



## Sps "j orj ian uoTer end faueri"

teqni kuri eqsperi zis da proeqti rebis depar tamenti  
saproeqto samsaxuri

mTawmi nda-krwani sis rai oni . s. zal dastani Svi l i s q. #26.

S.p.s. mk.devel opmenti -s obi eqtis s.k. (# 01.15.05.004.092)  
wyal saden-kanal izaci i s gare qsel i s mowyobi s proeqti .

Tbilisi 2022

wi namdebare proeqti reba Sesrul ebul i a gare  
wyal momarageba-kanal izaci i s qsel ebze sani tarul i normebi s  
2.04.02-84 2.04.03-85 Tanaxmad.  
samuSaTa organi zaci a da mi Reba-Cabarebis normebi s  
3.05.04-85 Tanaxmad.

dakveTa #	# IN22-0701377 (1977-1978)
stadi a	muSa proeqti (mp)

formati	stadi a	varianti
A3	m.p.	1

pi robi Ti aRni Svnebi :

asfal tis gza

qvi Sa-xreSovani fena

RorRis fena

adgil obri vi grunti

qvi Si s fena

### S en i S v n e b i

1. samuSaebi s warmoebi sas dacul i i qnas usafrTxoebi s wesebi .
2. gamagreba moewyos H=1.50 m CaRrmavebi s Semdeg .
3. Txril is gaTxris dros saval debul oa geol ogi s daswreba .

### n a x a z e b i s u w y i s i

#	n a x a z i s    d a s a x e l e b a	furc. #
1.	saerTo monacemebi .	wk-1
2.	gegma arsebul i da saproeqto kanal izaci s qsel ebi s dat an i T .	wk-2
3.	saproeqto ganStoebi s Wa .	wk-3
4.	saproeqto ganStoebi s Wa .	wk-4
5.	saproeqto wyal mzomi s Wa . mi wi s Txril is gani vi kveTi .	wk-5
6.	saproeqto kanal izaci s grZi vi profil i .	wk-6
7.	saproeqto kanal izaci s Wa . mi wi s Txril is gani vi kveTi .	wk-7
8.	saproeqto kanal izaci s Wa . mi wi s Txril is gani vi kveTi .	wk-8

### pro e q t i s g a n m a r t e b a

D160

100

D300

#26 , 01.15.05.004.092

D500 , , ,

: h - 1.20 .

: PE100SDR 11 PN 16 D160/63; - L 100/10 .

: 1 .

: 2 .

: h - 1.50/1.80 .

: SN8 D150/300; - L 6/74.50 .

\* \* \* \* \* H=1,5

### s a e r T o m i T i T e b e b i

1. samuSaebi s dawyebamde dazustebul i qnas trasebis gaswvri v sai nJinro komuni kaci ebi s arseboba .
2. wi namdebare proeqti Sesrul ebul ia gare wyal momarageba-kanal izaci s qsel is C 2.04.02-84 da C 2.04.03-85 mi Ti Tebebi s Tanaxmad .
3. samuSaTa warmoebi s zedamxedvel oba da mi Reba-Cabareba ganxorcziel des C 3.05.04-85 mi xedvi T .
4. obi eqtis saproeqto CarTvebi arsebul qsel ebTan dazustebul i da SeTanxmebul i i qnas S.p.s. "j orj ian uoTer end faueri "-s rai oni s wyal saden-kanal izaci s qsel ebi s saeqspl oataci o samsasurebTan .
5. mi wi s samuSaebi s warmoebi sas auci l ebel ia geol ogi s zedamxedvel oba .
6. samontajo samuSaebi s warmoeba ganxorcziel des mi l is mwarmoebel i firmis teqni kuri mi Ti Tebebi s mi xedvi T .
7. samuSaebi s dasrul ebi s Semdeg mi l sadenebi gamoi cados dawesebul i normebi s Tanaxmad .

damkeTi S.p.s. mk. devel opmenti

dakveTa # IN22-0701377  
(1977-1978)

Semsrul ebel i S.p.s."j orj ian uoTer end faueri" teqni kuri esper tizis da proeqtirebis departamenti-saproeqto samsaxuri Tbilisi, medea (mzia) j uRel is quCa #10 .

sap. axal i	s. j afari Ze
mi er. sam. ufrosi	
proeqtis xel mZRvanel i	n. imnaZe
Seasrul a	n. imnaZe
Seamowma	s. j afari Ze

mTawmi nda-krwani sis rai oni . s. zal dastani Svi l is q. #26 . S.p.s. mk.devel opmenti-s obieqtis s.k.(# 01.15.05.004.092) wyal saden-kanal izaci s gare qsel is mowyobi s proeqti .

