# Lot 6

: CNC Machining Equipment/Attachment

# APPROVED BUDGET FOR THE CONTRACT

Sixty Eight Million Three Hundred Thousand Six Hundred Sixteen Pesos and 56/100 (₱68,300,616.56)

No.	Item	Agency Specifications	Qty	Unit	Statement of Compliance*	Make Brand / Model	Reference
1	CNC Computer Aided Design and Computer-Aided Machining Software		26	unit			
2	CNC Lathe Performance Turning Center		1	unit			
3	5-Axis Rotary Table for Multi- Axes Simulation and CNC Machining		1	unit			
4	CNC Control Simulator (Full Function Control)		15	unit			
5	CNC Plasma Cutting Machine		1	unit			
6	Electric Box Furnace		1	unit			
7	Hardness tester		1	unit			
8	Prescision Centerless Grinding Machine	Kindly refer to the technical specifications	1	unit			
9	Pipe Bevelling Machine	attached as Annex I.	1	unit			
10	Plate Bevelling Machine		1	unit			
11	Universal Horizontal Milling Machine		1	unit			
12	Digital Vernier Caliper		25	рс			
13	Digital Micrometer Caliper		25	рс			
14	Combination Wrench Set		20	set			
15	Socket Wrench		21	set			E. C.
16	Screw Driver Set	1232	25	set			
17	Allen Wrench Set		25	set			
18	Combination Pliers	W	25	рс			
19	Long Nose Plier		25	рс			
20	Diagonal Cutting Plier		25	рс			



No.	Item	Agency Specifications	Qty	Unit	Statement of Compliance*	Make Brand / Model	Reference
21	Adjustable Wrench		25	рс			
22	Hacksaw with Blade		20	set			
23	Tap and Dies Set		15	set			
24	Pull-Push Rule		21	рс			NE P
25	Spirit Level Bar		21	рс			
26	Steel Square	Kindly refer to the technical specifications	20	рс			
27	Try Square		20	рс			
28	Combination Square		20	рс			
29	Letter and Number Punch	attached as Annex H.	20	set			
30	Screw Pitch Gauge		17	рс			
31	Digital Vernier Caliper		20	рс			
32	Angle Grinder		22	unit			
33	Portable hand drill		22	unit			To +1 7

<sup>\*</sup> Bidders must state here either "Comply" or "Not Comply" against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of "Comply" or "Not Comply" must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer's un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidder's statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the applicable laws and issuances.

Name of Company/Bidder	Signature over Printed Name of	Date
	Authorized Representative	



ot/ Item No.	Code	Technology Area/ Learning System	Agency Specification	Classification	Test Parameters (Post Evaluation)	Test Parameters (Inspection and Acceptance)	Onsite Warranty (Parts and Service)	with Training	with Manual	Qty per Lot	Unit
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(1)	(k)	(1)
6	09-000	CNC Machining Equipment/Attachment							AD: HE		
1	09-001	CNC Computer Aided Design and Computer-Aided Machining Software	refer to Technical Specification of Item Code 09-001	Learning System	refer to Technical Specification of Item Code 09-001	refer to Technical Specification of Item Code 09-001	1 Year	Yes	Yes	26	unit
2	09-002		refer to Technical Specification of Item Code 09-002	Learning System	refer to Technical Specification of Item Code 09-002	refer to Technical Specification of Item Code 09-002	1 Year	Yes	Yes	1	unit
3			refer to Technical Specification of Item Code 09-003	Learning System	refer to Technical Specification of Item Code 09-003	refer to Technical Specification of Item Code 09-003	1 Year	Yes	Yes	1	unit
4	09-004		refer to Technical Specification of Item Code 09-004	Learning System	refer to Technical Specification of Item Code 09-004	refer to Technical Specification of Item Code 09-004	1 Year	Yes	Yes	15	unit
5	09-005	CNC Plasma Cutting Machine	refer to Technical Specification of Item Code 09-005	Learning System	refer to Technical Specification of Item Code 09-005	refer to Technical Specification of Item Code 09-005	1 Year	Yes	Yes	1	unit
6	09-006	Electric Box Furnace	*Technology Transfer/Training *English Manual *Oven for heat treatment *Loading Capacity: 10-15kg *Max. Temperature 2000-2500F 1000-1500C *Amps10-15 Phase1 *Watts 3000-3600 *Nema 6-20R *Power source: Voltage 220V, 50-60Hz, 3 phase	Equipment	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing -Installation, Commissioning and Training	1 Year	Yes	Yes	1	unit

schedule.	deliver all the above requirements in accor	dance with the above
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Lot/ Item No.	Code	Technology Area/ Learning System	Agency Specification	Classification	Test Parameters (Post Evaluation)	Test Parameters (Inspection and Acceptance)	Onsite Warranty (Parts and Service)	with Training	with Manual	Qty per Lot	Unit
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(1)
7	09-008	Hardness tester	*Technology Transfer/Training *English Manual *Minor Load 8-10kg *Major load: 60-150kg *Test force application: Dead weight *Test force control: Hydraulic dashpot system *Result display: Analog dial gauge *Vertical capacity:6-7" *Throat depth: 6-7" *Height: 5-30" *Width: 8-10" *Depth: 15-20" *Power source: 220VAC, 60Hz 3 phase	Equipment	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing -installation, Commissioning and Training	1 Year	Yes	Yes	1	unit
8	09-009	Precision Centerless Grinding Machine	*Technology Transfer/Training *English Manual *Standard processing range: 1-60 diameter *Grinding wheel sizes: (ODxWxID): 400- 455x200-205x200-250 *Adjusting wheel sizes: (ODxWxID): 200- 255x200-205x200-100-110 *Grinding wheel speed: 1000-1500rpm *Adjusting wheel speed: 0-250rpm *Grinding wheel drive motor: 10-25kw *Adjusting wheel servo motor: 2-3kw *Hydraulic pump drive motor 0.5-0.75 kw *Power source: 220VAC, 60Hz	Equipment	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing -Installation, Commissioning and Training	1 Year	Yes	Yes	1	unit
9	14-012	Pipe Bevelling Machine	*English Manual *Functions: External and Internal Bevelling *Facing *Counter boring *Weld Removal *J-prepping and Compound bevels. *Materials: Any kind of steel & exotic alloy *Recommended working range: 3*-16* Diameter *Power: Pneumatic *Option of electric: 220VAC 50-60Hz	Equipment	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing -Installation, Commissioning and Training	1 Year	Yes	Yes	1	unit

