ЧУМХУРИИ ТОЧИКИСТОН -- REPUBLIC OF TAJIKISTAN

Private Buisnessman Aslam Pochoev



72-2014-RFQ-UNDP-CP-KUL-LITACA-@

PROJECT WORKING DESIGN

Construction of 5 additional classrooms in secondary school N 49 of Choilobkamar village, Chubek jamoat, Hamadoni district.

ALBUM - V

ЭО - Electric illumination and Fire alarm

	<u>Statement of</u>	working drawings of the main set	,
Sheets		Description	поте
1 !	Common data		
2 !	Lighting plan 1st floor		
3 !	Specifications		
	<u>Referenc</u>	e Statement and accompanying documents	
	Denotement	Description	note

Denotement	Description	note
	Reference documents	
mn. 4. 407–185	Installation distribution boards and cabinets	
5. 407-83	! Installation of switches and sockets	
5. 407-101	Laying lighting networks for a Group	
5. 407–129	! Laying of wires and cables in PVC pipes	
	<u>documents attached</u>	
	Specfication of materials and equipments	2 sheets

The main parameters of the project

Pos.	Description	indicator	note
	! Mains voltage, V	380/220	
	! Category reliability of power supply	//	
	! Installed capacity, kW	4,464	
	! Calculation of the current, A	6,78	
	! Coefficient of power, cos	0,9	

The project was developed in accordance with the applicable rules and provide for measures to ensure the explosive and fire safety at exploitation facilities.

Chief engineer of the project

Согласованно:

Подпись и дата

Shamsov M

ОБШИЕ УКАЗАНИЯ

The main set of drawings lighting, electrical equipment "Cnstruction of 5 additional classrooms in school number 49 Choylobkamar village, Jamoat Chubek, Hamadoni district" is developed on the basis of the technical specifications for the development of working documents for the construction, architectural drawings, sanitary and technological tasks. Working drawings are developed in accordance with the applicable rules. regulations and standards.

1. RB ed. 2005. "Rules for Electrical Installation"

2. SP 31-03-2007 "educational institutions" Design standards.

The project is designed for voltage 380/220 kV transformer neutral solidly earthed. Lamp voltage of 220 V. As lighting dashboards taken YAOU type shields.

In general, electric lighting fixtures performed with fluorescent lamps. Lighting control is carried out at the place of switches in corridors and with shields lighting.

Group runs a network of electric wire brand "PPV", hidden under a layer of plaster. On the ceiling, the group performed the same network cable. Backbone network run prvodam brand PV PVC pipes for storey risers.

Lighting and Power Panels with protection devices installed on each floor in wall niches. From dashboards powered lighting and electrical appliances. Sockets made with a safety device automatically closes the socket socket when removing the plug. Switches are installed at a height of up to 1.5 m from the floor, the wall outlet does not exceed 1 m.

