Memorandum

To:	Rebecca Cook - Spokane Tribe of Indians
From:	Noah Hornsby - McMillen, Inc.
Date:	March 25, 2025
Subject:	Initial Responses to Pre-bid Questions

1.0 Questions from Contractor 1 Received on March 12, 2025

1. Will the construction manager mentioned yesterday to be determined by the upcoming RFP advertisement be responsible for special inspections such as concrete sampling and testing, rebar inspection, compaction testing, epoxy anchors, etc.? Specification Sections 03 30 00 – 1.4.A.3 and 31 00 00 – 3.9.A for example state field testing will be by the Owner.

   Yes. This will be handled and coordinated by the Tribe's selected Construction Manager for the project.

2. Geotech report - Please provide. You responded to Anthony here on Tuesday that it was attached, but it wasn't.

   The Geotechnical Report for the site is attached.

3. Can the dewatering be pumped to the existing settling pond?

   Yes. The dewatering can be pumped to the existing settling pond.

4. Dwg. M105 - Please provide original drawings/as-builts for the head box structure where the return piping is to connect to.

   See attached design drawings for details on the existing head box structure. Head box is illustrated on pdf pages 10 and 48.

5. Dwg. M105 – The pipe support details called out, M106 and M107 are not applicable to the conditions that are there. Please clarify.

   The pipe hanger detail will be revised to reflect the correct existing conditions.

6. Dwg. M105 – We will need access below the grating to install this pipe and support. Can the water level be lowered, or preferably the cell drained for a short period to allow access? To gain access, grating will need to be removed, which will require moving one or two of the aerator columns to do so. Please confirm this will be allowed or provide direction on installation procedure.

Agreed. Access below the grating will be required. Whether it's lowered or drained will require close coordination with hatchery staff to ensure the timing of this does not negatively impact fish production.

7. Dwg. C201 – Please provide as-built information for existing utilities that will be encountered along the 16" RS line.

   All available drawings are attached.

8. Dwg. C201 – Can the existing line that the 16" RS line ties to be drained? What will be the allowable down time to allow for the tie in work?

   Yes. The existing pipe that the new 16" RS pipe connects to can be drained in order to make that connection. Allowable downtime will need to coordinated with the Hatchery Manager since this will require an outage period for the circular tanks that will need to occur when fish are not present in them.

9. Dwg. E101, Note 4 – Can the condition and fill of the existing conduit for R038 be determined prior to the bid for the electrical contractors. Otherwise, they will need to assume installing new conduit. Alternatively, a cost adder could be provided to install new conduit.

   Assume new conduit required.

10. Dwg. E101 – Is the intent that Raceway R001 will be run to either Pullbox PB-1 or PB-2 then have its Cable C-001 use an existing conduit from the pullbox to Panel RMP? Dwg. D100 does not show removing asphalt to cross the access road.

    R001 is new conduit that runs directly from existing panel RMP to new panel WTP. Asphalt will need to be removed as needed. Do not intercept existing pullboxes with this conduit.

11. Specification Sections 13 99 61 – 3.07.E and 33 95 34 – 3.06 both mention disinfecting, but no procedure is given. Please clarify. Since this is not a potable water system, is disinfecting necessary?

    Please follow the procedure outlined in 13 99 61 – 3.07A for cleaning. No additional disinfection is necessary.

12. Dwgs. C101 and C201 have the callout for the 16" RS pipe to be Material 16. This conflicts with the Allowable Material Group chart on Dwg. G005, which lists Material 12 for RS pipe service.

    Conflict noted. The new 16" RS should be Material 16 (SCH 80 PVC) to match existing pipe being tied into.

13. The is a rollup door in the precast building. There is no specification for it.

    The rollup door is sourced and supplied by the precast building manufacturer.

14. What is the thickness of the HSS4x4 steel columns shown on Dwg. S107 for the hoist frames?

    Columns should be HSS4x4x1/4.

15. In the Pre-Engineered building spec section, Para. 2.1.E requires the walls and ceiling to be furred, insulated and FRP laminated plywood as a finish. Para. 2.4.A is written as the interior finish is concrete. Please clarify.

    Walls and ceilings are to be per 13 34 00 Section 2.1.E to achieve proper insulation requirements for equipment.