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Lot/ Item No.	Code	Technology Area/ Learning System	Agency Specification	Classification	Test Parameters (Post Evaluation)	Test Parameters (Inspection and Acceptance)	Onsite Warranty (Parts and Service)	with Training	with Manual	Qty per Lot	Unit
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(1)	(k)	(1)
10	14-013	Plate Bevelling Machine	*English Manual *Self propelled *Max. bevel width: 40mm *Bevel angle:15-60 degree *Plate thickness: 6-60mm *Bevelling speed: 0-1.6 m/min. *Motor power: 3000 w *Motor idle speed: 800 rpm *Voltage: 220 V/60 Hz, 3-phase *Tooling: 9 changeable inserts; 80 mm diameter	Equipment	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing -Installation, Commissioning and Training	1 Year	Yes	Yes	1	unit
11	14-016	Universal Horizontal Milling Machine	Specification  Table size: 320mm X 1325mm  Max Longitudinal travel (manual/auto): 900mm/880mm  Max transverse travel (manual/auto): 255mm/240mm  Max vertical travel (manual/auto): 410mm/390mm  Table T-siots: 0.63° (16mm)  Max rotary angle: ±45°  Maximum Workpiece Weight: 750lbs (340kg)  Distance between spindle axis table: 30mm/440mm  Spindle speed step: 18 steps  Spindle speed range: 30-1500  Feed range of table travel: 18 steps  Overall size (L x W x H): 2294mmX2050mmX1790mm  Supply: 220VAC 60Hz 3phase  Features  1. Z-automatic feed milling head  2. Rectangular guideway on lifting platform  3. High stability  4. Hardened on X, Y, Z axes	Equipment	Brochure with picture and data sheet	Brochure with picture and data sheet	1 Year	Yes	Yes	1	unit

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Lot/ Item No.	Code	Technology Area/ Learning System	Agency Specification	Classification	Test Parameters (Post Evaluation)	Test Parameters (Inspection and Acceptance)	Onsite Warranty (Parts and Service)	with Training	with Manual	Qty per Lot	Unit
(a)	(b)	(c)	(d)  5. Vertical head swivels +- 45 degree 6. X-axis travel can be with 800mm  Standard accessories • Work light, coolant system, drill chuck, mill chuck, spindle arbors, horizontal arbors, wrenches. • Digital readouts (DRO) on X, Y, Z-AXIS. • Universal dividing head. Index plate set Footstock w/dead center gears and gear attachment for universal indexing and deferential indexing  Clamping device • 100 PCS Bolt and nut M12 X 1.75 X 50 MM • 50 PCS Bolt and nut M12 X 1.75 X 100 MM • 1 Cast iron Universal milling machine vise tool steel jaws: size 8"/200 mm, width of jaw 240 mm • 1 Cast iron milling machine vise w/ swivel base • Rotary worktable.with 3 jaw chuck attachment		(1)	(g)	(h)	(6)	9)	(k)	(1)
			Clamping kit set 5/8"Slot 1/2" Stud: (strap clamps, stud bolt, nut, parallels) standard size angle plates: L600 x B400 x H450 Electronic edge finder: probe 10, length 90, rotation 450 to 600RPM Mechanical edge finder: probe 10, length 90, rotation 450 to 600RPM Milling cutters 2 fluted HSS endmill 3mm to 16mm with Aluminum 3 fluted HSS endmill 3mm to 16mm with 4 fluted HSS endmill 3mm to 16mm 4 fluted HSS Roughing end mills 10 to 14mm 4 fluted HSS Corner rounding end mills 10 to 14mm Involute milling cutter m2.0, m2.5, m3.0, Shell endmill 2" x 1-3/8" Cutter 3/4" Arbor Hole 10 Teeth Unc								

