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1. Member List of the Study Team

1-1. Mission 1

livame	Assigned Role or Sector	Period of survey	Job title, Company name
$IMIr K en 11 K \Delta M/\Delta Z(1)H$		1 /	Matsuda Consultants International Co., Ltd.
Ms. Shoko SEYAMA	Architectural Design 1	March 25 to April 7, 2018	Fukunaga Architects- Engineers
Mr. Takahiro TANABE		March 25 to April 7, 2018	PADECO Co. Ltd.

1-2. Mission 2

Name	Assigned Role or Sector	Period of survey	Job title, Company name
Ms. Chiharu MORITA	Team Leader	May 20 to May 26, 2018	Director Social Security Team Higher Education and Social Security Group Human Development Department, JICA
Mr.Tomohiro FUDOUTA	Project Coordinator	May 20 to May 26, 2018	Deputy Director Technical and Higher Education Team and Social Security Team Higher Education and Social Security Group Human Development Department, JICA
Mr. Kenji KAWAZOE	Chief Consultant/ Architectural Plan	May 20 to June 9, 2018	Matsuda Consultants International Co., Ltd.
Mr. Tomohiro TAMAKI	Deputy Chief Consultant/ Equipment Plan	May 20 to June 9, 2018	INTEM Consulting Inc.
Ms. Shoko SEYAMA	Architectural Design 1	May 27 to June 9, 2018	Fukunaga Architects- Engineers
Mr. Reo ITO	Architectural Design 2	May 20 to June 9, 2018	Yamashita Sekkei Inc.
Mr. Takahiro TANABE	TVET/ Industrial Trend and Demand	May 20 to June 9, 2018	PADECO Co. Ltd.
Mr. Hideharu TANNO	Mechanical and Electrical Design	May 27 to June 9, 2018	Yamashita Sekkei Inc.
Mr. Tatsuji TSUCHIYA	Construction Program/ Cost Design	May 20 to June 9, 2018	Matsuda Consultants International Co., Ltd.

1-3. Mission 3

Name	Assigned Role or Sector	Period of survey	Job title, Company name
Ms. Chiharu MORITA	Team Leader	March 10 to March 16, 2019	Director Social Security Team Higher Education and Social Security Group Human Development Department, JICA
Mr.Tomohiro FUDOUTA	Project Coordinator	March 10 to March 16, 2019	Deputy Director Technical and Higher Education Team and Social Security Team Higher Education and Social Security Group Human Development Department, JICA
Mr. Kenji KAWAZOE	Chief Consultant/ Architectural Plan	March 10 to March 16, 2019	Matsuda Consultants International Co., Ltd.
Mr. Tomohiro TAMAKI	Deputy Chief Consultant/ Equipment Plan	March 10 to March 16, 2019	INTEM Consulting Inc.
Mr. Reo ITO	Architectural Design 2	March 10 to March 16, 2019	Yamashita Sekkei Inc.

2. Study Schedule

2-1. Mission 1

			Chief/ Architectural Plan KAWAZOE TVET/ Industrial trend & demand TANABE		Architectural Design SEYAMA
1	3/25	Sun	NRT-RGN	11	Ŭ
2	3/26	Mon	JICA, site survey Shwepyithar	, GTI	
3	3/27	Tue	data analysis & d	ocumentation	
4	3/28	Wed	YHT, GTI Shwe	pyithar	
5	3/29	Thu	RGN-NYT MOE/ DTVET		
6	3/30	Fri	DG & Dy.DG of MOE/DTVET	DTVET	
7	3/31	Sat	data analysis & d	a annua antatian	
8	4/1	Sun	data anaiysis & d	ocumentation	
9	4/2	Mon	ADB		
	:	WIOII	MOE/DTVET, 1 NYT-RGN	technical note	NRT-RGN
10	4/3	Tue	site survey		
11	4/4	Wed	SM VTI, GTI Ins		
12	4/5	Thu	YCDC/ Water, B JICA, GTI Insein		
13	4/6	Fri	EOJ		
1.4	4 /7	C 4	RGN-		
14	4/7	Sat	NRT		

event in NYT
DTVET=Department of Technical and Vocational Education and Training

EOJ=Embassy of Japan

GTI=Government Technical Institute

JICA=JICA Myanmar

MFSD=Myanmar Fire Service Department

MOE=Ministry of Education

NYT=Naypyidaw

NRT=Narita, Tokyo

SM VTI=Singapore-Myanmar Vocational Training Institute

YCDC=Yangon City Development Committee

YESC=Yangon Electricity Supply Corporation

RGN=Yangon

YHT=Yangon Heritage Trust

HND=Haneda, Tokyo

KIX=Kansai International Airport

2-2. Mission 2

			Leader	Chief/			TVET/	Mechanical	Construction	Deputy
			MORITA	Architectural		Architectural	Industrial	& Electrical	Program/	Chief/
			Coordinator	Plan	Design 2	Design 1	trend	Design	Cost Design	Equipment
			FUDOTA	KAWAZOE	ITO	SEYAMA	TANABE	TANNO	TSUCHIYA	TAMAKI
			7	2.1	21	14	21	14	21	21
1	5/20	Sun	NRT-RGN	21	21	17	NRT-RGN	17	NRT-RGN	21
2	5/21		JICA, site survey	I			w/Kawazoe	1	w/Kawazoe	
-	0,21		GTI Shwepyitha							
			RGN-NYT	-			RGN-NYT	1		RGN-NYT
3	5/22	Tue	MOE/DTVET,	DG			w/Kawazoe		construction	w/Kawazoe
			MOE, Dy. Minis						and cost	
4	5/23	Wed	MOE/ DTVET				MOE/		survey	DTVET,
							DTVET,		-	equip ment
5	5/24	Thu	MOE/DTVET,	minutes of mee	eting	İ	management			w/Kawazoe
			NYT-RGN				& operation,			
			EOJ				TVET			
6	5/25	Fri	JICA				program			w/Kawazoe
			RGN-	site survey						Documentati
7	5/26	Sat	NRT	data analysis	&		data analysis		data analysis	&
8	5/27	Sun	KIX-RGN	documentation	n	NRT-RGN		NRT-RGN	documentatio	
9	5/28	Mon	team meeting				MOE/	w/Kawazoe	construction	w/Kawazoe
			site survey			-	DTVET		and cost	
			GTI Shwepyitha						survey	
10	5/29	Tue	GIZ	construction r	naterial		MOE/DTVE	site survey		Procurement
			w/Tanabe				NYT-RGN			and cost
11	5/30	Wed	GTI Insein			MSFD	industrial	w/Sey ama		survey
			w/Tanabe				trend &			
12	5/31	Thu	RGN-NYT	data analysis			demand			
			MOE/DTVET	documentation	n					
_	- 13		NYT-RGN							
13	6/1	Fri	team meeting			YCDC/buildi				
14	6/2	Sat	JICA, RGN- -NRT	data analys-i-	& documentat	ng, road				
	6/3	Sun	-NKI ↑ Mr.	uata anaiy sis	& documentar	IOII				
16	6/4	Mon	Mr. NOGAMI,	data analysis	Q _T	YESC	industrial	w/Sey ama	construction	Procurement
17	6/5	Tue	automobile	documentation		YCDC/water		w/Scy ailia	and cost	and cost
1 /	013	1 uc	automoone	RGN-NYT		. land	trong &		and cost	survey
18	6/6	Wed		MOE/DTVE	Γ. facilities	,	& documentat	ion		Sai vey
19	6/7	Thu		MOE/DTVE						
*	J.,	1.114		note	, , , , , , , , , , , , , , , , , , , ,					
				NYT-RGN						
20	6/8	Fri		RGN-		<u> </u>				
21	6/9	Sat		NRT						
			L							

2-3. Mission 3

			Leader MORITA Coordinator FUDOTA	Chief/ Architectural Plan KAWAZOE	Architectural Design 2 ITO	Deputy Chief/ Equipment TAMAKI
1	3/10	Sun	NRT-RGN	RGN-NYT	HND-NYT	NRT-RGN
2	3/11	Mon	RGN-NYT			Technical
			MOE/DTVET, I	DyDG		Assitance
3	3/12	Tue	MOE/ DTVET			Project
4	3/13	Wed				RGN-NYT
			MOE/DTVET			
5	3/14	Thu	MOE/DTVET, 1	minutes of mee	eting	
			NYT-RGN	NYT-RGN		
6	3/15	Fri	JICA, EOJ DTVET,		w/JICA	
			RGN-		design	RGN-
7	3/16	Sat	NRT	data analysis documentation		NRT

3. List of Parties Concerned in the Recipient Country

Section	Title	Name
Ministry of Education		
	Deputy Union Minister	Dr.Win Maw Tun
DTVET	Director General	Dr. Aye Myint
DTVET	Deputy Director General	Dr. Nay Myo Htun
DTVET/ Administration	Deputy Director General(Acting)	Dr. Moe Kyaw Thu
DTVET/ Administration	Deputy Director General(Acting)	Dr.Nyan Win Than
DTVET/ Administration	Deputy Director	U Wai Yan Ko
DTVET/ Administration	Director	Dr.Zaw Min Naing
DTVET/ Administration	Assistant Director	U Thiha Tun
DTVET/ Finance	Assistant Director	Ms. Daw Thu Zar Nwe
DTVET/ Human Resource	Director	Dr. Pyae Kyaw Thu
DTVET/ Human Resource.	Assistant Director	U Kyaw Lwin
DTVET/ Foreign Relation .	Director	Dr. Daw Thet Thet Han Yee
DTVET/ Foreign Relation .	Deputy Director	Ms. Daw Thet Thet Han Yee
DTVET/ Foreign Relation .	Assistant Director	Ms. Daw Nan Kyawt Su Htwe
DTVET/ Foreign Relation .	Assistant Director	Ms. Daw Thin Thin Chaw
DTVET/ Foreign Relation .	Assistant Director	Daw Nan Kyawt Su Htwe
DTVET/ Planning	Director	Dr. Kyaw Ze Ya Myint
DTVET/ Planning	Deputy Director	Ms. Daw Nay Nwe Aung
JMASVTI	Principal	Dr. Yan Naing Tun
JMASVTI	Vice Principal	Dr.Myo Thura.
Technical High School (Aung San)	Principal	Dr. Myo Min Thant
Technical High School (Aung San)	Vice Principal	U Aw Aw Kyaw
Technical High School (Aung San)	Trainer of mechanical engineering	U Maung Maung Naing
Technical High School (Aung San)	Trainer of electrical engineering	Daw Nan Hnin Nwe Oo
Technical High School (Aung San)	Assistant trainer of electrical engineering	U Zaw Myo Aung
GTI Insein	Principal	U Myat Ko
GTI Insein	Associate Professor	U Min Min Oo
Singapore-Myanmar Vocationa	l Training Institute (SMVTI)	
	Vice Principal (Operation)	Dr. Thein Thein Aye
	Vice Principal (Academic)	Dr. Su Su Win
	Manager, Admin, IT&Operations	Dr. Aye Thant
Yangon City Development Con	nmittee (YCDC)	
City Planning & Land Administration	Head of Department	U Than Lwin oo
City Planning & Land Administration	Deputy Head of Department	Daw Tin Tin Kyi

Section	Title	Name
City Planning & Land Administration	Assistant Head of Department	Daw Kaying Mae Nyint
Water & Sanitation	Deputy Head (Director)	U Myo Thein
Water & Sanitation	Assistant Chief Engineer	U Khin Maung Htoo
Water & Sanitation	Assistant Chief Engineer	Daw Thwet Naing
Water & Sanitation	Executive Engineer	Daw Aye Mar
Water & Sanitation (Insein Town		-
ship)	Executive Engineer	U Nay Lynn
Water & Sanitation (Insein Town ship)	Senior Assistant Engineer	Daw Nyein Aung
Engineering (Building)	Assistant Chief Engineer	Daw Maw Kgi
Engineering (Building)	Executive Engineer	Daw Khn Then Liwn
Engineering (Building)	Assistant Engineer	U Htut Khaung Win
Engineering (Building)	Executive Engineer	U Thurein Win Myin
Engineering (Building)	Deputy General Manager	Daw Sun Win
Engineering (Building)	Deputy General Manager	U Khin Maung Thwin
Engineering (Building)	Deputy General Manager	U Yin Htun Win
Myanmar Fire Service Department	Director	U Kyaw Thura
Myanmar Fire Service		
Department		U Sai Okenn Kyaw
Yangon Electricity Supply Corp	oration (YESC)	
	Assistant General Manager	U Soe Moe
	Assistant General Manager	U Maung Thant Sin
	Assistant General Manager	U Thaik Htun Maung
Engineer Section	Manager	U Myo Myint Aung
Engineer Section	Director	U Kyaw Thura
Engineer Section		U Sai Okenn Kyaw
Private firms		
HTS	Service Technical Trainer	Mr. Kohei Mizoguchi
Mitsubishi Motors	After Sales Manager	Mr. Richard Steel
MAZDA	Workshop Manager	Mr. Thein Htike Lin
HONDA	General Manager	Mr. Hiroyoshi Ueno
HONDA	Automobile Services Manager	Mr. Thein Soe
TOKYO AUTO SERVICES	Director	Mr. Htin Lin
TOKYO AUTO SERVICES	Operation Manager	Mr. Htet Aung
NAING AUTO SERVICE	General Manager	Mr. Thet Naing
NAING AUTO SERVICE	C	Mr. Kyaw Naing
NISSAN E-GARAGE AUTO SERVICES & SPARE PARTS	Business Development manager	Mr. Cheong Ken Keong
UNITED DESIRE COMPANY	Operation Manager	Mr. Thet Tun Aung
UNITED DESIRE COMPANY	Business Development Manager	Mr. Ye Zaw
MMM Myanmar Automobile	Director	Mr. Than Aye Maung
MMM Myanmar Automobile	Director	Mr. Myo Myint
SUPER MEGA	Director	Mr. Khin Maung Win
SINE POWER	Managing Director	Mr. Saw Lin
SINE FOWER	Ivianaging Director	MI. Saw LIII

Section	Title	Name
INTERNATIONAL CONTACT ENGINEERING	Manager	Ms. Phyu Myint Soe
MTKK Electrical Services	Managing Director	Mr. U Kyaw Oo
MTKK Electrical Services	Director, Electrical Power	Mr. Thuya Kaung San
Myanmar Hendlix Utility	Managing Director	Mr. U Kaung Szi Thu
Myanmar Hendlix Utility	Business Development Manager	Mr. U Sein Moe
Embassy of Japan in Myanmar		
	Counsellor	Mr. Kazuyuki Takimi
	Second Secretary	Mr. Yuta Isozaki
JICA		
Myanmar Office	Chief Representative	Mr. Masayuki Karasawa
Myanmar Office	Senior Representative	Mr. Nobuo Iwai
Myanmar Office	Project Formulation Advisor	Ms. Kumiko Iwasawa
Myanmar Office	TVET Advisor	Mr. Shinichiro Nakahara
Myanmar Office	Assistant Program Officer	Ms. Thet Su Kyi
Project for Quality Improvement in the TVET Program	Chief Advisor	Mr. Yorio Kanemaru
Project for Quality Improvement in the TVET Program	Project Coordinator	Mr. Noriaki Tanaka
Project for Quality Improvement in the TVET Program	Automotive Engineering	Mr. Satoru Nogami
Project for Quality Improvement in the TVET Program	Electrical	Mr. Yoshikazu Iwasaki
Project for National Skills Standards (NSS) Development	Chief Advisor	Mr. Ryo Yamada
Project for National Skills Standards (NSS) Development	Project Coordinator	Mr. Norifumi Tomita

4. Minutes of Discussions (M/D)

- 4-1. Minutes of Discussion for Mission 2
- 4-2. Minutes of Discussion for Mission 3
- 4-3. Technical Note for Mission 1
- 4-4. Technical Note for Mission 2

Minutes of Discussions

on the Preparatory Survey for the Project for Establishment of Japan Myanmar Vocational Training Institute (Aung San)

In response to the request from the Government of The Republic of the Union of Myanmar (hereinafter referred to as "Myanmar"), Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Survey Team for the Outline Design (hereinafter referred to as "the Team") of the Project for Establishment of Japan Myanmar Vocational Training Institute (Aung San) (hereinafter referred to as "the Project") to Myanmar. The Team held a series of discussions with the officials of the Government of Myanmar and conducted a field survey. In the course of the discussions, both sides have confirmed the main items described in the attached sheets.

Nay Pyi Taw, 24th May, 2018

Chiharu MORITA

Leader

Preparatory Survey Team

Japan International Cooperation Agency

Japan

Dr. Aye Myint

Director General

Department of Technical and Vocational

Education and Training, Ministry of Education

Myanmar

ATTACHMENT

1. Objective of the Project

The objective of the Project is to establish Japan Myanmar Vocational Training Institute (Aung San) (hereinafter referred to as "JMVTI") for automobile maintenance course and electrical course at the former Aung San Technical High School site through building facilities and procuring equipment for the both courses of the TVET institute with Japanese experience and know-how about other TVET institute.