Tari Ri noemberi 2022  
naxazi

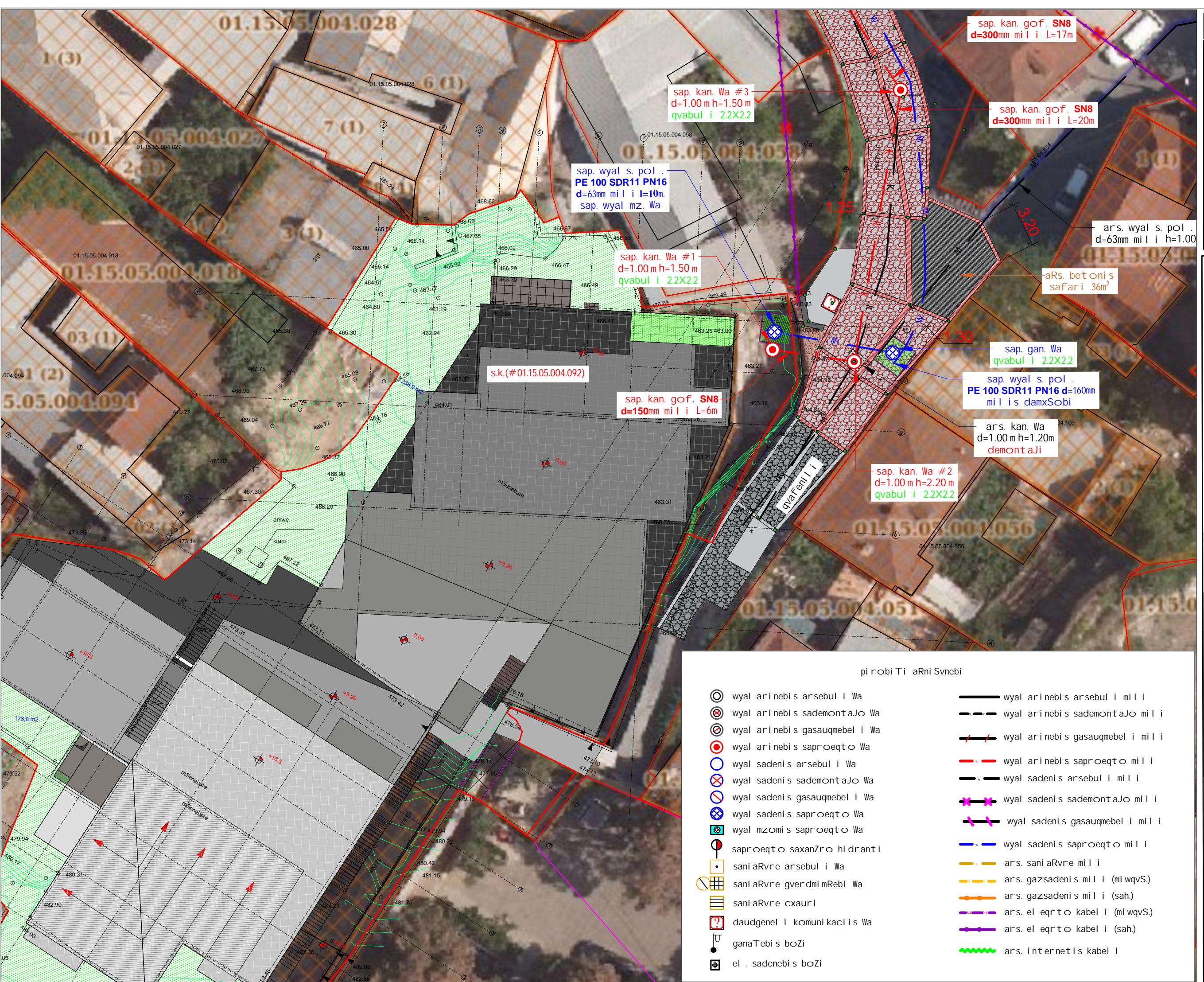
saerTo monacemebi

masStabi	furcel i #	furcl ebi
-----	wk-1	8



formati	stadi a	vari ant i
A3	m.p.	1
<b>pi robi Ti aRni Svnebi:</b>		
obi eqtis wi Tel i xazebi		
qvabul i		
aRs. asfal tis safari		
asfal tis konturi		
adgil obrivi grunti		
xreSovani safari		
qvafenil i		
aRs. qvafenil i s safari		
betonis safari		
aRs. betoni s safari		

damkeTi	S.p.s. mk. devel opmenti
dakveTa	# IN22-0701377 (1977-1978)
Semsrul ebel i	
<b>GWP</b>	
S.p.s."j orj i an uoter end faueri" teqnikuri esperimentis da proeqtri rebis departamenti-saproeqto samsaxuri Tbilisi, medea (mzia) j uRel i s quca #10.	
sap. axal i mier. sam. ufrosi	s. j afarize
proeqtis xel mZRvanel i	n. imnaze
Seasrul a	n. imnaze
Seamowma	s. j afarize
mTawmi nda-krwani si s rai oni . s. zal dastani Svi l i s q. #26. S.p.s. mk.devel opmenti -s obieqtis s.k.(# 01.15.05.004.092) wyal saden-kanal i zaci i s gare qsel i s mowyobi s proeqti.	
Tari Ri	noemberi 2022
naxazi	gemma arsebul i da saproeqto wyal saden-kanal i zaci i s qsel ebis datanIT.
masStabi	furcel i #
1:500	wk-2
	8



formati	stadi a	varianti
A3	m.p.	1
pi robi Ti aRni Svnebi:		
obi eqtis wi Tel i xazebi		
qvabul i		
aRs. asfal tis safari		
asfal tis konturi		
adgil obrivi grunti		
xreSovani safari		
qvafenil i		
aRs. qvafenil is safari		
betonis safari		
aRs. betonis safari		
<b>Seni Svna:</b>		
1. saproeqto qsel is mSenebl obi sas maqsi marul ad i qnas dacul i qanobi si zuste proeqti rebi s mi xedvi T. saproeqto kanal i zaci is qsel is mowyobamdes dazustebul i i qnas mi sqveSa gamaval i yvel a saxis komuni kaci a.		
2. mSenebare qsel is mowyobi sas aRmoCeni i wyal arinebi s ganStoebebi daerTdes sap. qsel ze.		
<b>damkevTi</b>		
S.p.s. mk. devel opmenti		
dakveTa	# IN22-0701377 (1977-1978)	
Semsrul ebel i		
<b>gwp</b>		
S.p.s."j orj ian uTer end faueri" teqnikuri esperimenti da proeqti rebis departamenti-saproeqto samsaxuri Tbilisi, medea (mzia) j uRel is quca #10.		
sap. axal i		
mier. sam. ufrosi		s. j afarize
proeqti s		
xel mZRvanel i		n. imnaze
Seasrul a		n. imnaze
Seamowma		s. j afarize
<b>mTawmi nda-krwani si s rai oni . s. zal dastani Svil i s q. #26.</b>		
S.p.s. mk.devel opmenti -s obieqtis s.k.(# 01.15.05.004.092) wyal saden-kanal i zaci i s gare qsel is mowyobi s proeqti.		
Tari Ri	noemberi 2022	
naxazi		
gemma arsebul i da saproeqto wyal saden-kanal i zaci i s qsel is mowyobi s proeqti.		
masStabi	furcel i #	furcl ebi
1:500	wk-2	8

formati	stadi a	varianti
A3	m.p.	1

pi robi Ti aRni Svnebi:

asfal tis gza

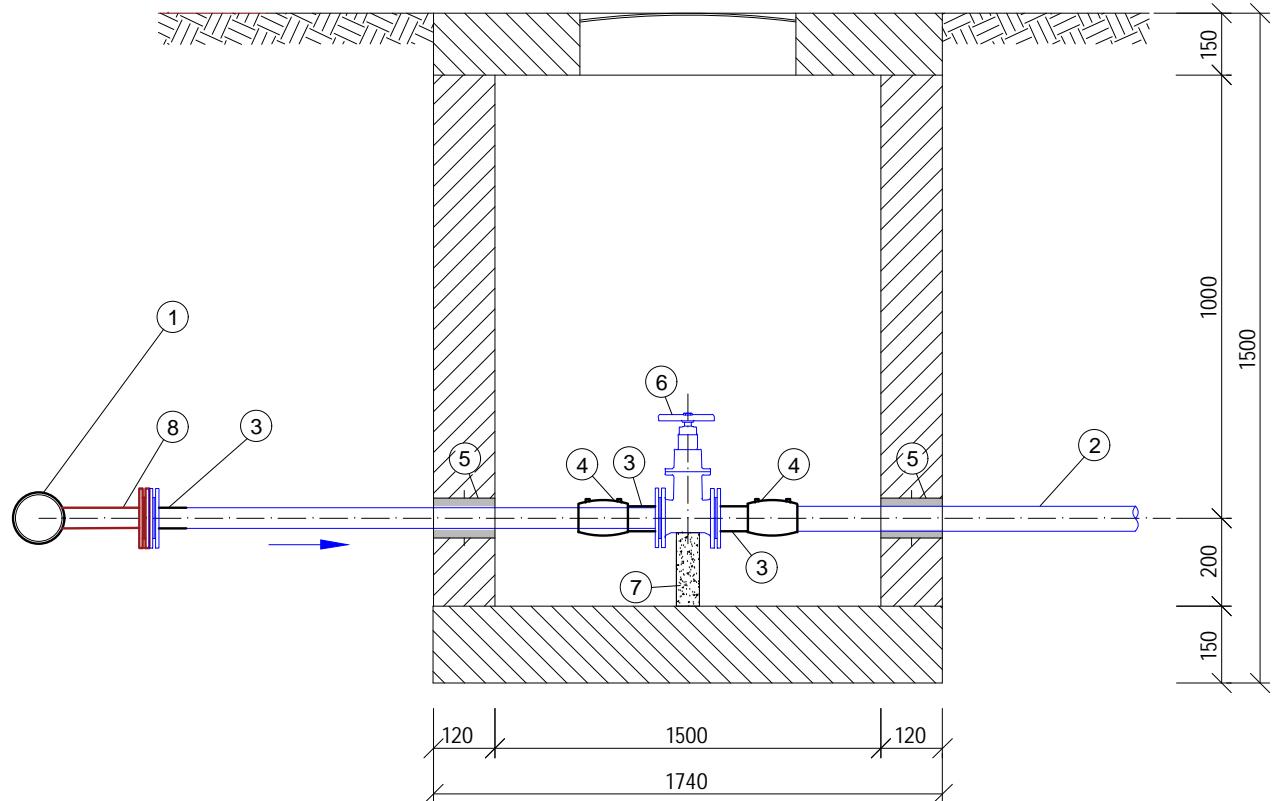
qvi Sa-xreSovani fena

RorRis fena

adgil obri vi grunti

qvi Si s fena

# saproeqto ganStoebis Wa Wri l i I-I



## eqspl ikacia

- ars. Tuj is milli d=300 mm milli;
- sap. pol i eTinel is milli PE100 SDR11 PN16 d=160 mm;
- pol i eTil enis adaptori mil tuCi T d=160 mm;
- pol i eTil enis SemaerTebel i el . quro d=160 mm;
- Cobal i d=273 mm;
- urdul i d=150 mm;
- sayrdeni fol adis milli d=150 mm i iToni s furcl i T;
- sap. fol adis mil yel i mil tuCi T d=150 mm i iToni s furcl i T;
- uni reversal uri quro-unagi ri d=300/150 mm

## S eni S vne b i

- samuSaebis warmoebi sas dacul i i qnas usafrTxoebi s wesebi.
- gamagreba moewyos H=1.50 m CaRrmavebi s Semdeg.
- Txril is gaTxris dros saval debul oa geol ogi s daswreba.

dakveTi  
S.p.s. mk. devel opmenti

dakveTa # IN22-0701377  
(1977-1978)

Semsrul ebel i



S.p.s."j orj ian uoTer end faueri"  
teqnikuri esper tizis da proeqtirebis  
departamenti-saproeqto samsaxuri  
Tbilisi, medea (mzia) j uRel is quca #10.

sap. axal i mi er. sam. ufrosi	s. j afari Ze	
proeqtis xel mZRvaneli	n. imnaZe	
Seasrul a	n. imnaZe	
Seamowma	s. j afari Ze	

mTawmi nda-krvani sis rai oni. s.  
zal dastani Svilis q. #26.  
S.p.s. mk.devel opmenti-s  
obi eqtis s.k. (# 01.15.05.004.092)  
wyal saden-kanal i zaci i s gare  
qsel i s mowyobi s proeqti.

Tari Ri noemberi 2022

naxazi

sap. ganStoebis Wa.  
saproeqto urdul i T.

masStabi	furcel i #	furcl ebi
----	wk-3	8

formati	stadi a	varianti
A3	m.p.	1

pi robi Ti aRni Svnebi:

asfal tis gza

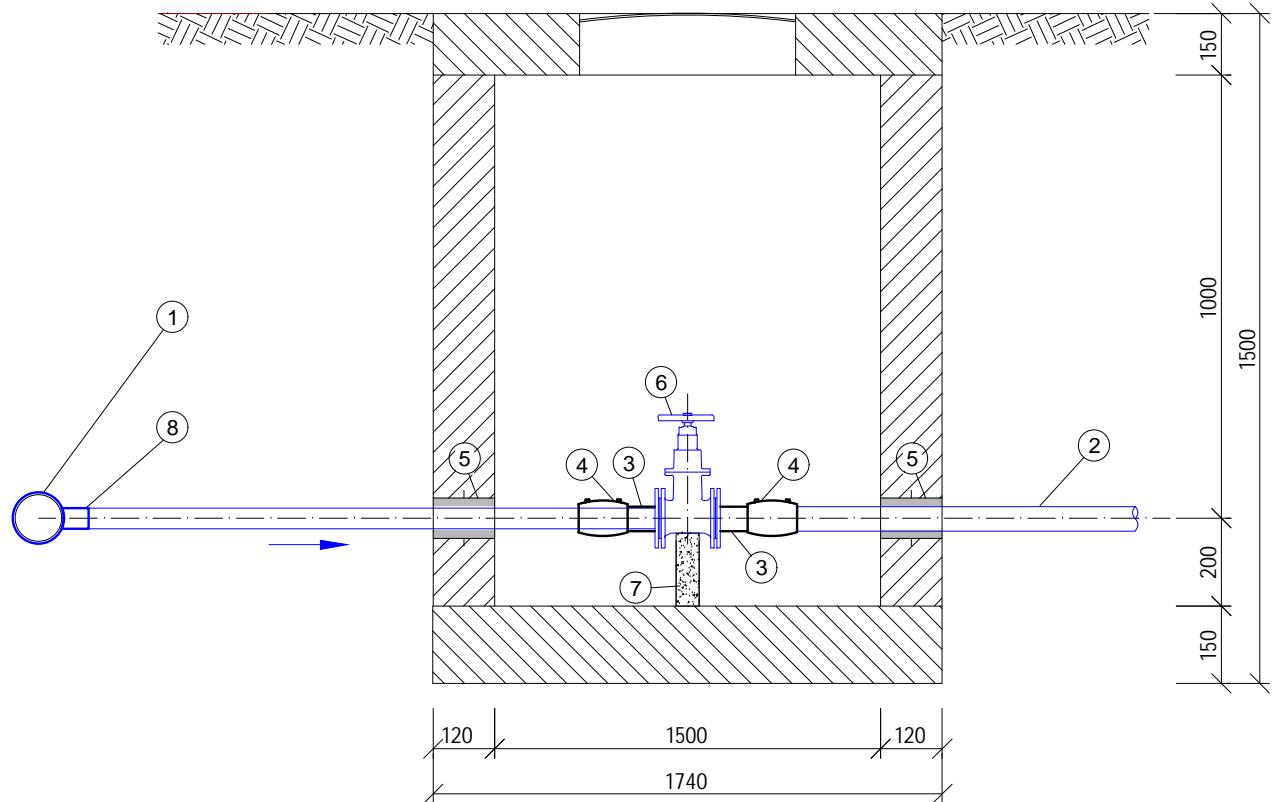
gvi Sa-xreSovani fena

RorRis fena

adgil obri vi grunti

gvi Si s fena

# saproeqto ganStoebis Wa Wri l i I-I



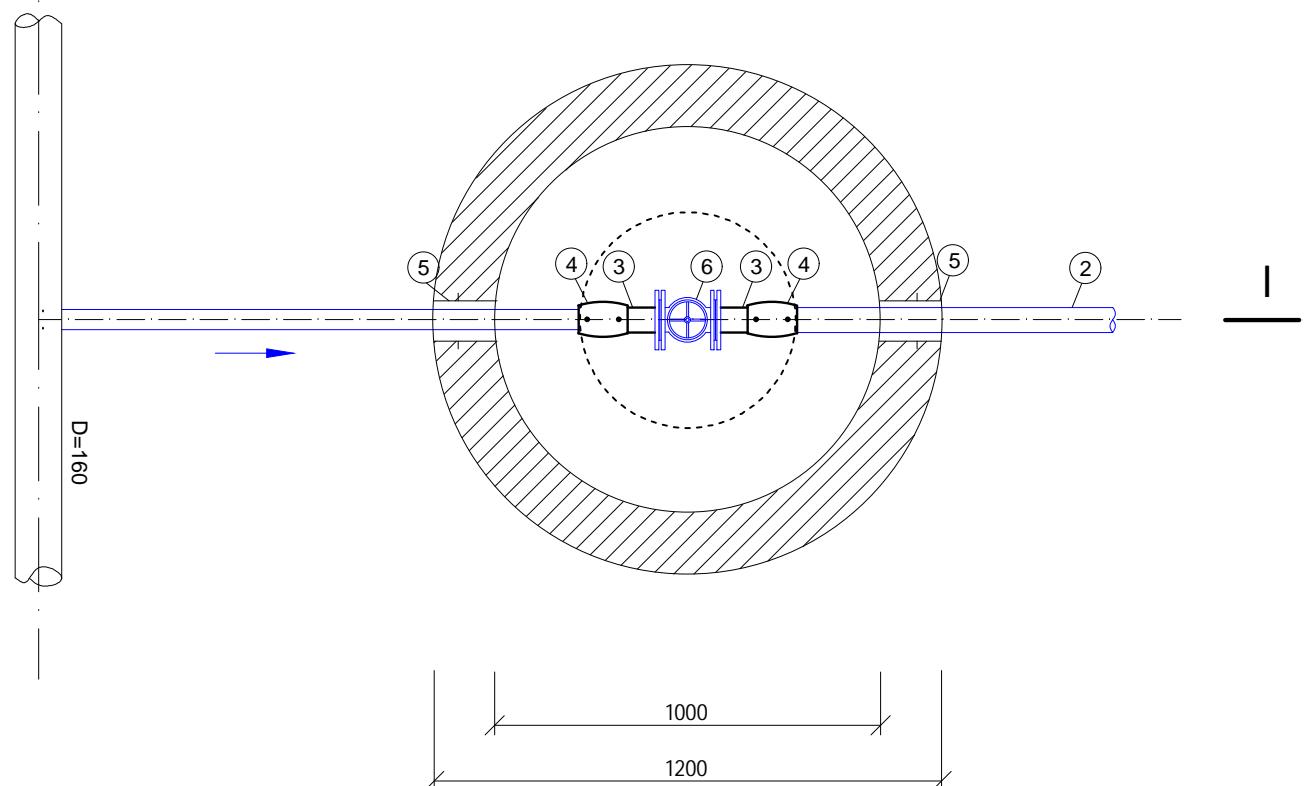
## eqspl ikacia

- ars. pol . mil i d=160 mm mil i;
- sap. pol ieTinel is mil i PE100 SDR11 PN16 d=63 mm;
- pol ieTil eni s adaptori mil tuCi T d=63 mm;
- pol ieTil eni s SemaerTebel i el . quro d=63 mm;
- Cobal i d=140 mm;
- urdul i d=50 mm;
- sayrdeni fol adis mil i d=50 mm i iTonis furcl i T;
- pol . samkapi d=160/63/mm;

## S eni S v ne b i

- samuSaebis warmoebi sas dacul i i qnas usafrTxoebi s wesebi .
- gamagreba moewyos H=1.50 m CaRrmavebi s Semdeg .
- Txril is gaTxris dros saval debul oa geol ogi s daswreba .

## gegma



dakveTa S.p.s. mk. devel opmenti

dakveTa # IN22-0701377  
(1977-1978)

Semsrul ebel i



S.p.s."j orj ian uoTer end faueri"  
teqni kuri esper tizi s da proeqti rebis  
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Tbilisi, medea (mzia) j uRel is quCa #10.

sap. axal i mi er. sam. ufrosi	s. j afari Ze	
proeqti s xel mZRvanel i	n. imnaZe	
Seasrul a	n. imnaZe	
Seamowma	s. j afari Ze	

mTawmi nda-krvani sis rai oni . s.  
zal dastani Svilis q. #26.  
S.p.s. mk.devel opmenti-s  
obi eqti s s.k.(# 01.15.05.004.092)  
wyal saden-kanal i zaci i s gare  
qsel i s mowyobi s proeqti .

Tari Ri noemberi 2022

naxazi

sap. ganStoebis Wa.  
saproeqto urdul i T.

masStabi	furcel i #	furcl ebi
----	wk-4	8

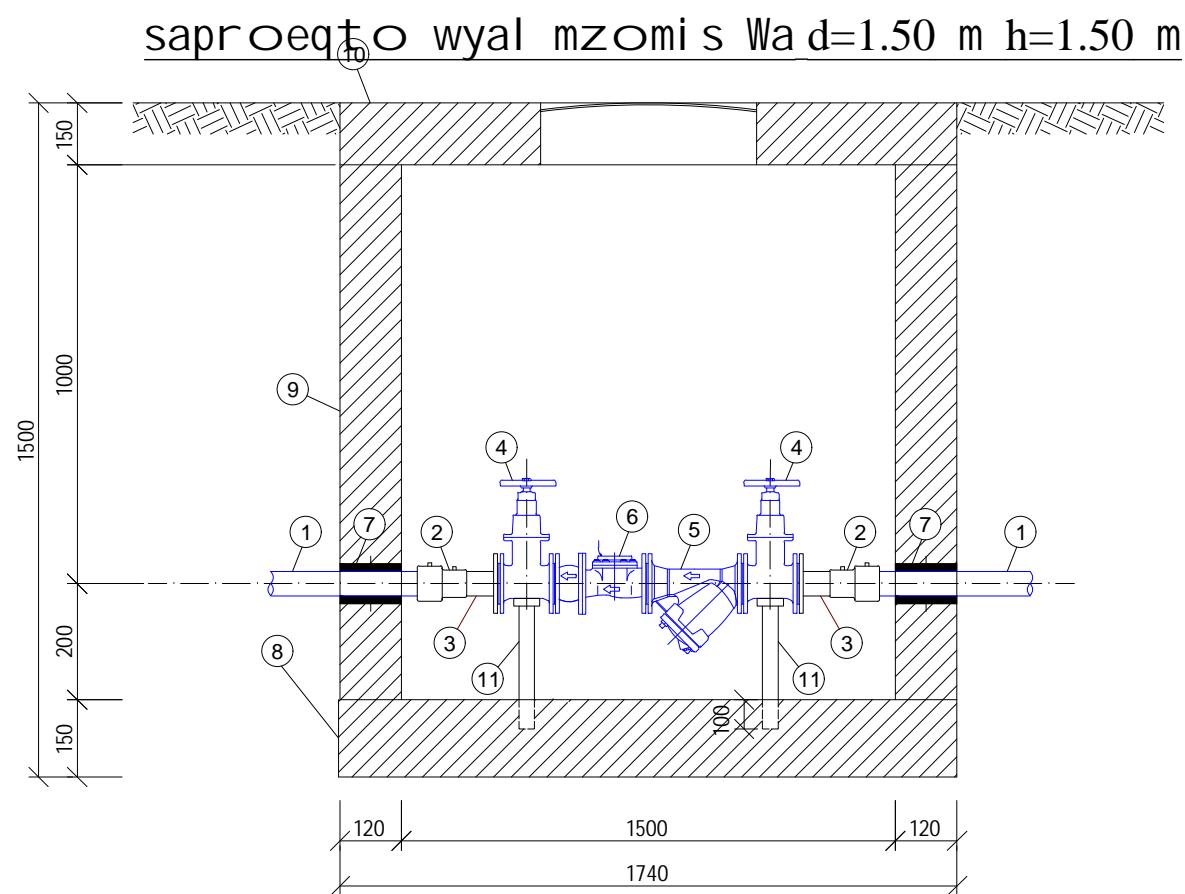
formati A3	stadi a m.p.	varianti 1
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pirobi Ti aRni Svnebi:

- asfal tis gza
- qvi Sa-xreSovani fena
- RorRis fena
- adgil obri vi grunti
- qvi Si s fena

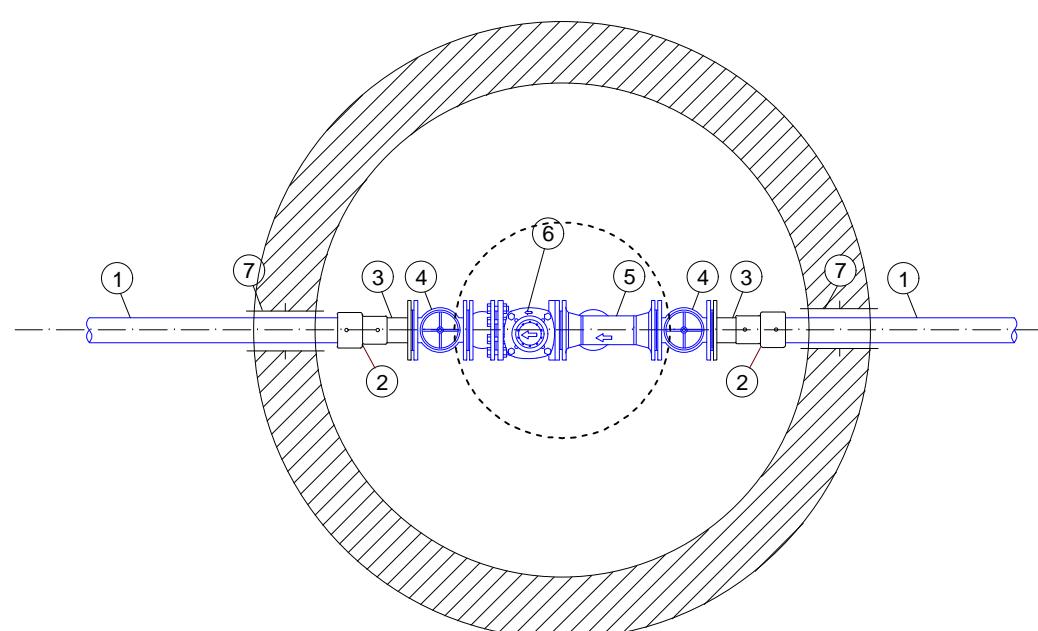
### S en i S v n e b i

- samuSaebis warmoebi sas dacul i i qnas usafrTxoebis wesebi.
- gamagreba moewyos H=1.50 m CaRrmavebis Semdeg.
- Txril is gaTxris dros saval debul oa geol ogi s daswreba.

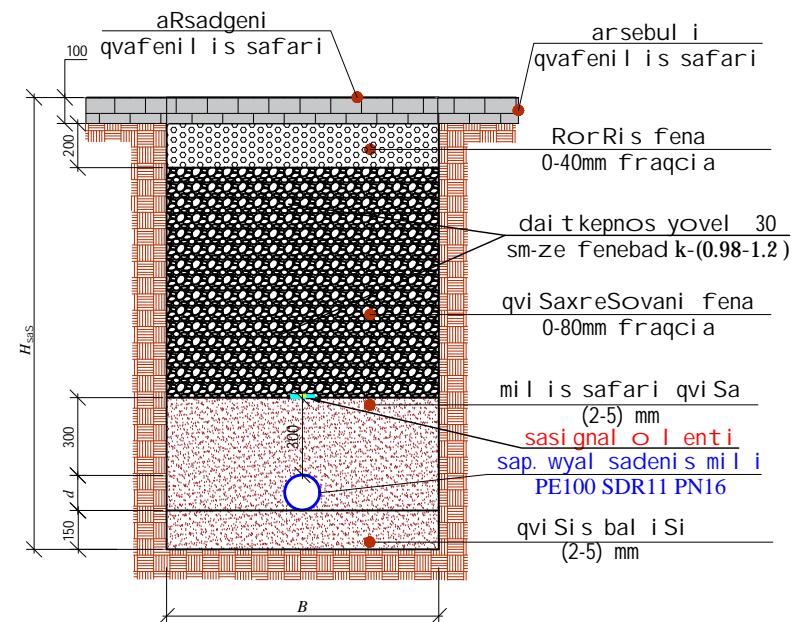


### eqlspl i kaci a:

- saproeqto pol ieTil enis milli PE100 PN16 SDR.11 - Ø63 mm.
- pol ieTil enis SemaerTebel i el . quro d=63 mm
- pol ieTil enis adaptor i mil tuCIT d=63 mm
- urdul i DN=50 mm.
- fil tri DN=50 mm.
- wyal mzomi DN=50 mm.
- Cobal i d=140 mm.
- W is Ziris rki na-betonis fil a.
- W is rki na-betonis kedel i.
- W is gadaxurvis rki na-betonis fill a Tuj i s xufiT.
- sayrdeni fol adis milli d=50 mm l i Tonis furcl i T.



### wyal sadenis mi wi s Txril is gani vi kveTi



#	d	H <sub>SaS</sub>	B	h <sub>SaS</sub>	L (m)
1	160	1200	700	290	100
2	63	1200	700	387	10

damkveTi  
S.p.s. mk. devel opmenti

dakveTa # IN22-0701377  
(1977-1978)

Semsrul ebli

S.p.s."j orj ian uoTer end faueri"  
teqnikuri esper tizi s da proeqti rebis  
departamenti-saproeqto samsaxuri  
Tbilisi, medea (mzia) j uRel is quCa #10.

