

## 191N4723Q0001-0002\_ Questions and Answers

1. **Question:** Does contractor need submit security plan after award?  
**Answer:** The contractor will have to comply with the security-related requirements listed in the solicitation.
2. **Question:** What is badging process? How long take time to get access of machinery and staff?  
**Answer:** The contractor will be requesting access for personnel and machinery a minimum of three business days prior to needing the access.
3. **Question:** Do US Citizens need ECC (Electronic Country Clearance) to visiting Embassy?  
**Answer:** Yes, they do.
4. **Question:** When is WWTP constructed? When was start date of operation?  
**Answer:** July 7, 2019.
5. **Question:** Is warranty of WWTP Contractor expired?  
**Answer:** It expires on November 7th, 2023.
6. **Question:** Can you share the name of General Contractor that built the plant?  
**Answer:** Contractor: Caddell Construction Co., Inc. Montgomery, AL; Manufacturer/Supplier: Jet, Inc. Cleveland, OH.
7. **Question:** Is there any current contract/contractor for Preventive Maintenance (this tender) or Operation contractor?  
**Answer:** No.
8. **Question:** Can you share the name of current waste removal contractor?  
**Answer:** The Consulate doesn't have one yet.
9. **Question:** Is there any history with local authorities about violation claim?  
**Answer:** No.
10. **Question:** Where is effluent of WWTP connected to?  
**Answer:** Effluent is connected to Tablet Chlorinator, wherein water further can be used in Irrigation.
11. **Question:** It is mentioned in RFP document that 18 no. of pump is in WWTP area. Please clarify their location.  
**Answer:** 1. HOA Pump. - 1 No, 2. Equalization Pumps – 2 Nos, 3. Primary Sledge Pump. - 1 No, 4. Filter Feed Pumps – 2 Nos, 5. Mudwell Pumps – 2 Nos, 6. Air Scour Header Pump- 1 No, 7. Backwash Feed Pumps – 2 Nos, 8. Decant Pump – 1 No, 9. Scum Air Lift Pump – 1 No, 10. Clarifier Air lift pump – 1 No, 11. Sodium Hydroxide Feed pump – 1 No, 12. Coagulant Pump – 1 No, 13. Irrigation Pumps – 2 Nos.

All these pumps are placed in the skids available in the Utility Building, except the sledge pumps which are outdoors of the utility building.

Location of WWTP is in the Utility/SCAP building corner room.

12. **Question:** What are applicable laws and regulations to receive the award (see RFQ document, Section 4, item 6)  
**Answer:** All applicable U.S. Government Laws and Regulations and any other laws and regulations mentioned in the solicitation document.
13. **Question:** RFQ section 1, item 1.2 is mentioned about temporary storage tank, tertiary filter and storage tank. Please clarify about the size and location of each tank.  
**Answer:** Temporary Storage Tank – 35300 Liters, Tertiary filters – 50 Micron clarifier filter at effluent, Storage Tank – 14000 Liters.
14. **Question:** What is capacity of grease interceptor?  
**Answer:** Grease Interceptor is of model # GB –250, make is Schier, and the liquid capacity is of 275 Gallons.
15. **Question:** There is requirement of RFQ to contractor inspect manholes. (see pg. 28). There is no CLIN item for this.  
**Answer:** Grease Interceptor is of model # GB –250, make is Schier, and the liquid capacity is of 275 Gallons.
16. **Question:** RFP page #4 , Section 3 :” Prices for all Contract Line-Item Numbers (CLIN) shall include proper disposal of toxic substances where applicable. Please clarify what is definition of “toxic Substance” in this part.  
**Answer:** Waste materials are any materials that are taken from the WWTP from maintenance services and are no longer usable for the vendor to dispose of. Example – Used filters, trash, glues etc.
17. **Question:** Is there any preference to local, US or international contractor per Government interest?  
**Answer:** No, there are no such preferences.
18. **Question:** What is magnitude of the project?  
**Answer:** It is between 25,000 and 250, 000 USD.
19. **Question/request:** Complete Process and Instrumentation (P&ID) diagram of existing STP.  
**Answer:** Please see the Technical Data attachment for details.
20. **Question/request:** Complete instrumentation, machinery asset list (includes mechanical and electrical) with their make and details.  
**Answer:** See below the Technical Data for details.
21. **Question:** Also, we would like to understand if the firm has to re-submit its quote (they had submitted earlier on 30th December 2022) or the need to only submit the amendment document.  
**Answer:** See Solicitation Amendment 191N4723Q0001-0002, Paragraph 11 for details.

