**State of Alaska**
**Department of Environmental Conservation**
**Village Safe Water Program**
555 Cordova Street
Anchorage, AK 99501
evan.patterson@alaska.gov

July 7, 2023

To: Vendor List

Re: Amendment 3
ITB 23-VSW-TLT-023
Tuluksak Water Treatment Plant / Washeteria Project
ITB Due Date: July 18, 2023 @ 2:00 PM AST

**The following changes are required:**

1. The ITB due date is extended from July 11, 2023 to July 18, 2023 @ 2:00 PM AST.

**The following are vendor questions and the department's response:**

1. Vendor: E103,E501- Were the lift station intermediate junction box enclosures supplied and installed by the fabrication contractor? Same question for the conduit and raceway between the LSCP and intermediate jboxes for power and controls, respectively.

   Department: The junction boxes, conduit and conductors from the LSCP panel to the lift station shall be supplied and installed by the installing contractor.

2. Vendor: Please confirm that installation of exterior light is part of the installing contractor's work.

   Department: The fabricator contractor has procured the exterior lights and completed the rough-in at the locations shown on drawing E105. The light fixtures will be shipped loose with the modules, and the installing contractor shall be responsible for installing the lights after installing the wall

siding. The same applies to the building alarm/strobe and OATs 801 and 851 shown on drawing E104.

3. Vendor: Please confirm that all lift station cabling and wiring from the lift station intermediate j-boxes to the lift station pumps and probes has been procured by the fabricating contractor and will be made available to the installing contractor.

   Department: Installing contractor shall install LSCP and procure and install all conduit, junction boxes, conductors, cables, and equipment (pumps, probes, etc.) beyond the LSCP.

4. Vendor: Is branch power for all fabricator contractor supplied control panels already in place, in vicinity of the respective panels and their locations?

   Department: Yes, for panels BAP, FGHCTP and DSCP. These panels will be installed and tested prior to shipment of the modules. The installing contractor shall be responsible for reconnecting the control wiring, if any, between the modules, and procuring and installing the conduit and conductors for the BAP alarm signals. The building low temp alarm, boiler control alarm, and the fuel day tank alarm signals will be completed by the fabricator contractor prior to shipment of the modules.

   No, for panels FSCP, WP/WSTCP, PPCP, WGHCTP, LSCP and FSCP. Panel FSCP will be mounted to the Package WTP and shipped separately from the modules. The other panels will be shipped loose with the modules.

5. Vendor: E103 Note 12- Are the 4x4 aluminum boxes and branch wiring already in place as called out in the note?

   Department: Yes, the 4x4 boxes and wiring are already installed. Installing contractor shall provide and install LFMC for connection between 4x4 boxes and piping, heat trace and heat trace end kits.

6. Vendor: How many conduits/ wire splices between modules are required for reinstall once modules are set and in place?

   Department: No splices or conduit are required. Fabricator contractor to provide flex for connections between modules and coil up and identify the feeder conductors to be installed by installing contractor after the modules are assembled in the field. See General Electrical Note 3 on drawing E103 and E104 and Sheet Note 3 on drawing E105.

7. Vendor: Will there be lift pockets in order to move the modules?

   Department: Fork pockets, if needed, are the responsibility of the installing contractor. Refer to ITB Section 00020, Scope of Work (Scope of Work), item 6.

8. Vendor: Is there a local resource we can communicate with?

   Department: Yes, see ITB Section 00020, Notice To Bidders, item 6. Both contacts are employees of the Tuluksak Native Community and live in Tuluksak. However, neither have detailed knowledge about this ITB or the project.

9. Vendor: Water main connecting to 4 buildings and 2 hydrants. School as well?

   Department: Yes, see drawings CW404 and CW521 for the school water main extension and connection details.

10. Vendor: Landfill: Will the local landfill be available for construction materials? How much? And what are possible fees?

    Department: Yes, the Tuluksak Dump Road Landfill is a Class III Community Municipal Solid Waste Landfill and is authorized to accept construction and demolition debris. A copy of the permit is included with this amendment. The landfill is owned and operated by the Tuluksak Native Community and the disposal fees for a construction project are $500/month and $250/truck load. The monthly fee is only due during periods of active construction, not winter shutdown. The meaning of "truck load" is a full 10 cubic yard dump truck or part thereof.

11. Vendor: Can the modules be released earlier then the date provided?

    Department: Yes, the modules can be released when completed if they are insured under the installing contractor's Builders Risk insurance policy. Refer to ITB Scope of Work, item 3 for the anticipated completion date.

12. Vendor: Ice Road: Is this road available every winter? Can this road handle heavy equipment?

    Department: No; and generally, not. Contact Mark Leary, director of operations for the Native Village of Napaimute, for further information (907) 543-2887.

13. Vendor: Wells: How many wells are currently in service? Are the other wells available to be used if necessary?

    Department: Well #1 (2005N) is the only well in use. The other wells shown on drawing G101 were drilled but not completed and their condition is unknown. The two "2003 wells" are located on land owned by the local corporation, Tulkisarmute Inc. Access to those wells would need to be coordinated with Agatha Fly, General Manager for the Corporation, (907) 695-6457.

14. Vendor: Please provide specifications for the Solar Panels required for this project. Include all items required for complete assembly.

    Department: The solar panels are specified on drawing E002. The panels shall be installed as shown on drawing E107 and attached to the roof with clips/brackets approved by the roof panel and solar panel manufacturers and meet the wind design criteria listed on drawing S001.

15. Vendor: Will any fire detection systems be required as this is not called out in specifications?

    Department: No fire detection systems are required.

16. Vendor: Will the WTP be fully installed in the pre-fabricated modular structures. What will come loos if not fully installed?

    Department: Assembly of the packaged WTP and associated water treatment equipment is the responsibility of the installing contractor. Refer to ITB Scope of Work, items 4, 13 and 14 and the revised WTP submittal package included with this Amendment.

17. Vendor: As the Modular structures and all components of these structures are purchased and installed by others how is contractor to Warranty and Guaranty what someone else purchased and assembled, and provide start up and maintenance when purchase was by others? Please define or provide information.

Department: The installing contractor will not be responsible for the warranties and guaranties on the equipment installed by the fabricator contractor or department provided materials. The installing contractor shall be responsible for startup, testing and calibration of the completed project. Refer to ITB Scope of Work, items 5, 16, 17, and 18.

18. Vendor: What is the total cost of all supplied items by owner?

    Department: $2.9 million.

19. Vendor: As schedule if very tight to accomplish the finial completion date of project can this be pushed out if possible or is there something driving this completion date?

    Department: The schedule is being driven by the need to replace the emergency/temporary WTP and water line to the school as soon as possible. These systems were only intended to operate for one to two years and are heading into their third winter. Last winter the water line failed, and the school and teacher housing were without water from February 2022 to late June 2023.

20. Vendor: Is there a estimated cost budget available for this project?

    Department: As shown in the ITB, the Engineer's estimate is $5 to $10 million.

21. Vendor: Bid Item "D" Demolition: drawing C104 show the existing equipment on site to be moved / relocated. Is the loader available for contractors use?

    Department: The loader could be available for use, but it will require some repairs and a rental agreement would need to be negotiated with the Tuluksak Native Community.

22. Vendor: Bid Item "D" Demolition: drawing C104 show the existing equipment on site to be moved / relocated. Is equipment fixable for use if contractor was to fix if needed and use. Would equipment be available for rent or use by contractor if contractor fixes? This is asked as there is a couple large pieces of equipment that would need large equipment to move unless it can be fixed and runnable.

    Department: The condition of the equipment is unknown, and except for the loader, the equipment hasn't been run for a few years. All of them were parked in their current position at the end of the last project. The fuse box and some of the controls in the cab of the Hitachi excavator have been vandalized since it was parked. The Tuluksak Native Community is interested in getting the equipment operational and is open to an agreement for repairs in leu of rent or a portion thereof.

23. Vendor: Bid Item "D" Demolition: where is the new location for the materials / equipment to be moved / relocated to? Will contractor need to provide shelter or cover for any of this equipment and or materials? If so to what extent?

    Department: The materials and equipment shall be moved approximately 900 ft to the northwest side of the community lagoon road near a group of old shipping containers. The containers are visible in the bottom left corner of drawing sheet G101. No shelter or cover for the materials and equipment is required.

24. Vendor: Bid Item "D" Demolition: drawing C102 shows to demo existing fence. Will this fence need to be reinstalled where equipment and materials are to be moved to?

    Department: No.

25. Vendor: Is any of the HDPE piping shown in drawing C104 for use on this project? Is there fittings available? Is there a quantity take-off of what is there if for use on this project?

    Department: No, the pipe and fittings at the project site belong to a different project. If there is a temporary need for some of the piping, that may be a possibility, but all permanent pipes and fittings for the proposed project shall be new.

26. Vendor: Cathodic Protection comments from "Norton Corrosion Limited": "With this being a bolted steel tank construction, I think we are going to have to pass on providing a cathodic protection (CP) bid. In order for the CP system to be effective, all metallic components of the tank interior need to be electrical continuous. With bolted steel (in lieu of a welded steel construction), this is extremely to do. And to verify that all tank metal panels are electrical continuous can be very expensive".

    Department: Please delete specification section 43 41 12 – Water Tank Cathodic Protection in entirety, and ignore any references to cathodic protection in specification section 43 41 11 – Insulated Bolted Steel Water Storage Tank.

27. Vendor: The scope of work indicates the department provided WTP/W modules and the water treatment equipment will be delivered to the Port of Anchorage on or about April 20, 2024. Could the modules be delivered to the Port of Seward versus Anchorage, and could they be delivered earlier than April 20th.

    Department: Per the Scope of Work, the modules will be delivered to the Port of Anchorage on or about April 20, 2024. The department is not opposed to them being delivered elsewhere or earlier, but all coordination and costs to do so will be the responsibility of the installing contractor and will require prior approval from the department. See below department clarification #2.

28. Vendor: Will the fabricator contractor also provide the flashing associated with the siding?

    Department: Yes, see siding submittal attached to this amendment.

29. Vendor: On the 'CW' Drawing Sheets it appears there is a man-camp in Tuluksak. Will we be able to use the man-camp for the construction effort? Will there be a charge for use of the camp?

    Department: The man-camp will be available for up to three weeks at the start of the project while the installing contractor is assembling its man-camp or establishing other housing in Tuluksak. The camp includes six bedrooms of which up to five will be available. The cost for the camp is $100 per person per day payable to the Tuluksak Native Community.

30. Vendor: Has a location been identified for the staging of materials and installation of a construction camp?

    Department: An area hasn't been dedicated for this purpose, but the entire Utility Core Site (Item H on drawing G101) is available, and the large gravel pad immediately northwest of the Utility Core Site is another possibility. The gravel pad is owned by the local corporation, Tulkisarmute Inc. and is available for lease at a rate of $0.50/square foot/month. Please contact Agatha Fly, General Manager for the Corporation, (907) 695-6457 for additional information. Included with this addendum is a land status map of the community for reference.

31. Vendor: Is there a gravel source in the community?

Department: No, all gravel required for the project will need to be imported. The only borrow material available is sand which varies from a fine-grained silty sand (SM) to a medium grained poorly graded sand (SP). The same sand was used to build the berms for the new community lagoon and the pad for the proposed WTP/W building. The borrow site for those projects was east of the landfill in an area referred to as "Tuluksak-A" (see Exhibit A included with this Amendment). The three test pits closest to the borrow site (LF-1, 2 and 3) are shown on drawing B001, and the test pit logs for LF-2 and 3 are shown on drawing B004. Tulkisarmute Inc. has a Material Sales Agreement with Calista Corporation for the borrow site and charges $20/cubic yard for material excavated from the pit.

32. Vendor: Is there any heavy equipment available for rent in the community?

    Department: Yes, the Tuluksak Native Community recently purchased a used Hitachi EX200 excavator. The machine is reportedly in fair condition. The dry rental rate for the excavator is $12,000/month, $4,000/week, and $1,000/day. See above response to questions 21 and 22 regarding the heavy equipment at the project site.

33. Vendor: Man-Camp: Project doc's call out and show an existing man-camp and Bid item (A) calls out construction of camp housing to be included in this bid item. Is the existing man camp available to the contractor and what is the capacity and rates? If not is there a site near the project location available for setting up a man-camp? Will there be a rental rate on this site?

    Department: See above question and response #29.

34. Vendor: Project Site Lay Out Area: Will there be a lay out area available near the project site?

    Department: See above question and response #30.

35. Vendor: Modules: What materials will the contractor need to supply to finish these modules? Such as electrical wire, roof trusses, Roofing material?

    Department: Modules 1, 2 and 3 will be finished except for the roof (ITB Scope of Work, item 7), siding (ITB Scope of Work, item 8), exterior lighting (See above question and response for #2), interior finishes at the marriage joints (materials to be provided by the fabricator contractor), and any conductors, piping and plumbing between the modules which will be removed prior to shipment and will need to be reinstalled by the installing contractor. Modules 4 and 5 will be similarly finished except the water treatment systems (ITB Scope of Work, item 13), process systems (ITB Scope of Work, item 14) and control panels (ITB Scope of Work, item 15) will need to be installed by the installing contractor. The fabricator contractors limit of work for the top of the modules is the double 2x4 nailer on top of the ceiling structure as shown drawing S301, detail 5 on S502, and the Tuluksak Washeteria Shop Fabrication Plans provided with the ITB.

36. Vendor: Owner Provided materials: Existing insulated arctic piping shown in drawings/pre-purchased, are all the arctic pipe materials available to complete this project? Or will contractor be required to provide arctic piping, fittings and insulation joints?

    Department: See amendment 1 question and response #1 and below question and response #37.

37. Vendor: Owner provided Materials: What is the total cost for owner provided materials? Is there an inventory?

Department: See above #18. ITB Scope of Work, item 3 (five WTP/W modules) and item 4 (water treatment equipment) are the only owner provided materials. All other materials shall be purchased and installed by the installing contractor.

