

**TOWN OF EMMITSBURG
EMMITSBURG WWTP ENR UPGRADE**

**CONTRACT NO. 2011-5-1651
ADDENDUM NO. 3**

June 6, 2012

To All Document Holders:

This Addendum No. 3 is hereby made a part of the Contract Documents on which the Contract will be based, and is issued to modify, explain and/or correct the original Contract Documents. Please attach this Addendum to your Contract Documents and submit bids and be otherwise governed accordingly. **Receipt of this Addendum must be acknowledged on Page 00410-2 of the Bid Form.**

An un-bound Bid Form has been attached to this Addendum. Bidders may opt to use this copy to for the submission of Bids. No changes have been made to this Bid Form other than the changes documented in Addendum 2 and 3.

The Bid Date has not been extended. All Bids are due on Tuesday, June 12, 2012 at 2:00 pm.

RESPONSES TO CONTRACTOR QUESTIONS:

The questions included in this Addendum were received between the dates of May 15, 2012 and the question deadline of May 29, 2012, inclusive, and are paraphrased below in no particular order. No responses to questions received after May 29, 2012 will be issued.

1. The drawings show a Vaughan pump with re-circulation, while the specifications for the pump section doesn't mention re-circulation. Please verify the intent of the documents.

The specifications are correct – this pump will be a non-recirculation type.

2. Drawing C007, there is an 8" RAW line from existing manhole into Headworks. There is also a new manhole on this line, but no invert or rim elevation is provided. Please provide this info.

A profile of this line has been added to the Drawings. Refer to Changes to Contract Drawings.

3. Drawing C008, east side, there is a 12" storm sewer with a catch basin. No profile for this line. Invert elevation? This question also applies to the storm drain pipe on the west side.

Inlet information has been added to Drawing C008. Refer to Changes to Contract Drawings.

4. Cannot find a spec section for RCP storm sewer pipe, nor do the drawings indicate a class for this pipe. What are we to provide?

A specification for this piping is added by this addendum. Refer to Changes to Contract Specifications.

5. If headwalls are required for the ends of storm drain piping, please provide a detail.

Refer to Changes to Contract Drawings.

6. Reference Drawing S010, Aeration Dist Box. Note 4 states that we are to excavate to rock, and backfill. This structure is built within the embankment that divides the existing lagoon into two lagoons. Wouldn't it be more appropriate to build this structure on 12" of stone, founded on the embankment, and not excavate to rock?

Over excavate as required to dense, undisturbed earth. It is anticipated that the bottom of this structure will be close to suitable subgrade material.

7. Special Conditions 5-.04.C.4 calls for Pollution Liability Coverage in the amount of \$10,000,000. This is not standard for treatment plant construction, and therefore our agent needs certain information regarding the Owner's facility-information that only the Owner can provide- in order to provide a quote. Please provide the information noted on the attached document. Alternatively, delete the requirement for this coverage.

Owner has provided clarifications for this form. Refer to Attachments.

8. Division 16 Table of Contents Specification did not list a section for Light Fixtures. Please comment.

Section 16500 is not used on this project. All information on lighting systems is presented on Drawings E010 and E011.

9. Addendum 2, Q&A 31 indicates that the Town will hire a firm for materials testing. Section 03300-3.11.A clearly states that concrete testing is paid for by the Owner. However, with respect to compaction testing, section 02228-1.04 requires us to submit the "testing agency's certifications", and section 02228-3.03 does not state who (Contractor or Owner) is to pay for compaction testing. Will the Contractor be responsible for hiring a firm to perform compaction testing?

Contractor will not be required to hire a firm to perform compaction testing. This testing will be conducted by Owner's materials testing firm. Refer to Changes to Contract Specifications.

10. Drawing C027, the berm, details indicate that we are to use "onsite soil backfill type E". Per 02223-2.01.B.1, this borrow material is derived from on-site excavations not required to construct the project. We interpret this sentence to mean that we cannot use soil excavated from the clarifiers (or any other structure) to be used as Type E fill. Please designate the "...borrow areas designated on the Drawings" as per 02223-2.01.B.2.

No borrow areas are designated at this time. Use excavated material Type A-2 instead of Type E. Refer to Changes to Contract Drawings.

11. For the berm embankment, is the fill to be E-1 or E-2, as defined in section 02223-2.01.B.4?

The backfill material should be a Type A-2. If there is not sufficient Type A-2 material, the off-site material would be Type A-2 On-Site Material and/or Bank Run Gravel if Off Site Material is needed.

12. Drawing C001, note M calls for all pipes entering or leaving a structure to have two joints within 4' from the wall of the structure. Details on W033 show two joints within 2' of the wall. Which is correct?

Note M on Drawing C001 is correct. This addendum revises the details on W033. Refer to Changes to Contract Drawings and Attachments.

13. Table 2.01.A, Mix B and B-1, note (1) requires the use of fly ash at a proportion of 20 to 25 percent of the total cementitious content or slag at 30 to 50 percent of total cementitious content. Can the concrete be proportioned with fly ash at 20 to 25 percent of the total cementitious content and a combination of slag at 30 to 50 percent of total cementitious content such that the total replacement of fly ash and slag does not exceed 50% percent of total cementitious materials?

Refer to Changes to Contract Specifications.

14. The owner requires that each offeror submit EPA forms 6100-3 and 6100-4 with its bid (per Article 15, and as noted in the pre-bid minutes dated 9 May 2012), as well as provide a comprehensive list of

subcontractors and suppliers with the Bid Form. Will it consider allowing offerors to submit these forms within 48 hours of bid submission? Subcontractors are reluctant to provide final pricing until moments before a bid's due date and time (and generally never provide it earlier), and therefore, contractors are usually unable to confirm pricing or to confirm subcontractor and manufacturer lists until moments before a bid is due as well. As a result, it will be very difficult for any offeror to complete forms 6100-3 and 6100-4 (to include obtaining pricing and signatures) or the subcontractor and supplier lists prior to bid submission.

EPA forms 6100-3 and 6100-4 are required to be completed by all subcontractors whose proposed share of the Work will be greater than one percent of the Contract Price. The list of proposed subcontractors and the list of proposed suppliers were shortened and re-issued in Addendum 2. The list of proposed subcontractors is still required – the list of proposed suppliers is removed by this Addendum. Refer to Changes to Contract Specifications.

15. What type of connection is required for the 8" DI-RAW connection to the existing PDMH Manhole? Does it require a core drill and link seal, wall sleeve and link seal, or core drill and grout in place?

Core drill with two linked mechanical seals will be acceptable for this connection.

16. Please provide profile details for the 8"-DI-RAW between the existing PDMH and the Headworks Structure. Provide rim elevations and pipe inverts at the manhole locations as a minimum.

A profile of this line has been added to the Drawings. Refer to Changes to Contract Drawings.

17. What type of manholes are the PDMH1, PDMH2, PDMH3, PDMH4, PDMH5, DMH, and 8" DI-RAW Manhole? Are they Type A, B, C or D Manholes as shown on C024?

These manholes shall be either Type A or C, depending on depth.

18. Please provide details for the round and square Methanol Transition Sumps, called out as MTS on C008 and in Methanol Transition Sump Detail on W029.

The Methanol Observation/Transition sumps are proprietary products intended for use with the selected make and model of double-contained buried methanol piping. The information presented on the Drawings is intended to communicate the general appearance of the completed methanol piping system - specific details will need to be coordinated with the selected manufacturer of this system.

19. Drawing C008 and Profile H1-PD on Drawing C012 show the 4"-DI-PD connecting to the RAS PS Sump Pump Discharge, but Drawing W016 shows the RAS PS Sump Pump Discharge emptying into the RAS Wet Well. Which is correct?

Refer to Changes to Contract Drawings.

20. What size are the Air and Vacuum Valves shown on W016, W017, W025, W026, W027, Detail 15 on W033, and specified in 15100-Inside and Above Grade Process Valves?

1" Air/Vacuum valves will be acceptable. All air/vacuum valves shall be rated for 150 psi service. Refer to Changes to Contract Drawings.

21. The Blower Discharge Piping, Valves, and Couplings are shown as 8" for both the Aeration Lagoon Blowers and the Aerobic Digesters Blowers on Drawing W012, but they are shown as 10" for the Aeration Lagoon Blowers and 6" for the Aerobic Digester Blowers on Drawing W013. Which is correct?

All blower discharge piping will be 6". Piping for the aeration lagoon header will need to increase

from 6" at the unit to 10" where shown on the Drawings. Refer to Changes to Contract Drawings.

