

October 3, 2025

This addendum forms a part of the contract documents and modifies the original bid documents for the project.

In case of conflicts between this addendum and previously issued documents, this addendum shall take precedence.

This Addendum consists of the following:

Addendum Language (Pages 1 through 7)

Drawing Attachments:

Conformed Drawings including AD 1-4 revisions and updated bookmarks.

TECHNICAL SPECIFICATIONS

AD3.01 330523.13 – HORIZONTAL DIRECTIONAL DRILLING

ADD 2.04 POLYURETHANE INSULATION

- A. Insulation: Spray-on insulating foam shall be closed cell, two-component urethane foam having the following properties:

“K” Factor: 0.15 BTU-in./sq.ft.- hr.- deg F @ 35 deg F (ASTM C 518)

Nominal Density: 3.0 pcf in place (ASTM D 1622)

Water Absorption: 0.017 gm/cc max. (ASTM C 2842)

Compressive Strength: 45 psi minimum (ASTM D 1621, perpendicular to rise)

Water Vapor Permeability: 1.9 perm-in. (ASTM C 355)

Closed Cell Content (min.): 90 percent (ASTM D 1940)

Tensile Strength (min): 70 psi (ASTM D 1623)

Shear Strength (min) 45 psi (ASTM C 273)

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ADD 2.05 WATERPROOF SURFACE COATING

- A. Protective Coatings shall be a two-component, 100 percent solids, sprayable polyurethane coating, Permex 700 by Resin Technology (or approved equal) with the following properties:

Tensile Strength 1,800 psi minimum

Elongation 120 percent

Water Vapor Transmission: 0.413 perms

- B. Any system or applicator shall be able to demonstrate prior experience of at least two years. Engineer shall be the sole judge of the qualifications of a system, material, application method, and applicator.

ADD 3.02. G

- G. Seal annular space at the casing ends with 18" of polyurethane insulation and apply waterproof surface coating over the exposed insulation.

REPLACE Pay Items with

330523-1	Horizontal Directional Drilling (10" HDPE Casing SDR 11)	Linear Foot
330523-2	Horizontal Directional Drilling (12" HDPE Casing SDR 11)	Linear Foot
330523-3	Horizontal Directional Drilling (18" HDPE Casing SDR 11)	Linear Foot

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DRAWINGS

AD3.02 C-001 GENERAL NOTES, LEGEND AND ABBREVIATIONS

REPLACE Sheet entirely with attached.

- Added Wetlands Linetype

AD3.03 C-312-C-314 AIRPORT ROAD (3-11 OF 14)

REPLACE Sheet entirely with attached.

- Added wetlands limits.
- Added Note to sheet regarding wetlands.

QUESTIONS AND RESPONSES:

1. **QUESTION:** Spec 31 10 00 1.04A & 3.06A, & 31 20 00 3.21A. May cleared materials and overburden be chipped and spread in lieu of removed from property, which per contract required to be removed from City and Borough of Yakutat?

RESPONSE: Clearing materials may be chipped and spread within the project limits, as long as they are not placed in drainage and wetland areas. Overburden may be placed in the City Gravel Pit for disposal. This is located along Forest Highway No 10, to the north of the road generally across from the Landfill.

2. **QUESTION:** Supplementals override much of the SGC's Insurance. Please confirm Builder's Risk policies remain as defined in Standard General Conditions 13-6.04 or whether they too are amended.

RESPONSE: The Builder's Risk insurance specified in 6.04 has not been modified with Supplementals.

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3. **QUESTION:** DBE Compliance Statement (Revised May 2025) states “*In 2025, EPA suspended the negotiation of fair share objectives or goals for MBE/WBE participation.*” I respect recent higher court rulings and ongoing efforts by the Trump Administration have made DBE politics very blurry, and it isn’t my intent to amplify that herein, but I find the documents confusing and want to ensure this project doesn’t get protested and/or get forced to Rebid. Am I correctly interpreting “**EPA suspended...goals for MBE/WBE participation.**” language to mean that due to Federal Funds this project’s DBE goal and Good Faith Efforts are **Zero Percent (essentially, null)**, meaning because there is no possibility a Bidder could violate zero percent, Bidders will **automatically default to satisfactory**? Please confirm 0% MBE/WBE/DBE applies and that Bidders will be deemed Responsive regardless of what DBE% Bidders commit to and/or Good Faith Efforts were deployed.

RESPONSE: The suspension of the fair share objectives for MBE/WBE participation essentially means that the collection of the MBE/WBE participation report at the end of October each year, demonstrating that the fair share goal objective has been met, is no longer required.

The borrower and the prime contractor must still go through the Good Faith Efforts process and maintain records showing that you reached out to DBEs. There is not a “goal”, however the contractor is required to demonstrate they reached out to DBEs for subcontract work. This is documented by completing the SRF Program DBE forms. The State of Alaska Revolving Fund will need verification from CBY that the Good Faith Effort has been met before disbursement will be made for the construction costs.

4. **QUESTION:** C-501/Det.1 Pea Gravel Bedding: Both groundwater and contamination greatly amplify the complexity of this project. As trench installation advances, the installed Pea Gravel Pipe Bedding will act as an unrestricted highly permeable conveyance to the active-edge of the trenching operation. This increases risk of cross-contamination migrating beyond present day limits, requires more extreme dewatering solutions, and adds complexity to Yakutat’s future maintenance team repair efforts because they’ll have thousands of feet of water in the capillary voids. To retard flows through the new alignment and isolate regions, it seems prudent to add a line item for Bentonite Trench-Dams spaced every X-hundred feet apart.

RESPONSE: The use of pea gravel bedding is not going to increase the risk of cross contamination. Soil borings show sand and gravel materials at the water main depth. These materials allow groundwater migration. Check dams will likely be needed to retard groundwater flow to aid in the dewatering process. We have seen success with silt materials in similar alluvial soils spaced in 200’ intervals but this is not a requirement of the contract. It will be up to the Contractor to propose the mean and method.

5. **QUESTION:** Given the extensive revisions to the plan set, can a compiled revised plan set with all addenda plans incorporated be issued prior to bid? I have been patching them together but want to make sure that nothing is missed and that our team is all working off the most current version.

RESPONSE: A conformed set of drawings has been issued with this Addendum.

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6. **QUESTION:** ADD#1 Question 7's Response [HDD Drill Fluids]: In the event drill fluids do exceed the limits of the Contractor's 'clean' HDD disposal plan please confirm that Owner will pay any associated premiums via C.O.

RESPONSE: Contractor will need to provide a clear plan for anticipated volumes, testing, and disposal. In the event that field conditions present a change from what was presented in the Construction Documents a change order will be negotiated.

7. **QUESTION:** ADD#3 Question 6's Response [Tree Root Zones]: Absent a Bidder's blatant negligence damaging a particular tree, please confirm any undesired peripheral vegetative rootzone die-off will not be blamed on Bidder's operations and be at risk for future growth warranty replacement.

RESPONSE: Proposed water line extension tasks are expected to affect the subsurface soil, as well as vegetation. Earthwork should be conducted to minimally damage vegetation adjacent to the work zone.

8. **QUESTION:** ADD#3 Question 18's Response [HDD annular space]: Your response affirmed the annular spaces will be neither sealed nor filled. With such extensive groundwater volatility the migration of soils will almost certainly yield future settlement. Please reconsider and either amend or reaffirm your intention so there is less debate during the post-project warranty inspection.

RESPONSE: Please consider this a revision of the response made to Question 18 on Addendum #3 and also to this question.

Casing spacers are not required. Mechanical end-seals are not required, though they may be allowed as a product substitution. The ends of HDD casings shall be filled with polyurethane foam such that a 18" thick plug is present at the casing end, and a water proofing coating applied to the exterior of the foam.

Specification Section 330523 has been modified with this addendum.

9. **QUESTION:** ADD#3-Question 20's Response [Culvert Failure]: Does this trigger a Force Account line item in the Bid Form?

RESPONSE: No. The work to replace culverts would need to be agreed to in advance of completion through a change order.

10. **QUESTION:** Based on visuals from the prebid it appears the City owns a Vector-Truck. Will that be available for Contractors to 'rent' and, if so, what will the pricing structure look like including disposal fees?

RESPONSE: The City owned vector truck is not available for rent.

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11. **QUESTION:** Spec 331100-4.02E Water Distribution Piping Pay Items: I've had two people ask me this question and I wasn't sure. Please provide a drawing reference that clearly identifies Start-Stop points where you intended for Water Distribution Unit Price Pay Items to transition to Lump Sum Pump House/Reservoir Specialty Firms. Thanks for the added clarity.

RESPONSE: The delineation point is 5' from the edge of the building. The piping between the building and tank should be paid for with the building.

12. **QUESTION:** My original question wasn't answered within ADD#3 but given the ongoing federal legal turbulence around the DBE program it seems prudent that the Owner eliminate subjectivity for this immediate bid. I'm not an attorney nor do I intend to spend money researching this federal topic, but this DBE litigation has become one of the more confusing hot-potato evolutions I've seen in my career and it's happening in near real-time. Bidders need confidence with how the Owner will interpret this this Bid's DBE entries so we don't end up with all bids getting rejected for differing opinions on subjective interpretation. Am I correct that for this Bid the DBE goal suspension means any DBE commitment above zero percent (0%) shall be deemed satisfactory for Award, and that "Good Faith Efforts" would only be evaluated if a Bidder where to propose zero percent? If so, please provide a Written DBE Commitment template a mandatory submission under Bid Form For Construction Contract Article 2 Attachment "2.01 – The following documents are submitted with and made a condition of this Bid" [or alternatively a 'Zero-Percent' Bidder's Good Faith Effort compilation, should they choose to avoid any DBE commitment on Bid Day]

RESPONSE: See #3 response.

13. **QUESTION:** Section 6 (4.02 Contract Times) Substantial Completion October 31st 2027: Please confirm that with the ongoing Q&A evolution there remains no project-specific Liquidated Damages and that Bidders are to default to Standard LD calculations.

RESPONSE: Confirmed. There will be no project specific Liquidated Damages.

14. **QUESTION:** Standard General Conditions 14.02 implies the Owner will provide independent inspector/test labs. However the vast majority of Spec. Sections or supplemental Work Plans/Exhibits then put the QAQC and Environmental compliance on the Contractor. For the sake of integrating so many documents' precedence, does the City intend to provide a formal Independent QAQC Rep. at all, or are Contractors to cover 100% of this project's QAQC needs? An absolute decision would be appreciated.

RESPONSE: The Owner will provide a Resident Project Representative through RESPEC. This role is not for QAQC. Inspections and tests are generally required to be completed by the Contractor unless explicitly assigned to the Owner. See Section 014000. An example of inspections that will be provided by the Owner or Owner's Agent include the Special Inspections described on Sheet S-004.

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15. **QUESTION:** The corrosion allowance appears to be from a welded tank specification and our tank supplier takes exception to this requirement. Please confirm the 1/8" corrosion allowance is required.

RESPONSE: The maximum 1/8" corrosion allowance is required per Section 331613.

16. **QUESTION:** Is there a space near the airport for stockpiles and laydown yard?

RESPONSE: Space is relatively limited, much of the available land is located within the runway protection zone. However, there are a couple spaces that could work depending on the height and size needed. The Contractor will need to coordinate with the South Coast Aviation Leasing Chief for acceptable location for soil stockpiles and laydown yard near the airport and that they will be responsible for securing the Land Use Permit.

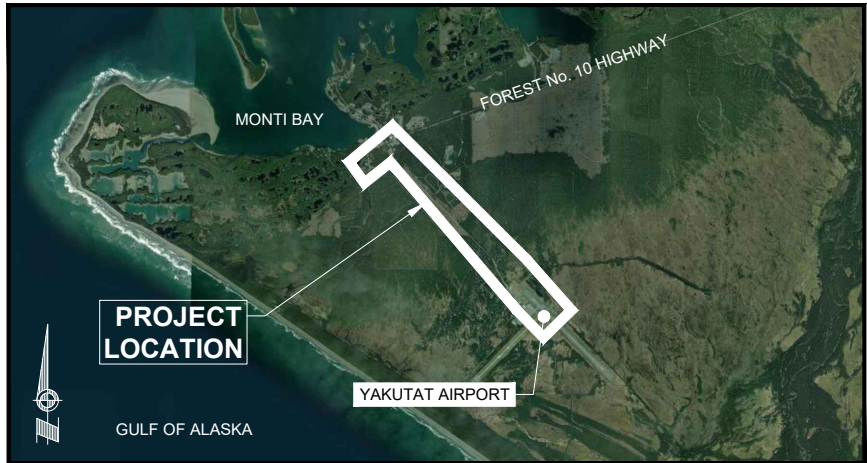
The estimated volume for VOC contaminated material adjacent to Borehole 23 is 57 cubic yards. The estimated volume of soil displaced with bedding for the extent of the ductile iron pipe is 858 cubic yards.

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING IT'S PRODUCTION, AFFECTING ALL LABELED SCALES

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YAKUTAT AIRPORT WATER SYSTEM EXTENSION

FOR:
CITY & BOROUGH
OF YAKUTAT



PREPARED BY:



Juneau, AK

9109 Mendenhall Mall Rd, Ste 4

Juneau, AK 99801

Phone: 907.780.6060

www.respec.com

AECC163270

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
G-001	TITLE SHEET
V-001	SURVEY CONTROL INDEX AND NOTES
V-002	SURVEY CONTROL PLAN (1 OF 2)
V-003	SURVEY CONTROL PLAN (2 OF 2)
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C-302	PLAN AND PROFILE - COAST GUARD ROAD (1 OF 2)
C-303	PLAN AND PROFILE - COAST GUARD ROAD (2 OF 2)
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C-305	PLAN AND PROFILE - AIRPORT ROAD (2 OF 14)
C-306	PLAN AND PROFILE - AIRPORT ROAD (3 OF 14)
C-307	PLAN AND PROFILE - AIRPORT ROAD (4 OF 14)
C-308	PLAN AND PROFILE - AIRPORT ROAD (5 OF 14)
C-309	PLAN AND PROFILE - AIRPORT ROAD (6 OF 14)
C-310	PLAN AND PROFILE - AIRPORT ROAD (7 OF 14)
C-311	PLAN AND PROFILE - AIRPORT ROAD (8 OF 14)
C-312	PLAN AND PROFILE - AIRPORT ROAD (9 OF 14)
C-313	PLAN AND PROFILE - AIRPORT ROAD (10 OF 14)
C-314	PLAN AND PROFILE - AIRPORT ROAD (11 OF 14)
C-315	PLAN AND PROFILE - AIRPORT ROAD (12 OF 14)
C-316	PLAN AND PROFILE - AIRPORT ROAD (13 OF 14)
C-317	PLAN AND PROFILE - AIRPORT ROAD (14 OF 14)
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E-601	INSTRUMENT BLOCK DIAGRAM
E-602	NETWORK & DATA COMMUNICATION CABLING DIAGRAM
E-701	PANEL SCHEDULES

CONSULTANT :

KAREN ANN BRADY
04/16/2025
REGISTERED PROFESSIONAL ENGINEER

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

TITLE SHEET

DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

PROJECT No.

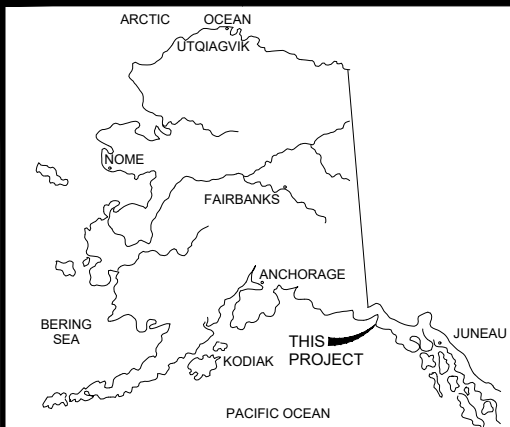
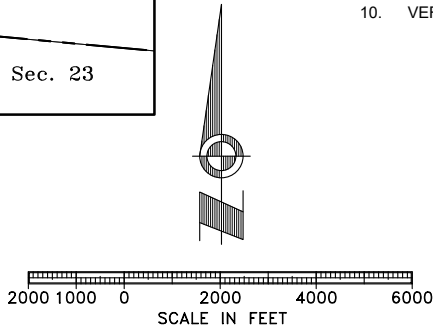
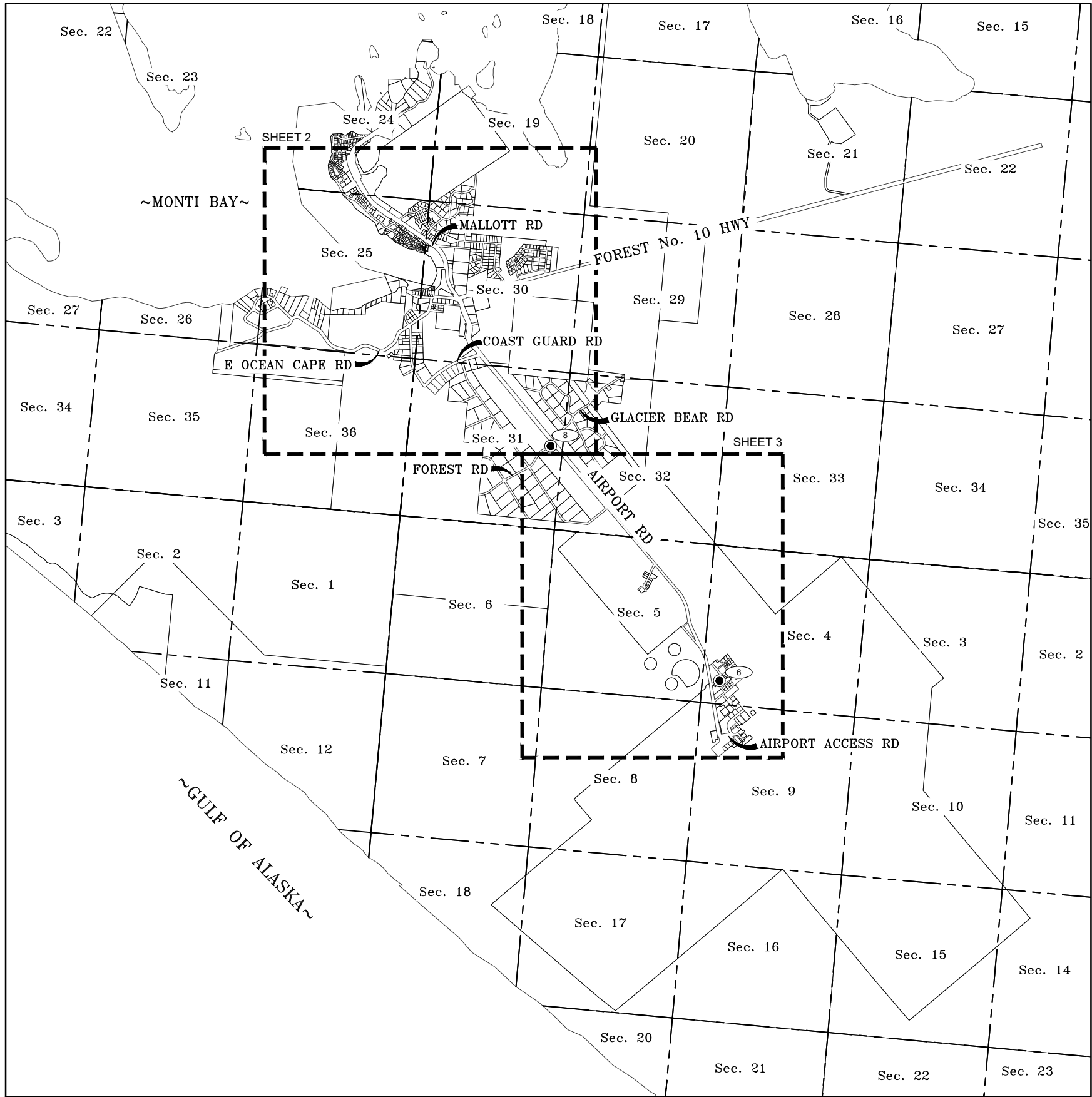
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SHEET NUMBER

G-001

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LOCATION MAP
NOT TO SCALE

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM PROPERLY REGISTERED AND LICENSED TO PRACTICE LAND SURVEYING IN THE STATE OF ALASKA, THAT THIS PLAT REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, THE MONUMENTS SHOWN HEREON ACTUALLY EXIST AS DESCRIBED, AND THAT ALL DIMENSIONS AND OTHER DETAILS ARE CORRECT TO THE BEST OF MY KNOWLEDGE.

DATE 4/16/25 REGISTRATION NO. LS-11798

CRAIG O. RANSON
REGISTERED LAND SURVEYOR

LEGEND

- # CONTROL POINT NUMBER
- SET PLASTIC CAP ON REBAR

NOTES:

- THE PURPOSE OF THIS SURVEY IS TO PROVIDE SITE CONTROL FOR THE CITY AND BOROUGH OF YAKUTAT AIRPORT WATER SYSTEM EXTENSION PROJECT.
- FIELD WORK FOR THIS SURVEY WAS CONDUCTED JUNE 2024 .
- BACKGROUND INFORMATION DEPICTED IS SHOWN FOR ORIENTATION PURPOSES ONLY AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
- THE BASIS OF COORDINATES IS NAD83 ALASKA STATE PLANE ZONE (AKSPZ) 1, BASED ON OPUS PROCESSED STATIC GPS SESSIONS ON SELECTED MONUMENTS THROUGHOUT THE CITY OF YAKUTAT. PRIMARY CONTROL POINTS (CP) FOR THIS PROJECT ARE CP 6 AND CP 8. BOTH BEING 1-3/8" YELLOW PLASTIC CAPS MARKED RESPEC CONTROL. NAD83 ALASKA STATE PLANE ZONE 1 COORDINATES FOR CP 6 AND CP 8 ARE:
 - CP 6: 2,854,699.47 NORTH, 1,571,418.66 EAST, U.S. SURVEY FEET.
 - CP 8: 2,862,515.61 NORTH, 1,565,798.84 EAST, U.S. SURVEY FEET.
- THE BASIS OF BEARING FOR THIS SURVEY IS THE NAD83 AKSPZ1 GRID COORDINATE SYSTEM.
- THE VERTICAL DATUM IS NAVD88 (DERIVED USING GEOID12B ALASKA) AT CP 8, HAVING AN ELEVATION OF 48.68'.
- THE POSITIONS OF RECOVERED MONUMENTS, AND TOPOGRAPHIC FEATURES WERE ESTABLISHED USING GLOBAL POSITIONING SURVEYING METHODS.
- COORDINATES SHOWN ARE AKSPZ1 GRID. UNITS ARE IN U.S. SURVEY FEET.
- DIFFERENTIAL LEVELS WERE RUN TO DETERMINE VERTICAL CONTROL ELEVATIONS.
- VERIFY ALL HORIZONTAL AND VERTICAL CONTROL PRIOR TO USE.

CONSULTANT :



Juneau, AK
9109 Mendota Mall Rd, Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AECOC163270



PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

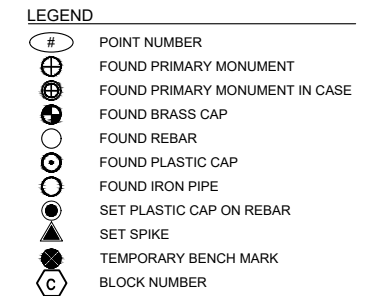
YAKUTAT, ALASKA

SHEET TITLE :
SURVEY CONTROL INDEX AND NOTES

DESIGN	-
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CHECKED	EPV/COR
DATE	04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

V-001

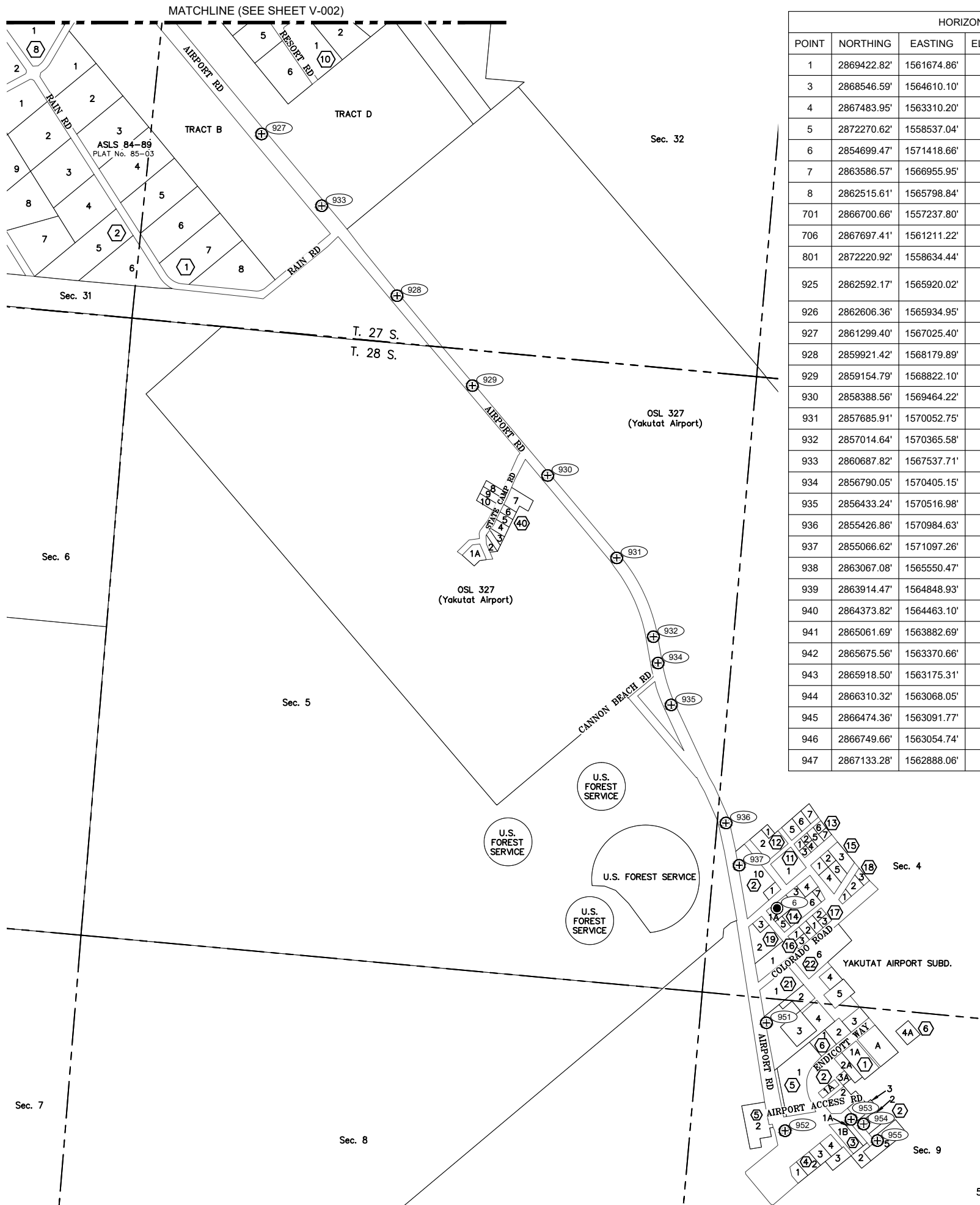


V-002

1"

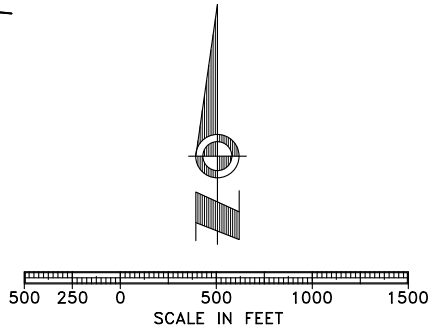
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HORIZONTAL CONTROL TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	2869422.82'	1561674.86'	80.57'	SET YPC MARKED "RESPEC CONTROL"
3	2868546.59'	1564610.10'	73.83'	SET YPC MARKED "RESPEC CONTROL"
4	2867483.95'	1563310.20'	58.94'	SET SPIKE
5	2872270.62'	1558537.04'	16.14'	SET YPC MARKED "RESPEC CONTROL"
6	2854699.47'	1571418.66'	32.76'	SET YPC MARKED "RESPEC CONTROL"
7	2863586.57'	1566955.95'	56.79'	SET YPC MARKED "RESPEC CONTROL"
8	2862515.61'	1565798.84'	48.68'	SET YPC MARKED "RESPEC CONTROL"
701	2866700.66'	1557237.80'	70.75'	FOUND PRIMARY MON.
706	2867697.41'	1561211.22'	26.68'	FOUND REBAR
801	2872220.92'	1558634.44'	16.03'	FOUND REBAR
925	2862592.17'	1565920.02'	51.45'	FOUND PPC MARKED "LOUNSBURY CONTROL"
926	2862606.36'	1565934.95'	51.87'	FOUND CENTERLINE MON.
927	2861299.40'	1567025.40'	51.01'	FOUND CENTERLINE MON.
928	2859921.42'	1568179.89'	46.04'	FOUND CENTERLINE MON.
929	2859154.79'	1568822.10'	45.80'	FOUND CENTERLINE MON.
930	2858388.56'	1569464.22'	43.20'	FOUND CENTERLINE MON.
931	2857685.91'	1570052.75'	41.31'	FOUND CENTERLINE MON.
932	2857014.64'	1570365.58'	38.50'	FOUND CENTERLINE MON.
933	2860687.82'	1567537.71'	48.48'	FOUND CENTERLINE MON.
934	2856790.05'	1570405.15'	37.75'	FOUND CENTERLINE MON.
935	2856433.24'	1570516.98'	37.30'	FOUND CENTERLINE MON.
936	2855426.86'	1570984.63'	35.61'	FOUND CENTERLINE MON.
937	2855066.62'	1571097.26'	34.20'	FOUND CENTERLINE MON.
938	2863067.08'	1565550.47'	48.86'	FOUND CENTERLINE MON.
939	2863914.47'	1564848.93'	46.69'	FOUND CENTERLINE MON.
940	2864373.82'	1564463.10'	47.20'	FOUND CENTERLINE MON.
941	2865061.69'	1563882.69'	43.00'	FOUND CENTERLINE MON.
942	2865675.56'	1563370.66'	39.82'	FOUND CENTERLINE MON.
943	2865918.50'	1563175.31'	45.20'	FOUND CENTERLINE MON.
944	2866310.32'	1563068.05'	63.44'	FOUND CENTERLINE MON.
945	2866474.36'	1563091.77'	66.27'	FOUND CENTERLINE MON.
946	2866749.66'	1563054.74'	70.68'	FOUND CENTERLINE MON.
947	2867133.28'	1562888.06'	73.84'	FOUND CENTERLINE MON.

- LEGEND
- # POINT NUMBER
 - ⊕ FOUND PRIMARY MONUMENT IN CASE
 - ⊙ SET PLASTIC CAP ON REBAR
 - ⊖ BLOCK NUMBER
 - YPC YELLOW PLASTIC CAP
 - PPC PINK PLASTIC CAP



HORIZONTAL CONTROL TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
948	2866970.38'	1562889.05'	76.04'	FOUND CENTERLINE MON.
949	2866145.36'	1562987.12'	69.57'	FOUND CENTERLINE MON.
950	2866114.92'	1563167.93'	39.75'	FOUND CENTERLINE MON.
951	2853723.96'	1571328.82'	31.20'	FOUND CENTERLINE MON.
952	2852803.49'	1571487.47'	27.44'	FOUND CENTERLINE MON.
953	2852900.36'	1572049.95'	26.00'	FOUND CENTERLINE MON.
954	2852860.89'	1572157.29'	25.72'	FOUND CENTERLINE MON.
955	2852719.85'	1572275.40'	24.52'	FOUND CENTERLINE MON.
956	2865363.10'	1563039.70'	38.68'	FOUND BRASS CAP MON.
957	2864821.44'	1561868.66'	31.42'	FOUND BRASS CAP MON.
959	2865735.99'	1563238.95'	40.49'	FOUND IRON PIPE
991	2866194.18'	1562993.20'	67.73'	FOUND PRIMARY MON.
992	2865199.42'	1563852.92'	34.79'	FOUND PRIMARY MON.

