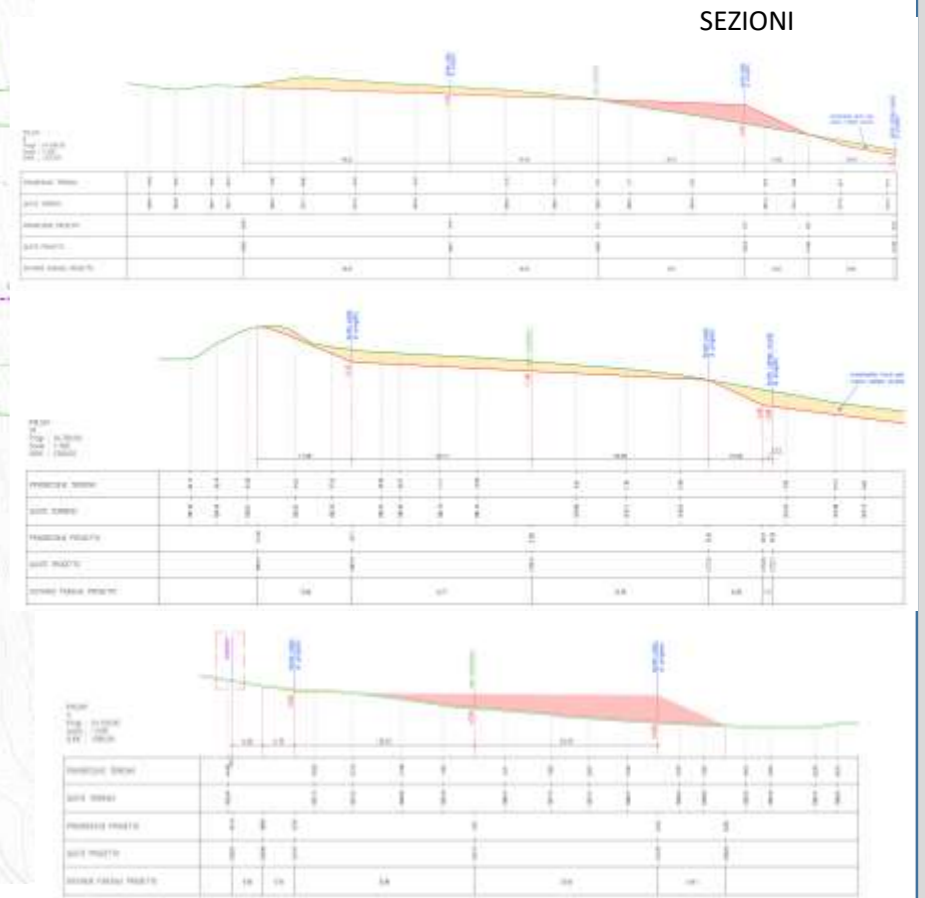
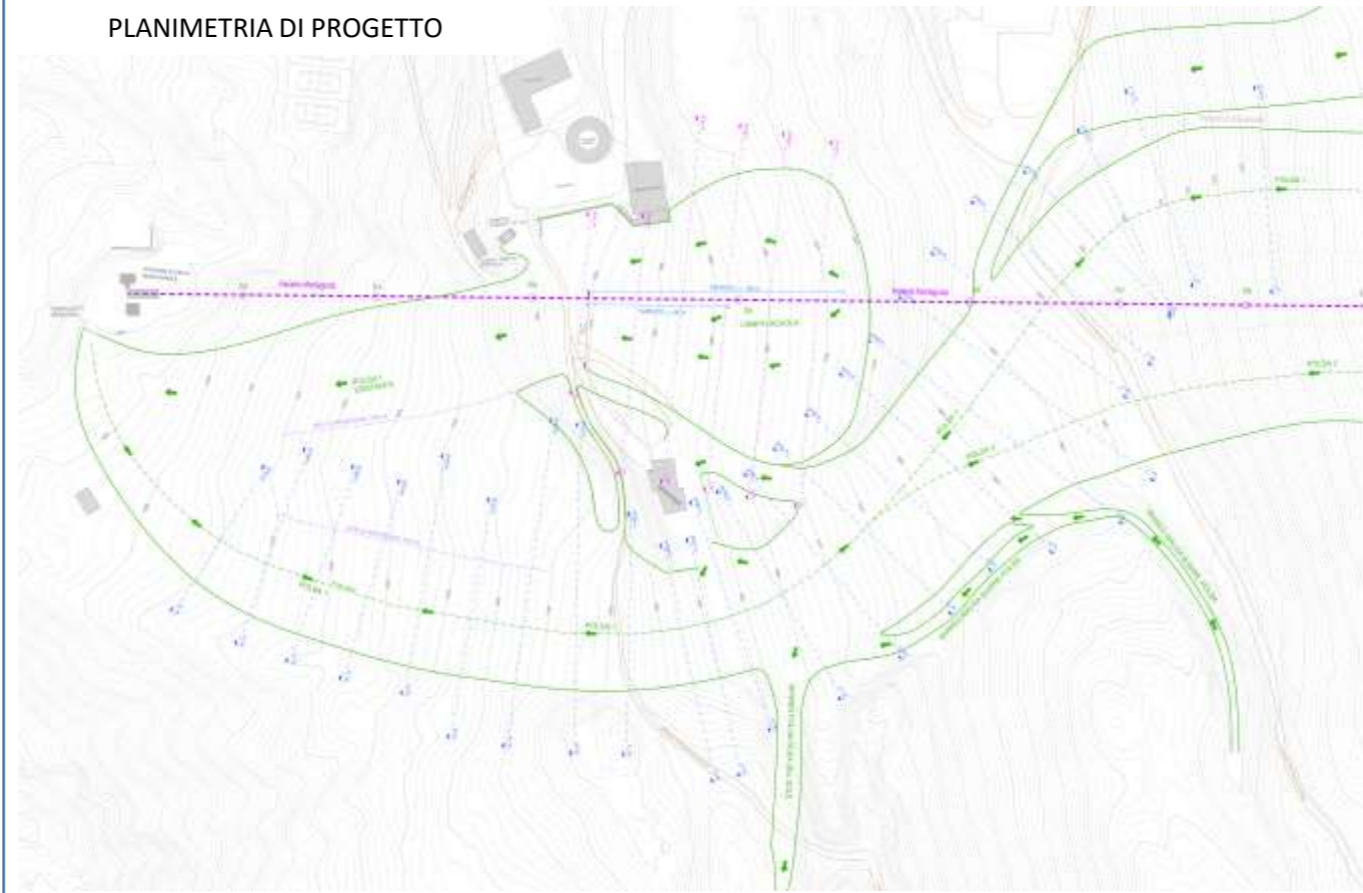
MOVIMENTI TERRA

SISTEMAZIONE PISTA POLSAIE E CAMPO SCUOLA - BRENTONICO - ITALIA

CUSTOMER
Brentonicoski S.c.a.r.l.

