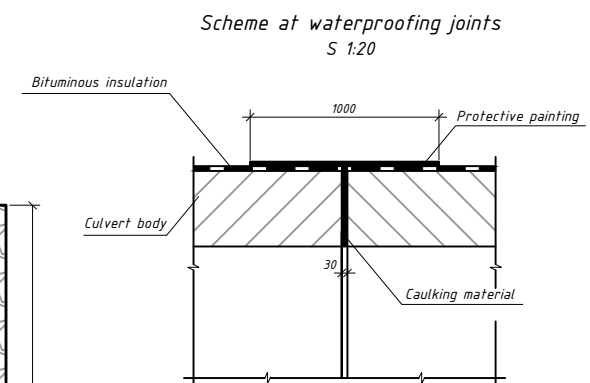
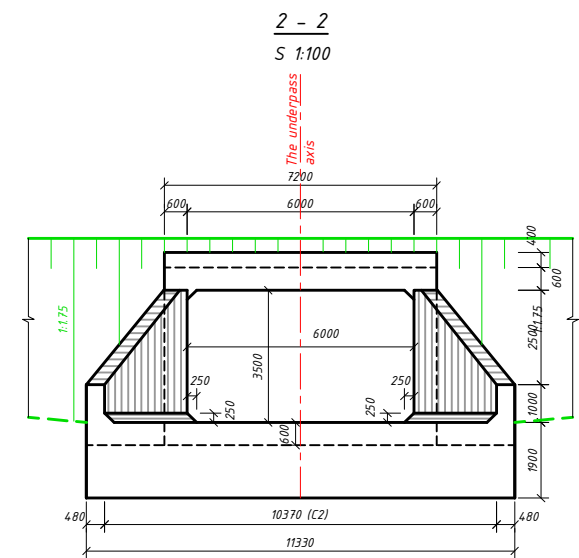




③ Gray and dark gray, fine, water-saturated sand, with thin bands of gray firm clays - 27^o
- $\rho=1.65 \text{ t/m}^3$, $e=1.02$, $\varphi=26^\circ$, $C=2 \text{ KPa}$, $E_0=11.0 \text{ MPa}$, $E_{EL}=80 \text{ MPa}$, $R_0=0.1 \text{ MPa}$