VERTICAL CONTROL TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
6	2854699'	1571419'	32.76'	SET YPC MARKED "RESPEC CONTROL"
8	2862516'	1565799'	48.68'	SET YPC MARKED "RESPEC CONTROL"
601	2866723'	1562999'	74.96'	CHISELED "X" ON E FIRE HYDRANT BOLT
925	2862592'	1565920'	51.45'	FOUND PPC MARKED "LOUNSBURY CONTROL"
926	2862606'	1565935'	51.87'	FOUND CENTERLINE MON.
927	2861299'	1567025'	51.01'	FOUND CENTERLINE MON.
928	2859921'	1568180'	46.04'	FOUND CENTERLINE MON.
929	2859155'	1568822'	45.80'	FOUND CENTERLINE MON.
930	2858389'	1569464'	43.20'	FOUND CENTERLINE MON.
931	2857686'	1570053'	41.31'	FOUND CENTERLINE MON.
932	2857015'	1570366'	38.50'	FOUND CENTERLINE MON.
933	2860688'	1567538'	48.48'	FOUND CENTERLINE MON.
934	2856790'	1570405'	37.75'	FOUND CENTERLINE MON.
935	2856433'	1570517'	37.30'	FOUND CENTERLINE MON.
936	2855427'	1570985'	35.61'	FOUND CENTERLINE MON.
937	2855067'	1571097'	34.20'	FOUND CENTERLINE MON.
938	2863067'	1565550'	48.86'	FOUND CENTERLINE MON.
939	2863914'	1564849'	46.69'	FOUND CENTERLINE MON.
940	2864374'	1564463'	47.20'	FOUND CENTERLINE MON.
941	2865062'	1563883'	43.00'	FOUND CENTERLINE MON.
942	2865676'	1563371'	39.82'	FOUND CENTERLINE MON.
943	2865918'	1563175'	45.20'	FOUND CENTERLINE MON.
944	2866310'	1563068'	63.44'	FOUND CENTERLINE MON.
945	2866474'	1563092'	66.27'	FOUND CENTERLINE MON.
946	2866750'	1563055'	70.68'	FOUND CENTERLINE MON.
948	2866970'	1562889'	76.04'	FOUND CENTERLINE MON.
949	2866145'	1562987'	69.57'	FOUND CENTERLINE MON.
950	2866115'	1563168'	39.75'	FOUND CENTERLINE MON.
951	2853724'	1571329'	31.20'	FOUND CENTERLINE MON.
952	2852803'	1571487'	27.44'	FOUND CENTERLINE MON.
953	2852900'	1572050'	26.00'	FOUND CENTERLINE MON.
954	2852861'	1572157'	25.72'	FOUND CENTERLINE MON.
955	2852720'	1572275'	24.52'	FOUND CENTERLINE MON.

CONSULTANT :



Juneau, AK
9100 Mendota Mall Rd. Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3770
AEC0163270



PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :
SURVEY CONTROL PLAN (2 OF 2)

DESIGN -
DRAWN CES
CHECKED EPV/COR
DATE 04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

V-003

GENERAL NOTES

1. CLEARING AND GRUBBING LIMITS SHALL BE A MAXIMUM OF 10 FEET BEYOND THE TOP OF TRENCH EXCAVATION UNLESS OTHERWISE SHOWN. IN NO CASE SHALL CLEARING BE BEYOND THE EDGE OF THE ROW OR EASEMENT LIMITS. MINOR CHANGES TO CLEARING, GRUBBING AND SEEDING LIMITS SHALL BE SUBJECT TO THE ENGINEERS DISCRETION. DISTURBED AREAS OUTSIDE THE LIMITS SHOWN ON THE PLANS SHALL BE RESTORED TO ORIGINAL GRADE AND SEEDED.
2. THE CONTRACTOR WILL ENCOUNTER VARIOUS IMPROVEMENTS SUCH AS (BUT NOT LIMITED TO) ASPHALT PAVEMENT, POWER POLES AND GUYS, SIGNS, SURVEY MONUMENTS, TREES, CULVERTS, DRIVEWAYS, AND TELEPHONE PEDESTALS. IT IS THE INTENT OF THIS CONTRACT TO INSTALL A WORKING UTILITY AND RESTORE ALL IMPACTED IMPROVEMENTS AT NO ADDITIONAL COST TO THE OWNER.
3. SIGNS SHALL BE PROTECTED OR REMOVED AND REINSTALLED IN THEIR EXISTING LOCATIONS. WHEN REINSTALLED, USE DESIGNOVATIONS, INC. "SNAP-N-SAFE" BREAKAWAY SQUARE SIGN POST COUPLERS, PART NUMBER S250.
4. SURVEY MONUMENTS DISTURBED DURING PROJECT SHALL BE RESET BY A PROFESSIONAL LICENSED SURVEYOR.
5. CONTRACTOR SHALL STAKE THE ROW AND EASEMENTS PRIOR TO BEGINNING ANY CLEARING OR CONSTRUCTION. WORK OUTSIDE THE ROW OR EASEMENTS SHALL BE COORDINATED AND APPROVED BY THE ENGINEER.
6. SAWCUT ALL MATCH LINES WHERE NEW CONSTRUCTION ABUTS EXISTING ASPHALT. APPLY STE-1 ASPHALT FOR TACK COAT ON THE VERTICAL FACE OF ALL SAWCUTS. SEE SHEET C-502 FOR ASPHALT SAWCUTTING AND TYPICAL SECTION FOR REPLACEMENT.

UTILITY NOTES

1. ELEVATIONS OF EXISTING UTILITIES ARE UNKNOWN. ALL POTENTIAL CONFLICTS WITH NEW WORK SHALL BE POTHOLED, SURVEYED, AND LOCATION & ELEVATION SHALL BE PROVIDED TO ENGINEER PRIOR TO EXCAVATION FOR THE WATER MAIN. IT IS THE CONTRACTORS RESPONSIBILITY TO OBTAIN LOCATES OF EXISTING UTILITIES BEFORE EXCAVATION.
2. THE EXISTING GROUNDWATER TABLE SHOWN IN THE PLAN AND PROFILE DRAWINGS IS APPROXIMATED USING PUBLICLY AVAILABLE MONITORING WELLS DATA, AS WELL AS FIELD OBSERVATIONS IN RECENT CONSTRUCTION PROJECTS DURING THE SUMMER MONTHS WHEN GROUNDWATER ELEVATIONS TEND TO BE THE HIGHEST. NOTE THAT THE GROUNDWATER ELEVATION FLUCTUATES SEASONALLY WITHIN THE PROJECT LIMITS. DEWATERING MAY BE REQUIRED TO OBTAIN SUITABLE COMPACTION.
3. ALL UTILITIES WITHIN AND BEYOND THE PROJECT BOUNDARY SHALL REMAIN IN PLACE AND IN SERVICE DURING CONSTRUCTION UNLESS APPROVED BY THE ENGINEER.
4. ALL MATERIALS THAT COME IN DIRECT CONTACT WITH POTABLE WATER MUST BE APPROVED BY NSF/ANSI STANDARD 61.
5. FIRE HYDRANT ASSEMBLIES INCLUDE ALL FITTINGS, BOLLARDS, AND VALVES SHOWN.
6. WATER SERVICE LOCATIONS WILL BE STAKED IN THE FIELD BY THE ENGINEER. ADDITIONAL SERVICES MAY BE ADDED DURING CONSTRUCTION BY ENGINEER AND PAID FOR AT UNIT PRICES. SEE SHEET C-701 FOR WATER SERVICE SCHEDULE.
7. PROTECT EXISTING WATER LINE THRUST BLOCK ASSEMBLIES AS NECESSARY DURING CONSTRUCTION.
8. ALL UTILITY SURFACE FEATURES IN THE ROAD SHALL BE ADJUSTED PRIOR TO PAVING. NO CUTTING OF ASPHALT SHALL BE ALLOWED WITHOUT ENGINEER'S APPROVAL.
9. UNDERGROUND UTILITY LOCATIONS WERE PAINTED ON THE GROUND AND ARE APPROXIMATE. CONTRACTOR SHALL CALL THE ALASKA DIGLINE (811) TO ESTABLISH THE EXACT LOCATION OF UTILITIES PRIOR TO COMMENCING WORK.
10. PLAN AND PROFILE SHEETS SHOW MINIMUM HORIZONTAL DIRECTIONAL DRILL (HDD) LIMITS BASED ON ALASKA DEPARTMENT OF TRANSPORTATION AND ALASKA DEPARTMENT OF FISH AND GAME COORDINATION. THESE LOCATIONS MAY BE EXTENDED.

ABBREVIATIONS

ABDN	ABANDONED
ADEC	ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AFF	ABOVE FINISHED FLOOR
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
CMP	CORRUGATED METAL PIPE
COMM	COMMUNICATIONS
CPP	CORRUGATED PLASTIC PIPE
CY	CUBIC YARD
DEMO	DEMOLITION
DIA, Ø	DIAMETER
DIP	DUCTILE IRON PIPE
DOT	DEPARTMENT OF TRANSPORTATION
E	EASTING
EG	EXISTING GROUND
ELEV, EL	ELEVATION
EM	EASEMENT
EP	EDGE OF PAVEMENT
EX	EXISTING
F/O	FIBER OPTIC CABLE
FG	FINISHED GRADE
FH	FIRE HYDRANT
GV	GATE VALVE
IE	INVERT ELEVATION
LF	LINEAR FOOT
MAX	MAXIMUM
MIN	MINIMUM
MH	MANHOLE
MJ	MECHANICAL JOINT
NTS	NOT TO SCALE
OC	ON CENTER
OFF	OFFSET
OHE	OVERHEAD ELECTRIC
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PUE	PUBLIC UTILITY EASEMENT
R	RADIUS
REV	REVISION
ROW, R/W	RIGHT OF WAY
RR	RAILROAD
SD	STORM DRAIN
SF	SQUARE FOOT
SH	SHOULDER
SHT	SHEET
SS	SANITARY SEWER
STA	STATION
TYP	TYPICAL
UGE	UNDERGROUND ELECTRIC
UV	ULTRA VIOLET
W/	WITH
W, WTR	WATER
WTP	WATER TREATMENT PLANT
X	CROSSING

LEGEND

EXISTING

	BOLLARD
	BORE PITS
	CATCH BASIN
	CLEARING LIMITS
	COMMUNICATIONS LINE
	CULVERT
	CUT SLOPE 3
	EASEMENT
	EDGE OF GRAVEL
	EDGE OF PAVEMENT
	ELECTRICAL BOX
	ELECTRICAL MANHOLE
	ELECTRICAL PEDESTAL
	ELECTRICAL TRANSFORMER
	EXTERIOR LIGHTING
	FILL SLOPE 3
	FIRE HYDRANT
	FENCE
	FLOW DIRECTION
	GAS LINE
	GAS VALVE
	HEADBOLT HEATER
	JUNCTION BOX
	MANHOLE
	WELL
	OHE OVERHEAD ELECTRIC LINE
	PIPE
	POST
	POWER AND LIGHT POLE
	PROPERTY LINE
	ROW RIGHT-OF-WAY
	SS SANITARY SEWER
	SANITARY SEWER MANHOLE
	SIDEWALK
	SD STORM DRAIN MANHOLE
	SIGN
	STRUCTURE
	T TELEPHONE / COMM MANHOLE
	TOE OF EMBANKMENT
	TOP OF EMBANKMENT
	TREES
	UTILITY POLE
	6" HDPE WATER MAIN
	10" HDPE WATER MAIN
	W WATER MAIN
	W WATER MANHOLE
	W WATER SERVICE
	W WATER TABLE
	W WATER VALVE
	W WETLANDS 4

			DRAWN	HRB
			CHECKED	KAB
			DATE	04-16-2025
			PROJECT No. 10297.24002	
			SHEET NUMBER	
			C-001	
	10/03/2025	ADDENDUM No. 4		
	09/24/2025	ADDENDUM No. 3		
No.	Date	Item		
REVISIONS				

CONSULTANT :



Juneau, AK
9109 Mendenthal Mall Rd, Ste. 4
Juneau, AK 99801
Phone: 907.780.6060
Fax: 907.586.3771
AECC163270



PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :
GENERAL NOTES, LEGEND AND ABBREVIATIONS

DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

PROJECT No.
10297.24002

SHEET NUMBER	
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5001

0-001

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CONSULTANT :

STATE OF ALASKA
49TH
KAREN ANN BRADY
04/16/2025
CE 11523
REGISTERED PROFESSIONAL ENGINEER

Juneau, AK
9109 Mendota Hall Rd, Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AEC 163270

ASPEC

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

KEY MAP

DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

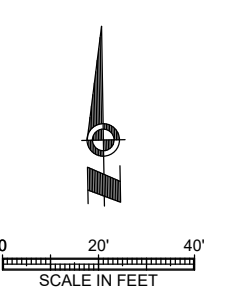
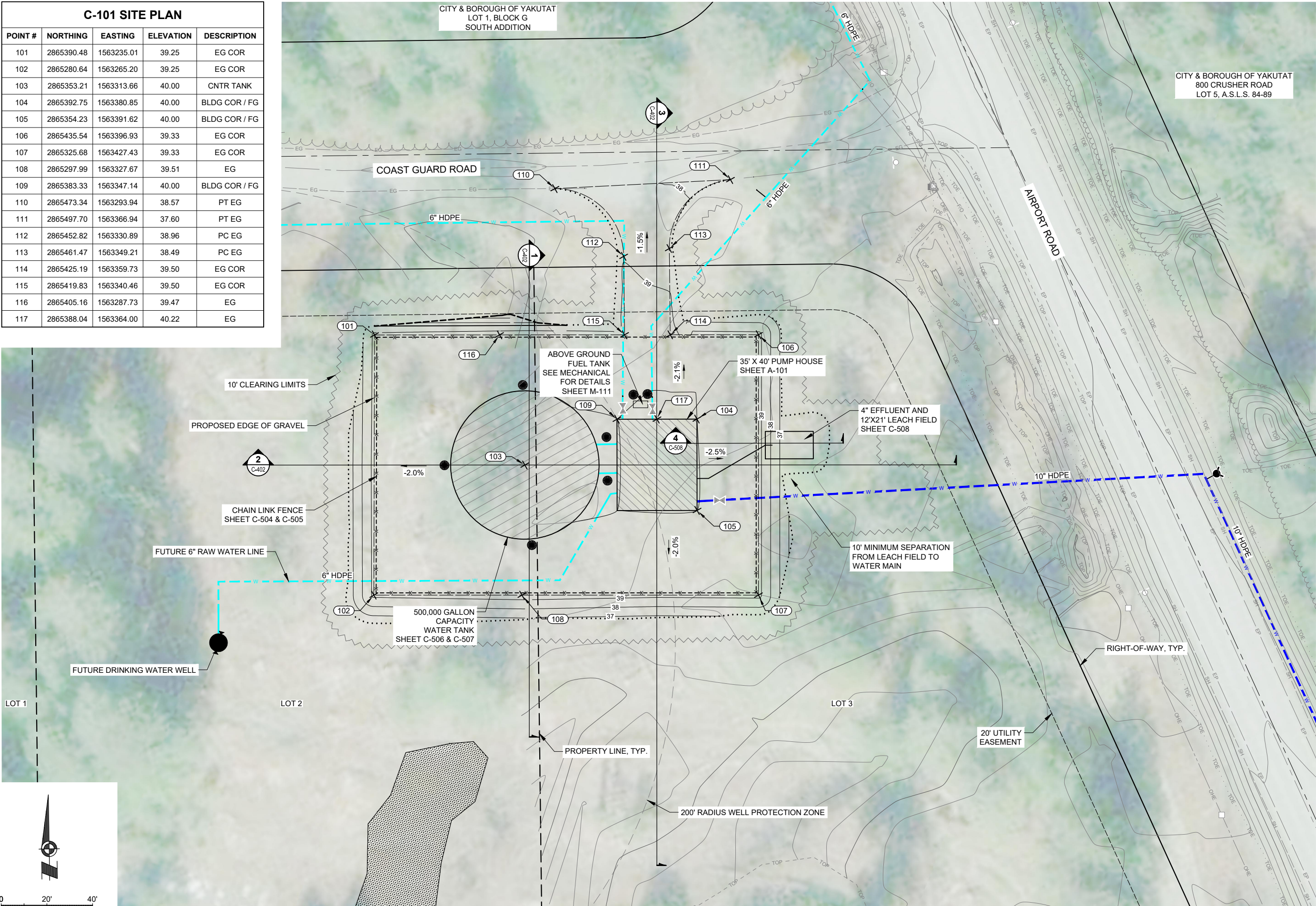
PROJECT No.
10297.24002

SHEET NUMBER
C-002

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C-101 SITE PLAN				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
101	2865390.48	1563235.01	39.25	EG COR
102	2865280.64	1563265.20	39.25	EG COR
103	2865353.21	1563313.66	40.00	CNTR TANK
104	2865392.75	1563380.85	40.00	BLDG COR / FG
105	2865354.23	1563391.62	40.00	BLDG COR / FG
106	2865435.54	1563396.93	39.33	EG COR
107	2865325.68	1563427.43	39.33	EG COR
108	2865297.99	1563327.67	39.51	EG
109	2865383.33	1563347.14	40.00	BLDG COR / FG
110	2865473.34	1563293.94	38.57	PT EG
111	2865497.70	1563366.94	37.60	PT EG
112	2865452.82	1563330.89	38.96	PC EG
113	2865461.47	1563349.21	38.49	PC EG
114	2865425.19	1563359.73	39.50	EG COR
115	2865419.83	1563340.46	39.50	EG COR
116	2865405.16	1563287.73	39.47	EG
117	2865388.04	1563364.00	40.22	EG



CONSULTANT :

STATE OF ALASKA
10297.24002
49 TH
Karen Ann Brady
KAREN ANN BRADY
04/16/2025
CE 11523
REGISTERED PROFESSIONAL ENGINEER

Juneau, AK
9103 Mendota Hall Rd. Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AEC 163270

ASPEC

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

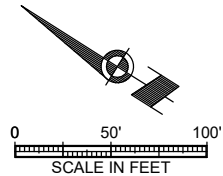
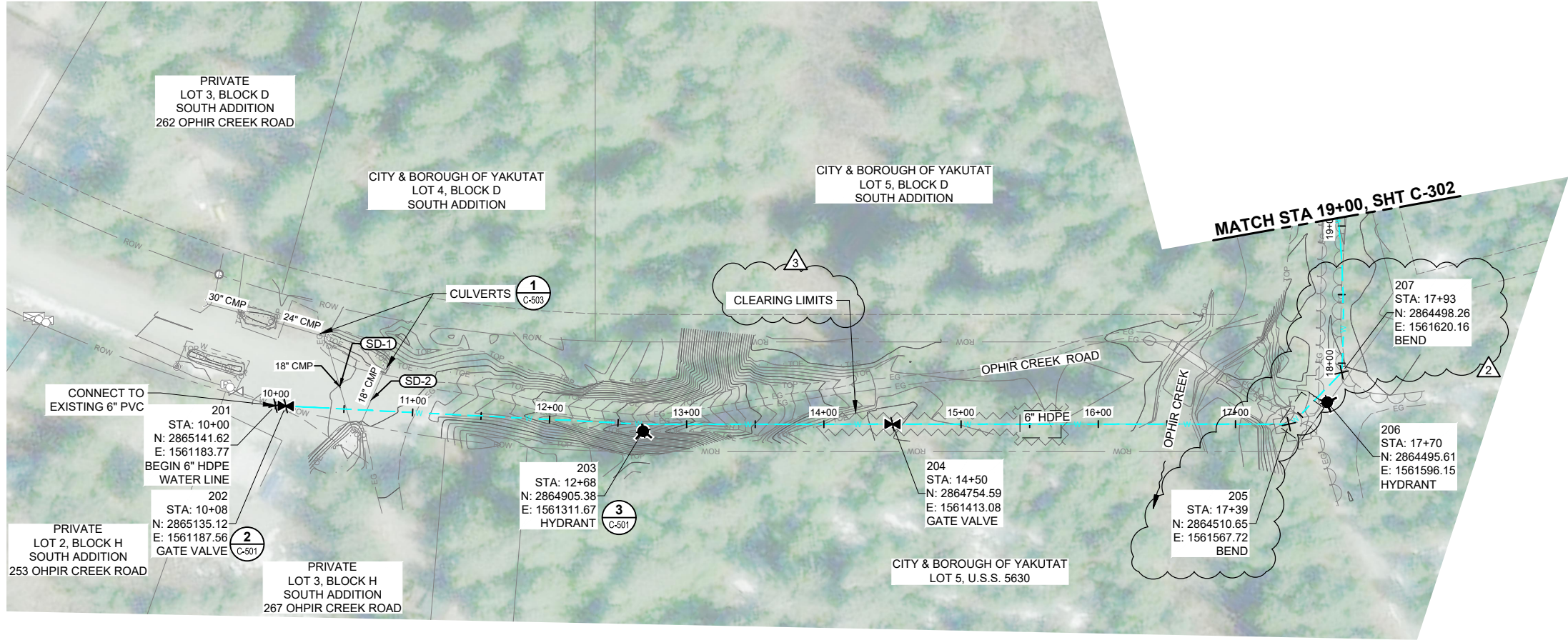
SHEET TITLE :

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DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

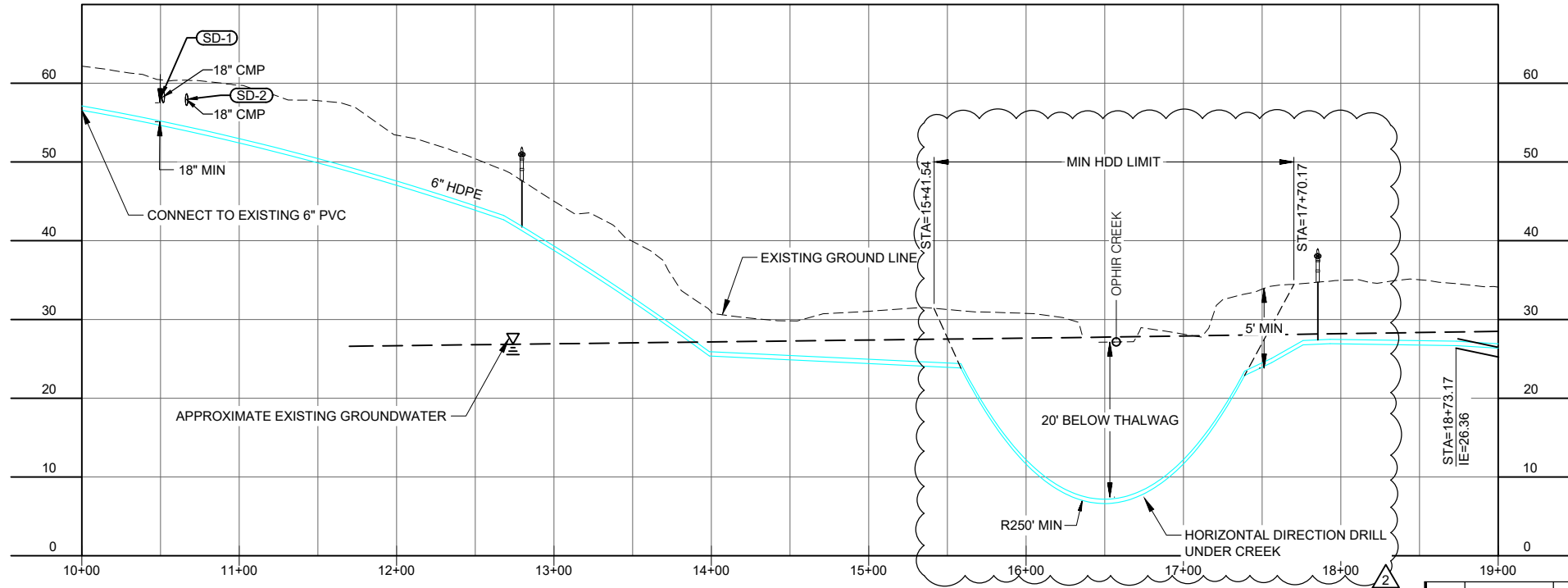
PROJECT No.
10297.24002

SHEET NUMBER
C-101



NOTES:

1. GROUNDWATER DEPTHS SHOWN ON PROFILE SHEETS IS APPROXIMATE AND ELEVATIONS WERE INTERPOLATED FROM GROUND WATER MEASUREMENTS TAKEN ON 12/15/2025.



				DRAWN	HRB	
				CHECKED	KAB	
				DATE	04-16-2025	
				PROJECT No.		
				10297.24002		
				SHEET NUMBER		
				C-301		
				REVISIONS		
				No.	Date	Item
					09/24/2025	ADDENDUM No. 3
					09/16/2025	ADDENDUM No. 2

CONSULTANT :



Juneau, AK
9102 Mendenhall Rd. Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AEC 163270



PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :
PLAN AND PROFILE -
OPHIR CREEK ROAD

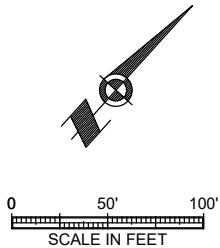
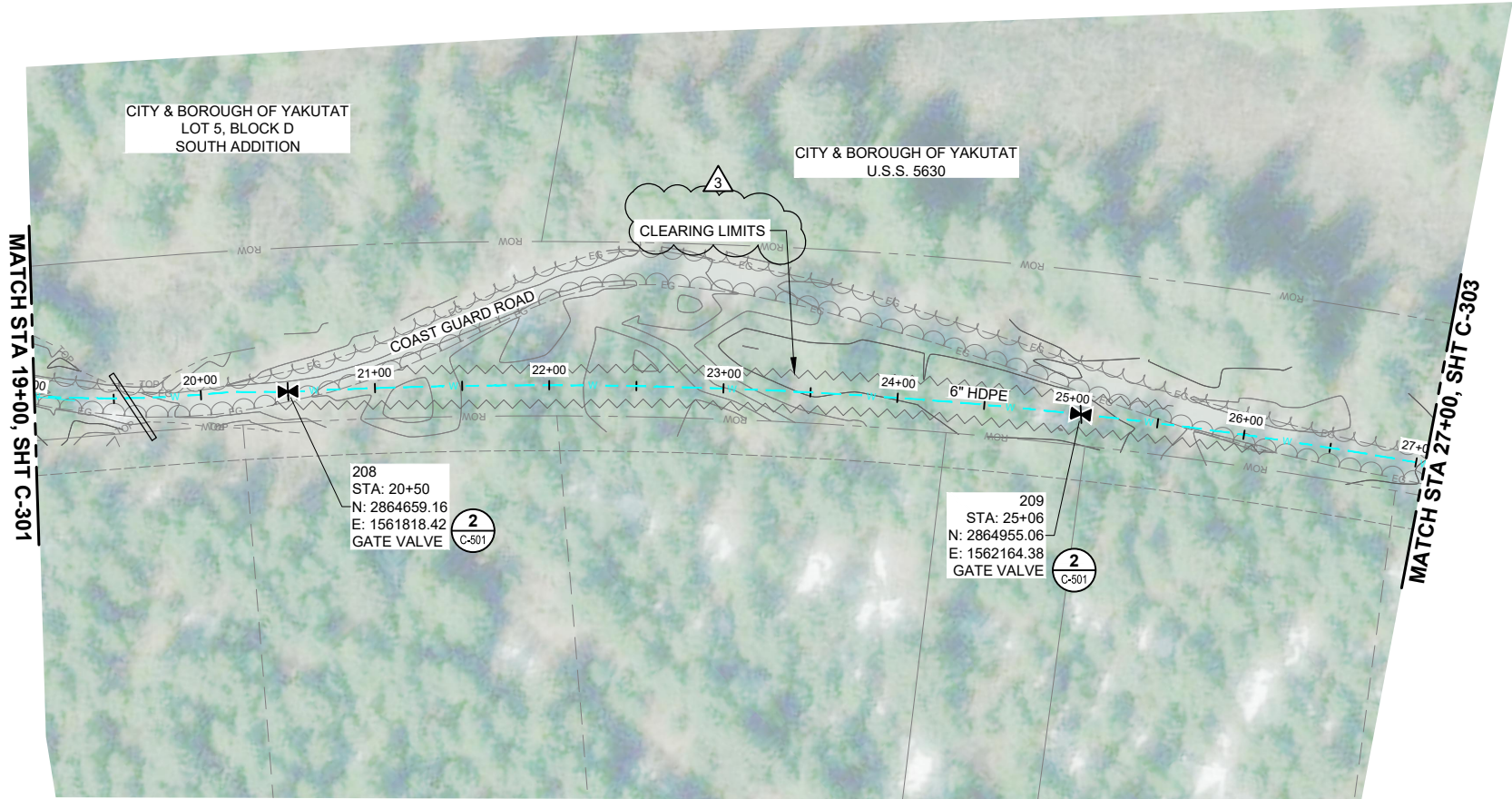
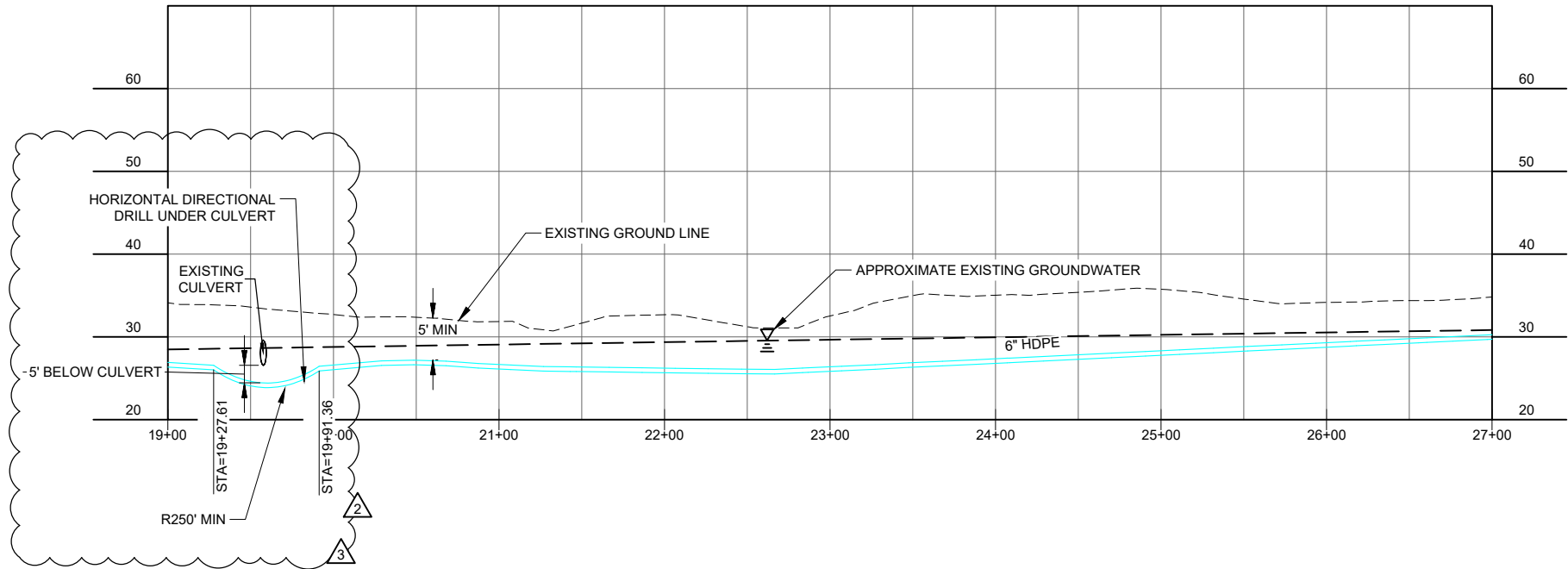
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DRAWN HRB
CHECKED KAB
DATE 04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

C-301

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No.	Date	Item

DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025
PROJECT No. 10297.24002	
SHEET NUMBER C-302	

SHEET TITLE :
PLAN AND PROFILE -
COAST GUARD ROAD (1 OF 2)

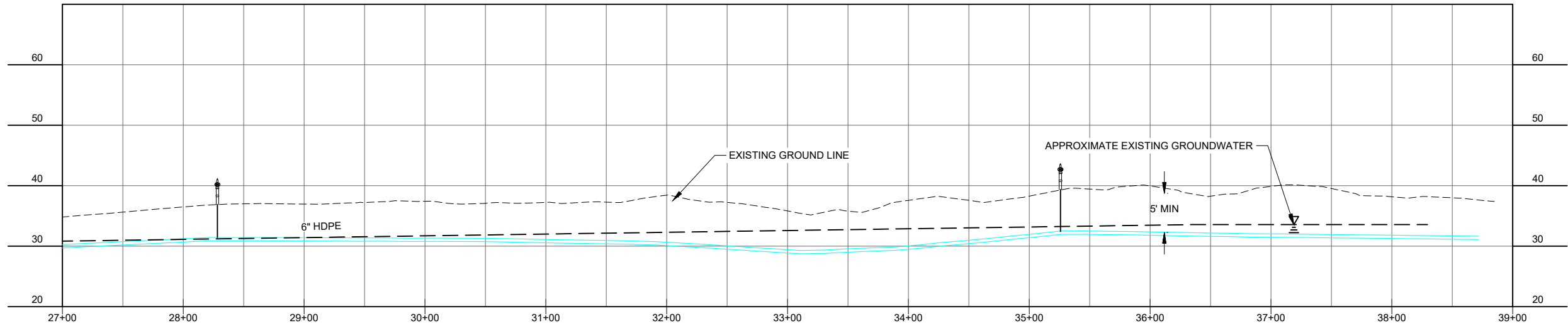
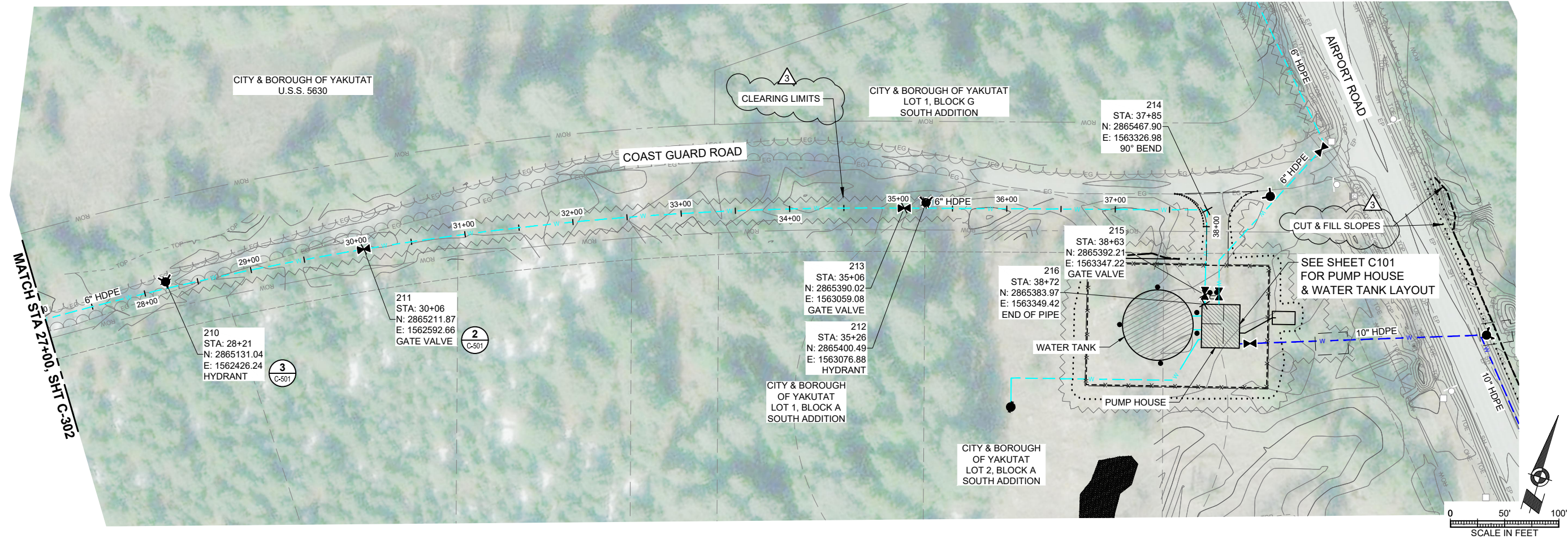
PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