**Equalization tank**  
 Volume 35,300 L  
 needed at >0.04 m<sup>3</sup>/m<sup>2</sup>-m<sup>2</sup>-hr

**Equalization Blower**  
 1 @ 65 m<sup>3</sup>/hr  
 Hand-Off-Auto, In AUTO  
 manually-adjustable flow  
 control (on/off) over 24-hr

**Primary Sedimentation**  
 Volume 10,400 L  
 Surface Area 4.0 m<sup>2</sup>

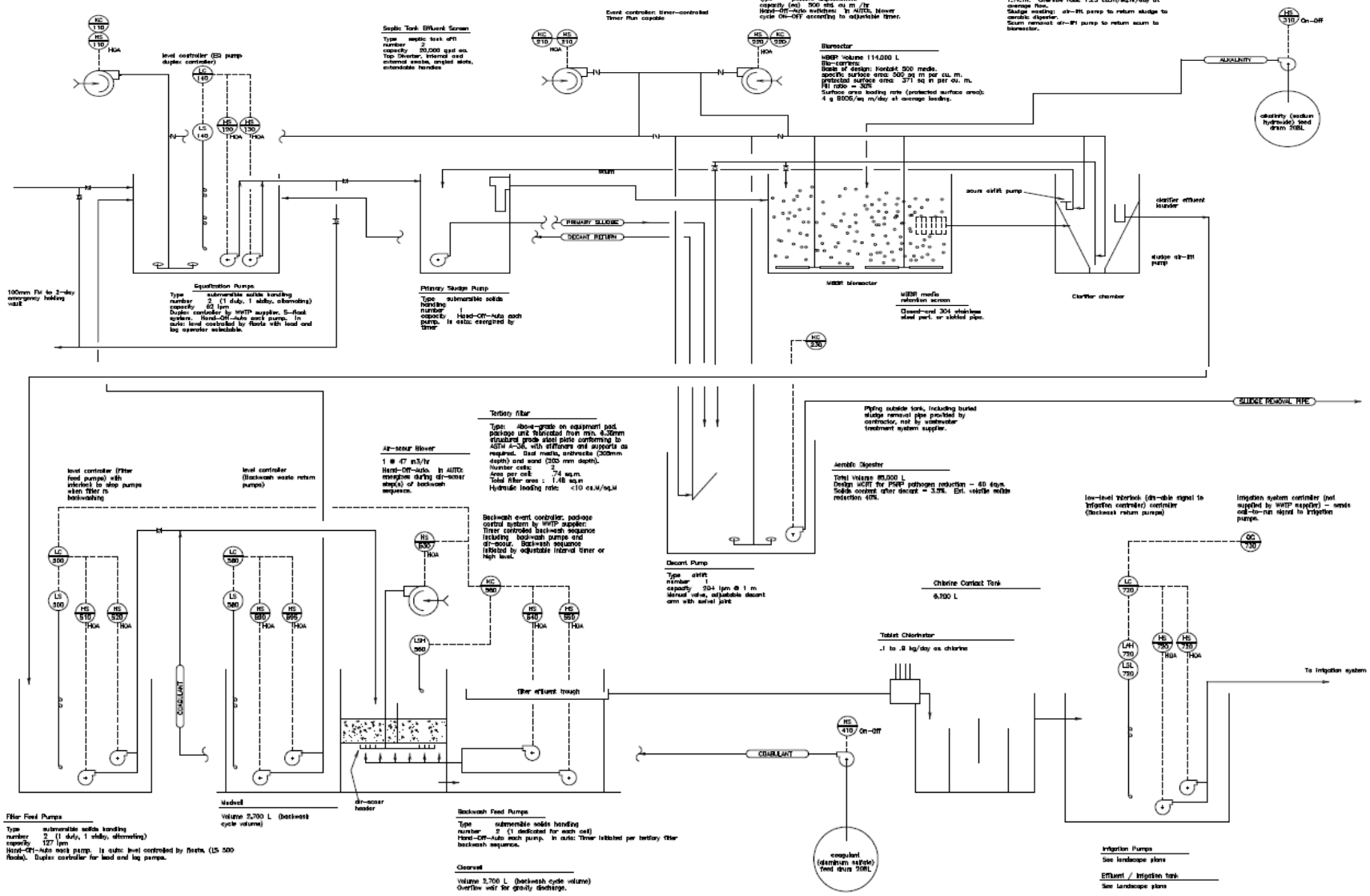
**Sludge Tank Effluent Screen**  
 Type: weirs  
 number: 2  
 capacity: 20,000 gpd on  
 Top Screen, internal steel  
 external cast-iron, angled slots,  
 adjustable handles