DATE
2018 - in corso

TOTAL AMOUNT FOR WORKS
1.000.000 €

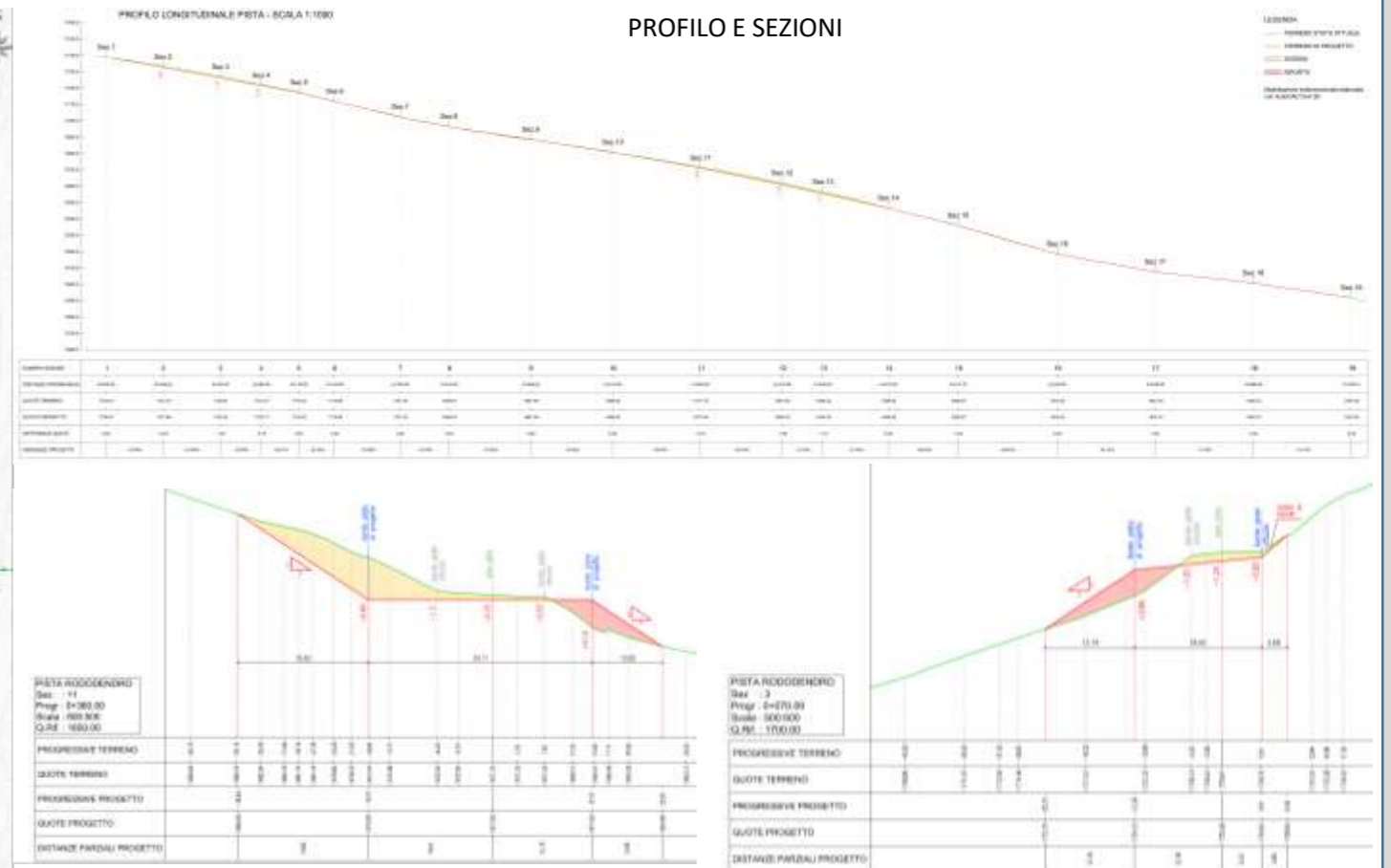
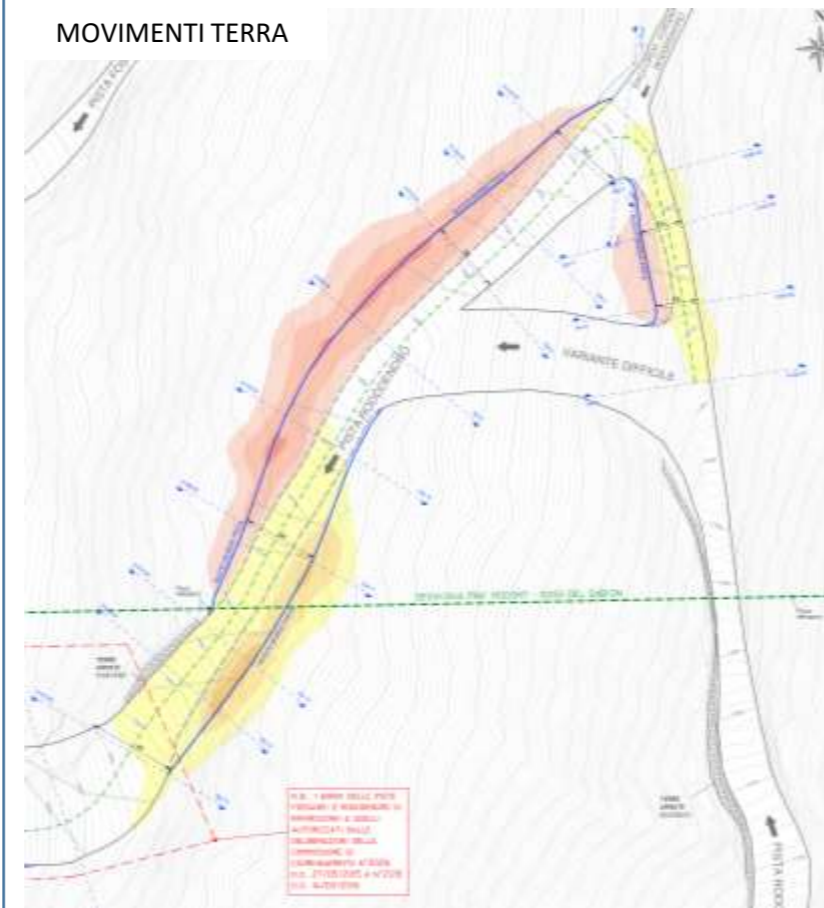


SISTEMAZIONE E ALLARGAMENTO PISTA RODODENDRO - PINZOLO - ITALIA

CUSTOMER
Funivie Pinzolo S.p.A.
(Italy)

DATE
2016

TOTAL AMOUNT FOR WORKS
1.500.000 €



SISTEMAZIONE PISTE MASTELLINA, PANORAMICA E ROCCE- SKI AREA FOLGARIDA MARILLEVA- ITALY

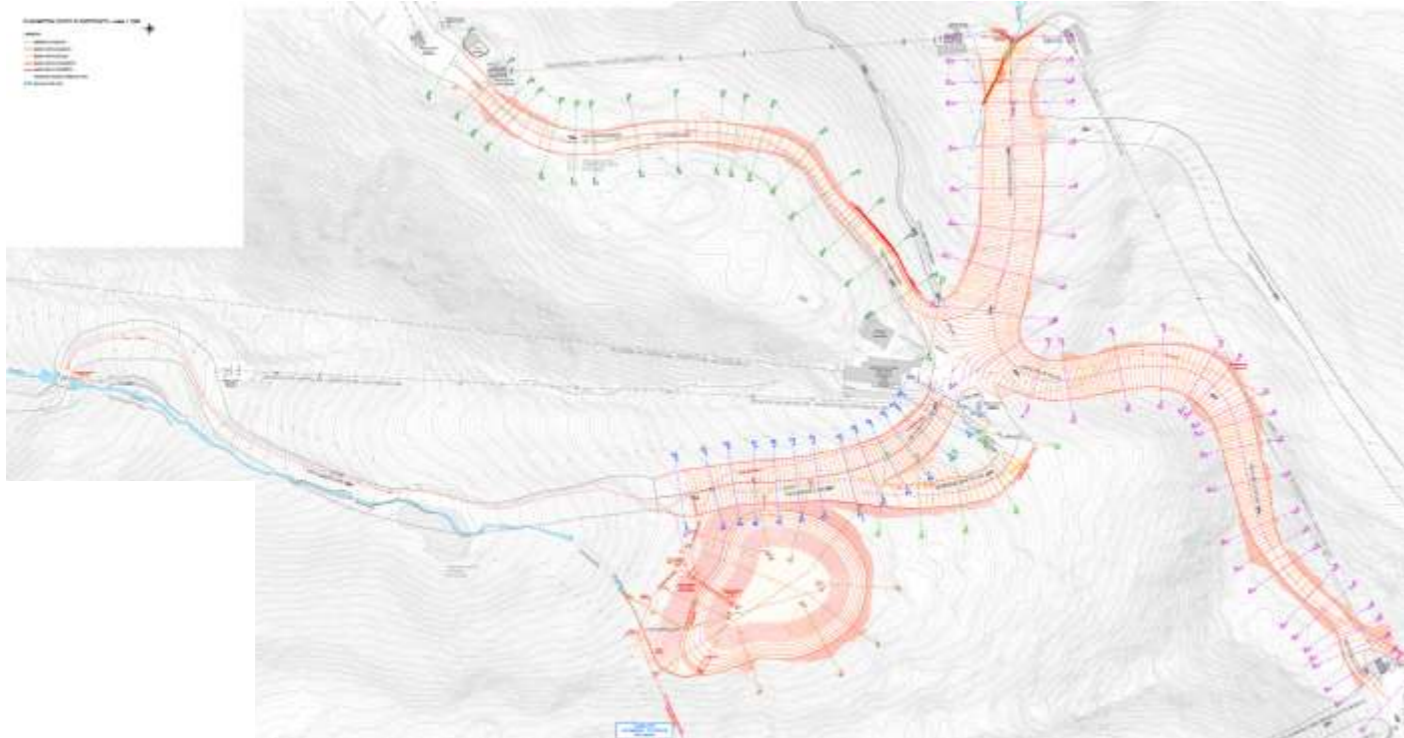
CUSTOMER: Funivie Folgarida S.p.a
(Italy)