22. Drawing W016 calls for Type "G" Pipe Supports (Typ) but Drawing W017 calls for Type "B" Pipe Supports for the same pipe supports. Which is correct?

Type B supports will be used for all the piping shown on Drawing W016. Refer to Changes to Contract Drawings.

23. Drawing C024, detail C-205. You show a pavement thickness of 4-1/2", but you do not indicate how this is split between base course and top course.

The base course shall be 3" and the top course shall be 1.5". Refer to Changes to Contract Drawings.

24. If the site cut/fill, structure excavation, and yard piping results in a surplus of earth, will the Owner allow this to be left on site, subject to proper grading, seeding, and modification of E&S plan?

No. Contractor must identify an approved off-site location for any surplus earth volumes generated by this project.

25. Confirm that the bid bond form EJCDC C-435 Bid Bond (Damages Form) that was included in the bidding documents is the form Bidders are supposed to use. In section 8 it states that we should be using for EJCDC C 430 2007 edition.

The Bid Bond in the Contract Documents is correct.

26. Please define the three symbols used in the Structural Sections. (Herring-bone, Parquet Floor and Gravel)

Refer to the Material Symbols list on Drawing S001.

27. Drawing S007 shows the "Gravel" symbol under the deepest slab, under the shallower slab and at the ground surface. (a) Is the entire excavation to be filled with this material? This question applies to most of the Structural Sections. (b) What is this material?

*(a) Refer to the answer to question 26 above. The "Gravel" symbol represents "Compacted Backfill".
(b) Refer to specification Section 02223 Article 2.03 for required materials at various locations.*

28. The Ground Elevations shown on the Boring Logs on Drawing C029 differ substantially from the existing grades shown on Drawings C005 and C006. In all but one location (SB-01) the elevations shown on the plans varies by about three feet from the elevations shown on the Boring Logs. Please provide the correct information.

The Boring Logs included on C029 are not correct. Refer to Changes to Contract Drawings.

29. Note 4 on Drawing S010 states "Excavate to rock, backfill per Spec Section 02223. (a) Please define how the elevation of Rock will be determined in the field. (b) Which material in 02223 is to be used?

(a) Refer to specification Section 02222 - "Excavation" for definition of rock determination.

(b) Section 02223 Articles 2.03.A.4 and A.5 define required materials.

30. Note 5 on Drawing S020 states "Excavate entire site for Effluent Filtration Facility to top of Dense Weathered Rock. Remove rock in locations to provide minimum 1'-0" compacted fill material below all construction. See Spec Section 02223." (a) Please define how the elevation of Dense Weathered Rock will be determined in the field. (b) Will solid rock be removed in order to place fill under

structures? (c) Which material specified in 02223 will be required?

(a) Determination of top of Dense Weathered Rock will be anticipated based on soil boring logs obtained at the location of this structure. These soils will be proof rolled to determine adequate density prior to backfilling with additional materials. Refer to Sections 02223 - "Backfilling" and 02228 - "Compaction".

(b) Yes, solid rock will be required to be excavated where necessary to provide 1'-0" of compacted fill below all elements of the structure per Note #5 on Drawing S020.

(c) Refer to Section 02223 Articles 2.03.A.4 and A.5 for required materials.

31. Section N on Drawing S023 shows a dashed line with a 2 on 1 slope indicator. What does this line represent?

This line represents the influence of bearing loads on the substructure soils (backfill) which is used to determine the minimum extent of excavation width as indicated plus refer back to Note #5 on Drawing S020.

32. Division 16000 Specifications do not have a section for light fixtures.

Refer to response to question 8 above.

33. Drawing E-024: Size of ground grid?

Ground size is #6. Refer to Changes to Contract Drawings.

34. Drawing E-009: Conduit 40 (1" RGS with 44#14, 10 #16TSP) Comment on conduit size and fill.

Conduit #40 is 2-inch. Refer to Changes to Contract Drawings.

35. Drawing E-007, E-008: Duct Bank V-V cross section shows conduits 50 and 51. These conduits are not continued in either duct banks U-U or W-W. Please indicate routing.

Conduit #'s 50 and 51 are in ductbanks W-W and X-X. They are not in Ductbank U-U. Refer to Changes to Contract Drawings.

36. Drawing E-019: NEMA 7 "in-grade" explosion proof junction box. Please furnish sketch detailing box and placement of conduit sealoff's. Also detail boundary of normal and hazardous location areas.

Refer to Changes to Contract Drawings.

37. Drawings E-005, E-007, E-008, E-020. Duct bank C-C (Conduits X and 68) starts at the Filter Building and terminates at Manhole IPB-8. This conduit run is approximately 1,470 feet in length and appears to have six (6) – 90 degree bends. Please comment.

Refer to Changes to Contract Drawings.

38. Please provide sizes of the aluminum hatches for the various vaults and pump stations on this project.

These dimensions are added to the W Drawings by this addendum. Refer to Changes to Contract Drawings.

39. AWWA D115 is a listed reference in the specification (03482 1.03.C.). There is no distinction between circular and rectangular tanks, so, we assume that D115 will apply to all PT structures. Do we want to

ask about eliminating the D115 requirement on the rectangular structure?

Refer to response to question 23 in Addendum No. 2.

40. The spec states that a live load factor of 1.6 shall be used in all cases (03482 1.04.A). The highest fluid live load factors in ACI 350 and AWWA D115 is 1.4. ACI 350 uses a fluid load factor of 1.2 plus 1.0 seismic. The 1.6 safety factor requirement will have a significant impact on the structural design. Can we use the appropriate live load factors defined in the referenced codes?

The current ACI 350 factors plus the environmental durability factor shall be used. Refer to Changes to Contract Specifications.

41. For design purposes, the spec requires assuming groundwater to grade (03482 1.04.B.) Designing for groundwater to grade will increase structure cost. This requirement appears to be unnecessary for the structures allowing post tensioning. The top of the Clarifier base slab is at Elev. 391< The top of the Digester base slab is 385< The 100 year flood elevation is given as 377< The borings do not show groundwater above the base slab of the structures (SB-5 shows water at about 389.5" below Clarifier No.2 and SB-7 shows water at about 377.5" below the Digesters). The site looks like it would be possible to install foundation drains for the Clarifiers and Digesters. A quick check of the Cast-In-Place Clarifier design indicates that it does not meet the groundwater to grade design requirement. So, as things stand now, the precast tanks have to meet a design criteria that the basis of bid design does not meet.

Refer to Changes to Contract Specifications.

42. Xypex admixture is required in cast-in-place concrete. Section 03300-Cast-In-Place Concrete is listed as a related section (03482 1.02.D.), but, Xypex is not mentioned in the precast spec section 03482. Do we need to add Xypex to the precast concrete?

Concrete for cast-in-place base slabs shall generally conform to all requirements of Section 03300 including the use of Type B-I concrete mix which includes an integral waterproofing admixture. Shop-cast wall panels at these structures may use the manufacturer's standard concrete mix that generally conforms to Mix B and does not include the integral waterproofing admixture.

43. Do we need control joints in the CIP base slabs? Note 3A., under General Structural Notes, on sheet S001 gives a max spacing of 30" for control joints.

There are no control joints in the structural base slabs of these structures.

In Drawing S001, General Structural Note #3A applies to cast-in-place concrete walls. Cast-in-place concrete structural base slabs shall include full strength construction joints similar to the "Elevated Slab Construction Joint (CSJT)" detail shown on S002. Slab construction joints shall be installed where indicated and as needed for constructability by Contractor.

In Drawing S015, the construction joints shown in the structural concrete of the base slab indicated as either "Const Joint" or "CSJT", shall be constructed similar to the "Elevated Slab Construction Joint (CSJT)" detail as shown on S002. At these same locations, within the 2-inch concrete topping, the Contractor shall install saw cuts similar to the "Slab On Grade Control Joint (CLJT)" detail as shown on S002. Saw cut shall be at least 1/2" deep. Prior to placing the concrete topping, the locations of the base slab construction joints shall be carefully noted and marked for future reference to align the saw cuts in the concrete topping.

44. Specification Section 11288 – FIBERGLASS CLARIFIER ACCESSORIES – states the weir plates are to be FRP. Weir Schedule on drawing W033 indicates they are to be 304 Stainless Steel. Which is correct?

The specification is correct. Refer to Changes to Contract Drawings.