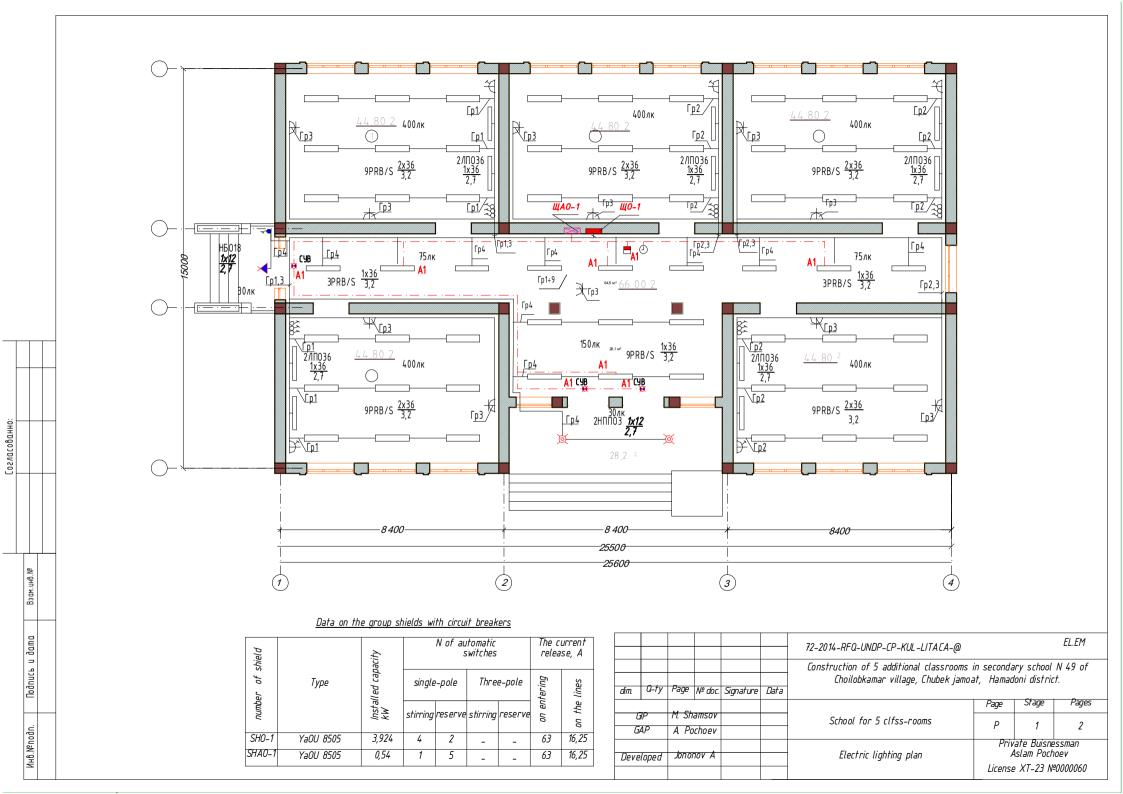
The project includes the following types of coverage: operating and emergency lighting (220 V), emergency lighting stand out from among the workers and managers with the emergency panel installed on the first floor in elktroshitovoy Lighting is carried out in the hallways, lobbies, recreation, and in the lobby.

Metal pipes electrical wiring, as well as cable racks are attached steel strip 40h4 mm to the main ground bus (GZSH made in parliament (in the switchboard) for potential equalization. GZSH joined to the outer steel strip the existing ground.

! ! GROUNDING

Grounding perform according to the "PUE". All metal dead parts of electrical equipment (frames shields, steel pipes, wiring, etc.) are subject to ground by connecting to the neutral wire network.

						72-2014-RFQ-UNDP-CP-KUL-LITACA-@			L.
						Construction of 5 additional classroom Choilobkamar village, Chubek jan			
dim.	Q-ty	Page	№ doc.	Signature	Data	споловкатаг Уксаде, спавек јап	iour, riamac	וטווו טוטוו ונו	
							Page	Stage	Pages
_	IP .	M. Sh	amsov			School for 5 clfss-rooms	P	1	2
G/	4 <i>P</i>	A. Po	choev				, , , , , , , , , , , , , , , , , , ,		2
Πονο	loped	Jonor	nov A			Specification		ivate Buisnes Aslam Pocho	
DE 1 E	ιυρεα	22,70,	,,			Эрстеноп	License	×T-23 №	0000060