TOTAL AMOUNT FOR WORKS: 10Meuro

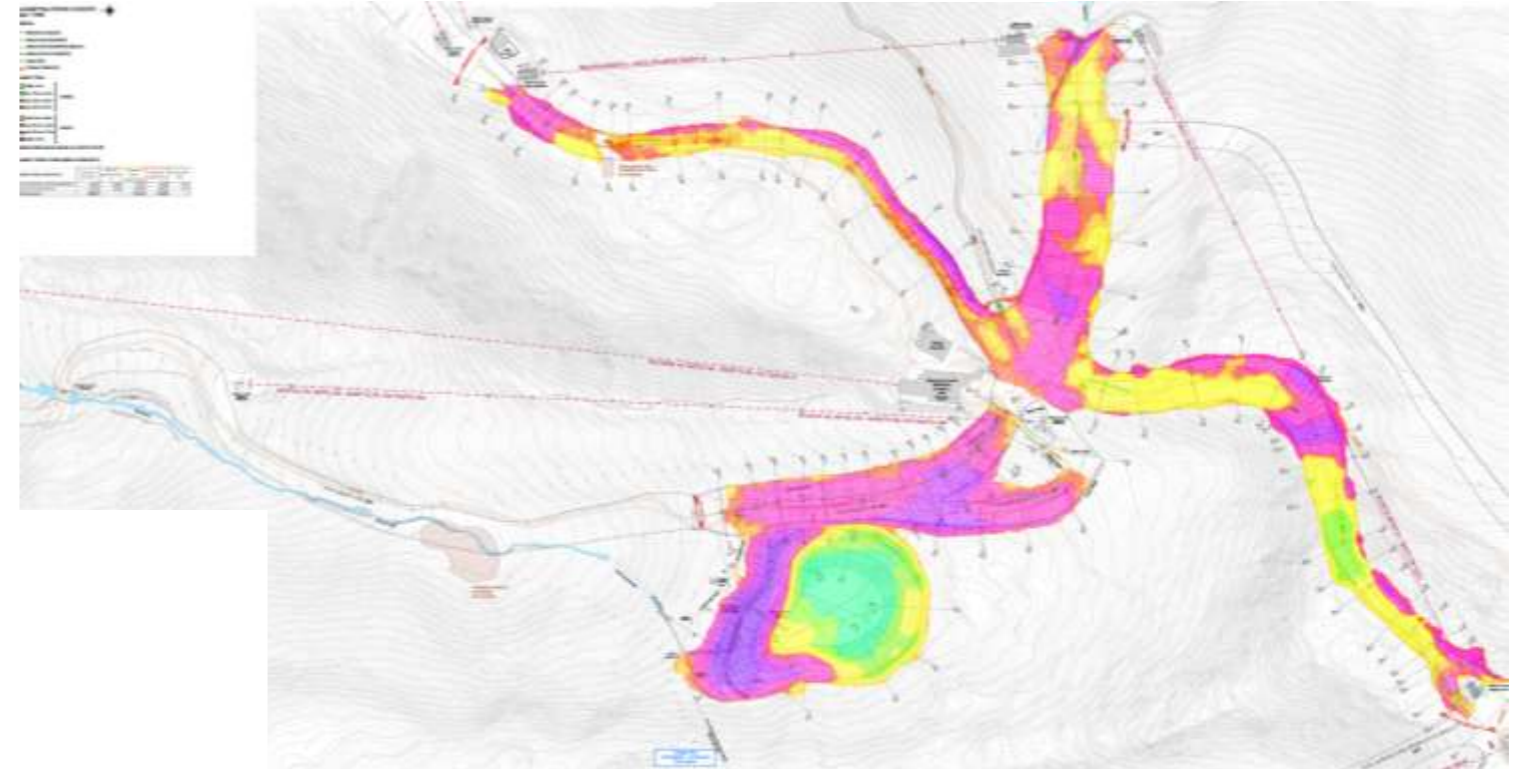
PLANIMETRIA DI PROGETTO



PLANIMETRIA STATO DI RAFFRONTO



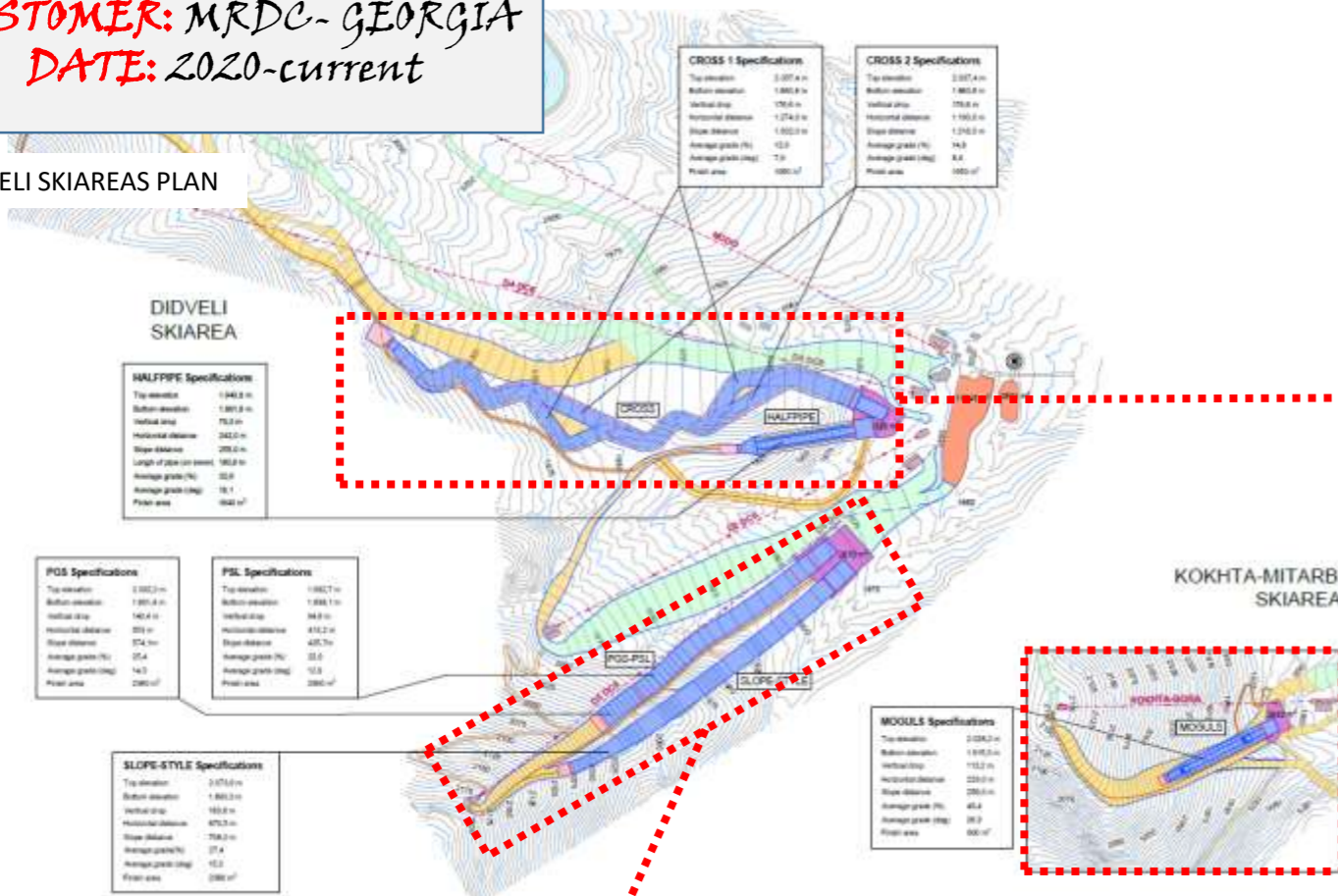
PLANIMETRIA MOVIMENTI TERRA



DIDVELI AND KOKHTA-MITARBI SKI RESORT AND SLOPE DESIGN WSC BAKURIANI 2023- GEORGIA

CUSTOMER: MRDC- GEORGIA
DATE: 2020-current

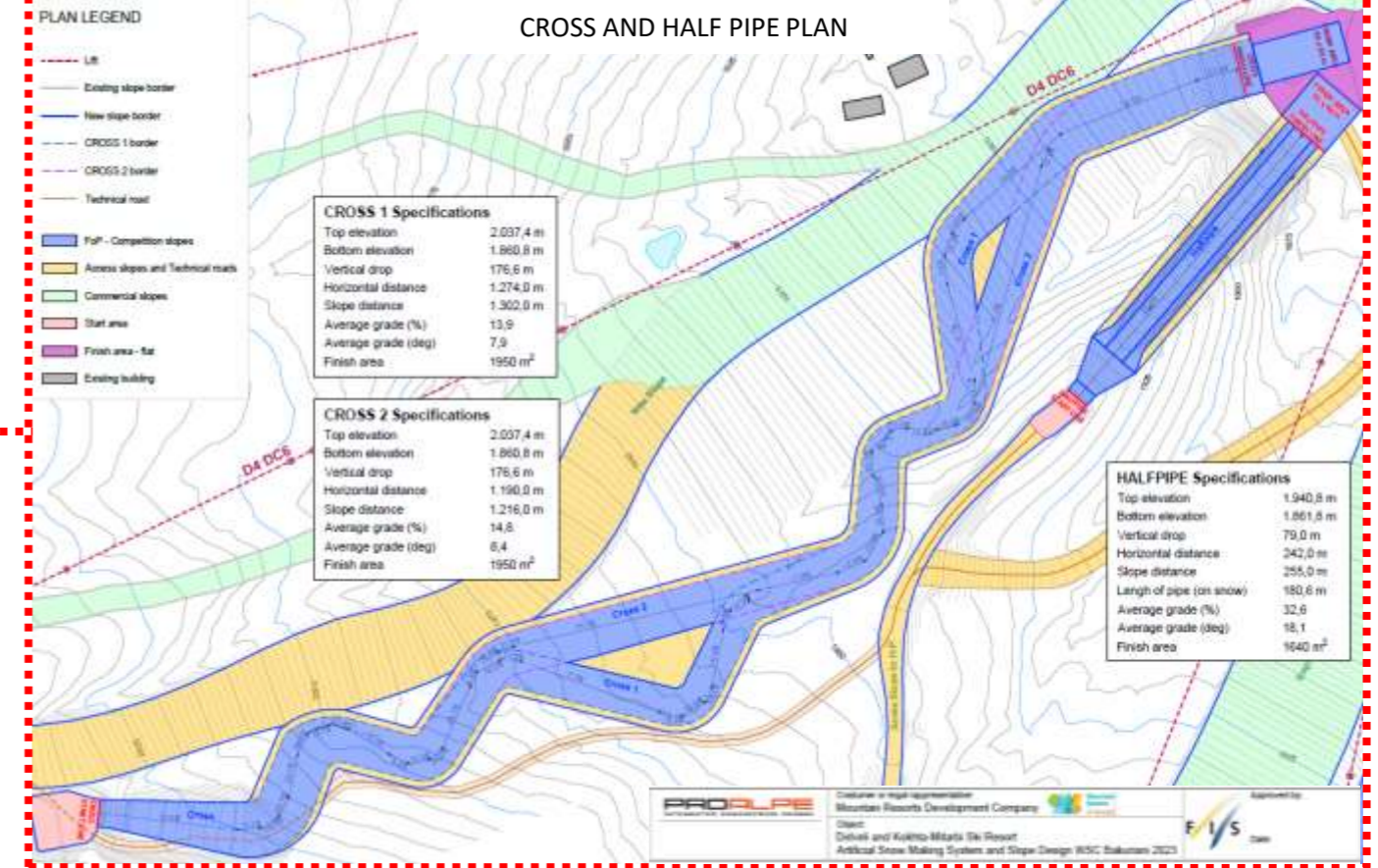
DIDVELI SKIAREAS PLAN



PLAN LEGEND

- LRT
- Existing slope border
- New slope border
- CROSS 1 border
- CROSS 2 border
- Technical road
- FIP - Competition slopes
- Access slopes and Technical roads
- Commercial slopes
- Start area
- Finish area - fat
- Existing building