38. Vendor: Owner Provided Materials: Of the materials that are already in the village, what is the contractors responsibility for lost/stolen or damaged/weather damaged materials?

    Department: There are no department provided materials currently at the project site.

39. Vendor: Owner Provided Materials: Is there a list or inventory on what still needs to be shipped to the village by the contractor? Are weights included? Do these have to be FOB anchorage?

    Department: See above question and responses. Yes, department provided materials will be at the Port of Anchorage. See below department clarification #3 for the Water treatment equipment weight and dimensions. See ITB Scope of Work, item 3 for the WTP/W modules weight and dimensions.

40. Vendor: Equipment on Site: Drawings show pictures of equipment DR. C104. Is this for contractors use? Is there a charge/rental fee for this? Is the equipment in satisfactory condition and useable? Or is contractor required to bring in all equipment required for this project? Please define.

    Department: See above question and response #32. The installing contractor shall be responsible for all equipment required for this project.

41. Vendor: Is there any useable backfill materials locally for this project or will contractor need to import all materials?

    Department: See above question and response #31.

42. Vendor: Scope Of Work, # 2 The department has procured materials for this project that the contractor shall use. These materials will be at the Port of Anchorage, 2000 Anchorage Port Road, Alaska 99501 (Port of Anchorage). The contractor shall be responsible for insuring and transporting these materials to the F.O.B. Final Destination (project site).

    (Q) Is all materials purchased for this project? This is only asked as most items on the SOW list calls out "Installation" and not "Supply and Install"? Are there any other Items being supplied per SOW #2 or just what is called out as being supplied per SOW by others. Just asking are we missing something as we take it we are to supply and install pre items not called out as being supplied.

    Department: See above question and response #37.

43. Vendor: Project Bid Schedule Item (L) calls out a 100,000 gal. water tank. Specifications 43 41 11, 3.1, A - calls out a 65,000 gal. tank. Site Drawings and other Drawings call out a 100,000 gal. tank, The Scope of Work does not call out the water tank. And if you do the math per drawing "CW510" Details 1 & 3 calling out the tank to be 24' high and 26' 9" wide = 100,000 gal. . Please provide how many gallons is required for this tank and what to use to design.

    Department: The tank size shall be a nominal 100,000-gallons. The tank was upsized during the design and the specification wasn't updated. The ITB Scope of Work, item 1 specifies a 100,000-gallon water storage tank.

**The following are department provided clarifications:**

1. TecPro Solutions of Wasilla, Alaska is designing and fabricating the control panels. They are a UL 508 certified industrial control panel fabricator, and offer simulation and acceptance testing, installation, commissioning, site acceptance testing and startup.
2. The modules will be completed by NANA Construction (fabrication contractor) in August/September 2023 and the water treatment equipment should be ready for shipment in October/November 2023. The department is not opposed to the installing contractor constructing some or all the process systems prior to shipment to Tuluksak if the work occurs in a controlled environment and the modules are protected from the weather. All coordination and costs associated with performing the work at NANA Construction's Big Lake, AK facility or having the modules delivered to a location other than the Port of Anchorage shall be the responsibility of the installing contractor and will require prior approval from the department. If the department agrees to a location other than the Port of Anchorage the contractor shall be responsible for insuring the modules to the new agreed upon location.
3. The department provided water treatment equipment, will not be containerized. The Water Boy Treatment unit will be covered with plastic shrink wrap, measure approximately 11'long x 8'W x 8'H, and weigh about 6,000 pounds. The other equipment (tanks, valves, pumps, chemical equipment, filter media, etc.) will be shipped on pallets or in crates.
4. Drawings E012, E106 and E602 have been revised. Bidders shall replace the current drawings with the attached revised drawings.
5. During the bidding process for ITB 23-VSW-TLT-005 Tuluksak Water Treatment Plant/Washeteria Building Modules the department issued Amendment 4 and the following was vendor question and department response #7:

   Vendor: For the lift station, Drawing CS501 shows concrete to be poured inside the fiberglass basin to build a base and fillet. Would it be acceptable to use a standard basin with built in fiberglass fillet around the bottom? We would adhere a steel plate to the fiberglass floor to mount the discharge elbows to.

   Department: Yes, a basin with built in fiberglass fillet and steel mounting plate, would be acceptable provided the weight of the concrete is replaced with an alternative anchoring system with the same or greater buoyancy uplift resistance. However, please note that the lift station is not a part of this ITB. It is the responsibility of the Installing contractor, not the Fabricator contractor.

**The following documents are attached to the amendment and made part of the ITB:**

1. Landfill permit
2. Package WTP Submittal-Rev A. Bidders must request this attachment from the procurement officer. Attachment will be sent via ZendTo.
3. Siding submittal
4. Land status map
5. Exhibit A -Sand borrow pit map
6. Drawings E012-R2, E106-R2, and E602 R1

Evan Patterson

*Evan Patterson*

Procurement Specialist

**STATE OF ALASKA**
**DEPARTMENT OF ENVIRONMENTAL CONSERVATION**
**555 Cordova Street**
**Anchorage, AK 99501**

# SOLID WASTE DISPOSAL PERMIT

Permit No. **SW3A176-27**

Date Effective: April 6, 2022

Date Expires: April 6, 2027

The Alaska Department of Environmental Conservation (ADEC), under authority of Title 46 of the Alaska Statutes and Title 18 Chapter 60 of the Alaska Administrative Code (18 AAC 60), issues a solid waste disposal permit to:

**Tuluksak Native Community**
**Tuluksak Dump Road Landfill**
**PO Box 95**
**Tuluksak, Alaska 99679**

and designated representatives for the operation and maintenance of a Class III Community Municipal Solid Waste Landfill. This landfill is authorized to accept municipal waste, ash, and construction and demolition debris. In addition, septage may be accepted in the designated septage pit. This permit is subject to the conditions listed below.

The landfill is located at latitude 61.092542, longitude -160.957018 in Tuluksak, Alaska, approximately 5,100 feet west of the Tuluksak Airport.

The permit holder shall manage and operate the facility in accordance with:

- The Alaska Solid Waste Regulations - 18 AAC 60;
- ADEC Class III Landfill Permit Renewal Application, dated March 1, 2022, and,
- Tuluksak Class III Landfill Operations Plan, dated December 6, 2016.

**In addition, the following conditions are required:**

**Specific Conditions:**

1. Maintain clearly legible signs at the entrance to the landfill with the name of the landfill, landfill owner and operator, landfill hours, prohibited wastes, and emergency contact information.

2. Prohibit disposal of medical waste, asbestos containing materials, used oil, oily waste, polluted soil, hazardous waste, lead-acid batteries, polychlorinated biphenyls (PCBs), and bulk liquids (greater than 1 gallon).

3. Separate special wastes such as electronics, lead acid batteries, fluorescent bulbs from normal household waste and store them in an enclosed area so that they will not be damaged. When possible, transport these wastes out of the community to proper recycling/disposal facilities.

4. Remove household hazardous waste, ammunition, gas canisters, large metals, large plastic or rubber items, and any other materials that might cause a hazard or black smoke, prior to lighting the burn box.

5. Any burning of solid waste at the landfill in the designated burn area must be conducted as follows:
   a. Prevent Landfill Fires and Wildfires
      i. PROHIBIT BURNING OF WASTE ON THE GROUND or at the working face.
      ii. The permit holder is responsible for any fire that escapes the landfill perimeter and may be subject to associated penalties.
      iii. No burning may be conducted during any statewide or local burn ban without approval from the Department of Natural Resources (forestry.alaska.gov) Southwest Area office – (907-524-3010).
      iv. Clear brush, dead trees and dead vegetation within a 50-foot boundary surrounding the landfill.
      v. Maintain a firebreak 10 feet wide down to mineral soil around the burn unit and any staging area for hot ash.
   b. Operate all burn units in accordance with 18 AAC 50.065 Air Quality Control.
   c. Operations
      i. Contain and control any burning of waste - All burning must be conducted in the constructed burn unit.
      ii. Only the operator (or designee) may ignite a fire at the landfill.
      iii. The operator (or designee) must be present AT ALL TIMES during any burning, from ignition through the end of the burn.
      iv. Fire suppression equipment must be available at the landfill (or burning area) during any burn.
      v. Only burn during favorable weather conditions with wind blowing away from the community. Do not burn in high winds that may blow ash or embers beyond the firebreak.
      vi. Do not allow waste to smolder or create black smoke.
      vii. Ensure that ash is completely cool before placing ash at the working face.
   d. Separate Waste Prior to Burning
      i. DO NOT BURN HOUSEHOLD HAZARDOUS WASTE, or other items that may create chemical hazards or do not readily burn.
      ii. Separate waste that should not be burned to the greatest extent practical before igniting the burn; dispose of non-burnable waste directly at the working face.
   e. Waste Storage
      i. Stage waste that is intended to be burned either in the inactive burn unit or at a location at least 25 feet from the burn unit.
      ii. Ensure that waste is kept as dry as possible through the use of a cover or dry storage facility.

6. Maintain a designated working face (dumping area) at the landfill. Consolidate and compact waste regularly to keep the working face manageable and reduce infiltration of water.

7. Cover waste with a minimum of 6-inches of soil at regular intervals as needed to control attraction of wild and domestic animals, windblown litter, fire, and odor. Cover any areas that do not receive waste for 90 days with at least 12 inches of soil material. Grade cover to prevent water from ponding.

8. Pick up litter or improperly disposed waste in and around the facility in a timely manner and place it into the active cell.

9. Do not dispose of waste in water. Remove any waste that is disposed in water and place it at the working face, or an appropriate dry area. Work to grade the surfaces of the landfill so water does not create ponds.

10. All snow must be removed from the disposal area before the spring thaw. Snow removed from the disposal area must be stored in an area that will prevent the melting snow from coming in contact with waste. Litter that remains after the snow melts must be picked up and properly disposed.

11. Septage or honey bucket waste may be placed in the permitted septage pit ONLY. Lime must be added, at a rate of approximately 25 pounds per 1000 gallons of septage, so a pH of 12 is maintained for at least 30 minutes.

12. Maintain a designated area for disposal of animal carcasses. Dust carcasses with lime and cover, by the end of the day, with a minimum of 6-inches of soil to prevent attracting pets and wildlife.

13. Keep the designated salvage area orderly and prohibit any salvaging within the active cell. Materials in the salvage area that do not have any further salvage or recycle value should be placed at the working face and buried.

14. Remove refrigerant from vehicles, refrigerators, freezers and any other refrigerant-containing units prior to disposal or ship the items out of the community for proper disposal. Only a certified technician may remove refrigerants.

15. Complete a visual inspection of the landfill each month. Complete the Tuluksak Dump Road Landfill Visual Monitoring Form checklist in Appendix A of the permit and retain the completed reports in the landfill operation record for at least 5 years.

16. Maintain a landfill operation record at the Tuluksak Native Community office containing the ADEC permit application, current ADEC solid waste disposal permit, operator training records, previous inspection reports, current operations plan, monthly visual monitoring records, and as-built drawings.

17. Encourage landfill operators and pertinent staff to attend solid waste trainings such as Rural Alaska Landfill Operator (RALO) or ADEC Solid Waste Boot Camp to ensure best management practices.

18. The permit application materials cited above must accompany this permit document for the landfill permit to be valid.

**General Conditions:**

1. Access and inspection - The Permittee shall allow the Commissioner or his representative access to the permitted facilities at reasonable times to conduct scheduled or unscheduled inspections or tests to determine compliance with this permit, State laws, and regulations.

2. Information access - Except for information relating to confidential processes or methods of manufacture, all records and reports submitted in accordance with the terms of this permit shall be available for public inspection at the State of Alaska, Department of Environmental Conservation, 555 Cordova Street, Anchorage, AK 99501.

3. Civil and criminal liability - Nothing in this permit shall relieve the Permittee from civil or criminal penalties for noncompliance, whether or not such noncompliance is due to factors beyond his control, including, but not limited to, accidents, equipment breakdowns, or labor disputes.

4. Availability - The Permittee shall post or maintain a copy of this permit available to the public at the disposal facility.

5. Adverse impact - The Permittee shall take all necessary means to minimize any adverse impacts to the receiving waters or lands resulting from noncompliance with any limitation specified in this permit, including any additional monitoring needed to determine the nature and impact of the noncomplying activity. The Permittee shall clean up and restore all areas adversely impacted by the noncompliance.

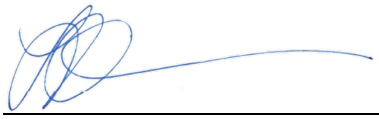
6. Cultural or paleontological resources - Should cultural or paleontological resources be discovered as a result of this activity, work which would disturb such resources is to be stopped, and the State Historic Preservation Office, Division of Parks and Outdoor Recreation, Department of Natural Resources, is to be notified immediately (907-269-8721).

7. Applications for renewal - In accordance with 18 AAC 15.100(d), applications for renewal or amendment of this permit must be made no later than 30 days before the expiration date of the permit or the planned effective date of the amendment.

8. Other legal obligations - The requirements, duties, and obligations set forth in this permit are in addition to any requirements, duties, or obligations contained in any permit that the Alaska Department of Environmental Conservation or the United States Environmental Protection Agency has issued or may issue to the Permittee. This permit does not relieve the Permittee from the duty to obtain any and all necessary permits and to comply with the requirements contained in any such permit or with applicable state and federal laws and regulations. All activities conducted by the Permittee pursuant to the terms of this permit and all plans implemented by the Permittee pursuant to the terms of this permit shall comply with all applicable state and federal laws and regulations.

9. Pollution prevention - In order to prevent and minimize present and future pollution, when making management decisions that affect waste generation, the Permittee shall consider the following order of priority options: waste source reduction; recycling of waste; waste treatment; and waste disposal.

This permit expires on **April 6, 2027** and may be revoked or amended in accordance with 18 AAC 60.260. The permit can be renewed if the facility will operate beyond this date. **To avoid expiration of this permit, a renewal application must be submitted to ADEC at least 30 days before the expiration date**, as set forth in 18 AAC 15.110.