Juneau, AK
9103 Mendota Mall Rd. Ste. 4
Juneau, AK 99801
Phone: 907.580.6060
Fax: 907.586.3771
AEC 163270

STATE OF ALASKA
49 TH
KAREN ANN BRADY
09/24/2025
061152
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT :



No.	Date	Item
1	09/24/2025	ADDENDUM No. 3
REVISIONS		

DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

C-303

CONSULTANT :



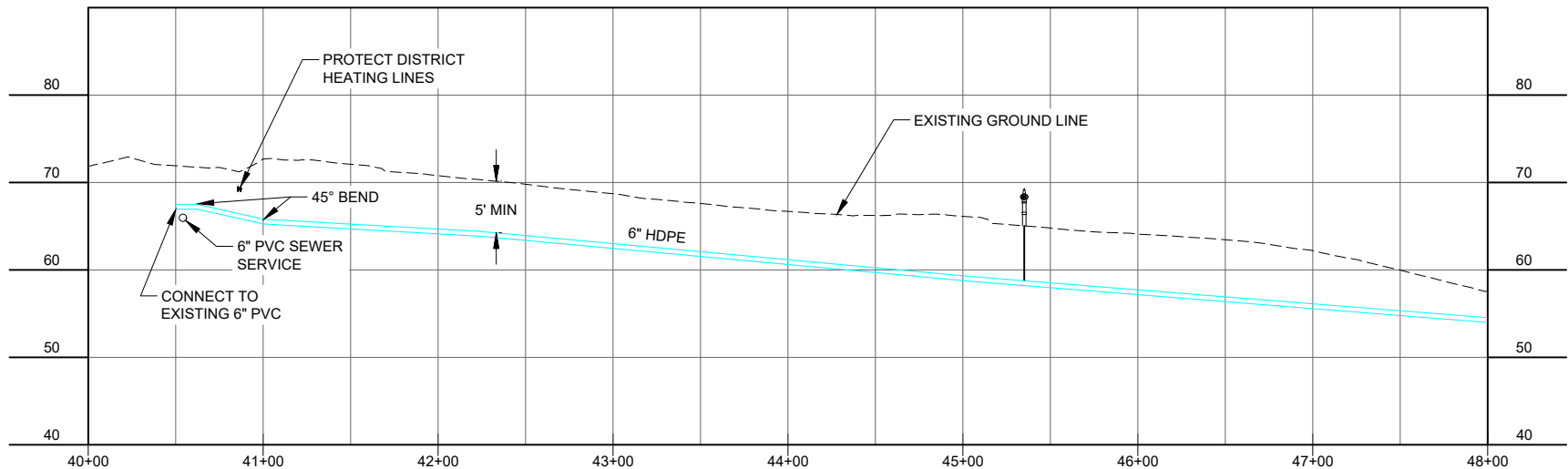
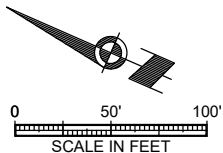
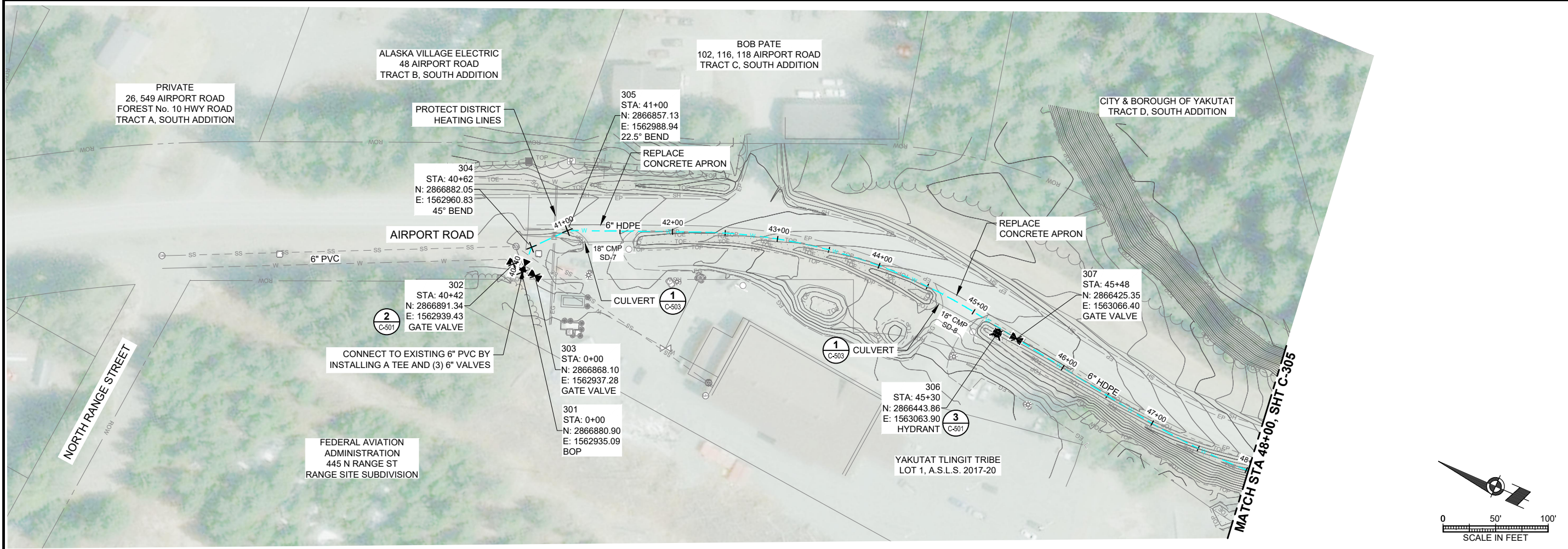
Juneau, AK
9102 Mendota Mall Rd. Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AEC 163270

PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION
YAKUTAT, ALASKA

SHEET TITLE :
PLAN AND PROFILE -
COAST GUARD ROAD (2 OF 2)

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CONSULTANT :

STATE OF ALASKA
10297.24002
49 TH
Karen Ann Brady
KAREN ANN BRADY
04/16/2025
CE 11523
REGISTERED PROFESSIONAL ENGINEER

Juneau, AK
9000 Mendenhall Mall Rd. Ste. 4
Juneau, AK 99801
Phone: 907.580.6060
Fax: 907.586.3771
AECI 63270

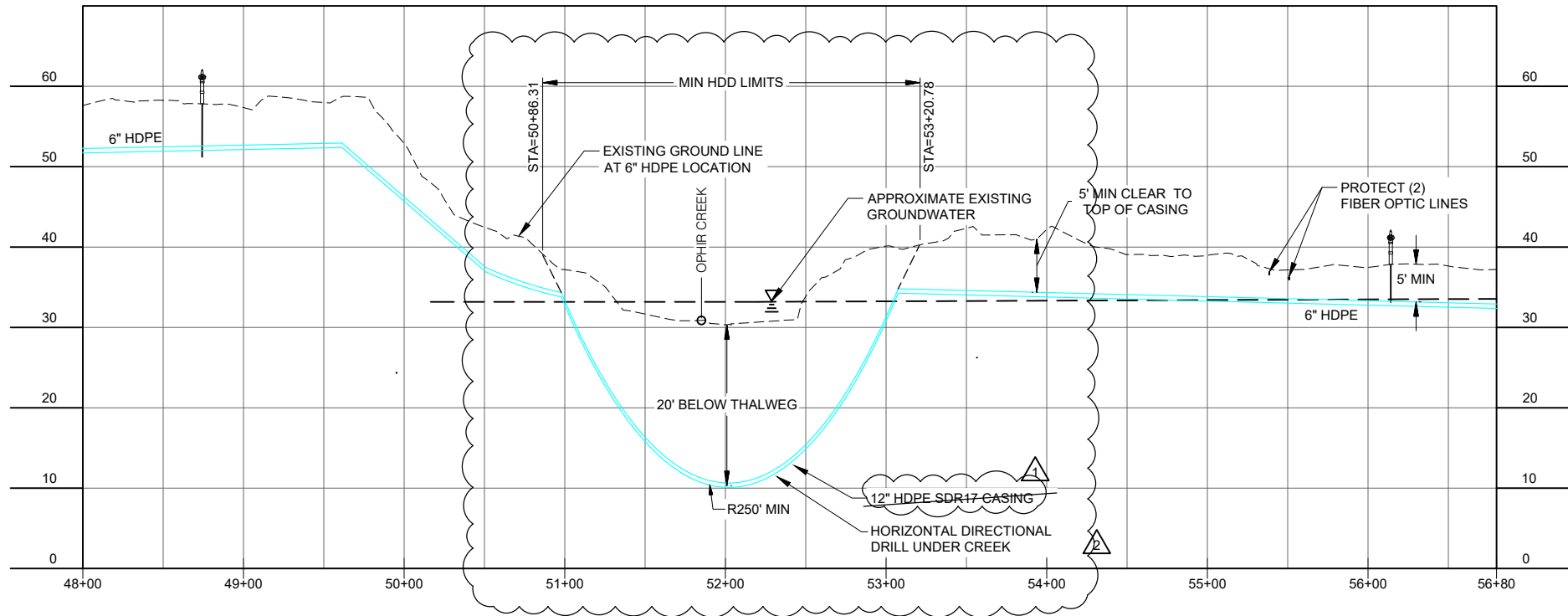
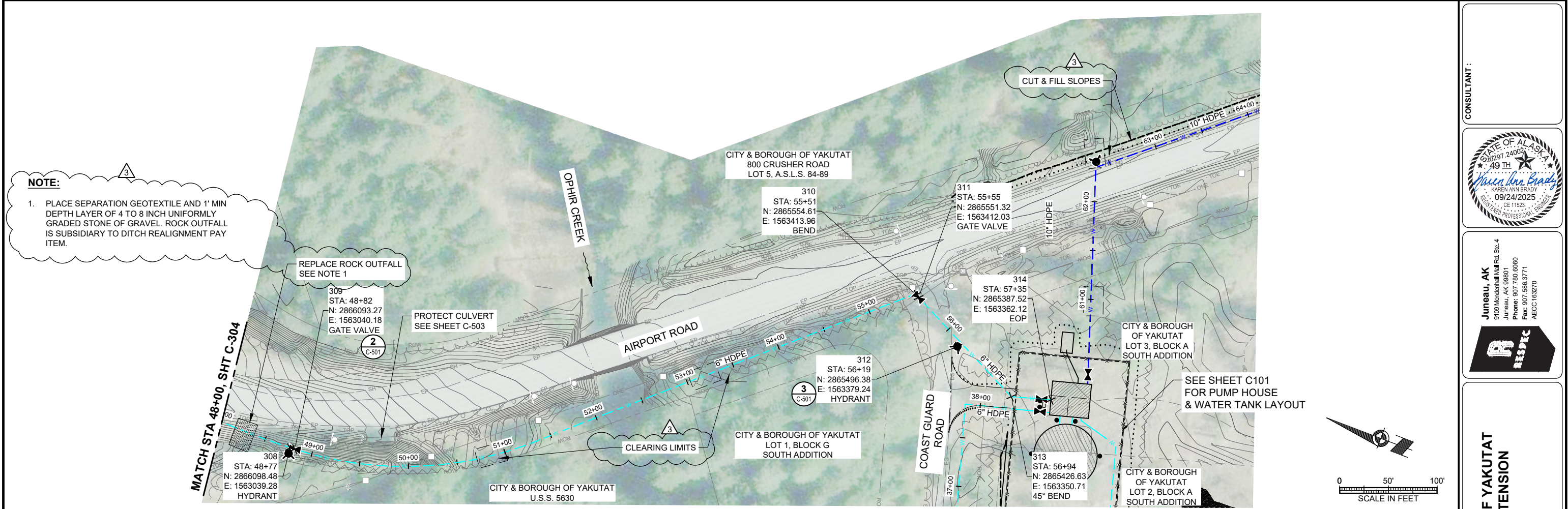
ASPEC

PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION
YAKUTAT, ALASKA

SHEET TITLE :
PLAN AND PROFILE -
AIRPORT ROAD (1 OF 14)

DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER
C-304



						DRAWN	HRB
						CHECKED	KAB
						DATE	04-16-2025
						PROJECT No. 10297.24002	
						SHEET NUMBER	
						C-305	

▲	09/24/2025	ADDENDUM No. 3
▲	09/16/2025	ADDENDUM No. 2
▲	08/27/2025	ADDENDUM No. 1
No.	Date	Item
REVISIONS		

CONSULTANT :

STATE OF ALASKA
49 TH
KAREN ANN BRADY
09/24/2025
08/11/23
REGISTERED PROFESSIONAL ENGINEER

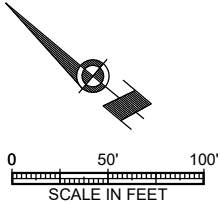
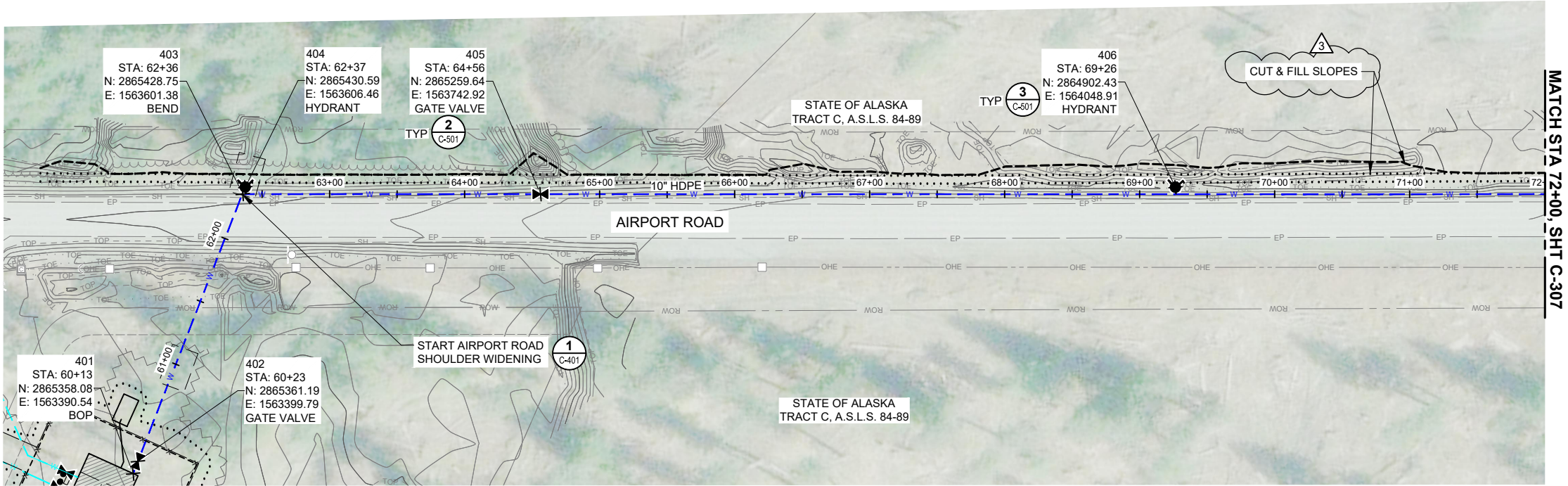
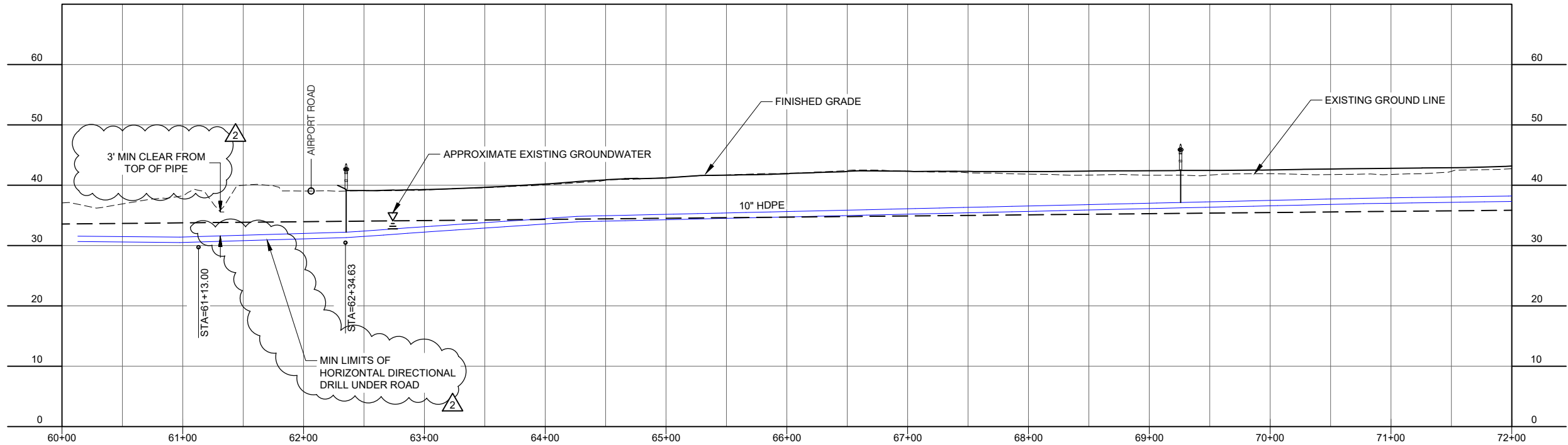
Juneau, AK
9100 Mendenhall Rd. Ste. 4
Juneau, AK 99801
Phone: 907.586.6060
Fax: 907.586.3771
AEC 163270

PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION
YAKUTAT, ALASKA

SHEET TITLE :
PLAN AND PROFILE -
AIRPORT ROAD (2 OF 14)

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REVISIONS		
No.	Date	Item
1	09/24/2025	ADDENDUM No. 3
2	09/16/2025	ADDENDUM No. 2

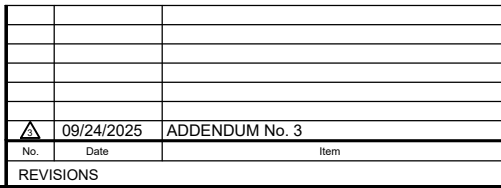
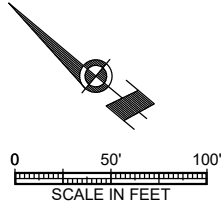
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DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025
PROJECT No. 10297.24002	
SHEET NUMBER	
C-306	

PROJECT : CITY & BOROUGH OF YAKUTAT WATER SYSTEM EXTENSION
SHEET TITLE : PLAN AND PROFILE - AIRPORT ROAD (3 OF 14)
YAKUTAT, ALASKA

Juneau, AK
9102 Mendota Rd. Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AEC 163270



CONSULTANT :



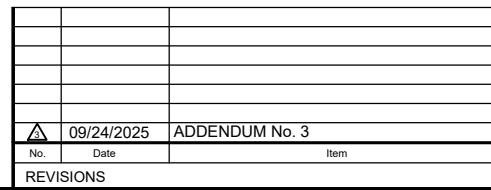
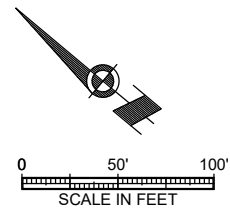
DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025
PROJECT No. 10297.24002	
SHEET NUMBER C-307	

PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION
YAKUTAT, ALASKA

Juneau, AK
9109 Mendemall Mall Rd, Ste. 4
Juneau, AK 99801
Phone: 907.780.6060
Fax: 907.586.3771
AECC 163270



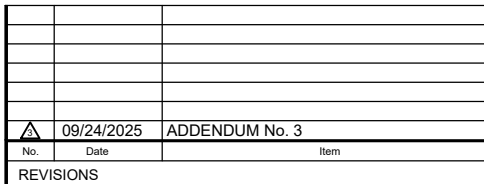
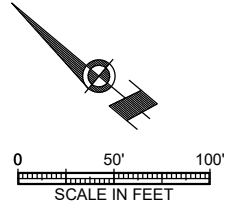
CONSULTANT :



C-308



IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING IT'S PRODUCTION, AFFECTING ALL LABELED SCALES



STATE OF ALASKA
 510297 24002
 49 TH
 KAREN ANN BRADY
 09/24/2025
 CE 11523
 REGISTERED PROFESSIONAL ENGINEER

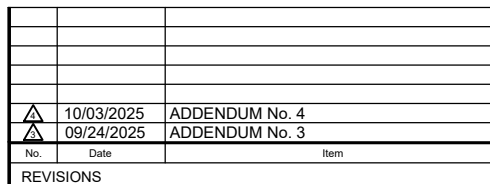
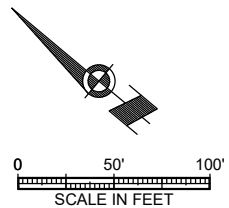


YAKUTAT, ALASKA

DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

C-309

IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING IT'S PRODUCTION, AFFECTING ALL LABELED SCALES

 $\triangle_4$ 

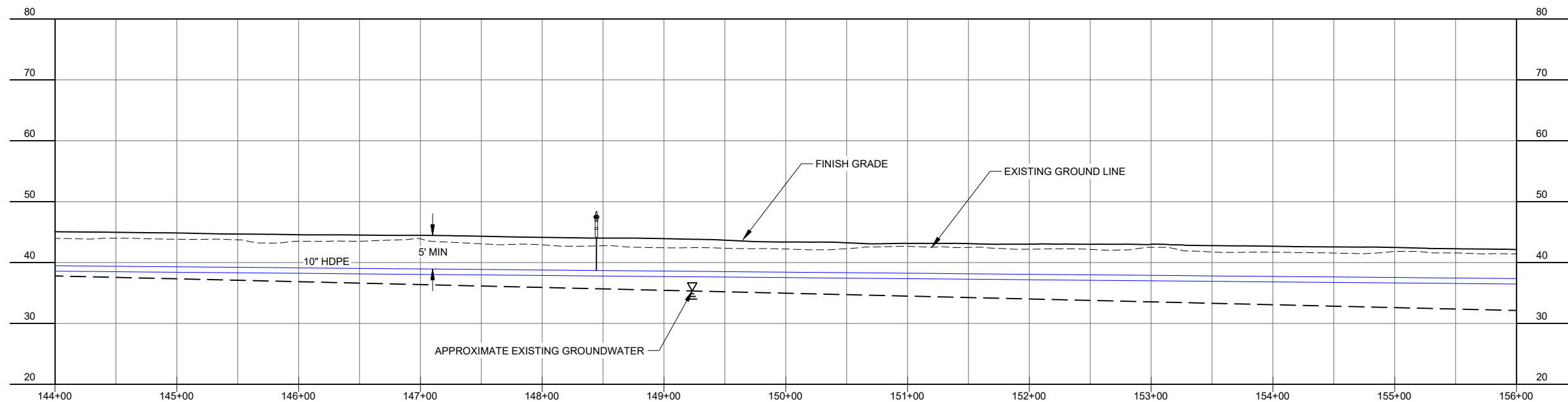
SHEET TITLE : PLAN AND PROFILE - AIRPORT ROAD (9 OF 14)	
DESIGN	AM
DRAWN	HR
CHECKED	KA
DATE	04-16-2022
PROJECT No. 10297.24002 SHEET NUMBER C-312	

DESIGN	AM
DRAWN	HR
CHECKED	KA
DATE	04-16-202

PROJECT No.
10297.24002
SHEET NUMBER

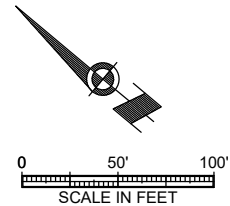
C-312

1. EXCAVATED MATERIAL FROM TRENCH EXCAVATION SHALL NOT BE PLACED, STOCKPILED OR DISPOSED OF WITHIN WETLANDS.

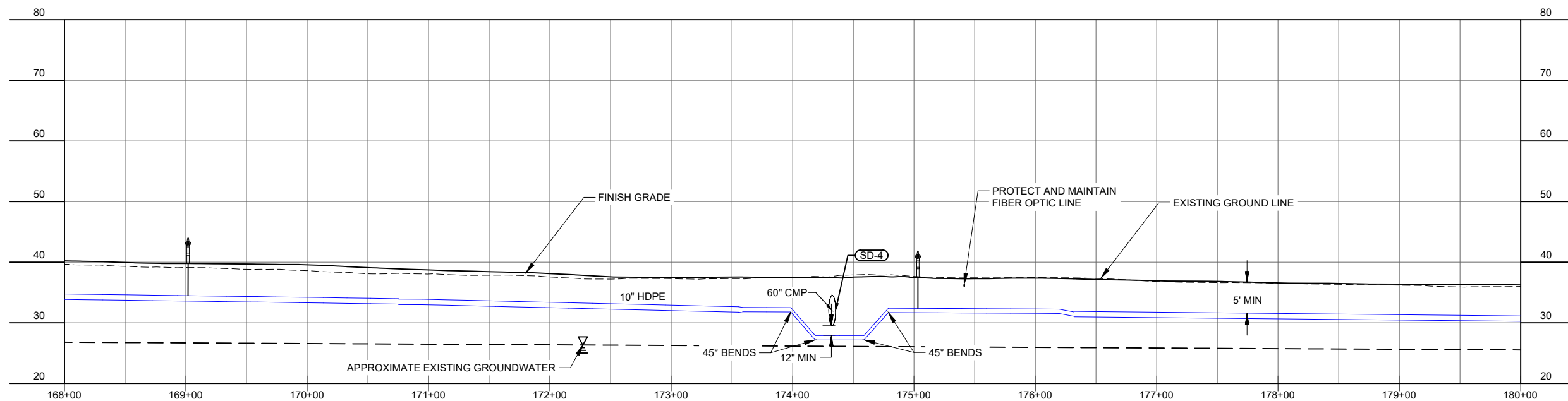
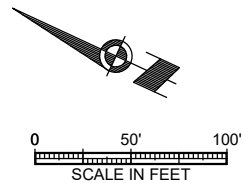


A	10/03/2025	ADDENDUM No. 4
A	09/24/2025	ADDENDUM No. 3
No.	Date	Item
REVISIONS		

C-313



C-314



	09/24/2025	ADDENDUM No. 3
No.	Date	Item
REVISIONS		



YAKUTAT, ALASKA

SHEET TITLE :
PLAN AND PROFILE -
AIRPORT ROAD (12 OF 14)

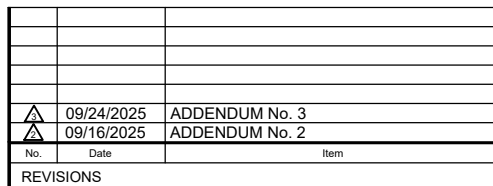
DESIGN	AM
DRAWN	HR
CHECKED	KA
DATE	04-16-202

PROJECT No.
10297.24002
SHEET NUMBER

C-315



1. THERE IS NO SURFACE MODEL FOR THE CORRIDOR BETWEEN 188+00 AND 196+50. THE ROAD PRISM AND DITCH ARE SIMILAR TO THE TYPICAL SECTION. CUT AND FILL LIMITS WILL BE SIMILAR TO WHAT IS SHOWN TO THE NORTH OF THIS AREA.



CONSULTANT :



Juneau, AK
9109 Mendenhall Mall Rd. Ste. 4
Juneau, AK 99801
Phone: 907.780.6060
Fax: 907.586.3771
AECC.163270



PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE:

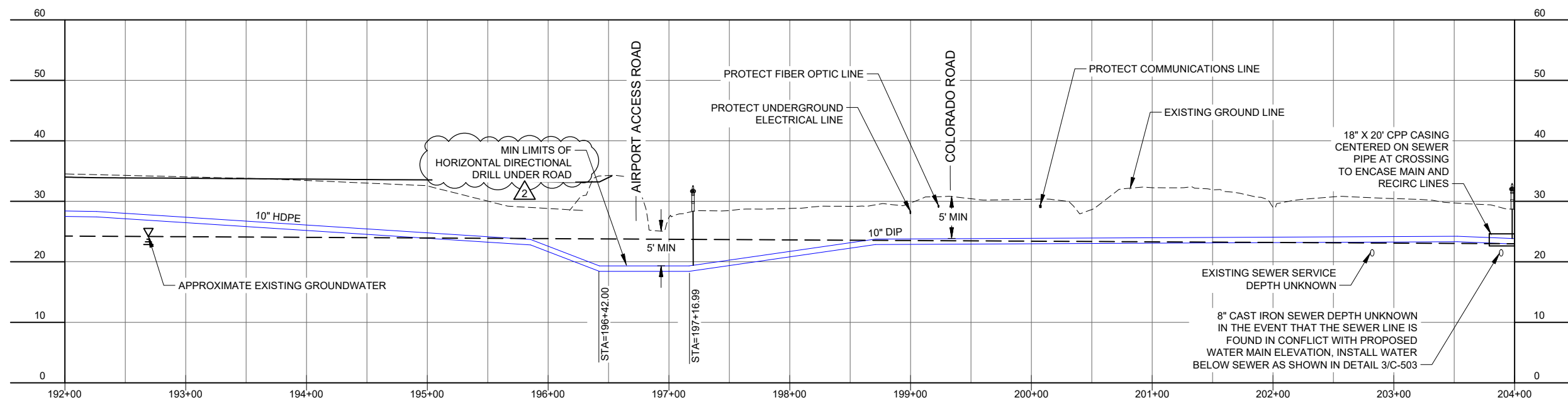
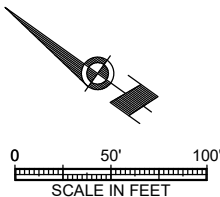
**PLAN AND PROFILE -
AIRPORT ROAD (13 OF 14)**

DESIGN	AM
DRAWN	HR
CHECKED	KA
DATE	04-16-202

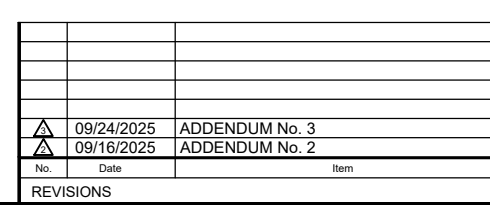
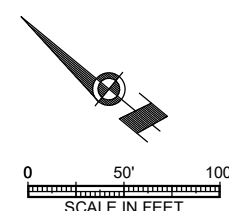
PROJECT No.
10297.24002

SHEET NUMBER

C-316

[illegible]

SHEET TITLE : PLAN AND AIRPORT	DESIGN	AM
	DRAWN	HR
	CHECKED	KA
	DATE	04-10-2024
	PROJECT No. 10297.24002	
SHEET NUMBER C-317		

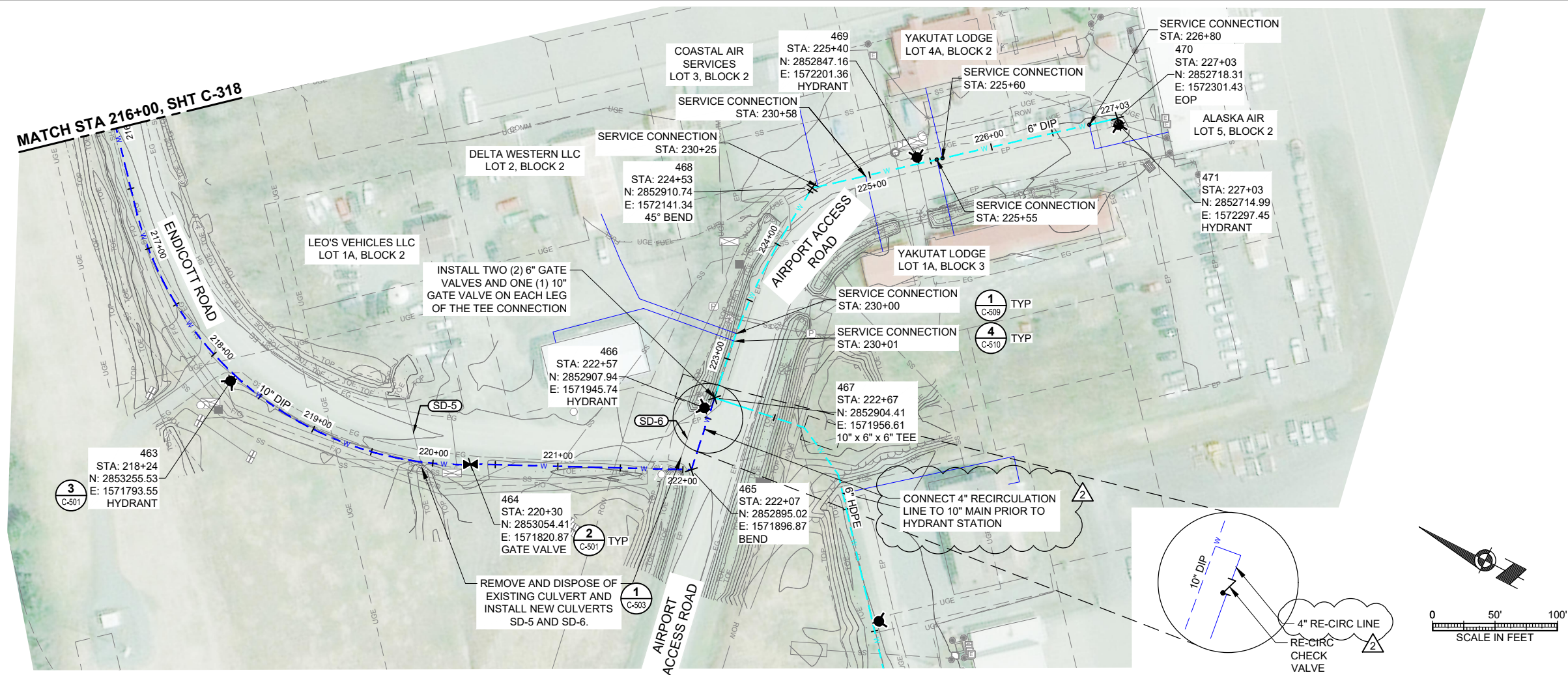


YAKUTAT, ALASKA

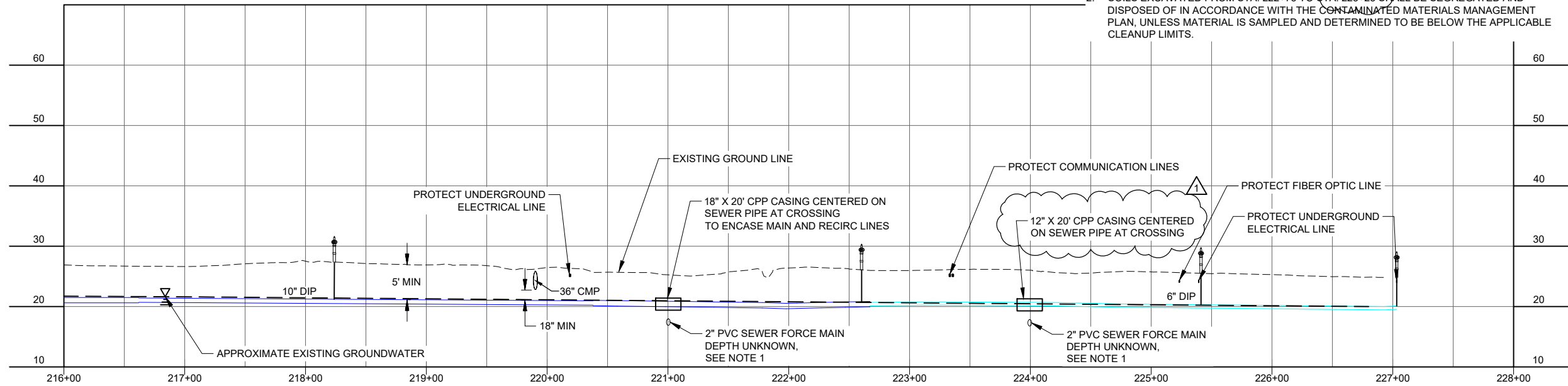
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DRAWN	HR
CHECKED	KA
DATE	04-16-2024
PROJECT No.	
10297.24002	
SHEET NUMBER	
C-318	

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING IT'S PRODUCTION, AFFECTING ALL LABELED SCALES

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- NOTES:**
- 1. IN THE EVENT THAT THE SEWER LINE IS FOUND IN CONFLICT WITH PROPOSED WATER MAIN ELEVATION, INSTALL WATER BELOW SEWER AS SHOWN IN DETAIL 3/C-503.
 - 2. SOILS EXCAVATED FROM STA: 222+75 TO STA: 223+25 SHALL BE SEGREGATED AND DISPOSED OF IN ACCORDANCE WITH THE CONTAMINATED MATERIALS MANAGEMENT PLAN, UNLESS MATERIAL IS SAMPLED AND DETERMINED TO BE BELOW THE APPLICABLE CLEANUP LIMITS.