**Primary Sludge Pump**  
 Type: submersible solids  
 handling  
 number: 1  
 capacity: hand-off-auto each  
 motor. In auto: timer  
 controlled

**Aeration Blower (2)**  
 Type: positive displacement  
 capacity: 100 m<sup>3</sup>/hr  
 Hand-Off-Auto, automatic, In AUTO  
 Blower cycle On-Off according to  
 oxygen level

**Blower**  
 MBBF Volume 114,000 L  
 Blower capacity: 200 m<sup>3</sup>/hr  
 Design surface area: 500.00 m<sup>2</sup> per cu. m.  
 Blower surface area: 571 m<sup>2</sup> per cu. m.  
 Blower ratio = 3.25  
 Surface area loading rate (projected surface area):  
 4 g BOD<sub>5</sub>/m<sup>2</sup>/day at average loading

**Clarifier**  
 Diameter: normally 3.66 m in x 2 boppers, slope =  
 1.25%  
 Overflow rate: 1.25 cum/m<sup>2</sup>/day at  
 average flow  
 Sludge loading: 0.8-1.0 m<sup>3</sup> per m<sup>2</sup> per day  
 Sludge return: 0.8-1.0 m<sup>3</sup> per m<sup>2</sup> per day  
 Sludge return: 0.8-1.0 m<sup>3</sup> per m<sup>2</sup> per day



**100mm Fil to 2-day emergency holding tank**  
 Volume 10,650 L

**Filter Feed Pumps**  
 Type: submersible solids handling  
 number: 2 (1 duty, 1 standby, alternating)  
 capacity: 127 lpm  
 Hand-Off-Auto each pump. In auto: level controlled by float, (LS 500 Backwash). Ductile controller for level and log pump.

**Backwash**  
 Volume 2,700 L (backwash cycle volume)

**Backwash Feed Pumps**  
 Type: submersible solids handling  
 number: 2 (1 dedicated for each cell)  
 Hand-Off-Auto each pump. In auto: timer initiated per tertiary filter backwash sequence.

**Clearwell**  
 Volume 2,700 L (backwash cycle volume)  
 Overflow weir for gravity discharge.

WWTP CHAMBER CAPACITIES	
CHAMBER	Capacity
Equalization tank	35,300 L
Primary Sedimentation	10,400 L
MBBR bioreactor (total, 2-stages)	114,000 L
Clarifier Chamber	14,000 L
Tertiary Filter Mudwell (BW waste EQ)	2,700 L
Aerobic Digester	65,000 L
Chlorine contact	6,200 L
Filter Clearwell	2,700 L
Effl holding EQ (filter pump feed)	10,050 L