16. Please provide details for any additional structural supports if needed for the blowers and UV unit, unless they can set on the grating only.

    Structural supports are provided beneath the UV unit (Sheet S102). They are not required beneath the blower as the grating is adequate to support the weight.

17. Dwg. C302 shows a vertical cut for the excavation next to the existing settling pond. This cannot be accomplished without a shoring system, which has not been considered in the engineer's estimate. Please clarify the intent here.

    The intent of the design drawing is to show that the excavation should not be advanced into the settling pond. Sloping, shoring, bracing is a means and methods item. Per note 7 and section 31 00 00 Part 1 subsection 1.3, the contractor shall provide a detailed excavation plan including any necessary shoring or bracing.

18. Dwg. M104 – Please provide a spec and details for the perforated screen shown.

    A specification and installation details for the perforated screen are being developed and will be provided as soon as available.

19. Dwg. M101 - Please provide a spec and details for the perforated screen shown around the sump in the slab at El. 1628.

    A specification and installation details for the perforated screen are being developed and will be provided as soon as available.

20. Dwgs. G006, S104, and S105 all show the water level in the Biofilter and Aeration Basin to be 1637.22. How does the water get to the Pump Sump when the top of the divider wall is at 1638.0?

    The weir is shown at the incorrect elevation. It should be set at elevation 1637.00. This is currently being addressed and updated IFC drawings will be issued showing the corrected weir elevation.

21. Dwg. C202 calls for the 12" discharge pipe to be at elevation El. 1635, which will be submerged, not well above the normal water level shown on Dwg. M104. Is this the intent? Or is the pump sump water level to be at 1634.22 per Dwg. G006?

    The pipe is not submerged. The WSEL shown on M104 is incorrect. The pump sump water level is 1634.22 per Dwg. G006 resulting in the invert of the pipe at El. 1635.00 above the normal water level.

22. Dwgs. C205 and M101 show the 4" drum filter drain to be Material Type 16, Sch 80 PVC. Dwg M102 calls it out as Material Type 12, HDPE.

    C205 and M101 are correct, M102 calls out the incorrect pipe material. Drain is to be Material Type 16, Sch 80 PVC.

23. Dwgs. C201, C205 and M101 call out the 16" supply line as Material Type 16, Sch 80 PVC. Dwg M102 calls it out as Material Type 12, HDPE.

    Dwgs. C201, C205, and M101 are correct, M102 calls out the incorrect pipe material. 16" Supply line is to be Material Type 16, Sch 80 PVC.

24. Dwgs. C100, C101, C102, C202 – C204, M101 and M104 call out the 12" discharge line as Material Type 12, HDPE. Dwg. M105 calls it out as Material Type 16, Sch 80 PVC.

    Dwgs. C100, C101, C102, C202 – C204, M101 and M104 are correct with the 12" discharge line as Material Type 12, HDPE.

2.0 Questions from Contractor 2 Received on March 12, 2025

25. Please provide all as-built information of the existing facility.

    No "as-built drawings are available. All available design and reference drawings are attached.

26. Please provide a geotechnical report and boring data where the new PRAS Vault is to be constructed including existing groundwater data.

    A geotechnical report finalized in 2016 has been used for this project. No borings were advanced within the footprint of the new PRAS vault. This Existing geotechnical report has been attached.

27. Sheet E105 calls for XLPE conductors in the cable schedule, but the spec calls for THHN for #8 and smaller and XHHW for #6 and larger. Please clarify which type of insulation to use.

    Please use XHHW for all cables listed as "Power XLPE."

28. Contract drawings and specs are fairly vague in regard to the pump and pipe supports inside the building. Please confirm that all the pump, pipe, valves and miscellaneous mechanical equipment found on sheets GM-001 & 002 are to be contractor designed supports inside the PRAS structure.

    Yes. The contractor should provide the design for the supports piping and pumps inside of the PRAS structure and is considered means and methods.

29. Please provide further details for the SS perforated screen between the two bio filtration areas as well as the SS perforated box for owner dewatering pump access.

    A specification and installation details for the perforated screen are being developed and will be provided as soon as available.