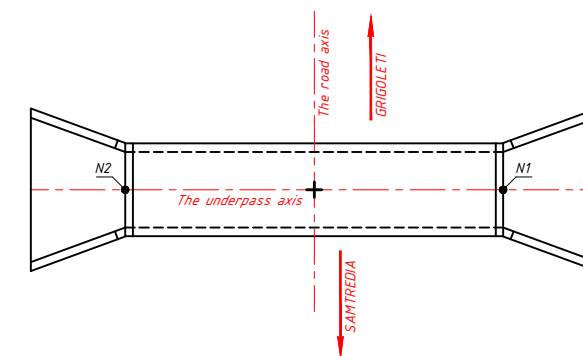


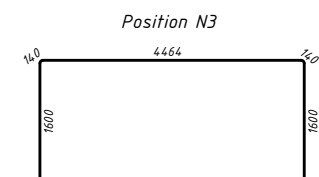
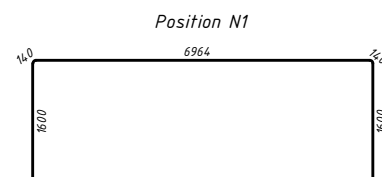
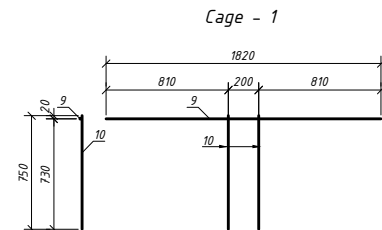
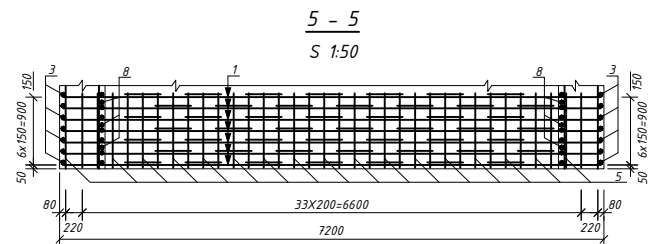
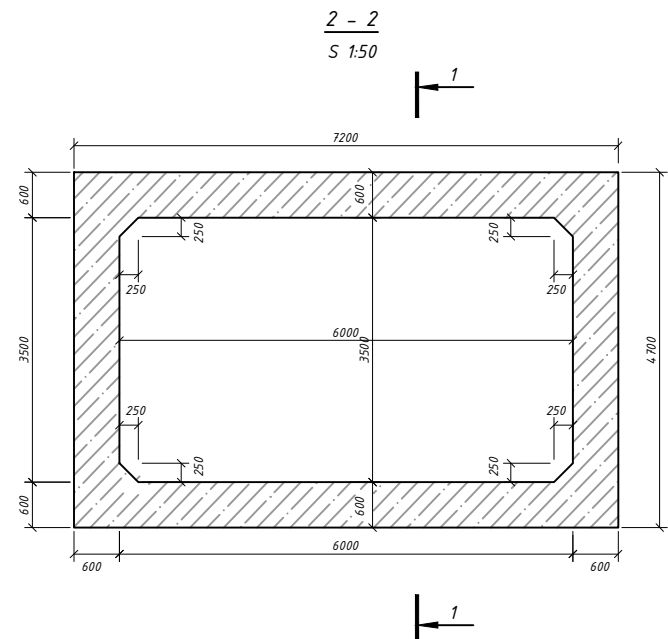
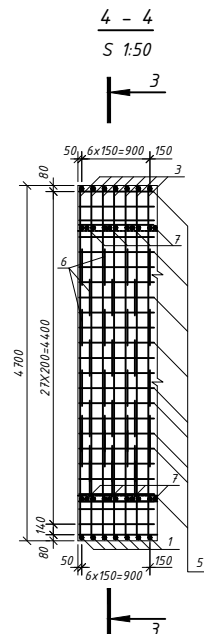
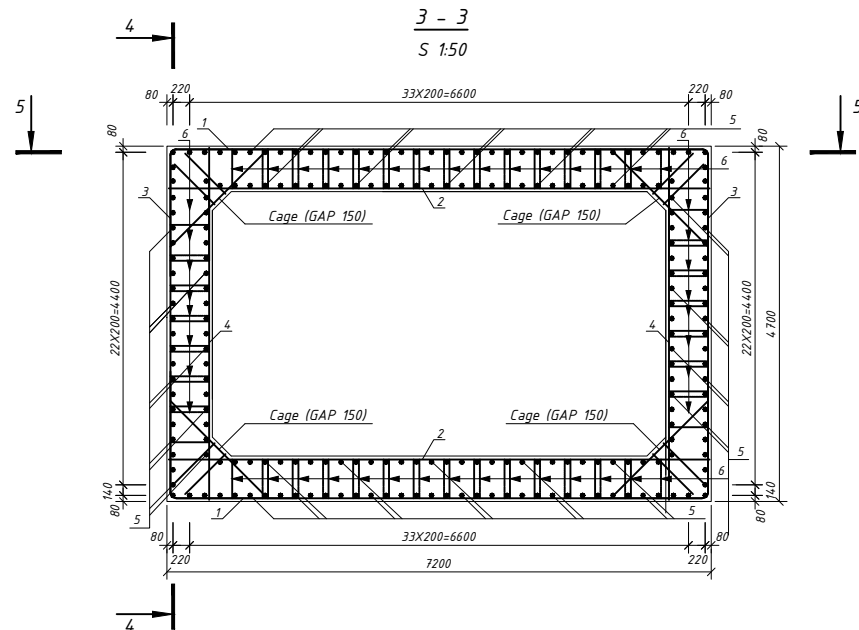
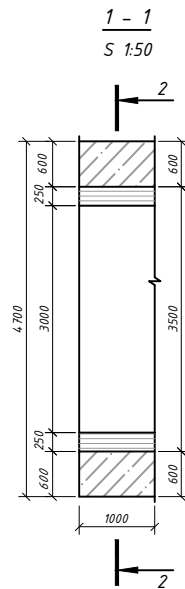
Table of coordinates

N1	N2
1	2
X=4667775.642 Y=276964.702	X=4667744.285 Y=276982.387

Table of design data on pipes

№ n/n	Sites, PK+ Миссе положения, ПК +	The angle of intersection with the road deg., °	Input headroom, left / right	Opening pipe, m	Slant pipe, %	Length, m		Options trays/building, m						Signs, m						Remarks
						without inlet and outlet, m	with inlet and outlet, m	D1	D2	A	B	C1	C2	tray input headroom	tray output headroom	brow (right)	brow (left)	top input headroom	top output headroom	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	47+50	90°0'	right	6,00x3,50	3	36,060	48,060	11,330	11,330	4,00	4,00	10,370	10,370	18,39	18,27	23,29	23,29	22,89	22,77	Underpass