WWTP DESIGN CRITERIA / PERFORMANCE			
PARAMETER	Units	INFLUENT	EFFLUENT
Flow (Ave Day)	Liters per Day	114,000 LPD	
BOD, 5-day	mg/L	300	<10
BOD, 5-day	kg/day	34	-
Total Suspended Solids (TSS)	mg/L	400	<10
Total Suspended Solids (TSS)	kg/day	45	-
Ammonia, as Nitrogen	mg/L	35	-
Fecal Coliform	N/ 100 mL	-	Non-detect in 4 of last 7 tests, 23 max

## LEGEND



LOCAL MOUNTED INSTRUMENT



MAIN PANEL MOUNTED INSTRUMENT



LOCAL PANEL MOUNTED INSTRUMENT

XX = LETTER DESIGNATOR – TYPE & FUNCTION  
 NNN = INSTRUMENT/CIRCUIT NUMBER

## LETTER DESIGNATORS

### FIRST LETTER

A ANALYSIS  
 F FLOW  
 H HAND  
 I CURRENT  
 K TIME  
 L LEVEL  
 P PRESSURE  
 Q EVENT  
 R RUN  
 S SPEED  
 T TEMPERATURE  
 W WEIGHT, TORQUE  
 Y STATUS  
 Z POSITION

### SECOND & SUBSEQUENT LETTERS

A ALARM  
 C CONTROL, CONTROLLER  
 D DIFFERENCE  
 E PRIMARY ELEMENT  
 F RATIO, FRACTION  
 G GAUGE  
 H HIGH  
 I INDICATOR  
 L LOW, LIGHT  
 Q QUANTITY, TOTAL  
 R RECORDER  
 S SWITCH  
 T TRANSMITTER  
 V VALVE

No.	Item	Description	Capacity	Units	Qty.
26	Tertiary filter outlet trough	fabricated by wwtp supplier		Ea	1
27	Backwash Feed pumps	submersible HP V, PH, Hz.	227 LPM	Ea	2
28	Tablet chlorinator	Severn Trent –Exceltec model 1000 or equal	.4–2 kg/d as Cl2	Ea	1
29	Air scour blower/motor	HP, V, PH, Hz w/ weather encl.	48 Cu.M/hr	Ea	1
30	Tertiary filter control Panel	NEMA 4X, package with filter, factor mount to filter		Ea	1
31	Primary clarifier side slope	nominal 1:1 concrete slope, coat per specifications		Ea	1
32	Chlorine contact tank baffles	Baffles by WWTP supplier		Ea	3
33	Treated Effl piping	100 mm to irrigation tank	317 LPM	Ea	1
34	Filter Feed pumps	127 lpm, base elbow, w/ guiderails	127 lpm	Ea	2
35	Waste sludge pump	200 lpm, base elbow, w/ guiderails	200 lpm	Ea	1
36	Primary sludge pump	base elbow, w/ guiderails		Ea	1
37	Irrigation bypass valve	Return non-compliant (not meeting reclaimed water standards) to lift station. Normally closed, manually open only when effluent not compliant with standards (turbidity or process equipment failure)	75 mm	Ea	1
38	Overflow baffle	Maintain water surface in disinfection chamber		Ea	1
39	Decant pipe	Decant sludge digester supernatant to primary	50 mm	Ea	1
40	Emergency bypass valve from lift station	Valves closed except for maintenance – directs discharge to emergency two-day storage. See civil sheet C1.132	100 mm	Ea	1
41	Emergency bypass valve from EQ basin		50 mm	Ea	2
42	Alum feed pumps (drum-mount)	Metering pumps (2 total, 1 un-installed spare) LMI series P or equal	7.5 lph max	Ea	2
43	Digester decant discharge	50mm piping digester to primary clarifier compartment, discharge w/ down elbow	50 mm	Ea	1
44	Decant assembly	Air lift pump and swivel-joint on tilting decant pipe. Manually operable from above access opening – cable-supported decant arm with crank accessible through opening without need to enter tank. Air valve manually operable and accessible through access opening with piping riser or valve operator extension.	50 mm	Ea	1
45	Housekeeping pad for sealed wastebin	Nominal 1mx 1m with curbs to prevent rolling.	–	Ea	1
46	Alkalinity feed pumps (drum-mount)	Metering pumps (2 total, 1 un-installed spare) LMI series P or equal	7.5 lph max	Ea	2
47	Spill pallet and cover kit	2-drum pallet. Polyethylene with matching polyethylene hardcover kit including roll-top design, ramp, and ramp extender.	2-drum (210L ± ea)	Ea	2
48	Air blower discharge	Flex connector, check valve, isolation valve. condensate blow-offs at high pts	line size	Ea	4
49	Tank vent	200mm, bury depth to pass below equipment pad, elbow up, opening at 75mm below underside of tank cover	200mm	Ea	1
50	Internal vent opening	150mm deep x 250mm wide opening at top of each internal divider wall. To extend 150 mm (± 6mm) below underside of tank cover.	150mm x 250mm At each internal divider wall	Ea	6
51	Filter Backwash Return	Elbow up and gooseneck at above high water elev, at equal. compartment entry	50 mm	Ea	1
52	Clarifier effl. weir trough	304 stainless steel, position for nominal water surface 3810 mm above tank bot.	min. length 1–m	Ea	1