**Lori Aldrich**
**Solid Waste Regional Program Manager**

Tuluksak WTP -W
SUBMITTAL REVIEW

K+A designstudios
ARCHITECTURE + PLANNING

35723 Kenai Spur Hwy.

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Tel: (907) 260-4440

Email: admin@ka-designstudios.com

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|---|---|---|---|
| Review Date: | 06.19.2023 | Job No.: | KA_2021 |
| Reviewed By: | Chris Parker | | |
| Client: | VSW | | |
| Contractor: | Nana Construction | | |
| Section No.: | 07 42 30-002 | | |
| Submittal: | Metal Wall Panel – Shop Dwgs. | | |

☐ No Exceptions Taken ☐ Amend and Resubmit ☐ Make Corrections Noted

☐ Rejected Resubmit ☒ Approved As Noted ☐ See Attached Comments

Architect's review is for general conformance with the design concept and contract documents. Markings or comments shall not be construed as relieving the Contractor from compliance with the project plans and specifications. The Contractor remains responsible for details and accuracy, for confirming and correlating all quantities and dimensions, for selecting fabrications processes, for techniques of assembly and for performing his work in a safe manner. Contractor to verify all dimensions at job site before ordering materials and equipment. Any deviations from the contract requirements must be specifically brought to the attention of the Architect in writing and upon the drawings, or by appropriate change order.

Specific comments are listed by section below. Revise to address items noted.

**Comments:**

- Please see the attached comments.
- CRW to confirm panel color "Zinc Gray"

Signed: Chas Parker

# Nu-Wave Corrugated, 24ga

| Substrate | | Fastener | | Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft$^2$) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Attachment Spacing, (ft-in) | | | | | | | | | | | | | | | | | |
| | | Nom. Size | Attach. Pattern | 2' - 0" | | 2' - 6" | | 3' - 0" | | 3' - 6" | | 4' - 0" | | 5' - 0" | | **6' - 0"** **Require 29.2psf** | | 7' - 0" | | 8' - 0" | |
| Material / Grade | Thick-ness | | | ASD W/Ω | LRFD ϕW | ASD W/Ω | LRFD ϕW | ASD W/Ω | LRFD ϕW | ASD W/Ω | LRFD ϕW | ASD W/Ω | LRFD ϕW | ASD W/Ω | LRFD ϕW | ASD W/Ω | LRFD ϕW | ASD W/Ω | LRFD ϕW | ASD W/Ω | LRFD ϕW |
| Plywood & OSB | **1/2"** | **#14** | **34.7/7** | 127 | 171 | 102 | 137 | 85 | 114 | 73 | 98 | 63 | 86 | 51 | 69 | 42 | 57 | 36 | 49 | **30** | 33 |
| | | **#14** | **34.7/5** | 91 | 122 | 73 | 98 | 60 | 82 | 52 | 70 | 45 | 61 | 36 | 49 | **30** | 41 | 26 | 35 | 23 | 31 |
| | 5/8" | #14 | 34.7/7 | 161 | 217 | 129 | 174 | 107 | 145 | 92 | 124 | 80 | 108 | 64 | 87 | 53 | 72 | 39 | 50 | 30 | 33 |
| | | #14 | 34.7/5 | 115 | 155 | 92 | 124 | 77 | 103 | 66 | 89 | 57 | 77 | 46 | 62 | 38 | 52 | 33 | 44 | 29 | 33 |
| | 3/4" | #14 | 34.7/7 | 195 | 263 | 156 | 210 | 130 | 175 | 111 | 150 | 97 | 131 | 77 | 105 | 53 | 79 | 39 | 50 | 30 | 33 |
| | | #14 | 34.7/5 | 139 | 188 | 111 | 150 | 93 | 125 | 79 | 107 | 69 | 94 | 56 | 75 | 46 | 63 | 39 | 50 | 30 | 33 |

Notes:

1. Panel capacities based on fastener pullout, pullover, fastener tension, panel outward bending strength, and IBC deflection limits.
2. Fastener capacities in steel based on AISI S100-16; fastener capacities in wood substrates based on ANSI/AWC NDS-2015.
3. Panel capacities presented in both ASD and LRFD. If design method is not known, use ASD (most conservative).

Rev. 7.20.20

ASC PROFILES

AEP SPAN
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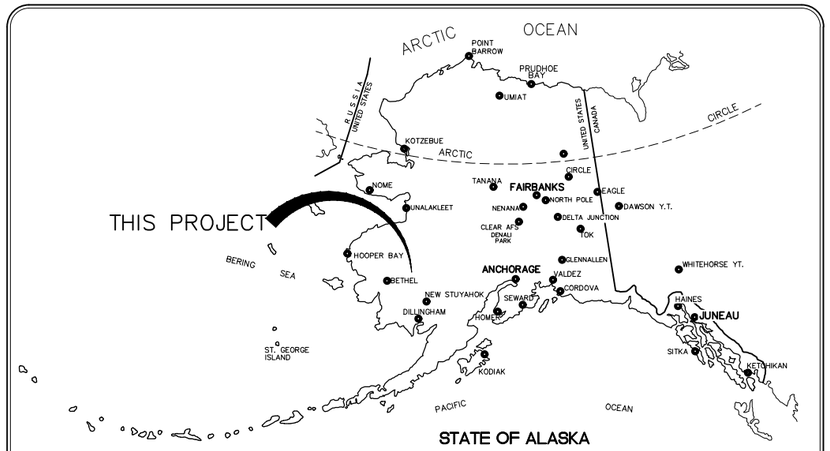
# NANA CONSTRUCTION

230032-30036

## TULUKSAK WTP
## TULUKSAK, ALASKA




**LOCATION MAP**

| DRAWING INDEX | |
|---|---|
| 100 | COVER SHEET |
| 101 | ENGINEERING SHEET |
| 102 | SYSTEM SHEET |
| 103 | GENERAL NOTES |
| | |
| 2xx | ELEVATIONS |
| | |
| 3xx | SECTIONS AND DETAILS |
| | |
| 4xx | TRIM DETAILS |
| | |

NOTICE

NANA CONSTRUCTION

Above mentioned company is responsible for verification of all dimensions on these drawings. If requested verifications are not provided, the approval signature will authorize AEP-Span to proceed with fabrication based on the dimensions shown on these drawings. Customer's signature and approval is a prerequisite for material fabrication to commence.

CUSTOMER APPROVAL: _____ DATE: _____

| | |
|---|---|
| TITLE: | COVER SHEET |
| PROJECT: | TULUKSAK WTP |
| BUYER: | NANA CONSTRUCTION |
| SALESPERSON: | CHRIS POPPERT |
| BRANCH: | - |
| PHONE #: | - |
| CONTRACTOR: | - |
| LOCATION: | TULUKSAK, ALASKA |

SHEET 100 1 OF 14

| | | | |
|---|---|---|---|
| A | ISSUED FOR INITIAL REVIEW | CFG | 05/30/23 |
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| | |
|---|---|
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| ENG. BY: | AEP-SPAN |
| DATE: | 05/08/23 |



SCALE: AS SHOWN

ZONES

SHEET 101 2 OF 14

| | |
|---|---|
| TITLE: | ENGINEERING SHEET |
| PROJECT: | TULUKSAK WTP |
| BUYER: | NANA CONSTRUCTION |
| LOCATION: | TULUKSAK, ALASKA |

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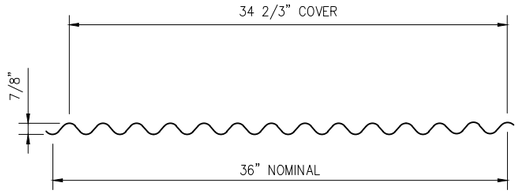
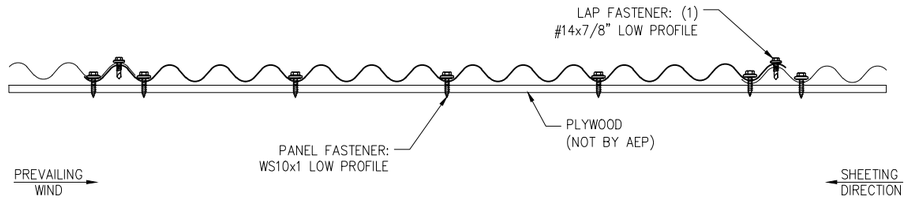
SCALE: AS SHOWN

| | |
|---|---|
| SYSTEM 1 | WP-1 |
| PANEL USE | WALL (VERT) |
| PANEL TYPE | NUWAVE |
| CLIP TYPE | NONE |
| PAN OPTIONS | CORRUGATED |
| PANEL COLOR | ZINC GRAY |
| PAINT SYSTEM | PVF |
| PANEL GAUGE | 24 |
| SUBSTRATE TYPE | 1/2" PLYWOOD |




| | |
|---|---|
| PANEL PROFILE APPROVAL | CUSTOMER'S SIGNATURE: _____ |

SHEET 102 3 OF 14

SYSTEM SHEET
TULUKSAK WTP
NANA CONSTRUCTION
TULUKSAK, ALASKA

TITLE:
PROJECT:
BUYER:
LOCATION:

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# GENERAL NOTES

1.0 GENERAL NOTES

1.1 The intent of these drawings is to provide the buyer and his installer with instructions for construction. The details included herewith, illustrate the assembly(s) once installation is complete with the sequence of assembly being the installer's responsibility. Tolerance dimensions shown for framing members must be complied with in order for the panel and trim envelope to fit the framing. It is important that the installer understand the assembly tolerance dimensions (from one member to another) are adhered to, since vertical member overall lengths must be determined in the field as based on these given tolerances.

1.2 This order and drawings cannot be put into production until all dimensions, quantities and colors are verified. Any information requested on approval submittals must be provided prior to releasing order for production.

1.3 Proposed lengths are based upon aep-span's interpretation of the contract documents and buyer provided field dimensions. All dimensions shown shall be deeme correct unless noted otherwise by buyer. Actual lengths may vary to that shown in these drawings once final manufacturing details and quantities are confirmed.

1.4 All flashings or flat sheets, where applicable, are the same gauge, material and color as specified by the buyer and as shown in the color schedule of this sheet. For flashing or trim that are not listed in the color schedule, they shall match that of its predominant adjacent panel.

1.5 All panels, flashings or flat sheets, where applicable, shall be provided square cut in determined lengths. However, aep-span may elect to provide some panels and/or flashing for selected locations in common lengths, for field cutting. This will allow for potential inconsistencies in a building surface such as walls, roof edges, etc. Also, notching, bends or penetrations or miters shall be done in the field by the installers.

1.6 "Oil canning" is a characteristic, not a defect, of panels manufactured from light gauge metal, and is not cause for rejection.

1.7 Substrate material, roofing felt, unrelated sealant, masonry anchors and other items not specifically listed in the drawings or the general exclusions (see this sheet) are not by aep.

1.8 Approved 'non-curing' butyl sealants are: sika 511, tremco js-773, pti-707, Pecora BR-96.

1.9 Approved 'curing' urethane sealants are: sonneborn np-1, sika-201, tremco dymonic, pecora dynatrol i-xl.

SHEET 103 4 OF 14

TITLE: GENERAL NOTES SHEET
PROJECT: TULUKSAK WTP
BUYER: NANA CONSTRUCTION
LOCATION: TULUKSAK, ALASKA

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| DATE: | 05/08/23 |



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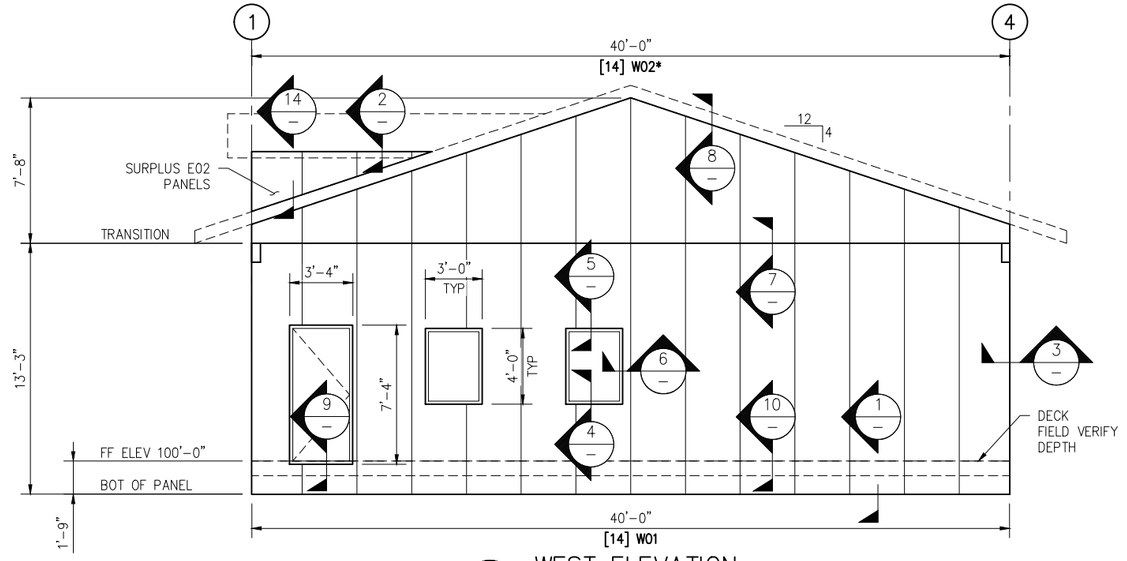
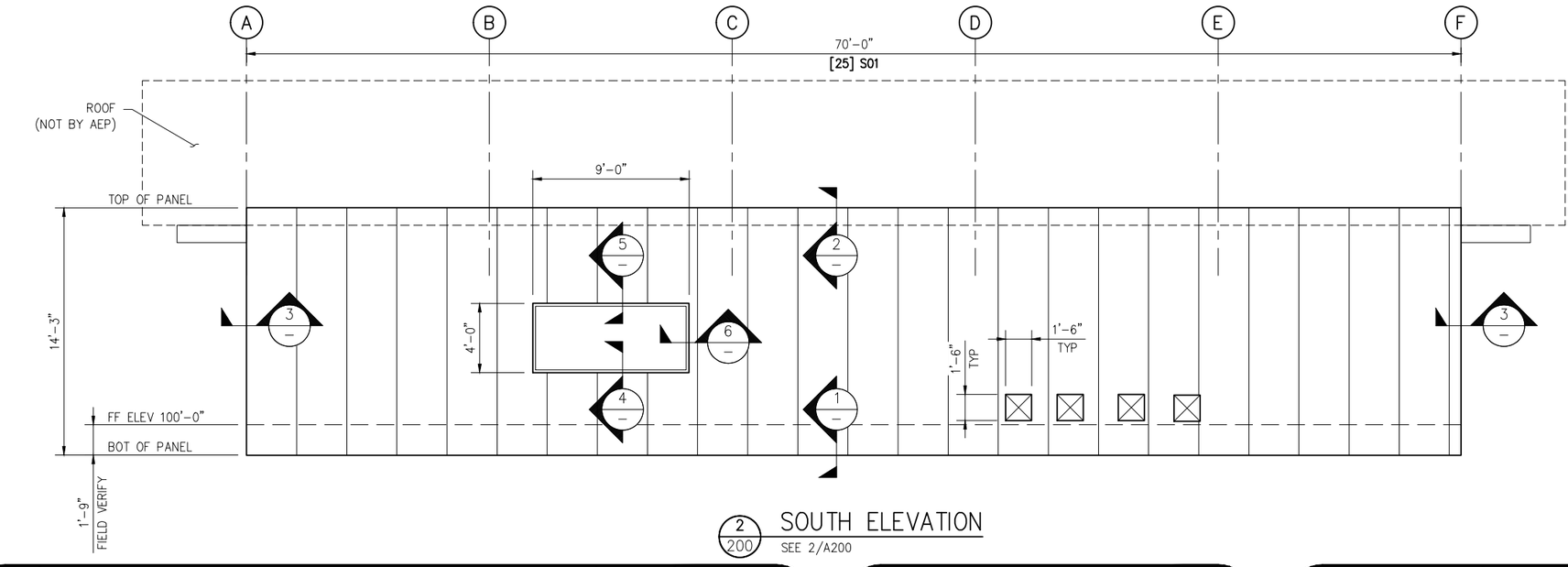