30. There are some conflicts between contract drawing sheet GM-001 basis of design manufacturer and the approved manufacturer in the specifications. Please review and advise if manufacturers listed under basis of design on this sheet are also preapproved.

    The basis of design equipment listed is acceptable. Equipment that is not listed as the basis of design may be submitted on if it is considered equal to or better than the basis of design equipment.

31. Spec 26 29 23 H.1 requires 2-1/2% Line Reactors. Line Reactors are not shown on the contract drawings for VFD's. Please advise if line reactors are required.

    Please include 2-1/2% line reactors.

32. Spec 26 29 23 H.4 requires Overload Heaters. No Overload Heaters are shown on the contract drawings for VFD's. Please advise if overload heaters are required.

    Overload heaters are not required.

33. Please provide sample HMI screens or description of operations.

    Please see specification section 26 90 00 – SCADA and Automation for description of operations.

34. Contract drawing sheet E201 note 4 calls for the contractor to update the existing PLC and Alarm System with new data from the PRAS addition. Please provide as-builts or detailed information regarding the existing PLC software and existing SCADA software, screens, and available spares for integration of the new system.

    STOI to provide as-builts of existing control/SCADA system.

35. For the two regenerative blowers, please provide pressure duty point requirements.

    RB-100 for the MBBR is 10.5 feet of head and RB-200 for the aeration basin is 5.5 feet of head.

36. The specification 23 34 23 paragraph 2.4 indicates that the MD-100 motorized damper needs a volume-control damper as an accessory, but the schedule states it to be motorized. The manufacturer is stating that you cannot have both. Please advise which is required.

    The volume control damper is not needed.

37. On M102 Note #2 is referenced for the following valves V-140 & 141 as well as V-120 & 121. The valve schedule does not show these pressure relief valves required by this note. Please confirm the number of Pressure relief valves required and their pressure settings.

    The note requiring pressure relief valves between the pumps and the isolation valves can be ignored.

38. Detail M805 is shown in three locations throughout the contract drawings. This detail and the valve schedule calls for combination air release and vacuum valves. But the only reference found in the spec is 139961 paragraph 2.3.I which is for air release valves. Please confirm these air release valves are the same valves to be used for the combination air release and vacuum valves shown on the drawings.

A combination air release and vacuum valve will be used. The spec will be updated and reisuued to reflect the combination valve requirements.

39. There are a few discrepancies between the valve table, drawings, and the specification. For example drawing GC003 calls for V-101 to be located in the valve box vault while M101 calls for V-101 to be located inside the PRAS just before the drum filter. Similarly the specs seem to require different products in some instances compared to the valve table. Please review and advise if the valve table is to be overridden by drawings and specifications differences.

    The valve table and spec will be updated and reissued to reconcile the differences between each other.

3.0 Questions from Other Recieved on March 13, 2025

40. Received from a grating supplier:

    There are conflicting loading requirements between drawing GS004 and the specs. The drawing calls out for 19-SG-4, 1 ½" x 3/16" serrated (which at a 4'-4" clear span is good for a 100#/sf uniform & 300# concentrated loading w/ a ¼" deflection max). The specs are calling for a 100#/sf uniform & **600# concentrated** loading w/ a ¼" deflection max.). To hold that loading the grating would need to be 19-SG-4, 2" x 3/16" serrated.

    The specs are incorrect and should state 300 lb concentrated load to match GS004.

41. Per drawing G005 and SPEC section 33 95 34 – HDPE… the HDPE pipe is called out as DIPS (OD) and DR17 materials.

    In accordance with "Note 17" on G005… the 12" size mentioned on the drawing C100 for the RR piping would require the HDPE Pipe to be 14".

    Can you please verify the correct size pipe for this project? The same question would apply for the 16" mentioned on plan page C205. This pipe would need to be 18".

    Applicable reducers would then be necessary to make the connections, provided they are for the sizes stated with regard to valves, and end connections.

    Is this too an accurate assessment?

    You are correct. The pipe size is a DIPS 14" resulting in an average ID of 11.55" meeting the design value for this pipe.

    The 16" is PVC so the comment above would not apply. The nominal pipe size of 16" with an inside diameter of 14.213" matches the design calculations and construction drawings.