E-60-00-WD-01-H.1-HP.01-P1				Construction of the road Samtredia - Grigoleti km 0 +000 - km 11 +500			
   	Engineer	R.Harlander					
 Road Building	Proj.Manag	O.Valuikin	11.16	Highway. Section PK 40+00 - PK 50+00	Stage	Sheet	Sheet
	Checked by	H.Gorobinskaya	11.16		WD	1	3
	Exec. by	M.Lunyakin	11.16	Underpass. Opening 6,00x3,50m PK4+7-50	 "Road Building "Altcom" LLC		

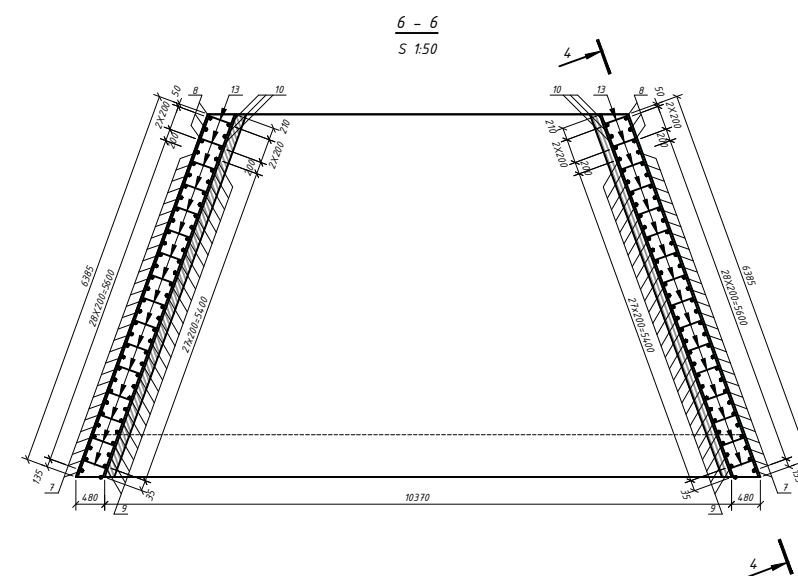
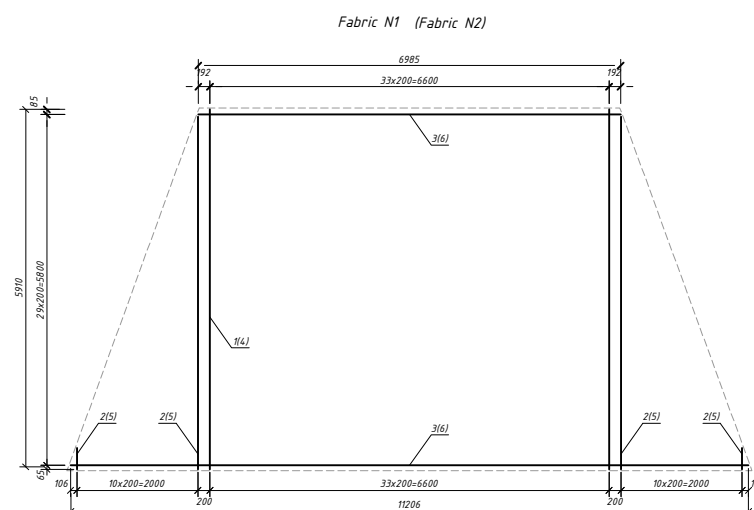
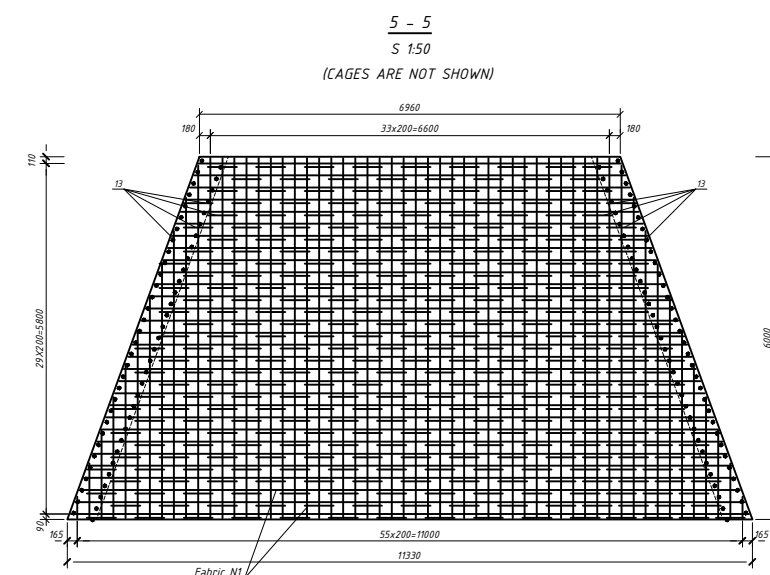
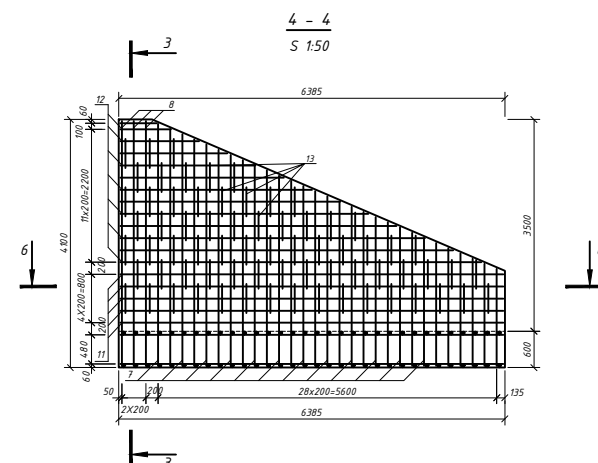
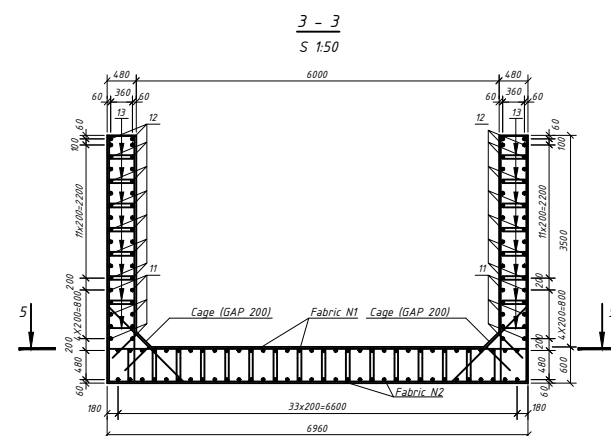
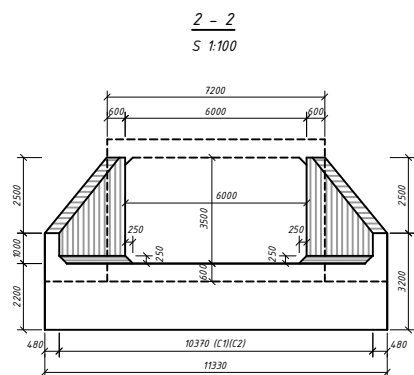