1/200 WEST ELEVATION

SEE 1/A200




2/200 SOUTH ELEVATION

SEE 2/A200

## SHEET NOTES:

1. ALL DIMENSIONS BASED ON ARCHITECTURAL AND ENGINEERING "ISSUED FOR CONSTRUCTION" PREPARED BY **K+A DESIGN STUDIOS,** DATED 06/14/2022.

| PANEL SCHEDULE | | | | |
|---|---|---|---|---|
| **MARK** | **QTY.** | **LENGTH** | **SYSTEM** | **NOTES** |
| S01 | 25 | 14'-3" | MWP-1 | |
| | | | | |
| W01 | 14 | 13'-3" | MWP-1 | |
| W02* | 14 | 7'-8" | MWP-1 | ABOVE TRANSITION |
| | | | | |
| TOTAL SQUARES: | | 18.75 | | |

SHEET 200 5 OF 14

ELEVATIONS
TULUKSAK WTP
NANA CONSTRUCTION
TULUKSAK, ALASKA

TITLE:
PROJECT:
BUYER:
LOCATION:

| | | | |
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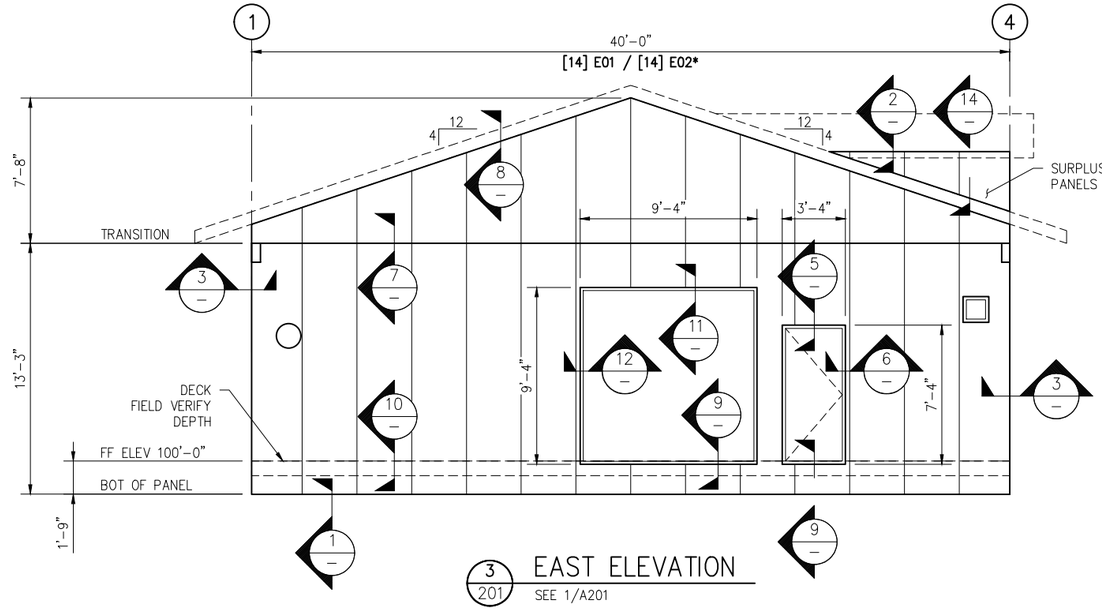
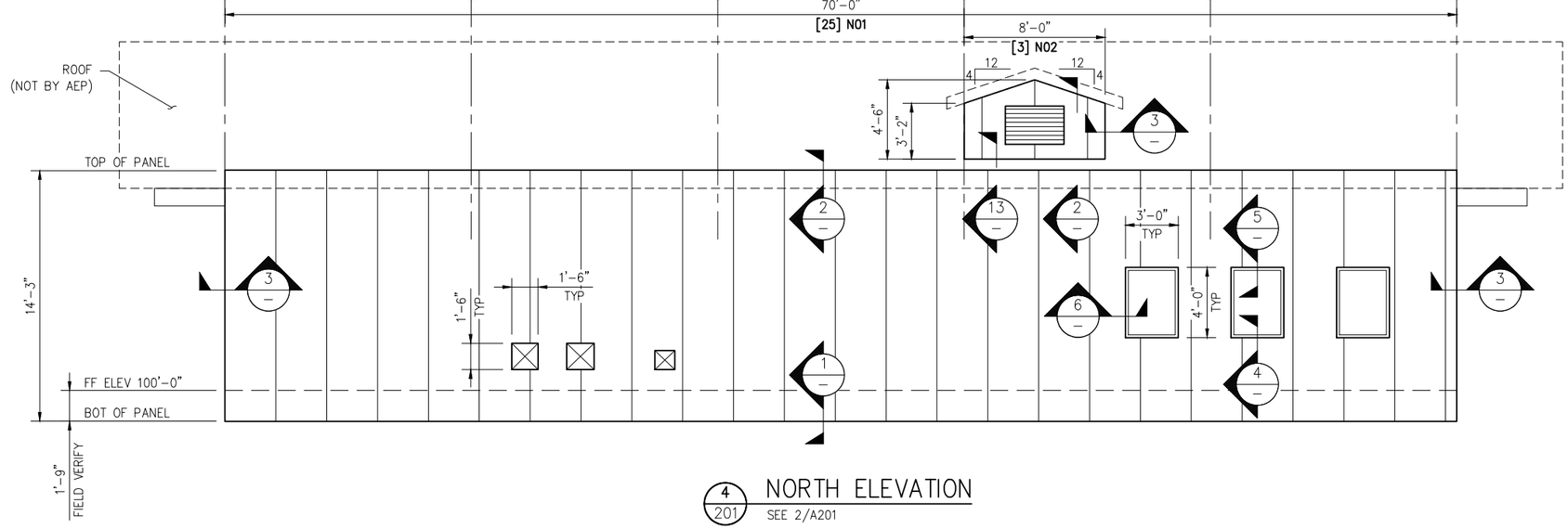
| ENG. BY: | AEP-SPAN |
| DATE: | 05/08/23 |



SCALE: AS SHOWN




3 / 201 EAST ELEVATION
SEE 1/A201




4 / 201 NORTH ELEVATION
SEE 2/A201

## SHEET NOTES:

1. ALL DIMENSIONS BASED ON ARCHITECTURAL AND ENGINEERING "ISSUED FOR CONSTRUCTION" PREPARED BY **K+A DESIGN STUDIOS,** DATED 06/14/2022.

| PANEL SCHEDULE | | | | |
|---|---|---|---|---|
| MARK | QTY. | LENGTH | SYSTEM | NOTES |
| N01 | 25 | 14'-3" | MWP-1 | |
| N02 | 3 | 4'-3" | MWP-1 | |
| | | | | |
| E01 | 14 | 13'-3" | MWP-1 | |
| E02* | 14 | 7'-8" | MWP-1 | ABOVE TRANSITION |
| | | | | |
| TOTAL SQUARES: | | 18.75 | | |

SHEET 201 6 OF 14

TITLE: ELEVATIONS
PROJECT: TULUKSAK WTP
BUYER: NANA CONSTRUCTION
LOCATION: TULUKSAK, ALASKA

| | | | |
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| JOB#: | ES23035A |
| DRAWN BY: | MAYA CADD |
| ENG. BY: | AEP-SPAN |
| DATE: | 05/08/23 |

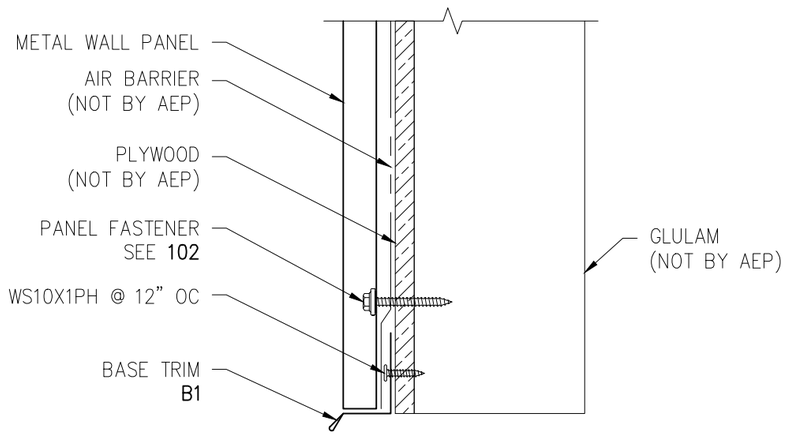


SCALE: AS SHOWN

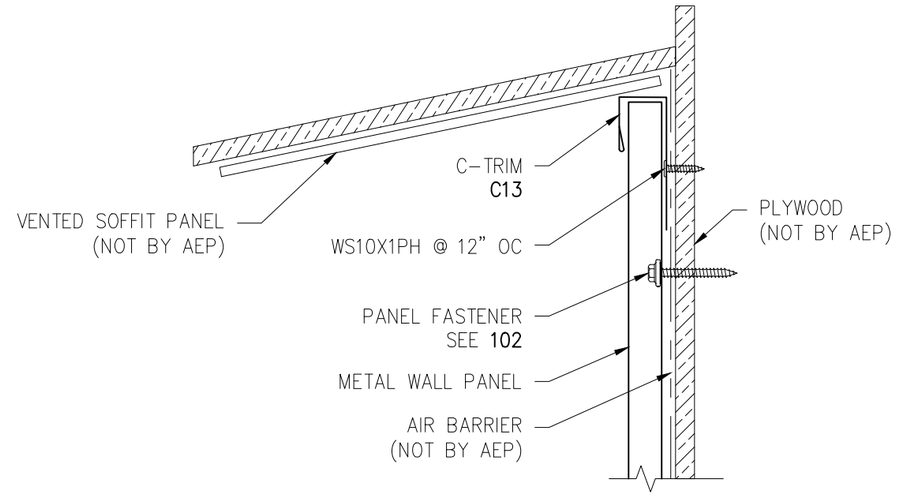
SHEET NOTES:

1. FOR GENERAL NOTES, PANEL INFORMATION AND RECOMMENDED TYPICAL FASTENER AND SEALANTS REFER TO SHEETS 102 THRU 105.

2. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL DETAILS NOT SHOWN.