42. Dwg. C201 calls for the two overflow drain lines to be Material Type 12, HDPE. The Allowable Piping Material Group table on Dwg. G005 calls for the overflow (OF) piping to be Type 16, Sch 80 PVC.

    OF pipe should be Material Type 16, Sch 80 PVC.

43. Dwg. C206 calls for the 12" drain line to be Material Type 12, HDPE. The Allowable Piping Material Group table on Dwg. G005 calls for the drain (DR) piping to be Type 16, Sch 80 PVC.

    DR pipe should be Material Type 16, Sch 80 PVC.

44. Dwg. C201 calls for the 16" supply line to be Material Type 16, Sch 80 PVC. The Allowable Piping Material Group table on Dwg. G005 calls for the supply line (RS) piping to be Type 12, HDPE.

    Dwgs. C201, is correct with the 16" supply line as Material Type 16, Sch 80 PVC.

45. Constructability should be considered for pipe material type for the RR discharge line shown on Dwg. M105 as this should be Sch 80 PVC as one of the elbows will need to be installed after the pipe is set through the core hole. M105 calls it out to be PVC, but there is no note showing where the pipe material changes if the buried portion is HDPE.

    The RR discharge pipe shown on M105 can remain HDPE for the full run. No transition to PVC will be required.

46. Another question – Dwg. GS004, Detail S501, Note 2 – the fabricators need a detail and spacing for attaching the alum plate to the grating in the covered area noted. The grating suppliers do not have a standard detail for doing this.
    It appears a standard saddle clip attached to the underside of the bar grating and bolted through the steel plate would be an acceptable attachment. Acceptable spacing would be at 24" oc. unless indicated otherwise by the manufacturer.

47. Lithium would be required in place of flyash to meet the shrinkage requirements. We don't have the ability to use flyash in our mix designs. Attached is the Data Sheet for Masterlife ASR 30 that we have used to mitigate this issue with another project. (ASR attachment)
    The concrete must be provided per 03 30 00 mix design specifications.

    Lithium poses a detrimental impact to fish health. Since this is a reuse system rather than flow through this is not acceptable on this project as noted per 03 30 00 Section 2.1.C.6. If aggregates do not meet the ASR requirements in 2.1.D, an alternative aggregate source may be required since lithium is not permitted to mitigate ASR.

    Fly ash is not required. An alternative to fly ash may be used provided the requirements in 03 30 00 are met.

48. Also, can we get confirmation on the diameter of diffusers for the aeration basin and biofilter? Will 9" diameter work for both basins?

    9" diameter is acceptable for both basins assuming the course diffusers for the biofilter area available in a 9" diameter size and the airflow requirements listed in the specs can be achieved.

49. Dwg. GC003 – For Detail C901, the plan view calls for the vault to be 5' x 5' x 3'. The section view has the vault dimensioned at 4' high. Please clarify.

Vault should be 5’ wide, 5’ long by 4’ tall at a minimum. Contractor can submit alternatives to the vault size.

50. Dwg. S102 – Note 2 on Dwg. GS004 says to install slip-resistant plate where covered grating is called out. Please confirm the area to receive this plate is the entire east half of the structure with the square grid pattern noted.
    The area noted for the covered grating is correct.