ADDITIONAL MANUFACTURER REQUESTS:

The following manufacturers have submitted their names for pre-approval as substitute or 'Or Equal' products. Evaluations have been conducted using the information submitted, and Engineer's determination at the time of Bid is provided in the table below. Note that any Or Equal submissions that have not be expressly rejected may be submitted for evaluation during construction, but any Substitute submissions that have not been approved during bid will not be approved during construction.

Section	Product	Comments
05500	Glass Steel Co. (Weirs / Baffles)	Insufficient information provided for pre-approval. Product may be resubmitted during construction.
05520	Delta Composites LLC	Insufficient information provided for pre-approval. Product may be resubmitted during construction.
06610	VPC Inc (Fiberglass Enclosures for equipment enclosure and Walk-in types)	Insufficient information provided for pre-approval. Product may be resubmitted during construction. Note that all enclosure internals must be rated for Class 1 Division 1 environments.
07190	Enershield-I and Enershield-HP	This equipment is Pre-Approved. Refer to Changes to Contract Specifications.
08820	ChemPruf LTD	Insufficient information provided for pre-approval. Product may be resubmitted during construction.
09900	Carbolone Pittsburgh paint and Shermin Williams paint for epoxy coatings	Insufficient information provided for pre-approval. Product may be resubmitted during construction.
11207	Fiberglass Fabricators (Flume)	Insufficient information provided for pre-approval. Product may be resubmitted during construction.
11285	Whipps	Insufficient information provided for pre-approval. Product may be resubmitted during construction.
11288	Fiberglass Fabricators (Clarifiers)	Insufficient information provided for pre-approval. Product may be resubmitted during construction.
11290	Waterman	Insufficient information provided for pre-approval. Product may be resubmitted during construction.
11291	Whipps	This equipment is Pre-Approved. Refer to Changes to Contract Specifications.
11303	Flygt	Insufficient information provided for pre-approval. Product may be resubmitted during construction. Note that the installation of this pump and associated VFD must fit within the existing vault layout and MCC, respectively. Equipment that cannot be installed into the existing facility will be rejected.

11335	Amwell	Insufficient information provided for pre-approval. Product may be resubmitted during construction.
11345	Blue Water	Insufficient information provided for pre-approval. Product may be resubmitted during construction.
11346	Blue Water	Insufficient information provided for pre-approval. Product may be resubmitted during construction.
11346	ProMinent	This equipment is Pre-Approved. Refer to Changes to Contract Specifications.
11348	ProMinent	This equipment is Pre-Approved. Refer to Changes to Contract Specifications.
11350	AnCor Plastics	Insufficient information provided for pre-approval. Product may be resubmitted during construction.
11360	Andritz	Insufficient information provided for pre-approval. Product may be resubmitted during construction.
11360	Rotating Solutions Centrifuge	Insufficient information provided for pre-approval. Product may be resubmitted during construction.
11380	Blue Water	Insufficient information provided for pre-approval. Product may be resubmitted during construction.
13200	Bendel Corp	Insufficient information provided for pre-approval. Product may be resubmitted during construction.
15260	VentureClad Vapor Barrier Zero Perm Thermal Jacket	Insufficient information provided for pre-approval. Product may be resubmitted during construction.
15890	AnCor Plastics	Insufficient information provided for pre-approval. Product may be resubmitted during construction.
16620	Generac Generator	Rejected - This product is not an acceptable substitution for this specification.
Drawings	Lightning Products	This equipment is Pre-Approved. Refer to Changes to Contract Specifications.
Drawings	VPC (fiberglass manholes and lockable manhole covers both Highway & Foot traffic)	Rejected - This product is not an acceptable substitution for this specification.

CHANGES TO CONTRACT SPECIFICATIONS:

Section 00410 (Bid Form), Article 7.01.C; CHANGE "List of Proposed Suppliers" to "Not Used"

Section 00410 (Bid Form); Attachment C: List of Proposed Suppliers: DELETE this attachment in its entirety.

Section 00520 (Agreement), Article 4.02.A, REPLACE "730 days" with "854 days" for the time to substantial completion. REPLACE "790 days" with "914 days" for the time to final completion.

Section 00800, REPLACE paragraph 1.01.A.44 with the following:

"44. Substantial Completion - The time at which all major components of the Work (including the new headworks facility with mechanical screening and grit removal; two phased aeration lagoons; two secondary clarifiers with a return activated sludge (RAS) pumping station; Chemical and Blower building; denitrification filters; UV disinfection; cascade aeration; flow monitoring; plant water pumping station; two aerobic digesters; dewatering facility with one centrifuge; plant recycle pumping station; electrical power and control systems, yard piping, and site work) are fully installed and tested in accordance with the Contract Documents and are operating with automatic control to meet the stated performance requirements. All specified performance tests for equipment, including those specified for the phased aeration lagoons, denitrification filters, UV disinfection system, and centrifuge, must be successfully completed prior to Substantial Completion. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof."

Section 01010, Paragraph 1.06.B.6; DELETE the phrase "or concurrent with".

Section 01010, Paragraph 1.06.B.7; ADD the following sentence at the beginning of this paragraph; "Startup of the Effluent Filtration Facility shall not occur until effluent from the Secondary Clarifiers has been shown to contain less than 30 mg/L TSS based on a minimum of three (3) consecutive 24-hour composite samples."

Section 01010, Paragraph 1.06.B.7; REPLACE "Lagoons No. 2, 3, and 4" with "Lagoon 2"

Section 01010, Paragraph 1.06.B.8; REPLACE "Irrigation Reservoir or the Chlorine Contact Tank" with "Lagoon 2, the Irrigation Reservoir, or the Chlorine Contact Tank"

Section 01010, Paragraph 1.06.B.9; REPLACE "a minimum of 24,000 gallons" with "a minimum of 99,000 gallons or 5% of the overall Phased Aeration Lagoons volume"

Section 01010, Paragraph 1.06.B.10; REPLACE paragraph with the following: "10. Contractor shall allow a minimum of 75 days in his schedule following seeding of the Phased Aeration Lagoons for Startup activities associated with the Phased Aeration Lagoons including Acclimation Period and Process Performance Test."

Section 01010, Paragraph 1.06.B.11; ADD the following sentence before this paragraph: "Contractor shall complete System Demonstration and Testing of the Aerobic Digesters, sludge pumps, and dewatering equipment prior to Startup of the Phased Aeration Lagoons."

Section 01010, Paragraph 1.06.B.11; REPLACE "75 days" with "90 days"

Section 01010, Paragraph 1.06.B; ADD Paragraph 14 as follows: "14. Contractor shall allow a minimum of 75 days in his schedule following seeding of the Phased Aeration Lagoons prior to starting methanol feed and beginning the Acclimation Period for the Denitrification Filter. Contractor shall allow a minimum 30 days in his schedule for the Acclimation Period for the Denitrification Filter prior to starting the Process Performance Test."

Section 01660, Paragraphs 1.09 C and 1.09.D; DELETE these paragraphs in their entirety and replace with the following new paragraphs C and D:

"C. Where specified in Contract Documents, performance testing of equipment shall be successfully completed as part of Startup. Startup activities for these Systems will require longer

durations. Suggested durations for some aspects of Startup related activities are defined in Section 01010. The full duration required to complete Startup of these Systems will depend on the time required to demonstrate completion of required performance testing."

"D. Upon successful completion of Startup, the System shall be delivered to the Owner for Partial Utilization. The Owner will not accept delivery of Systems prior to completion of associated performance testing for that particular System."

Section 02223, Paragraph 2.03.A.5; ADD "or Type A-2 material" to the end of this paragraph.

Section 02228, Paragraph 1.04; DELETE parts B and C of this article in their entirety.

Section 02228, Paragraph 3.03.A.2; DELETE the second sentence of this paragraph.

Section 02228, Paragraph 3.03.B.5; DELETE the following phrase from this paragraph: "the Contractor shall retest at his cost. If the retest does not meet specifications,"

Section 02270, REPLACE this Section in its entirety with the Section 02270 included as an attachment to this Addendum.

Section 03250, Paragraph 2.02.D.2; DELETE this entire paragraph and REPLACE with the following: "Where indicated on the Contract Drawings, where new concrete is cast against hardened concrete, provide a 10 mm by 20 mm non-bentonite, expandable hydrophilic rubber waterstop with adhesive and sealant; use Adeka - Ultra Seal MC-2010M with 3M-2141 adhesive and P-201 sealant; CETCO – Akwastop with Akwaswell adhesive/sealant; or equal."

Section 03250, Paragraph 2.02.D.3; DELETE the product "Leakmaster by Greenstreak".