Material / Equipment Schedule, WWTP

No.	Item	Description	Capacity	Units	Qty.
1	Access opening	Access location, refer to structural sheets for type. See approved WWTP shop drawings for final locations, sizing, and details	-	Ea	multiple
2	Influent lift station	See sheet C2.514 for lift station.			
3	Septic Tank Effl Screen	SaniTEE MyTEE no. SNT 1638 or equal	75,000 LPD	Ea	2
4	Package above ground tertiary filter	Coated steel (see Spec's) complete with media and controls			
5	Equalization pumps	HP V, PH, HZ	62 LPM@3M	Ea	2
6	Equalization basin Diffusers	Hydro-chek DP-75 or eq. w/ removable drop pipes	8+ Cu M/hr	Ea	4
7	Aerobic Digester Diffusers	Hydro-chek DP-75 or eq. w/ removable drop pipes	8+ Cu.M/hr	Ea	4
8	Emergency Eye Wash and dust cover	Pedestal-mounted eye-wash / face-wash with stainless steel bowl. Speakman Optimus # SE-1150 with Speakman Optimus dust cover.	1/2"	Ea	1
9	Raw Sewage	100 mm with venting energy dispersion tee at tank entry below access	317 LPM	Ea	1
10	MBBR bioreactor diffuser assemblies (typ.)	Hydro-chek DP-75 or eq. w/ removable drop pipes	60-110 Cu.M/hr	Total	16
11	EQ effluent trough	316 st. steel fab'd with flow control weir	127 LPM	Ea	1
12	EQ blower/motor	HP, V, PH, Hz. Fiberglass housing	65 Cu M/hr	Ea	1
13	Main control panel	NEMA 4X		Ea	1
14	Bioreator/aeration blowers	HP V, PH, HZ, weatherproof fiberglass enclosure	500 Cu M/hr	Ea	2
15	Clarifier Hopper Sides	4-sided hoppers, 1.67v:1h slope nominal, 1 sf bottom, 304 st. steel by WWTP manufacturer. Install per manf's instruction, seal to prevent leakage		Ea	2
16	Air-lift sludge pump	up to 8.5 cuM/hr	0-2 LPM	Ea	2
17	Air-lift scum removal	Manually adjustable air valve to control scum flow	0-2 LPM	Ea	1
18	MBBR media retaining screen	stainless steel perf. pipe with closed end	317 LPM	Ea	2
19	Air piping		25mm and 50mm		
20	Sludge waste piping	ductile iron, wrapped for corrosion protection - see sht C1.132	100mm		
21	Sludge diversion valve and piping	Diversion to bioreactor available for maintenance temp operation	75mm		
22	Backwash return pumps	submersible 0.5 HP, 380V 3PH, 50 Hz	62 LPM@3M	Ea	1
23	Tertiary Filter	2 cells, 0.74 Sq.M ea, anthracite + sand, underdrain, air scour, inlet distr.	63.5 LPM	Ea	2
24	filter feed piping	3" dia. with valves to isolate filter cells			
25	filter bypass piping	3" dia with manual valve			