2. Title of the Preparatory Survey

Both sides confirmed the title of the Preparatory Survey as "the Preparatory Survey for the Project for Establishment of Japan Myanmar Vocational Training Institute (Aung San)".

3. Project site

Both sides confirmed that the zone A and C as shown in Annex 1 are the Project site, the zone A is for educational function and the zone C is for the hostels of students. Landscape of Park zone can be proposed for better use.

4. Responsible authority for the Project

Both sides confirmed the authorities responsible for the Project are as follows:

The Department of TVET of Ministry of Education will be the executing agency for the Project (hereinafter referred to as "the Executing Agency"). The Executing Agency shall coordinate with all the relevant authorities to ensure smooth implementation of the Project and ensure that the undertakings for the Project shall be managed by relevant authorities properly and on time. The organization charts are shown in Annex 2.

5. Items requested by the Government of Myanmar

- 5-1. As a result of discussions, both sides confirmed that the items requested by the Government of Myanmar are as follows:
 - The component of facility was confirmed as shown in Annex 4.
 - > The equipment list was confirmed as shown in Annex 5.
- 5-2. JICA will assess the feasibility of the above requested items through the survey and will report the findings to the Government of Japan. The final scope of the



Project will be decided by the Government of Japan.

6. Procedures and Basic Principles of Japanese Grant

- 6-1. The Myanmar side agreed that the procedures and basic principles of Japanese Grant as described in Annex 6 shall be applied to the Project.

 As for the monitoring of the implementation of the Project, JICA requires Myanmar side to submit the Project Monitoring Report, the form of which is attached as Annex 7.
- 6-2. The Myanmar side agreed to take the necessary measures, as described in Annex 8, for smooth implementation of the Project. The contents of the Annex 8 will be elaborated and refined during the Preparatory Survey and be agreed in the mission dispatched for explanation of the Draft Preparatory Survey Report.

 The contents of Annex 8 will be updated as the Preparatory Survey progresses, and eventually, will be used as an attachment to the Grant Agreement.

7. Schedule of the Survey

- 7-1. The implementation schedule of preparatory survey and detailed design work was confirmed as shown in Annex 3.
- 7-2. The team will propose draft layout plan to Myanmar side by July 2018.
- 7-3. JICA will prepare a draft Preparatory Survey Report in English and dispatch a mission to Myanmar in order to explain its contents around January 2019.
- 7-4. If the contents of the draft Preparatory Survey Report is accepted and the undertakings for the Project are fully agreed by the Myanmar side, JICA will finalize the Preparatory Survey Report and send it to Myanmar around May 2019.
- 7-5. The above schedule is tentative and subject to change.

8. Environmental and Social Considerations

- 8-1. Myanmar side will confirm the necessity of IEE or EIA by June 7th 2018.
- 8-2. The Myanmar side confirmed to give due environmental and social considerations before and during implementation, and after completion of the Project, in accordance with the JICA Guidelines for Environmental and Social Considerations (April, 2010).
- 8-3. The Project is categorized as "C" from the following considerations:

 Not located in a sensitive area, nor has it sensitive characteristics, nor falls it into sensitive sectors under the Guidelines, and its potential adverse impacts on the

environment are not likely to be significant.

The Myanmar side confirmed to conduct the necessary procedures concerning the environmental assessment (including stakeholder meetings, Environmental Impact Assessment (EIA) /Initial Environmental Examination (IEE) and information disclosure, etc.) and make EIA/IEE report of the Project. The EIA/IEE approval shall be received from the responsible authorities and submitted to JICA by April 2019.

9. Other Relevant Issues

- 9-1. The Team explained that the former main building in zone A was designed by old building code and it is difficult to renovate this building to meet the current seismic standard. The Team also explained that the structure of the entrance hall and the open corridor are damaged seriously due to lack of maintenance for long period and suggested Ministry of Education not to use the upper floor fully.
- 9-2. the Executing Agency will obtain approval from Yangon Regional Government for demolishing the existing buildings in zone A. The existing buildings in zone A will be demolished by Myanmar side by the end of 2018.
- 9-3. Unexploded ordnance (UXO) clearance should be done by the end of 2018. Myanmar side explained the procedure as below;

 Ministry of Education executes digging work for UXO clearance with searching by Ministry of Defense, and shall confirm the safety of all construction area up to the designated depth according to proposed foundation plans.
- 9-4. The number of students of JMVTI is forty for each course each grade. The whole number of students is 240, which is forty multiplied by two courses and three grades. Classroom lecture will be implemented with 40 students and practical training will be implemented with 20 to 40 students.
- 9-5. The Executing Agency will assign 10 teachers for each course and 4 administrative staffs for JMVTI by October 2018, beginning of Training of teacher (TOT) activities.
- 9-6. After the technical cooperation project move to zone A when new facility is established, existing workshop for the project will be continued to use for another TVET course by Myanmar side.
- 9-7. Both sides confirmed that the name of JMVTI will be changed to "Japan Myanmar Aung San Vocational Training Institute" (JMASVTI). The change of the name will be confirmed officially by the letter from JICA.



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Annex 1: Project Site

Annex 2: Organization Chart

Annex 3: Implementation Schedule

Annex 4: Component of Facility

Annex 5: Requested Equipment List

Annex 6: Japanese Grant

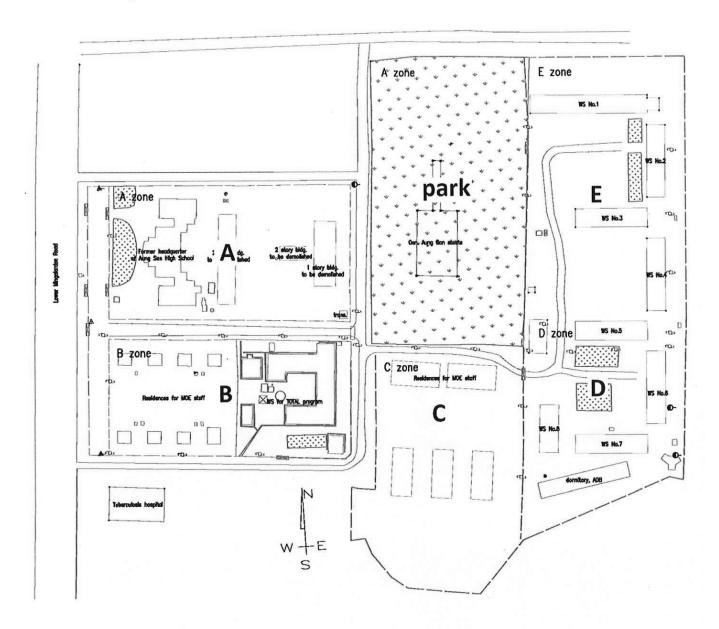
Annex 7: Project Monitoring Report (template)

Annex 8: Major Undertakings to be taken by the Government of Myanmar



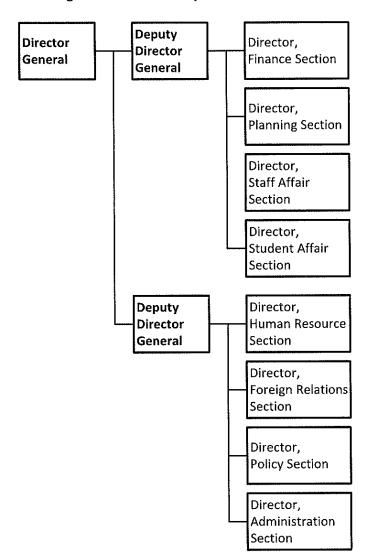
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Annex 1: Project Site





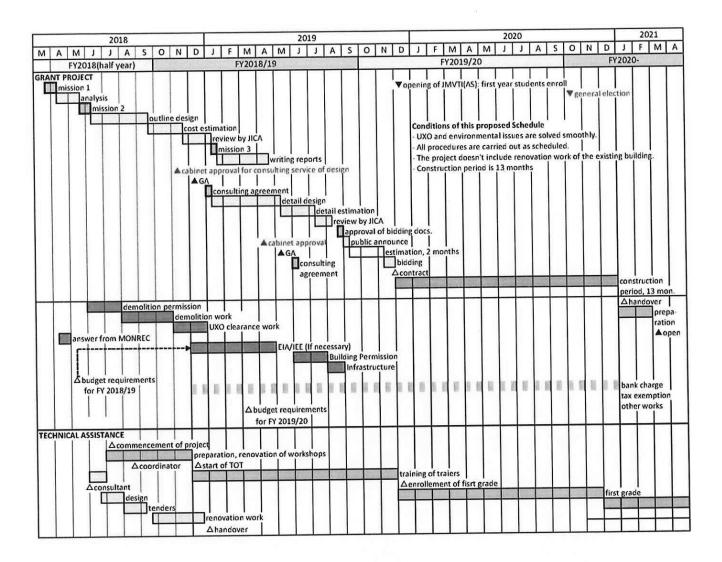
ANNEX 2: Organization chart of Department of Technical and Vocational Education and Training





A15

Annex 3: Implementation Schedule





ANNEX 4: Facility Component

	component	priority
raining	auto mechanics workshop	А
	electricity workshop	А
	classroom	А
	computer room	A
	drawing room	Α
	library	A
	physics and chemistry laboratory	В
	praying room	С
	security and control room	Α
administration	director and deputy director room	A
	administration office	Α
	health care room	В
	trainers' room	Α
	consulting room	Α
	large meeting room	Α
¥8	small meeting room	Α
	kiosk (Minchop)	С
common	assembly hall	А
	canteen	А
	hostel	В
	outdoor sport field	В
	landscape of park	В



Annex 5: Requested Equipment List

		ed Equipment List	Q'ty
No.	Code No.	Description	11
1	AM-001	Valve spring compressor	21
2	AM-002	Automobile mechanics tool sets	11
3	AM-003	Socket wrench set	2
4	AM-004	Gear bearing puller	
5	AM-005	Oil filter wrench	1
6	AM-006	Waste oil drainer	2
7	AM-007	Oil bucket pump	
8	AM-008	Cord reel	10
9	AM-009	Hand grease gun	5
10	AM-010	Rigid rack Two legs set	10
11	AM-011	Quick battery charger	2
12	AM-012	Booster cable	2
13	AM-013	Strut Spring compressor	5
14	AM-014	Cross wrench set	11
15	AM-015	Impact wrench	6
16	AM-016	Scraper set	6
17	AM-017	Snap ring pliers	11
18	AM-018	Service creeper, steel frame type	5
19	AM-019	Garage lamp	5
20	AM-020	Solder-less terminal kit	11
21	AM-021	Soldering irons	21
22	AM-022	Tire repair set, tubeless tire	20
23	AM-023	Tube repair set	20
24	AM-024	Cleaning pan	20
25	AM-025	Air blow gun	6
26	AM-026	Paint spray with container	6
27	AM-027	2 cylinder engine model	6
28	AM-028	4 cylinder engine model	6
29	AM-029	6 cylinder engine model	6
30	AM-030	Diesel engine model	6
31	AM-031	Gasoline engine trainer	5
32	AM-032	Disel engine trainer	5
33	AM-033	Mission with clutch	6
34	AM-034	Automatic mission	6
35	AM-035	Differential	6
36	AM-036	Drive shaft	6
37	AM-037	Starter motor	21
38	AM-038	Alternator	21
39	AM-039	Cut-away model, planetary gear	1
40	AM-040	Cut-away model, torque convertor	1
41	AM-041	Cut-away model, turbo charger	1
42	AM-042	Cut-away model, cabrator	1



No.	Code No.	Description	Q'ty
43	AM-043	Cut-away model, gasoline engine	1
43	AM-043	Cut-away model, engine with chassis	1
45	AM-045	Cut-away model, automatic transmission	1
46	AM-046	Lighting and electric ignition system trainer	1
47	AM-047	Light bulb & wiring set	21
48	AM-048	Resistance, diode, electrical-transistor set	1
48	AM-049	Refrigerant recovery equipment	1
50	AM-050	Car air conditioning maintenance tool	1
51	AM-051	On-board diagnostics scan tool type A	5
}	AM-051	On-board diagnostics scan tool type B	5
52	AM-052		5
53	AM-054	Laptop computer Vise	5
54			21
55	AM-055	Hacksaw The second displayed	5
56	AM-056	Taps and dies set	1
57	AM-057	Hydraulic press	2
58	AM-058	Bench grinder	2
59	AM-059	Drilling machine	5
60	AM-060	Electric drill	20
61	AM-061	Iron work file set	20
62	AM-062	Flat chisel	20
63	AM-063	Center punch	20
64	AM-064	Magnetic base	10
65	AM-065	Surface plate	20
66	AM-066	V-blocks	11
67	AM-067	Vernier caliper	6
68	AM-068	Digital vernier caliper	
69	AM-069	Micrometer set	21
70	AM-070	Dial gauge	21
71	AM-071	Cylinder gauge	21
72	AM-072	Thickness gauge	21
73	AM-073	Straight edge Tool	11
74	AM-074	Compression gauge	6
75	AM-075	Engine oil pressure gauge	6
76	AM-076	Timing light	6
77	AM-077	Digital tester	21
78	AM-078	Analog tester	21
79	AM-079	Battery coolant tester	6
80	AM-080	Tire gauge	6
81	AM-081	Radiator cap tester	6
82	AM-082	Preset type torque wrench set	6
83	AM-083	Digital type torque wrench	6
84	AM-084	A-plate type torque wrench set	11
85	AM-085	Buried-type car lift	5



No.	Code No.	Description	Q'ty
86	AM-086	Parts cleaner	2
87	AM-087	Air compressor	1
88	AM-088	Garage jack	5
89	AM-089	Work bench (small)	15
90	AM-090	Work bench (large)	4
91	AM-091	Floor crane	5
92	AM-092	Engine lifter	1
93	AM-093	Air hose reel	5
94	AM-094	Hot water high pressure washer	1
95	AM-095	Exhaust duct	1
96	AM-096	Tire changer	1
97	AM-097	Wheel balancer	1
98	AM-098	Wheel weight set	10
99	AM-099	Balance weight tool	5
100	AM-100	Starter generator test stand	1
101	AM-101	Head light tester	1
102	AM-102	Combination tester	1
103	AM-103	Steel cabinet	4
104	AM-104	Parts rack	10
105	AM-105	Forklift	1
106	EC-001	Analog tester	42
107	EC-002	Digital tester	42
108	EC-003	DC power supplly	21
109	EC-004	Multimeter	21
110	EC-005	Oscilloscope	21
111	EC-006	Function generator	21
112	EC-007	IC trainer set	21
113	EC-008	Bread board	42
114	EC-009	crocodile clip	21
115	EC-010	Power factor meter	6
116	EC-011	Watt meter(1 phase)	6
117	EC-012	Watt meter(3 phase)	6
118	EC-013	Voltage transformer for measurement	11
119	EC-014	Insulation tester megger	6
120	EC-015	Test phase shifter	6
121	EC-016	Current transfomer	6
122	EC-017	Voltage transfomer	6
123	EC-018	Electroscope	21
124	EC-019	Clamp meter	6
125	EC-020	Miniature plier	21
126	EC-021	Miniature cutter	21
127	EC-022	Motor(1 phase)	21
128	EC-023	Motor(3 phase)	6



No.	Code No.	Description	Q'ty
129	EC-024	Motor(3 phase) for Star-delta	6
130	EC-025	Magnetic contactor	42
131	EC-026	AUX contactor unit	42
132	EC-027	Themal relay	42
133	EC-028	Earth leakage breaker	42
134	EC-029	Laptop computer	42
135	EC-030	Printer	2
136	EC-031	Network equipment	1
137	EC-032	Programmable logic controller practice set	42
138	EC-033	Push botton	42
139	EC-034	Lamp (Red)	42
140	EC-035	Tool set	42
141	EC-036	Trainer for sensors	21
142	EC-037	Trainer for Pneumatic system	42
143	EC-038	Electric drill	6
144	EC-039	Projecter	3
145	EC-040	Screen	3
146	EC-041	Wiring practice board	21
147	EC-042	Pipe vendor	21
148	EC-043	Torch burner	21
149	EC-044	Line wire	11
150	EC-045	Electric works tool set	42
151	EC-046	Spirit level	42
152	EC-047	Earth tester	6
153	EC-048	Pipe thread cutter	21
154	EC-049	Pipe vise	21
155	EC-050	Electric works practice kit	42
156	EC-051	Work table	40
157	EC-052	Stool	120
158	EC-053	Chair	6
159	CM-001	Desktop PC	42
160	CM-002	Server	1
161	CM-003	Disk device	1
162	CM-004	Switching hub	2
163	CM-005	Black and white printer	2
164	CM-006	Color printer	1
165	CM-007	Large format printer	1
166	CM-008	Power Supply	1
167	CM-009	Back up Soft for Server	1
168	CM-010	Back up Soft for Client CP	42
169	CM-011	Anti Virus Software	42
170	CM-012	MS Office Personal	42
171	CM-013	Auto CAD (2 Dimension CAD)	42



No.	Code No.	Description	Q'ty
172	CM-014	Solid Works (3 Dimension CAD)	42
173	CM-015	UPS	42
174	CM-016	Projector (Small)	8
175	CM-017	Screen (Small)	8
176	CM-018	Projector (Large)	1
177	CM-019	Screen (Large)	1
178	CM-020	Audio visual equipment	11
179	CM-021	Drawing table	43
180	CM-022	First Aid kit	5
181	CM-023	Chemical expriment equipment set	10
182	CM-024	Pysical expriment equipment set	10



JAPANESE GRANT

The Japanese Grant is non-reimbursable fund provided to a recipient country (hereinafter referred to as "the Recipient") to purchase the products and/or services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. Followings are the basic features of the project grants operated by JICA (hereinafter referred to as "Project Grants").