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Lot/ Item No.	Code	Technology Area/ Learning System	Agency Specification	Classification	Test Parameters (Post Evaluation)	Test Parameters (Inspection and Acceptance)	Onsite Warranty (Parts and Service)	with Training	with Manual	Qty per Lot	Unit
(a)	(b)	(c)	(d)  Dovetail Cutters with Shank 6 mm: D 6.4 mm, B 8 mm, L 63 mm, Angle 7°, S 6 mm  Dovetail Cutters Shank 8 mm: D 6.4 mm, B 8 mm, L 44 mm, Angle 7°, S 8 mm  Dovetail Cutters with Shank 12 mm: D 16 mm, B 22 mm, L 65 mm, Angle 7°, S 12 mm  Carbide insert face milling cutter: Ball nose 40 mm dia  drill bit set Metric 1mm to 13mm  soluble oil coolant or cutting oil  with English manual	(e)	(1)	(9)	(h)	(i)	0	(k)	(0)
12	15-001	Digital Vernier Caliper	Stainless steel Dual reading scales on Vernier (English reading on top and Metric reading at bottom) (6 inches) 150 mm Least Count = 0.02 mm	Measuring Instruments	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing - Accuracy testing	1 Year	N/A	Yes	25	рс
13	15-002	Digital Micrometer Caliper	LCD Digimatic     Resolution: 0.001mm     Range: 0-25 mm     With English metric conversion	Measuring Instruments	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing - Accuracy testing	1 Year	N/A	Yes	25	рс
14	15-003	Combination Wrench Set	16 pcs     sizes: 6mm, 8mm, 10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 17mm, 19mm, 21mm, 22mm, 24mm, 27mm, 30mm and 32mm     Drop forged alloy or chrome vanadium steel construction     Lobular box end design	Tools	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing - 6 feet drop on concrete test, ten times, the item should not break/deform. Scratch or kink (not greater than 2mm in diameter) on the surface of the item is still acceptable. (1 sample)	1 Year	N/A	N/A	20	set

I hereby commit to comply and deliver all the above requirements in accordance with the above schedule. Signature over Printed Name of Authorized Representative Name of Company/Bidder Date 76

Lot/ Item No.	Code	Technology Area/ Learning System	Agency Specification	Classification	Test Parameters (Post Evaluation)	Test Parameters (Inspection and Acceptance)	Onsite Warranty (Parts and Service)	with Training	with Manual	Qty per Lot	Unit
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(1)
15	15-004	Socket Wrench	Chrome Vanadium Steel (Cr-V) Drive: 1/2* Socket points: 6 points Socket size: Metric 18 pcs Socket: 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 27, 30, 32 mm Ratchet Handle: 250 mm (±5mm) Swivel/ Power Handle: 380 mm (±5mm) Sliding T-Handle: 300 mm (±5mm) Universal Joint: 70 mm (±5mm) Extension bar length: 250 mm (±5mm) Extension bar length: 125 mm (±5mm) With case	Tools	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing	1 Year	N/A	N/A	21	set
16	15-006	Screw Driver Set	4 pieces per set     Flat Blade Tip Screw Driver:     6X150mm     5X100mm     Phillips Blade tip Screw Driver:     5X100mm     6X150mm     Plastic and rubbertzed handle     Chrome Vanadium	Tools	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing	1 Year	N/A	N/A	25	set
17	15-007	Allen Wrench Set	• 1.5 mm, 2.0 mm, 2.5 mm, 3.0 mm, 4.0 mm, 5.0 mm, 6.0 mm, 8.0 mm, 10 mm • 5" (+/- 2%) length • Chrome Vanadium steel	Tools	Brochure with picture and data sheet	Checking the conformity with the quantity including parts and accessories     Checking the conformity of hardware vis-a-vis offered specifications     Functionality testing	1 Year	N/A	N/A	25	set
18	15-008	Combination Pliers	Overall length: 8", Steel Alloy     Handle Finish: Ergonomic grip rubberized/plastic cushion	Tools	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing - 6 feet drop on concrete test, head first, ten times, the head of the item should not break/deform. Scratch or kink on the shaft/handle of the item is still acceptable. (1 sample)	1 Year	N/A	N/A	25	рс

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Lot/ Item No.	Code	Technology Area/ Learning System	Agency Specification	Classification	Test Parameters (Post Evaluation)	Test Parameters (Inspection and Acceptance)	Onsite Warranty (Parts and Service)	with Training	with Manual	Oty per Lot	Unit
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	0	(k)	(1)
19	15-009	Long Nose Plier	Overall Length: 8" ±1/2"     Material: Carbon Steel     Handle Finish: Ergonomic grip rubberized/plastic cushion	Tools	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing - 6 feet drop on concrete test, head first, ten times, the head of the item should not break/deform. Scratch or kink on the shaft/handle of the item is still acceptable. (1 sample)	1 Year	N/A	N/A	25	pc
20	15-011	Diagonal Cutting Plier	Overall Length: 8" ±1/2"     Material: Carbon Steel     Handle Finish: Ergonomic grip rubberized/plastic cushion	Tools	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing - 6 feet drop on concrete test, head first, ten times, the head of the item should not break/deform. Scratch or kink on the shaft/handle of the item is still acceptable. (1 sample)	1 Year	N/A	N/A	25	рс
21	15-012	Adjustable Wrench	10 inches (254 mm) length     Forged heat-treated alloy steel     Chrome	Tools	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing	1 Year	N/A	N/A	25	pc
22	15-013	Hacksaw with Blade	Adjustable aluminum alloy frame with rubber/plastic grip handle 90° adjustable blade angle 12 inches bi-metal hacksaw blade 24 TPI	Tools	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing	1 Year	N/A	N/A	20	set
23	15-016	Tap and Dies Set	Alloy Steel     Metric 20 pcs Threads     Sizes: M3 x 0.5, M4 x 0.7, M5 x 0.8, M6 x 1.0, M7 x 1.0, M8 x 1.25, M9 x 1.25, M10 x 1.5, M12 x 1.75	Tools	Brochure with picture and data sheet	Checking the conformity with the quantity including parts and accessories     Checking the conformity of hardware vis-a-vis offered specifications     Functionality testing	1 Year	N/A	N/A	15	set