1 BASE
SEE W1/A600 3" = 1'-0"




2 TOPWALL AT EAVE
SEE 1/A501 3" = 1'-0"

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| DATE: | 05/08/23 |

SHEET 300 7 OF 14

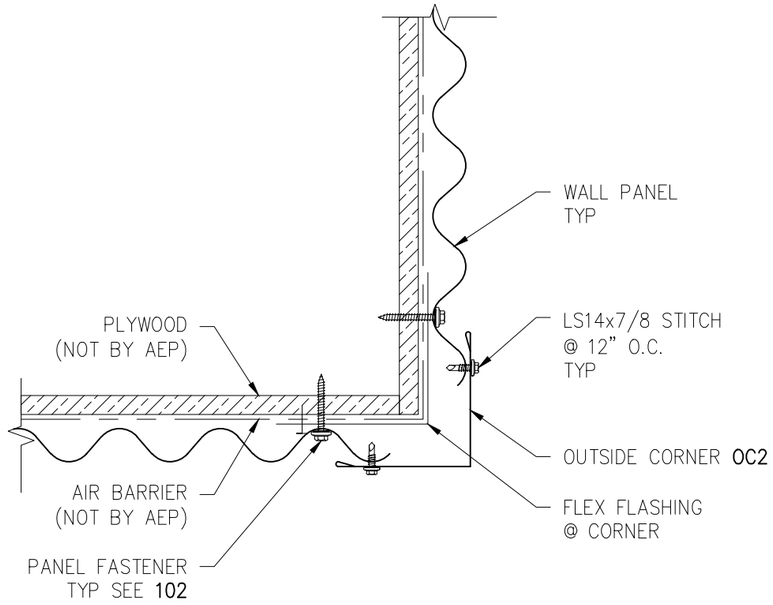
TITLE: SECTIONS AND DETAILS
PROJECT: TULUKSAK WTP
BUYER: NANA CONSTRUCTION
LOCATION: TULUKSAK, ALASKA

SCALE: AS SHOWN

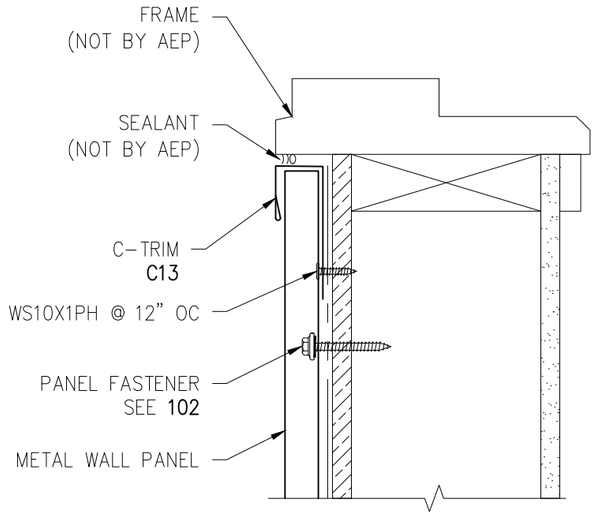
SHEET NOTES:

1. FOR GENERAL NOTES, PANEL INFORMATION AND RECOMMENDED TYPICAL FASTENER AND SEALANTS REFER TO SHEETS 102 THRU 105.
2. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL DETAILS NOT SHOWN.

SHEET 301 8 OF 14




3 TOPWALL AT EAVE
NO REF DETAIL 3" = 1'-0"




4 WINDOW SILL
SEE 9/A601 3" = 1'-0"

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|---|---|
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| ENG. BY: | AEP-SPAN |
| DATE: | 05/08/23 |

SECTIONS AND DETAILS

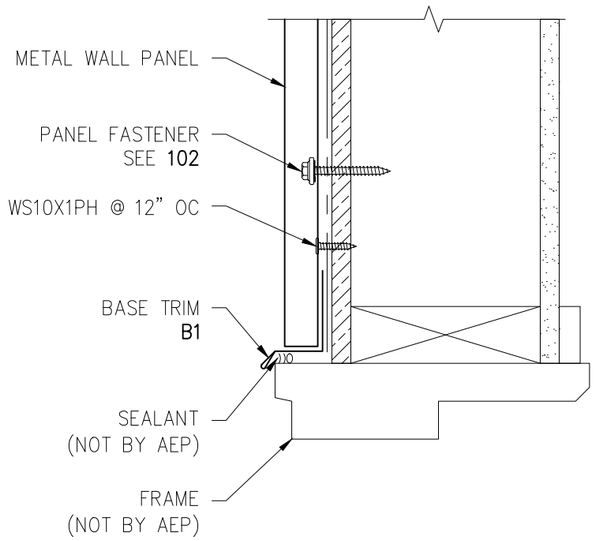
| | |
|---|---|
| TITLE: | |
| PROJECT: | TULUKSAK WTP |
| BUYER: | NANA CONSTRUCTION |
| LOCATION: | TULUKSAK, ALASKA |

SCALE: AS SHOWN

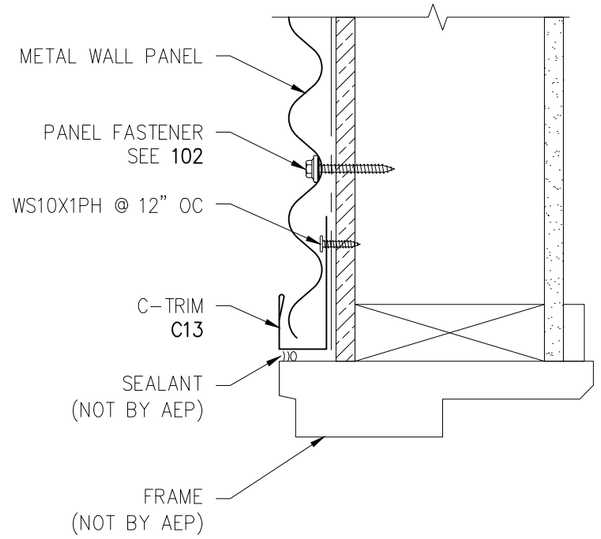
SHEET NOTES:

1. FOR GENERAL NOTES, PANEL INFORMATION AND RECOMMENDED TYPICAL FASTENER AND SEALANTS REFER TO SHEETS 102 THRU 105.
2. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL DETAILS NOT SHOWN.






5 DOOR/WINDOW HEAD
SEE 1/A601 3" = 1'-0"




6 DOOR/WINDOW JAMB
SEE 5/A601 3" = 1'-0"

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| ENG. BY: | AEP-SPAN |
| DATE: | 05/08/23 |

SECTIONS AND DETAILS
TITLE:
TULUKSAK WTP
PROJECT:
NANA CONSTRUCTION
BUYER:
TULUKSAK, ALASKA
LOCATION:

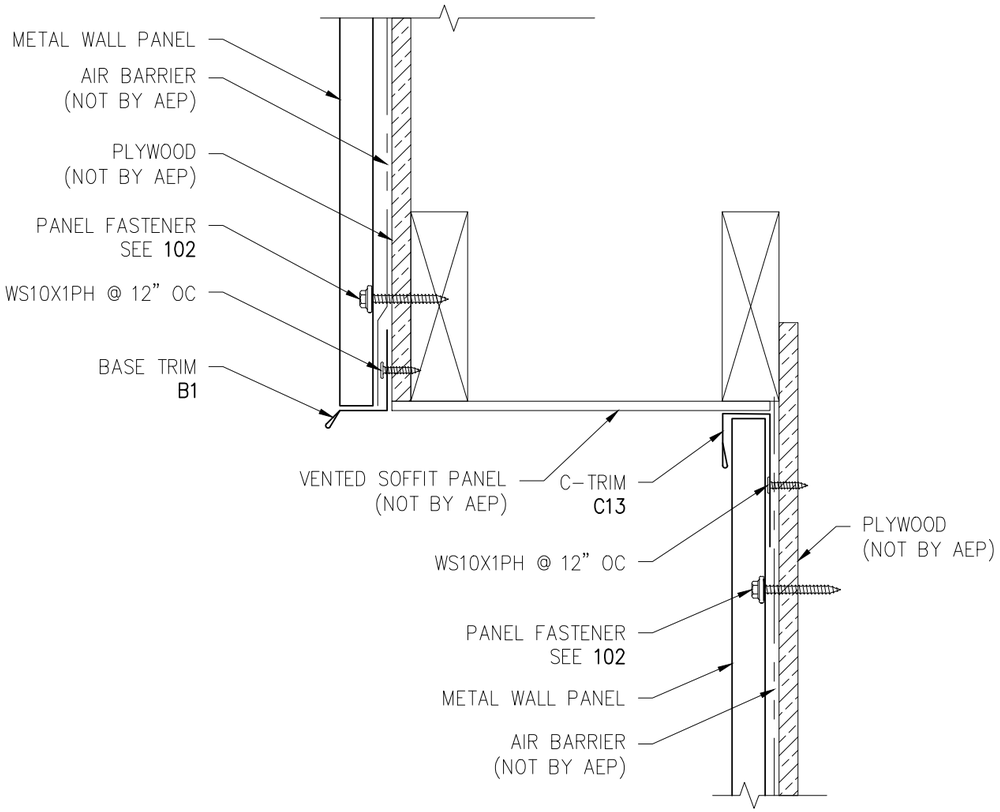


SCALE: AS SHOWN

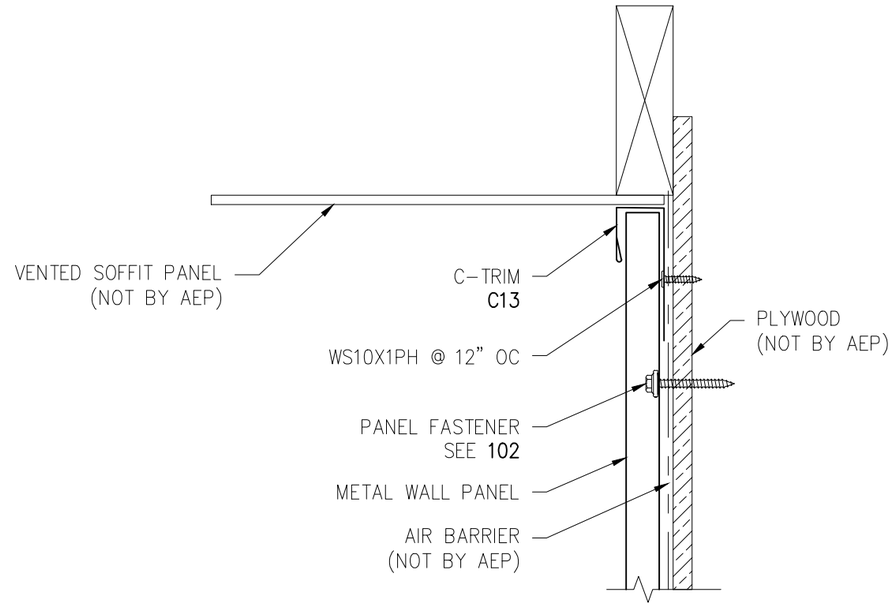
SHEET NOTES:

1. FOR GENERAL NOTES, PANEL INFORMATION AND RECOMMENDED TYPICAL FASTENER AND SEALANTS REFER TO SHEETS 102 THRU 105.
2. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL DETAILS NOT SHOWN.

SHEET 303 10 OF 14




7 TRANSITION
SEE 5/A301 3" = 1'-0"




8 TOPWALL AT EAVE
SEE 2/A501 3" = 1'-0"

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|---|---|
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| DRAWN BY: | MAYA CADD |
| ENG. BY: | AEP-SPAN |
| DATE: | 05/08/23 |

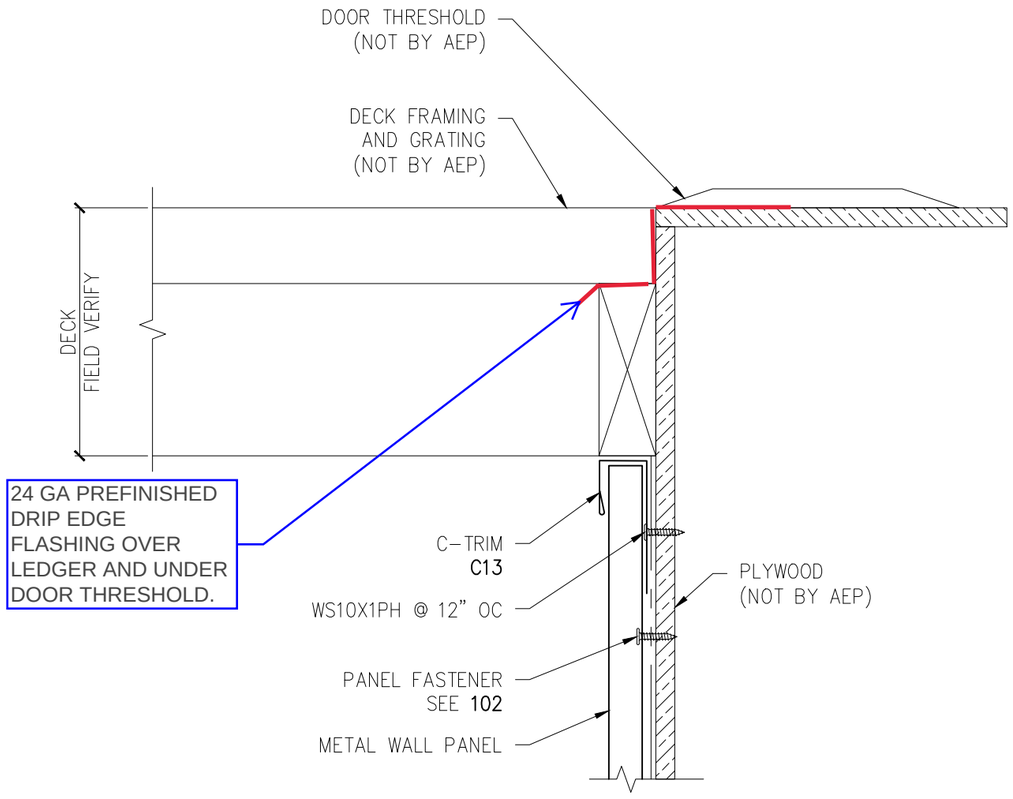
TITLE: SECTIONS AND DETAILS
PROJECT: TULUKSAK WTP
BUYER: NANA CONSTRUCTION
LOCATION: TULUKSAK, ALASKA