	Steel specification for 1 meter						Steel specification for 1 section (12 m)			Steel specification for 3 section (36 m)		
	Position	Sketch, mm	Diameter or section, mm	Length, mm	Quantity, unit	Total length, m	Length, mm	Quantity, unit	Total length, m	Length, mm	Quantity, unit	Total length, m
Separate bars	1	Is given on drawing	32A-III	10 444	14	146,216	10 444	168	1 754,592	10 444	504	5 263,776
	2	7150	32A-III	7 150	14	100,100	7 150	168	1 201,200	7 150	504	3 603,600
	3	Is given on drawing	32A-III	7 944	14	111,216	7 944	168	1 334,592	7 944	504	4 003,776
	4	4650	32A-III	4 650	14	65,100	4 650	168	781,200	4 650	504	2 343,600
	5	1000	16A-III	1 000	214	214,000	11 950	214	2 557,300	11 950	642	7 671,900
	6	584 444 484 544	10A-III	2 056	126	259,056	2 056	1 512	3 108,672	2 056	4 536	9 326,016
	7	7150	32A-III	7 150	8	57,200	7 150	96	686,400	7 150	288	2 059,200
	8	5650	32A-III	5 650	6	33,900	5 650	72	406,800	5 650	216	1 220,400
C (28 un)	9	1820	10A-III	1 820	28	50,960	1 820	336	611,520	1 820	1 008	1 834,560
	10	380	10A-III	750	56	42,000	750	672	504,000	750	2 016	1 512,000