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Lot/ Item No.	Code	Technology Area/ Learning System	Agency Specification	Classification	Test Parameters (Post Evaluation)	Test Parameters (Inspection and Acceptance)	Onsite Warranty (Parts and Service)	with Training	with Manual	Qty per Lot	Unit
(a)	(b)	(c)	(d)	(0)	(f)	(9)	(h)	(i)	(i)	(k)	(1)
24	15-019	Pull-Push Rule	Blade length 8m/26ft     Blade width 1"     High impact ABS case with durable rubber     Corrosion resistant tru-zero end	Measuring Instruments	Brochure with picture and data sheet	Checking the conformity with the quantity including parts and accessories     Checking the conformity of hardware vis-a-vis offered specifications     Functionality testing	1 Year	N/A	N/A	21	рс
25	15-020	Spirit Level Bar	Aluminum frame     Non Magnetic     3 vials     36* length	Measuring Instruments	Brochure with picture and data sheet	Checking the conformity with the quantity including parts and accessories     Checking the conformity of hardware vis-a-vis offered specifications     Functionality testing	1 Year	N/A	N/A	21	рс
26	15-021	Steel Square	Carpenter's framing square: 2" x 16" x 24" Aluminum Steel Engraved Double graduation inches/cm	Measuring Instruments	Brochure with picture and data sheet	Checking the conformity with the quantity including parts and accessories     Checking the conformity of hardware vis-a-vis offered specifications     Functionality testing	1 Year	N/A	N/A	20	рс
27	15-024	Try Square	Size: 8" x 12" Thickness: 1.8-2 mm Material: Spring Steel Handle Material: Aluminum Alloy Engrave Metric and English Graduations	Measuring Instruments	Brochure with picture and data sheet	Checking the conformity with the quantity including parts and accessories     Checking the conformity of hardware vis-a-vis offered specifications     Functionality testing	1 Year	N/A	N/A	20	рс
28	15-026	Combination Square	Stainless Steel     (12 inches) 300 mm     Combination Square Set (Blade and Handle)	Measuring Instruments	Brochure with picture and data sheet	Checking the conformity with the quantity including parts and accessories     Checking the conformity of hardware vis-a-vis offered specifications     Functionality testing	1 Year	N/A	N/A	20	рс
29	15-015	Letter and Number Punch	Hardened Steel     36pcs     4 mm height (letter and number)	Tools	Brochure with picture and data sheet	Brochure with picture and data sheet	1 Year	N/A	N/A	20	set
30	15-025	Screw Pitch Gauge	Metric • 51 leaves 0.4 to 7 mm pitch	Measuring Instruments	Brochure with picture and data sheet	Checking the conformity with the quantity including parts and accessories     Checking the conformity of hardware vis-a-vis offered specifications     Functionality testing	1 Year	N/A	N/A	17	рс

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Lot/ Item No.	Code	Technology Area/ Learning System	Agency Specification	Classification	Test Parameters (Post Evaluation)	Test Parameters (Inspection and Acceptance)	Onsite Warranty (Parts and Service)	with Training	with Manual	Qty per Lot	Unit
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	0	(k)	(1)
31	15-027	Digital Vernier Caliper	Digital Stainless Steel Vernier Caliper     Range: 0-300 mm/0-12 Inches     Automatic power off     With Data output function     SR44 battery     Coolant, water, dust and oil proof     English and Metric     Alarm low voltage, counting value     Operating temp 0-40 deg C     With thumb roller	Measuring Instruments	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing - Accuracy testing	1 Year	N/A	Yes	20	рс
32	15-028	Angle Grinder	Portable  4" capacity Input Voltage: 220-240V, 50-60Hz	Tools	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing	1 Year	Yes	Yes	22	unit
33	15-029	Portable hand drill	<ul> <li>Input Power: 500W-850W</li> <li>Input Voltage: 220-240V, 50-60Hz</li> <li>No load speed: 0~380/1300rpm</li> </ul>	Tools	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing	1 Year	Yes	Yes	22	unit

schedule.	deliver all the above requirements in accord	ance with the above
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Name of The Learning System	CNC Computer Aided Design and Computer-Aided Machining Software
Item Code	09-001
Technology Area(s)	CNC Machining

# Required Topics/Lessons

Specifically, this software will engage the learner to perform and articulate the following:

- Perform Computer Aided Design Using Draw tools
- · Perform computer aided design using modify tools
- Perform computer aided design through 2D and 3D modeling surfaces and solids
- Create Toolpaths for CNC Milling and CNC turning machine operations in Multiaxes machine environment
- · Perform verify/ dry run/ simulations of created tool paths
- Convert into standard CNC G-code programs the approved tool paths and/ or transfer post processed codes into a CNC Machine

#### Software:

CADCAM Software consists of the following specification and features:

- Integrated CAD for CAM Software
- Full 3D CAD Modeling
- Context-sensitive help available from all dialog boxes
- Powerful Multi Axis cutting
- Mill-turn for lathe
- Easy pocketing, contouring, and drilling
- Intelligent, stock –aware toolpaths
- Robust 3D solids and surface machining
- Complete tool library and custom tool support
- With Dynamic Motion feature
- Accelerated Finishing option
- Advanced Toolpaths option
- With Machine Simulation
- Live Tooling
- Intelligent ID and OD Roughing
- Compatible with SOLIDWORKS® environment
- · Complete with Dongle key
- Education Licensed and perpetual software

The software should be compatible with MS Windows 10 and/or MAC

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Authorized Representative



# Training:

The winning bidder shall provide at least five (5) days training for this learning system. The training will cover the following topics:

- · Configuration, set-up and maintenance of the software
- Utilization of the software and walkthrough with the learning activities associated with the software.