	Position	Name and technical characteristics	Type, make, designation of the document, interviewee sheet	Equipment code, products, materials	Plant manufacturer	Maes. unit	Q-ty	weight units kg	Remarks
	1	2	3	4	5	6	7	8	9
		Equipment and materials supplied by the customer							
		1. Lighting products							
	1	Luminaire with luminescent lamps, power 1h36 W	PRB/R			шт.	14		
	2	Luminaire with luminescent lamps, power 2h36 W	PRB/R			шт.	45		
	3 !	Luminaire with luminescent lamps, power 1h36 W	ЛПОЗ6			шт.	10		
	4	Luminaire with energy saving lamps, power 1x12 watts	НБО18			шт.	1		
	5	Luminaire with energy saving lamps, power 1x20 watts	НППОЗ			шт.	2		
	6	Luminescent lamp, 36 W	ЛБ-36			шт.	114		
	7	Energy saving lamps, 12 W	YPZ220/20-2S			шт.	1		
	8	Energy saving lamps, capacity 20 Wt	YPZ220/12-2S			шт.	2		
	9	! Copper conductors insulated with polivinilohloridn section 3 x2,5mm²	ПВ*			М.	260		
	10	! Copper conductors insulated with polivinilohloridn section 2 x1,5mm²	ПВ*			М.	60		
	11	! Copper conductors insulated with polivinilohloridn section 3 x4mm²	ПВ*			М.	255		
	12	Corrugated hose Ø15mm²				М.	300		
		2.Electrical installation products							
	13	SPDT switch for flush mounting 10A	ΒC1У-116-δ			шт.	15		
Щ	14	Hermetic Switch SPDT 10A	ΒΑ610-1265-δυ			шт.	1		
лн6.№	15	Block outlet with switch				шт.	5		
Взам. инв.№									
Подпись и дата			di	n O-ty Page № doc Si	Construc	RFQ-UNDP-CP-KUL tion of 5 additiona hoilobkamar village,	nl classrooms	s in secondary schoo oat, Hamadoni distr	rict.
				GIP M. Shamsov	Srh	hool for 5 clfss-ro	отѕ	Page Stage	Pages 1
Инв.№подп.				EVELOPED JOHONOV A		Specification		WD 1 Private Buisi Aslam Pou License XT-23	nessman Thoev

	Position	Name and technical characteristics	Type, make, designation of the document, interviewee sheet	Equipment code, products, materials	Plant manufacturer	Maes. unit	Q-ty	weight units kg	Remarks
	1	2	3	4	5	6	7	8	9
	1								
	2	! Sockets with zazemlyayushimi contacts for flush mounting 16A, 220V, with safety shutters ground	ΡC16-007-δ			UN.	10		
	3	! Junction box	Y-192			UN.	14		
	4	Box for flush mounting switches and sockets	II-/190			UN.	32		
	5	! Call Up electric				un.	1		
	6	! Electric clock				un.	1		
	7								
	8								
	9								
	10								
	11								
	12								
	13								
	14								
	15								
	16								
Взам.инв.№									
Взам.									
מ									
и дап									
Подпись и дата									
Инв.№подп.									Sheet
Инв.			dn	a Q-ty Page № doc S	ignature Data			LS,L	

Statement of working drawings of the main set

Sheet	Description	note
1	! Common data	
2	Block diagram of networking fire alarm sound and light alarm	
3	! Fire alarm plan 1st floor	
4		

Reference Statement and accompanying documents

Denotement	Description	note
MQS TJ 31-03-2007	<u>Reference documents</u>	
VSN 60-89	Communication devices, alarm systems and building management equipment residential and public buildings. Design standards.	
NPD-88-2001	Fire extinguishing installations and alarms. Standards and design rules	
	<u>Documents attached</u>	
SE; FS	Specfication of materials and equipments	

The main parameters of the project

Согласованно:

Подпись и дата

Инв.№подп.

	<i>Description</i>	Maes. unit	Q-ty
1	! The device receiving and controlling fire-protection "Granit-2"!	un.	1
2	! Number of planned fire zones	un.	2
3	! Number of reserve fire zones	un.	-
4	! Sounder (Mayak-12)	un.	2
5	! Strobes (display "Exit")	un.	3

General instructions

To build a system of fire alarm as the alarm control unit provides Mounting PPKOP "Granit-2", equipped with redundant power and installed in karidor.

The following types of detectors are taken in the project:

- Smoke optoelectronic detectors SP-212-3SU fire heat detector-3SU IPR;
- Manual fire alarm IPR-3SU that are installed on the escape routes at 1.5 m from the floor.