Section 03250, Paragraph 2.02.E; DELETE the company "Greenstreak".

Section 03300, Paragraph 2.01.A, foot note (1); ADD "As a third option, provide a blended hydraulic cement, Type IT which includes both fly ash and slag, limited as follows as a percentage of the total cementitious material: Fly Ash - 25 percent maximum; Slag - 50 percent maximum; Total fly ash plus slag - 50 percent maximum. Maximum total cementitious content shall not exceed 660 lbs/CY and refer to paragraph 03300.1.01.A. Contractor shall be responsible to monitor strength gain and adjust construction schedule accordingly for other required construction activities that require partial strength gain such as stripping of forms and activities that require full strength gain prior to proceeding such as Liquid Tightness Testing per Section 03301, and backfilling."

Section 03300, Paragraph 2.03.J; DELETE the product "Sonoprep by Sonneborn".

Section 03481, Paragraph 3.06; Chemical Injection Vault; CHANGE the Reference Drawings to "W008 and C007".

Section 03482 Paragraph 1.04.A; DELETE the entire 3rd paragraph: "ACI 350 environmental factor shall be used... Fluid live load factor of 1.6 shall be used in all cases." REPLACE with: "Under normal service fluid level conditions, (reference W Drawings for normal water level) the required concrete strength shall be determined by applying the most current ACI 350 load factors plus the environmental durability factor (Sd). The tank design shall also consider a tank flooded condition (fluid at top of walls) where the required concrete strength shall be determined by applying the most current ACI 350 load factors but without the environmental durability factor (Sd)."

Section 03482, Paragraph 1.04.B; DELETE this entire paragraph. REPLACE as follows: "B. For design, groundwater shall be assumed at the top of the structure base slab."

Section 03482, Paragraph 2.05.A; CLARIFICATION: Design and construction of the concrete base slab shall generally conform to Section 03300. The tank manufacturer will be required to provide a leak tight structure, tested to meet the requirements of Section 03301 (reference Section 03482, Paragraph 3.06.A). Therefore minor alterations to 03300 can be allowed if requested and approved, and provided that the changes are made to follow the standard procedures of the tank manufacturer. As such, a higher slump could be allowed during placement of concrete provided that after contract award, a change request is made by the tank manufacturer and the water/cement ratio is maintained as specified.

Section 05505, Paragraph 1.05.A; DELETE this entire paragraph and ADD the following: "Only Post-installed anchor products listed in Part 2 are acceptable for use on this project. Substitutions will only be considered for products having an applicable ICC-ES Evaluation Service Report."

Section 05505, Paragraph 1.05.C; DELETE this entire paragraph and ADD the following: "Prior to installation of the approved anchor, contact the manufacturer's representative to provide product installation training and a letter indicating successful completion of said training."

Section 05505, Paragraph 2.01.A; DELETE this entire paragraph and ADD the following: "Adhesive anchor system shall be a high strength, premeasured, two-part, self-mixing, cartridge-type adhesive. Adhesive system used to install threaded rod anchors and reinforcing bars into concrete shall be "SET-XP (ESR-2508)" by Simpson Strong-Tie Company, "HIT-HY 150 MAX (ESR-2262)" or HIT-RE 500SD (ESR-2322)" by Hilti Inc., or equal. Adhesive system used to install threaded rod anchors and reinforcing bars into grouted masonry shall be "SET (ESR-1772)" by Simpson Strong-Tie Company, "HIT-HY 150 MAX (ESR-1967)" by Hilti Inc., or equal. Adhesive system used to install threaded rod anchors into hollow core masonry using a mesh screen tube shall be "SET (ESR-1772)" by Simpson Strong-Tie Company, or equal."

Section 07190, Article 2.01.B: MODIFY as follows:

Renumber subparagraph 4 to be subparagraph 5.

Insert subparagraph 4 "Enershield-I by BASF Corporation".

Section 07900, Paragraph 2.03.E; DELETE the product "Expansion Joint Filer by Sonneborn®/ChemRex".

Section 09851, Paragraph 2.02.B, C, and D; DELETE these three paragraphs and ADD the following:

CHEMICAL	CARBOLINE COMPANY	KCC CORROSION	SAUEREISEN, INC.
Alum 27%	<ul style="list-style-type: none"> • Abrasive Blast • Primer- Semstone 800 • Filler- Semstone 800, Thixotrope Part D, Silica • Semstone 870 • 40 – 50 mils dry film 	<ul style="list-style-type: none"> • Abrasive Blast • Primer- Techni-Plus E 3.2 • Filler- Epoxy Scratch Coat • AEP 20.2 or Elasti-Liner I • 40 mils dry film 	<ul style="list-style-type: none"> • Abrasive Blast • Filler- 209 Epoxy • Primer- 501 Conoweld • 202 Conoglaze Epoxy • 20 -40 mils dry film
Sodium Hydroxide (caustic) 25%	<ul style="list-style-type: none"> • Abrasive Blast • Primer- Semstone 800 • Filler- Semstone 800, Thixotrope Part D, Silica • Semstone 870 • 40 – 50 mils dry film 	<ul style="list-style-type: none"> • Abrasive Blast • Primer- Techni-Plus E 3.2 • Filler- Epoxy Scratch Coat • Elasti-Liner II • 40 mils dry film 	<ul style="list-style-type: none"> • Abrasive Blast • Filler- 209 Epoxy • Primer- 501 Conoweld • 202 Conoglaze Epoxy • 20 – 40 mils dry film

CHEMICAL	CARBOLINE COMPANY	KCC CORROSION	SAUEREISEN, INC.
Phosphoric Acid 100%	<ul style="list-style-type: none"> • Abrasive Blast • Primer- Semstone 800 • Filler- Semstone 800, Thixotrope Part D, Silica • Semstone 870 • 40 – 50 mils dry film 	<ul style="list-style-type: none"> • Abrasive Blast • Primer- Techni-Plus E 3.2 • Filler- Epoxy Scratch Coat • Elasti-Liner II • 40 mils dry film 	<ul style="list-style-type: none"> • Abrasive Blast • Filler- 509 Epoxy • Primer- 550 VEPrime • 472 Novolak VEGlaze • 20 – 40 mils dry film

Section 11291, Paragraph 2.01.A; REPLACE part 3 with the following:

3. Whipps, Inc., Athol MA
4. Or Equal.

Section 11346, Paragraph 2.01.A.2, REPLACE “ProMus Hydraulic Pump” with “Hydro Pump”

Section 11348, Paragraph 1.03.C; CHANGE both instances of the phrase “gallons per hour” to “gallons per minute”

Section 11348, Paragraph 1.03.D; CHANGE the phrase “gallons per hour” to “gallons per minute”

Section 11348, Paragraph 2.01.A: REPLACE this paragraph in its entirety with the following: “A. ProMinent Fluid Controls, Inc ‘ProMix’.”

Section 11373, Paragraph 1.02.B; REPLACE with the following; "Oxygen Transfer Rate: 2,394 lbs/day/basin."

Section 11380, Paragraph 1.01.C.1.a; REPLACE this paragraph in its entirety with the following: “Solid covers and supports over each filter cell and the filter effluent channel are to be furnished by the filter system supplier. These covers shall be solid aluminum planking. All other solid covers and grating at the Effluent Filtration Facility shall be provided by Contractor in accordance with the Drawings and Section 05531.”

Section 11380, Paragraph 1.03.A; MODIFY each entry for “Air Flow Required, SCFM” as follows:

Design Parameter	Average Day, All Cells In Service	Peak Hour, All Cells In Service	Peak Day, One Cell Out Of Service
Air flow required, scfm	20.8	20.8	15.6

Section 11380, Paragraph 1.03.B; DELETE in its entirety and replace with the following: "Denitrification Filter System Supplier shall guarantee that the performance requirements states in Section 3.04 "Process Performance Warranty" will be met.

Section 11380, Paragraph 1.04.A.2.f.3); DELETE this paragraph.

Section 11380, Paragraph 1.06.A.2; DELETE and replace with "2. At the time of initial shop drawing submittal, the equipment manufacturer shall sign the Process Performance Warranty attached to the end of this Section, which certifies that effluent quality shall meet all of the performance requirements specified in this specification under influent loading rates and operating conditions which are at or below the maximum specified values shown in the design requirements."

Section 11380, Paragraph 1.06.A.3; REPLACE "Substantial Completion" with "successful completion of the specified performance testing"

Section 11380, Paragraph 2.04.A.4; ADD "or FRP" to the end of the second sentence.