The beneficiary TTI will cover the costs of the training venue, snacks and meals during training while the supplier will cover all other costs such as, but not limited to:

- · Honoraria of the trainer:
- · Accommodation of the trainer:
- · Supplies and materials required for the training;
- Reproduction of the learning materials

Other requirements:

Requirements	Printed copy	Digital copy
<ul> <li>Includes instructional video covering topics indicated in this specification</li> </ul>		Х
Includes Instructions to at least 25 exercises with solutions	X	Х
Includes Learner's workbook and instructor's manual	X	X
Quizzes and test(s) with key to corrections	X	Х
Presentation materials covering all topics in this specification	Х	Х
User's manual	X	X

All materials are in English language.

#### Post Evaluation Parameter(s):

- · Brochure/catalog with picture of equipment
- · Technical data sheet
- Curriculum/outline of learning activities with description
- Teaching aids, which may include, reading materials, activity sheets and/or video.
   The supplier either can provide these materials in digital format using secured access or printed form.

#### Inspection and Acceptance Parameters:

- Checking the conformity with the quantity including parts and accessories
- · Checking the conformity of software vis-a-vis offered specifications
- Checking of teaching aids vis-a-vis listed course outline
- Functionality testing
- Training on specified lessons

Name of Company/Bidder

I hereby commit to comply and deliver all the above requirements in accordance with the above schedule.

Signature over Printed Name of Authorized Representative 82

Name of The Learning System	CNC Lathe Performance Turning Center
Item Code	09-002
Technology Area(s)	CNC Machining

# **Brief Description:**

A CNC Lathe Machine equipment capable of high-performance multi-axis CNC Machining and Programming. Set-up for flexibility, extreme rigidity and high thermal stability.

# Required Topics/Lessons:

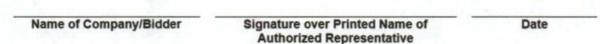
Specifically, this learning system will cover the following topics:

- Create CNC Programs using G and M Codes on an Actual Multi-Axes CNC Lathe Machine
- Perform 2/3 Axes Programming and Simulated Multi-Axes CNC Machining
- Simulate 2D/3D graphical dry run of Tool Paths and CNC Machining Operations
- Perform Actual Tool Length Compensation and Measurements (Basic & Advance)
- Perform Actual Set-up Work Offsets (Basic & Advance)
- Perform Actual CNC Lathe Multi-Axis Machine Operations
- Perform Actual manual operations using Jog Mode on a Multi-Axes Environment
- Perform Actual Manual Data Input (MDI)
- · Identify different machine alarms and how to troubleshoot it.
- · Perform routine maintenance checks on oil, coolant, air supply indicators.
- Perform transfer of CAD CAM Programs using USB, Ethernet and Wi-Fi Connectivity

#### **Hardware Requirements:**

CNC Multi Axis Lathe Machine consists of the following specification and components:

- Spindle Speed: 6000 RPM
- · Drive System: Direct Speed, Belt Drive
- Turret/ Tool Capacity: 12 Station Hybrid BOT/VDI Tool Turret
- Live Tooling: 4000-RPM Live Tooling with C Axis
- Probing System: Automatic Tool Presetter
- CNC Control:
  - Visual Part Programming System
  - Media Display M-Code:M130
  - Remote Monitoring
  - Rigid Tapping
  - Spindle Orientation to provide repeatable spindle positioning accurate to 0.5 degree
  - Ethernet Interface
  - Wifi Connection for the CNC Control
  - Standard Program Memory, 1 GB





- Spindle Power: 15 HP / 11.2kW
- Input AC Voltage: 220VAC/ 3 Phase / 60 hz
- Full Load Amps: 40 ASpindle Nose: A2-5
- Spindle Bore Diameter: 58.7 mm
- · Chuck Size: 165 mm
- Max Cutting Diameter: 356 mm
- Max Cutting Length: 406 mm
- Bar Capacity: 44 mm
- Max Part Diameter: 419 mm
- Over Wedge: 419
- X Axis Travel: 200 mm
- Z Axis Travel: 406 mm
- Turrets & Live tooling
- Chip & Coolant Management: 30 Gallon Coolant Tank
- Auto Door Option for Machine
- Air Requirements: 4scfm @ 100psi
- 6.5" Hydraulic Chuck, A2-5
- Axial Driven Toolholder, ER-32
- Radial Driven Toolholder, ER-32
- Manual Tailstock with Hydraulic Quill
- Machine Size LxWxH: 2621x1827x1864mm
- · Toolings:
  - 1 Set of Bolt-on Tool Holder kit, ¾"
  - o 1 Set VDI Tool Holder Kit
  - o Bolt-on 1" ID Boring Bar Holder
  - o Bolt-on 1.25" ID Boring Bar Holder
  - 1 Set of ER-32 Collet
- Dimension: The equipment when installed should not consume more than 8sqm space and not over 1.9m for the overall height.

# Training:

The winning bidder shall provide at least three (3) days training for this learning system. The training will cover the following topics:

- Configuration, set-up and maintenance of the training equipment
- Utilization of the training equipment and walkthrough with the learning activities associated with the training equipment.

The beneficiary TTI will cover the costs of the training venue, snacks and meals during training while the supplier will cover all other costs such as, but not limited to:

- Honoraria of the trainer:
- · Accommodation of the trainer;
- · Supplies and materials required for the training;
- · Reproduction of the learning materials.

I hereby commit to comply and deliver all the above requirements in accordance with the above schedule.

