150752-ONE LINER PROVISION FOR IMPROVEMENT & DEVELOPMENT OF TECHNICAL EDUCATION ADP.NO553 FY 2019-20

Sub Project: **Establishment of Govt Technical & Vocational Centre in Rented Building & Procurement of Equipment / Machinery &Furniture atMaidan, Dir Lower**

Establishment of Govt Technical & Vocational Centre in Rented Building & Procurement of Equipment / Machinery & Furniture at Maidan, Dir Lower

Administrative Department
**Industries, Commerce and Technical Education Department
Government: of Khyber Pakhktunkhwa.**

Executing Authority
KHYBER PAKHTUNKHWA TECHNICAL EDUCATION AND VOCATIONAL TRAINING AUTHORITY

Summary of the Cost Estimate.

S.No	Items/Description	Details
3	Information Technology (Equipment's & Machinery)	Annex-A2
4	Land Surveying (Equipment's & Machinery)	Annex-A3
5	Civil Drafting (Equipment's & Machinery)	Annex-A4
6	Electrical Trade (Equipment's & Machinery)	Annex-A5

Annexure-A2
Information Technology Computer and equipment's list

S#	Specifications	Qty
1	Processor: 10th Generation Intel® Core™ i5-10400, 12 MB Cache, 6 Core, 12 Threads, 2.9 GHz to 4.3 GHz. Chipset: Intel B460 chipset or higher Memory: 8GB - DDR4, 2666MHz Hard Drive: 1TB 7200RPM 3.5" SATA HDD Optical Drive: 9.5 mm Slimline DVD +/- RW Graphics Card: Intel® UHD Graphics 630 with shared graphics memory or higher Communication: Gigabit Ethernet controller 10/100/1000 (RJ45) Ports: 2 USB 2.0(front), 2 USB 3.2 Gen 1 Type-A (front), 1 HDMI, 1 VGA 2 USB 3.2 Gen 1 Type-A (rear), 2 USB 2.0(rear), 1 RJ-45 Ethernet Wireless: Intel® Wireless-AC 3165 802.11ac 1x1 + Bluetooth 4.2 or higher Keyboard: USB Keyboard and Mouse Antivirus with 1 year subscription Display: 18.5" LED Warranty: 3-years Provision of Manufacturer / Distributor authorization letter in the name of undersigned is mandatory.	25
2	**MULTIFUNCTIONAL PRINTERS** **Functions: PRINT/SCANNER/COPY/FAX** **PRINTER TECHNOLOGY:** Laser **CONNECTIVITY, STANDARD:** 1 Hi-Speed USB 2.0, Fast Ethernet 10/100Base-TX **MOBILE PRINTING CAPABILITY:** Yes **WIRELESS:** Yes **DISPLAY:** 3.0-in (7.62-cm) touch screen CGD **PRINT SPEED BLACK:** Up to 22 PPM **PRINT QUALITY:** Up to 600 x 600 dpi (with HP Fast Res 1200)	1

4		MULTIMEDIA PROJECTORS		1
	1.	**MULTIMEDIA PROJECTOR with motorized Screen system.**	1	
		Type of display — Poly-silicon TFT active matrix		
		Resolution — BrightLink 480i:		
		1024 × 768 pixels (XGA)		
		BrightLink 475Wi/485Wi:		
		1280 × 800 pixels (WXGA)		
		Lens — F= 1.80		
		Focal length: 3.71 mm		
		Color reproduction — Full color, 16.77 million colors		
		Brightness — BrightLink 475Wi:		
		Normal Power Consumption mode:		
		White light output 2600 lumens (ISO 21118 standard)		
		Color light output 2600 lumens		
		ECO Power Consumption mode:		
		White light output 1800 lumens (ISO 21118 standard)		
		BrightLink 480i:		
		Normal Power Consumption mode:		
		White light output 3000 lumens (ISO 21118 standard)		
		Color light output 3000 lumens		
		ECO Power Consumption mode:		
		White light output 1800 lumens (ISO 21118 standard)		
		BrightLink 485Wi:		
		Normal Power Consumption mode:		
		White light output 3100 lumens (ISO		