			DRAWN	HRB	
			CHECKED	KAB	
			DATE	04-16-2025	
			PROJECT No. 10297.24002		
			SHEET NUMBER		
			C-319		
			No.	Date	Item
			REVISIONS		

CONSULTANT :

Juneau, AK
9080 Mendota Rd. Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AEC 163270

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

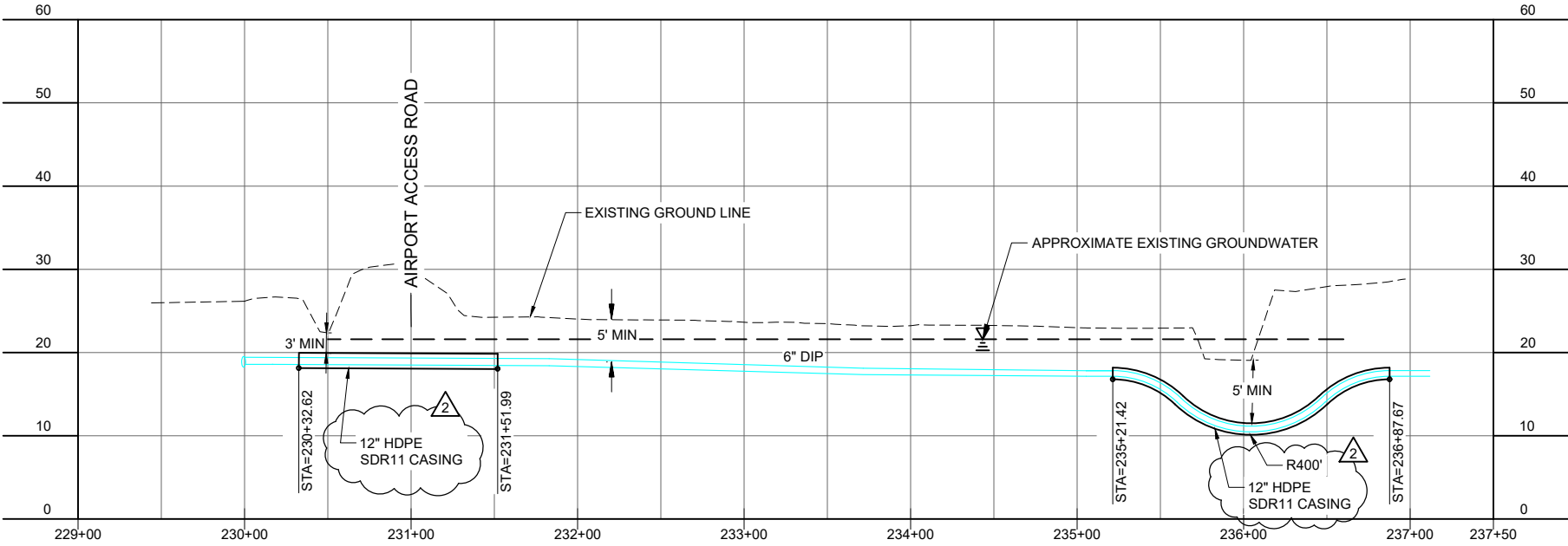
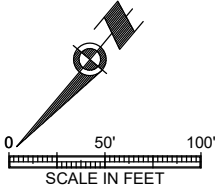
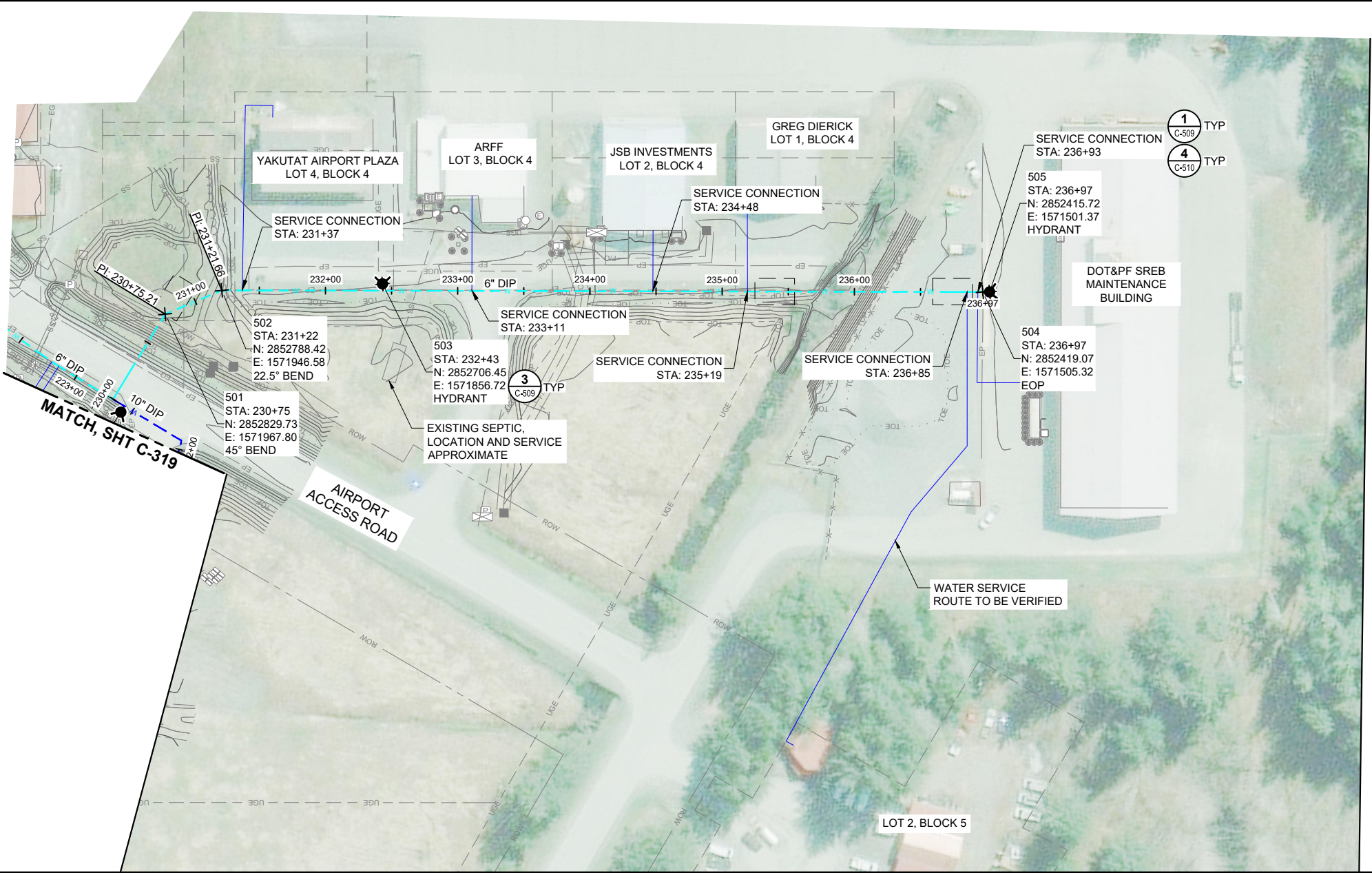
YAKUTAT, ALASKA

SHEET TITLE :

PLAN AND PROFILE -
ENDCOTT ROAD TO
AIRPORT ACCESS ROAD

STATE OF ALASKA
90297 24002
49 TH
KAREN ANN BRADY
09/24/2025
GE 1152
REGISTERED PROFESSIONAL ENGINEER

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING IT'S PRODUCTION, AFFECTING ALL LABELED SCALES



REVISIONS		
No.	Date	Item

CONSULTANT :



Juneau, AK

910297, 24002, Alaska Reg. No. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AEC 163270



PROJECT :

CITY & BOROUGH OF YAKUTAT

WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

PLAN AND PROFILE -

AIRPORT ACCESS ROAD

DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

PROJECT No.	
10297.24002	
SHEET NUMBER	
C-320	

IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING IT'S PRODUCTION. AFFECTING ALL LABELED SCALES



	09/24/2025	ADDENDUM No. 3
No.	Date	Item

REVISIONS

CONSULTANT :



Juneau, AK
9109 Mendenhall Mall Rd, Ste. 4
Juneau, AK 99801
Phone: 907.780.6060
Fax: 907.586.3771
AECC163270



PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :
AIRPORT ROAD TYPICAL SECTION

DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

PROJECT No.
10297.24002

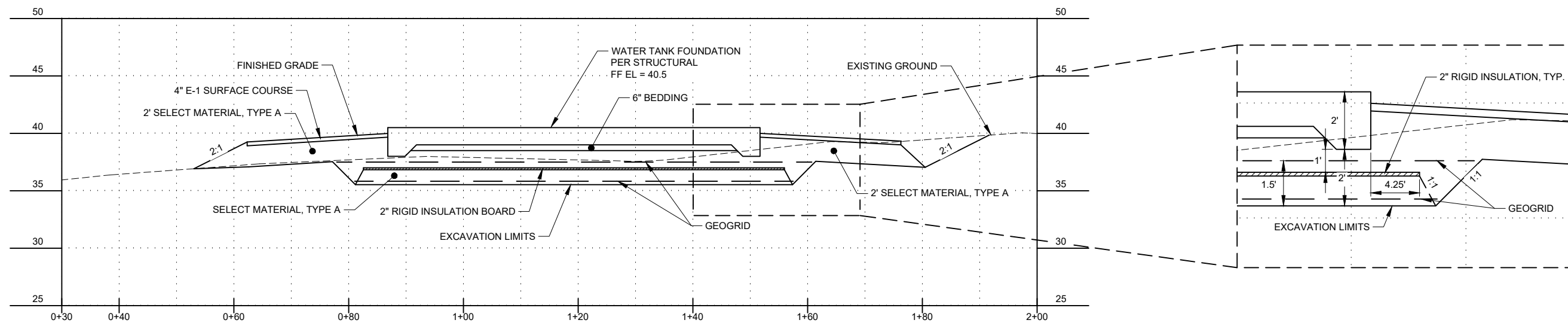
SHEET NUMBER

C-401

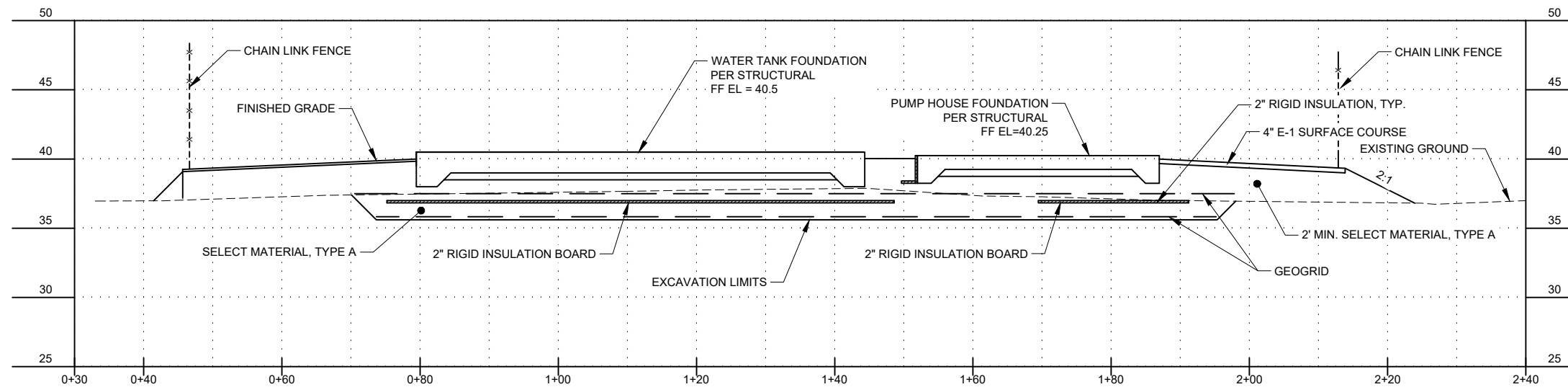
IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING IT'S PRODUCTION, AFFECTING ALL LABELED SCALES

1"

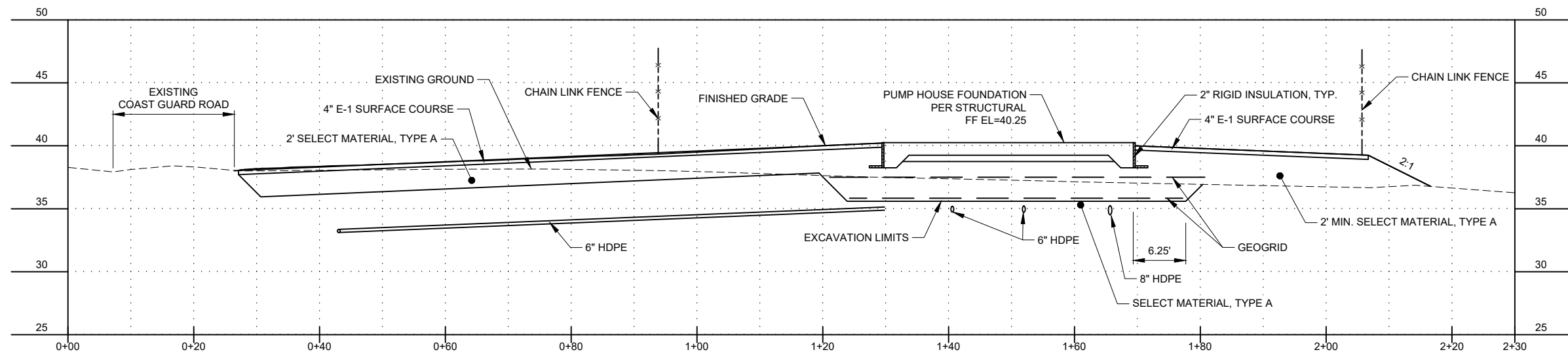
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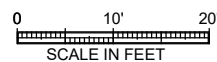
1 SOUTH TO NORTH WATER TANK SITE SECTION
C-402 SCALE: H:1:1, V: 2:1



2 WEST TO EAST WATER TANK & PUMP HOUSE SITE SECTION
C-402 SCALE: H:1:1, V: 2:1



3 NORTH TO SOUTH PUMP HOUSE SITE SECTION
C-402 SCALE: H:1:1, V: 2:1



NOTES:
1. ALL SLOPES AT 1:1 MAX, EXCEPT AS NOTED.

CONSULTANT :

STATE OF ALASKA
10297.24002
49TH
KAREN ANN BRADY
04/16/2025
CE 11523
REGISTERED PROFESSIONAL ENGINEER

Juneau, AK
9080 Mendota Mall Rd. Ste. 4
Juneau, AK 99801
Phone: 907.580.6060
Fax: 907.586.3771
AEC 163270

ASPEC

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

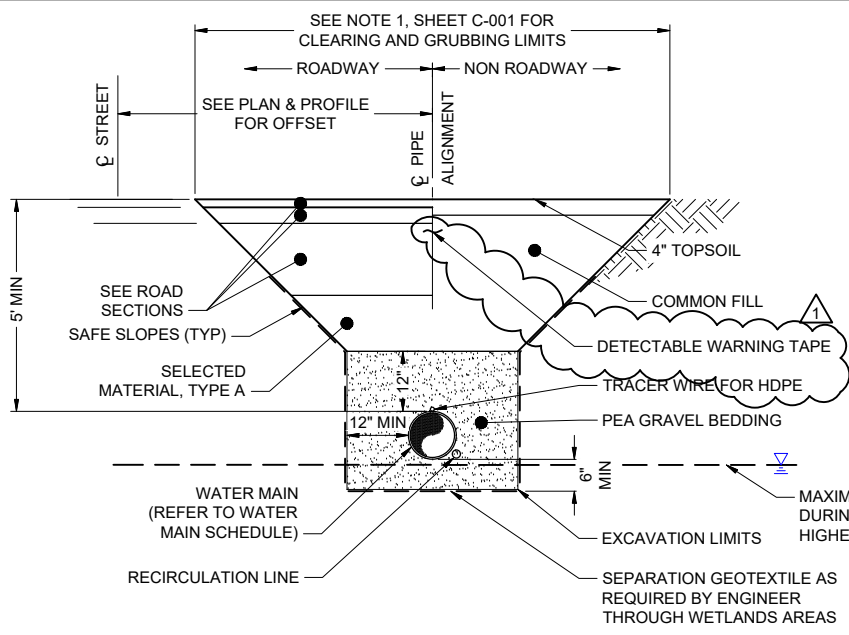
PUMP HOUSE CROSS SECTIONS

DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

PROJECT No.
10297.24002

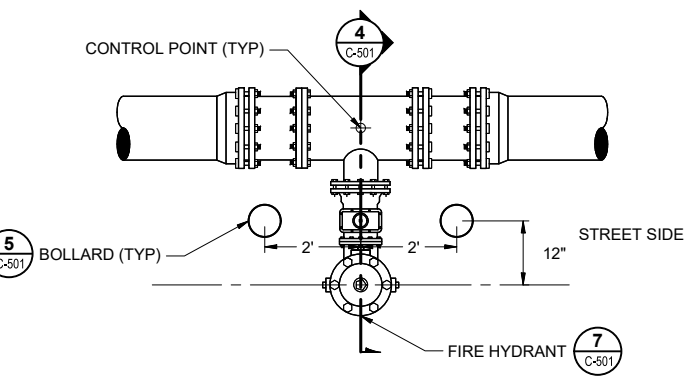
SHEET NUMBER
C-402

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES.



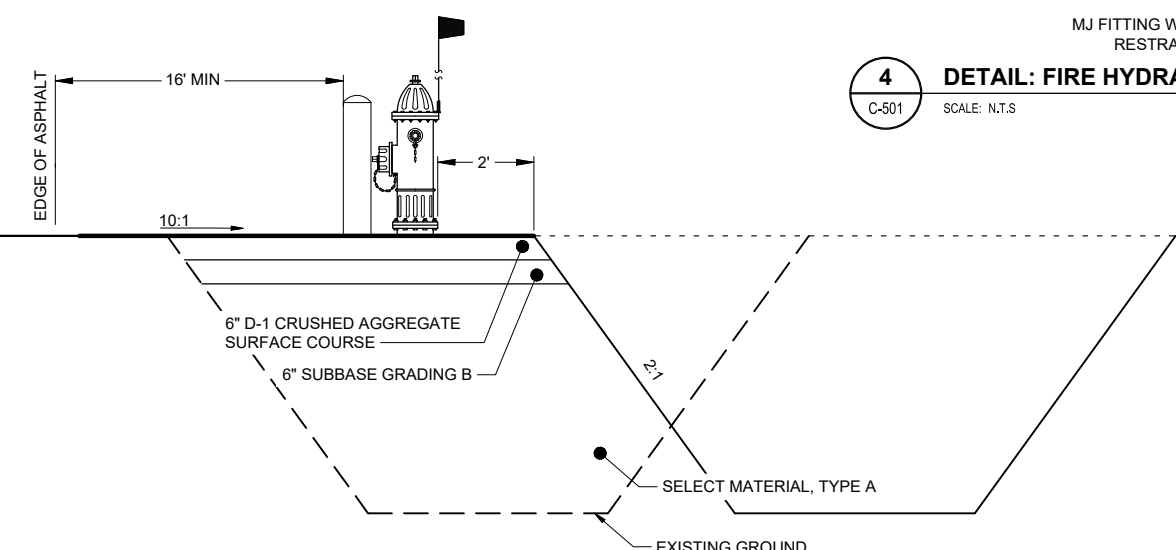
1 TYPICAL TRENCH SECTION

C-501 SCALE: N.T.S



3 DETAIL: FIRE HYDRANT PLAN

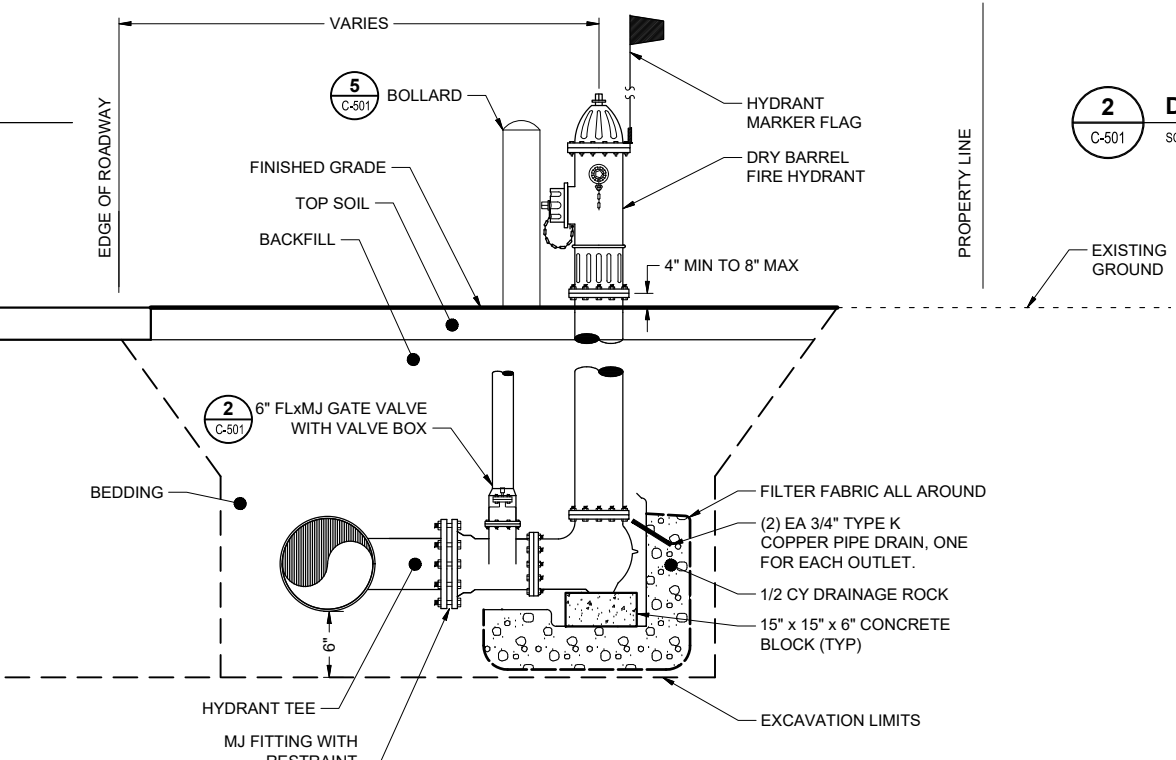
C-501 SCALE: N.T.S



6 DETAIL: HYDRANT WIDENING SECTION

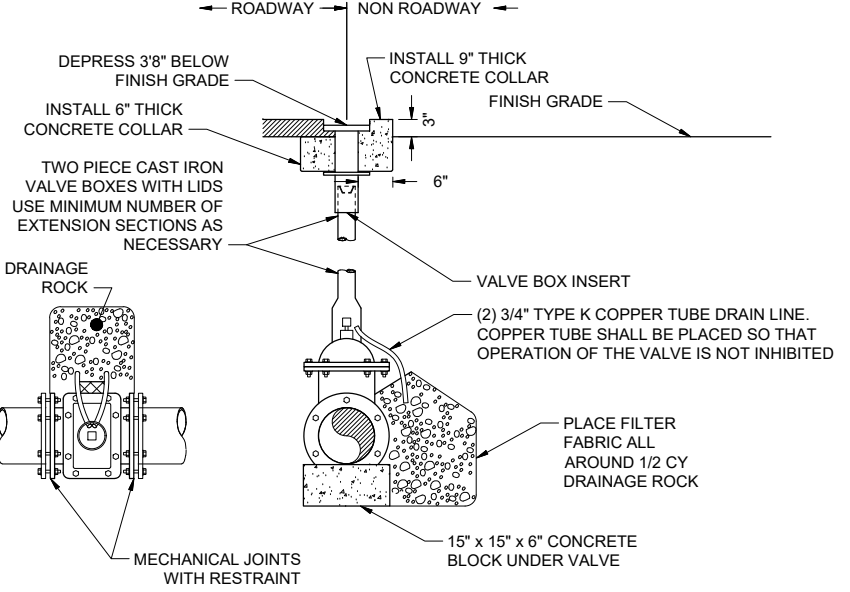
C-501 SCALE: N.T.S

PROPOSED WATER MAIN SCHEDULE				
SUPPLY RECIRC SIZE	PIPE TYPE	LOCATION	LENGTH (L.F.)	GATE VALVE QUANTITY
6" SUPPLY	HDPE SDR11	STA 10+00 TO 38+79 AND 40+37 TO 57+27	4600	15
10" SUPPLY 4" RECIRC	HDPE SDR11	STA 60+13 TO STA 197+17	13740	25
6" SUPPLY	DIP CLASS 50	STA 222+67 TO 227+03 AND 230+00 TO 236+97	1200	0
10" SUPPLY 4" RECIRC	DIP CLASS 50	STA 197+67 TO 222+67	2600	5
SIZE	DESCRIPTION		QUANTITY (EACH)	
SEE DETAIL	HYDRANT		31	
*HYDRANTS SHALL INCLUDE 6" GATE VALVES				



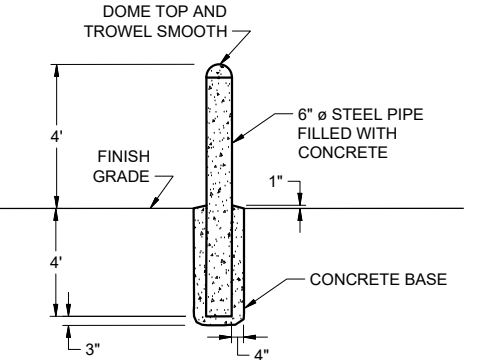
4 DETAIL: FIRE HYDRANT SECTION

C-501 SCALE: N.T.S



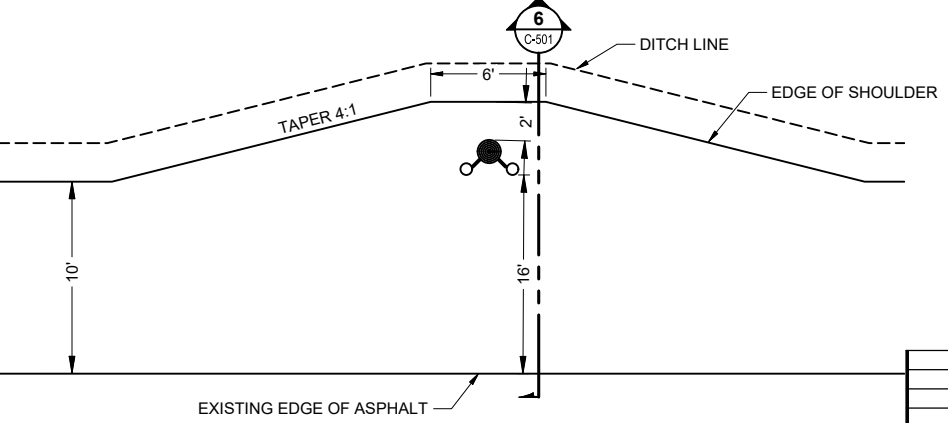
2 DETAIL: GATE VALVE

C-501 SCALE: N.T.S



5 DETAIL: BOLLARD

C-501 SCALE: N.T.S



7 DETAIL: HYDRANT WIDENING PLAN

C-501 SCALE: N.T.S

No.	Date	Item
REVISIONS		
1	09/24/2025	ADDENDUM No. 3
2	09/16/2025	ADDENDUM No. 2
3	08/27/2025	ADDENDUM No. 1

CONSULTANT:

STATE OF ALASKA
KAREN ANN BRADY
09/24/2025
REGISTERED PROFESSIONAL ENGINEER
0910297 24002

Juneau, AK
9109 Mendonhall Mall Rd. Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AEC 163270

PROJECT:

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

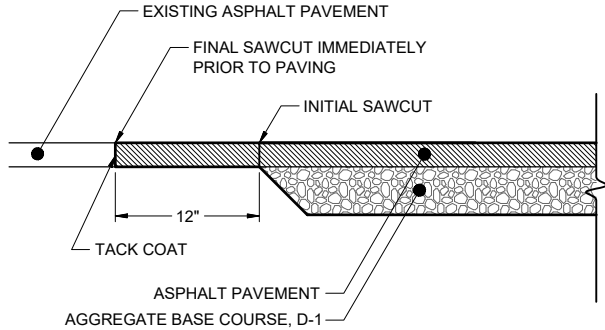
YAKUTAT, ALASKA

SHEET TITLE:

WATER PIPING DETAILS

DESIGN AMN
DRAWN HRB
CHECKED KAB
DATE 04-16-2025

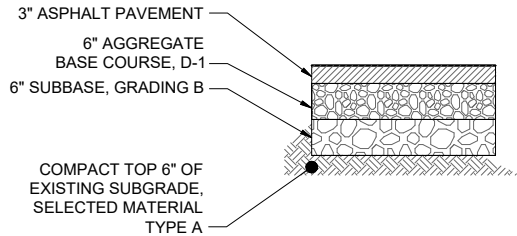
PROJECT No.
10297.24002
SHEET NUMBER
C-501



NOTES:

- ALL MATERIALS AND CONSTRUCTION IN PAVEMENT SECTION SHALL CONFORM WITH ALASKA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2020 EDITION.