Name of Company/Bidder

Signature over Printed Name of Authorized Representative Date



Other requirements:

Requirements	Printed copy	Digital copy
<ul> <li>Includes instructional video covering topics indicated in this specification</li> </ul>		Х
Includes simulation software (single machine)		X
<ul> <li>Includes Instructions to at least 25 exercises with solutions</li> </ul>	Х	Х
Includes Learner's workbook and instructor's manual	X	Х
Quizzes and test(s) with key to corrections	X	Х
Presentation materials covering all topics in this specification	Х	Х
Equipment service and operation manual	Х	X

All materials are in English language.

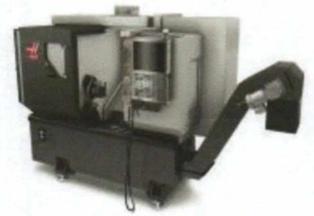
# Post Evaluation Parameter(s):

- · Brochure/catalog with picture of equipment
- Technical data sheet
- Curriculum/outline of learning activities with description
- Teaching aids, which may include, reading materials, activity sheets and/or video.
   The supplier either can provide these materials in digital format using secured access or printed form.

# Inspection and Acceptance Parameters:

- Checking the conformity with the quantity including parts and accessories
- · Checking the conformity of hardware vis-a-vis offered specifications
- · Checking of teaching aids vis-a-vis listed course outline
- Functionality testing
- Commissioning and training

### Sample Image:



Picture for reference only

I hereby commit to comply and deliver all the above requirements in accordance with the above schedule.

Name of Company/Bidder

Signature over Printed Name of Authorized Representative

Date

Name of The Learning System	5-Axis Rotary Table for Multi-Axes Simulation and CNC Machining
Item Code	09-003
Technology Area(s)	CNC Machining

# **Brief Description:**

This CNC Rotary Table (trunnion) for 5 Axes CNC Milling Machine will upgrade the former 4 axis HAAS VF-2 CNC Milling Machines to become 5 Axes CNC Milling Machine.

# Required Topics/Lessons:

Specifically, this equipment will engage the learner to perform the following:

- Perform 4 & 5 Axes CNC Milling Machine Operations
- Perform Actual Tool Length Compensation and Measurements (Advance)
- Perform Actual Set-up Work Offsets (Advance)
- Perform Actual CNC Milling Multi-Axis Machine Operations
- Perform Actual manual operations using Jog Mode on a Multi-Axes Environment
- · Perform Actual Manual Data Input (MDI) on a Multi-Axes Environment
- Identify different machine alarms and how to troubleshoot it in a Multi-Axes Environment
- · Perform routine maintenance checks on oil, coolant, air supply indicators.
- · Perform transfer of CAD CAM Programs using USB, Ethernet and Wi-Fi Connectivity

# Hardware:

5 Axis Rotary Table (Trunnion) consists of the following specification and components:

- 4th and 5th Axis Drives and Software version M18.29B or later for true 4th and 5th Axis Operation.
- Platter Diameter: 100 mm
- Max Weight on Platter: 6.8kg
- Part Swing Max: 214 mm
- Spindle –A (Tilt)
  - Max Speed: 1000° / Sec
  - Max Torque: 48Nm
  - Gear Ration 8:1
  - o Brake Torque @ 100psi/6.9 bar: 136Nm
  - Repeatability: 30 arc-sec
  - Travel: 120 Degrees
  - Indexing Resolution: 0.001 degrees





Spindle – C (Rotary)

o Max Speed: 1000° / Sec

o Max Torque: 22Nm

o Gear Ration 7:1

Brake Torque @ 100psi/6.9 bar: 68Nm

Repeatability: 30 arc-sec

o Travel: 360 Degrees

Indexing Resolution: 0.001 degrees

Air Requirements: 150 PSI
Rotary Table Weight: 77-80Kg

Other requirements:

Requirements	Printed copy	Digital copy
<ul> <li>Includes instructional video covering topics indicated in this specification</li> </ul>		Х
Includes simulation software (single machine)		X
Includes Instruction to learning exercises:	Х	X
<ul> <li>Presentation materials covering all topics in this specification</li> </ul>	х	Х
Equipment service and operation manual	X	X

# Training:

The winning bidder shall provide at least three (3) days training for this learning system. The training will cover the following topics:

- Configuration, set-up and maintenance of the training equipment
- Utilization of the training equipment and walkthrough with the learning activities associated with the training equipment.

The beneficiary TTI will cover the costs of the training venue, snacks and meals during training while the supplier will cover all other costs such as, but not limited to:

- Honoraria of the trainer:
- · Accommodation of the trainer;
- Supplies and materials required for the training;
- Reproduction of the learning materials

I hereby commit to comply and deliver all the above requirements in accordance with the above schedule.

Name of Company/Bidder Signature over Printed Name of Date
Authorized Representative

# Post Evaluation Parameter(s):

- Brochure/catalog with picture of equipment
- Technical data sheet
- Curriculum/outline of learning activities with description
- Teaching aids, which may include, reading materials, activity sheets and/or video. The supplier either can provide these materials in digital format using secured access or printed form.

# Inspection and Acceptance Parameters:

- Checking the conformity with the quantity including parts and accessories
- · Checking the conformity of hardware vis-a-vis offered specifications
- Checking of teaching aids vis-a-vis listed course outline
   Functionality testing
- Commissioning and training

# Sample Image:



Picture for reference only

Name of Company/Bidder	Signature over Printed Name of Authorized Representative	Date

Name of The Learning System	CNC Control Simulator (Full Function Control)
Item Code	09-004
Technology Area(s)	CNC Machining

# **Brief Description:**

An External CNC Machine Control Simulator for CNC technology training which uses a real, full-function CNC control panel and keypad. This is an add-on to the existing CNC machine of the beneficiary center, as such it should be compatible with Haas VF-2 vertical milling machine.