Selection armature for 1 m			Selection armature for 1 section (12 m)		Selection armature for 3 section (36 m)	
Ø mm and steel grade	The total length, m	Weight, kg	The total length, m	Weight, kg	The total length, m	Weight, kg
10 A-III	352,016	217,194	4 224,192	2 606,326	12 672,576	7 818,979
16 A-III	214,000	338,120	2 557,300	4 040,534	7 671,900	12 121,602
32 A-III	513,732	3 241,649	6 164,784	38 899,787	18 494,352	116 699,361
Total:						
A-III		3 796,963		4 554,648		136 639,943
Binding wire 2%		75,94	-	910,93	-	2 732,80

Remark:
1. Armature adopted in accordance with GOST 5781-82
"Hot-rolled steel for reinforcement of ferroconcrete structures. Specifications"

E-60-00-WD-01-H.1-HP.01-P1				Construction of the road Samtredia - Grigoleti km 0 +000 - km 11 +500			
		Engineer	R.Harlander				
							
 ALTCOM Road Building LLC	Proj.Manag.	O.Valuikin	11.16			Stage	Sheet
	Checked by	H.Gorabinskaya	11.16			WD	2
	Exec. by	M.Lunyakin	11.16				3
				Highway. Section PK 40+00 - PK 50+00			
				Underpass. Opening 6,00x3,50m PK47+50		 "Road Building "Altcom" LLC	



	Steel specification for one head						Steel specification for two heads		
	Position	Sketch, mm	Diameter or section, mm	Length, mm	Quantity, unit	Total length, m	Length, mm	Quantity, unit	Total length, m
Fabric #1 (1 unit)	1		12A-III	5 950	34	202,300	5 950	68	404,600
	2		12A-III	$L_{2 \text{ head}} \times 3 \text{ 093}$	22	68,046	$L_{2 \text{ head}} \times 3 \text{ 093}$	44	136,092
	3		16A-III	$L_{2 \text{ head}} \times 9 \text{ 098}$	30	272,940	$L_{2 \text{ head}} \times 9 \text{ 098}$	60	545,880
Fabric #2 (1 unit)	4		12A-III	5 950	34	202,300	5 950	68	404,600
	5		12A-III	$L_{2 \text{ head}} \times 3 \text{ 093}$	22	68,046	$L_{2 \text{ head}} \times 3 \text{ 093}$	44	136,092
	6		22A-II	$L_{2 \text{ head}} \times 9 \text{ 098}$	30	272,940	$L_{2 \text{ head}} \times 9 \text{ 098}$	60	545,880
Separate bars	7	is given on drawing	22A-II	$L_{2 \text{ head}} \times 4 \text{ 100}$	58	237,800	$L_{2 \text{ head}} \times 4 \text{ 100}$	116	475,600
	8	is given on drawing	22A-II	5 350	6	32,100	5 350	12	64,200
	9	is given on drawing	16A-III	$L_{2 \text{ head}} \times 4 \text{ 100}$	58	237,800	$L_{2 \text{ head}} \times 4 \text{ 100}$	116	475,600
	10	is given on drawing	16A-III	5 350	6	32,100	5 350	12	64,200
	11		12A-III	6 335	20	126,700	6 335	40	253,400
	12		12A-III	3 285	52	170,820	3 285	104	341,640
	13		10A-III	1 970	488	961,360	1 970	976	1 922,720
C (4,2 un)	14		16A-III	550	128	70,400	550	256	140,800
	15		16A-III	1 720	64	110,080	1 720	128	220,160

Selection armature for one head			Selection armature for two heads	
<i>B</i> mm and steel grade	The total length, m	Weight, kg	The total length, m	Weight, kg
10 A-II	861,360	593,159	1 922,720	1 186,318
12 A-II	930,212	744,332	1 676,224	1 489,665
16 A-II	723,320	1 142,846	1 446,640	2 285,691
22 A-III	542,840	1 617,663	1 085,680	3 235,326
Total:		4 098,000		8 196,000
Binding wire 2X	81,96	-	163,92	-

Remark:
1. Armature adopted in accordance with GOST 5781-82 "Hot-rolled steel for reinforcement of ferroconcrete structures. Specifications"

E-60-00-WD-01-H1-HP-01-P1				Construction of the road Samfredra - Grigoleti km 0 +000 - km 11 +500				
	Engineer	R.Harlander						
	Proj.Manag.	O.Valukin	11/15	Highway Section PK 40+00 - PK 50+00		Stage	Sheet	Sheets
	Checked By	M.Gorobiskaya	11/15			WD	3	3
	Exec. by	M.Lunyak	11/15	Underpass. Opening 6,00x3,50m PK67+50		 "Road Building "Altcom" LLC		