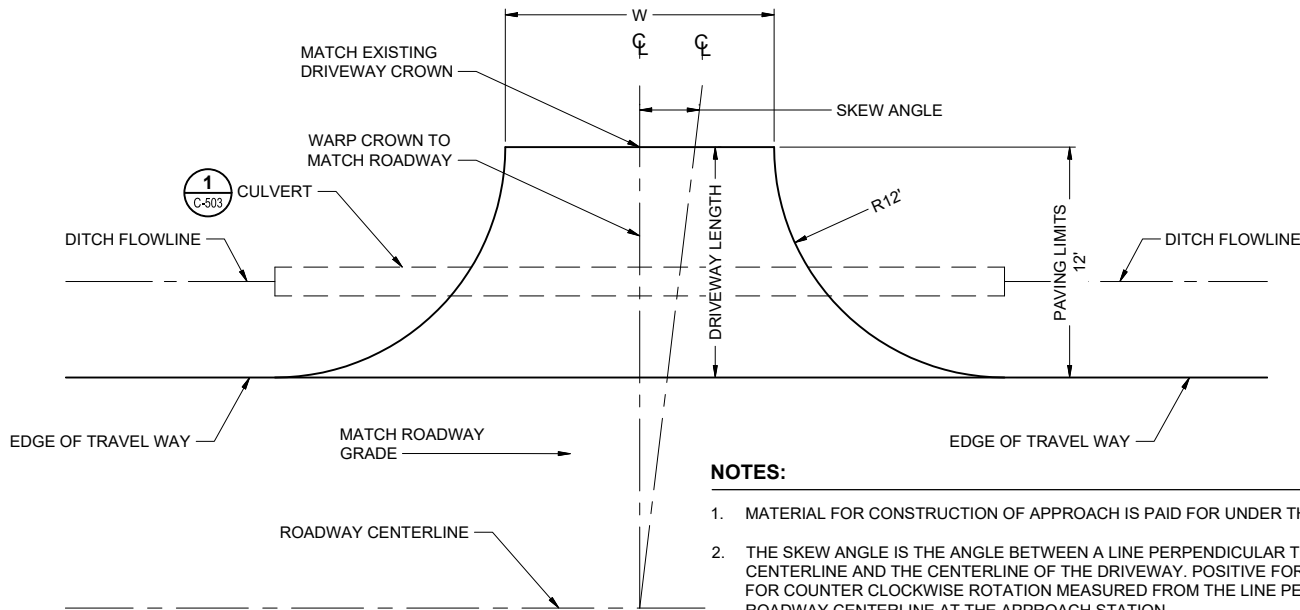
1 **DETAIL: ASPHALT SAWCUT & PATCH**
C-502 SCALE: N.T.S



NOTES:

- MATCH ADJACENT LAYER THICKNESS TO PROVIDE SIMILAR PAVEMENT PERFORMANCE WHILE MAINTAINING THE THICKNESS AS INDICATED.
- SAWCUT EXISTING CHIPSEAL OR ASPHALT FOR CLEAN JOINT BETWEEN EXISTING AND NEW WORK.
- ALL MATERIALS AND CONSTRUCTION IN PAVEMENT SECTION SHALL CONFORM WITH ALASKA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2020 EDITION.

3 **DETAIL: TYPICAL ASPHALT PAVEMENT SECTION**
C-502 SCALE: N.T.S



NOTES:

- MATERIAL FOR CONSTRUCTION OF APPROACH IS PAID FOR UNDER THE RESPECTIVE PAY ITEM.
- THE SKEW ANGLE IS THE ANGLE BETWEEN A LINE PERPENDICULAR TO THE ROADWAY CENTERLINE AND THE CENTERLINE OF THE DRIVEWAY. POSITIVE FOR CLOCKWISE AND NEGATIVE FOR COUNTER CLOCKWISE ROTATION MEASURED FROM THE LINE PERPENDICULAR TO THE ROADWAY CENTERLINE AT THE APPROACH STATION.
- RESIDENTIAL DRIVEWAY WIDTHS SHALL BE 20' FOR SINGLE FAMILY RESIDENCES, 30' FEET FOR MULTIPLE FAMILY RESIDENCES AND COMMERCIAL.

2 **DETAIL: DRIVEWAY PLAN**
C-502 SCALE: N.T.S

CONSULTANT :

STATE OF ALASKA
10297.24002
49 TH
KAREN ANN BRADY
04/16/2025
CE 11523
REGISTERED PROFESSIONAL ENGINEER

Juneau, AK
9080 Mendota Mall Rd. Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AECOC 63270

PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION
YAKUTAT, ALASKA

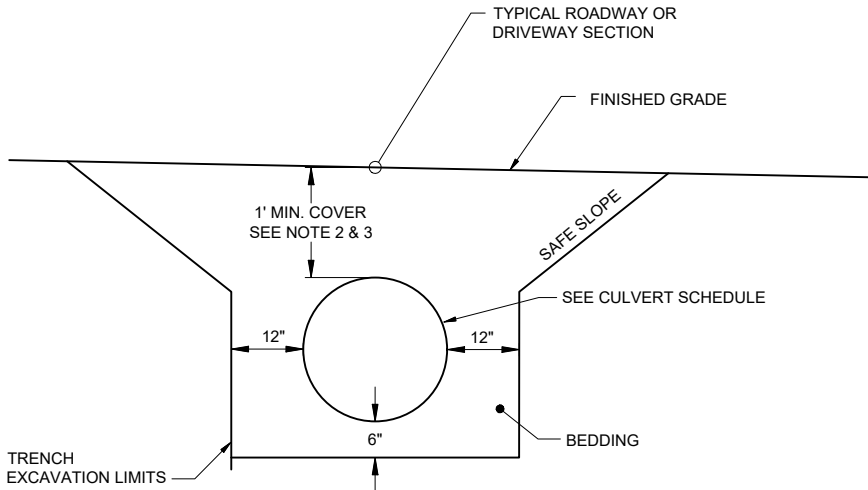
SHEET TITLE :
ASPHALT PAVEMENT
DETAILS

DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

PROJECT No.	10297.24002
SHEET NUMBER	C-502

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES

\\Project\10297.24002\CSV_Airport_Wtr_Ext\10297.24002-C-DETAILS-C-503_Apr 18, 2025 9:11 AM



NOTES:

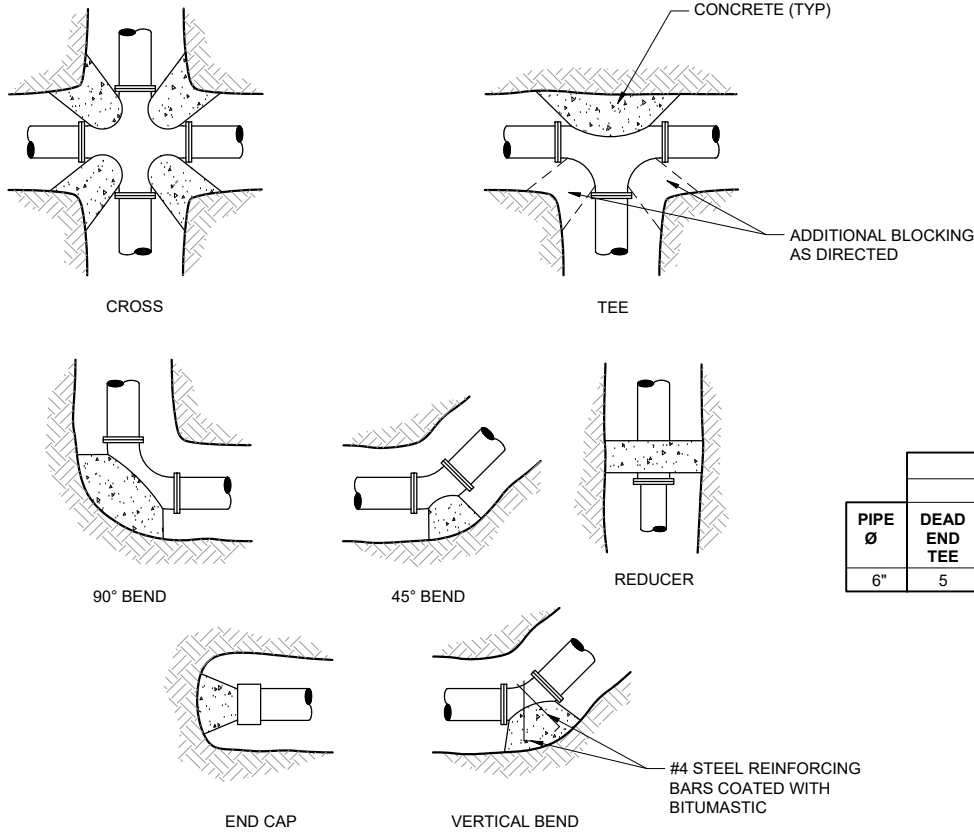
- BEFORE OPENING TO TRAFFIC, PLACE AND COMPACT MINIMUM COVER.
- SET INVERTS OF PIPE TO NEW DITCH LINE. SEE THIS SHEET FOR CULVERT SCHEDULE.
- FOR CPP CASING INVERT, SEE SCHEDULE.
- EACH CULVERT THAT IS REPLACED SHALL RECEIVE TWO END SECTIONS. IF ONLY ONE END OF THE CULVERT IS REPLACED, THEN ONE NEW END SECTION SHALL BE PROVIDED.
- FOR ANY CULVERTS WITH INCOMPLETE OR MISSING INFORMATION, CONTRACTOR SHALL RECORD AND MATCH EXISTING CULVERT SIZE AND INVERT ELEVATIONS.

1

DETAIL: CULVERT AND CPP CASING

C-503

SCALE: N.T.S



2

DETAILS: THRUST BLOCK

C-503

SCALE: N.T.S

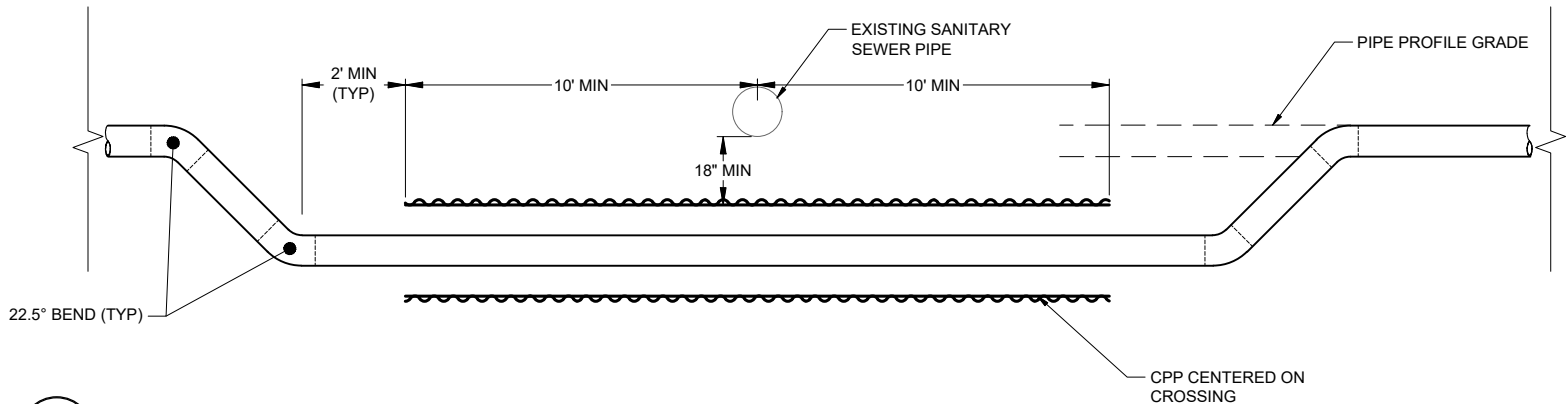
NOTES:

- BASED ON PRESSURE OF 200 psi, MIN COVER OF 3' AND SOIL BEARING OF 1500 psf.
- FOR SOIL BEARING
 - = 3000 psf, USE 0.5 AREA SHOWN
 - = 1000 psf, USE 1.5 AREA SHOWN
 - = 500 psf, USE 3.0 AREA SHOWN
- ALL ANCHORS AND THRUST BLOCKS SHALL BE PLACED AGAINST UNDISTURBED SOIL OR COMPACTED BEDDING.
- THRUST BLOCKS ON CROSSED SHALL BE USED WHENEVER PIPE DIAMETERS DIFFER OR WHEN ONE OR MORE OPENINGS ARE PLUGGED.
- FORM THRUST BLOCKS SO THAT BOLTS ARE NOT COVERED WITH CONCRETE AND ARE READILY ACCESSIBLE.
- ALL THRUST BLOCKS SHALL CONSIST OF A MINIMUM OF 0.5 CY CONCRETE.
- WRAP PIPE AND JOINTS WITH 6 mil POLYETHYLENE SHEETING.

PIPE Ø	HORIZONTAL TO END						VERTICAL BEND		
	MINIMUM BEARING AREA, SF						MIN VOL, CY		
	DEAD END TEE	90°	45°	22 1/2°	END CAP	CROSS EACH WAY	90°	45°	22 1/2°
6"	5	7	4	2	5	2	2.6	1.4	0.7

CULVERT SCHEDULE										
CULVERT NUMBER	ROAD NAME	PLAN SHEET NUMBER	STATION	LENGTH				CROSSING (X) OR PARALLEL	INVERT	
				18"	24"	36"	60"		IN	OUT
SD-1	OPHIR CREEK ROAD	C-301	10+52	63'				X	59.1 LT	57.1 RT
SD-2	OPHIR CREEK ROAD	C-301	10+67	50'				X	58.4 LT	56.6 RT
SD-3	AIRPORT ROAD	C-314	162+50		50'			X	36.4 RT	35.7 LT
SD-4	AIRPORT ROAD	C-315	174+35				58'	X	29.6 LT	29.1 RT
SD-5	ENDICOTT ROAD	C-319	219+90			56'		X	23.5 LT	22.8 RT
SD-6	ENDICOTT ROAD	C-319	221+95		55'			X	22.0 RT	21.9 LT
SD-7	AIRPORT ROAD	C-304	41+12	53'-0"				PARALLEL	70.10 RT	69.49 RT
SD-8	AIRPORT ROAD	C-304	44+57	60'				PARALLEL	63.38 RT	62.47 RT

CPP CASING SCHEDULE					
CPP NUMBER	ROAD NAME	PLAN SHEET NUMBER	STATION	LENGTH	WATER MAIN INVERT
				18"	
CPP-1		C-317	203+89	20'	23.4
CPP-2		C-318	205+08	20'	22.7
CPP-3	ENDICOTT ROAD	C-319	221+00	20'	10.3
CPP-4	AIRPORT ACCESS ROAD	C-319	223+99	20'	10.5



3

DETAIL: SANITARY SEWER UTILITY CROSSING

C-503

SCALE: N.T.S

CONSULTANT :



Juneau, AK
9089 Mendota Rd. Ste. 4
Juneau, AK 99801
Phone: 907.980.6060
Fax: 907.986.3771
AECOC 63270



PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :
CULVERT AND THRUST BLOCK DETAILS

DESIGN AMN
DRAWN HRB
CHECKED KAB
DATE 04-16-2025

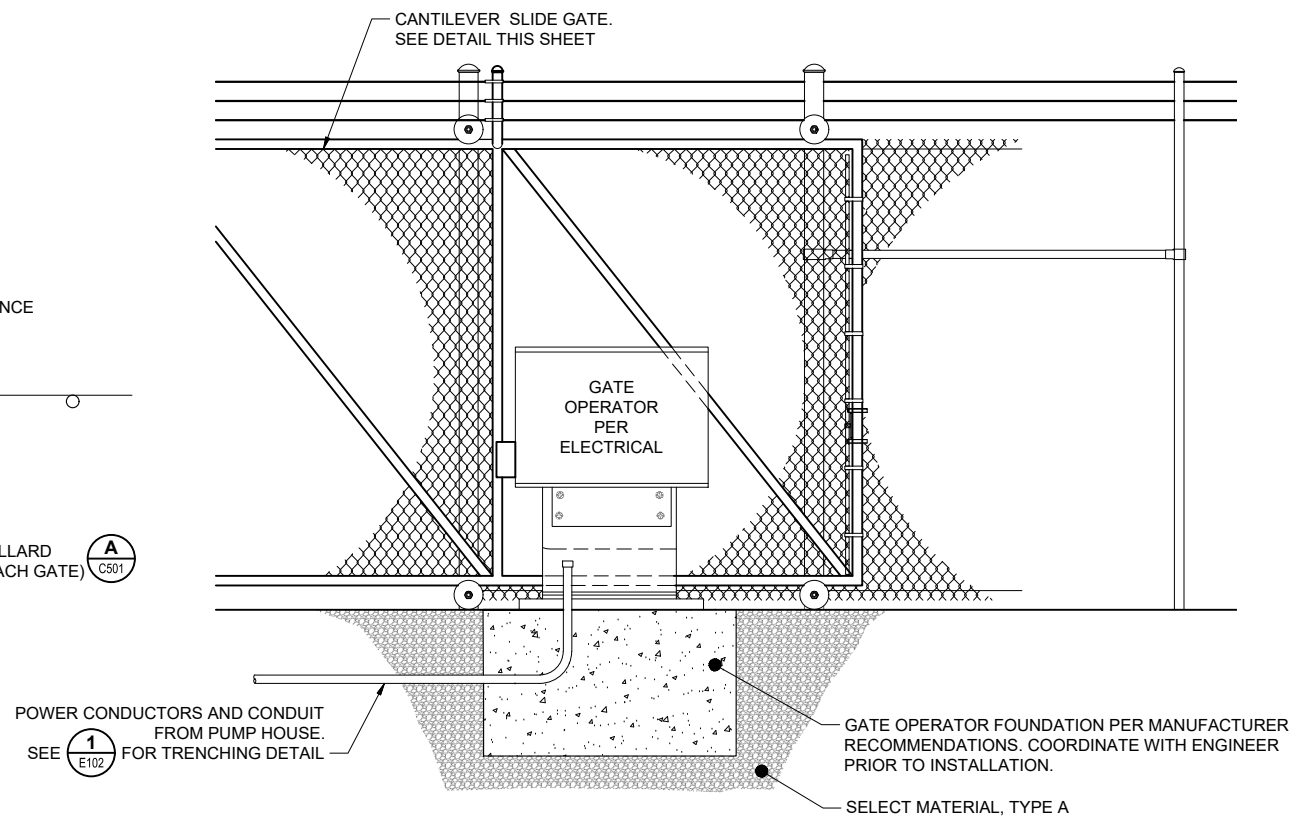
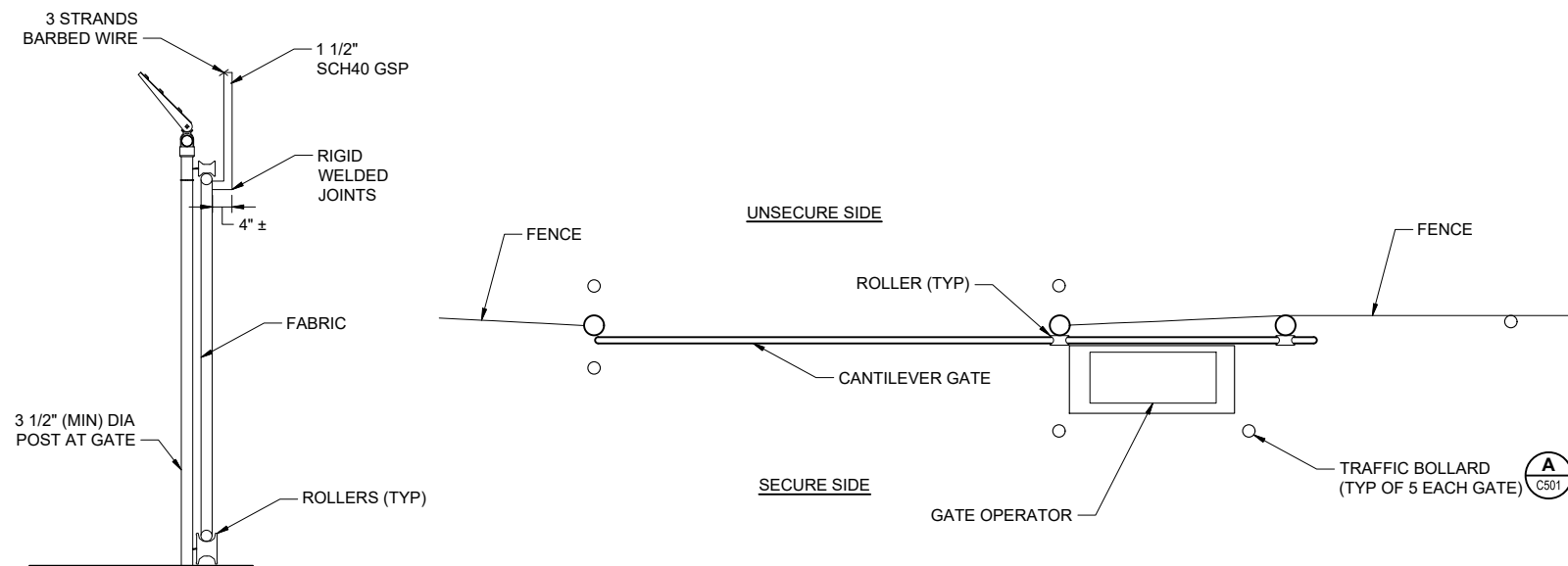
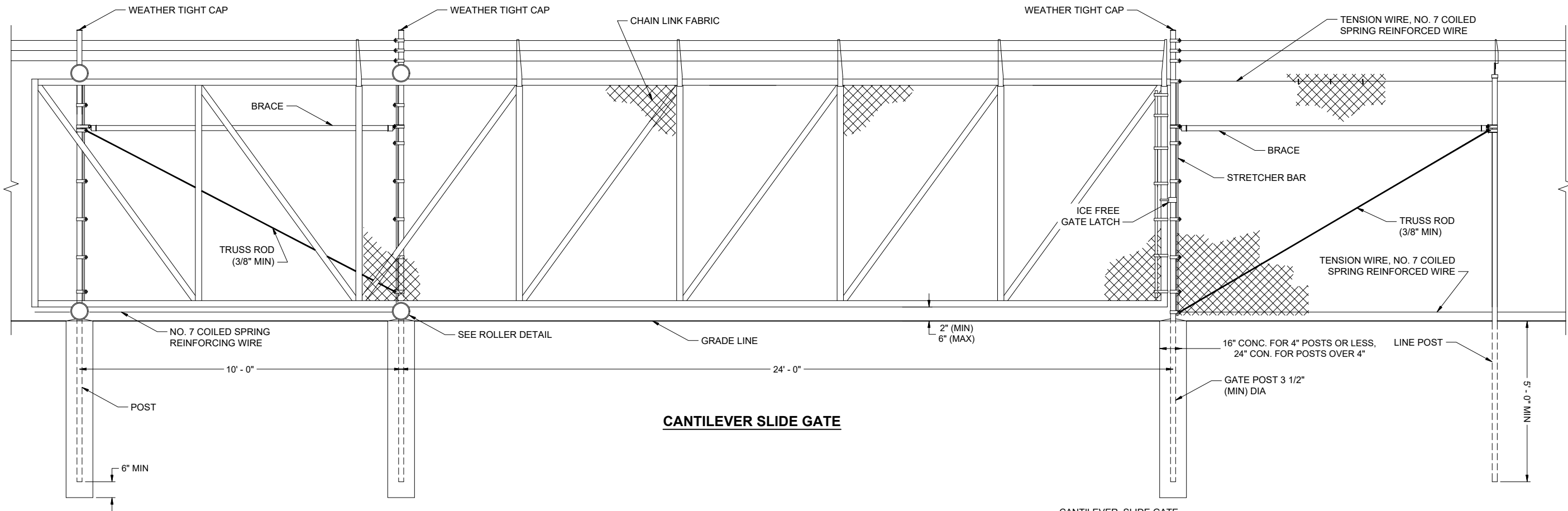
PROJECT No.
10297.24002

SHEET NUMBER

C-503

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES

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1

C-504

DETAIL: CANTILEVER SLIDE GATE
SCALE: N.T.S

CONSULTANT :

STATE OF ALASKA
10297.24002
49 TH
KAREN ANN BRADY
04/16/2025
CE 11523
REGISTERED PROFESSIONAL ENGINEER

Juneau, AK
9109 Mendota Rd. Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AECOC 63270

PROJECT :
**CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION**

YAKUTAT, ALASKA

SHEET TITLE :
CHAIN LINK DETAILS (1 OF 2)

DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER
C-504

IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING IT'S PRODUCTION. AFFECTING ALL LABELED SCALES



1
2
3
4
5
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7
8
9



Juneau, AK
9109 Mendontha Mall Rd, Ste. 4
Juneau, AK 99801
Phone: 907.780.6060
Fax: 907.586.3771
AECC163270



CITY & BOROUGH OF YAKUTAT WATER SYSTEM EXTENSION

IAKUUTAI, ALASKA

CHAIN LINK DETAILS (2 OF 2)

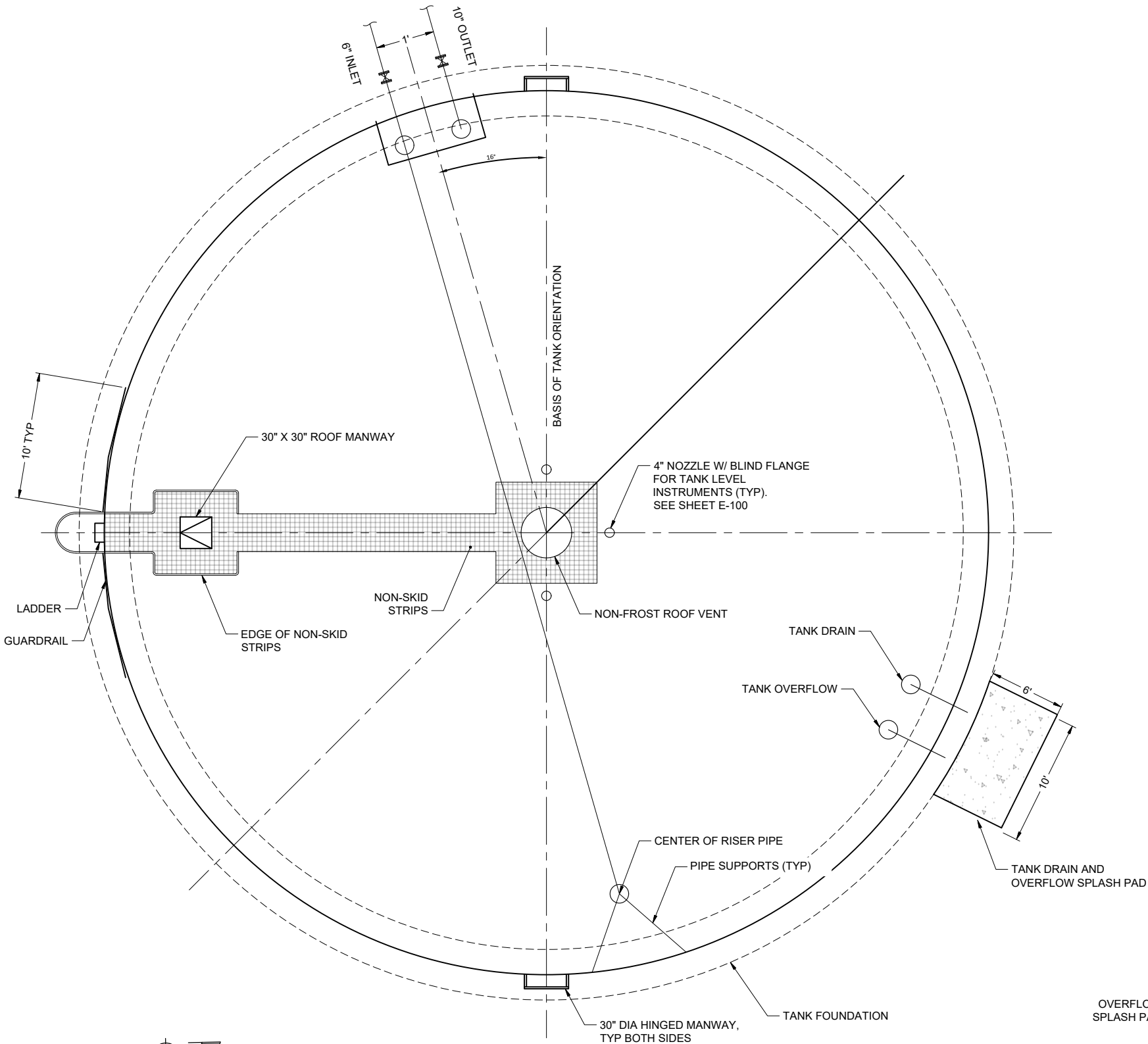
SIGN	AMN
LAWN	HRB
CHECKED	KAB
DATE	04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

C-505

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES

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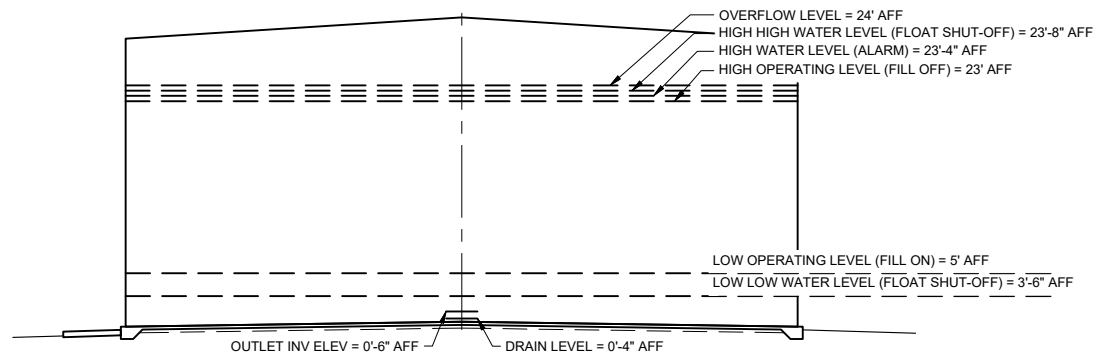


1 DETAIL: BOLTED STEEL TANK PLAN
SCALE: N.T.S.

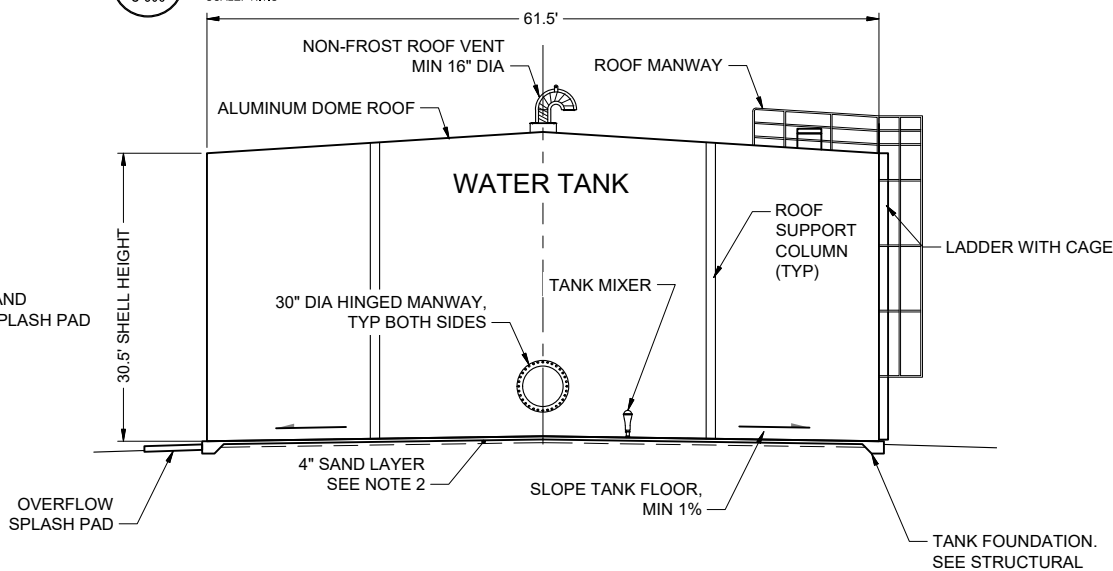
BOLTED STEEL WATER STORAGE TANK DESIGN CRITERIA	
SIZE	61'-6.5" DIAMETER +/- & 30'-6" TALL AT SHELL
CATHODIC PROTECTION	ACTIVE SYSTEM REQUIRED DESIGNED BY TANK MANUFACTURER, SEE SPECIFICATIONS
COATING SYSTEM	FACTORY APPLIED EPOXY COATING
SEISMIC	AS INDICATED, SEE SPECIFICATIONS
ROOF DESIGN	BALANCED SNOW LOAD = $p_g=186$, $l_e=1.2$, $C_e=1.0$, $C_r=1.2$, $P_f=188$ psf, SEE SPECIFICATIONS
WIND	WIND SPEED = 161 MPH, ASCE 07-16
FOUNDATION	SHALLOW FROST PROTECTED MAT FOUNDATION
WORKING CAPACITY ¹	500,000 U.S. GALLONS

NOTES:

- NORMAL WORKING CAPACITY IS FROM 0.5' TO 23.5' FROM FINISHED FLOOR. MAXIMUM FLUID AND OVERFLOW LEVEL IS 24'.
- TANK BEDDING TO BE MADE FROM CLEAN SAND MIXED WITH HYDRATED LIME TO OBTAIN A pH OF AT LEAST 10.5. THE RESISTIVITY OF THE SAND BEFORE HYDRATED LIME IS ADDED SHOULD BE GREATER THAN 3,000 OHM-CM WHEN SATURATED WITH DISTILLED WATER.
- WATER TANK STANDARDS:
 - AWWA D103-19 FACTORY-COATED BOLTED CARBON STEEL TANKS FOR WATER STORAGE
- TANK LEAK TESTING, CLEANING, DISINFECTION, TESTING, AND COMMISSIONING PER AWWA STANDARDS.
- A CORROSION ALLOWANCE OF 1/8" IS TO BE PROVIDED ON ALL PLATE STEEL OF TANK
- INTERIOR COATINGS OF TANK ARE TO BE NSF/ANSI 61 COMPLIANT. ALL MATERIAL TO BE PREPPED AND COATED PER MANUFACTURER'S RECOMMENDATIONS.
- EXTERIOR OF TANK TO BE PAINTED WITH EPOXY PAINT. ALL MATERIALS / WELDS TO BE PREPPED AND COATED PER MANUFACTURE'S RECOMMENDATIONS.
- TANK AIR VENT SHALL BE A PRESSURE VACUUMED SCREENED VENT, SIZED FOR MAKEUP AIR, AND TO PREVENT INFILTRATION OF INSECTS AND BIRDS.