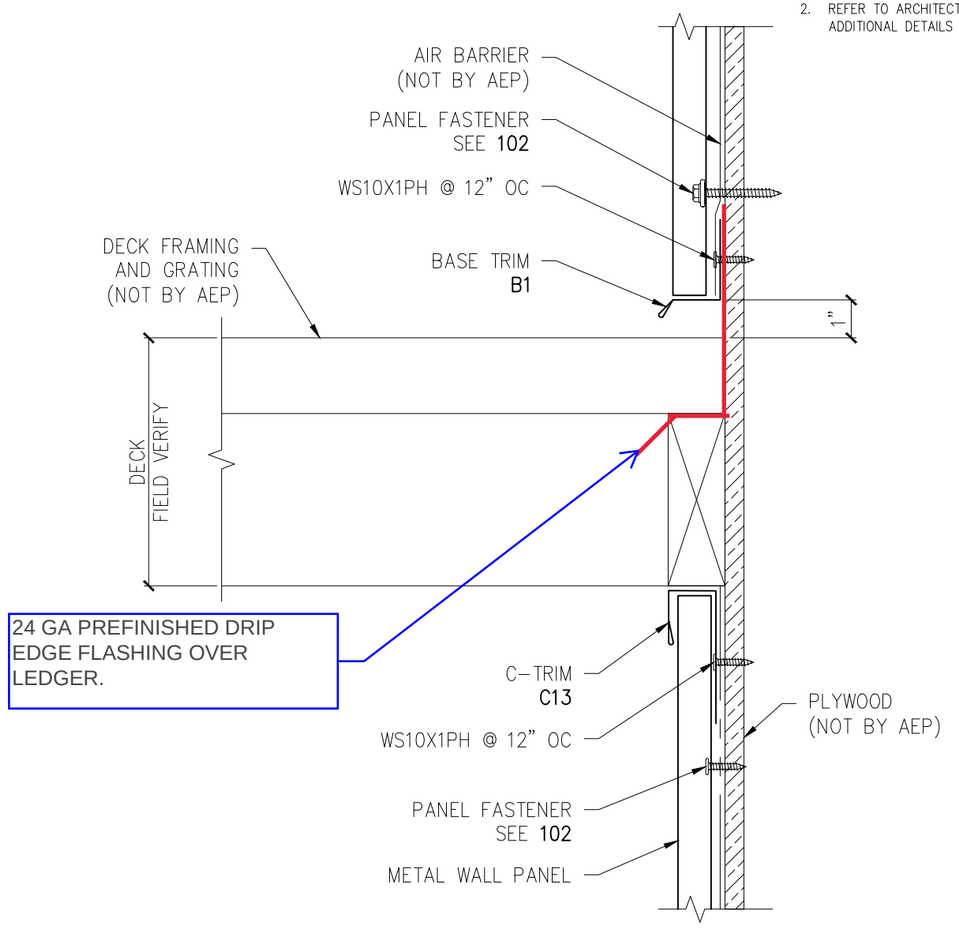
SCALE: AS SHOWN

SHEET NOTES:

1. FOR GENERAL NOTES, PANEL INFORMATION AND RECOMMENDED TYPICAL FASTENER AND SEALANTS REFER TO SHEETS 102 THRU 105.
2. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL DETAILS NOT SHOWN.




9 DOOR THRESHOLD
SEE 10 & 11/A601 3" = 1'-0"




10 WALL PANEL AT DECK
SEE 4/A601 3" = 1'-0"

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| ENG. BY: | AEP-SPAN |
| DATE: | 05/08/23 |

SHEET 304 11 OF 14

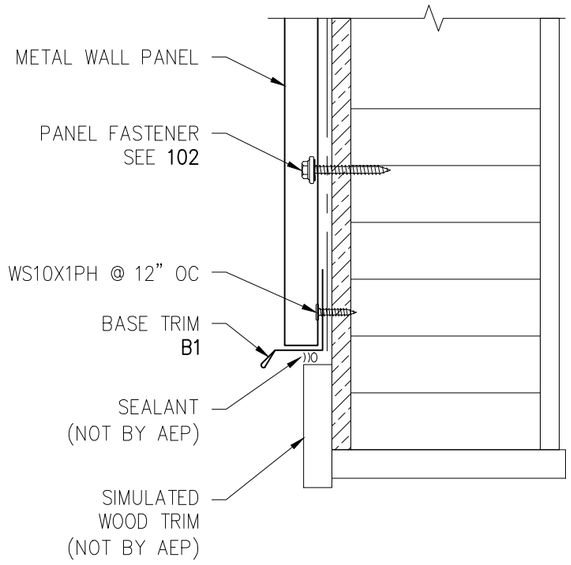
TITLE: SECTIONS AND DETAILS
PROJECT: TULUKSAK WTP
BUYER: NANA CONSTRUCTION
LOCATION: TULUKSAK, ALASKA

SCALE: AS SHOWN

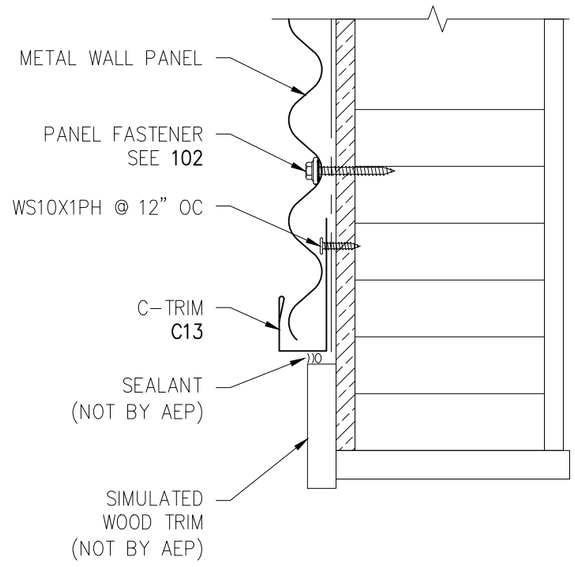
SHEET NOTES:

1. FOR GENERAL NOTES, PANEL INFORMATION AND RECOMMENDED TYPICAL FASTENER AND SEALANTS REFER TO SHEETS 102 THRU 105.
2. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL DETAILS NOT SHOWN.

SHEET 305 12 OF 14




11 SECTIONAL DOOR HEAD
SEE 1/A601 3" = 1'-0"




12 SECTIONAL DOOR JAMB
SEE 5/A601 3" = 1'-0"

| | | | |
|---|---|---|---|
| A | ISSUED FOR INITIAL REVIEW | CFG | 05/30/23 |
| | | | |
| | | | |
| | | | |

AEP SPAN
Engineered Solutions in Metal
469.387.3483
253.896.8460 (FAX)

| | |
|---|---|
| JOB#: | ES23035A |
| DRAWN BY: | MAYA CADD |
| ENG. BY: | AEP-SPAN |
| DATE: | 05/08/23 |

SECTIONS AND DETAILS
TULUKSAK WTP
NANA CONSTRUCTION
TULUKSAK, ALASKA

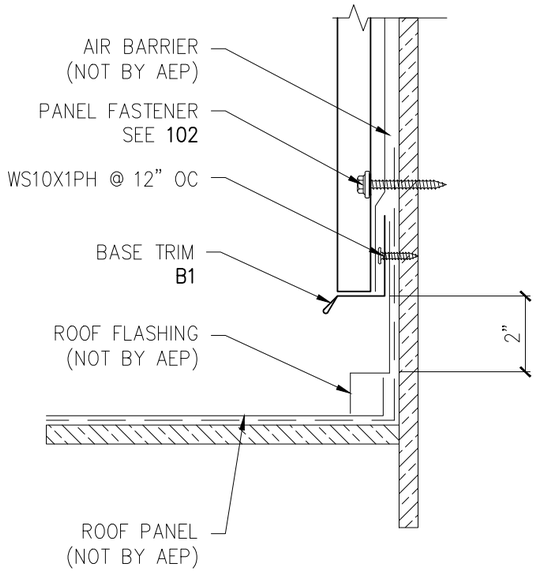
TITLE:
PROJECT:
BUYER:
LOCATION:



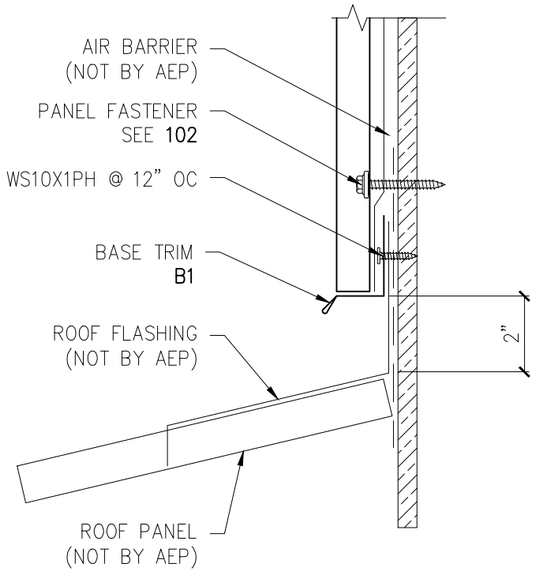
SCALE: AS SHOWN

SHEET NOTES:

1. FOR GENERAL NOTES, PANEL INFORMATION AND RECOMMENDED TYPICAL FASTENER AND SEALANTS REFER TO SHEETS 102 THRU 105.
2. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL DETAILS NOT SHOWN.




13 PANEL BASE AT SIDEWALL
NO REF DETAIL 3" = 1'-0"




14 PANEL BASE AT HEADWALL
NO REF DETAIL 3" = 1'-0"

SHEET 306 13 OF 14

| | | | |
|---|---|---|---|
| TITLE: | SECTIONS AND DETAILS | | |
| PROJECT: | TULUKSAK WTP | | |
| BUYER: | NANA CONSTRUCTION | | |
| LOCATION: | TULUKSAK, ALASKA | | |

| | | | |
|---|---|---|---|
| A | ISSUED FOR INITIAL REVIEW | CFG | 05/30/23 |
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| | | | |
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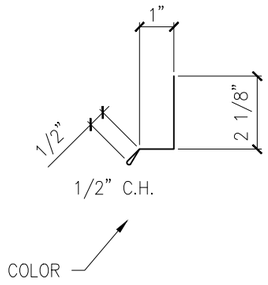
| | |
|---|---|
| JOB#: | ES23035A |
| DRAWN BY: | MAYA CADD |
| ENG. BY: | AEP-SPAN |
| DATE: | 05/08/23 |

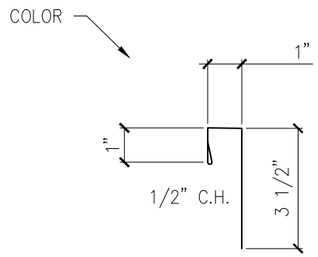


SCALE: AS SHOWN



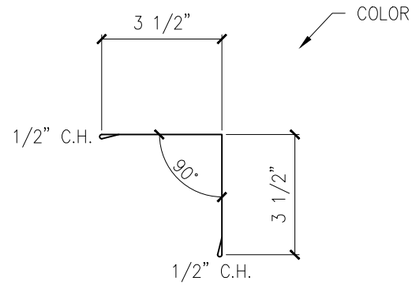

DWG#: B1 DESC: BASE TRIM

| | | | |
|---|---|---|---|
| GAUGE: | 24 | STRETCH-OUT: | 4 1/8" |
| COLOR: | METALLIC | # OF BREAKS: | 5 |
| LENGTH: | 10' 0" | QUANTITY: | 9 |




DWG#: C13 DESC: C-METAL

| | | | |
|---|---|---|---|
| GAUGE: | 24 | STRETCH-OUT: | 6" |
| COLOR: | METALLIC | # OF BREAKS: | 5 |
| LENGTH: | 10' 0" | QUANTITY: | 22 |




DWG#: OC2 DESC: OUTSIDE CORNER

| | | | |
|---|---|---|---|
| GAUGE: | 24 | STRETCH-OUT: | 8" |
| COLOR: | METALLIC | # OF BREAKS: | 6 |
| LENGTH: | 10' 0" | QUANTITY: | 7 |

SHEET 500 14 OF 14

TITLE: TRIM DETAILS
PROJECT: TULUKSAK WTP
BUYER: NANA CONSTRUCTION
LOCATION: TULUKSAK, ALASKA

| | | | |
|---|---|---|---|
| A | ISSUED FOR INITIAL REVIEW | CFG | 05/30/23 |
| | | | |
| | | | |
| | | | |

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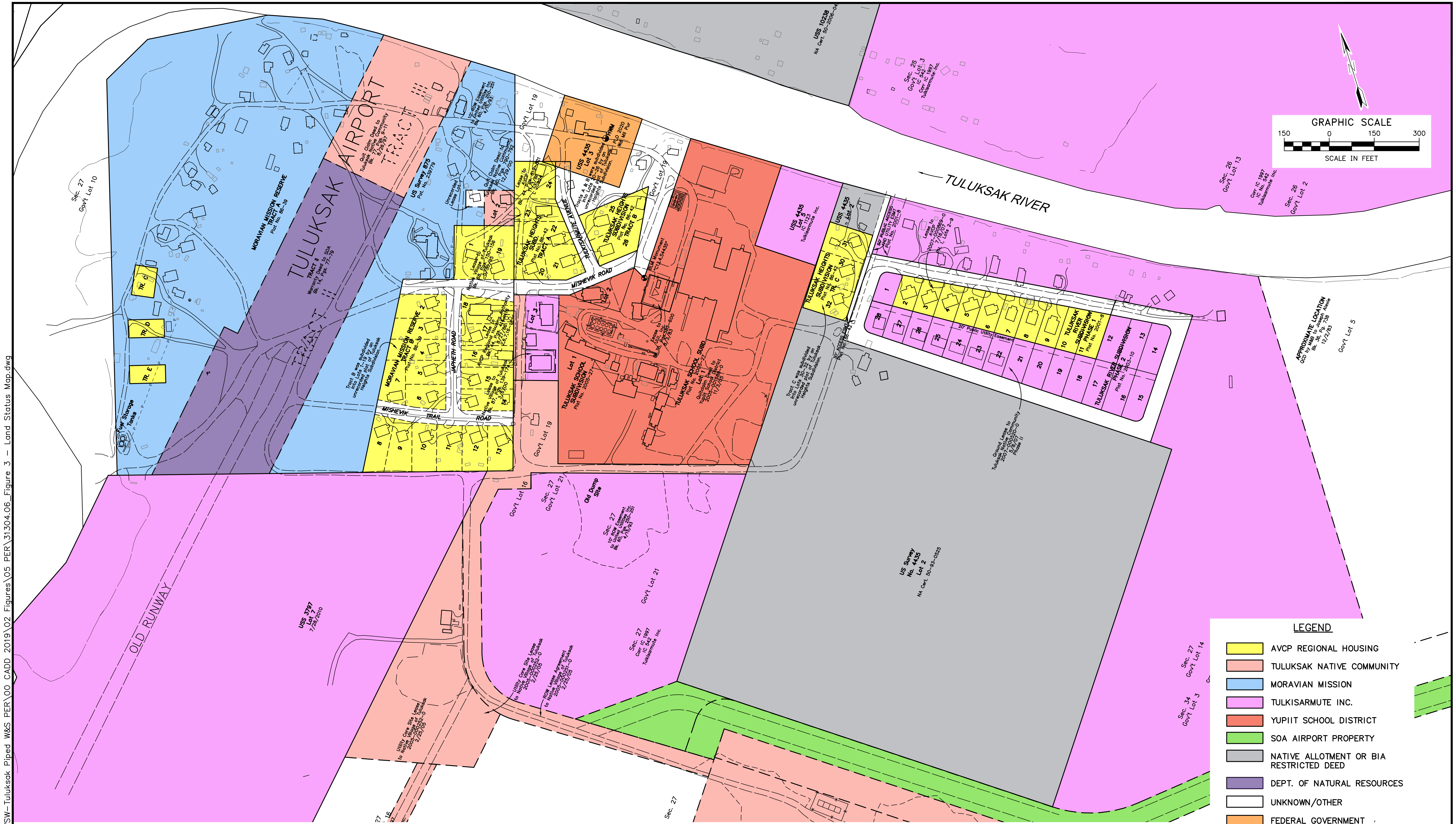
253.896.8460 (FAX)