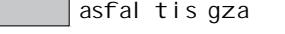
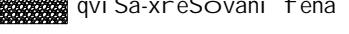
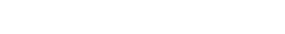
sap. axal i mi er. sam. ufrosi	s. j afari Ze	
proeqti s xel mZRvaneli	n. i mnaze	
Seasrul a	n. i mnaze	
Seamowma	s. j afari Ze	

mTawmi nda-kwani sis rai oni . s.  
zal dastani Svi l is q. #26.  
S.p.s. mk.devel opmenti-s  
obieqtis s.k.(# 01.15.05.004.092)  
wyal saden-kanal i zaciis gare  
qsel is mowyobi s proeqti.

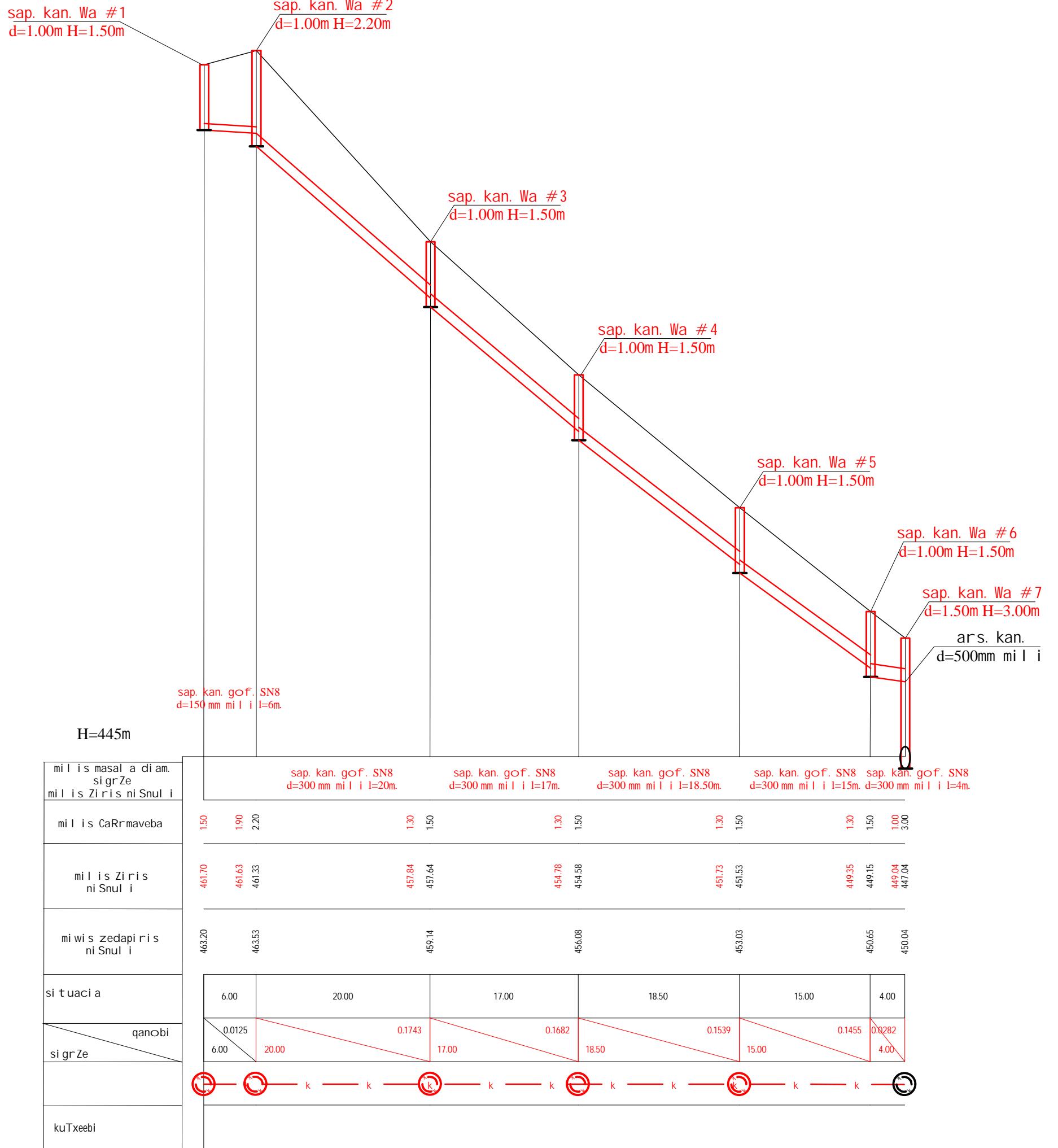
Tari Ri noemberi 2022  
naxazi

sap. wyal mzomis Wa  
mi wi s Txril is gani vi kveTi

masStabi	furcel i #	furcl ebi
-----	wk-5	8

formati	stadi a	varianti
A3	m.p.	1
pi robi Ti aRni Svnebi:		
 asfal tis gza		
 qvi Sa-xreSovani fena		
 RorRis fena		
 adgil obri vi grunti		
 qvi Si s fena		

kanal i zaci i s qsel i s grZi vi profil i  
masSt abi : v 1:100; h 1:500;



S en i S v ne b i

1. samuSaebi s warmoebi sas dacul i i qnas usafrTxoebi s wesebi .
2. gamagreba moewyos H=1.50 m CaRrmavebi s Semdeg .
3. Txril i s gaTxris dros saval debul oa geol ogi s daswreba .

dakveTi  
S.p.s. mk. devel opmenti

dakveTa  
# IN22-0701377  
(1977-1978)

Semsrul ebel i



S.p.s."j orj ian uoTer end faueri"  
teqnikuri esper tizis da proeqtirebis  
departamenti-saproqto samsaxuri  
Tbilisi, medea (mzia) j uRel is quca #10.

sap. axal i mi er. sam. ufrosi	s. j afari Ze	
proeqtis xel mZRvaneli	n. imnaZe	
Seasrul a	n. imnaZe	
Seamowma	s. j afari Ze	

mTawmi nda-kwani sis rai oni . s.  
zal dastani Svil i s q. #26.  
S.p.s. mk.devel opmenti-s  
obieqtis s.k.(# 01.15.05.004.092)  
wyal saden-kanal i zaci s gare  
qsel i s mowyobi s proeqti .