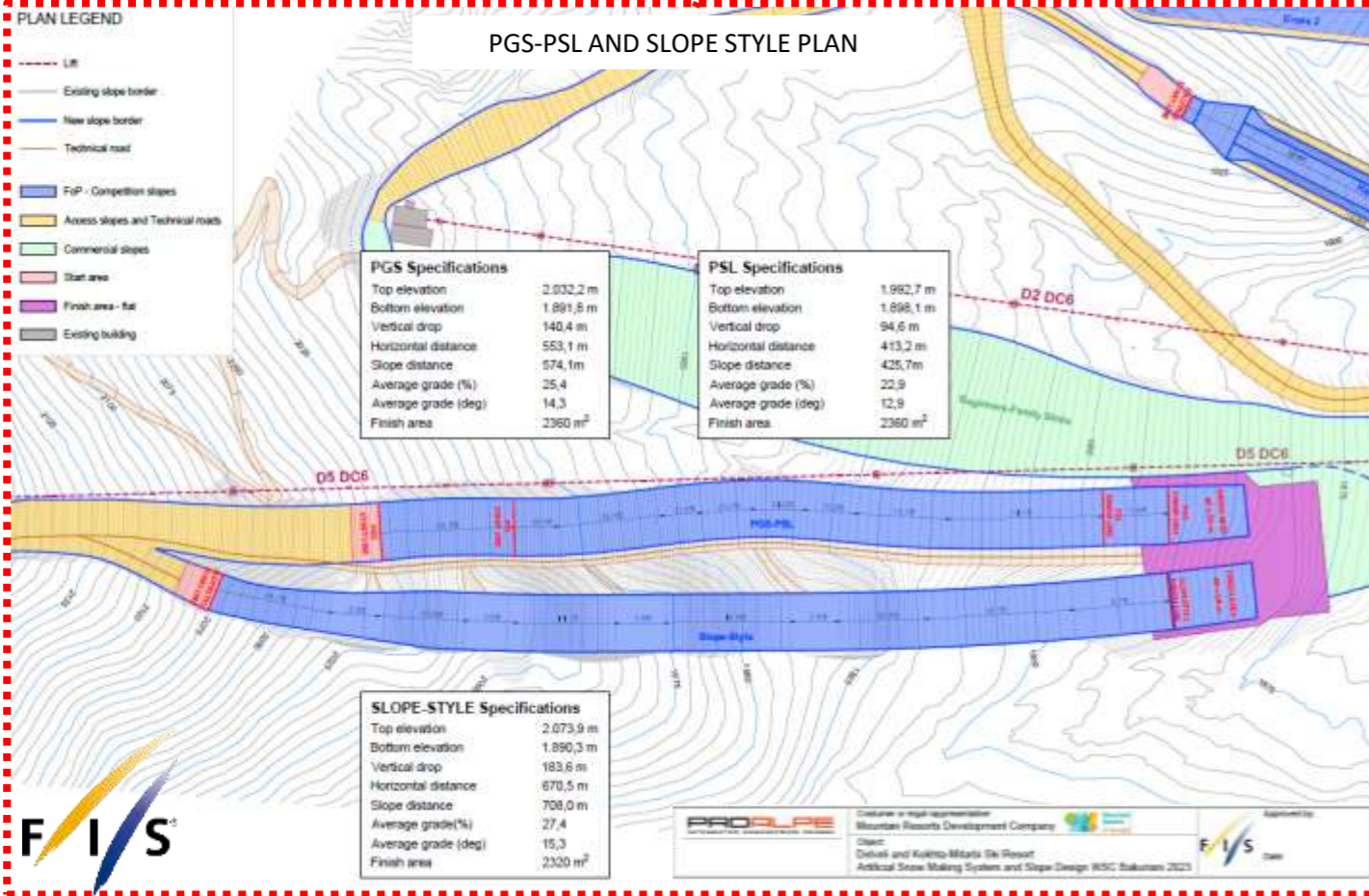
CROSS AND HALF PIPE PLAN



PLAN LEGEND

- LRT
- Existing slope border
- New slope border
- Technical road
- FIP - Competition slopes
- Access slopes and Technical roads
- Commercial slopes
- Start area
- Finish area - fat
- Existing building