SI No	Item	Description	Capacity	Units	Quantity	Make	Model #	Serial #	Remarks
1	Access openings	Access location refers to Structural sheets for type. Size details in Shop Drawings	N/A	N/A	multiple	N/A	N/A	N/A	-
2	Influent Lift Station	C2 514	3"	Inches	2	Custom	Concrete	N/A	
3	Septic tank effluent screen	SoniTEE My Tee no. SNT 1638 or Equal	75000 LPD		2	SiniTee	SNT 1638	N/A	
4	Package above ground tertiary Filter	Coated steel complete with media and controls	N/A	N/A	N/A	N/A	N/A	N/A	Site Fabrication
5	Equalization pumps	HP, V, PH, Hz	62 LPM@ 3M head		2	GOULDS	WS0546BF		
6	Equalization basin diffusers	Hydro-chek DP 75 or Eq. w/ Removable drop pipes	8+ Cu M/Hr		4	Hydro-chek	DP75		
7	Aerobic Digester Diffusers	Hydro-chek DP 75 or Eq. w/ Removable drop pipes	8+ Cu M/Hr		4	Hydro-chek	DP75		
8	Emergency Eye Wash & Dust cover	Pedestal mounted eye-wash/ Face wash with stainless steel bowl. Speakman Optimus #SE with dust cover	1/2"	Inches	1	Custom	N/A	N/A	Fabrication
9	Raw Sewage	100mm with venting energy dispersion tee at tank entry below access	317 LPM		1	N/A	N/A	N/A	
10	MBBR bio Reactor diffuser assemblies	Hydro-chek DP 75 or Eq. w/ Removable drop pipes	60-110 Cu M/hr	Nos	16	Baldor-Reliance	EM3709T-58		
11	EQ Equivalent trough	316 St. Steel Fab'd with control Weir	127 LPM		1	N/A	N/A		
12	EQ Blower/ Motor	HP, V, PH, Hz, Fibreglass housing	65 Cu M/hr		1	Howden Roots	URAI-33		
13	Main control Panel	NEMA 4x			1	Seametrics	FT420		

14	Bio Reactor/Aeration blowers	HP.V, PH, Hz, Weatherproof fibreglass enclosure	500 Cu M/hr		1	Howden	URAI-45		
15	Clarifier Hopper Sides	4-Sided hoppers, 1.67v: 1h Slope nominal, 1 sf bottom, 304 St. Steel by WWTP manufacturer. Install per manufacturer instruction, seal to prevent leakage.			2	N/A	N/A	N/A	Jet Inc.
16	Air Lift Sledge pump	up to 8.5 Cu M/hr	0-2 LPM		2	GOULDS	3SDX16F6JCY		
17	Air Lift scum removal	Manually adjustable air valve to control scum flow	0-2 LPM		1	Amaid	TAF-750		2" TAF 750 for flowrates of up to 110 gpm (25 m <sup>3</sup> /h) and higher dirt loads
18	MBBR media Retaining screen	Stainless steel perf. Pipe with closed end	317 LPM		2	Raschig	Kontakt 650		1" diameter x ¼" long (25.4mm x 6.4mm)
19	Air piping		25mm and 50mm			N/A	N/A	N/A	Caddell
20	Sledge water piping	Ductile iron, wrapped for corrosion protection, - C1 132	100 mm			N/A	N/A	N/A	Caddell
21	Sledge diversion valve and piping	Diversion to bio reactor for maintenance temp operation	75mm		1	N/A	N/A	N/A	Caddell
22	Backwash return pumps	Submersible, 0.5 HP, 380V 3 PH, 50 HZ	62 LPM@		1	GOULDS	8GS75		