Section 11380, Paragraph 2.06.G.1; DELETE this paragraph.

Section 11380, Paragraph 2.08.A.1; REPLACE the phrase "NEMA 4X" with the phrase "weathertight".
REPLACE the phrase "fives panels total" with the phrase "four panels total".

Section 11380, Paragraph 3.02.F and G; DELETE in their entirety

Section 11380, Paragraph 3.02.H; REPLACE "Following startup" with "During Startup"

Section 11380, Paragraph 3.02.J; DELETE in its entirety and replace with the following: "J. The Contractor shall conduct process testing as necessary to assess the initial performance of the System and shall advise the Owner when the System is ready for the 14-Day Performance Testing Period as specified in the Process Performance Warranty in Article 3.04."

Section 11380, Paragraph 3.02.K; DELETE in its entirety and replace with the following: "K. Contractor shall conduct a 14-Day Performance Test specified in the Process Performance Warranty in Article 3.04. The Contractor shall hire an independent certified laboratory pre-approved by the Owner to collect and analyze daily 24-hour composite filter influent and filter effluent samples for all monitoring parameters specified in the Process Performance Warranty in Article 3.04 with the exception of temperature, pH, and DO. Contractor shall monitor temperature, pH, and DO based on grab samples taken at least three times per day at evenly spaced increments during normal plant operating hours. During the Performance Testing Period, the Contractor must demonstrate that the System meets the monthly average effluent performance requirements based on the 14-day average influent and effluent quality observed during the test. If the filter system fails to meet performance requirements, the manufacturer shall make adjustments as necessary at no cost to the Owner and then the Contractor shall repeat the 14-Day Performance Test."

Section 11380, Paragraph 3.02.K; REPLACE "Operational Test" with "Performance Test" in all occurrences in this paragraph

Section 11380, Paragraph 3.02.L; REPLACE "Operational Test" with "Performance Test"

Section 11380, Paragraph 3.02.M; REPLACE "Operational Test" with "Performance Test"

Section 11380, Paragraph 3.02.M; DELETE the words "specified in Paragraph 3.02.J".

Section 11380; DELETE Paragraph 3.04 "Process Performance Warranty" in its entirety and replace with new Paragraph 3.04 "Process Performance Warranty" attached to this addendum.

Section 11390, Paragraph 2.03.A.3; ADD "using MS2 or equivalent T1/Q-Beta validated dose" after "24,000 uWs/cm²"

Section 11390, Paragraph 2.03.A.3 ADD "USEPA UVDGM (2006)" after "May (2003)"

Section 11390, Paragraph 2.03.B.8 ADD "/Junction Boxes" after "Power Distribution Systems"

Section 11390, Paragraph 2.04.A.1; ADD the following sentence: "All supports and anchors required for the finger weir trough shall be furnished by the UV system manufacturer."

Section 11390, Paragraph 2.04.A.3, REPLACE "Type 316" with "Type 304"

Section 11390 Paragraph 2.04.E.4; ADD "or 460 volts, 60 hertz, three-phase" after "120 volts, 60 hertz, single-phase"

Section 11390, Paragraph 2.05.H.1 Replace "60%" with "50%"

Section 11390, Paragraph 2.05.H.7 ADD "or in a NEMA 4 enclosure" after "top of each module"

Section 11500, Paragraph 1.03.B; ADD this paragraph as follows:

- B. Certified Site Report – a report prepared by Contractor and certified by the Lagoon System Supplier that verifies the following;
1. That a third party surveyor, licensed in the state of Maryland, has performed a survey to verify the finished dimensions and grade of the lagoon basins.
 2. That the finished dimensions and grade of the lagoon basins are within the tolerances required by the Lagoon System Supplier for the installation of the phased aeration lagoon system equipment.
 3. That the surveyor, under the supervision of a representative for the Lagoon System Supplier, has surveyed the level of the finished lagoon basin elevation along the alignment of each floating aeration chain.
 4. That the level of the completed lagoon basin elevation along the alignment of each floating aeration chain is within a tolerance of +/- 0.1 ft of the elevation shown on the Contract Drawings at any given point of measurement, unless otherwise required by the Lagoon System Supplier.

Section 11500, Paragraph 1.04.A; REPLACE the table in this paragraph with the following:

Design Influent Loadings per Phased Aeration Lagoon Including Process Recycles		
Parameter	Average Month	Maximum Month
Flow	0.48 mgd	0.895 mgd
Minimum Influent Temperature	12°C	12°C
Maximum Influent Temperature	24°C	24°C
BOD5	665 lbs/day	875 lbs/day
TSS	730 lbs/day	1005 lbs/day
TKN	140 lbs/day	180 lbs/day
NH3 – N	85 lbs/day	115 lbs/day
NO3	0 lbs/day	0 lbs/day
TP	30 lbs/day	35 lbs/day
pH	7	7

Section 11500, Paragraph 1.04.B; REPLACE the table in this paragraph with the following:

	Daily Maximum	Monthly Average
BOD5	30 mg/L	10 mg/L
TSS	30 mg/L	15 mg/L
TN	N/A	10 mg/L
TKN	N/A	2 mg/L
NO3-N	N/A	8 mg/L
NO2-N	N/A	<0.2 mg/L

Section 11500, Paragraph 1.05.A.2.f.3); DELETE this paragraph.

Section 11500, Paragraph 1.05.A.4; REPLACE this paragraph with "4. Special guarantees"

Section 11500, Paragraph 1.05.A.9; ADD this paragraph as follows: "9. Certified Site Report"

Section 11500, Paragraph 1.07.A.2; REPLACE "Warranty" with "Guarantee"

Section 11500, Paragraph 1.07.A.3; REPLACE "Substantial Completion" with "successful completion of the specified performance testing"

Section 11500, Paragraph 2.03.I.2; in the third sentence, REPLACE the phrase "three phase" with the phrase "single phase"

Section 11500, Paragraph 3.01; ADD Paragraph K as follows: "K. Prior to the installation of the Phased Aeration Lagoon equipment into the lagoon basins, prepare and submit a Certified Site Report."

Section 11500, Paragraph 3.02; ADD Paragraphs E, F, and G as follows:

E. Following introduction of wastewater to the System, Contractor shall conduct process testing as necessary to assess the initial performance of the filter system and shall advise Owner when the units are ready for Performance Testing.

F. Contractor shall conduct a 14-Day Performance Test of the phased aeration lagoon treatment system once the biological process has attained full performance functionality.

1. During the Process Performance Test, Contractor shall hire an independent certified laboratory pre-approved by Owner to collect and analyze daily 24-hour composite filter influent and filter effluent samples for all monitoring parameters specified in Section 1.04 with the exception of temperature, pH, and DO. Contractor shall monitor temperature, pH, and DO based on grab samples taken at least three times per day at evenly spaced increments during normal plant operating hours.
2. The Process Performance Test shall be successfully completed when the 14 consecutive day average secondary clarifier effluent wastewater characteristics are within the Effluent Performance Requirements stated in Article 1.04 regardless of whether the 14 consecutive day average phased aeration lagoon influent characteristics are within the range of Influent Parameters stated in Article 1.04.
3. The requirement to complete the Process Performance Test shall be waived if the 14 consecutive day average phased aeration lagoon influent characteristics do not fall within the range of Influent Parameters stated in Article 1.04.
4. If the 14 consecutive day average phased aeration lagoon influent characteristics fall within the range of Influent Parameters stated in Article 1.04 and at the same period the 14

consecutive day average secondary clarifier effluent wastewater characteristics are not within the Effluent Performance Requirements stated in Article 1.04, Manufacturer shall make modifications as necessary at no cost to Owner and then Contractor shall repeat the 14-Day Performance Test. Manufacturer shall bear all of the costs associated with repeating the 14 Day Performance Test.

5. Documentation of all operational settings and testing results shall be made available to the Owner in a written report provided within 14 days of testing completion."

G. Acceptance of the System will not be made until after the 14-Day Performance Test is successfully completed."

Section 11500, Paragraph 3.03.B.1; REPLACE this paragraph with the following: "B. Visit the site to oversee the survey of the lagoon basin elevations along each air header alignment. Coordinate with Contractor to provide a Certified Site Report as defined in Article 1.03 of this Section."

Section 11500; DELETE Paragraph 3.04 "Process Performance Guarantee" in its entirety and replace with new Paragraph 3.04 "Process Performance Guarantee" attached to this addendum.

Section 16050, Paragraph 1.02.A, DELETE Item 4. ADD:

4. "Conduit and wiring, including ductbank construction, together with all excavation, dewatering rock removal, backfilling, and compaction work."