2 DETAIL: BOLTED STEEL TANK LEVEL ELEVATION
SCALE: N.T.S.



3 DETAIL: BOLTED STEEL TANK EAST ELEVATION
SCALE: N.T.S.

CONSULTANT :



Juneau, AK
9100 Mendota Rd. Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AEC 63270



PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :
WATER STORAGE TANK
DETAILS (1 OF 2)

DESIGN AMN
DRAWN HRB
CHECKED KAB
DATE 04-16-2025

PROJECT No.
10297.24002

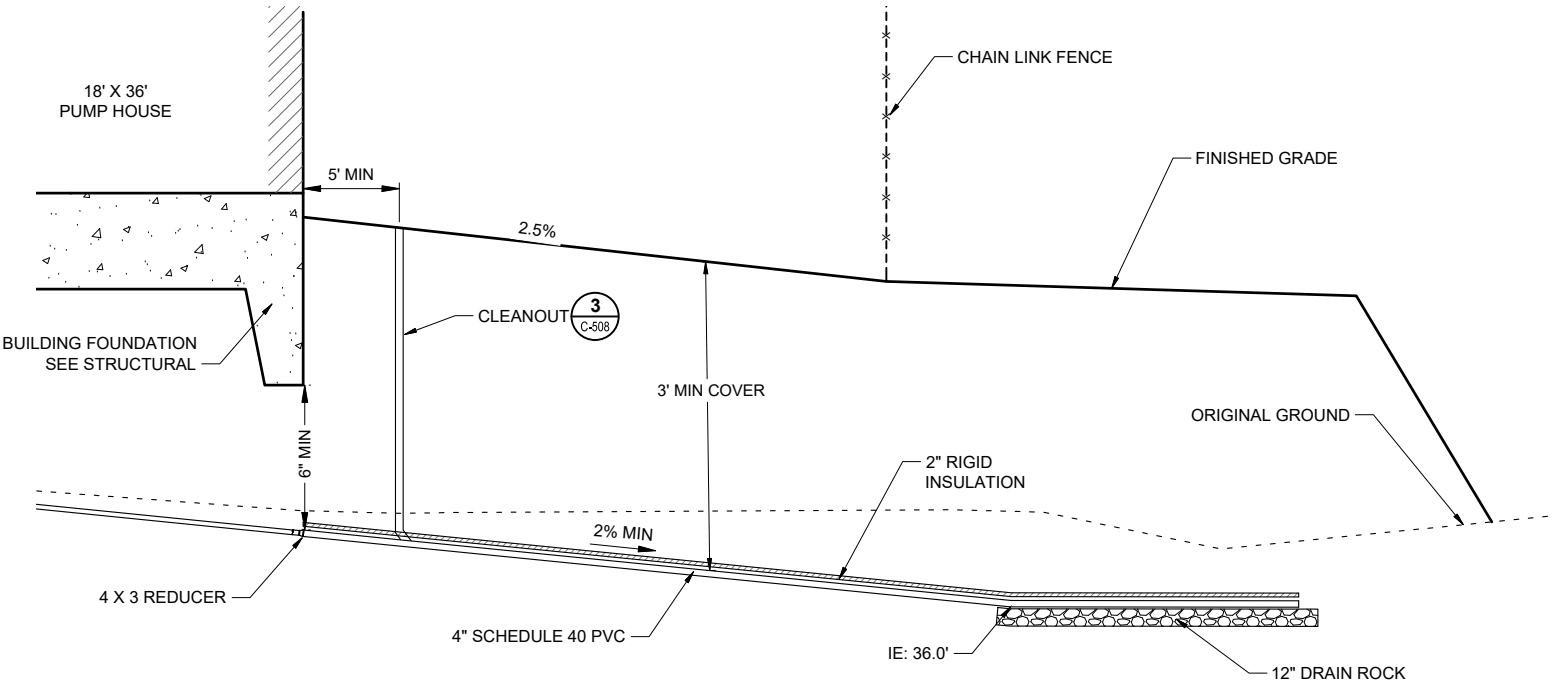
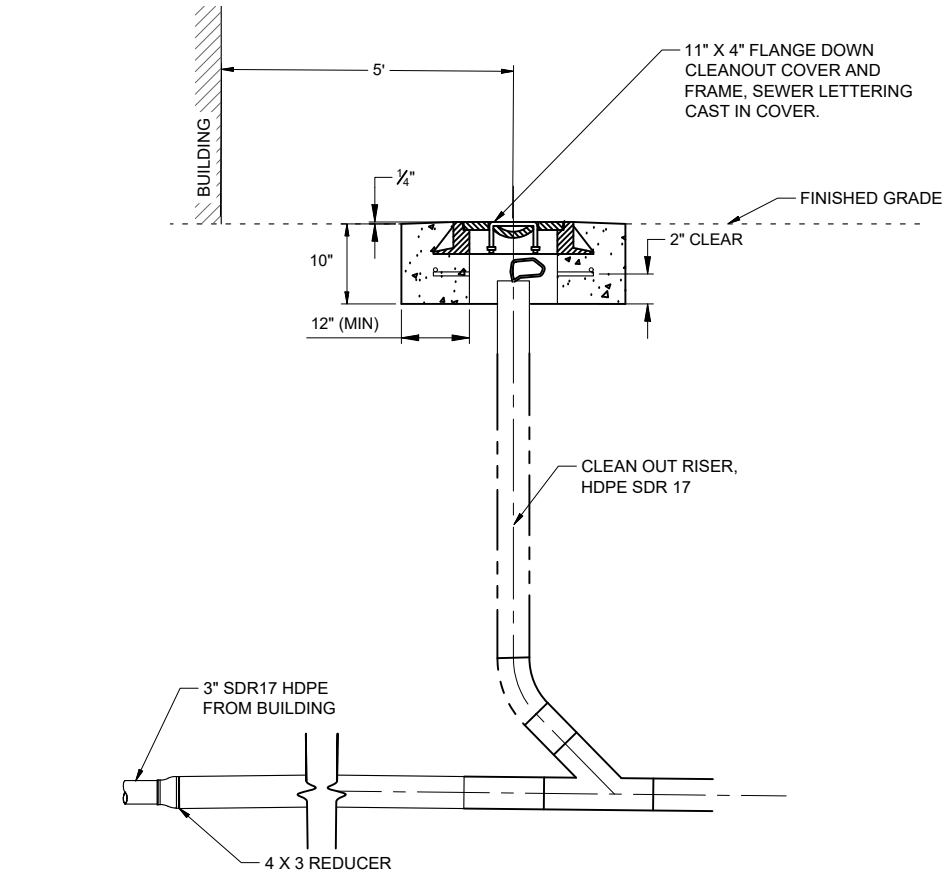
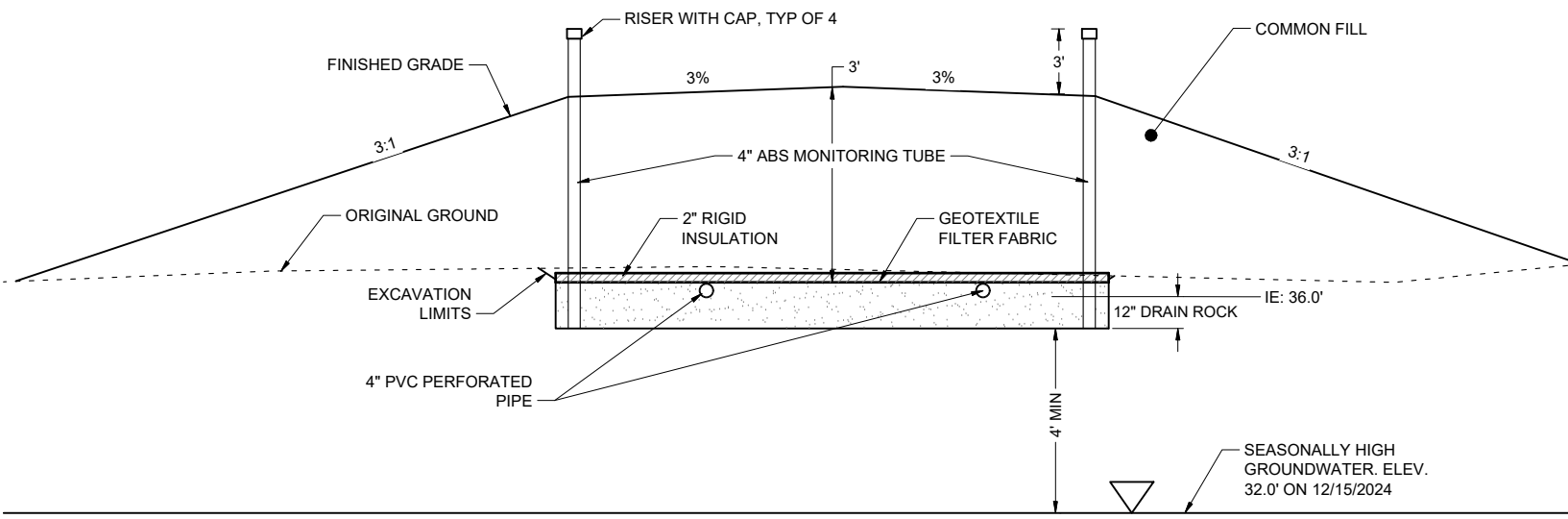
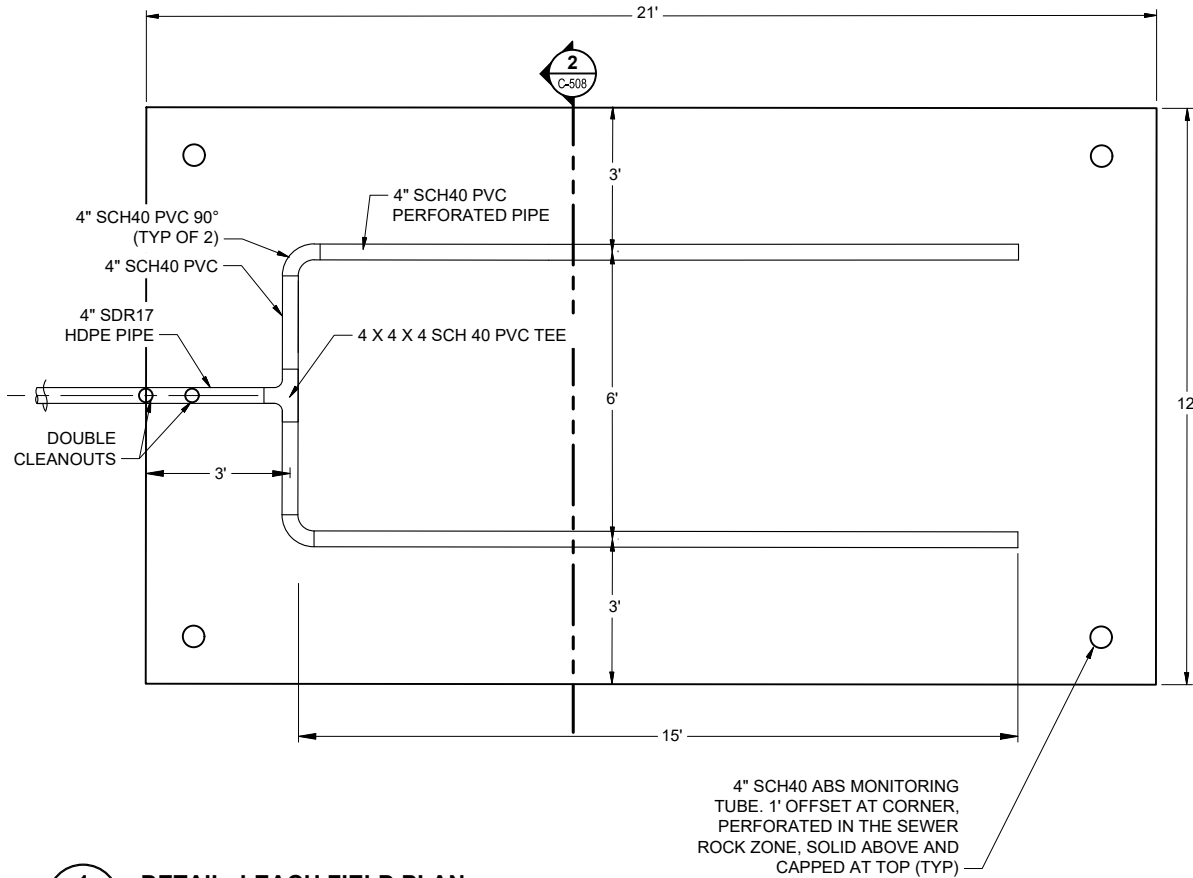
SHEET NUMBER

C-506



1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES

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CONSULTANT :



Juneau, AK
9103 Mendota Rd. Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AEC 163270

PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :
LEACH FIELD DETAILS

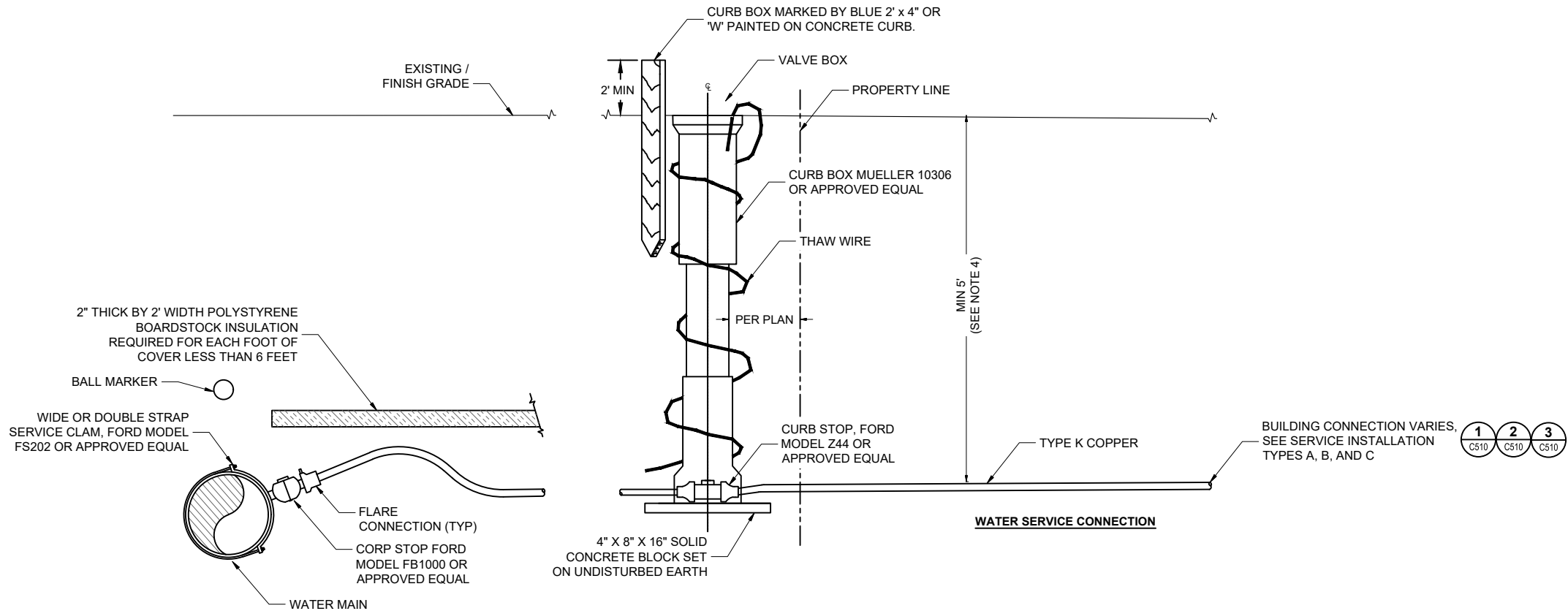
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DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

C-508

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING IT'S PRODUCTION, AFFECTING ALL LABELED SCALES

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1 **DETAIL: WATER SERVICE**
C-509 SCALE: N.T.S

NOTES

1. ALL JOINTS OR VALVES ON SERVICE SIDE OF METER MUST BE MECHANICAL FITTINGS.
2. ALL UNDERGROUND COPPER TUBE CONNECTIONS SHALL BE FLARED UNIONS.
3. CURB BOX MUST BE RESET SO THAT IT IS PLUMB, AND THAW WIRE SHALL BE WOUND AROUND OUTSIDE OF CURB BOX.
4. MINIMUM 5' OF COVER. WHERE COVER IS LESS THAN 5 FEET, PROVIDE 1 INCH OF BOARD INSULATION FOR EVERY FOOT LESS THAN 5 FEET OF COVER.

CONSULTANT :

STATE OF ALASKA
10297.24002
49 TH
Karen Ann Brady
KAREN ANN BRADY
04/16/2025
CE 11523
REGISTERED PROFESSIONAL ENGINEER

Juneau, AK
9102 Mendota Hall Rd. Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AEC 163270

PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION
YAKUTAT, ALASKA

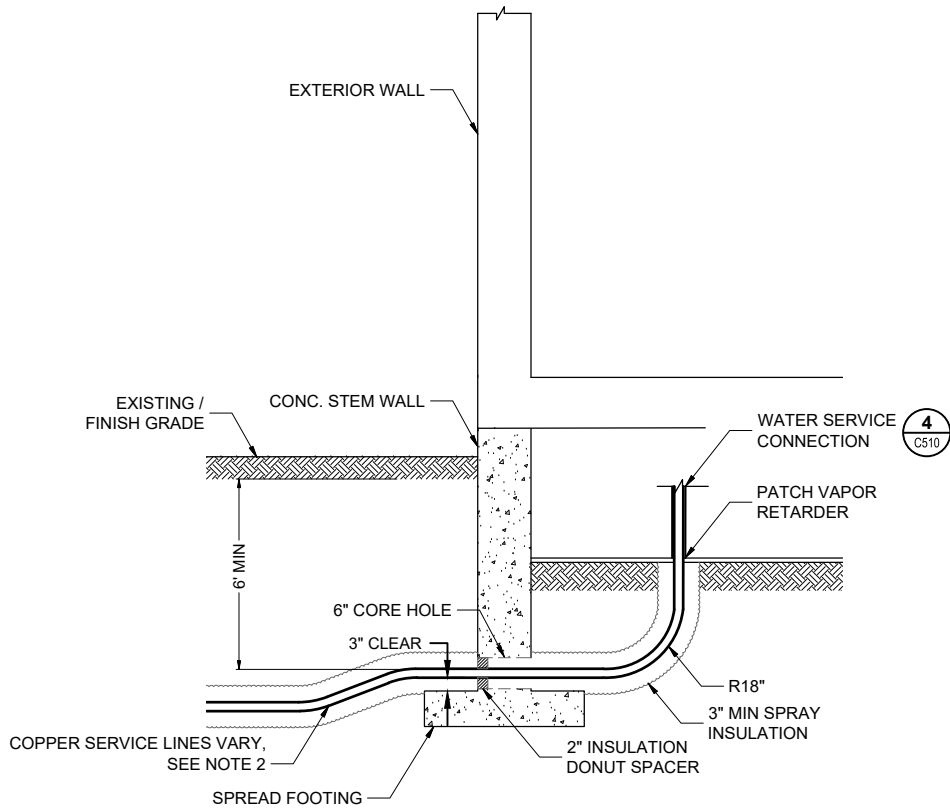
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WATER SERVICE DETAILS

DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

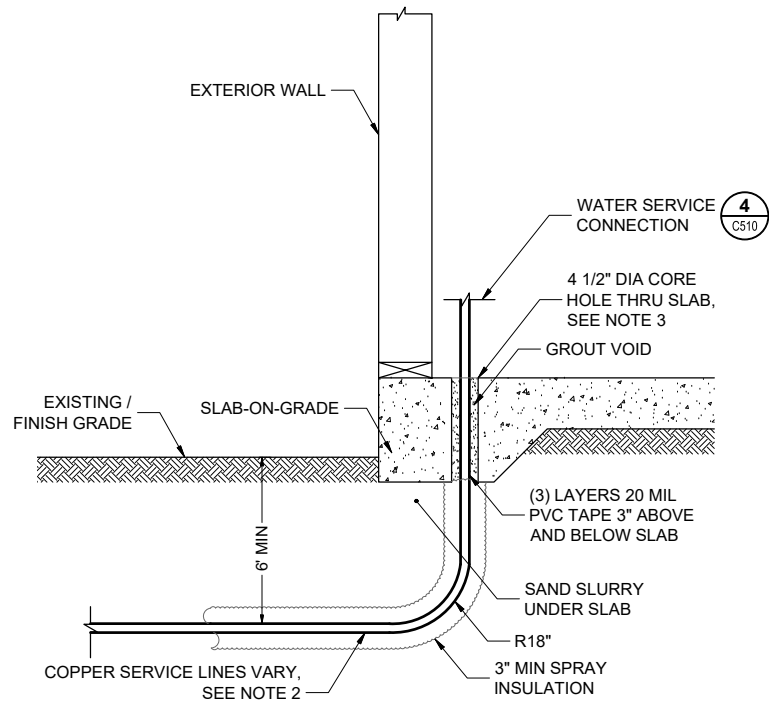
PROJECT No. 10297.24002
SHEET NUMBER C-509

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING IT'S PRODUCTION, AFFECTING ALL LABELED SCALES

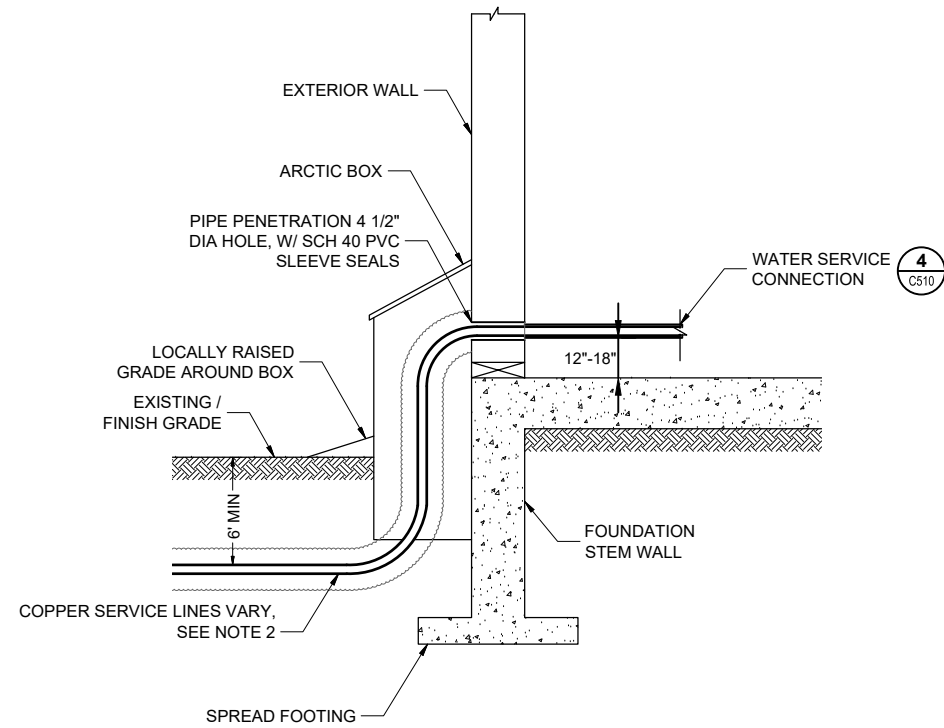
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1 **DETAIL: SERVICE INSTALLATION - TYPE A**
C-510 SCALE: N.T.S



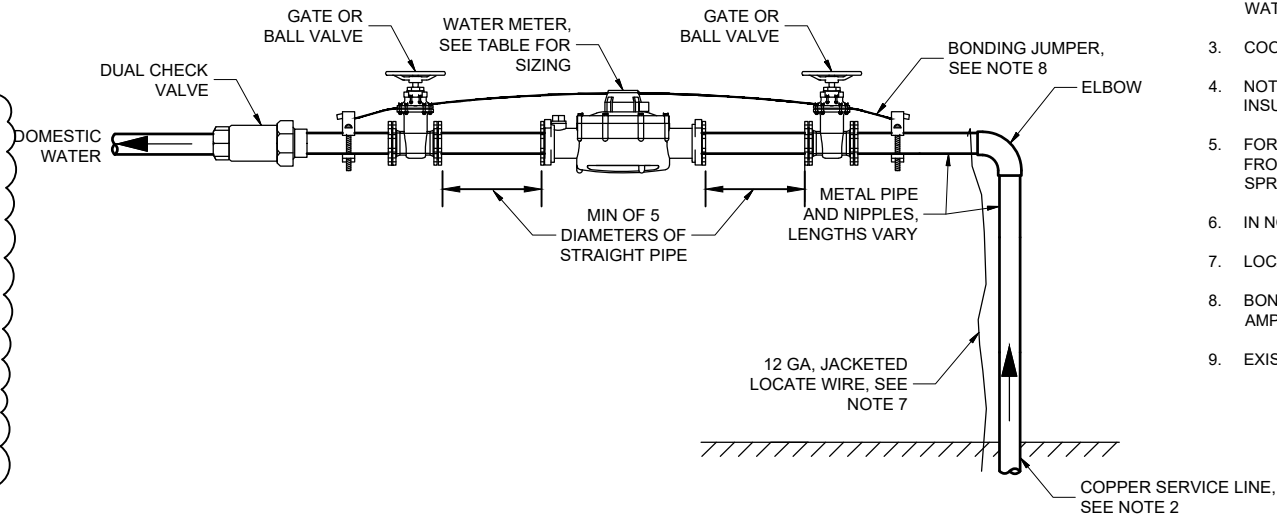
2 **DETAIL: SERVICE INSTALLATION - TYPE B**
C-510 SCALE: N.T.S



3 **DETAIL: SERVICE INSTALLATION - TYPE C**
C-510 SCALE: N.T.S

RECORDALL METER SCHEDULE			
MODEL	SIZE	OPERATING FLOW RATE	REGISTER MODEL
55	1"	1 - 55 GPM	
70	1"	1.25 - 70 GPM	
120	1-1/2"	2.5 - 120 GPM	
170	2"	2.5 - 170 GPM	
450	3"	4 - 450 GPM	

4 **DETAIL: RESIDENTAL CUSTOMER LINE WATER SERVICE CONNECTION**
C-510 SCALE: N.T.S



NOTES:

- LIMIT EXCAVATION WIDTH TO 12" WITHIN FOUNDATION FOOTPRINT.
- REFER TO WATER SERVICE SCHEDULE ON SHEET C701 FOR SPECIFIC SERVICE SIZES. SERVICE TREES MUST BE INSTALLED WITHIN CONDITIONED SPACE OF THE STRUCTURES. THE WATER SERVICE DEMARCATION POINT SHALL BE DOWNSTREAM OF THE SERVICE TREE AND DUEL CHECK VALVE, AT THE STRUCTURE'S PRIMARY DOMESTIC WATER SUPPLY POINT.
- COORDINATE PENETRATIONS WITH IN-SLAB HEAT TUBING IF PRESENT.
- NOTIFY AND ALLOW ENGINEER TIME FOR INSPECTION OF SERVICE CONNECTIONS PRIOR TO GROUTING AND INSULATION.
- FOR WATER SERVICE INSTALLATIONS WHERE LINES ARE TO BE INSTALLED ABOVE GRADE, INSULATE SERVICE LINES FROM 4 INCHES BELOW GRADE TO THE HEATED STRUCTURE THEY SERVICE WITH NO LESS THAN 8 INCHES OF SPRAYED URETHANE INSULATION.
- IN NO CASE SHALL URETHANE INSULATION BE EXPOSED TO UV LIGHT UPON FINAL INSTALLATION.
- LOCATE WIRE OPTIONAL FOR COPPER SERVICE LINES.
- BONDING JUMPER MUST MATCH ELECTRICAL COLD WATER GROUND WIRE. (EXAMPLE: NO. 4 WIRE FOR UP TO 200 AMP SERVICE.) BONDING JUMPER CLAMP MUST BE COMPATIBLE WITH COPPER PIPE.
- EXISTING WELL SUPPLY LINES SHALL BE CUT AND CAPPED PRIOR TO CONNECTING TO THE CBY WATER SYSTEM.