According to BNP 104-2003 in the project provided the second type of the fire warning system: zvukovoy- "Mayak-12-h", svetovye- svetoukazateli "Exit", which are installed on the escape routes in places that provide sufficient audibility and visibility of the signal.

 ${\it Plumes of smoke, security and manual fire alarms made with cable brand KSPEV-2x0,5.}$

Connect light and sound signaling devices produced wire SHVVP 2x0,75.

Mounting network is executed in steel pipe Ø20mm.

All wires cables covered under plaster

Power for the PPKOP "Granit-2" is performed by the guaranteed

power supply cable 3x1.5 PVA-in cable channels and Corrugated.

Blok for thr Uninterruptible power supply is provided to prevent failure of the system during emergency shutdown of the main power supply.

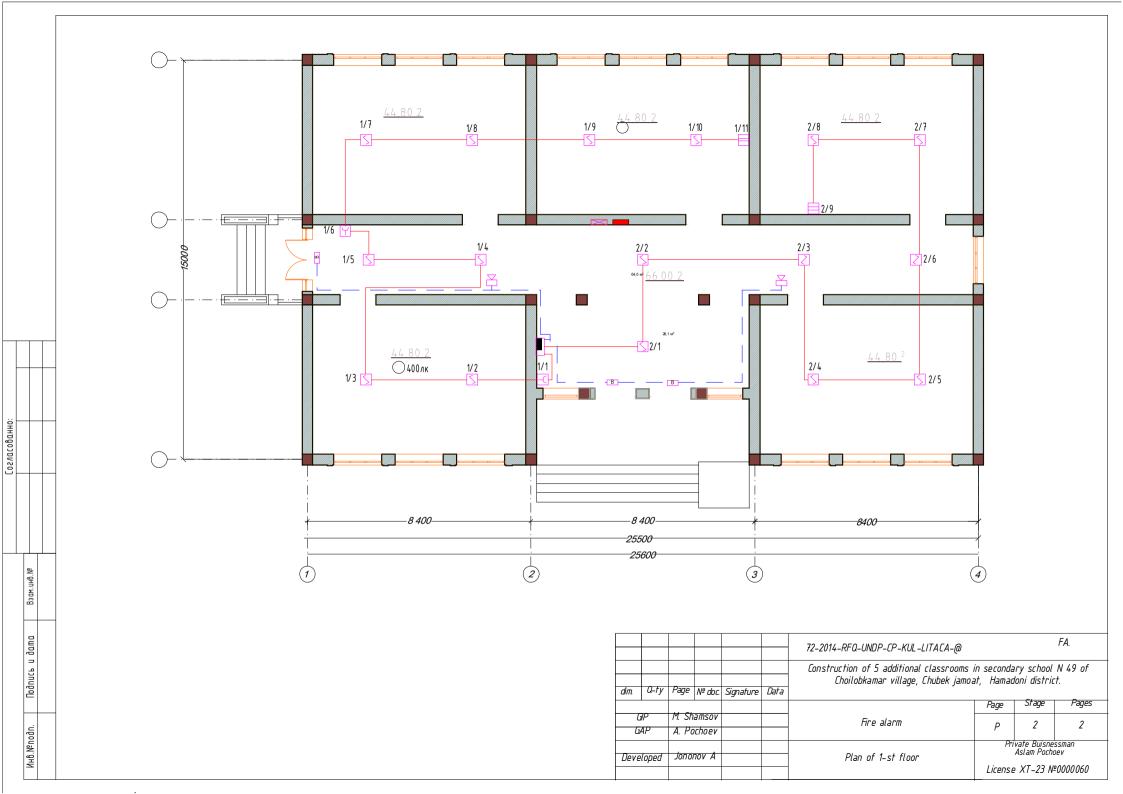
The project was developed in accordance with the applicable rules and provide for measures to ensure the explosive and fire safety at exploitation facilities.