Section 16050, Paragraph 1.04, ADD: "R. Section 02226 – Rock Removal." RELABEL the remaining sections (S through W).

Section 16100, Paragraph 2.01.C.1, ADD: "Drilling is typically done by a water well driller as a sub to the Contractor."

Section 16110, Paragraph 3.01.B.7, ADD:

- d. Maximum lengths of Conduit Types F, G, G-1 shall be 36 inches.
- e. Maximum lengths of Conduit Types G-2 and H shall be 24 inches.

Section 16191, Paragraph 3.01.C.5, DELETE entire item: "5. Exterior Areas – Stainless Steel Channel System."

Section 16475, Paragraph 1.06:

1. In Item C, ADD "five" into blank space.
2. At the end of Item C.5.a, ADD: "(two required)."

Section 16475, Paragraph 3.07.B, DELETE "ATS-1995." ADD: "ATS-2007."

Section 16480, Paragraph 2.02.B.9, ADD:

"e. Output reactors or filters as required by the manufacturer for the distance between the VFD and motor."

Section 16480, Paragraph 3.05, Table 16480-1. In Item 3 below the table, ADD: "or filters as required by the manufacturer."

Section 16670, Paragraph 1.06.B, DELETE "Lightening", ADD: "Lightning".

Section 16670, Paragraph 2.01.E, DELETE entire Item, ADD:

- e. Robbins Lightning, Inc.
- f. Or equal.

Section 16950, Paragraph 3.04.7, DELETE entire Item. ADD:

- 7. Test method shall be Fall of Potential. Test probe shall be placed a distance of 10 times the tested rod depth away from the testing ground rod. The movable probe shall have resistance read at 10 percent increments of distance between ground rod under test and the test probe.

Appendix A: ADD the attached Appendix to the Contract Documents.

CHANGES TO CONTRACT DRAWINGS:

Drawing C001; ADD Note Q as follows "All pipes shall be restrained for 2 pipe lengths at every change in direction, both horizontal and vertical."

Drawing C004, Note 1; CHANGE the text of the second sentence from "the entire site" to "the entire existing paved access road"

Drawing C005; REPLACE this Drawing in its entirety with the attached Drawing C005.

Drawing C006; REPLACE this Drawing in its entirety with the attached Drawing C006.

Drawing C007; REPLACE this Drawing in its entirety with the attached Drawing C007.

Drawing C008; REPLACE this Drawing in its entirety with the attached Drawing C008.

Drawing C009; REPLACE this Drawing in its entirety with the attached Drawing C009.

Drawing C010; REPLACE this Drawing in its entirety with the attached Drawing C010.

Drawing C012; REPLACE this Drawing in its entirety with the attached Drawing C012.

Drawing C013; REPLACE this Drawing in its entirety with the attached Drawing C013.

Drawing C025; REPLACE this Drawing in its entirety with the attached Drawing C025.

Drawing C026, Detail C-402; DELETE the note callout stating "Terminate geocomposite @ top of slope." Extend the geocomposite horizontally underneath of the geomembrane liner and turn down with the geomembrane liner. Terminate the geocomposite layer at the end of the vertical embedment of the geomembrane liner.

Drawing C027; at both the "Geogrid Reinforced Embankment Detail" and the "Geogrid Reinforced Center Berm Detail"; CHANGE the Backfill from "Type E" to read "Type A-2 On-Site Material and/or Bank Run Gravel if Off Site Material is needed".

Drawing C029; DELETE all Boring Logs on this sheet and replace with the Boring Logs included as an attachment to this addendum.

Drawing A001; at the "Partition Wall Brace Detail"; CHANGE the top of wall angle brace to an L4X4X1/4 and CHANGE the top of wall bond beam call out to read: "Continuous Bond Beam; Grout Fill w/ 2-#5 Bars, Reference "Masonry Wall Reinforcing" detail on S002."

Drawing A001, FRP-Faced Plywood Installation Notes; CHANGE Note 1 to read "All panel edges are to be solidly backed. Run 3-inch wide galvanized 20 gauge steel straps perpendicular to the truss spans at 24" OC. Fasten panels 24" OC to truss bottom chords and 24" OC to straps with corrosion resistant coated drive screws or pneumatically driven nails. Reference Fastener Pattern Diagram at left."

Drawing A001, Fastener Pattern Diagram FRP-Faced Plywood; CHANGE diagram to show 3 fasteners across the short sides of panels with a spacing of 23" between fasteners. Change diagram to show typical spacing of fasteners along the long edges to be 24", with a 12" offset of fasteners at adjacent edges, and a 1" margin from the edge of the panel to the center of fasteners. Show a single row of interior fasteners spaced 24" OC except offset 1" from panel edges.

Drawing A016, Door Schedule; Under the Width column of the Door section of the Door Schedule: CHANGE the width of Door D02-SDB from 10'-0" to 8'-0". Note that the door width shown on the schedule for overhead doors represents the nominal masonry opening width, whereas the actual door panel will be somewhat smaller to accommodate installation details.

Drawing A019; Detail J; CLARIFICATION: Truss is welded to a continuous HSS 5X2X1/4 which is fastened to the masonry wall using 1/2" diameter stainless steel adhesive anchors with minimum 8-inch embedment into the bond beam at 24 inches on centers to match truss spacing.

Drawing A005; CHANGE the entire length of the east building wall to use 12" CMU backup block at the masonry bearing wall. REVISE the plan dimension to the Chemical Feed and Compressor Rooms accordingly from 13'-2" to read 12'-10".

Drawing A019; Details F and G; REPLACE these two details with the revised details attached as Figures 9 and 10 to this addendum. Finish off the top of the masonry cavity wall with fire stop and align with the top slope of the roof trusses.

Drawing A019; Detail H; CHANGE the 8" Concrete Plank to interrupt the masonry wall to provide full sidelap bearing of the concrete plank immediately above a reinforced bond beam per Detail B on Drawing S006. Core drill through the concrete plank and into the bond beam to use an adhesive reinforcing dowel, embedded 6 inches into the bond beam, to continue the masonry reinforcing continuous full height of the wall.

Drawing S003; ADD standard detail "Slide Gate Block-Out", see attached Figure 8.

Drawing S003; ADD standard detail "HSS Beam to HSS Column Connection", see attached Figure 7.

Drawing S007; At Sections D, E, and H; ADD a 3 to 4 inch layer of well-draining, compacted gravel or sand above the prepared subgrade fill material followed by a heavy duty sheet vapor retarder directly below the concrete floor slab at the Electrical Room and the lower level of the Grit Room.

Drawing S008; At Section P; ADD a 3 to 4 inch layer of well-draining, compacted gravel or sand above the prepared subgrade fill material followed by a heavy duty sheet vapor retarder directly below the concrete floor slab under the lower level of the Grit Room.

Drawing S011; At Sections D, E, and F; ADD a 3 to 4 inch layer of well-draining, compacted gravel or sand above the prepared subgrade fill material followed by a heavy duty sheet vapor retarder directly below the concrete floor slab under the entire building.

Drawing S013; CHANGE the 8" Precast Concrete Ceiling Plank layout such that there is no sidelap along the east wall. Provide equal width planks at the west and east sides. ADD an L2X2X1/4 continuous closure to cover the edge of the cut ceiling plank against the east CMU wall. Reference Detail G on A019.