Tari Ri  
noemberi 2022

naxazi

sap. kan. grZi vi profil i .

masSt abi	furcel i #	furcl ebi
----	wk-6	8

formati A3	stadi a m.p.	varianti 1
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pirobi Ti aRni Svnebi:

asfal tis gza
qvi Sa-xreSovani fena
RorRis fena
adgil obri vi grunti
qvi Si s fena

### Seni S vnebi

1. samuSaebi s warmoebi sas dacul i i qnas usafrTxoebi s wesebi .
2. gamagreba moewyos H=1.50 m CaRrmavebebi Semdeg .
3. Txril is gaTxris dros saval debul oa geol ogi s daswreba .

damkeTi  
S.p.s. mk. devel opmenti

dakveTa # IN22-0701377  
(1977-1978)

Semsrul ebel i  
  
S.p.s."j orj ian uoTer end faueri"  
teqnikuri esper tizi s da proeqtirebis  
departamenti-saproeqto samsaxuri  
Tbilisi, medea (mzia) j uRel is quca #10.

sap. axal i mi er. sam. ufrosi	s. j afari Ze
proeqti s xel mZRvanel i	n. imnaZe
Seasrul a	n. imnaZe
Seamowma	s. j afari Ze

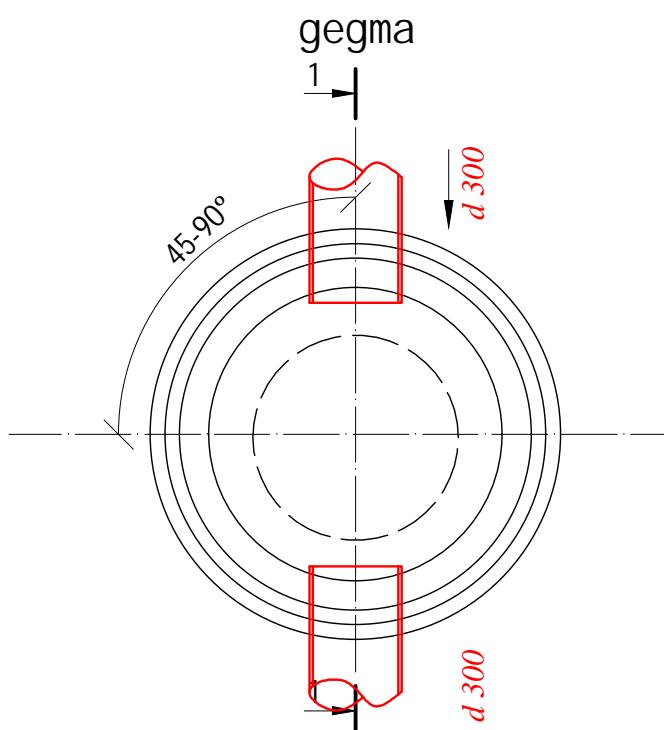
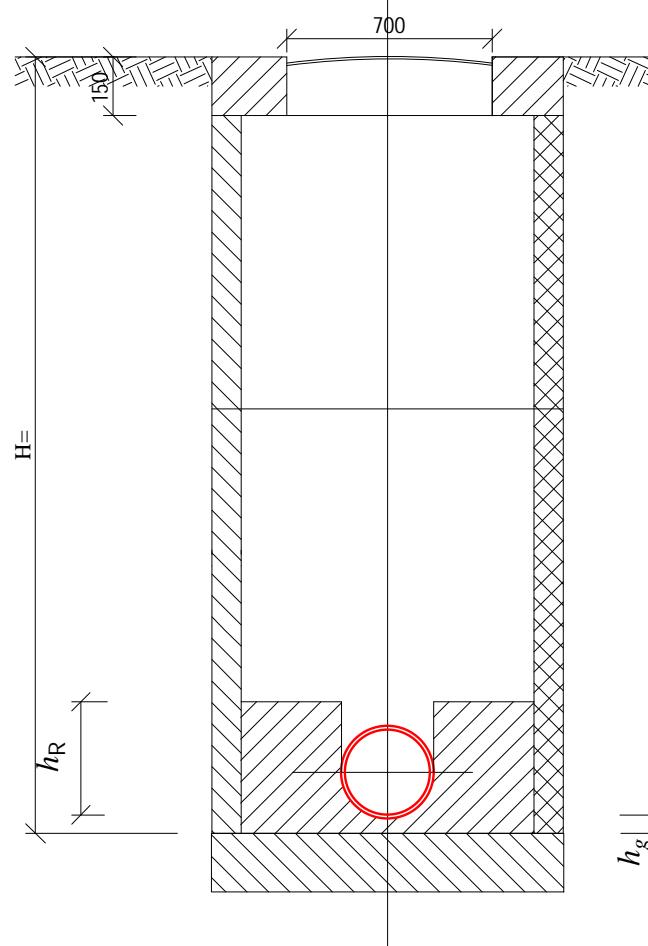
mTawmi nda-kwani sis rai oni . s.  
zal dastani Svi l is q. #26.  
S.p.s. mk.devel opmenti-s  
obieqtis s.k. (# 01.15.05.004.092)  
wyal saden-kanal izaciis gare  
qsel is mowyobi s proeqti .

Tari Ri  
noemberi 2022  
naxazi

sap. kan. Wa.  
mi wi s Txril is gani vi kveTi .

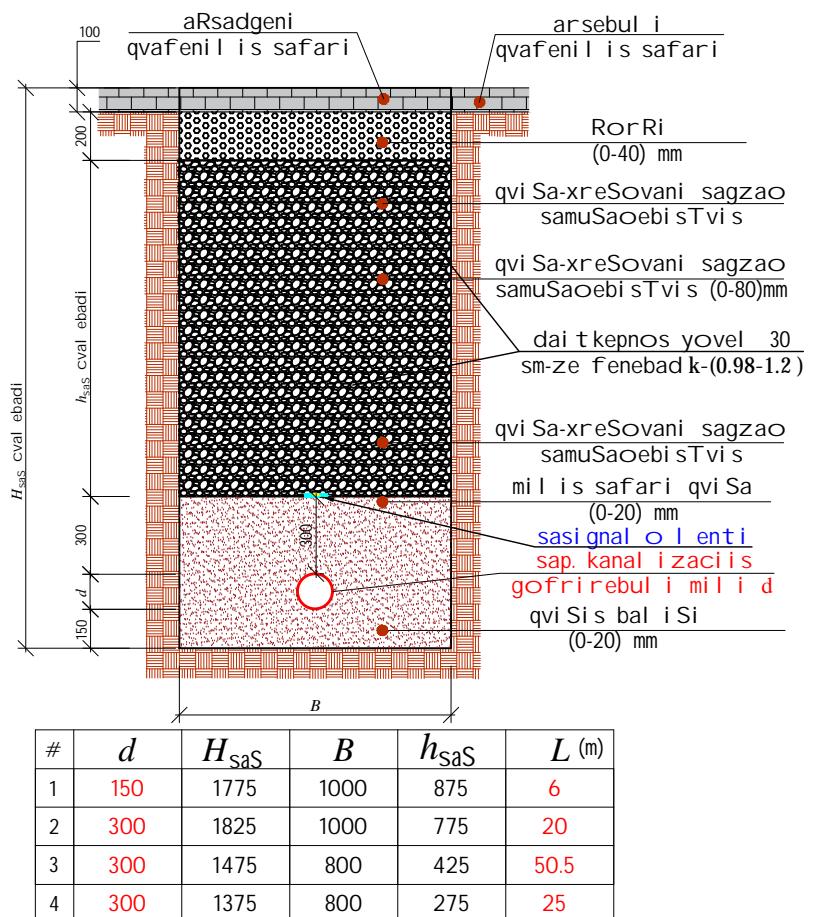
masStabi	furcel i #	furcl ebi
-----	wk-7	8