			21118 standard)		
			Color light output 3100 lumens		
			ECO Power Consumption mode:		
			White light output 1800 lumens (ISO 21118 standard)		
		Contrast ratio	3000 to 1 with Auto Iris on and Normal Power Consumption mode		
		Image size	BrightLink 480i:		
			55.9 to 93.2 inches (1.42 to 2.37 m)		
			BrightLink 475Wi/485Wi:		
			60 to 100 inches (1.52 to 2.54 m)		
		Projection distance	13.7 to 23.5 inches (0.35 to 0.60 m)		
		Projection methods	Front, wall or ceiling-mounted		
		Optical aspect ratio (width-to-height)	BrightLink 480i: 4:3 BrightLink 475Wi/485Wi: 16:10		
		Focus adjustment	Manual		
		Zoom adjustment	Digital		
		Zoom ratio (Tele-to-Wide)	1:1.35		
		Internal sound system	16 W monaural		
		Noise level	35 dB (Normal Power Consumption mode) 28 dB (ECO Power Consumption mode)		
		Keystone correction angle	Vertical: ± 5⁰ Horizontal: ± 5⁰		
		USB-B port compatibility	USB 1.1 and 2.0 compliant for USB display or external mouse		

		USB-A port compatibility	One USB 1.1 and 2.0 compliant port for USB device input or EPSON document camera display		

Type of display	Poly-silicon TFT active matrix
Resolution	BrightLink 480i:
	1024 × 768 pixels (XGA)
	BrightLink 475Wi/485Wi:
	1280 × 800 pixels (WXGA)
Lens	F= 1.80
	Focal length: 3.71 mm
Color reproduction	Full color, 16.77 million colors
Brightness	BrightLink 475Wi:
	Normal Power Consumption mode:
	White light output 2600 lumens (ISO 21118 standard)
	Color light output 2600 lumens
	ECO Power Consumption mode:
	White light output 1800 lumens (ISO 21118 standard)
	BrightLink 480i:
	Normal Power Consumption mode:
	White light output 3000 lumens (ISO 21118 standard)
	Color light output 3000 lumens
	ECO Power Consumption mode:
	White light output 1800 lumens (ISO 21118 standard)
	BrightLink 485Wi:
	Normal Power Consumption mode:

	White light output 3100 lumens (ISO 21118 standard)	
	Color light output 3100 lumens	
	ECO Power Consumption mode:	
	White light output 1800 lumens (ISO 21118 standard)	
Contrast ratio	3000 to 1 with Auto Iris on and Normal Power Consumption mode	
Image size	BrightLink 480i:	
	55.9 to 93.2 inches (1.42 to 2.37 m)	
	BrightLink 475Wi/485Wi:	
	60 to 100 inches (1.52 to 2.54 m)	
Projection distance	13.7 to 23.5 inches (0.35 to 0.60 m)	
Projection methods	Front, wall or ceiling-mounted	
Optical aspect ratio	BrightLink 480i:	
(width-to-height)	4:3	
	BrightLink 475Wi/485Wi:	
	16:10	
Focus adjustment	Manual	
Zoom adjustment	Digital	
Zoom ratio	1:1.35	
(Tele-to-Wide)		
Internal sound system	16 W monaural	
Noise level	35 dB (Normal Power Consumption mode)	
	28 dB (ECO Power Consumption mode)	
Keystone correction angle	Vertical: ± 5º	
	Horizontal: ± 5º	
USB-B port compatibility	USB 1.1 and 2.0 compliant for USB display or external mouse	
USB-A port compatibility	One USB 1.1 and 2.0 compliant port for USB device input or document camera display	

SURVEYING& LEVELLING

S.NO	Name of Items/Specification	Qty
1	Ranging Rods	5
2	Engineer's chain	5
3	Gunter's chain	5
4	Metric chain	4
5	Cross staff	5
6	line ranger	5
7	Optical square,	5
8	Measuring tapes	5
9	Prismatic compass with stand.	5
10	Surveyor's compass	5
11	Plane table with all accessories	5
12	AUTOMATIC LEVEL SEPCIFICATION: I)Magnification 32 x ii)Aperture…………………….45 mm iii)Compensator range………….+12' ACCESSORIES: a) Instrument b) Instructional manual c) Plumb Bob d) Lens cap e) Heavy Duty Aluminum Tripod Stand f) Double sided Aluminum Staff pole.	2
13	LEVELING STAFF. Aluminum folding type.	10
14	LASER LEVEL.	01
15	ELECTRONIC THEODOLITE WITH ALL ACCESSORIES. Accuracy 5 sec Aperture 45 mm Angle measuring mode Absolute encoder Tilt sensor Automatic vertical compensation Display 5 sec/ 2 sec Magnification 30x Measurements 175mmxL170xH334mm ACCESSORIES. Lens cap Lens brush Battery case Instructional Manual Carrying case	02