1. Procedures of Project Grants

Project Grants are conducted through following procedures (See "PROCEDURES OF JAPANESE GRANT" for details):

- (1) Preparation
 - The Preparatory Survey (hereinafter referred to as "the Survey") conducted by JICA
- (2) Appraisal
 - -Appraisal by the government of Japan (hereinafter referred to as "GOJ") and JICA, and Approval by the Japanese Cabinet
- (3) Implementation

Exchange of Notes

-The Notes exchanged between the GOJ and the government of the Recipient

Grant Agreement (hereinafter referred to as "the G/A")

-Agreement concluded between JICA and the Recipient

Banking Arrangement (hereinafter referred to as "the B/A")

-Opening of bank account by the Recipient in a bank in Japan (hereinafter referred to as "the Bank") to receive the grant

Construction works/procurement

- -Implementation of the project (hereinafter referred to as "the Project") on the basis of the G/A
- (4) Ex-post Monitoring and Evaluation
 - -Monitoring and evaluation at post-implementation stage

2. Preparatory Survey

(1) Contents of the Survey

The aim of the Survey is to provide basic documents necessary for the appraisal of the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of



relevant agencies of the Recipient necessary for the implementation of the Project.

- Evaluation of the feasibility of the Project to be implemented under the Japanese Grant from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.
- Estimation of costs of the Project.
- Confirmation of Environmental and Social Considerations

The contents of the original request by the Recipient are not necessarily approved in their initial form. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant.

JICA requests the Recipient to take measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the executing agency of the Project. Therefore, the contents of the Project are confirmed by all relevant organizations of the Recipient based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA contracts with (a) consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the feasibility of the Project.

3. Basic Principles of Project Grants

(1) Implementation Stage

1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes (hereinafter referred to as "the E/N") will be singed between the GOJ and the Government of the Recipient to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Recipient to define the necessary articles, in accordance with the E/N, to implement the Project, such as conditions of disbursement, responsibilities of the Recipient, and procurement conditions. The terms and conditions generally applicable to the Japanese Grant are stipulated in the "General Terms and Conditions for Japanese Grant (January 2016)."



- 2) Banking Arrangements (B/A) (See "Financial Flow of Japanese Grant (A/P Type)" for details)
 - a) The Recipient shall open an account or shall cause its designated authority to open an account under the name of the Recipient in the Bank, in principle. JICA will disburse the Japanese Grant in Japanese yen for the Recipient to cover the obligations incurred by the Recipient under the verified contracts.
 - b) The Japanese Grant will be disbursed when payment requests are submitted by the Bank to JICA under an Authorization to Pay (A/P) issued by the Recipient.

3) Procurement Procedure

The products and/or services necessary for the implementation of the Project shall be procured in accordance with JICA's procurement guidelines as stipulated in the G/A.

4) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the Recipient to continue to work on the Project's implementation after the E/N and G/A.

5) Eligible source country

In using the Japanese Grant disbursed by JICA for the purchase of products and/or services, the eligible source countries of such products and/or services shall be Japan and/or the Recipient. The Japanese Grant may be used for the purchase of the products and/or services of a third country as eligible, if necessary, taking into account the quality, competitiveness and economic rationality of products and/or services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm, which enter into contracts with the Recipient, are limited to "Japanese nationals", in principle.

6) Contracts and Concurrence by JICA

The Recipient will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be concurred by JICA in order to be verified as eligible for using the Japanese Grant.

7) Monitoring

The Recipient is required to take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and to regularly report to JICA about its status by using the Project Monitoring Report (PMR).

8) Safety Measures

The Recipient must ensure that the safety is highly observed during the implementation of the Project.

9) Construction Quality Control Meeting

Construction Quality Control Meeting (hereinafter referred to as the "Meeting") will be held for quality assurance and smooth implementation of the Works at each stage of the Works. The member of the Meeting will be composed by the



Recipient (or executing agency), the Consultant, the Contractor and JICA. The functions of the Meeting are as followings:

- a) Sharing information on the objective, concept and conditions of design from the Contractor, before start of construction.
- b) Discussing the issues affecting the Works such as modification of the design, test, inspection, safety control and the Client's obligation, during of construction.

(2) Ex-post Monitoring and Evaluation Stage

- 1) After the project completion, JICA will continue to keep in close contact with the Recipient in order to monitor that the outputs of the Project is used and maintained properly to attain its expected outcomes.
- 2) In principle, JICA will conduct ex-post evaluation of the Project after three years from the completion. It is required for the Recipient to furnish any necessary information as JICA may reasonably request.

(3) Others

1) Environmental and Social Considerations

The Recipient shall carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the Recipient and JICA Guidelines for Environmental and Social Considerations (April, 2010).

2) Major undertakings to be taken by the Government of the Recipient

For the smooth and proper implementation of the Project, the Recipient is required to undertake necessary measures including land acquisition, and bear an advising commission of the A/P and payment commissions paid to the Bank as agreed with the GOJ and/or JICA. The Government of the Recipient shall ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the Recipient with respect to the purchase of the Products and/or the Services be exempted or be borne by its designated authority without using the Grant and its accrued interest, since the grant fund comes from the Japanese taxpayers.

3) Proper Use

The Recipient is required to maintain and use properly and effectively the products and/or services under the Project (including the facilities constructed and the equipment purchased), to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Japanese Grant.



4) Export and Re-export

The products purchased under the Japanese Grant should not be exported or re-exported from the Recipient.



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PROCEDURES OF JAPANESE GRANT

Stage	Procedures	Remarks	Recipient Government	Japanese Government	JICA	Consultants	Contractors	Agent Bank
Official Request	Request for grants through diplomatic channel	Request shall be submitted before appraisal stage.	х	х				
1. Preparation	(1) Preparatory Survey Preparation of outline design and cost estimate		x		х	x		
	(2)Preparatory Survey Explanation of draft outline design, including cost estimate, undertakings, etc.		х		х	х		
2. Appraisal	(3)Agreement on conditions for implementation	Conditions will be explained with the draft notes (E/N) and Grant Agreement (G/A) which will be signed before approval by Japanese government.	х	x (E/N)	x (G/A)			
	(4) Approval by the Japanese cabinet			х				
	(5) Exchange of Notes (E/N)		х	х				
	(6) Signing of Grant Agreement (G/A)		х		х			
	(7) Banking Arrangement (B/A)	Need to be informed to JICA	х					х
	(8) Contracting with consultant and issuance of Authorization to Pay (A/P)	Concurrence by JICA is required	х			x		х
	(9) Detail design (D/D)		x			х		
3. Implementation	(10) Preparation of bidding documents	Concurrence by JICA is required	х			х		
	(11) Bidding	Concurrence by JICA is required	х			х	х	
	(12) Contracting with contractor/supplier and issuance of A/P	Concurrence by JICA is required	х				x	х
	(13) Construction works/procurement	Concurrence by JICA is required for major modification of design and amendment of contracts.	x			х	Х	
	(14) Completion certificate		x			х	х	
4. Ex-post	(15) Ex-post monitoring	To be implemented generally after 1, 3, 10 years of completion, subject to change	x		x			
evaluation	(16) Ex-post evaluation	To be implemented basically after 3 years of completion	x		х			

notes:

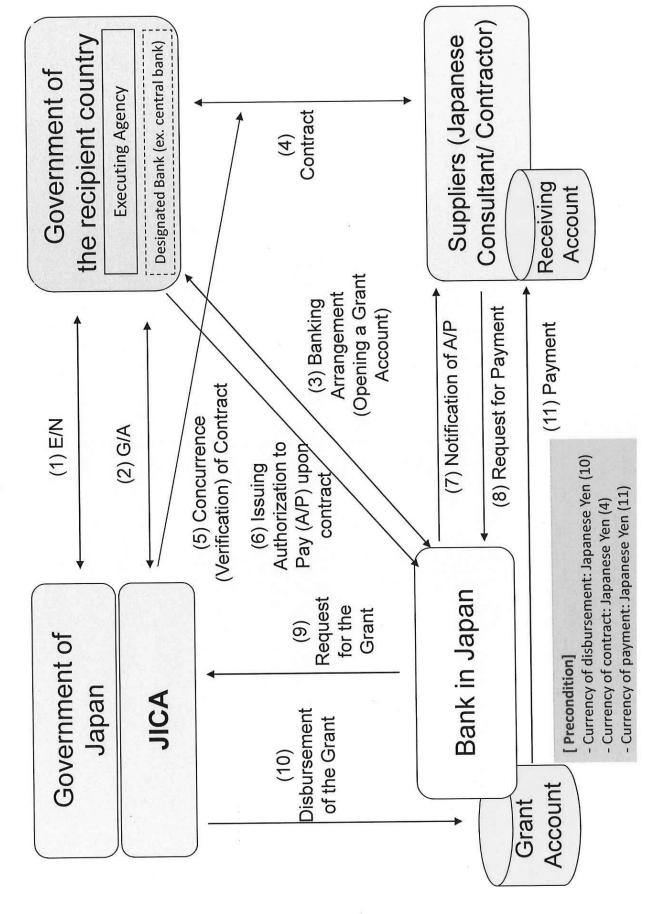


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^{1.} Project Monitoring Report and Report for Project Completion shall be submitted to JICA as agreed in the G/A.

^{2.} Concurrence by JICA is required for allocation of grant for remaining amount and/or contingencies as agreed in the G/A.

Financial Flow of Japanese Grant (A/P Type)





Project Monitoring Report on **Project Name** Grant Agreement No. XXXXXXX 20XX, Month

Organizational Information

Signer of the G/A (Recipient)	Person in Charge Contacts	(Designation) Address: Phone/FAX: Email:
Executing Agency	Person in Charge Contacts	(Designation) Address: Phone/FAX: Email:
Line Ministry	Person in Charge Contacts	(Designation) Address: Phone/FAX: Email:

General Information:

Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:
Source of Finance	Government of Japan: Not exceeding JPYmil. Government of ():



-1	Project Objecti	ive				
-2	Project Rationary - Higher-level policies and	el objectives to	which the projec	t contribute	es (national/r	egional/sector
			ps to which the p	roject addre	esses	
_	T 11		C #E66 - +12-2-2-2	aall		
-3		r measurement	of "Effectivene		1.	
பொ						
200	intitative indicate Indicators	The section of the se	the attainment of Original (Yr	of project o)	Target	(Yr)
×4		The section of the se		of project o)		(Yr)
	Indicators	5	Original (Yr)	Target	(Yr)
		5	Original (Yr)	Target	(Yr)
	Indicators	5	Original (Yr)	Target	(Yr)
	Indicators	5	Original (Yr)	Target	(Yr)
Qua	Indicators	to measure the a	Original (Yr)	Target	(Yr)
	Indicators	to measure the a	Original (Yr)	Target	(Yr)
Qua	Indicators litative indicators Details of the Location	to measure the a	Original (Yr)	es	
Qua	Indicators litative indicators Details of the	to measure the a	Original (Yr	ect objective	Target	
Qua	Indicators litative indicators Details of the Location	to measure the a	Original (Yr	ect objective	es	
Qua	Indicators litative indicators Details of the Location Components	Project (proposed in	Original (Yr	ect objective	es	
Qua	Indicators litative indicators Details of the Location	Project (proposed in	Original (Yr Original original the outline design	ect objective	es	al
Qua	Indicators Details of the Location Components Scope of the	Project (proposed in	Original (Yr Ittainment of proj Original I the outline desig	ect objective	Target es Actu	al
Qua -1 -2	Indicators Details of the Location Components Scope of the	Project (proposed in	Original (Yr Original original the outline design	ect objective	Target es Actu	al

2-3 Implementation Schedule

	Ori	ginal	
Items	(proposed in the outline design)	(at the time of signing the Grant Agreement)	Actual

Reasons for any changes of the schedule, and their effects on the project (if any)	

2-4 Obligations by the Recipient

2-4-1 Progress of Specific Obligations

See Attachment 2.

2-4-2 Activities

See Attachment 3.

2-4-3 Report on RD

See Attachment 11.

2-5 Project Cost

2-5-1 Cost borne by the Grant(Confidential until the Bidding)

Components		Cos (Million	
Original (proposed in the outline design)	Actual (in case of any modification)	Original ^{1),2)} (proposed in the outline design)	Actual
1.			
		1	
 Total			

Note: 1) Date of estimation:

2) Exchange rate: 1 US Dollar = Yen

2-5-2 Cost borne by the Recipient

Components		Cost (1,000 Taka)		
Original (proposed in the outline design)	Actual (in case of any modification)	Original ^{1),2)} (proposed in the outline design)	Actual	
1.				

Note: 1) Date of estimation

2) Exchange rate: 1 US Dollar =

Reasons for the remarkable gaps between the original and actual cost, and the countermeasures (if any)

2-6 Executing Agency

- Organization's role, financial position, capacity, cost recovery etc,

 Organization Chart including the unit in charge of the implementation and number of employees.

	of employees.
i	Original (at the time of outline design)
	name:
ļ	role:
	financial situation:
	institutional and organizational arrangement (organogram):
	human resources (number and ability of staff):
	Actual (PMR)

2-7 Environmental and Social Impacts

- The results of environmental monitoring based on Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- The results of social monitoring based on in Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- Disclosed information related to results of environmental and social monitoring to local stakeholders (whenever applicable).

3: Operation and Maintenance (O&M)

3-1 Physical Arrangement

- Plan for O&M (number and skills of the staff in the responsible division or section, availability of manuals and guidelines, availability of spareparts, etc.)

O : 1 al / t the time of authing designs)		 	
Original (at the time of outline design)			
1 (5) (5)	nie	 	
Actual (PMR)			

3-2 Budgetary Arrangement

- Required O&M cost and actual budget allocation for O&M

Original (at the time of outline design)



Actual (PMR)	

4: Potential Risks and Mitigation Measures

- Potential risks which may affect the project implementation, attainment of objectives, sustainability
- Mitigation measures corresponding to the potential risks

Assessment of Potential Risks (at the time of outline design)

Potential Risks	Assessment
1. (Description of Risk)	Probability: High/Moderate/Low
,	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
2. (Description of Risk)	Probability: High/Moderate/Low
,	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
3. (Description of Risk)	Probability: High/Moderate/Low
,	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:

Cor	tingency Plan (if applicable):
Cor	unigency Frant (if applicable).
Actual Situation and Countermeasures	
(PMR)	
(2 2 2 2 2)	
	V.
5: Evaluation and Monitoring Pla	n (after the work completion)
5-1 Overall evaluation	
or Overall evaluation	
Please describe your overall evaluation on the	project.
5-2 Lessons Learnt and Recommendat	ions
	oject experience, which might be valuable for the
ž	as well as any recommendations, which might be
beneficial for better realization of the project e	· · · · · · · · · · · · · · · · · · ·
**	Con Dead Forday Con
5-3 Monitoring Plan of the Indicators	
-	cion(s)/department(s) in charge of monitoring,
frequency, the term to monitor the indicator	s supulated in 1-3.

Attachment

- 1. Project Location Map
- 2. Specific obligations of the Recipient which will not be funded with the Grant
- 3. Monthly Report submitted by the Consultant

Appendix - Photocopy of Contractor's Progress Report (if any)

- Consultant Member List
- Contractor's Main Staff List
- 4. Check list for the Contract (including Record of Amendment of the Contract/Agreement and Schedule of Payment)
- 5. Environmental Monitoring Form / Social Monitoring Form
- 6. Monitoring sheet on price of specified materials (Quarterly)
- 7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (PMR (final)only)
- 8. Pictures (by JPEG style by CD-R) (PMR (final)only)
- 9. Equipment List (PMR (final)only)
- 10. Drawing (PMR (final)only)
- 11. Report on RD (After project)

Monitoring sheet on price of specified materials

Initial Conditions (Confirmed)

Initial IInit Initial total 1% of Contract	Initial Volume $P_{\text{rice}}(\Psi)$		100				
I. IIIItai Condinina (Contra inca)	Items of Specified Materials	1 Item 1	2 Item 2	3 Item 3	4 Item 4	5 Item 5	m dept.