CONSULTANT :

Juneau, AK
9109 Mendota Rd. Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AEC 163270

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION
YAKUTAT, ALASKA

SHEET TITLE :

WATER METER AND SERVICE
INSTALLATION DETAILS

DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

PROJECT No.	
10297.24002	
SHEET NUMBER	
C-510	

No.	Date	Item
REVISIONS		

IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING IT'S PRODUCTION, AFFECTING ALL LABELED SCALES

LOT / BLOCK	PROPERTY USE	PHYSICAL ADDRESS	PROPERTY NOTES	PIPE SIZE	LENGTH OF SERVICE	REFERENCE SHEET
LOT A, BLOCK 1	COMMERCIAL	958 ENDICOTT WAY	WWII HANGER	2"	85	C-318
LOT 1A, BLOCK 1	COMMERCIAL	960 ENDICOTT WAY	ITALIO RIVER ADVENTURES	1"	237	C-318
LOT 2, BLOCK 2	COMMERCIAL	994 ENDICOTT WAY	DELTA WESTERN	1"	156	C-319
LOT 2, BLOCK 2	COMMERCIAL	996 ENDICOTT WAY	DELTA WESTERN	1"	161	C-319
LOT 3, BLOCK 2	COMMERCIAL	1020 AIRPORT ACCESS RD	COASTAL AIR SERVICES	1"	73	C-319
LOT 1A, BLOCK 3	COMMERCIAL	1023 AIRPORT ACCESS RD	YAKUTAT LODGE	1"	62	C-319
LOT 1A, BLOCK 3	COMMERCIAL	1033 AIRPORT ACCESS RD	YAKUTAT LODGE	1"	62	C-319
LOT 4A, BLOCK 2	COMMERCIAL	1034 AIRPORT ACCESS RD	YAKUTAT LODGE	1"	58	C-319
LOT 5, BLOCK 2	COMMERCIAL	1044 AIRPORT ACCESS RD	ALASKA AIR TERMINAL	1"	80	C-319
LOT 4, BLOCK 4	COMMERCIAL	951 AIRPORT ACCESS RD	YAKUTAT AIRPORT PLAZA	1"	179	C-320
LOT 4, BLOCK 4	COMMERCIAL	951 AIRPORT ACCESS RD	YAKUTAT AIRPORT PLAZA	1"	68	C-320
LOT 3, BLOCK 4	COMMERCIAL	941 AIRPORT ACCESS RD	AKDOT&PF ARFF	1"	72	C-320
LOT 2, BLOCK 4	COMMERCIAL	931 AIRPORT ACCESS RD	PARKS SERVICE HANGER	1"	46	C-320
LOT 1, BLOCK 4	COMMERCIAL	921 AIRPORT ACCESS RD	DIERICK HANGER	1"	67	C-320
	COMMERCIAL	1015 AIRPORT ACCESS RD	AKDOT&PF SREB MAINTENANCE	3"	132	C-320
LOT 2, BLOCK 5	COMMERCIAL	961 & 963 AIRPORT ACCESS RD	ECONOMY AUTO LEASING LLC	1"	386	C-320

[illegible]

CONSULTANT :



Juneau, AK
9109 Mendenhall Mall Rd. Ste. 4
Juneau, AK 99801
Phone: 907.780.6060
Fax: 907.586.3771
AECC163270



PROJECT :

CITY & BOROUGH OF YAKUTAT WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE:

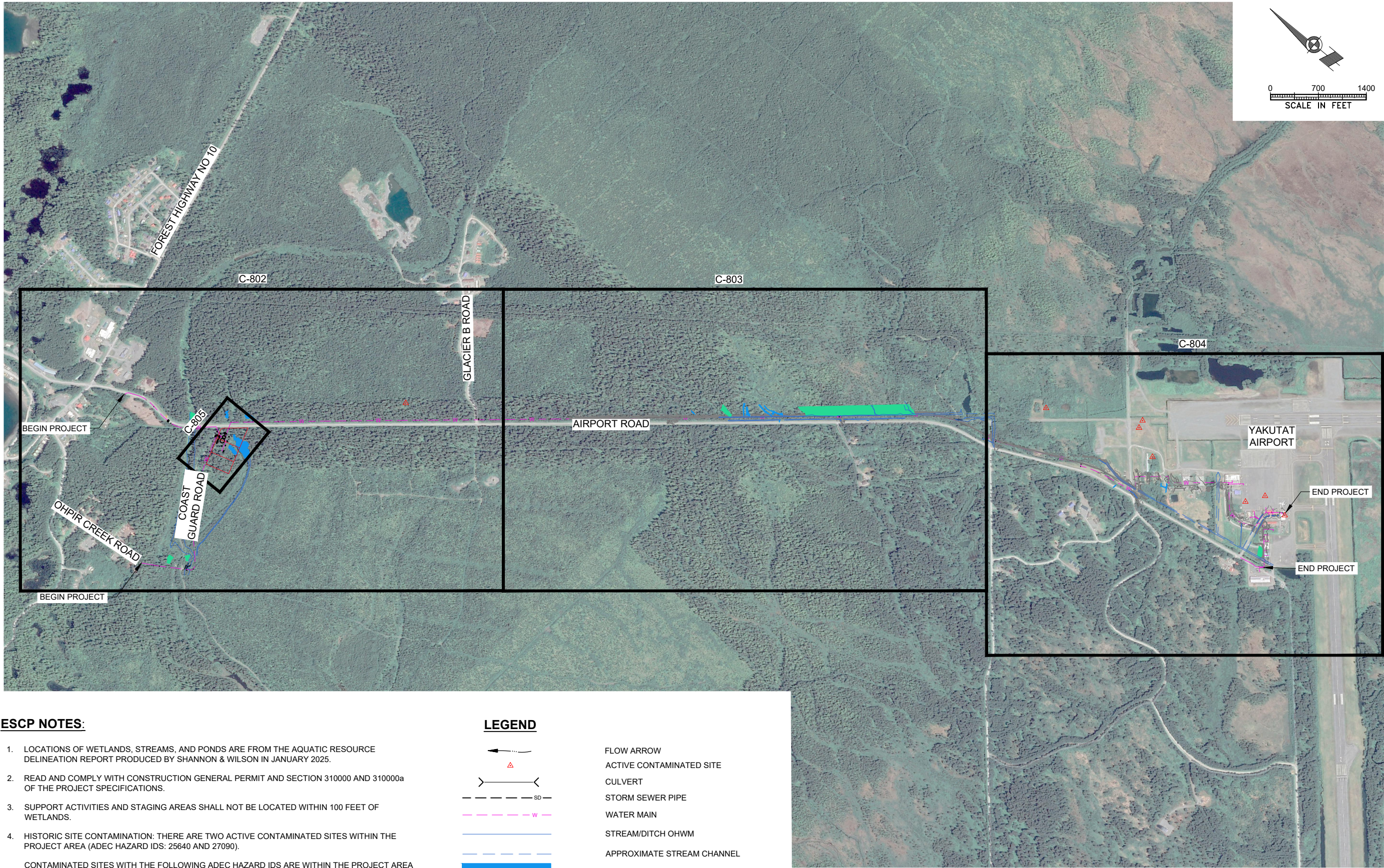
WATER SERVICE SCHEDULE

DESIGN	AMT
DRAWN	HRE
CHECKED	KAL
DATE	04-16-2021

PROJECT No.
10297.24002
SHEET NUMBER

C-701

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING IT'S PRODUCTION, AFFECTING ALL LABELED SCALES



ESCP NOTES:

- LOCATIONS OF WETLANDS, STREAMS, AND PONDS ARE FROM THE AQUATIC RESOURCE DELINEATION REPORT PRODUCED BY SHANNON & WILSON IN JANUARY 2025.
- READ AND COMPLY WITH CONSTRUCTION GENERAL PERMIT AND SECTION 310000 AND 310000a OF THE PROJECT SPECIFICATIONS.
- SUPPORT ACTIVITIES AND STAGING AREAS SHALL NOT BE LOCATED WITHIN 100 FEET OF WETLANDS.
- HISTORIC SITE CONTAMINATION: THERE ARE TWO ACTIVE CONTAMINATED SITES WITHIN THE PROJECT AREA (ADEC HAZARD IDS: 25640 AND 27090).

CONTAMINATED SITES WITH THE FOLLOWING ADEC HAZARD IDS ARE WITHIN THE PROJECT AREA BUT ARE NOT ANTICIPATED TO BE ENCOUNTERED: 2377, 2972, 25483, 26944, AND 27902. ONE ADDITIONAL CONTAMINATED SITE IS ADJACENT TO THE PROJECT AREA AND DOES NOT HAVE A HAZARD ID ASSIGNED BY ADEC. IT IS DENOTED AS ID 1.

SEE SECTION 312000 OF THE PROJECT SPECIFICATION FOR INFORMATION ON HANDLING CONTAMINATED SOIL.

LEGEND

	FLOW ARROW
	ACTIVE CONTAMINATED SITE
	CULVERT
	STORM SEWER PIPE
	WATER MAIN
	STREAM/DITCH OHWM
	APPROXIMATE STREAM CHANNEL
	POND/CHANNEL
	WETLAND
	CBY PARCELS

CONSULTANT :

Juneau, AK
9109 Mendota Hall Rd, Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AEC 163270

STATE OF ALASKA
10297.24002
49 TH
Karen Ann Brady
KAREN ANN BRADY
04/16/2025
CE 11523
REGISTERED PROFESSIONAL ENGINEER

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

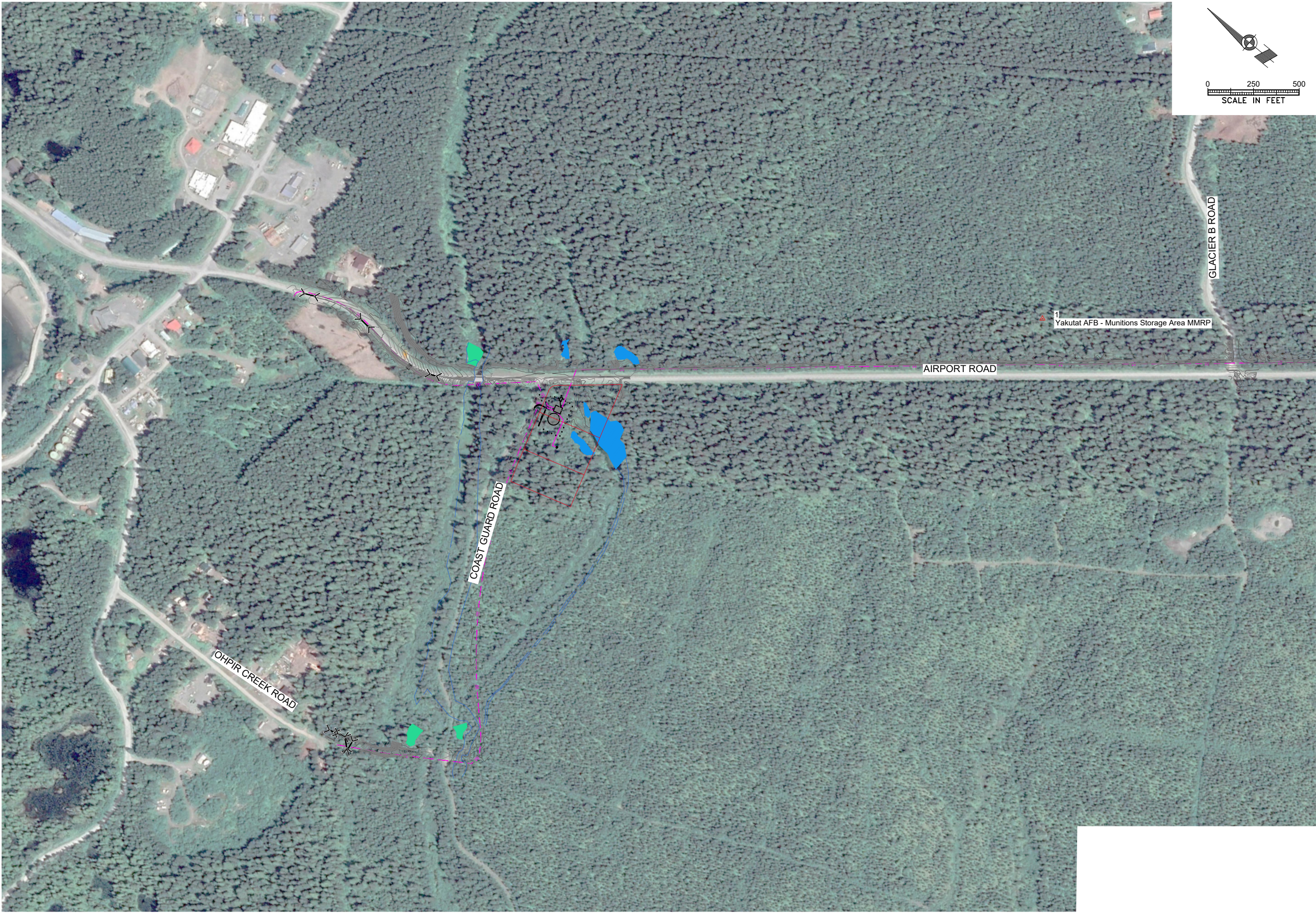
SHEET TITLE :

KEY MAP - EROSION AND
SEDIMENT CONTROL PLAN

DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

PROJECT No.
10297.24002

SHEET NUMBER
C-801



CONSULTANT :

STATE OF ALASKA
10297.24002
49TH
Karen Ann Brady
KAREN ANN BRADY
04/16/2025
CE 11523
REGISTERED PROFESSIONAL ENGINEER

Juneau, AK
9109 Mendota Hall Rd, Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AEC 163270

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

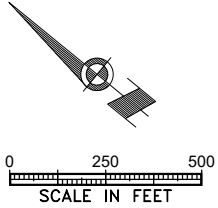
YAKUTAT, ALASKA

SHEET TITLE :

ESCP (1 OF 3)

DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER
C-802



CONSULTANT :

Juneau, AK

9109 Mendota Mall Rd, Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AEC 163270

PROJECT :

CITY & BOROUGH OF YAKUTAT

WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

ESCP (2 OF 3)

DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

PROJECT No.

10297.24002

SHEET NUMBER

C-803



CONSULTANT :

STATE OF ALASKA
10297.24002
49TH
Karen Ann Brady
KAREN ANN BRADY
04/16/2025
CE 11523
REGISTERED PROFESSIONAL ENGINEER

Juneau, AK
9109 Mendota Hill Rd, Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AEC 163270

SHEET TITLE :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

ESCP (3 OF 3)

DESIGN

AMN

DRAWN

HRB

CHECKED

KAB

DATE

04-16-2025

PROJECT No.

10297.24002

SHEET NUMBER

C-804

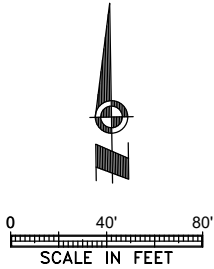
1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING IT'S PRODUCTION, AFFECTING ALL LABELED SCALES

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NOTES:

1. XXXX



CONSULTANT :

STATE OF ALASKA
10297.24002
49 TH
KAREN ANN BRADY
04/16/2025
CE 11523
REGISTERED PROFESSIONAL ENGINEER

Juneau, AK
9109 Mendota Mall Rd, Ste. 4
Juneau, AK 99801
Phone: 907.580.6060
Fax: 907.586.3771
AEC 163270

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

ESCP - PUMP HOUSE

DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

PROJECT No.
10297.24002

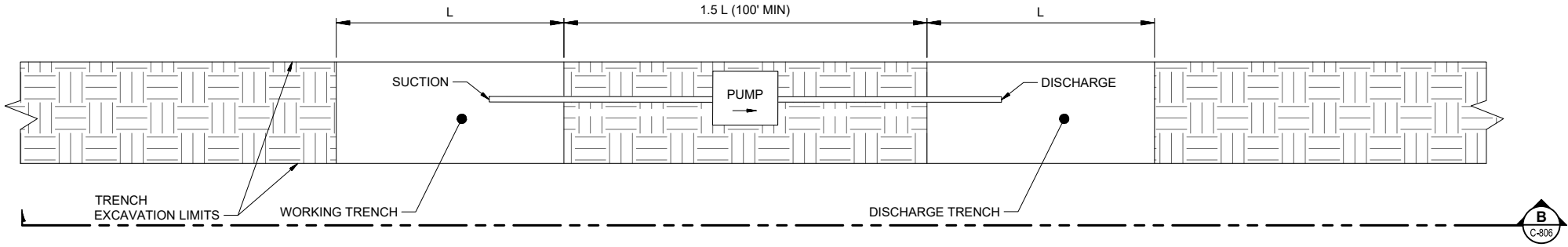
SHEET NUMBER
C-805

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING IT'S PRODUCTION, AFFECTING ALL LABELED SCALES

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NOTES:

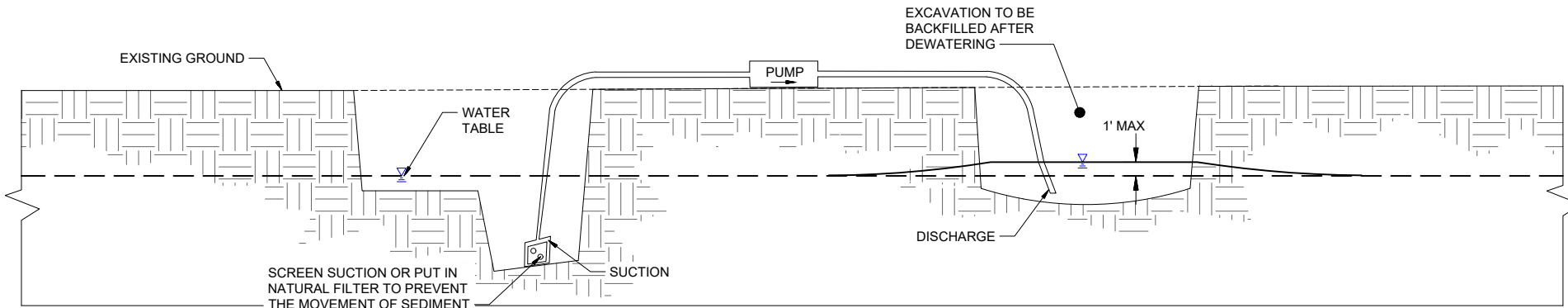
1. EXCAVATION DEWATERING DETAIL SHOWN APPLIES TO ENTIRE PROJECT AREA.
2. WATER SHOULD BE DISCHARGED WITHIN TRENCH CORRIDOR DEFINED FOR THIS PROJECT AND SHOWN IN THESE PLAN DRAWINGS. CONTRACTOR MAY UTILIZE AREA BEHIND OR AHEAD OF CURRENT EXCAVATION FOR DISCHARGE.
3. WATER LEVEL IN DISCHARGE TRENCH CANNOT BE RAISED BY MORE THAN ONE FOOT. TRENCH LENGTH SHALL BE INCREASED, IF NEEDED, TO PREVENT THIS.



A
C-806

**PLAN VIEW:
EXCAVATION DEWATERING CONCEPT**

SCALE : NTS



B
C-806

**SECTION:
EXCAVATION DEWATERING CONCEPT**

SCALE : NTS

CONSULTANT :



Juneau, AK
9109 Mendota Hall Rd. Ste. 4
Juneau, AK 99801
Phone: 907.586.3771
Fax: 907.586.3771
AEC 163270



PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :
DEWATERING DETAIL

DESIGN	AMN
DRAWN	HRB
CHECKED	KAB
DATE	04-16-2025

PROJECT No.
10297.24002

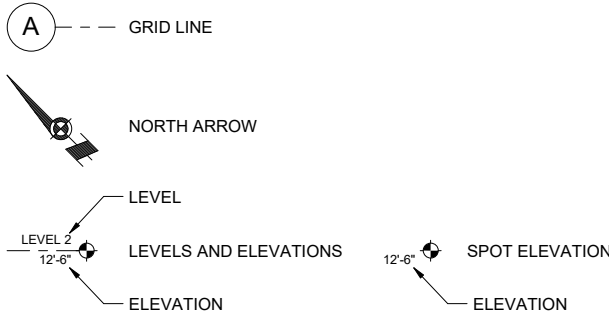
SHEET NUMBER

C-806

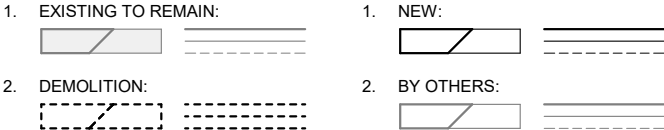
1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES

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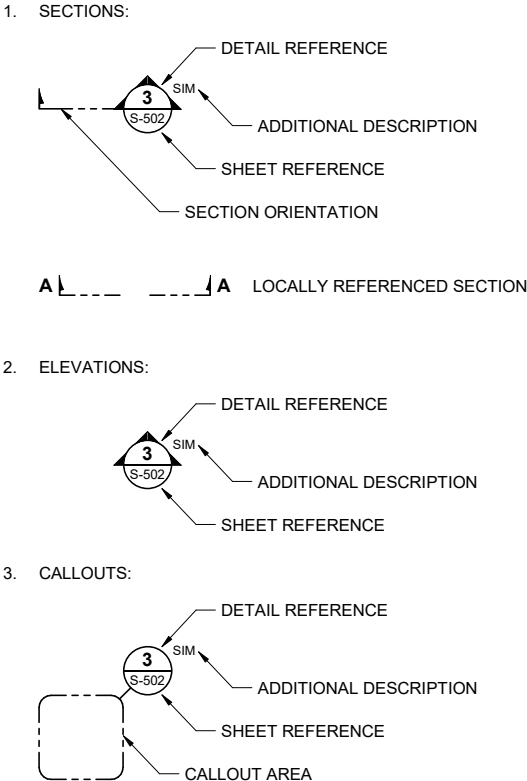
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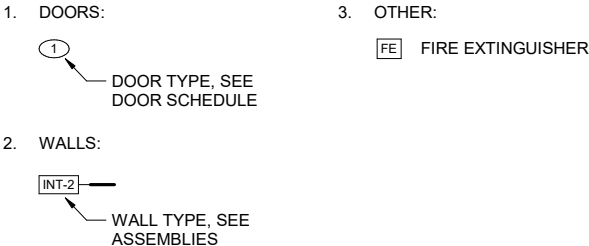
LINEWORK



REFERENCES



TAGS AND SYMBOLS



CODE ANALYSIS

1. DATE:

A. 10/4/2024
2. PROJECT:

A. YAKUTAT PUMP HOUSE
3. GENERAL DESCRIPTION:

A. NEW PRE-ENGINEERED METAL FRAME BUILDING HOUSING PUMP HOUSE-COOLING WATER PUMPS
4. CODE:

A. 2021 INTERNATIONAL BUILDING CODE, NFPA 101 (2021)
B. 2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
5. OCCUPANCY:

A. IBC 303.3 STORAGE BUILDING (S-2):

a. NFPA 101 - 40.1.2.1.2 SPECIAL PURPOSE INDUSTRIAL OCCUPANCY
6. GENERAL BUILDING HEIGHTS AND AREAS:

A. IBC TABLE 504.3 BUILDING HEIGHTS FOR GROUP S-2, TYPE V-B CONSTRUCTION

a. ALLOWABLE HEIGHT: 60'-0"

• ACTUAL: 25'-0"

B. TABLE 504.4 NUMBER OF STORIES FOR GROUP S-2, TYPE V-B CONSTRUCTION

a. STORIES ALLOWED: 2

• ACTUAL STORIES: 1

C. TABLE 506.2 BUILDING AREA FOR GROUP S-2, TYPE V-B CONSTRUCTION

a. AREA ALLOWED: 13,500 S.F.

• ACTUAL: 1,360 SQUARE FEET S-2 OCCUPANCY

D. 506.2 AUTOMATIC SPRINKLER SYSTEM INCREASE: NONE TAKEN

7. TYPE OF CONSTRUCTION:

A. TABLE 601 FIRE RESISTIVE RATING FOR BUILDING ELEMENTS TYPE V-B CONSTRUCTION:

a. PRIMARY: STRUCTURAL FRAME
b. BEARING WALLS: 0-HRS
c. INTERIOR: 0-HRS
d. EXTERIOR: 0-HRS

B. NONBEARING WALLS AND PARTITIONS

a. INTERIOR: 0-HRS
b. EXTERIOR: 0-HRS

C. TABLE 602 FIRE RESISTIVE RATING REQUIREMENTS BASED ON SEPARATION DISTANCE FOR GROUP S-2

a. <5FT: 1-HR
b. 5FT< - <10FT: 1-HR
c. 10FT< - <30FT: 0-HR
d. >30FT: 0-HR
8. RATED SEPARATIONS:

A. 2-HR BETWEEN MECHANICAL AND GENERATOR ROOM PER IBC 2702.1.3 AND NFPA 110-7.2.1.1.
9. SEPARATION DISTANCE:

A. 705.5 S-2 OCCUPANCY TYPE VB CONSTRUCTION SEPARATION DISTANCE BETWEEN 10 AND 30 FEET HAS A FIRE WALL RATING OF 0 HOURS.
10. FIRE PROTECTION:

A. AUTOMATIC SPRINKLERS NOT REQUIRED.
11. PORTABLE FIRE:

A. FIRE EXTINGUISHERS REQUIRED PER IBC 906.1, CLASS ABC (MINIMUM 2A:10B:C).

CODE ANALYSIS (CONTINUED)

12. MEANS OF EGRESS:

A. OCCUPANT LOAD: S-2 MECHANICAL EQUIPMENT ROOM 300 SF PER PERSON - 5 OCCUPANTS
B. MAXIMUM COMMON PATH TRAVEL DISTANCE WITH SPRINKLER: 100'

a. ACTUAL: 74'
13. ENERGY REQUIREMENTS TABLE C402.1.4 (YAKUTAT = CLIMATE ZONE 7, U-FACTOR REQUIREMENTS):

A. ROOFS: U-FACTOR 0.029 MAX (R-34.5)
B. WALLS: U-FACTOR 0.050 MAX (R-20)

GENERAL NOTES

1. FIELD VERIFICATION:

THE CONTRACTOR SHALL FIELD-VERIFY ALL DIMENSIONS PRIOR TO WORK. PROMPTLY NOTIFY THE ARCHITECT, OWNER'S REPRESENTATIVE, AND/OR THE CONTRACTING OFFICE OF ALL DISCREPANCIES.
2. PEMB BUILDING TO BE PROVIDED BY CONTRACTOR.

A. THE CONTRACTOR SHALL COORDINATE THE METAL BUILDING DESIGN WITH ALL TRADES AND INSTALLATIONS INCLUDED IN THE CONTRACT DOCUMENTS. THIS INCLUDES, BUT IS NOT LIMITED TO THE APPLICATION OF LOADS; FIT AND FUNCTION BETWEEN BUILDING AND OTHRE COMPONENTS; AND REQUIRED CLEARANCES FOR QUIPMENT OPERATION AND INTENDED OCCUPANT USE.

CONSULTANT :



Juneau, AK
9103 Wendenhall Mall Rd, Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC163270

RESPEC

PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION
YAKUTAT, ALASKA

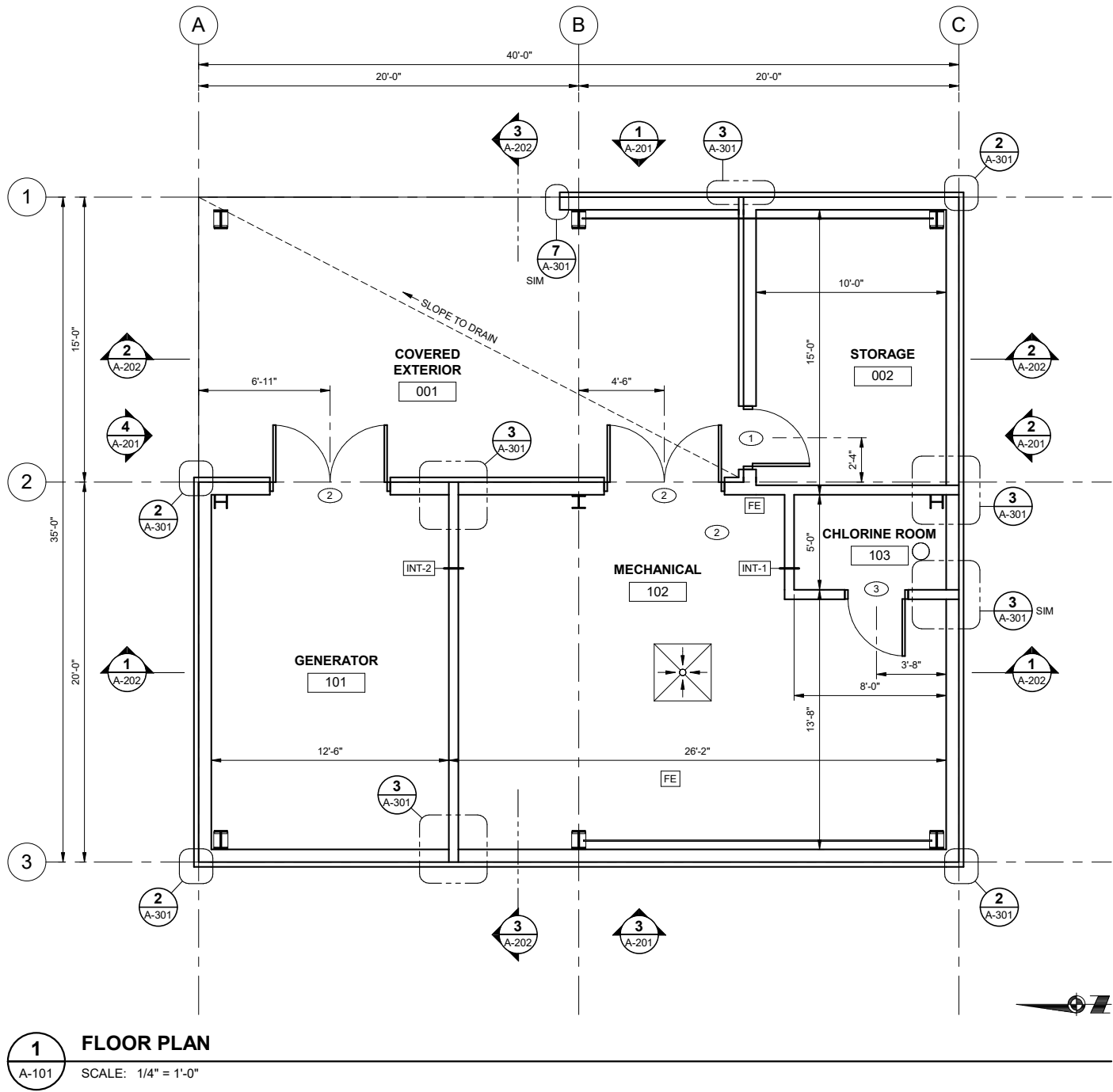
SHEET TITLE :
LEGEND, CODE ANALYSIS,
GENERAL NOTES

DESIGN	TKM
DRAWN	DJM
CHECKED	TKM
DATE	04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

A-001

No.	Date	Item
REVISIONS		



SHEET NOTES

- ALL NEW CONSTRUCTION DIMENSIONS ARE TO FACE OF FRAMING UNLESS NOTED OTHERWISE.
- ALL DIMENSIONS INDICATED AS CLEAR SHALL PROVIDE CLEARANCE TO FACE OF FINISH.
- INTERIOR DOORS TO BE LOCATED 4" CLEAR FROM FACE OF ADJACENT FRAMING, OR AS DIMENSIONED.
- SEE E-111 FOR REFLECTED CEILING PLAN (OPEN TO STRUCTURE).
- REFER TO MECHANICAL, ELECTRICAL, AND FIRE PROTECTION PLANS FOR EQUIPMENT AND RELATED ASSEMBLIES. CONTRACTOR TO COORDINATE WORK WITH OTHER TRADES.
- OPENINGS ARE DIMENSIONED TO CENTER OF OPENING. REFER TO DOOR SCHEDULE.
- SEE STRUCTURAL FOR HEADER SIZE AS REQUIRED.
- PROVIDE RATED PENETRATION ASSEMBLIES THROUGH RATED WALLS.

CONSULTANT :

STATE OF ALASKA

49TH

Trent Mullins

TRENT K MULLINS

No. AEA11194

4/16/25

REGISTERED PROFESSIONAL ARCHITECT

Juneau, AK

9103 Mendernall Mall Rd. Ste 4

Juneau, AK 99801

Phone: 907.780.6060

www.respec.com

AEC0163270

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PROJECT :

CITY & BOROUGH OF YAKUTAT

WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

PUMP HOUSE FLOOR PLAN

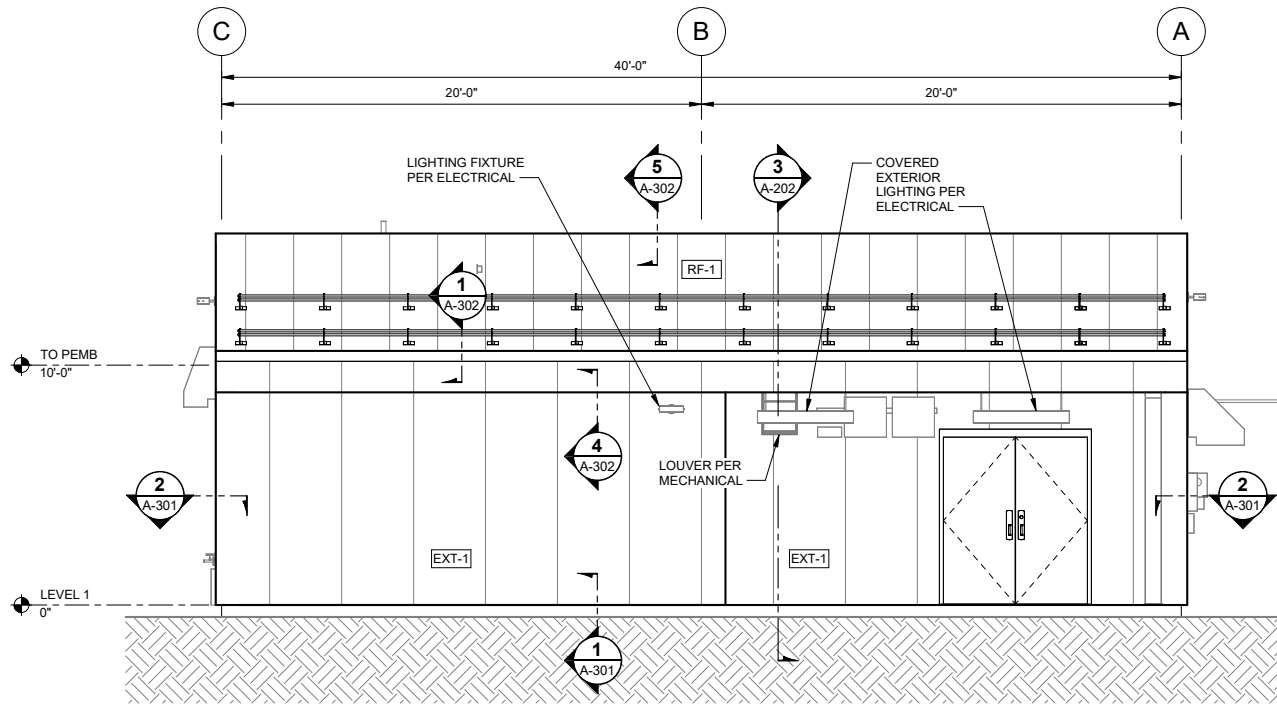
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DRAWN	DJM
CHECKED	TKM
DATE	04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

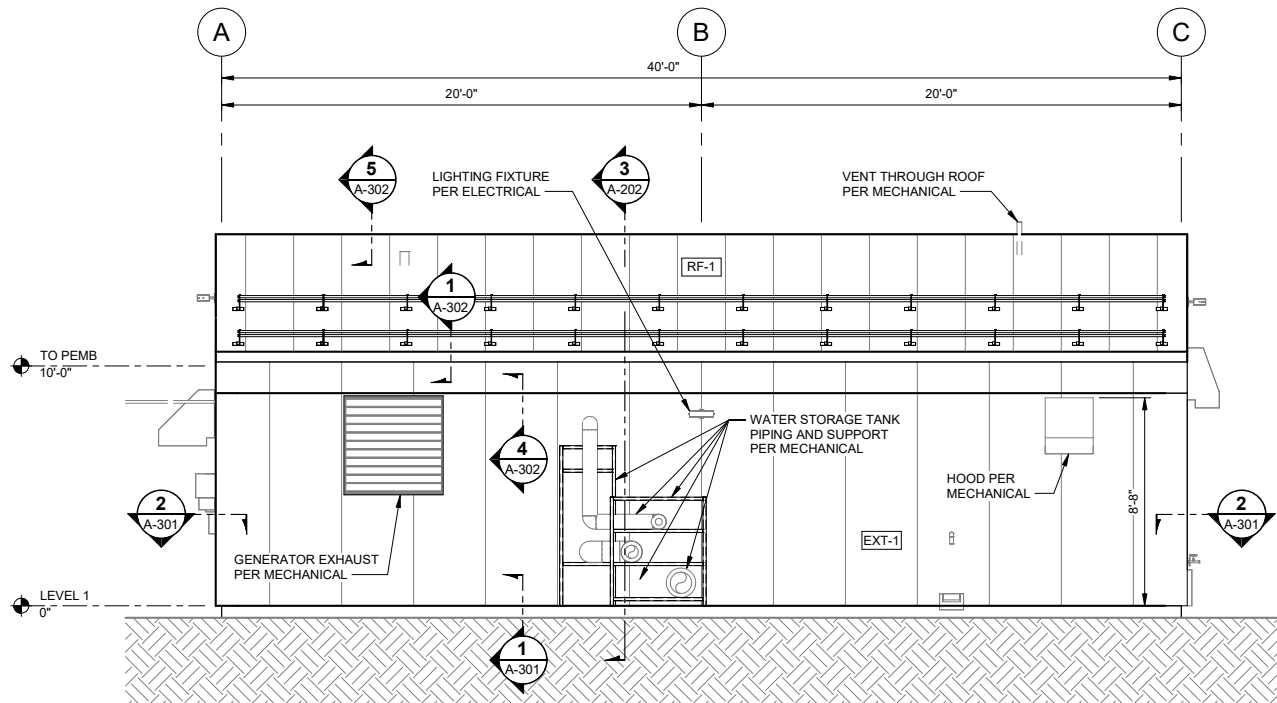
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No.	Date	Item
REVISIONS		