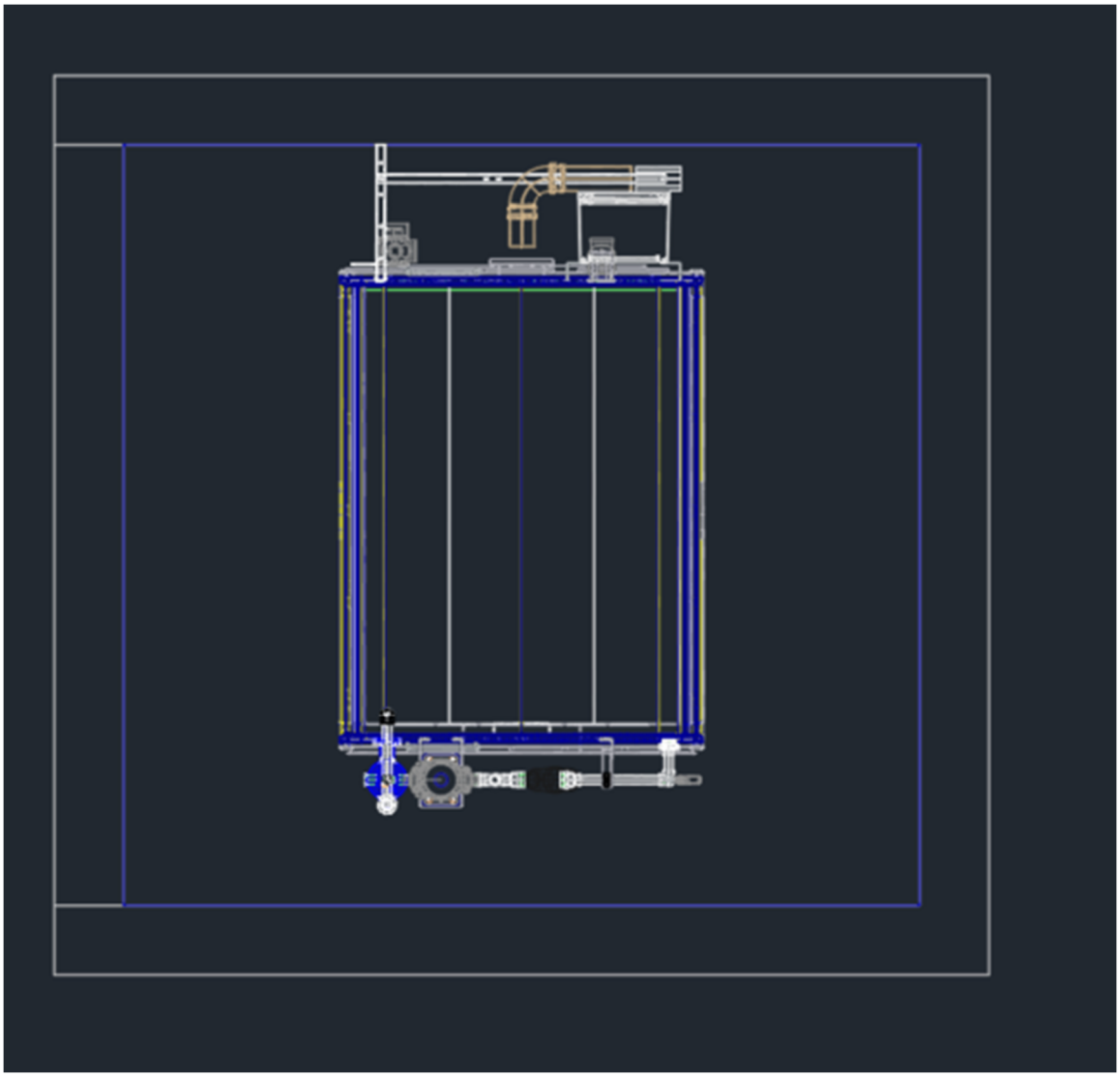
4.0 Questions from Innovasea Recieved on March 13, 2025

51. There is a discrepancy between the required moving bed biofilter media requirements from the missing specs and from the stamped mechanical calculations. It appears the safety factor was not included in the specs. Which volume of media will be used 934 m3 from the stamped mechanical calculations or 778.1 m3 from the equipment specs?
    Assume the 934 m3 from the stamped mechanical calculations supersedes.

52. Will a biomedia surface area of 602 m2/m3 be accepted, if its ensure the quoted amount of media will effectively process the maximum feed rate per day?
    The reduced biomedia surface area will not be acceptable for this project..