	Aluminum tripod.	
16	**TOTAL STATION WITH ALL ACCESSORIES** **Electronic total station which combines in one compact unit a 5-second digital read out with an electronic distance meter, with the following specification:-** **Angle Accuracy…………… 5 Seconds** **Plummet………………… Laser** **Guide light………………… In Built** **On Board software….. Power Tope light installed** **Distance with Single Prism. 7 KM** **Distance with ripple Prism. 9 KM** **In Built Internal Memory: 10,000 Points** **Auto: Atmospheric Correction: In built.** **Key Board ……………. Alpha Numeric** **Reflector- less range... 500 M and above** **TS shield. (Telecommunicated)** **SD Card………………………Built in** **USB Slot……………………Built in** **ACCESSORIES:** **a)Battery Pack** **b)Battery Adopter** **c)Plumb Bob** **d)A set of Tools.** **e)Rain Cover** **f)Carrying Case** **g)Operational Manual** **h)Heavy Duty Aluminum Tripod** **i)Single Prism** **j)Prism Holder** **k)Coaxial Target Plate** **l)Prism Pole** **Or** **Equivalent**	01
17	**GPS (Garmin).**	02

Annexure-A4		
Civil Drafting Lab		
S.No	**Name of Items & Specification**	**Qty**
1	**Amonia Printing Machine (Complete Set)** semi-automatic Model K-3/s haveving 3 tube of 140 watts	01

3	**Drafting Machine with Scale** 360 degree size 1100x650 mm	01
6	**scale card**	10
7	**Diagonal Scale Card**	10
10	DRAWING TABLES Adjustable Drawing Table with Water Proof Board 55x80x1.2cm	02
11	Drawing Board Wooden 24 x36" Stander Size	20
12	Drawing Board Stand 3 X 4'Stander Size	20
13	Stools	25
14	METER RULER (STEEL) Features Pocket Clip Material Stainless Steel Brand General Supply Color Stainless Steel Manufacturer Part Number 300/1 Assembled Product Weight 0.057 lb Assembled Product Dimensions (L x W x H) 6.00 x 0.50 x 0.23 Inches	05

15	**A0 Size Coloured Plotter Cum Scanner Cum Copier**		01
	Name	Wide format Coloured Plotter Cum Copier Cum Scanner Cum Copier- A0 size with introductory print cartridges and 5 set of spare cartridges	
	Function	Print, copy, scan	
	Print	Speed - One A0 Sheet Per Minute Resolution - 2400 x 1200 dpi Line accuracy- $\pm$ 0.1% Applications - Line drawings, Renderings, Presentations, Maps, Photographs	
	Print Applications	WINDOWS and LINUX APPLICATIONS	
	Media Type	Paper, tracing, film and coated media, bond and coated paper, technical paper, photographic paper	
	Media Weight	60-280 GSM	
	Media	Input: Two automatic roll feeds [core dia 2"], automatic roll switching, manual cut sheet feeding Output: Output stacking tray upto 50 sheets stacking capacity, media bin, automatic cutter Size: Roll width : 279 to 914 mm Sheets: A4, A3, A2, A1, A0 size [untrimmed]	
	Scan	Straight through scan paper for sheet and cardboards Speed 190 mm/s for grayscale and 62 mm/s for colour [minimum] Resolution 600 dpi	

		Calibration sheet to be included in the scope of supply	
	Scan format	jpeg, pdf, tiff	
	Scan to	File, email, USB, HDD, network folder, FTP	
	Copy	25 to 400% reduction/enlargement at 1% increment Features for setting copy quality, copy colour, paper type, paper output, background removal, blueprint support, job queue storage mode	
	Memory	128 GB (virtual), 500 GB hard disk minimum	
	Connectivity	High-Speed USB (USB 2.0 compatible), Gigabit Ethernet (1000 Base-T)	
	Drivers	Drivers for Windows and LINUX operating systems; PostScriptPDF drivers for Windows and Linux	
	Preloaded Software's	Like Scan To File, Print To File etc.	
	Power supply	Input voltage 220 VAC, 50 Hz	
	Environmental Conditions	Temperature : 5 to 40˚C Operating humidity range : 20 to 80% RH	
	Warranty	Two year Comprehensive on-site warranty	
18	**Pyramids set complete**		01
19	**cone & conic section set complete**		01
20	**INVARE TAPE** Made of alloy of Nickle 36% and Steel 64% . 6mm wide, 30m, 50m, 100m length.		02
25	**Paper Cutter Machine 24"**		10
27	**Measuring Tape 100 feet** Leather		05
28	**Technical Pen Reprograph** 8 Pcs set imported Set		05
30	**Instruments Box** Special Compass Set		05
31	**Panta Graph**		05
32	**Plani Meter**		02
33	**Mini- Drafter**		05
34	**Steel Ruler (01 Meter)**		05
36	**Triangular file Scale** 12" Plastic		20