2. Monitoring of the Unit Price of Specified Materials(1) Method of Monitoring : ●●

(2) Result of the Monitoring Survey on Unit Price for each specified materials

		37	က	4	5	
Items of Specified Materials	Item 1	Item 2	Item 3	Item 4	Item 5	
1st 2nd 3rd 4th 0month, 2015 0month, 2015			the state of the s			The state of the s
5th 6th			the state of the s	and the second s		The state of the s

(3) Summary of Discussion with Contractor (if necessary)

Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (Actual Expenditure by Construction and Equipment each)

	Domestic Procurement	Foreign Procurement	Foreign Procurement	Total
	(Recipient Country)	(Japan)	(Third Countries)	Q
	A	В	С	
Construction Cost	(A/D%)	(B/D%)	(%Q/D)	
Direct Construction Cost	(A/D%)	(B/D%)	(C/D%)	777
others	(A/D%)	(B/D%)	(C/D%)	
Equipment Cost	(A/D%)	(B/D%)	(%D/D)	
Design and Supervision Cost	(A/D%)	(B/D%)	(C/D%)	
Total	(A/D%)	(B/D%)	(C/D%)	



Ref. No.
JAPAN INTERNATIONAL COOPERATION AGENCY JICA XXX OFFICE
[Address specified in the Article 5 of the Grant Agreement]
Attention: Chief Representative
Ladies and Gentlemen:
NOTICE CONCERNING PROGRESS OF PROJECT
Reference: Grant Agreement, dated <u>署名日(signed date of the G/A)</u> , for <u>プロジェクト名(name</u>
of the Project)
In accordance to the Article 6 (3) of the Grant Agreement, we would like to report on the progress of the Project up to the following stages:-
[Common]
Preparation of bidding documents - result of detailed design
Completion of final works under construction/procurement contract
[Construction]
Monthly progress [Month/Year]
[Procurement of Equipment]
Shipping/delivery, hand-over (take over) of equipment
Installation works
Operational training
Other
Please see the details as per attached Project Monitoring Report (PMR).
Very truly yours,
[Signature]

Date:

(I,

cc:

Director General
Financial Cooperation Implementation Department
Japan International Cooperation Agency
[Address specified in the Article 5 of the Grant Agreement]



Annex 8: Major Undertakings to be taken by the Government of Myanmar

1. Specific obligations of the Government of Myanmar which will not be funded with the Grant

(1) Before the Bidding

NO	Items	Deadline	In charge	Estimated Cost	Ref.
1	To open bank account (B/A)	within 1 month after the signing of the G/A			
2	To issue authorization to pay (A/P) to a bank in Japan (the Agent Bank) for the payment to the consultant	within 1 month after the signing of the contract		1	
	To approve IEE/EIA(Conditions of approval should be fulfilled, if any) and secure the necessary budget for implementation.	four months before notice of the bidding document(s)	DTVET		
4	To secure and clear the following lands - former Aung San GTHS premises	before notice of the bidding document(s)	DTVET		
5	To obtain the planning, zoning, building permit	before notice of the bidding document(s)	DTVET		
6	To clear, level and reclaim the following sites 1) removal of existing buildings and utilities 2) clearance of UXO buried in the ground	eight months before notice of the bidding document(s)	DTVET		
7	To submit Project Monitoring Report (with the result of Detail Design)	before preparation of bidding document(s)s	DTVET		

(B/A: Banking Arrangement, A/P: Authorization to pay, N/A: Not Applicable)

(2) During the Project Implementation

NO	Items	Deadline	In charge	Estimated Cost	Ref.
	To issue A/P to a bank in Japan (the Agent Bank) for the payment to the Supplier(s)	within 1 month after the signing of the contract(s)			
2	To bear the following commissions to a bank in Japan for the banking services based upon the B/A		DTVET		
	1) Advising commission of A/P	within 1 month after the signing of the contract(s)			
	2) Payment commission for A/P	every payment			
3	to ensure prompt unloading and customs clearance at ports of disembarkation in the country of the Recipient and to assist the Supplier(s) with internal transportation therein		DTVET		



4	To accord Japanese nationals and/or physical persons of third countries whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the country of the	during the Project	DTVET	
5	Recipient and stay therein for the performance of their work To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the products and/or the services be exempted or be borne by its designated authority without using the Grant	during the Project	DTVET	
6	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project	during the Project	DTVET	
7	To submit Project Monitoring Report	every month	DTVET	
	To submit Project Monitoring Report (final)	within one month after signing of Certificate of Completion for the works under the contract(s)		
	To submit a report concerning completion of the Project	within six months after completion of the Project	DTVET	
9	To provide necessary power and water supply to the procured equipment and the new workshop, and other incidental facilities necessary for the implementation of the Project		DTVET	
	 Electricity The contract capacity shall be upgraded and the transformer and leading cables shall be exchanged. 	2 months before completion of the construction		
	Water Supply A well shall be developed and/or city water shall be connected to the Project.	2 months before completion of the construction		
	Furniture and Equipment General furniture	I month before completion of the construction		
10	To take necessary measure for safety construction - fence	1 month before completion of the construction	DTVET	

(3) After the Project

NO	Items	Deadline	In charge	Estimated Cost	Ref.
	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid	After completion of	DTVET		
	, · · · ·	the construction			
	Operation and maintenance structure Routine check/Periodic inspection				



2. Other obligations of the Government of Myanmar funded with the Grant

NO	Items	Deadline	Amount (Million Japanese Yen)*
	To construct buildings and to procure equipment 1) To conduct the following transportation a) Marin (Air) transportation of the products from Japan to the recipient country b) Internal transportation from the port of disembarkation to the project site		
	 2) To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities a) Electricity The drop wiring and internal wiring within the site The main circuit breaker b) Water Supply The supply system within the site (receiving and/or elevated tanks) c) Drainage The drainage system (for toilet sewer, ordinary waster, storm drainage and others) within the site 		
	d) Furniture and Equipment -Project equipment		
2	To implement detailed design, bidding support and procurement supervision (Consulting Service)		
3	Contingencies		
	Total		XXX

^{*}The Amount is provisional. This is subject to the approval of the Government of Japan.

Minutes of Discussions

on the Preparatory Survey for the Project for Development of Japan-Myanmar Aung San Vocational Training Institute (Explanation on Draft Preparatory Survey Report)

With reference to the minutes of discussions signed between Department of Technical and Vocational Education and Training, Ministry of Education, Myanmar and the Japan International Cooperation Agency (hereinafter referred to as "JICA") on 24th May, 2018 and in response to the request from the Government of The Republic of the Union of Myanmar (hereinafter referred to as "Myanmar") dated 10th Feb, 2017, JICA dispatched the Preparatory Survey Team (hereinafter referred to as "the Team") for the explanation of Draft Preparatory Survey Report (hereinafter referred to as "the Draft Report") for the Project for Development of Japan-Myanmar Aung San Vocational Training Institute (hereinafter referred to as "the Project").

As a result of the discussions, both sides agreed on the main items described in the attached sheets.

Nay Pyi Daw, 19 March, 2019

\$ 1 1 6

Chiharu MORITA

Leader

Preparatory Survey Team

Japan International Cooperation Agency

Japan

Dr. Aye Myint

Director General

Department of Technical and Vocational

Education and Training,

Ministry of Education

Myanmar

ATTACHEMENT

1. Objective of the Project

The objective of the Project is to develop Japan-Myanmar Aung San Vocational Training Institute (hereinafter referred to as "JMASVTI") for Automotive

Technology and Electrical Engineering at the former Aung San Government Technical High School (GTHS) site through building facilities and procuring equipment for the both courses of the Government Technical Institute (GTI), based on Japan's experiences and know-how about other TVET institutes, thereby contributing to the number of students enrolled in and graduates from the new courses of JMASVTI.

2. Title of the Preparatory Survey

Both sides confirmed the title of the Preparatory Survey is changed from "the Preparatory Survey for the Project for Establishment of Japan-Myanmar Vocational Training Institute" to "the Preparatory Survey for the Project for Development of Japan-Myanmar Aung San Vocational Training Institute".

3. Project site

Both sides confirmed that the site of the Project is zone A, B and C which is shown in Annex 1

The Myanmar side shall schedule UXO detection of zone B and C. The Myanmar side will relocate eight families and demolish these residences of zone B by August 2019. The Myanmar side will complete the relocation of residents, demolition of the residences and UXO detection of zone C by April 2020.

4. Responsible authority for the Project

Both sides confirmed the authorities responsible for the Project are as follows:

The Department of TVET will be the executing agency for the Project (hereinafter referred to as "the Executing Agency"). The Executing Agency shall coordinate with all the relevant authorities to ensure smooth implementation of the Project and ensure that the undertakings for the Project shall be managed by relevant authorities properly and on time. The organization charts are shown in Annex 2.

5. Contents of the Draft Report

After the explanation of the contents of the Draft Report by the Team, the Myanmar side agreed to its contents. The facilities component and equipment list are shown in Annex 3.



6. Cost estimate

Both sides confirmed that the cost estimates which are borne by both governments as shown in Annex 4 including the contingency explained by the Team is provisional and will be examined further by both governments for its approval. The contingency would cover the additional cost against natural disaster, unexpected natural conditions, etc.

7. Confidentiality of the cost estimate and technical specifications

Both sides confirmed that the cost estimate and technical specifications of the Project should never be disclosed to any third parties until all the contracts under the Project are concluded.

8. Procedures and Basic Principles of Japanese Grant

The Myanmar side agreed that the procedures and basic principles of Japanese Grant as described in Annex 5 shall be applied to the Project. In addition, the Myanmar side agreed to take necessary measures according to the procedures.

9. Timeline for the project implementation

JICA explained to the Myanmar side that the expected timeline for the project implementation is as attached in Annex 6.

Both sides confirmed that the first phase in zone A is expected to be completed around May 2021, while the second phase in zone B and C is expected to be completed around May 2022.

10. Expected outcomes and indicators

Both sides agreed that key indicators for expected outcomes are as follows. The Myanmar side will be responsible for the achievement of agreed key indicators targeted in year 2025, and shall monitor the progress based on those indicators.



[Quantitative indicators]

Indicator	Course	Baseline (2018)	Target (2025)
The accumulative number of students	Automotive Technology	0	200
enrolled in the new courses of JMASVTI	Electrical Engineering	0	200
	Automotive Technology	0	78
new courses of JMASVTI	Electrical Engineering	0	78

[Qualitative indicators]

- Highly-qualified human resources are developed through improved educational and training environments by provision of the facility and equipment for TVET.
- The facility and training courses of JMASVTI are highly evaluated by teachers and students by provision of the facility and equipment of TVET.
- Graduates of JMASVTI get employed in some industrial fields.

11. Undertakings of the Project

Both sides confirmed the undertakings of the Project as described in Annex 7. With regard to exemption of customs duties, internal taxes and other fiscal levies as stipulated in 1. (2) 5 of Annex 7, both sides confirmed that such customs duties, internal taxes and other fiscal levies, which shall be clarified in the bid documents by Department of Technical and Vocational Education and Training (DTVET) during the implementation stage of the Project. The Myanmar side assured to take the necessary measures and coordination including allocation of the necessary budget which are preconditions of implementation of the Project. It is further agreed that the costs are provisional, i.e. at Outline Design level. More accurate costs are being calculated at the Detailed Design stage.

Both sides also confirmed that the Annex 7 will be used as an attachment of G/A.

11. 1 Tax exemption

Both sides confirmed the content of the Notification No.38/2018 of Ministry of Planning and Finance. The Myanmar side agreed to prepare the described documents in the notification for tax exemption in principle, but shall not exempt a commercial tax for small item purchased by shopping package with tax stamps. The Myanmar side will discuss internally for the possibility of the exemption of the personal income tax and inform the result of discussion by 22nd March, 2019.



11.2. UXO exploration and excavation costs

The Government of Myanmar will bear the cost for the second phase corresponding zone B and C, while Japanese side bears the cost of UXO exploration and excavation for the first phase corresponding zone A.

11.3. Environmental and Social Considerations

Japanese side will prepare Environment Management Plan (EMP) according to the requirement by the Ministry of Natural Resources and Environmental Conservation (MONREC) and the Myanmar side will apply the EMP to MONREC for its approval and carry out the EMP during operation phase.

11.4. Building Permit

DTVET will apply to Yangon City Development Committee (YCDC) for a building permit for the Project and manage to obtain the permit by August 2019. The Japanese consultant prepares drawings and technical information to be required for the procedures and the DTVET will endorse the drawings with an engineer of the deaprtment upon the agreement by YCDC. DTVET will obtain the C and D map required also.

12. Monitoring during the implementation

The Project will be monitored by the Executing Agency and reported to JICA by using the form of Project Monitoring Report (PMR) attached as Annex 8. The timing of submission of the PMR is described in Annex 7

13. Project completion

Both sides confirmed that the Project completes when all the facilities constructed and equipment procured by the grant are in operation. The completion of the Project will be reported to JICA promptly, but in any event not later than six months after completion of the Project.

14. Ex-Post Evaluation

JICA will conduct ex-post evaluation after three (3) years from the project completion, in principle, with respect to five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact, Sustainability). The result of the evaluation will be publicized. The Myanmar side is required to provide necessary support for the data collection.

15. Schedule of the Study

JICA will finalize the Preparatory Survey Report based on the confirmed items. The report will be sent to the Myanmar side around June 2019.



16. Other Relevant Issues

16.1. Park zone

The Myanmar side explained that the Park zone is not allowed for temporary storage space during the construction and suggested use of zone C or E instead of the Park zone.

The Myanmar side explained that they had requested to develop all the boundary fence surrounding the Park zone by the grant with the letter, DTVET/FRD/2018 9314, dated on 23rd November, 2018. Final decision will be made by the Japanese side.

16.2. Former school emblems

Both sides confirmed that the place and the method of the emblem display shall be designed by the Myanmar side and the conservation treatment shall be also done by the Myanmar side.

16.3. Organization of JMASVTI

Both sides confirmed the draft organization of JMASVTI as shown in Annex 9 and will assign each staff to realize a smooth operation of this institute.

16.4. Collaboration with the Technical Cooperation Project

Both sides confirmed the importance of close collaboration and coordination with the on-going Technical Cooperation Project, the "Project for Quality Improvement in TVET Program", and the "Project for National Skills Standards (NSS) Development" to maximize the synergy among all the projects.

16.5 Request for Facility Design

The Myanmar side requested to modify the floor height of building A and B from 12.5 feet to 14 feet in terms of local practice and comfort. The Team explained that 12.5 feet complies with the National Myanmar Building Code and this modification would affect the implementation of the Project.