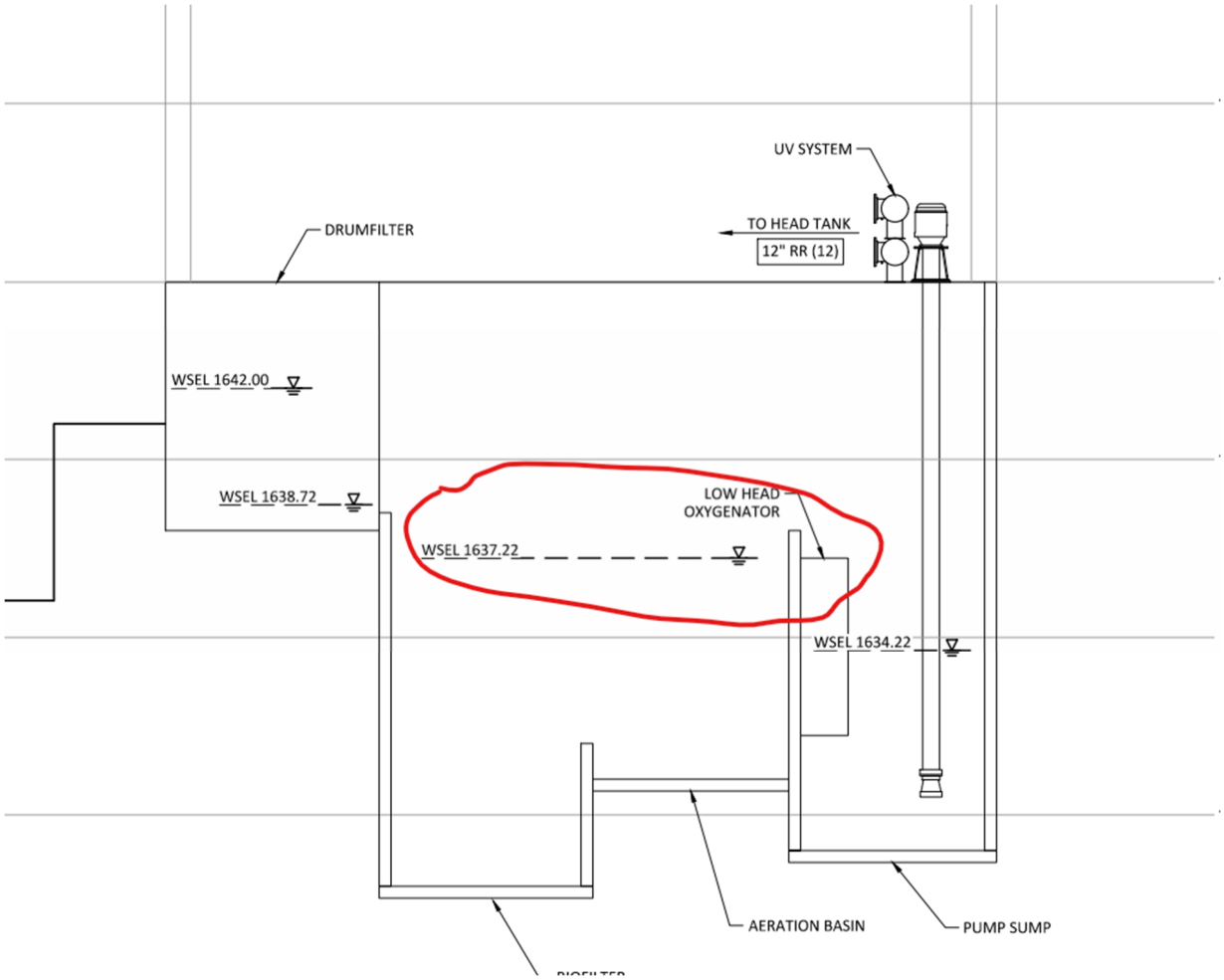
53. There is no bypass shown in case of drum filter clogging. Is there bypass plumbing in the inlet side of the drum filter plumbing or can the drum filter have wing walls to allow for emergency bypass? By not having emergency bypass can lead to premature drum failure.
    1. Would the drum filter design and layout below be accepted?

    The design includes a bypass vale upstream of the drum filter allowing water to be directed to the existing discharge infrastructure and away from the PRAS system in the event of drum filter clogging or other PRAS system failures.



54. The inlet water level going into the drum is currently set at 1642. This water level is too high for the drum filter at the current elevation. Can the drum be elevated on a concrete pad by 12” or can the water level going into the drum be reduced to 1641?
    The inlet pipe can be adjusted down as needed to accommodate the drum filter chosen for the project.