| | |
|---|---|
| JOB#: | ES23035A |
| DRAWN BY: | MAYA CADD |
| ENG. BY: | AEP-SPAN |
| DATE: | 05/08/23 |



## LEGEND

- 🟨 AVCP REGIONAL HOUSING
- 🟥 TULUKSAK NATIVE COMMUNITY
- 🟦 MORAVIAN MISSION
- 🟪 TULKISARMUTE INC.
- 🟥 YUPIIT SCHOOL DISTRICT
- 🟩 SOA AIRPORT PROPERTY
- ⬜ NATIVE ALLOTMENT OR BIA RESTRICTED DEED
- 🟪 DEPT. OF NATURAL RESOURCES
- ⬜ UNKNOWN/OTHER
- 🟧 FEDERAL GOVERNMENT

PROJECT: 30307.68

STATUS: FINAL

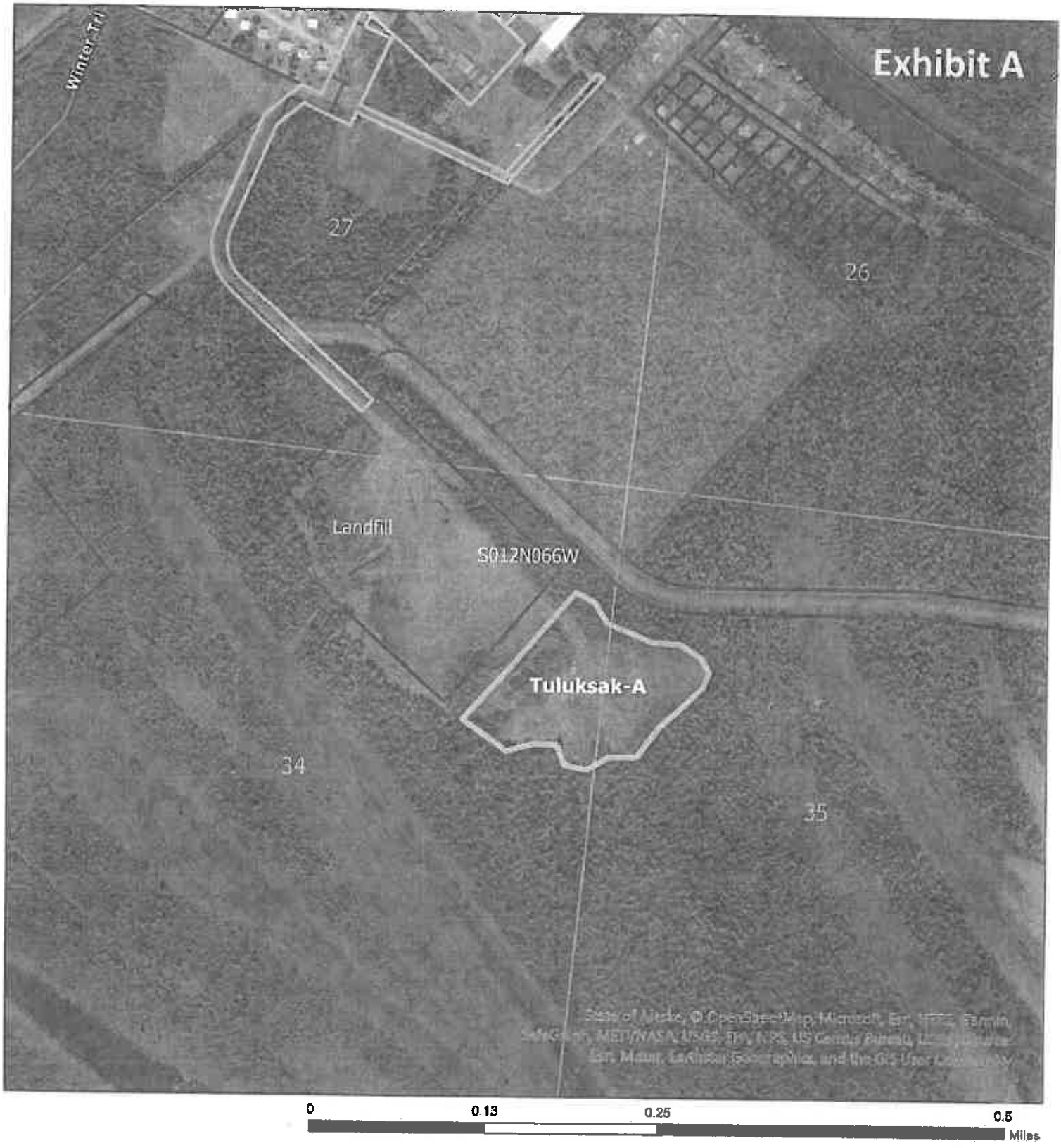
CRW ENGINEERING GROUP, LLC
3940 ARCTIC BLVD. SUITE 300
ANCHORAGE, ALASKA 99503
PHONE: (907) 562-3252
#AECL882-AK

TULUKSAK NATIVE COMMUNITY
WATER AND SEWER SYSTEM PER

# LAND STATUS MAP

| | |
|---|---|
| DATE | SEPT 2022 |
| SCALE | FINAL |
| FIGURE | 3 |

File: J:\JobsData\31304.06 VSW-Tuluksak Piped W&S PER\00 CADD 2019\02 Figures\05 PER\31304.06_Figure 3 - Land Status Map.dwg




# Material Source for Tuluksak Water and Sewer Project

*Map Projection Data:*
*Universal Transverse Mercator*
*AK State Plane Zone 7*
*North American 1983 Map Datum*
*Central Meridian 165 West*
*Reference Latitude: 0*
*False Easting: 500000*
*False Northing: 0*

Material Site

Tulkisarmute, Inc.. -- Surface
Calista Corp. -- Subsurface

Encumbrances

Conveyance Divisions

Native Allotment Parcel

Source of land status information includes: Alaska Department of Natural Resources, Bureau of Land Management, Resource Data, Inc., and Calista Corporation. This map is for planning purposes and is no substitute for a legal description.

March 2022

Calista Corporation
5015 Business Park Blvd. Suite 3000
Anchorage, Alaska 99503
907.275-2800 - 907.275-2977 fax
www.calistacorp.com

## MONNIT SENSOR SCHEDULE

| NO. | FUNCTION | TYPE | SOURCE | ALTA MODEL NUMBER |
|---|---|---|---|---|
| 1 | WTP INDOOR AIR TEMP | ANALOG | FIELD | MNS2-9-IN-TS-ST-L03 |
| 2 | WST WATER TEMPERATURE | ANALOG | TIT-601 WP/WSTCP | MNS2-9-IN-MA-020 |
| 3 | WST WATER LEVEL | ANALOG | LIT-601 WP/WSTCP | MNS2-9-IN-MA-020 |
| 4 | TREATED WATER FLOW RATE | ANALOG | FIT-401 WP/WSTCP | MNS2-9-IN-MA-020 |
| 5 | HEATED RAW WATER TEMPERATURE | ANALOG | TIT-102 WP/WSTCP | MNS2-9-IN-MA-020 |
| 6 | ALTA 4G LTE CELLULAR GATEWAY | --- | --- | MNG2-9-LTE-IN-ND |
| 7 | TREATED WATER TOTAL | ANALOG | FIT-401 WP/WSTCP | MNS2-9-IN-MA-020 |
| 8 | GENERAL ALARM | DIGITAL | BAP | MNS2-9-W1-DC-CF-L01 |
| 9 | WATER MAIN DISTRIBUTION TOTAL USE | ANALOG | FIT-601 | MNS2-9-IN-MA-020 |
| 10 | BOILER B-1 FUEL FLOW METER | ANALOG | FIT-801 | MNS2-9-IN-MA-020 |
| 11 | BOILER B-2 FUEL FLOW METER | ANALOG | FIT-802 | MNS2-9-IN-MA-020 |
| 12 | 208Y120V SERVICE VOLTAGE MONITOR A PHASE | ANALOG | FIELD (MDP) | MNS2-9-IN-VM-500 |
| 13 | 208Y120V SERVICE VOLTAGE MONITOR B PHASE | ANALOG | FIELD (MDP) | MNS2-9-IN-VM-500 |
| 14 | 208Y120V SERVICE VOLTAGE MONITOR C PHASE | ANALOG | FIELD (MDP) | MNS2-9-IN-VM-500 |
| 15 | BOILER SUPPLY TEMP | ANALOG | FIELD | MNS2-9-IN-TS-TC-KP* |
| 16 | BOILER RETURN TEMP | ANALOG | FIELD | MNS2-9-IN-TS-TC-KP* |
| 17 | FORCE MAIN GLYCOL LOOP RETURN TEMP | ANALOG | TIT-921 FGHTCP | MNS2-9-IN-MA-020 |
| 18 | WATER DISTRIBUTION GLYCOL LOOP RETURN TEMP | ANALOG | TIT-951 WGHTCP | MNS2-9-IN-MA-020 |
| 19 | BOILER B-1 ON/OFF | DIGITAL | BOILER B-1 | MNS-9-IN-DC-CF-L03 |
| 20 | BOILER B-2 ON/OFF | DIGITAL | BOILER B-2 | MNS-9-IN-DC-CF-L03 |
| 21 | WASHETERIA INDOOR AIR TEMP | ANALOG | FIELD | MNS2-9-IN-TS-ST-L03 |
| 22 | FUEL STORAGE TANK LEVEL | ANALOG | LT-FTM | MNS2-9-IN-MA-020 |
| 23 | WHRS SUPPLY TEMP | ANALOG | FIELD | MNS2-9-IN-TS-TC-KP** |

1 2

SEE SHEET E106 FOR MONNIT PLAN.
SEE MECHANICAL AND PROCESS DRAWINGS FOR INSTRUMENTATION LOCATIONS.
*PROVIDE THERMOCOUPLE WITH K-TYPE CONNECTOR IN THERMOWELL FOR BOILER SUPPLY AND RETURN TEMPERATURES.
** PROVIDE K-TYPE THERMOCOUPLE WITH QUICK CONNECT IN THERMOWELL IN WHRS SUPPLY PIPE FOR TEMPERATURE SENSOR.


Alaska Department of Environmental Conservation
Division of Water
Village Safe Water Program
555 Cordova Street 4th Floor
Anchorage, Alaska 99501




CRW ENGINEERING GROUP, LLC
3940 ARCTIC BLVD. SUITE 300
ANCHORAGE, ALASKA 99503
PHONE (907) 562-3252
#AECL882-AK


**TULUKSAK WTP-WASHETERIA**

MONNIT SCHEDULE

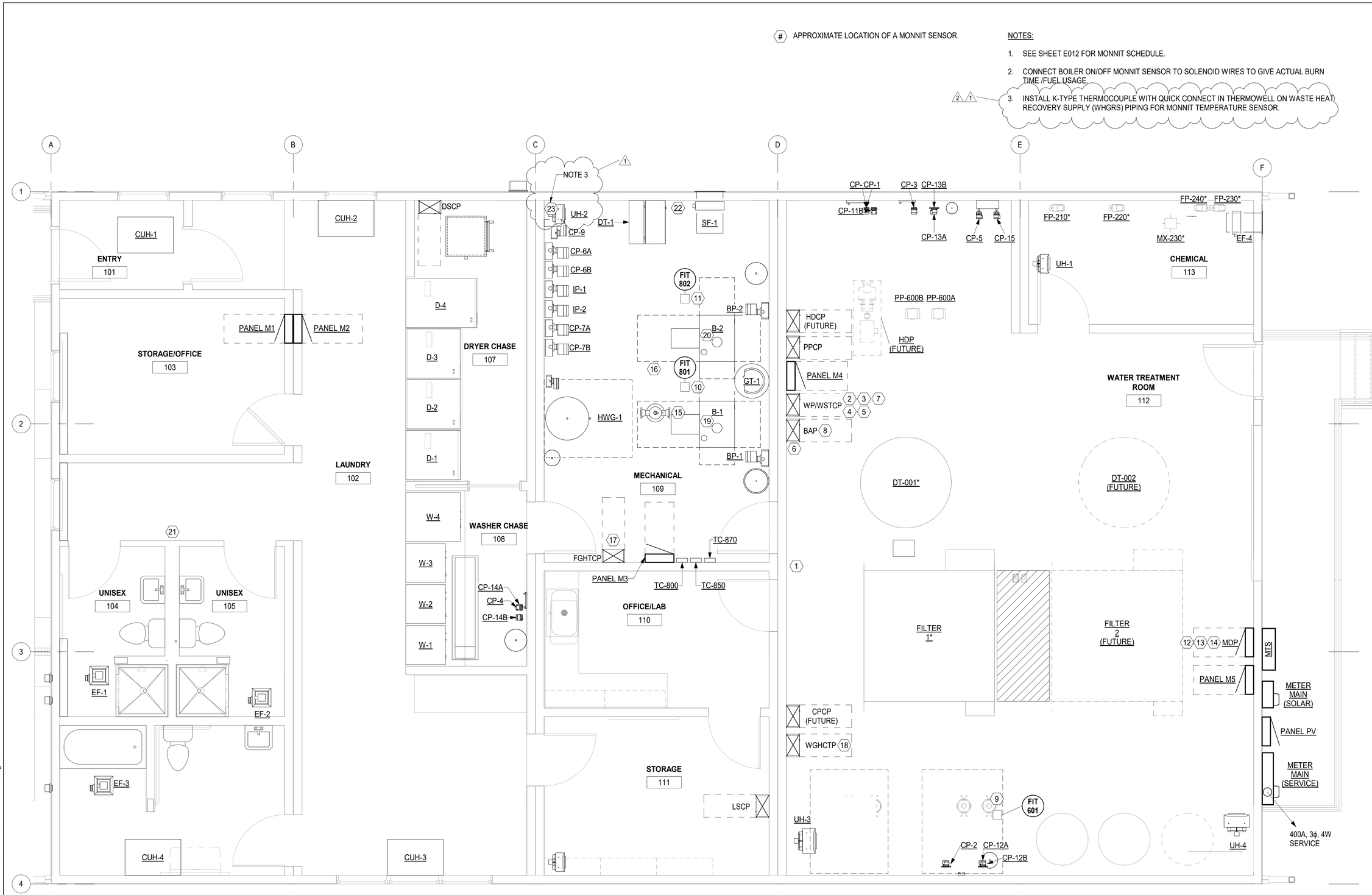
ISSUED FOR CONSTRUCTION

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| 1 | ADDED TEMP SENSOR TO WHRS SUPPLY | TRK | 05.30.2023 |
| 2 | CHANGED PART NUMBER OF ITEM 23 | TRK | 06.02.2023 |