Annex 1 Project Site

Annex 2 Organization Chart

Annex 3 Facilities Component and Equipment List

Annex 4 Budget preparation approval process

Annex 5 Japanese Grant

Annex 6 Project Implementation Schedule

Annex 7 Major Undertakings to be taken by the Government of Myanmar

Annex 8 Project Monitoring Report (template)

Aneex 9 Organization chart of JMASVTI



■ Project Site and Proposed Design

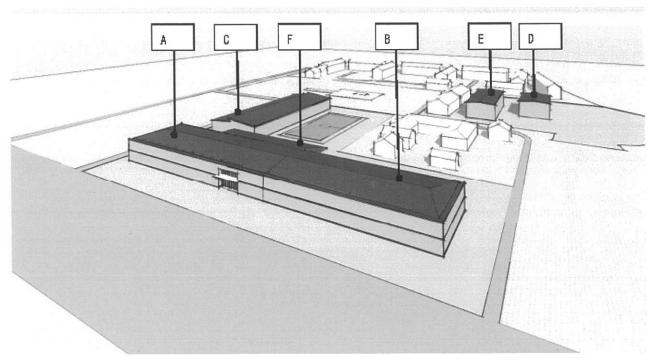


Figure 1 Proposed Completion Design

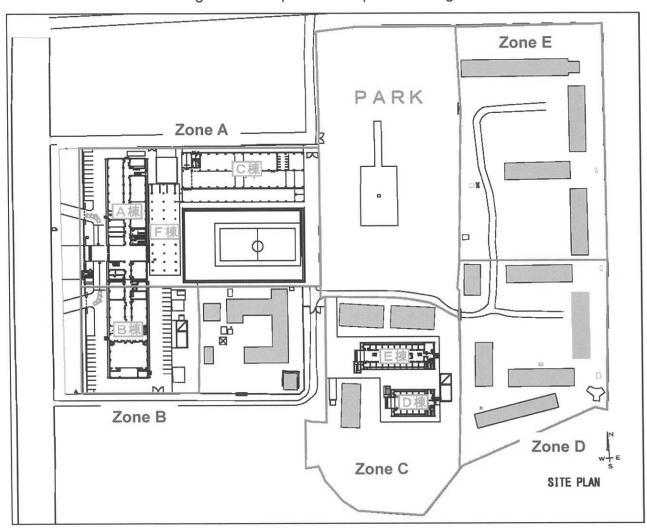
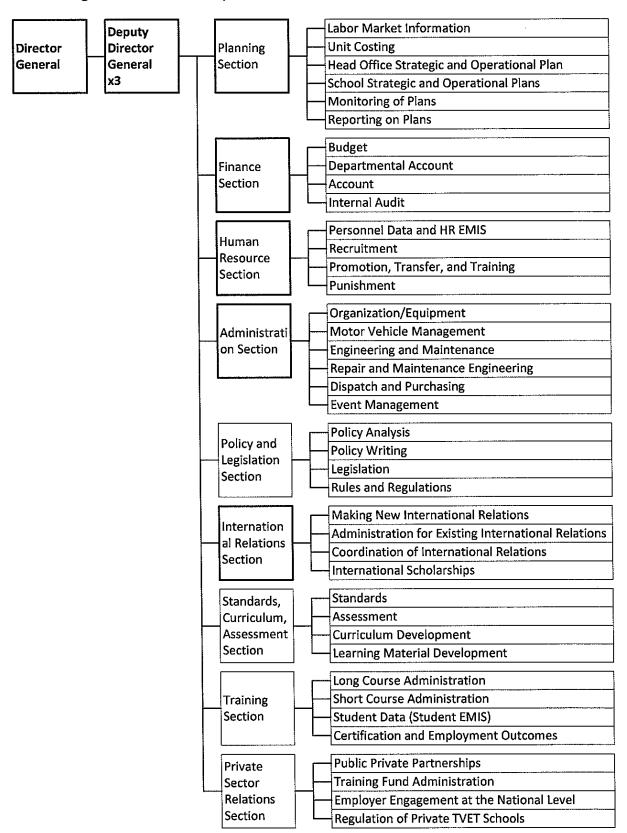


Figure 2 Project Site Zoning



Annex 2 Organization chart of Department of Technical and Vocational Education and Training





ANNEX 3a: Facility Component

Section	Component	Nos. of rooms	Description
Academic	Automotive Technology Workshop	1 block	General car services, Car-lift practice, welding, painting, metal work, frame adjustment and inspection lane
	Electrical Engineering Workshops	3	workshops for measurement, control and electrical work.
	Classroom	6	40 seats
	Computer room	1	40 seats
	Drawing room	11	40 seats
	Library	1	
	Chemical laboratory	1	
Non-academic	Principal room, Vice-principal room	1 for each	
	Administration room	1	
	Dispensary	1	
	Trainer's room	2	
	Counseling room	1	
	Large meeting room	1	
	Small meeting room	2	
	Printing room	1	
Assembly hall		1	270 seats, flat floor and stage
Covered Canteer	1	1 block	
Hostel		2 blocks	40 beds for girl, 80 beds for boys
Services	toilets, locker room, st	orage and buildi	ng services



Annex 3b Equipment List

No.	Equipment Name	Qty	unit
1	Valve spring compressor	11	sets
2	Automobile mechanics tool sets	30	sets
3	Socket wrench set	11	sets
4	Gear bearing puller	2	sets
5	Oil filter wrench	2	sets
6	Waste oil drainer	2	sets
7	ATF changer	1	set
8	Cord reel (mobile)	9	sets
9	Cord reel (fixed)	5	sets
10	Hand grease gun	4	sets
11	Rigid rack Two legs set	4	sets
12	Quick battery charger	2	sets
13	Booster cable	2	sets
14	Strut Spring compressor	5	sets
15	Cross wrench set	10	sets
16	Impact wrench	6	sets
17	Scraper set	5	sets
18	Snap ring pliers	10	sets
19	Sliding hammer	5	sets
20	Slide hammer type puller	5	sets
21	Clutch alignment tool set	2	sets
22	Universal joint bearing press with adapter	1	set
23	Tie-rod end and ball joint puller	5	sets
24	Front bearing hub tool	1	set
25	Hold-down spring and return spring tool	5	sets
26	Caliper piston removal tool	5	sets
27	Service creeper, steel frame type	5	sets
28	Garage lamp	5	sets
29	Solder-less terminal kit	11	sets
30	Soldering irons	20	sets
31	Tire repair set, tubeless tire	20	sets
32	Tube repair set	1	set
33	Cleaning pan	20	sets
34	Air blow gun	10	sets
35	Air hose	5	sets



36	Paint spray with container	5	sets
37	Double action sander	5	sets
38	Polisher	5	sets
39	Protective tool for painting	21	sets
40	Arc welding machine	5	sets
41	Gas welding and cutting machine	5	sets
42	Fume collector	5	sets
43	Helmet for welding	5	sets
44	2 cylinder engine model	11	sets
45	4 cylinder engine model	9	sets
46	6 cylinder engine model	11	sets
47	Diesel engine model	11	sets
48	Gasoline engine trainer	2	sets
49	Diesel engine trainer	5	sets
50	Transmission with clutch	9	sets
51	Automatic transmission	9	sets
52	Differential	9	sets
53	Drive shaft	9	sets
54	Rear axle	11	sets
55	Starter motor	18	sets
56	Alternator	18	sets
57	Cut-away model, planetary gear	1	set
58	Cut-away model, torque convertor	1	set
59	Cut-away model, turbo charger	1	set
60	Cut-away model, gasoline engine	1	set
61	Cut-away model, engine with chassis	1	set
62	Cut-away model, automatic transmission	1	set
63	Cut-away model, CVT	1	set
64	Lighting and electric ignition system trainer	1	set
65	Car air conditioning system trainer	1	set
66	Car air conditioning maintenance tool	1	set
67	On-board diagnostics scan tool type A	6	sets
68	Vise	5	sets
69	Hacksaw	20	sets
70	Taps and dies set	4	sets
71	Hydraulic press	1	set
72	Bench grinder	2	sets



73	Drilling machine	2	sets
74	Electric drill	4	sets
75	Iron work file set	19	sets
76	Flat chisel	19	sets
77	Center punch	19	sets
78	Magnetic base	20	sets
79	Surface plate	10	sets
80	V-blocks	19	sets
81	Vernier caliper	10	sets
82	Digital vernier caliper	6	sets
83	Micrometer set	20	sets
84	Dial gauge	20	sets
85	Cylinder gauge	20	sets
86	Thickness gauge	20	sets
87	Straight edge Tool	10	sets
88	Compression gauge	5	sets
89	Engine oil pressure gauge	5	sets
90	Timing light	5	sets
91	Digital tester	20	sets
92	Analog tester	20	sets
93	Battery coolant tester	5	sets
94	Tire gauge	5	sets
95	Radiator cap tester	5	sets
96	Preset type torque wrench set	6	sets
97	Digital type torque wrench	6	sets
98	A-plate type torque wrench set	10	sets
99	Turning radius gauge	5	sets
100	Camber, caster, kingpin gauge	5	sets
101	DC power supply	6	sets
102	Thermometer	100	sets
103	Buried-type car lift	6	sets
104	Garage jack	4	sets
105	Work bench (small)	9	sets
106	Work bench (large)	2	sets
107	Engine lifter	2	sets
108	Air hose reel	10	sets
109	Hot water high pressure washer	1	set



110	Tire changer	1	set
111	Wheel balancer	1 1	set
112	Wheel weight set	10	sets
113	Balance weight tool	1	set
114	Leader bench	1	set
115	Head light tester	1	set
116	Combination tester	1	set
117	Exhaust gas tester	1	set
118	Opacimeter	1	set
119	Steel cabinet	4	sets
120	Parts rack	10	sets
121	Sink	, 1	set
122	Forklift	1	set
123	Analog tester	21	sets
124	Digital tester	21	sets
125	DC power supply	10	sets
126	Multimeter	10	sets
127	Oscilloscope	10	sets
128	Function generator	10	sets
129	IC trainer set	10	sets
130	Bread board	21	sets
131	crocodile clip	12	sets
132	Watt meter	4	sets
133	Voltage transformer for measurement	7	sets
134	Insulation tester megger	4	sets
135	Test phase shifter	4	sets
136	Current transformer	4	sets
137	Voltage transformer	4	sets
138	Electroscope	10	sets
139	Clamp meter	4	sets
140	Miniature plier	10	sets
141	Miniature cutter	10	sets
142	Motor (1 phase)	19	sets
143	Motor (3 phase)	4	sets
144	Motor (3 phase) for Star-delta	4	sets
145	Magnetic contactor	21	sets
146	AUX contactor unit	21	sets



			
147	Thermal relay	21	sets
148	Earth leakage breaker	21	sets
149	Laptop computer	40	sets
150	Printer	2	sets
151	Programmable logic controller practice set	40	sets
152	Push button	21	sets
153	Lamp set	21	sets
154	Tool set	40	sets
155	Trainer for sensors	21	sets
156	Trainer for Pneumatic system	42	sets
157	Inverter training system	2	sets
158	Servo training system	2	sets
159	Electric drill	6	sets
160	Projector	3	sets
161	Screen	3	sets
162	Wiring practice board	21	sets
163	Pipe vendor	21	sets
164	Torch burner	21	sets
165	Line wire	11	sets
166	Electric works tool set	42	sets
167	Spirit level	42	sets
168	Earth tester	6	sets
169	Pipe thread cutter	21	sets
170	Pipe vise	21	sets
171	Electric works practice kit	4	sets
172	Work table	40	sets
173	Stool	120	sets
174	Chair	6	sets
175	Desktop PC	42	sets
176	Server	1	set
177	Switching hub	2 .	sets
178	Black and white printer	2	sets
179	Color printer	1	set
180	Large format printer	1	set
181	Projector (Small)	9	sets
182	Screen (Small)	9	sets
183	Projector (Large)	1	set



184	Screen (Large)	1	set
185	Audio visual equipment	1	set
186	Drawing table	42	sets
187	First Aid kit	1	set
188	Chemical experiment equipment set	1	set
189	Chemical experiment table for teacher	1	set
190	Chemical experiment table for student	4	sets
191	Physical experiment equipment set	1	set
192	Movable white board	9	sets
193	Kitchen equipment	1	set



Annex 4 Total estimated costs to be included in the budget proposal for parliament's approval

An implementing agency of the Government of Myanmar is responsible for submitting a budget proposal to be approved for the next fiscal year's (FY) budget or the current year's supplementary budget. The budget proposal shall include both estimated costs borne by the Government of Myanmar and the grant provided by the Government of Japan. If the proposed budget spans multiple years, it must be appropriated and approved for each fiscal year.

*Expenses to be borne by the Government of Myanmar are subject to change depending on the progress of project implementation. The actual amount to be requested each FY shall be amended accordingly.

	Items	FY2018/19	FY2019/20	FY2020/21	FY2021/22
Expenses to be	UXO detection of B and C zone		186.5		
borne by the Government of	Payment charge to the Japanese bank	2.3	4.0	18.6	15.7
Myanmar [million MMK]	Payment charge to the Myanmar bank	14.0	9.3	1	
	Extension of power supply for expansion of electricity		100.0		:
	Boundary fence construction				186.7
	Relocation of a bus stop and removal of electric poles			27.8	•
	Extension of city water		6.9		
Total amount to	be borne by Myanmar – (a)	16.3	306.7	46.4	202.4
Grant to be	Construction work				
provided by the	Equipment work				
Government of	Consultant Service				
Japan	Contingencies				
[million JPY]		_			
Total amount to be borne by Japan – (b)					-
Amount to be requested each FY for budget approval - (a+b)					
T	otal project expenses				

Budget preparation/approval process in Myanmar

Budget proposal for next fiscal year	Budget proposal for supplementary budget of current year	Process
March - May	March	Line ministries and departments prepare and submit budget proposal to the Ministry of Planning and Finance (MOPF)
April - July	April - May	The Budget Department scrutinizes and compiles budget proposals, which are to be vetted by a Vice-President and submitted to the Financial Commission
July - August	May - June	The Financial Commission discusses the budget proposals and submits them to the Cabinet with recommendations
July - August	May - June	Union Budget Bill is discussed and approved by the Cabinet
August - September	June	Union Budget Bill is discussed and approved by Pyidaungsu Hluttaw
September	July	Union Budget Law is enacted by Pyidaungsu Hluttaw and approved by the President
October -	July	MOPF allocates budget to each ministry for execution

^{*}The schedule is subject to change every year.

^{**}If the budget proposal cannot be processed and approved at the above-mentioned timings, the implementation agency shall seek alternative ways to secure the necessary budget.



JAPANESE GRANT

The Japanese Grant is non-reimbursable fund provided to a recipient country (hereinafter referred to as "the Recipient") to purchase the products and/or services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. Followings are the basic features of the project grants operated by JICA (hereinafter referred to as "Project Grants").

1. Procedures of Project Grants

Project Grants are conducted through following procedures (See "PROCEDURES OF JAPANESE GRANT" for details):

- (1) Preparation
 - The Preparatory Survey (hereinafter referred to as "the Survey") conducted by JICA
- (2) Appraisal
 - -Appraisal by the government of Japan (hereinafter referred to as "GOJ") and JICA, and Approval by the Japanese Cabinet
- (3) Implementation

Exchange of Notes

-The Notes exchanged between the GOJ and the government of the Recipient

Grant Agreement (hereinafter referred to as "the G/A")

-Agreement concluded between JICA and the Recipient

Banking Arrangement (hereinafter referred to as "the B/A")

-Opening of bank account by the Recipient in a bank in Japan (hereinafter referred to as "the Bank") to receive the grant

Construction works/procurement

- -Implementation of the project (hereinafter referred to as "the Project") on the basis of the G/A
- (4) Ex-post Monitoring and Evaluation
 - -Monitoring and evaluation at post-implementation stage

2. Preparatory Survey

(1) Contents of the Survey

The aim of the Survey is to provide basic documents necessary for the appraisal of the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of



relevant agencies of the Recipient necessary for the implementation of the Project.

- Evaluation of the feasibility of the Project to be implemented under the Japanese Grant from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.
- Estimation of costs of the Project.
- Confirmation of Environmental and Social Considerations

The contents of the original request by the Recipient are not necessarily approved in their initial form. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant.

JICA requests the Recipient to take measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the executing agency of the Project. Therefore, the contents of the Project are confirmed by all relevant organizations of the Recipient based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA contracts with (a) consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the feasibility of the Project.

3. Basic Principles of Project Grants

(1) Implementation Stage

1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes (hereinafter referred to as "the E/N") will be singed between the GOJ and the Government of the Recipient to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Recipient to define the necessary articles, in accordance with the E/N, to implement the Project, such as conditions of disbursement, responsibilities of the Recipient, and procurement conditions. The terms and conditions generally applicable to the Japanese Grant are stipulated in the "General Terms and Conditions for Japanese Grant (January 2016)."



2) Banking Arrangements (B/A) (See "Financial Flow of Japanese Grant (A/P Type)" for details)

- a) The Recipient shall open an account or shall cause its designated authority to open an account under the name of the Recipient in the Bank, in principle. JICA will disburse the Japanese Grant in Japanese yen for the Recipient to cover the obligations incurred by the Recipient under the verified contracts.
- b) The Japanese Grant will be disbursed when payment requests are submitted by the Bank to JICA under an Authorization to Pay (A/P) issued by the Recipient.

3) Procurement Procedure

The products and/or services necessary for the implementation of the Project shall be procured in accordance with JICA's procurement guidelines as stipulated in the G/A.

4) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the Recipient to continue to work on the Project's implementation after the E/N and G/A.

5) Eligible source country

In using the Japanese Grant disbursed by JICA for the purchase of products and/or services, the eligible source countries of such products and/or services shall be Japan and/or the Recipient. The Japanese Grant may be used for the purchase of the products and/or services of a third country as eligible, if necessary, taking into account the quality, competitiveness and economic rationality of products and/or services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm, which enter into contracts with the Recipient, are limited to "Japanese nationals", in principle.

6) Contracts and Concurrence by JICA

The Recipient will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be concurred by JICA in order to be verified as eligible for using the Japanese Grant.

7) Monitoring

The Recipient is required to take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and to regularly report to JICA about its status by using the Project Monitoring Report (PMR).

8) Safety Measures

The Recipient must ensure that the safety is highly observed during the implementation of the Project.

9) Construction Quality Control Meeting

Construction Quality Control Meeting (hereinafter referred to as the "Meeting") will be held for quality assurance and smooth implementation of the Works at each stage of the Works. The member of the Meeting will be composed by the



Recipient (or executing agency), the Consultant, the Contractor and JICA. The functions of the Meeting are as followings:

- a) Sharing information on the objective, concept and conditions of design from the Contractor, before start of construction.
- b) Discussing the issues affecting the Works such as modification of the design, test, inspection, safety control and the Client's obligation, during of construction.

(2) Ex-post Monitoring and Evaluation Stage

- 1) After the project completion, JICA will continue to keep in close contact with the Recipient in order to monitor that the outputs of the Project is used and maintained properly to attain its expected outcomes.
- 2) In principle, JICA will conduct ex-post evaluation of the Project after three years from the completion. It is required for the Recipient to furnish any necessary information as JICA may reasonably request.

(3) Others

1) Environmental and Social Considerations

The Recipient shall carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the Recipient and JICA Guidelines for Environmental and Social Considerations (April, 2010).