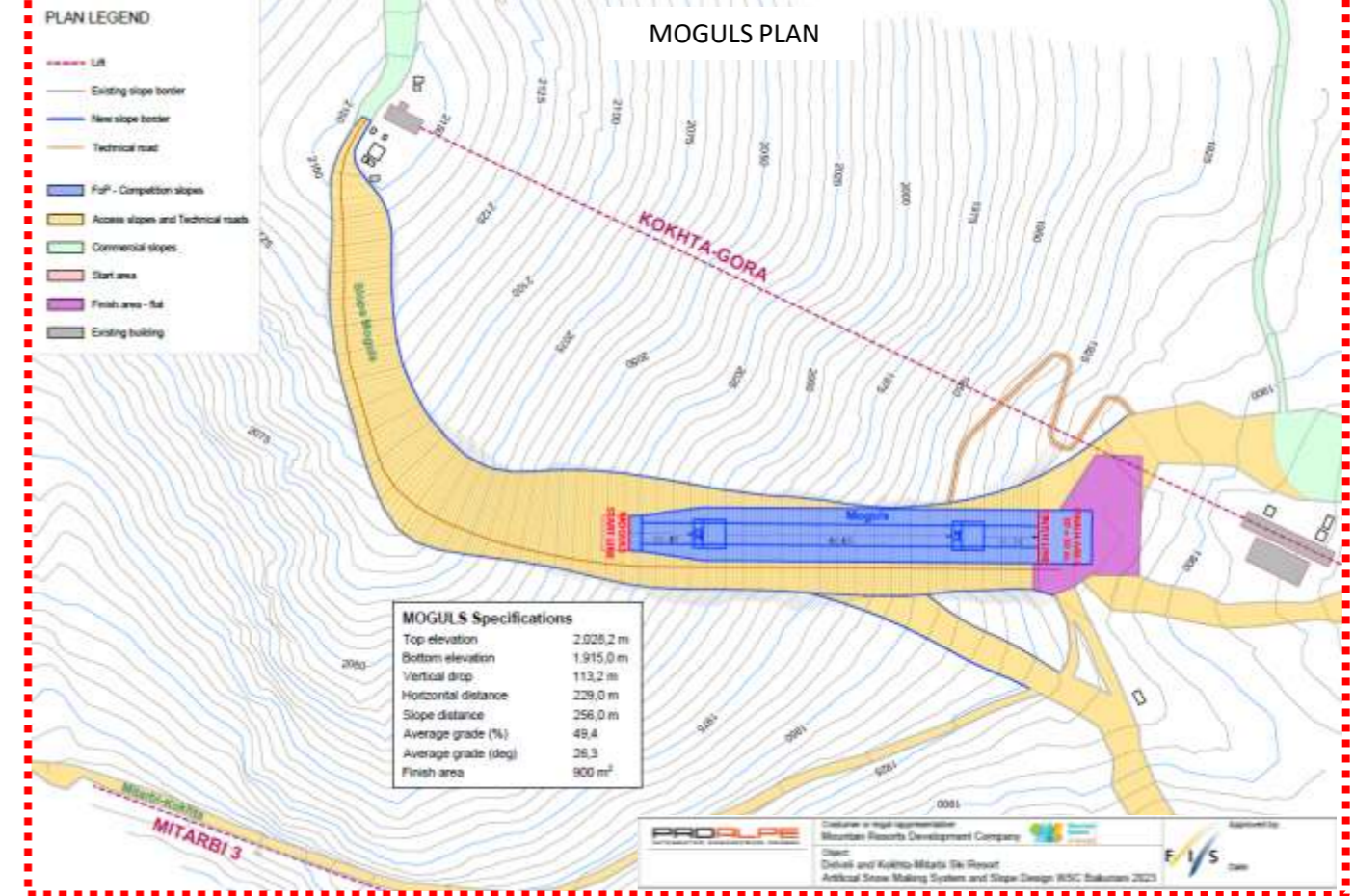
PGS-PSL AND SLOPE STYLE PLAN



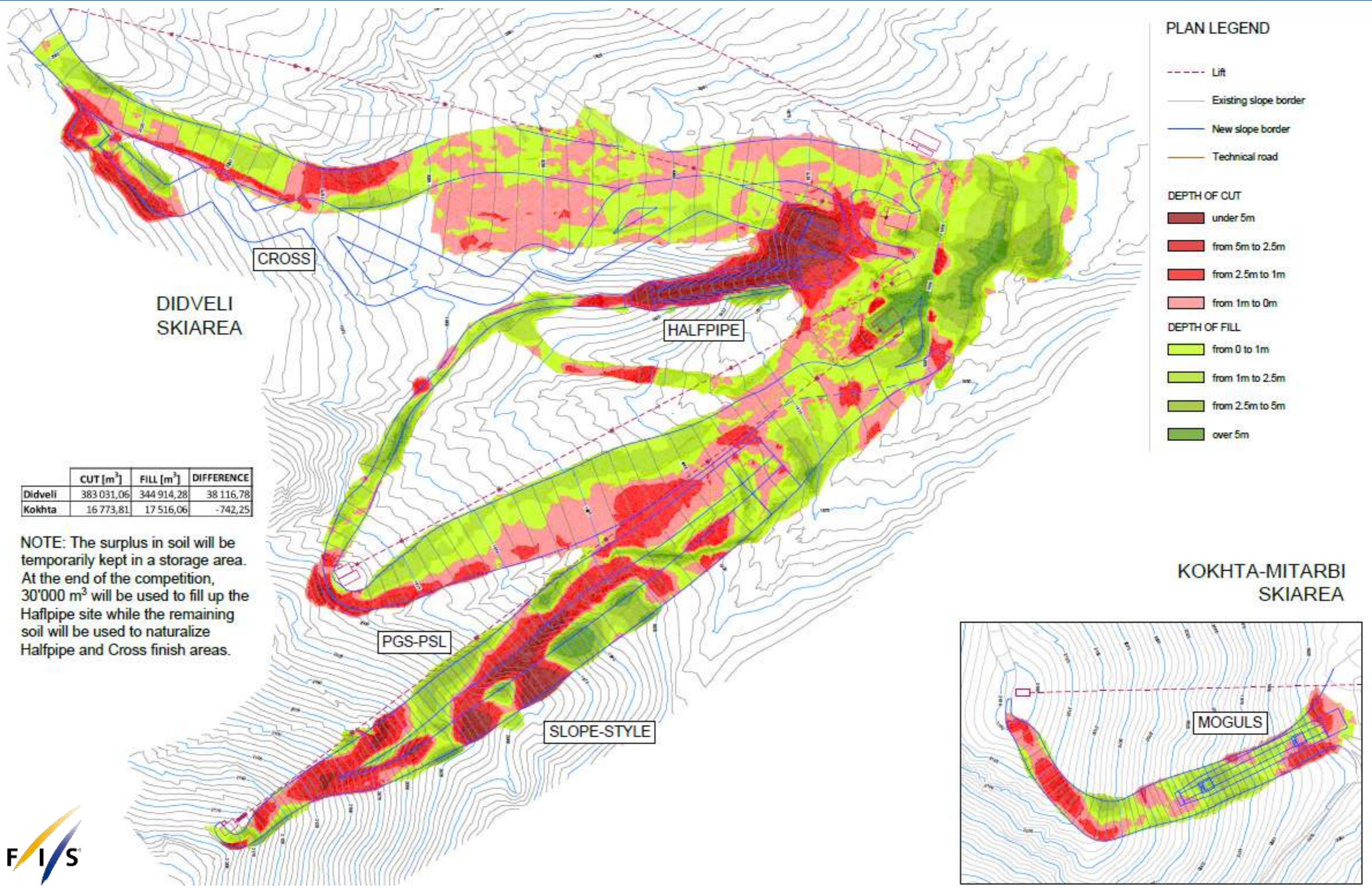
PLAN LEGEND

- LRT
- Existing slope border
- New slope border
- Technical road
- FIP - Competition slopes
- Access slopes and Technical roads
- Commercial slopes
- Start area
- Finish area - fat
- Existing building

MOGULS PLAN



DIDVELI AND KOKHTA-MITARBI SKI RESORT AND SLOPE DESIGN WSC BAKURIANI 2023- GEORGIA



PLAN LEGEND

- Lift
 - Existing slope border
 - New slope border
 - Technical road
- DEPTH OF CUT**
- under 5m
 - from 5m to 2.5m
 - from 2.5m to 1m
 - from 1m to 0m
- DEPTH OF FILL**
- from 0 to 1m
 - from 1m to 2.5m
 - from 2.5m to 5m
 - over 5m

	CUT [m ³]	FILL [m ³]	DIFFERENCE
Didveli	383 031,06	344 914,28	38 116,78
Kokhta	16 773,81	17 516,06	-742,25

NOTE: The surplus in soil will be temporarily kept in a storage area. At the end of the competition, 30'000 m³ will be used to fill up the Halfpipe site while the remaining soil will be used to naturalize Halfpipe and Cross finish areas.