Plot Date: JUNE 2022
Designed: TK
Drawn: TK
Approved: JS

Sheet No.
E012

File: J:\JobsData\31308.00 Tuluksak Washeteria And WTP Design\00 CADD 2019\01 Working Set\03 Electrical\31308.00 - MONITT SCHEDULE.dwg Plot Date: 6/2/2023 12:49 PM




## 1 MONNIT PLAN

SCALE: 3/8" = 1'-0"

Plot Date: 6/2/2023 12:33:57 PM

File: J:\JobsData\31308.00 Tuluksak Washeteria and WTP Design\00 REVIT 2022\00 Central Revit Model\31308.00-ELEC-R22.rvt

Alaska Department of Environmental Conservation
Division of Water

Village Safe Water Program
555 Cordova Street 4th Floor
Anchorage, Alaska 99501

STATE OF ALASKA 49TH — REGISTERED ELECTRICAL ENGINEER — W. ZIM SMITH — EE-1401 — 06.14.2022 — PROFESSIONAL ENGINEER

CRW ENGINEERING GROUP LLC
3940 ARCTIC BLVD. SUITE 300
ANCHORAGE, ALASKA 99503
PHONE: (907) 562-3252
#AECL682-AK

**TULUKSAK WTP-W**

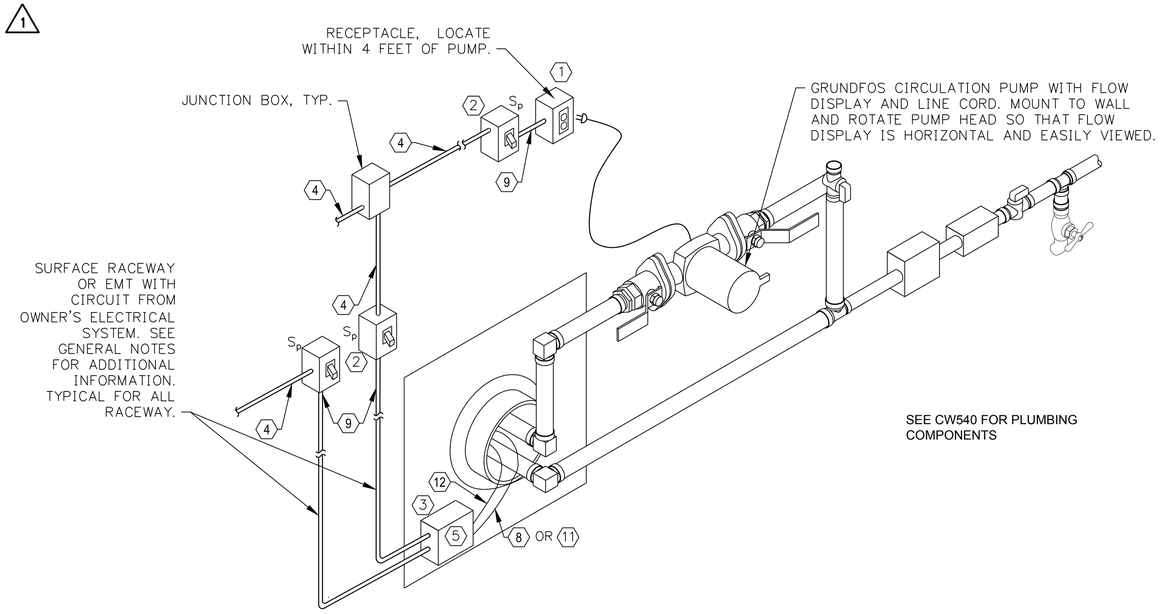
MONNIT PLAN

ISSUED FOR CONSTRUCTION

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| 1 | ADDED TEMP SENSOR TO WHRS SUPPLY | TRK | 05.30.2023 |
| 2 | REVISED NOTE 3 TO ADD THERMOCOUPLE | TRK | 06.02.2023 |

Plot Date JUNE 2022
Designed TK
Drawn JH
Approved JS

Sheet No. E106




## 1 WATER SERVICE CIRCULATION PUMP AND HEAT TRACE SCHEMATIC

SCALE: NTS

## 1 GENERAL NOTES

THE INTENT IS TO PROVIDE POWER FOR THE NEW ELECTRICAL COMPONENTS FROM AN ELECTRICAL HEAT TRACE CIRCUIT, OR THE PANELBOARD IN EACH BUILDING. IF CONDITIONS EXIST THAT PREVENT THAT FROM HAPPENING, CONTACT THE ENGINEER FOR ADDITIONAL INSTRUCTIONS.

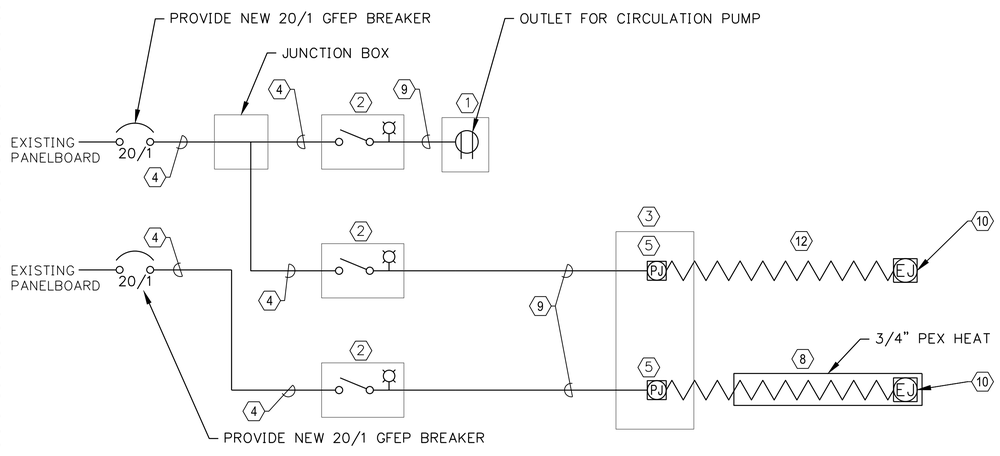
REMOVE AND DISPOSE OF ALL ELECTRIC HEAT TRACE EQUIPMENT FOR THE EXISTING WATER SERVICE LINE.

PROVIDE AN ELECTRICAL SUPPLY FROM THE BUILDING ELECTRICAL TO POWER THE PUMP AND HEAT TRACE ASSEMBLIES. CORD EQUIPPED PUMP ALLOWS REPLACEMENT OF PUMP WITHOUT RE-WIRING THE POWER ASSEMBLY. WIRING METHODS FOR INTERIOR WORK CONSIST OF SURFACE RACEWAY (LEGRAND WIREMOLD SERIES 800 RACEWAY AND FITTINGS) OR EMT.

DISCONNECT SWITCH AND DUPLEX OUTLETS IN NRTL LISTED BOX AS APPROPRIATE FOR THE USE AND ENVIRONMENT (WITH CONDUCTOR AND FITTINGS AS SHOWN).

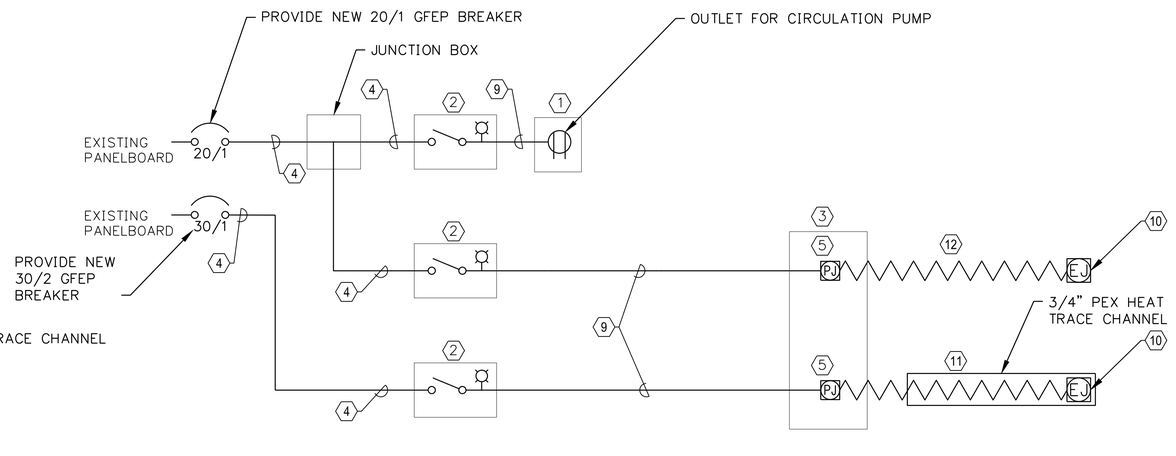
## SHEET NOTES/ITEMS:

1. RECEPTACLE, 120V/20A, LEVITON 5801 OR SIMILAR
2. 30A, 120V TOGGLE SWITCH, RED PILOT LIGHT TOGGLE, 2 HP RATED. LEVITON 3031-PLR OR EQUAL. THE SWITCH FOR THE PUMP MUST BE LOCATED WITHIN SIGHT OF THE MOTOR OUTLET. PROVIDE RED LABEL NEXT TO PUMP SWITCH STATING "TURN PUMP ON OCTOBER 15 AND OFF JUNE 15". PROVIDE RED LABEL NEXT TO THE SERVICE LINE HEAT TRACE SWITCH STATING "TURN ON FOR EMERGENCY THAW ONLY". PROVIDE LABEL NEXT TO THE ARCTIC BOX HEAT TRACE SWITCH STATING, "TURN ON DURING COLD SEASON TO PREVENT FREEZING."
3. NON METALLIC JUNCTION BOX, 5"X5"X2". NELSON JBB552 OR APPROVED EQUAL
4. 1/2"C, 3#12 (H, N, G).
5. NELSON LT-SP HEAT TRACE POWER CONNECTION OR APPROVED EQUAL.
6. NOT USED
7. NOT USED
8. SERVICE LINE HEAT TRACE: SELF-REGULATING, 8W/FT @120V, NELSON CLT8-JT OR APPROVED EQUAL. INSTALL IN 3/4" PEX HEAT TRACE CHANNEL, SEE SHEET C-500 & C-120.
9. 1/2"C, 3#12 (SL, N, G).
10. HEAT TRACE END KIT PER MANUFACTURER, NELSON LT-SE OR APPROVED EQUAL.
11. SERVICE LINE HEAT TRACE: SELF-REGULATING, 8W/FT @240V, NELSON CLT28-JT OR APPROVED EQUAL. INSTALL IN 3/4" PEX HEAT TRACE CHANNEL, SEE SHEET C-500 & C-120.
12. ARCTIC BOX HEAT TRACE: SELF-REGULATING, 5W/FT @120V, NELSON CLT5-JT OR APPROVED EQUAL. INSTALL IN ARCTIC SERVICE BOX AND FIRST 10 FEET OF THE 4" CARRIER PIPE, SEE SHEET C-500.




## 2 POWER SUPPLY ASSEMBLY SCHEMATIC, LESS THAN 115' OF HEAT TRACE

SCALE: NTS




## 3 POWER SUPPLY ASSEMBLY SCHEMATIC, MORE THAN 115' OF HEAT TRACE

SCALE: NTS


Alaska Department of Environmental Conservation
Division of Water

Village Safe Water Program
555 Cordova Street 4th Floor
Anchorage, Alaska 99501

STATE OF ALASKA
49TH
REGISTERED
EE-11401
10.14.2022
PROFESSIONAL ENGINEER

CRW ENGINEERING GROUP, LLC
3940 ARCTIC BLVD. SUITE 300
ANCHORAGE, ALASKA 99503
PHONE: (907) 562-3252
#AECL882-AK


**TULUKSAK WTP-W**

WATER SERVICE PUMP AND HEAT TRACE SCHEMATICS

ISSUED FOR CONSTRUCTION

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| 1 | REVISED DETAILS | TRK | 07.03.2023 |

Plot Date: JUNE 2022 | Designed: TK | Drawn: TK | Approved: JS

Sheet No. E602