Chief engineer of the project

Shamsov M

						72-2014-RFQ-UNDP-CP-KUL-LITACA-@			FA.
	0.44	Page				Construction of 5 additional classrooms Choilobkamar village, Chubek jamoa			
dim.	Q-fy	Page	№ doc.	Signature	Data				
		м с				Fire alarm.	Page	Stage	Pages
	aP AP		amsov ochoev			rii e atariii.	Р	1	4
Deve	eloped	Jonoi	nov A			Common data	/	rate Buisne Aslam Poch e XT-23 N	noev
			^			denvem.			

копировал: формат



	F	Position	Name and technical characteristics	Type, make, designation of the document, interviewee sheet	e Equip produc	pment code, cts, materials	Pla	nt manufacturer	. Maes. unit	Q-ty	weight units kg		note
		1	2	3		4		5	6	7	8		9
			Equipment and materials supplied by the customer										
		1	Devices control and fire-protection	"Granit-2"					set.	1			
		2	Аккмуляторная-батарея 12В, 7Ачас						un.	1			
		3	Smoke detector	IP-212-3SU					un.	17			
		4	Fire detector manual	IPR-3SU					un.	2			
		5	Siren light 12V	Table"Exit"					un.	3			
		6	12V siren sound	"Mayak-12-3"					un.	2			
		7	Loop control device	UKSH					un.	2			
		8	Universal junction box	UK-2P					un.	9			
		9	Gipky cord with twisted with PVC insulation	SHVVP 2x0,75					m.	35			
;;		10	Cable "twisted pair"	KSРэнг-FRLS-2x0,5					m.	100			,
Lогласованно 		11	Cable	PVC-3X1,5					m.	25			
L02/IQ		12											
		13											
		14											
1		15											
	28 . UHĎ S . UHĎ												
	Взам.п												
+				,									
	J dama								14-RFQ-UNDP-CP-KU				FA. Spec
	Подпись и дама				dim. Q-ty	Page № doc.	Signature		ruction of 5 addition Choilobkamar villag	nal classrooms e, Chubek jam	s in secondai oat, Hamado	y school ni district	N 49 of t.
-					GIP	M. Shamsov			Cabaal for F 15		Page	Stage	Pages
	nodn.				GAP	A. Pochoev			School for 5 clfss-r	UOMS	P	1 ate Buisnes	1 ssman
:	Инб.№поdп.				Developed	Jononov A			Specification			afe Buisnes slam Pocho XT-23 Nº	
L									форма	m			

ЧУМХУРИИ ТОЧИКИСТОН -- REPUBLIC OF TAJIKISTAN

Private Buisnessman Aslam Pochoev



72-2014-RFQ-UNDP-CP-KUL-LITACA-@

PROJECT WORKING DESIGN

Construction of 5 additional classrooms in secondary school N 49 of Choilobkamar village, Chubek jamoat, Hamadoni district.

ALBUM

H3C - external electrical networks

	<u> </u>	tatement of working drawings of the main set		_
sheet		Description		note
1	Common data			
2	Intra-network 0.4 k	/. Design scheme of cable networks		
3	Specifications			
	<u>Refe</u>	rence Statement and accompanying documents		
	Denotement	Description		note
		<u>Reference documents</u>		
	тп. 4. 407–185	Rules for the Construction of electric installa	tions	
	5. 407–83	Cabling voltage up to 35 kV transchee		
	5. 407–101			
	5. 407-129	<u>Documents attached</u>		
		Equipment Specifications and materialls		
				2 sheets
		The main parameters of the project		
	Des	cription	indicator	note
٨	1ains voltage, W		380/220	
C	ategory reliability of power	supply	//	
E	stimated power, kW		4,464	
C	alculation of the current, A		6,78	
(oefficient of power		0,92	