2) Major undertakings to be taken by the Government of the Recipient

For the smooth and proper implementation of the Project, the Recipient is required to undertake necessary measures including land acquisition, and bear an advising commission of the A/P and payment commissions paid to the Bank as agreed with the GOJ and/or JICA. The Government of the Recipient shall ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the Recipient with respect to the purchase of the Products and/or the Services be exempted or be borne by its designated authority without using the Grant and its accrued interest, since the grant fund comes from the Japanese taxpayers.

3) Proper Use

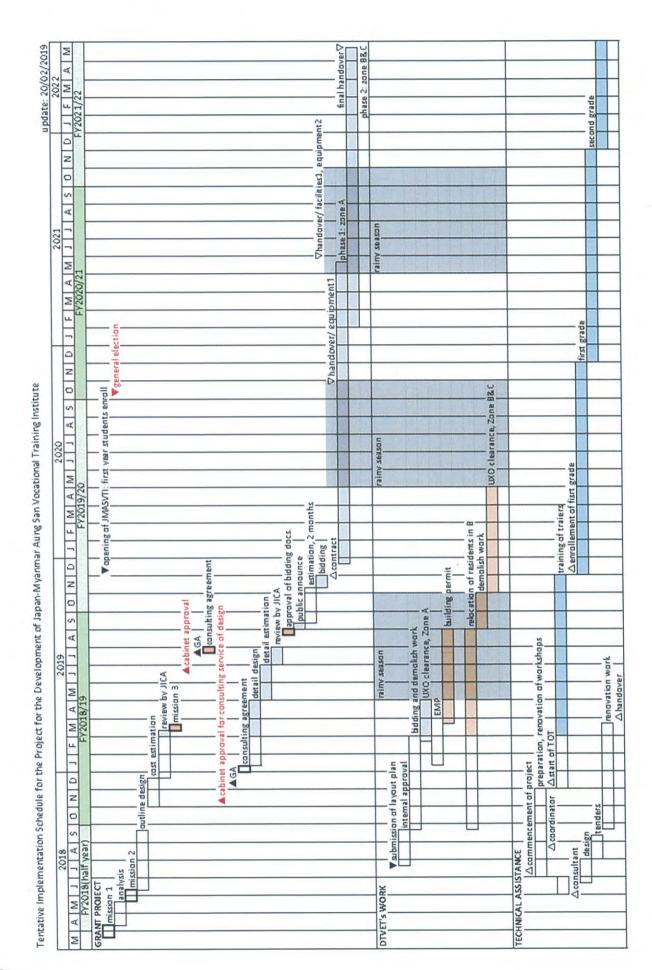
The Recipient is required to maintain and use properly and effectively the products and/or services under the Project (including the facilities constructed and the equipment purchased), to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Japanese Grant.



4) Export and Re-export

The products purchased under the Japanese Grant should not be exported or re-exported from the Recipient.







Annex 7: Major Undertakings to be taken by the Government of Myanmar

1. Specific obligations of the Government of Myanmar which will not be funded with the Grant

(1) Before the Tender

(1)	serore the render			,	
NO	Items	Deadline	In charge	Estimated Cost (million MMK)	Ref.
1	To open bank account (B/A)	within 1 month after the signing of the G/A	DTVET	-	:
2	To issue authorization to pay (A/P) to a bank in Japan (the Agent Bank) for the payment to the consultant and a Japanese company to conduct a UXO exploration		MFTB	14.0	
	To approve EMP and secure the necessary budget for implementation.	before notice of the bidding document(s)	MONRE C		
4	To bear payment commission	for each payment	DTVET	2.3	ı
5	To secure and clear the following lands - former Aung San GTHS premises	before notice of the bidding document(s)	DTVET	_	
6	To obtain the planning, zoning, building permit	before notice of the bidding document(s)	DTVET	**	
7	To clear, level and reclaim the following sites 1) removal of existing buildings and utilities of B and C zone for the phase 2 of the Project 2) clearance of UXO buried in the ground of B and C zone for the phase 2 of the Project	April, 2020	DTVET	186.5	
8	To submit Project Monitoring Report (with the result of Detail Design)	before preparation of bidding document(s)s	DTVET	-	

(B/A: Banking Arrangement, A/P: Authorization to pay, N/A: Not Applicable)

(2) During the Project Implementation

NO	Items	Deadline	In charge	Estimated Cost	Ref.
	To issue A/P to a bank in Japan (the Agent Bank) for the payment to the Supplier(s)	within 1 month after the signing of the contract(s)	MFTB	9.3	
2	To bear the following commissions to a bank in Japan for the banking services based upon the B/A		DTVET	-	
	1) Advising commission of A/P	within 1 month after the signing of the contract(s)		-	
	2) Payment commission	for each payment		38.3	
3	to ensure prompt unloading and customs clearance at ports of disembarkation in the country of the Recipient and to assist the Supplier(s) with internal transportation therein		DTVET	-	
4	To accord Japanese physical persons and/or physical persons of third countries whose services may be required in connection with the supply of the products and the services	during the Project	DTVET	_	



	such facilities as may be necessary for their entry into the country of the Recipient and stay therein for the performance of their work				
5	with respect to the purchase of the products and/or the services be exempted	during the Project		-	
6	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project	during the Project	DTVET	TBC	
7	To submit Project Monitoring Report	every month	DTVET		
	To submit Project Monitoring Report (final)	within one month after signing of Certificate of Completion for the works under the contract(s)		-	
8	To submit a report concerning completion of the Project	within six months after completion of the Project	DTVET	-	:
9	To provide necessary power and water supply to the procured equipment and the new workshop, and other incidental facilities necessary for the implementation of the Project		DTVET		
	Electricity Upgrading of the contract capacity with YESC Extension of high-voltage cables to the new-installed transformer	6 months before completion of the phase 1		100.0	1
	Water Supply Connection with the planned water supply network in the site.	2 months before completion of the phase 1		6.9	
	 3) Furniture and Equipment - Furniture which are not provided by the Project - Stationaries and electrical appliance - Curtains, sheets, pillows, blankets - Textbooks and reference books - Telephone and internet device 	1 month before completion of the construction		TBC	
10	To take necessary measure for safety construction - fence	1 month before completion of the construction	DTVET	186.7	
11	To relocate of a bus stop and move power poles facing Lowe Mingalodon road	3 months before completion of the phase 1	DTVET	27.8	

(3) After the Project

NO	Items	Deadline	In charge	Estimated Cost	Ref.
	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of maintenance cost 2) Operation and maintenance structure 3) Routine check/Periodic inspection	After completion of the construction	DTVET		·



2. Other obligations of the Government of Myanmar funded with the Grant

	ner obligations of the Government of Myanmar funded with	HC GIUHC	
NO	Items	Deadline	Amount (Million Japanese Yen)*
1	To construct buildings and to procure equipment 1) To conduct the following transportation a) Marin (Air) transportation of the products from Japan to the recipient country b) Internal transportation from the port of disembarkation to the project site		
	 2) To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities a) Electricity The drop wiring and internal wiring within the site The main circuit breaker b) Water Supply The supply system within the site (receiving and/or elevated tanks) 		
2	To implement detailed design, bidding support and procurement supervision (Consulting Service)		
3	Contingencies		
	Total		XXX

^{*}The Amount is provisional. This is subject to the approval of the Government of Japan.



Project Monitoring Report on Project Name Grant Agreement No. XXXXXXX

20XX, Month

Organizational Information

		The state of the s
Signer of the G/A (Recipient)	Person in Charge Contacts	Address: Phone/FAX:
İ	<u> </u>	Email:
Executing Agency	Person in Charge Contacts	(Designation) Address: Phone/FAX: Email:
Line Ministry	Person in Charge Contacts	(Designation) Address: Phone/FAX: Email:

General Information:

Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:
Source of Finance	Government of Japan: Not exceeding JPYmil. Government of ():



		ption				
-1	Project Object	ive				
-2	policies and	l objectives to w			es (national/regiona	al/secto
-3	Indicators for	measurement o	f "Effectivenes	s"		
Qua	antitative indicate			f project o		
	Indicators	6	Original (Yr)	Target (Yr)
	litative indicators				**	
2:	Details of the	Project				
	Details of the	Project				
	••••	Oı	r iginal he outline design	1)	Actual	
2-1	Location	Oı	r iginal he outline design	1)	Actual	
2-1 I.	Location Components Scope of the	Or (proposed in t	he outline design	1)		
2-1 I.	Location Components	Or (proposed in t	he outline design		Actual*	
2-1 1. 2-2	Location Components Scope of the	Or (proposed in t	he outline design			
2-1 1. 2-2	Location Components Scope of the	Or (proposed in t	he outline design			
2: 2-1 1.	Location Components Scope of the	Or (proposed in t	he outline design			



2-3 Implementation Schedule

	Or		
Items	(proposed in the outline design)	(at the time of signing the Grant Agreement)	Actual

Reasons for any changes of the schedule, and their effects on the project (if any)				

2-4 Obligations by the Recipient

2-4-1 Progress of Specific Obligations

See Attachment 2.

2-4-2 Activities

See Attachment 3.

2-4-3 Report on RD

See Attachment 11.

2-5 Project Cost

2-5-1 Cost borne by the Grant(Confidential until the Bidding)

	Components			Cost	
	•		(Million Yen)		
	Original (proposed in the outline design)	Actual (in case of any modification)	Original ^{1),2)} (proposed in the outline design)	Actual	
	1.				
	Total				

Note:

- 1) Date of estimation:
- 2) Exchange rate: 1 US Dollar = Yen

2-5-2 Cost borne by the Recipient

Components			Cost	
	-		(1,000 Ta	ıka)
	Original (proposed in the outline design)	Actual (in case of any modification)	Original ^{1),2)} (proposed in the outline design)	Actual
	1.			



Note:	

1) Date of estimation:

2) Exchange rate: 1 US Dollar =

Reasons for the remarkable gaps between the original and actual cost, and the countermeasures (if any)

/DX	4D	٦
$\{I'I'\}$	ИΚ	

2-6 Executing Agency

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

of employees.	
Original (at the time of outline design)	
name:	
role:	
financial situation:	
institutional and organizational arrangement (organogram):	
human resources (number and ability of staff):	
Actual (PMR)	

2-7 Environmental and Social Impacts

- The results of environmental monitoring based on Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- The results of social monitoring based on in Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- Disclosed information related to results of environmental and social monitoring to local stakeholders (whenever applicable).

3: Operation and Maintenance (O&M)

3-1 Physical Arrangement

- Plan for O&M (number and skills of the staff in the responsible division or section, availability of manuals and guidelines, availability of spareparts, etc.)

Original (at the time of outline design)	***************************************	
Actual (PMR)		

3-2 Budgetary Arrangement

- Required O&M cost and actual budget allocation for O&M



Actual (PMR)		

4: Potential Risks and Mitigation Measures

- Potential risks which may affect the project implementation, attainment of objectives, sustainability
- Mitigation measures corresponding to the potential risks

Assessment of Potential Risks (at the time of outline design)

Potential Risks	Assessment
I. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
2. (Description of Risk)	Probability: High/Moderate/Low
2. (Bescription of Risk)	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
3. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
•	



	Contingency Plan (if applicable):
100 0 10	
Actual Situation and Cou (PMR)	ntermeasures
(FIMIK)	
5: Evaluation and	Monitoring Plan (after the work completion)
5-1 Overall evaluation	on
Please describe your overal	l evaluation on the project.
: : : : : :	nd Recommendations
_	earned from the project experience, which might be valuable for the r type of projects, as well as any recommendations, which might be
	tion of the project effect, impact and assurance of sustainability.
Deficial for better realization	nor or the project effect, impact and assurance of sustainability.
5-3 Monitoring Plan	of the Indicators for Post-Evaluation
•	ing methods, section(s)/department(s) in charge of monitoring,
	onitor the indicators stipulated in 1-3.



Attachment

- 1. Project Location Map
- 2. Specific obligations of the Recipient which will not be funded with the Grant
- 3. Monthly Report submitted by the Consultant

Appendix - Photocopy of Contractor's Progress Report (if any)

- Consultant Member List
- Contractor's Main Staff List
- 4. Check list for the Contract (including Record of Amendment of the Contract/Agreement and Schedule of Payment)
- 5. Environmental Monitoring Form / Social Monitoring Form
- 6. Monitoring sheet on price of specified materials (Quarterly)
- 7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (PMR (final)only)
- 8. Pictures (by JPEG style by CD-R) (PMR (final)only)
- 9. Equipment List (PMR (final)only)
- 10. Drawing (PMR (final)only)
- 11. Report on RD (After project)



Monitoring sheet on price of specified materials

	Condition of pa	$egin{array}{ll} ext{Lract} & ext{Price} & ext{Price} \ & ext{(Decreased)} & ext{(Increased)} \ & ext{E=C-D} & ext{F=C+D} \ \end{array}$	•			Total Control			
	10/ 25 /01	1% or Contract Price D						i	
		Initial total Price C=A×B	•			3			
	, h	Initial Unit Price (¥) B	•						
		Initial Volume A	+		t •				7
1. Initial Conditions (Confirmed)		Items of Specified Materials	1tem 1	THOUT	Item 2	Item 3	Item 4	Item 5	
ij			,	4	Ø	က	4	ıO	

2. Monitoring of the Unit Price of Specified Materials(1) Method of Monitoring : ●●

(2) Result of the Monitoring Survey on Unit Price for each specified materials

6th				į			100	
4								
5th								
4th								
3rd 15								
2nd —month, 2015								
1st • month, 2015						i.		
Items of Specified Materials	Item 1	Trans	Item 2	Item 3	Ψ.	1	The III o	
	76	4 C	Ŋ	c:	> -	t r	ဂ	

(3) Summary of Discussion with Contractor (if necessary)



A76

Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (Actual Expenditure by Construction and Equipment each)

	Domestic Procurement	Foreign Procurement	Foreign Procurement	Total
	(Recipient Country)	(Japan)	(Third Countries)	Q
	A	В	С	
Construction Cost	(A/D%)	(B/D%)	(%Q/D)	
Direct Construction	(A/D%)	(B/D%)	(%Q/D)	
others	(A/D%)	(B/D%)	(%0/0)	***************************************
Equipment Cost	(A/D%)	(B/D%)	(%0/5)	
Design and Supervision Cost	(A/D%)	(B/D%)	(%0/0)	
Total	(A/D%)	(B/D%)	(%0/0)	



Date:

Ref. No.
APAN INTERNATIONAL COOPERATION AGENCY ICA <u>XXX</u> OFFICE
Address specified in the Article 5 of the Grant Agreement]
Attention: Chief Representative
adies and Gentlemen:
NOTICE CONCERNING PROGRESS OF PROJECT
Reference: Grant Agreement, dated 署名日(signed date of the G/A), for プロジェクト名(name of the Project)
In accordance to the Article 6 (3) of the Grant Agreement, we would like to report on the progress of the Project up to the following stages:
[Common]
Preparation of bidding documents - result of detailed design
Completion of final works under construction/procurement contract
[Construction]
☐ Monthly progress [Month/Year]
[Procurement of Equipment]
Shipping/delivery, hand-over (take over) of equipment
☐ Installation works
Operational training
Other

[Signature]

[Name of the signer]
[Title of the signer]
[Name of the executing agency]



Very truly yours,

Please see the details as per attached Project Monitoring Report (PMR).

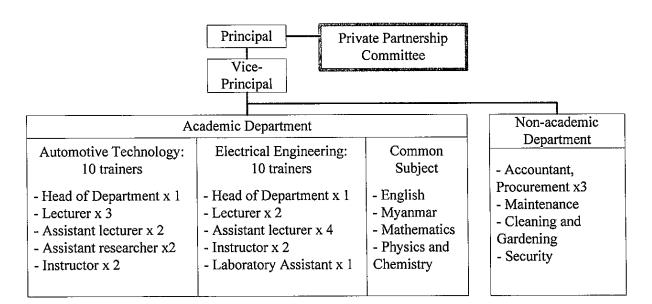
Annex 8b

cc:

Director General
Financial Cooperation Implementation Department
Japan International Cooperation Agency
[Address specified in the Article 5 of the Grant Agreement]



Annex 9 Organization chart of JMASVTI





TECHNICAL NOTE for the Preparatory Survey for the Project for Establishment of Japan Myanmar Vocational Training Institute (Aung San), Mission 1

Department of Technical and Vocational Education and Training, Ministry of Education (hereinafter referred to as "DTVET") and the Consultant Team confirmed the followings through a series of discussion on 29th and 30th March between DTVET and the Consultant Team (hereinafter referred to as "both parties")

1. Basic concept

- This Project aims to establish JMVTI for automobile maintenance course and electrical course at the former Aung San Technical High School site. And the number of students is forty for each course. The whole number of students is 240, which is forty multiplied by two courses and three grades.
- In the future, DTVET will offer new courses depend on regional needs that related to automobile maintenance and electrical courses. DTVET doesn't have an idea to establish Technical High School in the same site.