- Drawing S014; At all Sections; ADD a 3 to 4 inch layer of well-draining, compacted gravel or sand above the prepared subgrade fill material followed by a heavy duty sheet vapor retarder directly below the concrete floor slab under the entire building including the Blower Area and Chemical Tank Area.
- Drawing S019; ADD Note 2 as follows: "2. Coordinate dimensions of filter cells with the Denitrification Filter System Supplier."
- Drawing S020; ADD Note 6 as follows: "6. Coordinate dimensions of filter cells with the Denitrification Filter System Supplier."
- Drawing S021; ADD Note 4 as follows: "4. Coordinate dimensions of filter cells with the Denitrification Filter System Supplier."
- Drawing S028; At Sections D and E; ADD a 3 to 4 inch layer of well-draining, compacted gravel or sand above the prepared subgrade fill material followed by a heavy duty sheet vapor retarder directly below the concrete floor slab under the entire building not including the Truck Bay.
- Drawing W012; CHANGE two discharge piping callouts from CBB-AB-103 from 8" to 6".
- Drawing W012; CHANGE the location of the cut for Section B from the right of CBB-ABB-101 to the right of CBB-AB-103.
- Drawing W012; CHANGE two discharge piping callouts between CBB-AB-201 and CBB-AB-202 from 8" to 6".
- Drawing W013, Section A; CHANGE eccentric reducer size from 10"x8" to 10"x6".
- Drawing W013, Section B; CHANGE the pipe and fitting sizes from 10" to 6". CHANGE the equipment tag to CBB-AB-103.
- Drawing W016, RAS Pumping Station Lower Plan; REPLACE all "Type G" pipe supports with "Type B" pipe supports.
- Drawing W016; ADD the following Note: "Air/Vacuum valves shall be as specified in Section 15100. Minimum size shall be 1" with a minimum pressure rating of 150 psi"
- Drawing W017; ADD the following Note: "Air/Vacuum valves shall be as specified in Section 15100. Minimum size shall be 1" with a minimum pressure rating of 150 psi"
- Drawing W022, Recycle Pumping Station Plan; DELETE the two dimensions indicating distances from the center of the flowmeter. Dimensions shown in Section A shall remain.
- Drawing W022, Recycle Pumping Station Plan; ADD dimensions to the aluminum hatch on the valve vault. The hatch shall be 2'-6" x 3'-0" with the long dimension parallel to the long dimension of the vault.
- Drawing W025; ADD the following Note: "Air/Vacuum valves shall be as specified in Section 15100. Minimum size shall be 1" with a minimum pressure rating of 150 psi"
- Drawing W026; ADD the following Note: "Air/Vacuum valves shall be as specified in Section 15100. Minimum size shall be 1" with a minimum pressure rating of 150 psi"
- Drawing W027; ADD the following Note: "Air/Vacuum valves shall be as specified in Section 15100. Minimum size shall be 1" with a minimum pressure rating of 150 psi"

Drawing W029, Plan; ADD "6'-0" x 6'-0"" to the beginning of the methanol pump enclosure callout

Drawing W031, Sections A, B, and C; MODIFY the callout for each access hatch to the following: "2'-6"x3'-2" aluminum access hatch"

Drawing W033; REPLACE Details 10 and 11 with the details included in Figures 1 and 2 of this addendum.

Drawing W033, Weir Schedule, CHANGE the material for Weir 13, Secondary Clarifiers from "304SS" to "FRP"

Drawing E001, ADD the following General Note 8:

"8. Conduit run on exterior of structures shall be either wall or handrail mounting. All such mounting shall be via electrical channel."

Drawing E002:

A. In detail 101, ADD: "See detail 102 Manhole/Pullbox Notes – Also applicable to this detail."

B. In detail 105, ADD:

"6. Contractor shall adjust depth and lateral locations of ductbanks as required to clear other utilities and pipelines."

Drawing E005:

A. In the Key Plan DELETE the scale shown, ADD "Not to Scale".

B. In the titleblock, for the scale, DELETE the scale shown, ADD, "As Shown".

C. On the Site Plan, the ductbank shown from the Filter Building to IPB-8 (better shown on Drawing E008),

1. Label this ductbank as "CC-CC".

2. ADD IHH-2, placed 15 feet southerly of ductbank A-A.

3. From this IHH-2 to IPB-8, ADD: four, IHH's (labelled IHH-2, 3, 4, & 5) approximately evenly spaced – 200 to 250 feet apart.

D. On the Site Plan, lower right side after the note "Storage Reservoir Flow Meter Vault", ADD: "(See Sheet Nos E008 and E023)".

Drawing E006, ADD: "Note – Contractor shall adjust depth and lateral locations of ductbanks as required to clear other utilities and pipelines."

Drawing E007:

A. ADD "Note – Contractor shall adjust depth and lateral locations of ductbanks as required to clear other utilities and pipelines."

B. On the Site Plan No. 2, right center of drawing, the ductbank extending to the Aerobic Digesters No. 1 & 2 shall be LABELED "T-T".

C. For ductbank T-T, ADD: "Ductbank is concrete encased its full length."

- D. On the Site Plan, lower right on ductbank CC-CC ADD: "IHH-2 located 15 feet southerly of ductbank A-A."
- E. On the Site Plan, center area, DELETE: "Ductbank V-V at its present location". ADD: "Ductbank V-V extending from Ductbank W-W to the Methanol Feed Pump VFD mounting stand – better shown on revised sheet E019, attached at the end of this Addendum."

Drawing E008:

- A. ADD, "Note – Contractor shall adjust depth and lateral locations of ductbanks as required to clear other utilities and pipelines."
- B. In the Telecommunication Service Plan, RELOCATE Ductbank V-V as discussed on Sheet E007.
- C. In the Ductbank Schedules,
 - 1. In Section W-W in place of an X, ADD "No. 50" to the left side and "No. 51" to right side.
 - 2. In Section X-X in place of an X, ADD "No. 50" to the left side and "No. 51" to right side.

Drawing E009:

- A. For Conduit Nos. 1, 3, 5, ADD: "5-inch" for Conduit Size, and "PVC" for Conduit Type.
- B. For Conduit Nos. 10, and 42, ADD: "4-inch" for Conduit Size, and "PVC" for Conduit Type.
- C. For Conduit Nos. 15, and 18, ADD: "4-inch" for Conduit Size.
- D. To Note No. 1, ADD: "For interior or on tank/structure conduit sizes, see Sheet E027."
- E. In the Schedule at Conduit No. 49, in the "From" column, DELETE: "DWF-LP-1", ADD: "FIL-LP-1".
- F. In the Schedule at Conduit No. 40, CHANGE the size from "1-inch" to "2-inch".

Drawing E011:

- A. DELETE Detail 803, ADD "Detail 803A" included as "Addendum No. 3, Figure 3" at the end of this Addendum.
- B. In the Lighting Notes, ADD:
 - 2. Install lighting luminaries in locations as shown, as noted, or as close as possible to these locations when adjustments to avoid interference are required. Luminaries shall be installed level and plumb.
 - 3. Install luminaire at height shown in table unless a specific mounting height is called out on plan drawings.
 - 4. Connect luminaries on circuits as shown on drawings and on panelboard schedules. Lighting circuit conduit and conductors shall be per NEC or as noted on the drawings.
 - 5. Clean each luminaire at time of substantial completion.
 - 6. Replace at time of substantial completion any lamps that are out. Replacement lamps

shall not come from spares being provided.

7. Operate each luminaire after installation and connection. Inspect for and repair all improper connections and operation.
8. Light switches shall be as specified in Section 16142.
9. Provide the following spare components:

LAMPS: As noted in spare lamps requirements table.

BALLASTS: As noted in spare ballasts requirements table.

10. Submit shop drawings for all luminaries under this contract in accordance with specification Section 01300 in the Contract Documents. Provide complete information including luminaire accessories, installation instructions, operation and maintenance information, and list of luminaire types and manufacturer to be used for each.
11. Provide project record documents in accordance with Section 01700 and Section 16050 of the contract documents. Record documents shall accurately show fixture locations of each luminaire including the connections, and for each type of luminaire, provide manufacturer's name, catalog number, voltage, lamp type, and power requirements.

C. In Detail 802, ADD: "Provide handhole opposite T-Fitting."

Drawing E012, under the "Existing Control Building" title, ADD: "Locations of Conduit runs in the Existing Control Building shall be determined in the field by the Contractor and Owner."

Drawing E013

A. On the Building Plan,

1. Where Ductbank J-J enters building, ADD: "Boxout foundation for Ductbank entry."
2. At the top right of the sheet, LABEL Ductbank connecting to structure "Conduit Nos. 26, 27, and 28". Also ADD: "Conduits terminate at above grade individual pull or junction boxes, wall or handrail mounted."

Drawing E016, on the Building Plan,

- A. Left side of plan, where Ductbank Nos. F-F, E-E, C-C, D-D, and N-N enter the building, ADD: "Ductbanks pass through boxouts in the foundation wall and continue under the slate to stub up as shown."
- B. At the 30-inch CBB-MCC1, Section 7, DELETE "Fused Switch", ADD "Circuit breaker, Metering".

Drawing E018, In each clarifier plan, at the level and plug valve structures, ADD "For each a power and signal junction box to accept underground conduit."

Drawing E019, REPLACE this Drawing in its entirety with the attached Drawing E019.

Drawing E021, at the scale in the title block, DELETE "Scale shown", REPLACE with "1/4-inch = 1-ft. 0-inch".