COMMON NOTES

Electrical networks 10 and 0.4 kW for working project "Construction of 5 additional classrooms in school number 49 Choylobkamar village, Jamoat Chubek, Hamadoni" performed according to

a) TC-technical conditions

- b) General Plan
- 2. Projected network of 0.4 kW from existing transformer substation to the PR-№1 perform cable brand APVVng-4x6 in the ground at a depth of 0.7 m from the ground surface to the pastels of loose soil. From the building exterior lighting cable brand APVVng-4x4 in the ground at a depth of 0.7 m from the surface to the pastels of loose soil.
- 3. From the boiler room of the building to perform cable brand APVVng-4x4 in the ground at a depth of 0.7 m from the surface to the pastels of loose soil.
- 3. At the intersection of cable lines other cables, they must be separated by a layer of soil thickness not less than 0.5 m.
- 4. At the intersection of cable exits for motor vehicles in the yard cable ducts and heating pipes, electrical wiring must be done in the asbestos cement pipes D = 100mm.
- 5. When laying cables in the greenery of the distance from the cable to the trunks of trees should be at least 2 meters, with bushes allowed umenschit to 0.75 m.
- 6. Coverage of the territory of the proposed facility to perform the type of lamp lamps park type Bugatti, Park 5007 Art / Å
- 7. Management of outdoor lighting performed from the building.
- 8. All electrical work carried out according to PUE, PTE and PTB

The project was developed in accordance with the applicable rules and provide for measures to ensure the explosive and fire safety at exploitation facilities.

Chief engineer of the project

Shamsov M

				72–2014–RFQ-UNDP-CP-KUL-LITACA-@	30.						
/ Page	№ doc.	Signature	Data	Construction of 5 additional classrooms in secondary school N 49 of Choilobkamar village, Chubek jamoat, Hamadoni district.							
					Page	Stage	Pages				
				School for 5 clfss-rooms	WD	1	2				
Jono	nov A			Common data	Private Buisnessman Aslam Pochoev		ev				
_	A. Po	M. Shamsov A. Pochoev	M. Shamsov A. Pochoev	M. Shamsov A. Pochoev	Choilobkamar village, Chubek jamo M. Shamsov A. Pochoev Choilobkamar village, Chubek jamo School for 5 clfss-rooms	Choilobkamar village, Chubek jamoat, Hamac Page M. Shamsov A. Pochoev G. Jononov A. Common data	Choilobkamar village, Chubek jamoat, Hamadoni district Page Nº doc. Signature Data M. Shamsov School for 5 clfss-rooms WD 1 Private Buisnes Aslam Porthe				

Positio	ion	Name and technical characteristics	Type, make, designation of the document, interviewee sheet	Equipment co products, mate	de, rials	Plant manufac	turer	Maes. unit	Q-ty	weight units kg	Remarks
1		2	3	4		5		6	7	8	9
		<u>Электрические сети 0,4 кВ Electric 0.4 kV network</u>									
1	!	Power cable with aluminum conductor cross-section 4x6mm ²	AP VVng-4x6					m.	110		
2	!	Power cable with aluminum conductor cross-section 4x4mm²	APVVng-4x4					m.	45		
3	!	Power cable with aluminum conductor cross-section 3x4mm²	APVVng-3x4					m.	55		
4	,	Floor lamp park	Bugatti, Park 5007 Art / R (черный)					UN.	5		
5	,	energy saving lamps, 20 W	YPZ 220/20-3U 20					UN.	10		
6	,	Cable pointer trail						UN.	3		
7	,	Connection box	PK-1					un.	5		
8	,	Asbestos cement pipes D = 100mm.						m.	4		
9											
11	,										
12	,										
13	,										
14											
15	;										
16	;										
17	,										
18	,										
			·				72 201/ DEO	וואחס רס עו	II LITACA @		ExL. ES
			rhm	dim 0-ty Page № doc.			72-2014-RFQ-UNDP-CP-KUL-LITACA-@ Construction of 5 additional classrooms in secondary sch Choilobkamar village, Chubek jamoat, Hamadoni dis				chool N 49 of
			uni	1		Daid				Page St	age Pages
				GIP M. Shari GAP A. Poch			School	School for 5 clfss-rooms			1 1
			De	veloped Jonono	v A		Specifications		Private Buisnessman Aslam Pochoev License XT-23 №0000060		