DIDVELI AND KOKTHA-MITARBI SKI RESORT AND SLOPE DESIGN WSC BAKURIANI 2023- GEORGIA

PLAN LEGEND

- Lift
- Existing slope border
- New slope border
- Road
- Creek

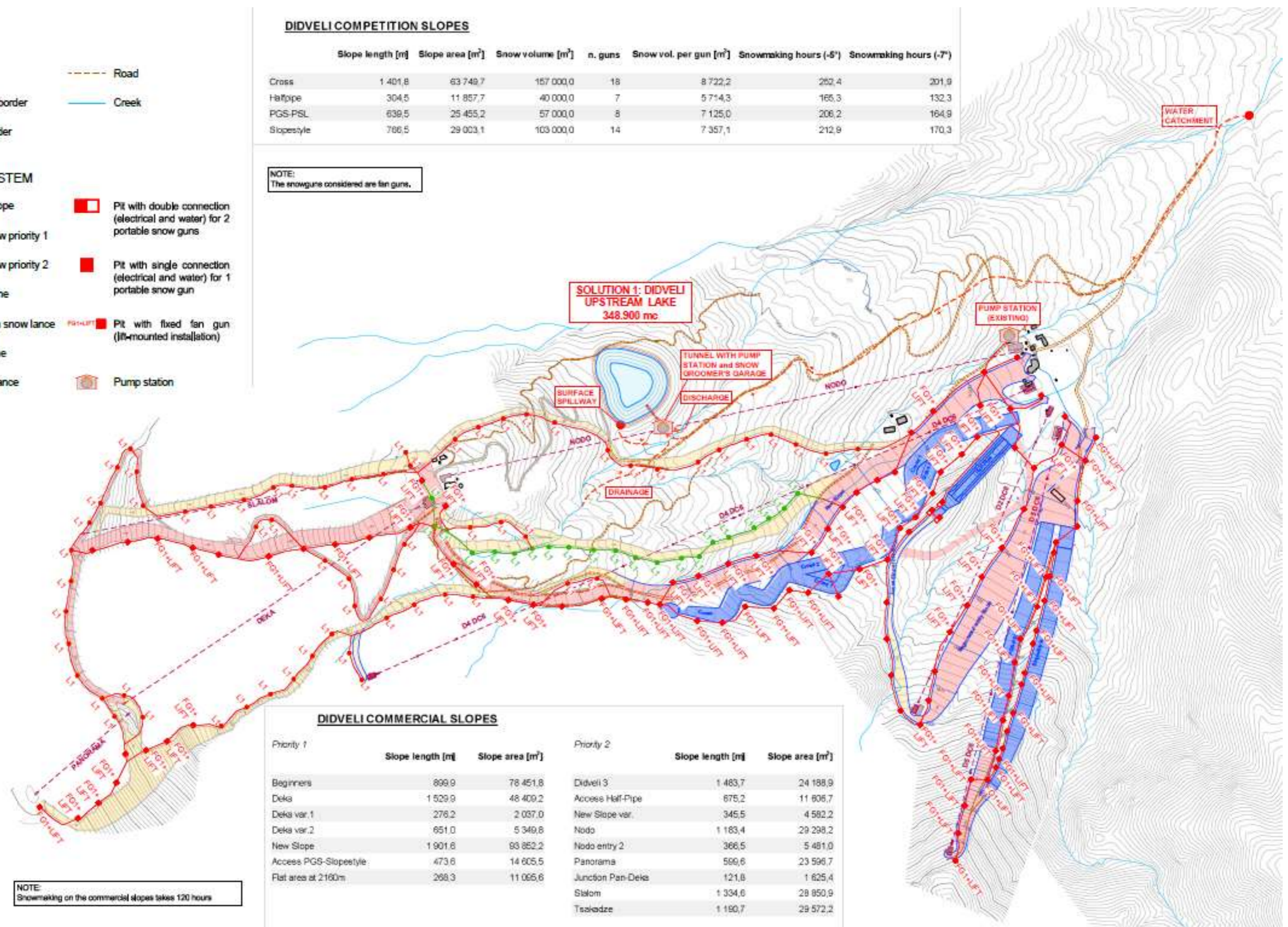
SNOWMAKING SYSTEM

- Competition slope
- Slope with snow priority 1
- Slope with snow priority 2
- Current snowline
- Current pit with snow lance
- Project snowline
- Pit with snow lance
- Pit with double connection (electrical and water) for 2 portable snow guns
- Pit with single connection (electrical and water) for 1 portable snow gun
- Pit with fixed fan gun (lift-mounted installation)
- Pump station

DIDVELI COMPETITION SLOPES

	Slope length [m]	Slope area [m ²]	Snow volume [m ³]	n. guns	Snow vol. per gun [m ³]	Snowmaking hours (-5°)	Snowmaking hours (-7°)
Cross	1 401,8	63 748,7	157 000,0	18	8 722,2	262,4	201,9
Halfpipe	304,5	11 857,7	40 000,0	7	5 714,3	165,3	132,3
PGS-PSL	639,5	25 455,2	57 000,0	8	7 125,0	206,2	164,9
Slopestyle	786,5	29 003,1	103 000,0	14	7 357,1	212,9	170,3

NOTE:
The snowguns considered are fan guns.