### saproeqto kanal izaciis tipiuri Wa Wri l i I-I



$h_g$  - Raris Ziri s sise, romel ic  
tol ia mil is kedl i s sses  
damatebul i 30 mm

### kanal izaciis mi wi s Txril is gani vi kveTi



Wi s di ametri D	mil is di ametri		Raris si maRI e h <sub>R</sub>
	Semyvani d <sub>p1</sub>	gamyvani d <sub>p2</sub>	
1000	2	3	4
	100	150	200
	200	200	300
	250	250	350
	300	300	400
	350	350	450
	400	400	500
	450	450	550
	500	500	600
	600	600	700
1500	600	700	800
	800	900	950
	700	800	800
	800	900	950
	900	1000	1050
2000	800	900	950
	900	1000	1050
	1000	1000	1150
	1000	1000	1150
	1000	1000	1150

### Seni S vna:

1. naxazebi s CamonaTval i i xi l eT fur. k-1
2. cxril ebSi moyvani l i a kanal izaciis tipiuri Webi s anal ogi urad.
3. Webi s di ametrebi da Raris CaRrmavebebi SerCeul i qnas Sesabami si tipi s Webi s cxril ebi dan.
4. Webi s hi droizol aci a ganxorci el des Wi s gare perimetrze bi Tumi T ara umci resi 2 feni sa saerTo si sqiT 4-5 mm.
5. wyal arinebis Txril is si Rrmis mi xedvi T H-1.7 m da meti samuSaTa warmoebi s usafrTxoebi s mi zni T movawayod Txril is ferdebi s gamagreba . i x. gamagrebi s naxazi .
6. anakrebi Wi s rgol i s gadabma ganxorci el des qvi Sa-cementi s xsnar i T wyal SeuRwevadi danamatis damebi T B-7 M-100 W8.
7. qvi Sa-cementi s xsnar i s mocul oba dazust des adgil ze Webi s konstruqci ul i el ementebi s zedapi rebi s si swori sa da geometri ul i zomebi s mi xedvi T .
8. i xel mZRvanel eT konstruqci ul i naxazebi s mi xedvi T .

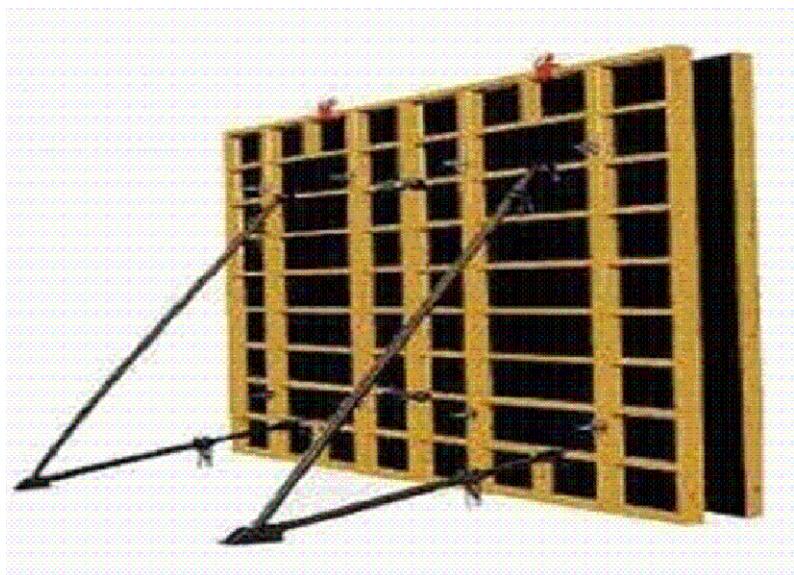
formati	stadi a	varianti
A3	m.p.	1

pi robi Ti aRni Svnebi:

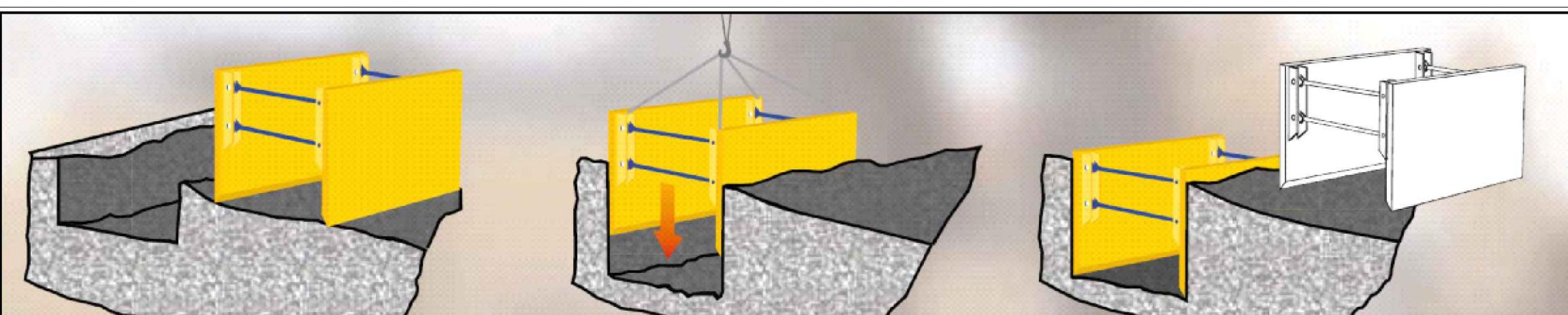
	asfal tis gza
	qvi Sa-xreSovani fena
	RorRis fena
	adgil obri vi grunti
	qvi Si s fena

### S en i S v n e b i

1. samuSaebi s warmoebi sas dacul i i qnas usafrTxoebi s wesebi .
2. gamagreba moewyos H=1.50 m CaRrmavebi s Semdeg .
3. Txril is gaTxris dros saval debul oa geol ogi s daswreba .



\ -%) !



dakveTi  
S.p.s. mk. devel opmenti

dakveTa # IN22-0701377  
(1977-1978)

Semsrul ebli



S.p.s."j orj ian uoTer end faueri"  
teqnikuri esqer tizis da proeqtirebis  
departamenti-saprepto samsaxuri  
Tbilisi, medea (mzia) j uRel is quCa #10.

sap. axal i mi er. sam. ufrosi	s. j afari Ze	
proeqtis xel mZRvaneli	n. imnaZe	
Seasrul a	n. imnaZe	
Seamowma	s. j afari Ze	

mTawmi nda-krvani sis rai oni . s.  
zal dastani Svilis q. #26.  
S.p.s. mk.devel opmenti-s  
obieqtis s.k.(# 01.15.05.004.092)  
wyal saden-kanal izaciis gare  
qsel is mowyobi s proeqti .

Tari Ri noemberi 2022

naxazi  
saprepto kanal izaciis  
mi wi s Txril is gamagrebis  
kvanZi .

masStabi	furcel i #	furcl ebi
-----	wk-8	8