2. Project site

- Both sides agreed to develop two options of the layout plan for the Project: (a) space behind the former main building and space where workshops which will be renovated by the technical cooperation project, (b) space where eight houses stand along the main road and space behind the main building.
- Both sides agreed that the park can be included in the design.

3. Facility component

- DTVET requested workshops, classrooms, computer room, laboratories for chemistry and physics, drawing room, administration rooms, library, canteen, shrine room, assembly hall and space for sport activities for facility component.
- The Consultant Team explained canteen, assembly hall or space for sport activities need huge space and these components can be excluded depend on the extent of the site and the budget.

4. Main building of former Aung San GTHS

- A heavy renovation which reinforces the structure takes time and cost, which affects the implementation schedule. The Consultant Team proposed that DTVET carry out a light renovation of deteriorated elements.
- DTVET doesn't consider that the renovation work needs structural reinforcement and requests an official letter if Japanese side suggests the renovation work by the Ministry of Education.

KZ

5. DTVET's work

- DTVET will submit Ministry of Education to send a letter to the Ministry of Defense in order to arrange of the initial screening of UXO for the areas of option (a) and (b) described in the item 2 and inform the result to JICA in the mission 2.
- DTVET needs to demolish existing buildings and trees to be designated the Consultant prior UXO clearance and agreed to commence the demolition work as soon as the construction site is decided.
- DTVET will submit Ministry of Education to send the letter to MONREC (Ministry of Natural Resource and Environment) to confirm whether this Project is required of IEE (Initial Environmental Examination) or EIA (Environmental Impact Assessment) or not. The DTVET to provide the answer in the mission 2.
- The Consultant Team explained the payment steps of the Grant Aid system and DTVET agreed to take procedures of Banking Arrangement (B/A) and Authorization to Pay (A/P).
- DTVET agreed to acquire a Building Permit of the Project prior the announcement of the tender, tentatively by August 2019 and the Consultant Team provides necessary information for the procedures.

6. Others

 DTVET requests the Consultant Team to submit rough estimated amount of the consulting fee for Detail Design and the advance payment of the consulting fee for supervision, to register for FY 2018/19 budget, by 5 April 2018.

Dr. Aye Myint

Director General
Department of Technical and Vocational
Education and Training
Ministry of Education

Myanmar

Mr. Kenji Kawazoe

Chief Consultant

Matsuda Consultants Intl. Co., Ltd.

TECHNICAL NOTE for the Preparatory Survey for the Project for Establishment of Japan Myanmar Vocational Training Institute (Aung San), Mission 2

Department of Technical and Vocational Education and Training, Ministry of Education (hereinafter referred to as "DTVET") and the Consultant Team confirmed the followings through a series of discussion on 6th and 7th June between DTVET and the Consultant Team (hereinafter referred to as "both parties")

1. Block plan and building design

- The Consultant Team proposed two options of block plan (Annex 1); option 1 using A zone, option 2 using A and B zone:
 - *Option 1: Facility components except hostels are set in A zone. B zone may be used for future additional workshops.
 - *Option 2: Facility components except hostels are set in A and B zone. Future additional workshops may be built in A zone.
- The Consultant Team showed features of each option as follows:

	option 1: A	option 2: A+B
site area	10,500 sqm	14,300 sqm
1	2.60 acre	3.53 acre
building area*	6,000 sqm	5,000 sqm
building coverage ratio	59%	35%
length of façade	65m	120m

^{*} The area is based on preliminary study and can be changed.

- According to the discussion, Option 2 has advantages over option 1 with followings;
 - * Option 2 tends to get people's attention with wide façade.
 - * Option 1 is a rather crowded and has less opening space, which is not considered to be rich educational environment.
- DTVET will inform the final decision to the Japanese side by early July through internal procedure.

If option 2 will be chosen,

- a) DTVET explained that the residents of zone B need to move and it takes time. The
 Consultant Team proposed two-stage construction; priority components are set in A
 zone and built first. Additional components, e.g. assembly hall, library, meeting
 rooms and so on, are set in B zone and built when residents move away and UXO
 are cleared.
- b) The Consultant Team showed a summary of buildings in zone A+B in response to a demand of DTVET for internal approval of usage of B zone.

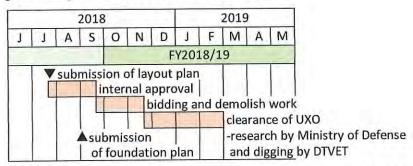
- The Consultant Team explained preconditions of this proposal as follows;
 - *DTVET is required to remove all existing buildings in A zone and manage moves of residents in B zone for each option.
 - *The pathway between A and B zone is cancelled so that both zones unite. (refer Annex 2)
 - *The pathway between A zone and park can be used for maintenance and emergency purpose. This change enables smooth traffic of students between both zones.
 - *The existing transformer is replaced with a bigger and dual-voltage (6.6kV and 11kV) one by this Project. This replacement enables activities in other zones other than this Project and suit a future voltage change which YESC (Yangon Electricity Supply Corporation) plans.
 - *DTVET is required to obtain agreement from the authorities and prepare necessary budget for the followings; relocation of the bus stop by YRTA (Yangon Region Transport Authority), relocation of power cables to a telephone tower and a cabinet along Lower Mingaladon Road by MPT, and removal of nine power poles along north boundary of zone B and installing a new power cable and poles. (refer Annex 2)
- Hostels can be built in C zone. The capacity is decided on the budget. Two north buildings are recommended to be removed in terms of future program.
- A chemistry laboratory is planned to carry out science experiments by handling dangerous chemicals, but physics laboratory is not planned because physics experiment can be done in classrooms.

2. Equipment list

- Both parties confirmed a requested equipment list (Annex 3).

3. DTVET's work

 DTVET explained the procedure of UXO clearance as below table. DTVET will try to get a budget of excavation in FY 2018/19.



- The Consultant Team explained that DTVET is required bank commission, around USD 2,100 for Japanese bank at DTVET's cost and surplus commission for Myanmar bank for issuance of Authorization to Pay (A/P).
- DTVET confirmed an oral answer by ECD (Environmental Conservation Department) that this Project is not required for EIA and IEE, but EMP (environmental

management plan) is required. DTVET explained that ECD is preparing an official letter for this issue.

4. Others

- The Consultant Team informed that the technical assistant project by JICA is planning 40-students practice for electricity course and planned the building design and the equipment list with this condition. Concerning automobile course, the unit is 20-students.

Dr. Aye Myint

Director General
Department of Technical and Vocational
Education and Training
Ministry of Education
Myanmar

Mr. Kenji Kawazoe

Chief Consultant

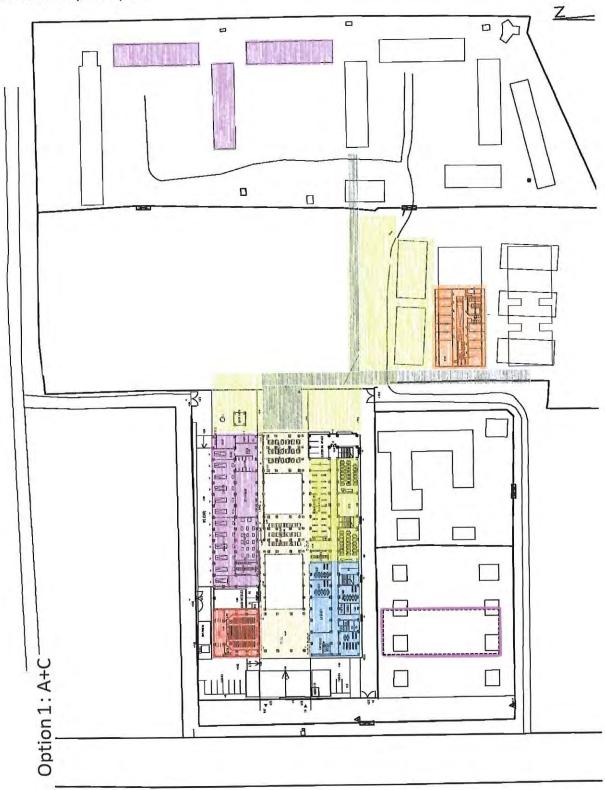
Matsuda Consultants Intl. Co., Ltd.

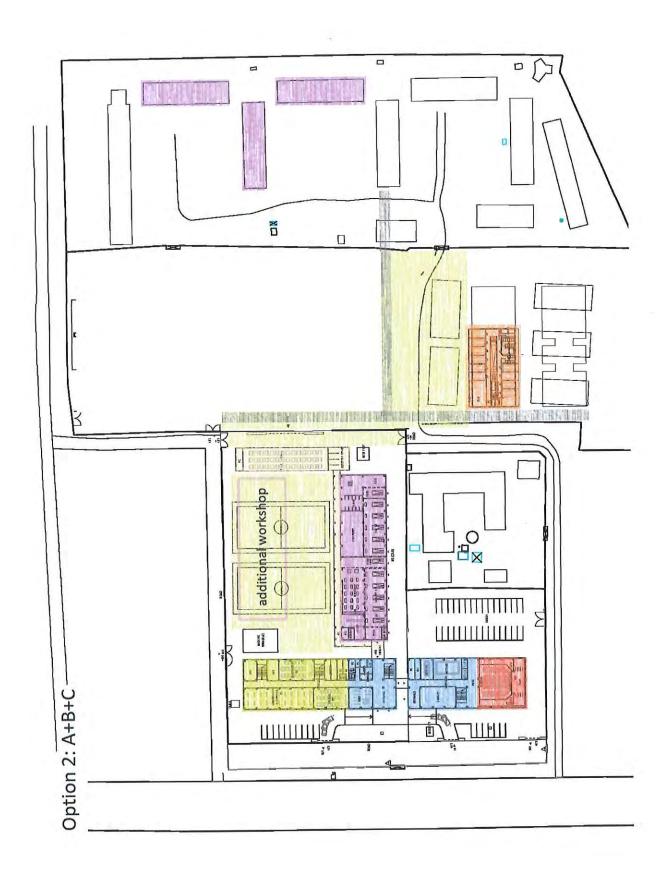
Annex 1: Proposed building plan

Annex 2: Site conditions

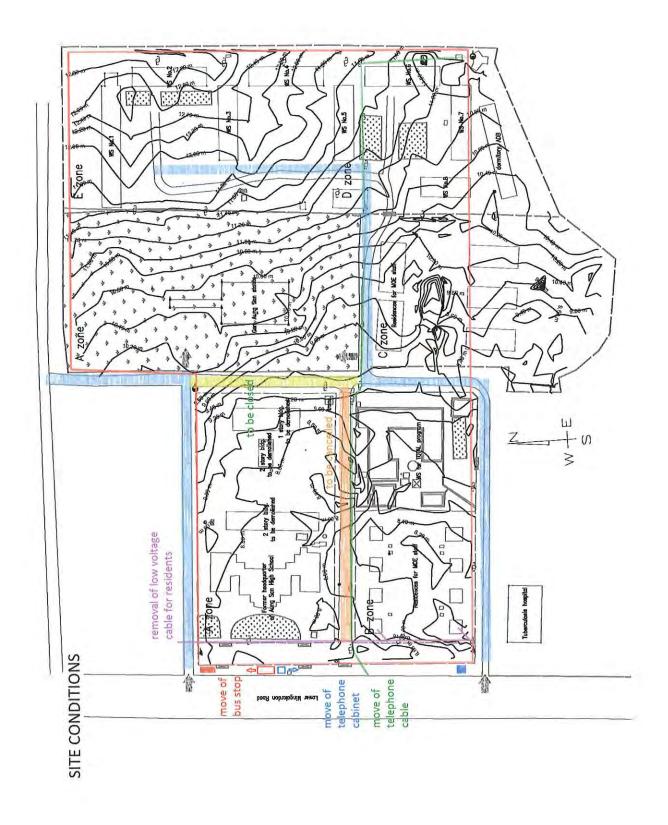
Annex 3: Final requested equipment list

Annex 1: Proposed plan





Annex 2: Site conditions



Annex 3: Final requested equipment list *the items in bold is modified ones

No. 1 2		Olt.	
_	Description	Q'ty	Priority
	Valve spring compressor	11	A
	Automobile mechanics tool sets	33	Α
		11	À
3	Socket wrench set		
4	Gear bearing puller	2	Α
5	Oil filter wrench	2	Α
		2	Ä
6	Waste oil drainer		
7	Oil bucket pump	2	С
8	ATF changer	1	Α
9	Cord reel (mobile)	10	<u> </u>
10	Cord reel (fixed)	5	l A
		5	Α
	Hand grease gun		
12	Rigid rack Two legs set	10	Α
13	Quick battery charger	2	Α
14		2	Α
	Booster cable		
15	Strut Spring compressor	5	A
16	Cross wrench set	11	Α
		6	A
17	Impact wrench		
18	Scraper set	6	Α
19	Snap ring pliers	11	T A
20	Sliding hammer	5	A
21	Slide hammer type puller	5	Α
33	Clutch alignment tool set	2	A
	Ciucos angliment tool set		
23	Universal joint bearing press with adapter	1	A
24	Control arm bushing tool	1	Α
25	Tie west and and half laint muller	5	Â
	Tie-rod end and ball joint puller	1	
26	Front bearing hub tool	1 1	Α
27	Hold-down spring and return spring tool	5	Α
	Tiolu-down spring did return spring tool	5	À
28	Caliper piston removal tool		
29	Service creeper, steel frame type	5	A
30	Garage lamp	5	Α
30	Oarage lamp		
31	Solder-less terminal kit	11	A
32	Soldering irons	21	A
		20	A
33	Tire repair set, tubeless tire		
34	Tube repair set	1	A
35	Cleaning pan	20	A
	Clearing pair	10	A
36	Air blow gun		
37	Air hose	5	A
38	Paint spray with container	5	Α
	Paint Spray with Container		
39	Double action sander	5	A
40	Polisher	5	A
41	Protective tool for painting		
1 41			! A
		21	A
42	Arc welding machine		A
42	Arc welding machine	21 5	Α
42 43	Arc welding machine Gas welding and cutting machine	21 5 5	A
42	Arc welding machine Gas welding and cutting machine Fume collector	21 5 5 5	A A A
42 43 44	Arc welding machine Gas welding and cutting machine Fume collector	21 5 5 5 5	A
42 43 44 45	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding	21 5 5 5 5	A A A
42 43 44 45 46	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model	21 5 5 5 5 5	A A A A
42 43 44 45 46 47	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model	21 5 5 5 5 11 11	A A A A A
42 43 44 45 46 47	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model	21 5 5 5 5 5	A A A A
42 43 44 45 46 47 48	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model	21 5 5 5 5 11 11 11	A A A A A
42 43 44 45 46 47 48 49	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model	21 5 5 5 5 11 11 11	A A A A A A
42 43 44 45 46 47 48 49 50	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer	21 5 5 5 5 11 11 11 11 5	A A A A A A
42 43 44 45 46 47 48 49 50	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer	21 5 5 5 5 11 11 11 11 5	A A A A A A
42 43 44 45 46 47 48 49 50 51	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer	21 5 5 5 5 11 11 11 11 5	A A A A A A A
42 43 44 45 46 47 48 49 50 51	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch	21 5 5 5 5 11 11 11 11 5 5	A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer	21 5 5 5 11 11 11 11 11 11 11	A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission	21 5 5 5 11 11 11 11 11 11 11 11 11	A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential	21 5 5 5 11 11 11 11 11 11 11 11 11	A A A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53 54 55	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft	21 5 5 5 11 11 11 11 11 11 11 11 11	A A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axle	21 5 5 5 5 11 11 11 5 5 11 11 11 11 11	A A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axle	21 5 5 5 5 11 11 11 5 5 11 11 11 11 11 11	A A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axie Starter motor	21 5 5 5 5 11 11 11 5 5 11 11 11 11 11 11	A A A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axie Starter motor Alternator	21 5 5 5 11 11 11 11 5 5 11 11 11 11 11 1	A A A A A A A A A A A A A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axie Starter motor	21 5 5 5 5 11 11 11 5 5 11 11 11 11 11 11	A A A A A A A A A A A A A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axle Starter motor Alternator Cut-away model, planetary gear	21 5 5 5 11 11 11 11 5 5 11 11 11 11 11 1	A A A A A A A A A A A A A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axie Starter motor Alternator Cut-away model, planetary gear Cut-away model, torque convertor	21 5 5 5 5 11 11 11 11 5 5 11 11 11 11 11	A A A A A A A A A A A A A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 60 61	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axle Starter motor Alternator Cut-away model, planetary gear Cut-away model, torque convertor Cut-away model, turbo charger	21 5 5 5 11 11 11 11 5 5 11 11 11 11 11 1	A A A A A A A A A A A A A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axie Starter motor Alternator Cut-away model, torque convertor Cut-away model, torque convertor Cut-away model, carburetor	21 5 5 5 5 11 11 11 5 5 11 11 11 11 11 11	A A A A A A A A A C C
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axie Starter motor Alternator Cut-away model, torque convertor Cut-away model, torque convertor Cut-away model, carburetor	21 5 5 5 11 11 11 11 5 5 11 11 11 11 11 1	A A A A A A A A C C
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axle Starter motor Alternator Cut-away model, planetary gear Cut-away model, torque convertor Cut-away model, carburetor Cut-away model, carburetor Cut-away model, gasoline engine	21 5 5 5 5 11 11 11 5 5 11 11 11 11 11 11	A A A A A A A A A A A A A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 67 61 62 63 64	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axle Starter motor Alternator Cut-away model, planetary gear Cut-away model, torque convertor Cut-away model, carburetor Cut-away model, carburetor Cut-away model, gasoline engine Cut-away model, engine with chassis	21 5 5 5 5 11 11 11 11 5 5 11 11 11 11 11	A A A A A A A A A A A A A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 67 61 62 63 64	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axle Starter motor Alternator Cut-away model, planetary gear Cut-away model, torque convertor Cut-away model, carburetor Cut-away model, carburetor Cut-away model, gasoline engine Cut-away model, engine with chassis	21 5 5 5 5 11 11 11 5 5 11 11 11 11 11 11	A A A A A A A A A A A A A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 60 61 62 63 64 65	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axle Starter motor Alternator Cut-away model, planetary gear Cut-away model, torque convertor Cut-away model, carburetor Cut-away model, gasoline engine Cut-away model, engine with chassis Cut-away model, automatic transmission	21 5 5 5 5 11 11 11 5 5 11 11 11 11 11 21 21 1 1 1	A A A A A A A A A A A A A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 60 61 62 63 64 65 66	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axle Starter motor Alternator Cut-away model, planetary gear Cut-away model, torque convertor Cut-away model, carburetor Cut-away model, carburetor Cut-away model, carburetor Cut-away model, engine with chassis Cut-away model, automatic transmission Cut-away model, CVT	21 5 5 5 5 11 11 11 11 11 11 11 11 21 21 1 1 1	A A A A A A A A A A A A A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axle Starter motor Alternator Cut-away model, planetary gear Cut-away model, torque convertor Cut-away model, carburetor Cut-away model, carburetor Cut-away model, gasoline engine Cut-away model, engine with chassis Cut-away model, cutomatic transmission Cut-away model, CVT Lighting and electric ignition system trainer	21 5 5 5 11 11 11 11 11 11 11 11 21 21 21 1 1 1 1	A A A A A A A A A A A A A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axle Starter motor Alternator Cut-away model, planetary gear Cut-away model, torque convertor Cut-away model, carburetor Cut-away model, carburetor Cut-away model, gasoline engine Cut-away model, engine with chassis Cut-away model, cutomatic transmission Cut-away model, CVT Lighting and electric ignition system trainer	21 5 5 5 5 11 11 11 11 11 11 11 11 21 21 1 1 1	A A A A A A A A A A A A A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axle Starter motor Alternator Cut-away model, planetary gear Cut-away model, torque convertor Cut-away model, turbo charger Cut-away model, carburetor Cut-away model, carburetor Cut-away model, engine with chassis Cut-away model, automatic transmission Cut-away model, CVT Lighting and electric ignition system trainer Car air conditioning system trainer	21 5 5 5 11 11 11 11 11 11 11 11 11 11 11	A A A A A A A A A A A A A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 60 61 62 63 64 65 66 67 68 69	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axie Starter motor Alternator Cut-away model, planetary gear Cut-away model, turbo charger Cut-away model, carburetor Cut-away model, gasoline engine Cut-away model, engine with chassis Cut-away model, automatic transmission Cut-away model, CVT Lighting and electric ignition system trainer Car air conditioning system trainer Light bulb & wiring set	21 5 5 5 11 11 11 11 11 11 11 11 11 21 21 21 1 1 1 1 1	A A A A A A A A A A A A A A A A A A A
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68	Arc welding machine Gas welding and cutting machine Fume collector Helmet for welding 2 cylinder engine model 4 cylinder engine model 6 cylinder engine model Diesel engine model Gasoline engine trainer Diesel engine trainer Mission with clutch Automatic mission Differential Drive shaft Rear axle Starter motor Alternator Cut-away model, planetary gear Cut-away model, torque convertor Cut-away model, turbo charger Cut-away model, carburetor Cut-away model, gasoline engine Cut-away model, engine with chassis Cut-away model, automatic transmission Cut-away model, CVT Lighting and electric ignition system trainer Car air conditioning system trainer	21 5 5 5 11 11 11 11 11 11 11 11 11 11 11	A A A A A A A A A A A A A A A A A A A