DIDVELI COMMERCIAL SLOPES

Priority 1	Slope length [m]	Slope area [m ²]	Priority 2	Slope length [m]	Slope area [m ²]
Beginners	899,9	78 451,8	Didveli 3	1 483,7	24 188,9
Deka	1 529,9	48 409,2	Access Half-Pipe	675,2	11 606,7
Deka var.1	276,2	2 037,0	New Slope var.	345,5	4 582,2
Deka var.2	651,0	5 349,8	Noda	1 183,4	29 298,2
New Slope	1 901,8	93 852,2	Noda entry 2	366,5	5 481,0
Access PGS-Slopestyle	473,6	14 605,5	Panorama	599,6	23 596,7
Flat area at 2160m	268,3	11 065,6	Junction Pan-Deka	121,8	1 625,4
			Stelom	1 334,6	28 850,9
			Tsakadze	1 190,7	29 572,2

NOTE:
Snowmaking on the commercial slopes takes 120 hours



DIDVELI AND KOKHTA-MITARBI SKI RESORT AND SLOPE DESIGN WSC BAKURIANI 2023- GEORGIA

PLAN LEGEND

- Lift
- Road
- Existing slope border
- Creek
- New slope border

SNOWMAKING SYSTEM

- Competition slope
- Slope with snow priority 1
- Slope with snow priority 2
- Current snowline
- Current pit with snow lance
- Project snowline
- Pit with snow lance
- Pit with double connection (electrical and water) for 2 portable snow guns
- Pit with single connection (electrical) and water for 1 portable snow gun
- Pit with fixed fan gun (lift-mounted installation)
- Pump station

KOKHTA COMPETITION SLOPES

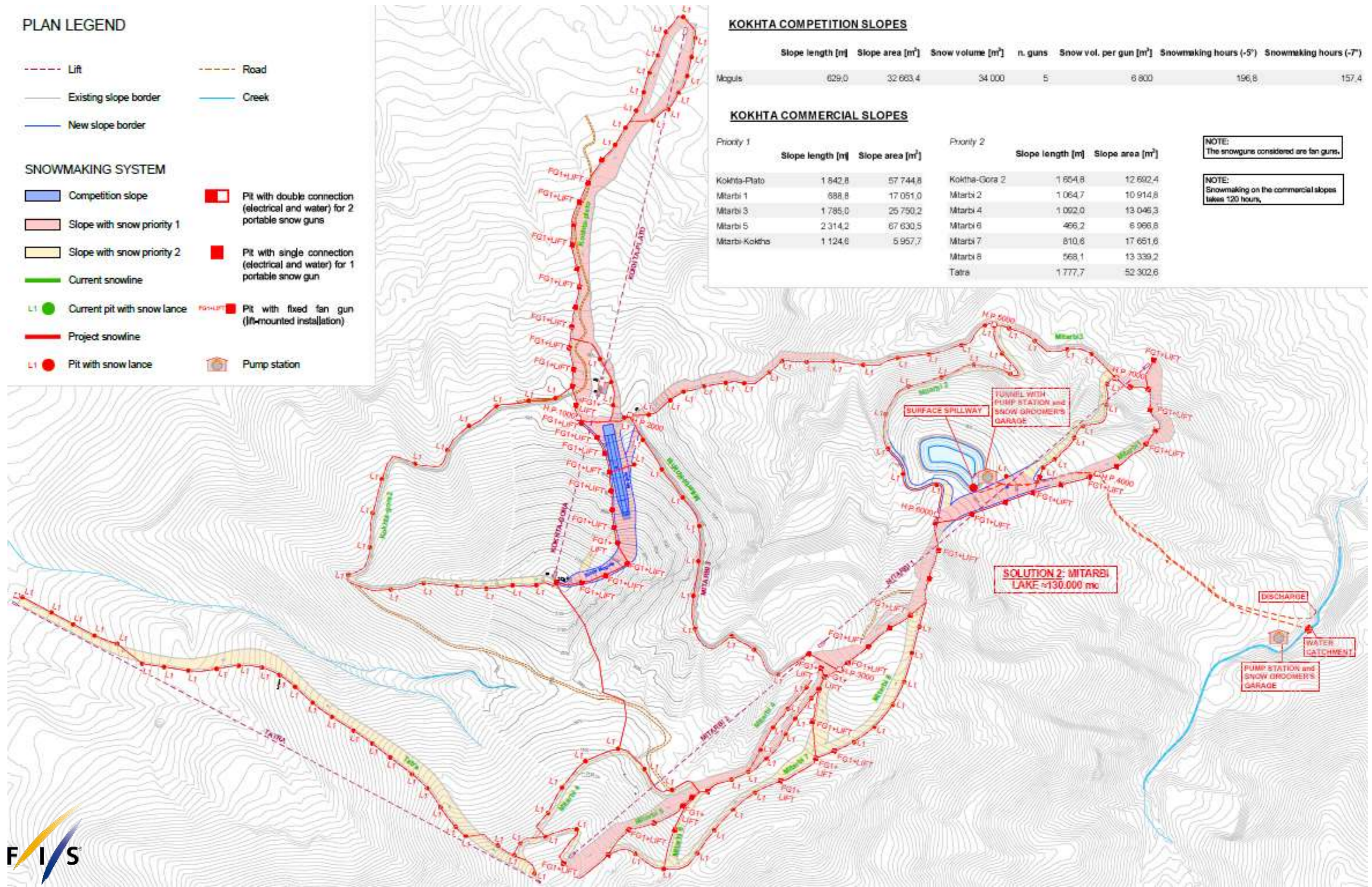
	Slope length [m]	Slope area [m ²]	Snow volume [m ³]	n. guns	Snow vol. per gun [m ³]	Snowmaking hours (-5°)	Snowmaking hours (-7°)
Moguls	629,0	32 663,4	34 000	5	6 800	196,8	157,4

KOKHTA COMMERCIAL SLOPES

Priority 1	Slope length [m]	Slope area [m ²]	Priority 2	Slope length [m]	Slope area [m ²]
Kokhta-Plato	1 842,8	57 744,8	Kokhta-Gora 2	1 654,8	12 602,4
Mtarbi 1	688,8	17 051,0	Mtarbi 2	1 064,7	10 914,8
Mtarbi 3	1 785,0	25 750,2	Mtarbi 4	1 002,0	13 046,3
Mtarbi 5	2 314,2	67 630,5	Mtarbi 6	466,2	6 966,8
Mtarbi-Kokhta	1 124,6	6 957,7	Mtarbi 7	810,8	17 651,6
			Mtarbi 8	568,1	13 339,2
			Tetra	1 777,7	52 302,6

NOTE:
The snowguns considered are fan guns.

NOTE:
Snowmaking on the commercial slopes takes 120 hours.



REALIZZAZIONE NUOVA TELECABINA AMMORSAMENTO AUTOMATICO 10 posti CASTELIR - LE FASSANE - LA MOREA
NEW GONDOLA (GD10) CASTELIR - LE FASSANE - LA MOREA

CUSTOMER:

SIT Bellamonte S.p.A.