Drawing E022

- A. On the building Power and Control Plan,
 - 1. Where each ductbank Nos. X-X, Z-Z, and AA-AA enter the building, ADD: "Ductbanks enter via boxouts in concrete foundation and continue under slab to stub up at designated termination."
 - 2. In the Process Room, on the westerly wall, ADD: "Spare Fuse Panel".
 - 3. DELETE the light line box shown around FIL-LP-1.

Drawing E024, at the ground line shown to the North of the structure, ADD "No. 6 Ground Conductor".

Drawing E025, on the Power and Control Plan,

- A. In the Dewatering Room, DELETE the Dewater Gate motor symbol and power indication.
- B. In the Electrical Room, the box between DWF-T-1 and Sludge Pump VFD, LABEL "Spare Fuse Cabinet".
- C. Where ductbank Nos. R-R and R2-R2 join and enter the building, ADD: "Ductbanks enter via boxouts in concrete foundation and continue under slab to stub up at designated termination."

Drawing E027, In the notes for the Conduit and Wire Schedule, in the asterisk Note, DELETE "XHHN", ADD "XHHW".

Drawing E028, at the Generator Plan,

- A. ADD a North arrow pointing to the top of the page and slightly right. See the Site Plan No. 2, drawing E007.
- B. On the generator, ADD an "airflow" arrow pointing to the bottom of the drawing.

Drawing E030:

- A. In DWF-EP-1 schedule,
 - 1. DELETE "Load, Diagram Note, and Description for Circuit Nos. 20, 22, 24."
 - 2. ADD under description for circuit Nos. 20, 22, 24 "Spare".
 - 3. At circuit Nos. 26, 28, 30 CHANGE the load horsepower to "1/2".
- B. In HWF-EP-1, at circuit Nos 8, 10, 12, and 26, 28, 30, CHANGE the load horsepower to "1/2".

Drawing E031:

- A. In CBB-EP-1 schedule,
 - 1. At circuits 8, 10, and 12, CHANGE the load horsepower to "1/2".
 - 2. At circuits 19, 21, and 23, CHANGE the load horsepower to "2-1/3".
- B. In CBB-EP-2 schedule, at circuits 19, 21, and 23, CHANGE the load horsepower to "1/2".

Drawing E032, in FIL-LP-1 schedule,

- A. At circuit 31, DELETE "Spare", ADD: "Methanol Eye Wash Heater/E039/500 watt"

- B. At circuit 37, DELETE "Space", ADD: "Spare/--/--/20A/1pole".

Drawing E033, in schematic for "Sump Pump HWF-SMP-100", in the list of Typical, ADD: "SRT-SMP-100, PLC-C3/Exist Panelboard".

Drawing E034:

- A. In the elementary for "Secondary Clarifier SCL-CD-100 diagrams",
 - 1. DELETE the three "ladder logic rungs" starting with the rung with the remote WWTP, ADD: "Figure 5 attached at the end of this Addendum."
 - 2. For each of the pilot lights at the small arrow (lower left of each light), ADD "1".
- B. In the "RA5 Pump RA5-R5-100 diagrams",
 - 1. In the elementary,
 - a. DELETE that portion of the "ladder logic" starting in the Monitoring Relay below the seal contact down through the rung with the TRMT contact and CRMT relay, ADD: "Figure 6 attached at the end of this Addendum."
 - b. At the output filter at the top, ADD "or reactor".
 - 2. In the schematic at the output filter, ADD "or reactor".

Drawing E035:

- A. In the Scum Pump RA5-SCP-100 Diagrams in the elementary, DELETE that portion of the "ladder logic" starting with the Monitoring Relay below the seal contact down through the rung with the TRMT contact and CRMT relay, ADD: "Figure 6 attached at the end of this Addendum."
- B. In the Pinch Valve RA5-PIV-100 Schematic, DELETE the double detail indications below the Hazardous Area note, ADD detail "902/E004".

Drawing E036:

- A. In the Aerobic Digester Blower CBB-AB-201 diagrams,
 - 1. In the schematic, DELETE the harmonic filter as shown, ADD the harmonic filter next to the VFD enclosure,
 - 2. In the elementary, DELETE the three "ladder logic rungs" starting with the rung with the remote WWTP, ADD "Figure 5 attached at the end of this Addendum".
- B. In the Phased Aeration Lagoon Blower CBB-AB-101 diagrams,
 - 1. In the schematic, DELETE the harmonic filter location as shown; ADD the harmonic filter next to the VFD enclosure.
 - 2. In the elementary, DELETE the three "ladder logic rungs" starting with the rung with the remote WWTP, ADD "Figure 5 attached at the end of this Addendum".

Drawing E038, In the Rapid Mixer EFF-MIX-100 diagrams, in the elementary,

- A. At the top of the elementary, in the power lines between the VFD and 30A Disconnect Switch, ADD a box labelled "Output reactor or filter", EXTEND the enclosure symbol so the reactor/filter is now inside the enclosure.
- B. In the elementary, DELETE the three "ladder logic rungs" starting with the rung with the remote WWTP, ADD "Figure 5 attached at the end of this Addendum".

Drawing E039:

- A. In the Plant Water System Pump EFF-PWP-100 diagrams,
 - 1. In the elementary,
 - a. DELETE the three "ladder logic rungs" starting with the rung with the remote WWTP, ADD "Figure 5 attached at the end of this Addendum".
 - b. RELOCATE the enclosure symbol to enclose the output filter inside the VFD enclosure.
 - 2. In the schematic RELOCATE the output filter to inside the VFD enclosure.
- B. In the Methanol Facility Static Grounding System at the 120VAC, single phase, ADD: "Conduit No. 49".
- C. In the Methanol Feed Pumps Schematic, ADD
 - 1. "Conduit No. 43" to the 480VAC three phase input.
 - 2. "Conduit No. 46" to conduit to Denit Filter System CP.
 - 3. "Conduit No. 44" to the 208VAC, three phase input.
- D. In the Methanol Facility Fill Schematic, ADD
 - 1. "Conduit No. 49" to 120VAC, single phase input.
 - 2. "Conduit No. 47" to line to PLC-FIL.
- E. In the UV System Type B Schematic, CHANGE "Note 1" pointing to the transformer to "Note 2". ADD Note 2 in the notes section as follows: "2. Transformer shall be provided by the UV system supplier."

Drawing E040:

- A. In the In-line Grinder DWF-GRD-100, ADD
 - 1. "3/4-inch conduit with 2 No. 14 to PLC-DWF for Failure down". Conduit runs from the Grinder Control Panel to PLC-DWF.
- B. In the Sludge Feed Pump DWF-SLDP-100 elementary diagram DELETE the three "ladder logic rungs" starting with the rung with the remote WWTP, ADD "Figure 5 attached at the end of this Addendum".
- C. In the Decant Pump AED-DCP-100 elementary diagram DELETE that portion of the "ladder logic" starting with the Monitoring Relay below the seal contact down through the rung with the TRMT contact and CRMT relay, ADD: "Figure 6 attached at the end of this Addendum."

Drawing E041: In the Centrifuge and Associated Equipment Schematic, left side of drawing DELETE Diverter Gate power and control shown.

Drawing E042, In the notes and specification info at the top of the drawing,

- A. In the General Notes, at the end ADD "All heat tracing systems shall be suitable for use in Class I, Division 2 hazardous areas, except for heat tracing in the Headworks and Methanol Facilities which shall be rated for Class I, Division 1 hazardous locations.
- B. In pipe heat tracing notes
 - 1. Note B, ADD, "HSRL by Chromalux or equal by Nelson."
 - 2. Note 8, A, DELETE entry, ADD "Thermon Model B7-15140, Chromalux TXL or equal by Nelson."
- C. In the Protection of Pipe Insulation detail, DELETE the 60-inch dimension; ADD "36-inch".

ATTACHMENTS:

- Boring Logs for SB-01 through SB-09
- Owner's Pollution Liability Information
- Contract Specification 00410 (Bid Form) with attachments
- Contract Specification 02270 – Textured HDPE Geomembrane
- Contract Specification 02723 – Storm Sewer Piping
- Contract Specification 09920 – Seamless Epoxy Mosaic Composition Flooring
- Contract Specification 11380, Pages 11380-19 through 11380-22: Process Performance Warranty for Denitrification Filter System
- Contract Specification 11500, Pages 11500-17 through 11500-20: Process Performance Guarantee for Phased Aeration Lagoon Treatment System
- Contract Documents APPENDIX A: Current NPDES Permit
- Addendum 3 Figures 1 through 10
- Contract Drawings C005-C010, C012-C013, C025, E019



John Cannon
Engineer