77	Con all and distant as an internal and to all	1	D
72	Car air conditioning maintenance tool	6	B A
73	On-board diagnostics scan tool type A		
74	On-board diagnostics scan tool type B	6	A
75	On-board diagnostics scan tool type C	1	В
76	Laptop computer	6	A
77	Vise	6	A
78	Hacksaw	21	A
79	Taps and dies set	5	A
80	Hydraulic press	1	Α
81	Bench grinder	2	Α
82	Drilling machine	2	A
83	Electric drill	5	Α
84	Iron work file set	20	A
85	Flat chisel	20	A
86	Center punch	20	Ä
87	Magnetic base	20	$\frac{\gamma}{A}$
88	Surface plate	10	$\frac{\Lambda}{A}$
		20	Â
89	V-blocks	11	$\frac{\Lambda}{A}$
90	Vernier caliper		
91	Digital vernier caliper	6	A
92	Micrometer set	21	A
93	Dial gauge	21	A
94	Cylinder gauge	21	A
95	Thickness gauge	21	A
96	Straight edge Tool	11	A
97	Compression gauge	6	Α
98	Engine oil pressure gauge	6	Α
	Timing light	6	Α
100	Digital tester	21	Α
101	Analog tester	21	A
	Battery coolant tester	6	A
102	Tire gauge	6	Ä
104	Radiator cap tester	6	A
104	Preset type torque wrench set	6	$\frac{\hat{A}}{A}$
105	District type torque wrench	6	A
100	Digital type torque wrench		
107	A-plate type torque wrench set	11	A A
108	Turning radius gauge	5	
109	Camber, caster, kingpin gauge	5	A
110	DC power supply	6	Α
110 111	DC power supply Thermometer	6 100	A A
110 111 112	DC power supply Thermometer Buried-type car lift	6 100 6	A A A
110 111 112 113	DC power supply Thermometer Buried-type car lift Parts cleaner	6 100 6 2	A A A C
110 111 112 113 114	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor	6 100 6 2 1	A A C A
110 111 112 113 114 115	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack	6 100 6 2 1 5	A A A C
110 111 112 113 114 115 116	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small)	6 100 6 2 1	A A C A
110 111 112 113 114 115 116 117	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large)	6 100 6 2 1 5 15	A A A C A A A
110 111 112 113 114 115 116 117	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large)	6 100 6 2 1 5 15 4	A A C A A C C
110 111 112 113 114 115 116 117 118	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane	6 100 6 2 1 5 15	A A A C A A A
110 111 112 113 114 115 116 117 118 119	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter	6 100 6 2 1 5 15 4	A A C A A C C
110 111 112 113 114 115 116 117 118 119 120	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel	6 100 6 2 1 5 15 4 5	A A C A A A C A A
110 111 112 113 114 115 116 117 118 119 120 121	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer	6 100 6 2 1 5 15 4 5 2 10	A A A C A A A C A A A A A A A
110 111 112 113 114 115 116 117 118 119 120 121 122	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct	6 100 6 2 1 5 15 4 5 2 10 1	A A A C A A A C C A A C
110 111 112 113 114 115 116 117 118 119 120 121 122 123	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer	6 100 6 2 1 5 15 4 5 2 10 1	A A A C A A A C A A C A A C A A
110 111 112 113 114 115 116 117 118 119 120 121 122 123 124	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer	6 100 6 2 1 5 15 4 5 2 10 1 1 1	A A A C A A A C A A C A A A A A A A A A
110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set	6 100 6 2 1 5 15 4 5 2 10 1 1 1 1	A A A C A A A C A A C A A A A A A A A A
110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set Balance weight tool	6 100 6 2 1 5 15 4 5 2 10 1 1 1 1 1 1 1 1 1	A A A A A A C A A A C A A A A A A A A A
110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set Balance weight tool Starter generator test stand	6 100 6 2 1 5 15 4 5 2 10 1 1 1 1 1 1 1 1	A A A A A A C A A A C A A A C A A C A A C
110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set Balance weight tool Starter generator test stand Leader bench	6 100 6 2 1 5 15 4 5 2 10 1 1 1 1 1 1 1 1	A A A A A A C A A A C A A A C A A C A A A A C A
110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set Balance weight tool Starter generator test stand Leader bench Head light tester	6 100 6 2 1 5 15 4 5 2 10 1 1 1 1 1 1 1 1	A A A A A A C A A A C A A A C A A A A A
110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set Balance weight tool Starter generator test stand Leader bench Head light tester Combination tester	6 100 6 2 1 5 15 4 5 2 10 1 1 1 1 1 1 1 1 1	A A A A A A A C A A A A A C A A A A A A
110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set Balance weight tool Starter generator test stand Leader bench Head light tester Combination tester Exhaust gas tester	6 100 6 2 1 5 15 4 5 2 10 1 1 1 1 1 1 1 1 1	A A A A A A C A A A A A A A A A A A A A
110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set Balance weight tool Starter generator test stand Leader bench Head light tester Combination tester Exhaust gas tester Opacimeter	6 100 6 2 1 5 15 4 5 2 10 1 1 1 1 1 1 1 1 1 1 1	A A A A A A A A A A A A A A A A A A A
110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set Balance weight tool Starter generator test stand Leader bench Head light tester Combination tester Exhaust gas tester Opacimeter Steel cabinet	6 100 6 2 1 5 15 4 4 5 2 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A A A A A A A A A A A A A A A A A A A
110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 131 131	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set Balance weight tool Starter generator test stand Leader bench Head light tester Combination tester Exhaust gas tester Opacimeter Steel cabinet Parts rack	6 100 6 2 1 5 15 4 4 5 2 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A A A A A A A A A A A A A A A A A A A
110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 131 131	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set Balance weight tool Starter generator test stand Leader bench Head light tester Combination tester Exhaust gas tester Opacimeter Steel cabinet	6 100 6 2 1 5 15 4 5 2 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A A A A A A A A A A A A A A A A A A A
110 111 112 113 114 115 116 117 118 120 121 122 123 124 125 126 127 128 129 130 131 131 132 133 134 135	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set Balance weight tool Starter generator test stand Leader bench Head light tester Combination tester Exhaust gas tester Opacimeter Steel cabinet Parts rack Sink	6 100 6 2 1 5 15 4 5 2 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A A A A A A A A A A A A A A A A A A A
110 111 112 113 114 115 116 117 118 120 121 122 123 124 125 126 127 128 129 130 131 133 134 135 136	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set Balance weight tool Starter generator test stand Leader bench Head light tester Combination tester Exhaust gas tester Opacimeter Steel cabinet Parts rack Sink Forklift	6 100 6 2 1 5 15 4 5 2 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A A A A A A A A A A A A A A A A A A A
110 111 112 113 114 115 116 117 118 120 121 122 123 124 125 126 127 128 129 130 131 133 134 135 136	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set Balance weight tool Starter generator test stand Leader bench Head light tester Combination tester Exhaust gas tester Opacimeter Steel cabinet Parts rack Sink Forklift Analog tester	6 100 6 2 1 5 15 4 5 2 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A A A A A A A A A A A A A A A A A A A
110 111 112 113 114 115 116 117 118 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set Balance weight tool Starter generator test stand Leader bench Head light tester Combination tester Exhaust gas tester Opacimeter Steel cabinet Parts rack Sink Forklift Analog tester Digital tester	6 100 6 2 1 5 15 4 5 2 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A A A A A A A A A A A A A A A A A A A
110 111 112 113 114 115 116 117 118 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 135 137	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set Balance weight tool Starter generator test stand Leader bench Head light tester Combination tester Exhaust gas tester Opacimeter Steel cabinet Parts rack Sink Forklift Analog tester DC power supply	6 100 6 2 1 5 15 4 5 2 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A A A A A A A A A A A A A A A A A A A
110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set Balance weight tool Starter generator test stand Leader bench Head light tester Combination tester Exhaust gas tester Opacimeter Steel cabinet Parts rack Sink Forklift Analog tester DC power supply Multimeter	6 100 6 2 1 5 15 4 5 2 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A A A A A A A A A A A A A A A A A A A
110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set Balance weight tool Starter generator test stand Leader bench Head light tester Combination tester Exhaust gas tester Opacimeter Steel cabinet Parts rack Sink Forklift Analog tester DC power supply Multimeter Oscilloscope	6 100 6 2 1 5 15 4 5 2 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A A A A A A A A A A A A A A A A A A A
110 111 112 113 114 115 116 117 118 120 121 122 123 124 125 126 127 128 130 131 132 133 134 135 136 137 138 139 140 141 142	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set Balance weight tool Starter generator test stand Leader bench Head light tester Combination tester Exhaust gas tester Opacimeter Steel cabinet Parts rack Sink Forklift Analog tester DC power supply Multimeter Oscilloscope Function generator	6 100 6 2 1 5 15 4 5 2 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A A A A A A A A A A A A A A A A A A A
110 111 112 113 114 115 116 117 118 120 121 122 123 124 125 126 127 128 130 131 132 133 134 135 136 137 138 139 140 141 142 143	DC power supply Thermometer Buried-type car lift Parts cleaner Air compressor Garage jack Work bench (small) Work bench (large) Floor crane Engine lifter Air hose reel Hot water high pressure washer Exhaust duct Tire changer Wheel balancer Wheel weight set Balance weight tool Starter generator test stand Leader bench Head light tester Combination tester Exhaust gas tester Opacimeter Steel cabinet Parts rack Sink Forklift Analog tester DC power supply Multimeter Oscilloscope	6 100 6 2 1 5 15 4 5 2 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A A A A A A A A A A A A A A A A A A A

			A
	crocodile clip	21	<u> </u>
	Power factor meter	6	<u>A</u>
	Watt meter(1 phase)	6	Α
148	Watt meter(3 phase)	6	Α
149	Voltage transformer for measurement	11	A
150	Insulation tester megger	6	Α
151	Test phase shifter	6	A
152	Current transformer	6	A
		6	A
133	Voltage transformer	21	Ä
154	Electroscope		
155	Clamp meter	6	A
156	Miniature plier	21	A
157	Miniature cutter	21	<u> </u>
158	Motor(1 phase)	21	A
159	Motor(3 phase)	6	Α
160	Motor(3 phase) for Star-delta	6	Α
161	Magnetic contactor	42	Α
162	AUX contactor unit	42	Α
102	The arrest value	42	A
103	Thermal relay	42	$\frac{\Lambda}{A}$
164	Earth leakage breaker		A
165	Laptop computer	42	
	Printer	2	A
167	Network equipment	1	Ç
168	Programmable logic controller practice set	42	A
169	Push button	42	Α
170	Lamp (Red)	42	Α
	Tool set	42	A
177	Trainer for sensors	21	$\frac{\lambda}{A}$
1/2	Trainer for Sensors Trainer for Pneumatic system	42	A
			Ā
	Electric drill	6	
	Projector	3	A
	Screen	3	Α
177	Wiring practice board	21	Α
178	Pipe vendor	21	Α
179	Torch burner	21	Α
	Line wire	11	Α
	Electric works tool set	42	A
		42	A
182	Spirit level	6	Â
	Earth tester	21	$\frac{A}{A}$
	Pipe thread cutter		
185	Pipe vise	21	A
186	Electric works practice kit	42	Α
187	Work table	40	A
	Stool	120	Α
	Chair	6	A
	Desktop PC	42	Α
4 40 4		1	Α
131	Server	1 1	Ä
	Disk device	$-\frac{1}{2}$	$-\frac{\gamma}{A}$
193	Switching hub		Ā
	Black and white printer	2	
195	Color printer	1	A
196	Large format printer	1	A
197	Power Supply	1	C
198	Back up Soft for Server	1	Α
199	Back up Soft for Client CP	42	Α
200	Anti-Virus Software	42	Α
	MS Office Personal	42	Α
201	Auto CAD (2 Dimension CAD)	42	A
202	Solid Works (3 Dimension CAD)	42	A
203	Tibe	42	A
204	UPS	8	A
205	Projector (Small)	8	<u>A</u>
	Screen (Small)		
207	Projector (Large)	1	A
208	Screen (Large)	1	Α
209	Screen (Large) Audio visual equipment	1	Α
210	Drawing table	43	Α
711	First Aid kit	5	Α
717	Chemical experiment equipment set	1 1	A
212	Chemical experiment table for teacher	1 1	B
Z13	Chemical experiment table for teacher Chemical experiment table for student	4	В
0.4	u u nemical experiment table for STUGENT		D
214	- Circumout CAPOTITION CO.	4	٨
214 215	Physical experiment equipment set	1	A
214 215 216	Physical experiment equipment set Movable white board Kitchen equipment	1 9 1	A A A