DATE

2016

TOTAL AMOUNT FOR WORKS

9.480.000 €



STAZIONE INTERMEDIA



CANTIERE



TELECABINE



STAZIONE DI RISALITA



STAZIONE INTERMEDIA



STAZIONE INTERMEDIA



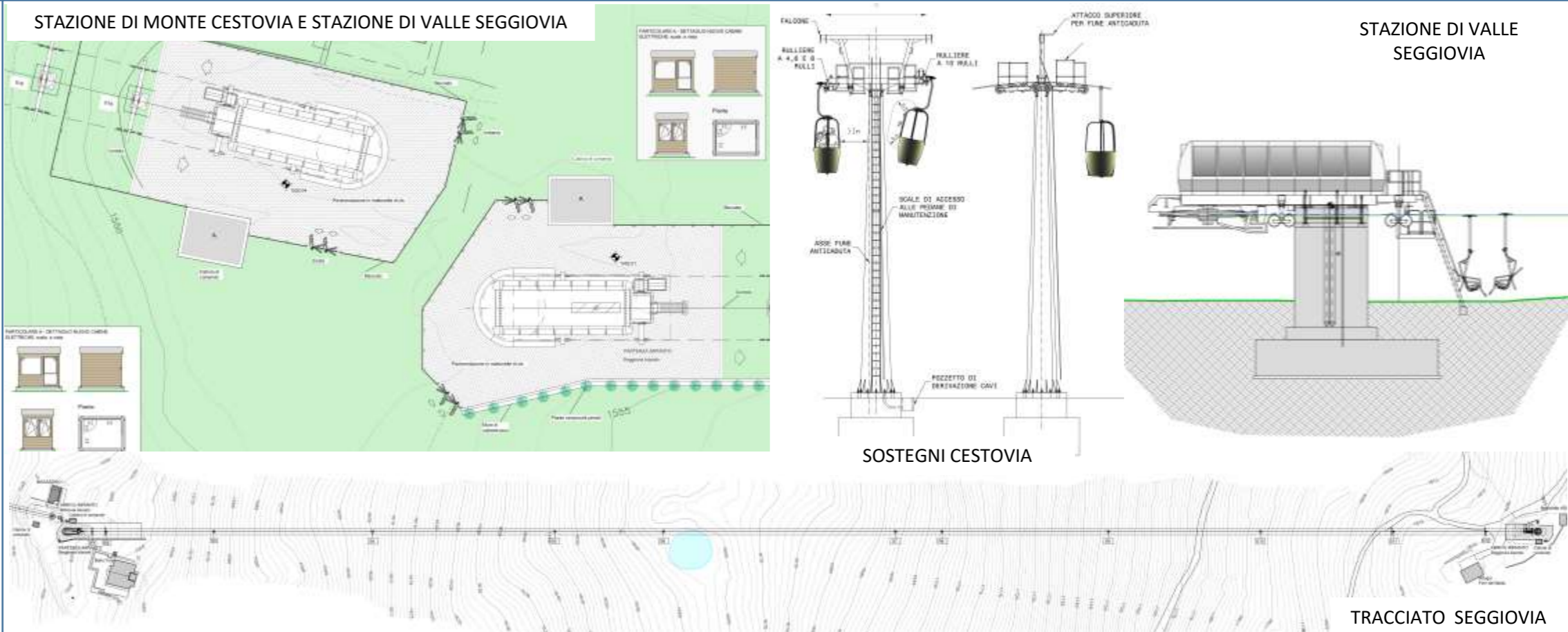
STAZIONE DI RISALITA



STAZIONE DI RISALITA

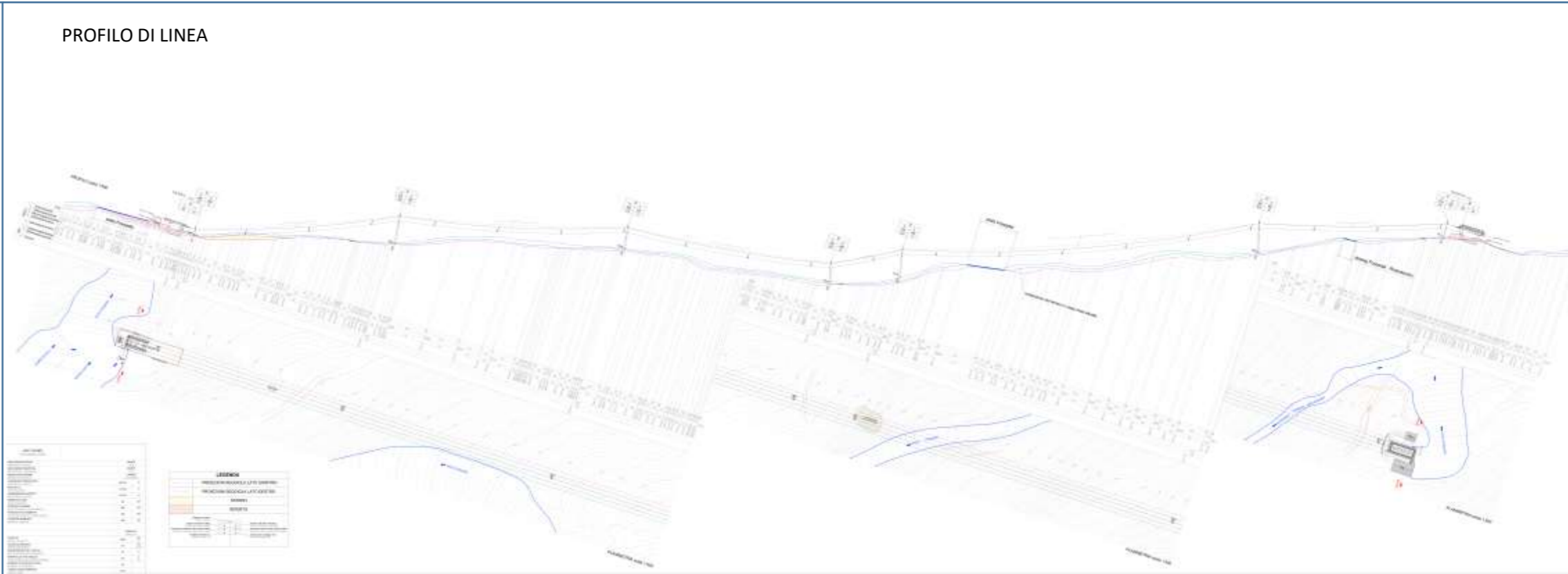
WORKING PLAN
REALIZZAZIONE DI DUE NUOVI IMPIANTI DI RISALITA (SEGGIOVIABIPOSTO E CESTOVIA BIPOSTO) - PRADA - ITALIA

CUSTOMER
 ATF Malcesine - Monte Baldo/ Prada Costabella S.r.l. (Italy)
DATE
 2017-2018
TOTAL AMOUNT FOR WORKS
 estimado 2.500.000 €



WORKING PLAN
REALIZZAZIONE DELLA NUOVA SEGGIOVIA ESAPOSTO 'FOSSA DEI MALGACIOCA' - PINZOLO - ITALIA

CUSTOMER -
 Funivie Pinzolo S.p.A. (Italy)
DATE - DATE
 2018
TOTAL AMOUNT FOR WORKS
 4.000.000 €



REALIZZAZIONE TELECABINA A.A. CON STAZIONE INTERMEDIA "ANDALO - DOSS PELA" CON ANNESSO DEPOSITO BATTIPISTA
IMPLEMENTATION OF CABLE CAR AND INTERMEDIATE STATION "ANDALO - DOSS PELA" AND RELATED STORAGE AREA FOR GROOMERS

CUSTOMER

Paganella 2001 S.p.A.

DATE

2005

TOTAL AMOUNT FOR WORKS

6.700.000 €



TELECABINE-CABLE CARS AT SKI



TELECABINE-CABLE CARS AT SKI

SOSTITUZIONE DELLA SEGGIOVIA MONOPOSTO ATTACCO FISSO "ROSA DEL SOLE" CON UNA SEGGIOVIA QUADRIPOSTO ATTACCO FISSO ED
ALLARGAMENTO DELLA PISTA "ROSA DEL SOLE" - POLSA - ITALIA

CUSTOMER

Baldo Garda S.p.a

DATE

2008-2009

TOTAL AMOUNT FOR WORKS

3.000.000 €





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