


A. TECHNICAL SPECIFICATIONS OF Mapping survey tools to digitize and Geo-locate the Water network				
ITEM NO	ITEM DESCRIPTIONS	QUANTITY	UNIT	Reference picture
1) UAV Drone, PHANTOM 4 RTK	<p>Drone Model: DJI Phantom 4 RTK or equivalent</p> <p>Service ceiling of 6000m, flight time of 30 minutes, hover accuracy range of ± 0.1 m; horizontal ± 0.1 m, gimbal stabilization, obstacle sensing range of 7-meter, 2 sets of additional flight batteries</p> <p>Main features: Aircraft: Max Speed- 31 mph (50 kph)(P-mode) , 36 mph (58 kph)(A-mode) Mapping Functions:Ground Sample Distance(GSD)(H/36.5) cm/pixel. H means the aircraft altitude relative to shooting scene (unit: m) Vision System:Velocity Range ≤ 31 mph(50 kph) at 6.6 ft(2 m) above ground with adequate lighting Camera:Sensor1" CMOS; Effective pixels: 20 M Intelligent Flight: Battery(PH4-5870mAh-15.2V) Capacity 5870 mAh Voltage15.2 V GNSS: Single-Frequency, High-Sensitivity GNSS Module GPS+BeiDou+Galileo (Asia) ; Gimbal: Stabilization 3-axis (tilt, roll, yaw)</p>	2	pcs	
2) Agisoft Metashape software	<p>Agisoft Metashape (Professional Edition) software: Agisoft Metashape is a stand-alone software product that performs photogrammetric processing of digital images and generates 3D spatial data to be used in GIS applications, and visual effects production as well as for indirect measurements of objects of various scales. Metashape is a perfect tool for aerial imagery processing.</p>	2	software	
3) Tablet	<p>Tablet iPad Pro 12.9-in or equivalent 4th generation, 12.9" Liquid Retina display, A12Z Bionic chip with Neural Engine, Magic Keyboard, Apple Pencil (2nd generation), 512GB Storage, USB C the tablet must be able to apply Item 3 (Agisoft Metashape software) to be installed in it. durable type because it will be used in the site.</p>	2	pcs	
B.	Remarks and Conditions			
1	The Bidder must provide the following below documents with the bid documents, in order to substantiate their eligibility for the contract being awarded: Technical and professional capacity In the last three years prior to this bid, the company has gained experience [survey tools, GPS and mapping] and can substantiate this with at least two reference projects (includes the client's emails, contact numbers, contract value).			
2	The supplier must provide training sessions to the beneficiaries, on-how to use the items, to cover the below topics: The use of UAV (Drone) in topographic surveying, and Integration of GNSS GPS and UAV in Data processing and analysis.			
3	The supplier must install, test and activate all above items including software, in addition ensure the beneficiaries are trained to use the items.			
4	Warranty period and service period (at least 1-year after handing over items) must be confirmed by the bidder.			
5	All technical data sheets and required specifications must be with the tender package for technical evaluation process.			
6	Delivery locations are Directorates of Water in Duhok Governorate. All items to be used by Governmental staff in Directorates. The handing over process must be coordinated with GIZ.			