55. The water level within the aeration basin and biofilter is set at 1637.22’ however the weir going into the LHO is set higher. Does the concrete divider have a window cut out to allow for the water level to be at 1637.22 or is the weir dividing the aeration basin and pump sump set at the incorrect elevation?
    The weir is shown at the incorrect elevation. It should be set at elevation 1637.00. This is currently being addressed and updated IFC drawings will be issued showing the corrected weir elevation.



56. Due to the 10' width requirement for the LHO, can (2) 5' width LHO's sit side by side within the basin with each LHO having 6 chambers?
    This is acceptable.

57. There is a discrepancy between the requested quantity on the number of diffusers. Can you confirm that the correct size and quantity are correct?
    - Moving Bed Diffusers: (236) 5" diameter diffusers
    - Aeration Bed Diffusers: (126) 9" diameter diffusers

    The aeration bed diffuser count is a minimum of 108 diffusers assuming an airflow of 4 CFM per diffuser. The moving bed diffuser count is 70 diffusers based on an airflow of 4.5 CFM per diffuser.

58. The only equipment that lists out Innovasea is the drum filter, however we can supply and commission most of the equipment requested. To ensure we are contacted by contractors for this project, it would be ideal to have our names under each equipment category.

Comment is understood. The term “or equal” was used to cover all suppliers capable of providing all equipment for this project. This will be considered on future projects. No change made to the current stamped/signed specification.

5.0 Questions from Electrician Recieved on March 20, 2025

59. Sheet E106 conduits R008-R011 & R013-R016 are called out as being ¾” GRC with VFD cable.
    Conduit may be upsized as needed for VFD cable installation.

60. #8 3-conductor VFD cable would require a minimum 1-1/4” GRC conduit. This applies to conduits R008, R009, R013 and R014.
    Conduit may be upsized as needed for VFD cable installation.

61. #10 3-conductor VFD cable would require a minimum 1” GRC conduit. This applies to conduits R010, R011, R015 and R016.
    Conduit may be upsized as needed for VFD cable installation.

62. This question applies to specification 03 30 00. Paragraph 1.4.A4 states the Contractor shall furnish the concrete for the testing and assist the Engineer in obtaining samples. This suggests the Engineer will be in possession of the samples and conduct the testing of concrete placements. 1.4.B states continuous inspection by a special inspector is required. Costs of this special inspector shall be paid for by the Contractor. The special inspector is required to observe work associated with the preparation and taking of required test specimens and placement of concrete. Question: Does the Engineer cover the cost to perform all physical testing of concrete on-site? If so, can the Contractor eliminate the need for a carrying a special inspector during concrete placements since they are only required to observe and not perform the test?

    The interpretation of the referenced paragraph (1.4.A.4) is incorrect. The Contractor shall be responsible for concrete testing and shall assist with obtaining samples, and disposal and cleanup of excess materials for concrete testing as part of that responsibility. Items 1.4.A.3 states cost responsibilities for tests (Owner and Contractor).

    Special inspections are required per 1.4.B a and b with costs paid by the Contractor.

63. Section 13 99 61, Para. 2.03.D calls for butterfly valves to be flanged. The Valve Schedule on Dwg. GM001 calls for them to be true union style.

    Please provide flanged valves.

64. The Easi-Set supplier has pointed out that in Section 13 34 00, Para 2.1.C requires the roof to extend 2 ½" past the exterior wall line. Dwg. S103 shows a 1'-0" overhang. Please clarify.

    13 34 00 2.1.C notes 2 ½" minimum beyond the wall panel so 1'-0" overhang shown on S103 is correct.

6.0 Questions Received March 25, 2025

65. Just spoke with one of the equipment suppliers, and he noted that on Dwg. S106 Section D that the 16" supply pipe to the drum filter is shown coming in higher than the drum filter. Dwg. C201 appears to show the invert of the line to be at El. 1642.33. He said they are supplying a stand to elevate the drum filter to meet the pipe. Is this the intent?

    Contractor has the option of using a supplier provided stand to lift the drum filter to the pipe invert shown in the drawings, or lower the supply pipe invert as needed to meet the drum filter without the stand.

66. I am not sure if this has been asked yet, but the drawings call out a 6'x8' double door but the specs call out an 8'x6'8" double door. Which are we to supply?

    Please supply the 6'x8' double door called out on the drawings.