# Features include:

- Includes Simulated Graphic dry run
- Tool length measurement
- · Work Offsets,
- True DNC
- Visual Programming System
- CNC Mill and Lathe Control Software
- 3/4/5 Axes
- Built-in USB, Ethernet, and WiFi Connectivity
- Software is Upgradable to Future Versions
- Industry 4.0 Ready

#### Required Topics/Lessons:

Specifically, this learning system will cover the following topics:

- Create CNC Programs using G and M Codes for both CNC Lathe and Milling Machine Operations.
- Perform 2/3/4/5 Axes Programming and Simulated Multi-Axes CNC Machining
- Simulate 2d/3d graphical dry run of Tool Paths and CNC Machining Operations
- Perform Tool Length Compensation and Measurements
- Set-up Work Offsets
- Engage the learner to manipulate actual controls of a CNC machine and familiarize itself on the different functions of each button.
- Perform Edit mode
- Perform Memory Run
- · Perform manual operations using Jog Mode
- Perform Manual Data Input (MDI)
- · Identify different machine alarms and how to troubleshoot it.
- Perform routine maintenance checks on oil, coolant, air supply indicators.
- Perform transfer of CAD CAM Programs using USB, Ethernet and Wi-Fi Connectivity

### **Hardware Requirements:**

CNC Control Simulator consists of the following specification and components:

- Stand Alone exact replica of a CNC Control Simulator.
- Mill and lathe control Software

I hereby commit to comply and o schedule.	deliver all the above requirements in accord	dance with the above
Name of Company/Bidder	Signature over Printed Name of Authorized Representative	Date



- Supports 3/4/5 Axes Programming and Simulations
- Simulates graphic dry run, tool length measurement, work offsets, true DNC and Visual Programming System
- Simulator can be mirrored on a computer or mobile device, and projected for classroom display.
- Built-in USB, Ethernet, and WIFI Connectivity
- Supports step-by-step templates and 3D Graphics to help the user quickly create programs for simple machining operations.
- Control Simulator Software is upgradable to future versions.
- Single Phase 220VAC, 60Hz
- Dimension: The equipment when installed should not consume more than 6sqm space and not over 1m for the overall height.

# Training:

The winning bidder shall provide at least three (3) days training for this learning system. The training will cover the following topics:

- Configuration, set-up and maintenance of the training equipment
- Utilization of the training equipment and walkthrough with the learning activities associated with the training equipment.

The beneficiary TTI will cover the costs of the training venue, snacks and meals during training while the supplier will cover all other costs such as, but not limited to:

- · Honoraria of the trainer;
- · Accommodation of the trainer;
- · Supplies and materials required for the training;
- · Reproduction of the learning materials

Other requirements:

Requirements	Printed copy	Digital copy
<ul> <li>Includes instructional video covering topics indicated in this specification</li> </ul>		X
Includes simulation software (single machine)		Х
Includes Instructions to at least 25 exercises with solutions	X	Х
Includes Learner's workbook and instructor's manual	X	X
Quizzes and test(s) with key to corrections	X	Х
Presentation materials covering all topics in this specification	Х	х
Equipment service and operation manual	X	X

All materials are in English language.

I hereby commit to comply and schedule.	d deliver all the above requirements in	accordance with the above
Name of Company/Bidder	Signature over Printed Name of	Date

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#### Post Evaluation Parameter(s):

- · Brochure/catalog with picture of equipment
- Technical data sheet
- · Curriculum/outline of learning activities with description
- Teaching aids, which may include, reading materials, activity sheets and/or video.
   The supplier either can provide these materials in digital format using secured access or printed form

# Inspection and Acceptance Parameters:

- Checking the conformity with the quantity including parts and accessories
- Checking the conformity of hardware vis-a-vis offered specifications
- Checking of teaching aids vis-a-vis listed course outline
- Functionality testing
- Commissioning and training

# Sample Image:



Picture for reference only

I hereby commit to comply and deliver all the above requirements in accordance with the above schedule.

Name of Company/Bidder

Signature over Printed Name of Authorized Representative Date



Name of The Learning System	CNC Plasma Cutting Machine	
Item Code	09-005	
Technology Area(s)	CNC Machining	

# Required Topics/Lessons:

- 1. History of Plasma Arc Cutting
- Plasma Arc Cutting Safety
- 3. CNC Plasma Cutting Machine
- 4. CNC Software & Coordinate System
- 5. G-Code Programming
- 6. Introduction to Tool Paths
- 7. CNC Plasma Cutting Driver Software interface
- 8. Test cutting
- 9. Introduction to CAD
- 10. Importing Images to CAD
- 11. Basic CAD Project

### Specification

- Working area 4ft x 8ft
- Cutting capabilities: Mild Steel plate 22mm max, Stainless steel 20mm max, Aluminum 20mm max
- Max travel speed: 15,000 mm/min
- Electrical input: 220VAC, 3 phase, 60 Hz
- CAD/CAM Software
- Accessories:
  - Consumable starter kit (swirl ring, electrode, nozzle, retaining cap, shield)
  - Piston type air compressor
- Dimension: The equipment when installed should not consume more than 6sqm space and not over 1.9m for the overall height.