Annexure-A5

General Electrician Trade

Sr. No.	Name of Tools / Equipment	Quantity
1.	Adjustable ladder, Aluminium 6 Ft	2 Nos
2.	Ammeter (Panel type 4″ x 4″) 0-30-AC 50 HZ	20 Nos
3.	Bearing puller(3 & 4 inches)	(5+5) Nos
4.	Bench Vice 5″	05 Nos
5.	Center punch	10 Nos
6.	Chisels 6″, 12″	10 Nos each
7.	Circuit Breaker (Single, double, three pole)	10 Nos
8.	Drum Switch ON / OFF, REV / FOR, Star / Delta	10 Nos. Each
9.	Dust brush / File brush	10 Nos each
10.	Earth Resistance Tester	5 Nos
11.	Electric soldering iron 150 watt	05 Nos
12.	Farmer chisels 8″.	05 Nos
13.	Files (Flat) (36x22x13)cm	10 Nos each
14.	Files (Half round) 200 x 2 (36x22x14)	10 Nos
15.	Files (Raps cut) 150	10 Nos
16.	Files (Round) (30x25x14)cm	10 Nos
17.	Files (Triangular) 150 x 2(25x22x17)cm	10 Nos
18.	Fuse (15A, 25-30A)	10 Nos
19.	Hack saws	10 Nos
20.	Hammers 200 grams	10 Nos
21.	Hand Electric Drill Machine with hammering 0-13 mm	02 Nos
22.	High insulation rubber hand gloves	20 Nos
23.	Insulated long nose pliers with side cutter	10 Nos
24.	Insulated pliers with side cutter	10 Nos
25.	Insulated wire cutter	10 Nos
26.	Insulation Remover 150 mm	10 Nos
27.	Iron hammer 500 grm	10 Nos
28.	Jigsaw machine portable	1 No
29.	Knife(6 inches)	10 Nos
30.	Magnetic Contactors 2 + 2 220 Volts / 10 A 50Hz	10 Nos.
31.	Measuring tap 3m	10 Nos
32.	Motor Protection Switch Three Phase	10 Nos.
33.	Multi-meter (Analog)	05 Nos
34.	Multi-meter (Digital)	05 Nos
35.	Neon phase tester light duty pocket size	15 Nos
36.	Overload Relay 0.5 – 3.0 Amp	10 Nos.
37.	Pedestal drill machine(1/2 inch)	01 Nos
38.	Philips screw driver No 1, 2, 3.	10 Nos each
39.	Power factor meter	2 Nos
40.	Push Button Single Way / Two Way / Three Way	20 Nos. Each
41.	RLC Tester	02 Nos
42.	Rubber hammer	05 Nos
43.	Scissor 6	05 Nos
44.	Screw Driver 4″, 6″, 8″	10 Nos each
45.	Scriber	10 Nos

46.	Single phase energy meter 220V /10-20A	05 Nos
47.	Single Phase Motor 220 Volts 50Hz ½ HP	05 Nos.
48.	Steel foot rule.	10 Nos
49.	Test boy	10 Nos
50.	Three phase energy meter 30 A	05 Nos
51.	Three Phase Motor 380 Volts 50Hz 2 HP	05 Nos
52.	Tong tester meter	10 Nos
53.	Tri square 150 x 100 mm	10 Nos
54.	Variable Power Supply 0-24V, 5A	05 Nos
55.	Vernier caliper 150 mm	10 Nos
56.	Vice clamps	10 Nos
57.	Volt meter (Panel type 4″ x 4″) 0-300V-AC 50 HZ	10 Nos
58.	Volt meter (Panel type 4″ x 4″) 0-600V-AC 50 HZ	10 Nos
59.	Wire stripper	05 Nos
60.	Wooden saw 300 mm	10 Nos