			3M head						
23	Tertiary filter	2 Cells, 0.74 Sq. M eq, Anthracite + Sand, underdrain, air scour, inlet dist.	63.5 LPM		2	Harmsco	HUR170 P		
24	filter feed piping	3" dia valves with isolate filter cells				N/A	N/A		
25	Filter Bypass piping	3" Dia with manual valve				N/A	N/A		
26	Tertiary filter outlet trough	Fabricated with WWTP Supplier			1	N/A	N/A	N/A	
27	Backwash feed pumps	Submersible HP, V, PH, Hz	227 LPM		2	GOULDS	WE1546 H		
28	Tablet Chlorinator	Severn Trent - Exceltec Model 1000 or Eq	0.4- 2 kg/d as C12		1	Exceltec	Model 1100		
29	Air Scour blower/motor	HP,V,PH, Hz w/weather enclave	48 Cu M/Hr		1	Universal	RAI -45		
30	Tertiary Filter control Panel	NEMA 4x, Package with filter. Factor mount filter			1	N/A	N/A		Jet Inc
31	Primary Clarifier side slope	nominal 1:1 concrete slope, coat per specification			1	N/A	N/A		Caddell
32	Chlorine contact tank baffles	Baffles by WWTP suppliers			3	N/A	N/A		Jet Inc.
33	Treated Eff. Piping	100 mm to Irrigation tank	317 LPM		1	N/A	N/A		Jet Inc.
34	Filter Feed pump	127 lpm, base elbow, w/ guiderails	127 lpm		2	Amaid	TAF 750		Pumps
35	Waste sledge pump	200 lpm, base elbow, w/guiderails	200 lpm		1	GOULDS	WS0546BF		
36	Primary Sledge pump	base elbow, w/ guiderails			1	GOULDS	WS 304 6D3		
37	Irrigation Bypass valve	Return Non-Compliant to lift station, Normally closed, Manually open only when	75mm		1				

		effluent not compliant with standards							
38	Overflow Baffle	Maintain water surface disinfection chamber			1	N/A	N/A		
39	Decant Pipe	Decant sledge digester supernatant to primary	50 mm		1	N/A	N/A		
40	Emergency Bypass valve from lift station	Valve closes except for maintenance- Directs discharge to emergency two-day storage. C1 , 132	100mm		1				
41	Emergency Bypass valve from EQ Basin		50 mmm		1				
42	Alum Fed Pumps (drum-mount)	Metering Pumps, LMI Series P or Equal	7.5 LPH , Max		2	Zoeller	V807-A		
43	Digester decant discharge	50mm Piping digester to primary clarifier copartment, discharge w/ down elbow	50mm		1	N/A	N/A		
44	Decant Assembly	Air lift pump and swivel-joint on tilting decant pipe. Manually operable from above access opening -cable- supported decant arm with crank accessible through opening without need to enter tank. Air valve manually operable and accessible through access opening with pipe riser or valve operator extension.	50mm		1	N/A	N/A		
45	Housekeeping Pod for sealed wastebasin	Nominal 1m x 1m with curbs to prevent rolling			1	N/A	N/A		
46	Alkalinity feed pumps	Metering Pumps, LMI Series P or Equal	7.5 LPH , Max		2	Harmsco	HUR170HP		

47	Spill Palet cover kit	2 -drum pallet. Polyethylene with matching polyethylene hard cover kit including roll-top design, ramp, and ramp extender	2- drum (210+-)		2	N/A	N/A		
48	Air blower discharge	Flex connector, check valve, isolation valve, condensate blow-offs at high pts	line size		4	N/A	N/A	N/A	
49	Tank vent	200 mm, burry depth to pass below equipment pad, elbow up, opening at 75mm below underside of the tank cover	200 mm		1	N/A	N/A		
50	Internal vent opening	150mm deep x 250 mm wide opening at top of each internal divider wall, to extend 150mm( +- 6mm) below underside of tank cover.	200 mm		1	N/A	N/A		
51	Filter Backwash return	Elbow up and gooseneck at above high water elev, at equal, compartment entry	50 mm		1	N/A	N/A		
52	Clarifier effl. Water trough	304 Stainless steel, position for normal water surface 3810 mm above tank bot.	min Length. 1m		1	N/A	N/A		