Other requirements:

Requirements	Printed copy	Digital copy
<ul> <li>Includes instructional video covering topics indicated in this specification</li> </ul>		X
Includes simulation software (single machine)		X
<ul> <li>Includes Instruction to learning exercises covering the listed lessons:</li> </ul>	Х	×

eliver all the above requirements in accord	ance with the above
Signature over Printed Name of	Date
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Requirements					Printed copy	Digital			
•	Presentation specification	materials	covering	all	topics	in	this	Х	Х
•	Equipment se	rvice and o	peration ma	anua				X	X

All materials are in English language.

# Training:

The winning bidder shall provide at least three (3) days training for this learning system. The training will cover the following topics:

- · Configuration, set-up and maintenance of the training equipment
- Utilization of the training equipment and walkthrough with the learning activities associated with the training equipment.

The beneficiary TTI will cover the costs of the training venue, snacks and meals during training while the supplier will cover all other costs such as, but not limited to:

- · Honoraria of the trainer:
- · Accommodation of the trainer:
- · Supplies and materials required for the training;
- · Reproduction of the learning materials

# Post Evaluation Parameter(s):

- Brochure/catalog with picture of equipment
- Technical data sheet
- Curriculum/outline of learning activities with description
- Teaching aids, which may include, reading materials, activity sheets and/or video.
   The supplier either can provide these materials in digital format using secured access or printed form

### Inspection and Acceptance Parameters:

- Checking the conformity with the quantity including parts and accessories
- Checking the conformity of hardware vis-a-vis offered specifications
- · Checking of teaching aids vis-a-vis listed course outline
- Functionality testing
- Commissioning and Training

I hereby commit to comply and o schedule.	deliver all the above requirements in accor	dance with the above
Name of Company/Bidder	Signature over Printed Name of Authorized Representative	Date

# Sample Image:



Picture for reference only

I hereby commit to comply and deliver all the above requirements in accordance with the above schedule.

Name of Company/Bidder Signature over Printed Name of Authorized Representative

Lot 7

: Welding Machine

APPROVED BUDGET FOR THE CONTRACT

One Million One Hundred Fourteen Thousand Six Hundred Eighty-Seven Pesos and 62/100 (₱1,114,687.62)

No.	Item	Agency Specifications	Qty	Unit	Statement of Compliance*	Make Brand / Model	Reference
1	4-in-1 Welding Machine	Kindly refer to the technical	3	unit			
2	Oxy-Acetylene Welding Set	specifications attached as Annex J.	3	unit			

<sup>\*</sup> Bidders must state here either "Comply" or "Not Comply" against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of "Comply" or "Not Comply" must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer's un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidder's statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the applicable laws and issuances.

Signature over Printed Name of	Date
	Signature over Printed Name of Authorized Representative

Lot/ Item No.	Code	Technology Area/ Learning System	Agency Specification	Classification	Test Parameters (Post Evaluation)	Test Parameters (Inspection and Acceptance)	Onsite Warranty (Parts and Service)	with Training	with Manual	Oty per Lot	Unit
(a)	(b)	(c)	(d)	(e)	(1)	(g)	(h)	(i)	(i)	(k)	(1)
7	12-000	Welding Machine					1745 F 1250				
1	12-002	4-in-1 Welding Machine	*Multi-process capability welding equipment - Stick welding - DC TIG - Pulsed DC TIG - Pulsed DC TIG - MIG - Pulsed MIG - Flux-Cored *Voltage:220VAC-60 Hz *with accessories: MIG torch assembly, argon or CO2 regulator with Flowmeter welding mask hand type with lens, 3 meters welding cable, 3 meters ground cable w/ ground clamp *Technology Transfer/Training *English Manual	Equipment	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing - Installation, Commissioning and Training	1 Year	Yes	Yes	3	unit
2	12-014	Oxy-Acetylene Welding Set	Handle mixer cutting attachment Check valves Cutting tips Welding tip Single stage oxygen regulator Single stage fuel gas regulator  Accessories 6 m hose (4300591) goggles (4304482) Lighter (26s) Filints (26l) Tip cleaner Cylinder key 2 cylinders Acetylene Tank and 4 cylinders Oxygen Tank	Equipment	Brochure with picture and data sheet	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing -Installation, Commissioning and Training	1 Year	Yes	Yes	3	unit

I hereby commit to comply and schedule.	deliver all the above requirements in acco	rdance with the above
Name of Company/Bidder	Signature over Printed Name of Authorized Representative	Date

Lot 8

: Fabrication Machines/Equipment

APPROVED BUDGET FOR THE CONTRACT

Twenty-Three Million One Hundred Forty-Three Thousand Six

Hundred Seventeen Pesos and 69/100 (P23,143,617.69)

No.	Item	Agency Specifications	Qty	Unit	Statement of Compliance*	Make Brand / Model	Reference
1	Hydraulic Press Brake Machine		1	unit			
2	Hydraulic Shearing Machine		1	unit			1 7
3	Lock Forming Machine		1	unit			
4	Hydraulic Plate Bending Roller Machine		1	unit			
5	Hydraulic Iron Worker Machine	Kindly refer to the technical specifications	1	unit			
6	Automatic Sheet and Plate Rolling Machine	attached as Annex K.	1	unit			
7	Multi-function Pipe Bending Machine		2	unit			
8	Power Hacksaw		2	unit			
9	Horizontal Bandsaw		1	unit			
10	Shaper Machine		1	unit			

<sup>\*</sup> Bidders must state here either "Comply" or "Not Comply" against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of "Comply" or "Not Comply" must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer's un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidder's statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the applicable laws and issuances.

I hereby	commit t	o comply	and	deliver	all	the	above	requirements	in	accordance	with	the	above
schedule	Э.												

Name of Company/Bidder	Signature over Printed Name of Authorized Representative	Date