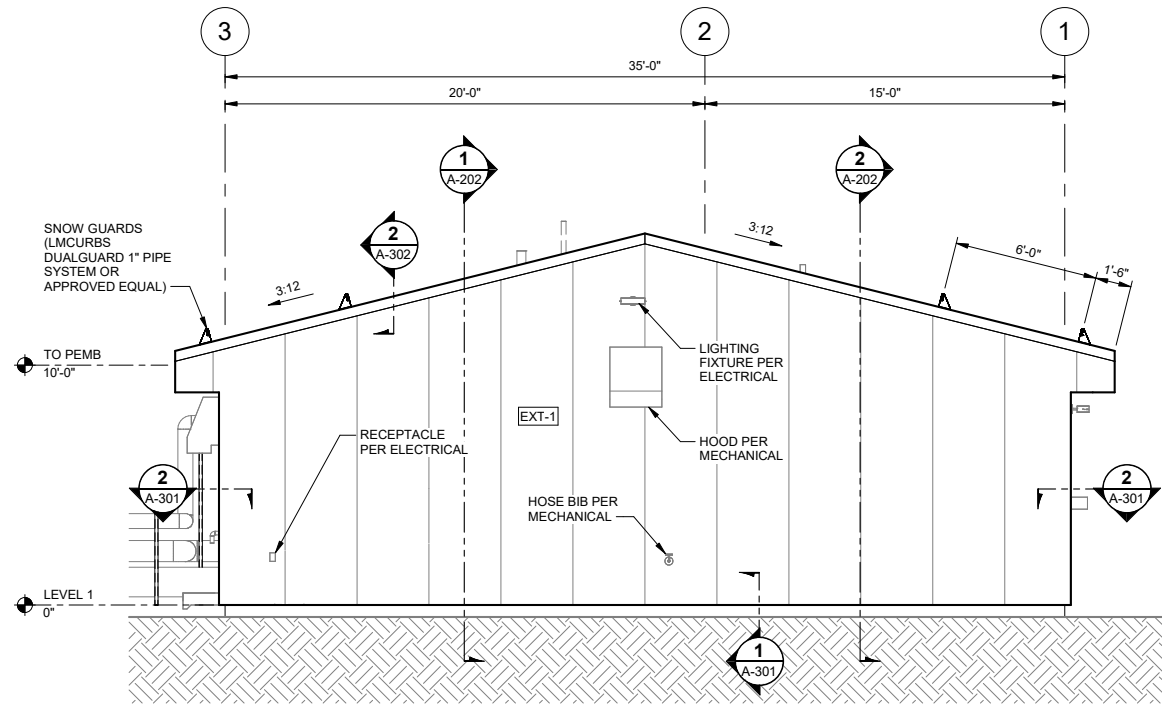
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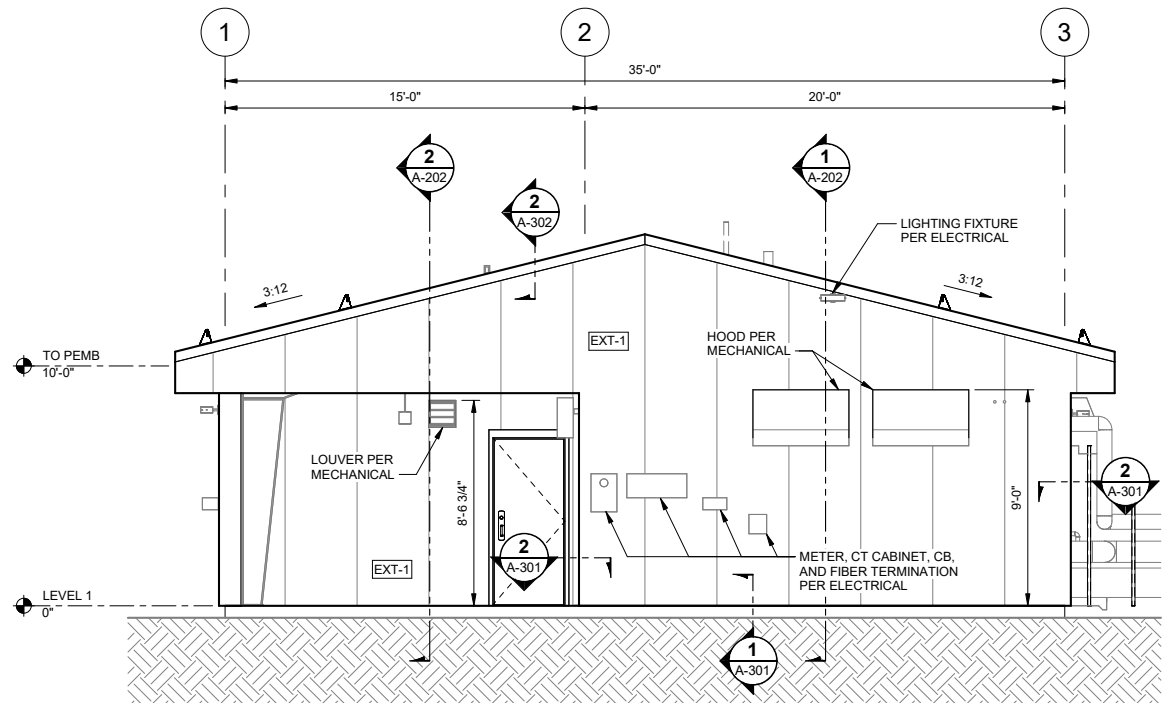
1 BUILDING ELEVATION - NORTH
A-201 SCALE: 1/4" = 1'-0"



3 BUILDING ELEVATION - SOUTH
A-201 SCALE: 1/4" = 1'-0"



2 BUILDING ELEVATION - EAST
A-201 SCALE: 1/4" = 1'-0"



4 BUILDING ELEVATION - WEST
A-201 SCALE: 1/4" = 1'-0"

CONSULTANT :



Juneau, AK
9103 Wendenburg Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC163270

PROJECT :
**CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION**
YAKUTAT, ALASKA

SHEET TITLE :
**PUMP HOUSE BUILDING
ELEVATIONS**

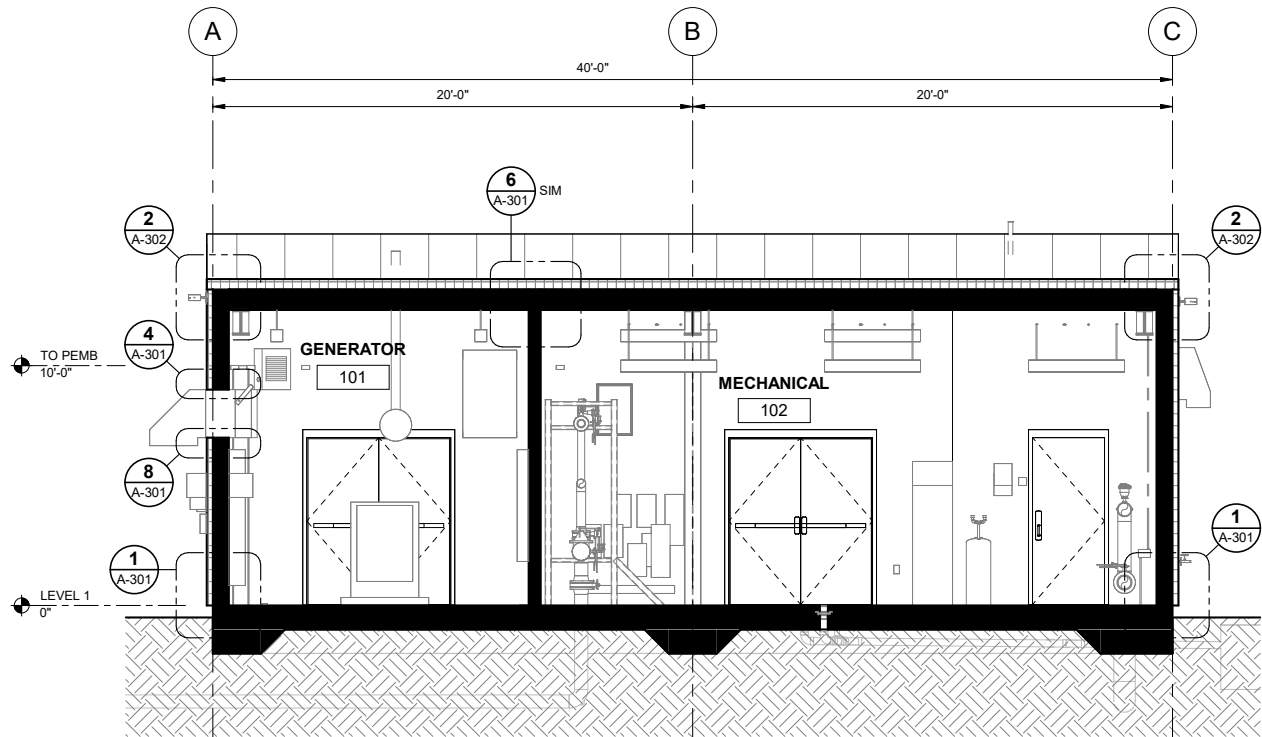
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CHECKED TKM
DATE 04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

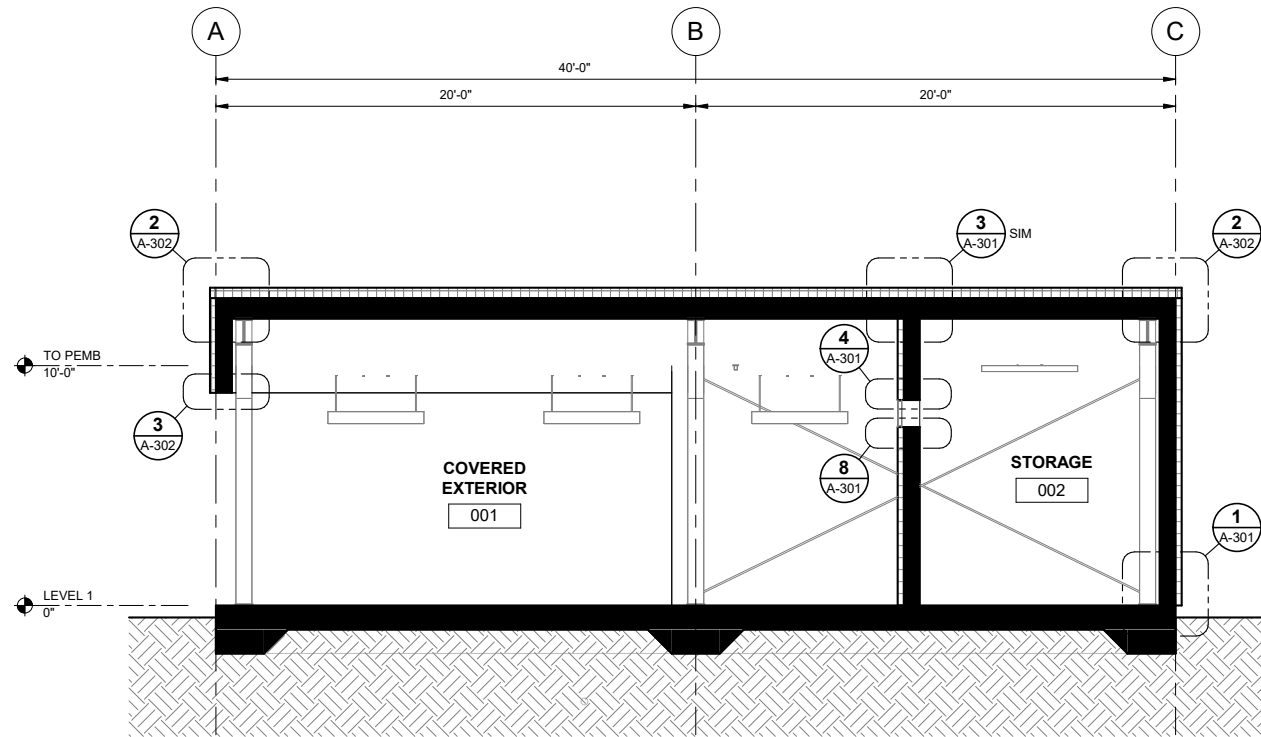
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No.	Date	Item
REVISIONS		

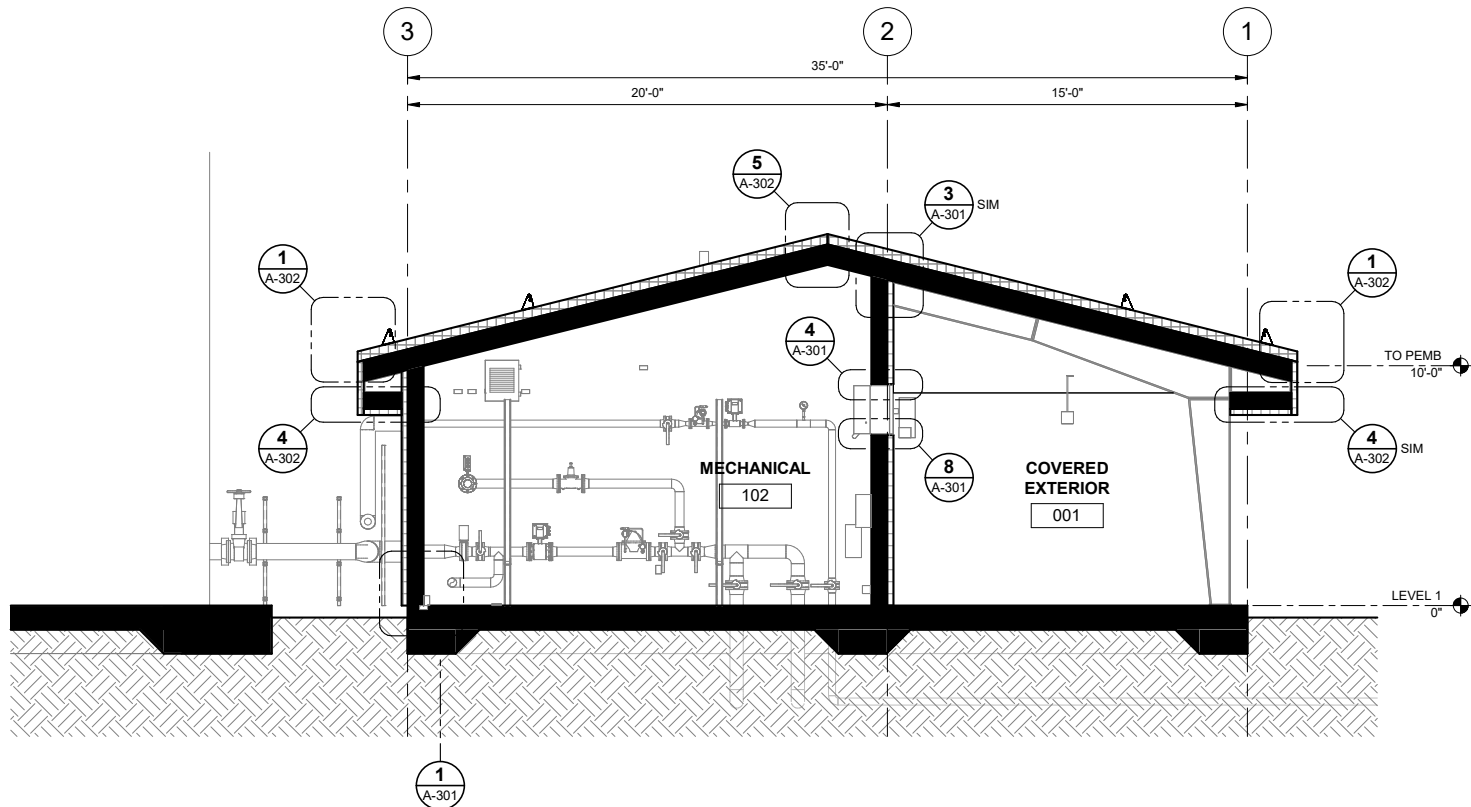
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1 BUILDING SECTION
A-202 SCALE: 1/4" = 1'-0"



2 BUILDING SECTION
A-202 SCALE: 1/4" = 1'-0"



3 BUILDING SECTION
A-202 SCALE: 1/4" = 1'-0"

CONSULTANT :



Juneau, AK
9103 Wendenhall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC163270

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PROJECT :
**CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION**

YAKUTAT, ALASKA

SHEET TITLE :
PUMP HOUSE BUILDING SECTIONS

DESIGN *TKM*
DRAWN *DJM*
CHECKED *TKM*
DATE 04-16-2025

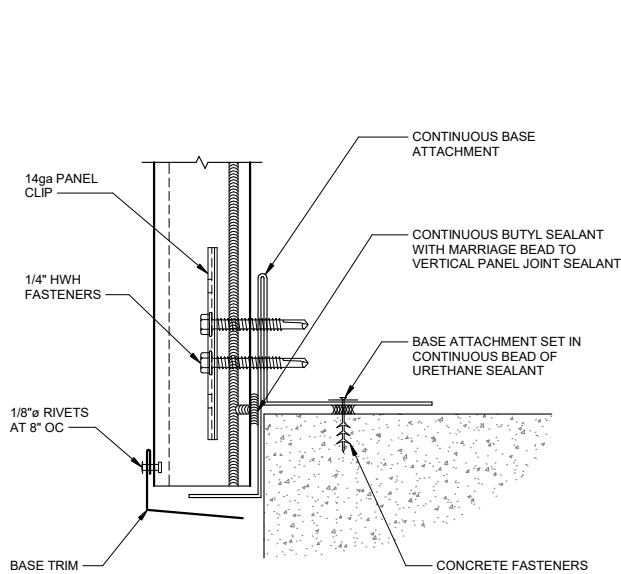
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SHEET NUMBER

A-202

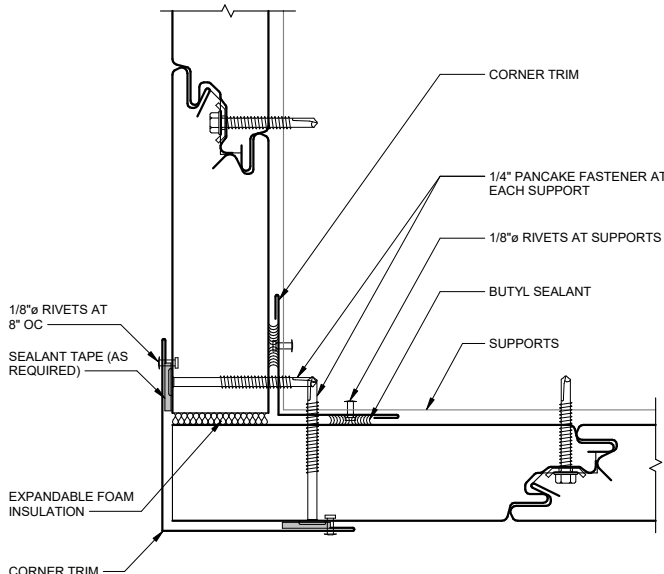
No.	Date	Item
REVISIONS		

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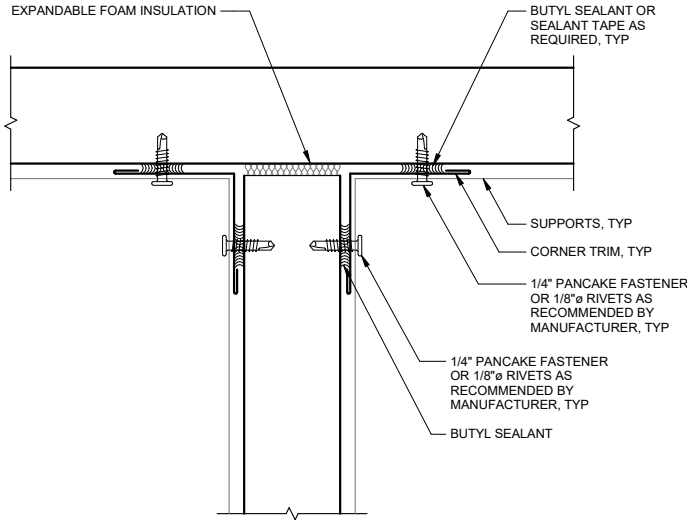
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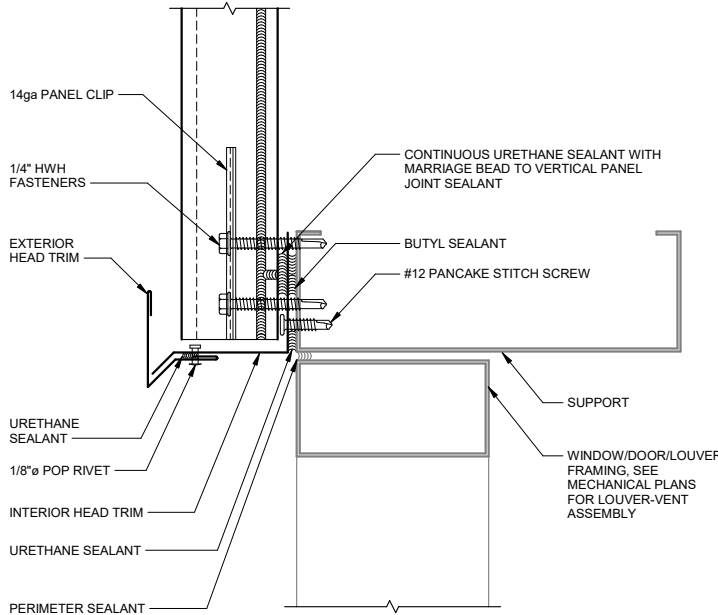
1 WALL PANEL BASE DETAIL
A-301 SCALE: 6" = 1'-0"



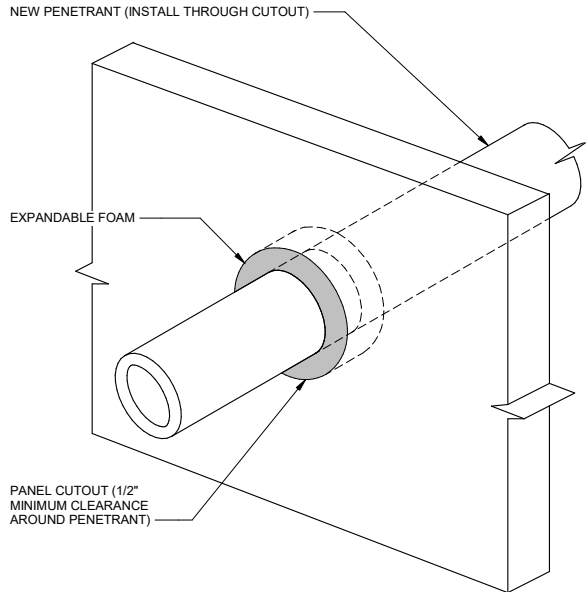
2 WALL PANEL OUTSIDE CORNER DETAIL
A-301 SCALE: 6" = 1'-0"



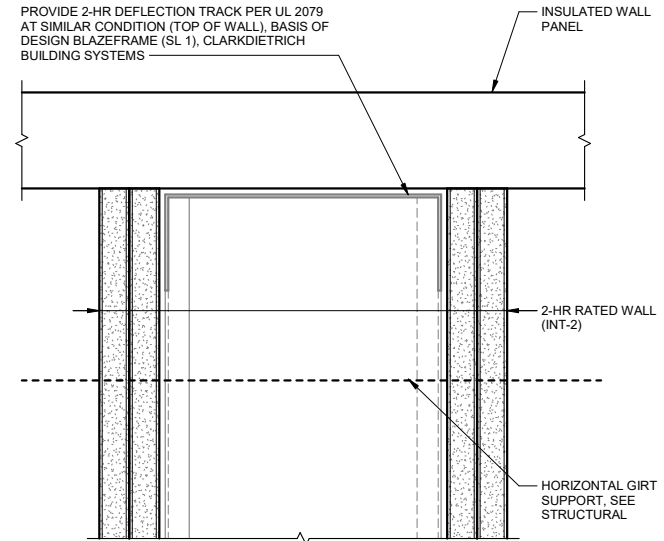
3 WALL PANEL TO INSIDE OF WALL PANEL
A-301 SCALE: 6" = 1'-0"



4 WALL PANEL OPENING HEAD DETAIL
A-301 SCALE: 6" = 1'-0"



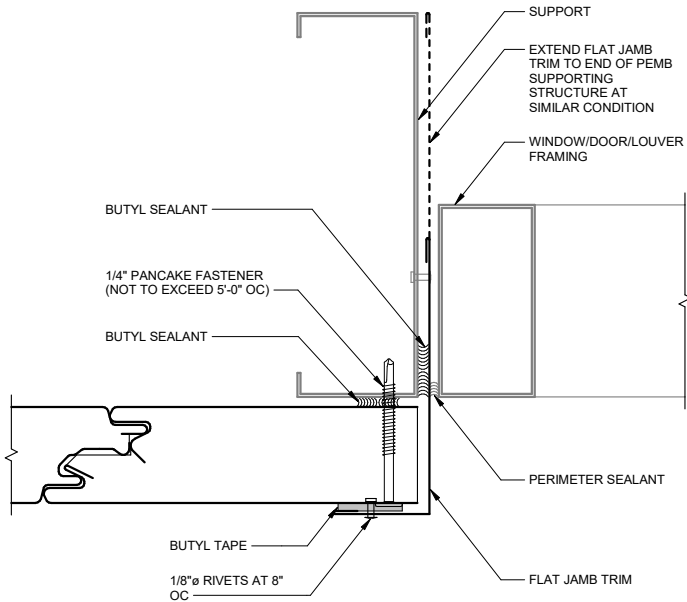
5 WALL PANEL PENETRATION DETAIL
A-301 SCALE: 6" = 1'-0"



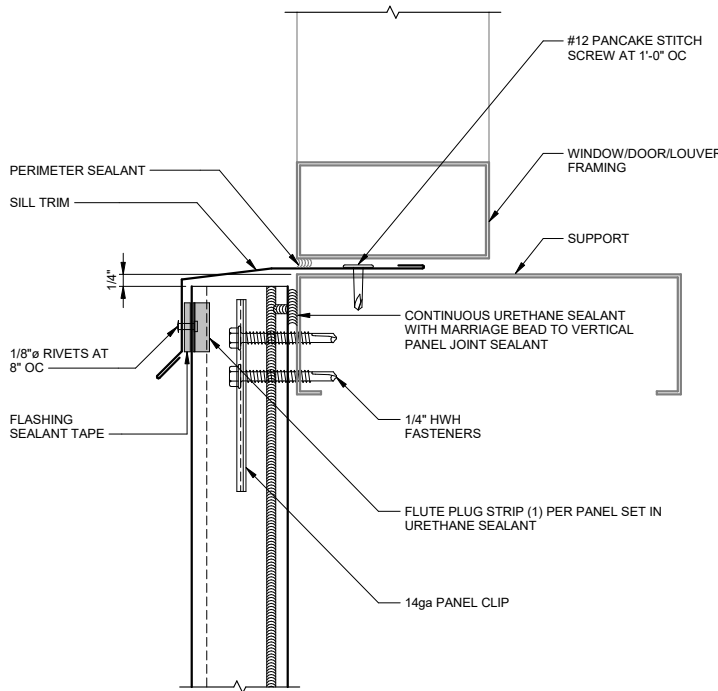
NOTES:

1. CONFIGURE GYPSUM BOARD AROUND Z-GIRT SUPPORTS AND FILL GAPS WITH FIRE STOPPING CAULK TO MAINTAIN 2-HR RATING.
2. INT-1 PARTITION SIMILAR AT LIKE CONDITION.

6 INT-2 WALL TO WALL PANEL
A-301 SCALE: 6" = 1'-0"



7 WALL PANEL OPENING JAMB DETAIL
A-301 SCALE: 6" = 1'-0"



8 WALL PANEL OPENING SILL DETAIL
A-301 SCALE: 6" = 1'-0"

CONSULTANT :

STATE OF ALASKA
49 TH
Trent Mullins
No. AEA11194
4/16/25
REGISTERED PROFESSIONAL ARCHITECT

Juneau, AK
9103 Mendocino Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.0060
www.respec.com
AEC0163270

RESPEC

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

WALL DETAILS

DESIGN	TKM
DRAWN	DJM
CHECKED	TKM
DATE	04-16-2025

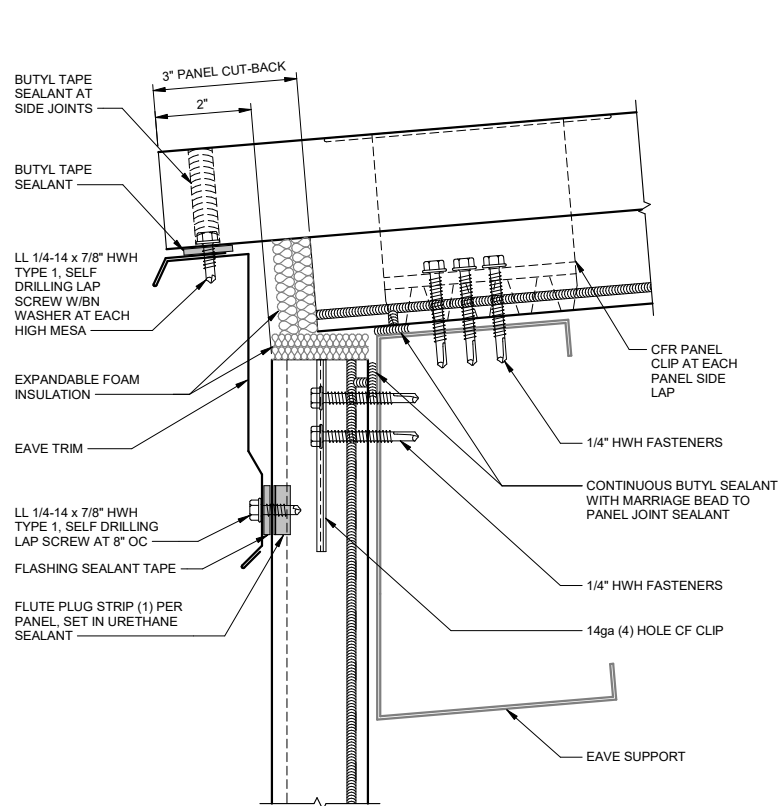
PROJECT No.
10297.24002

SHEET NUMBER
A-301

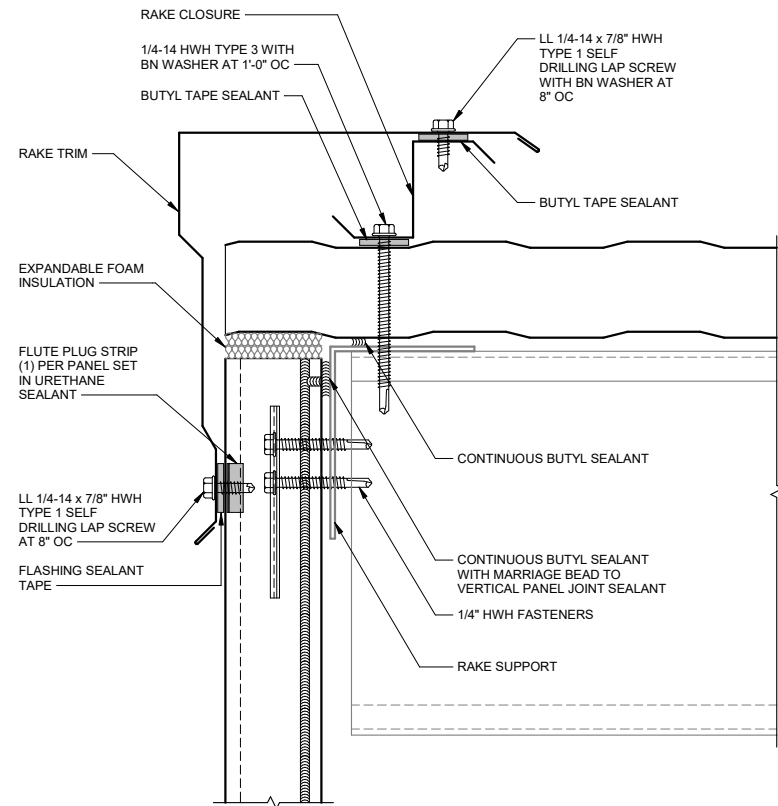
No.	Date	Item
REVISIONS		

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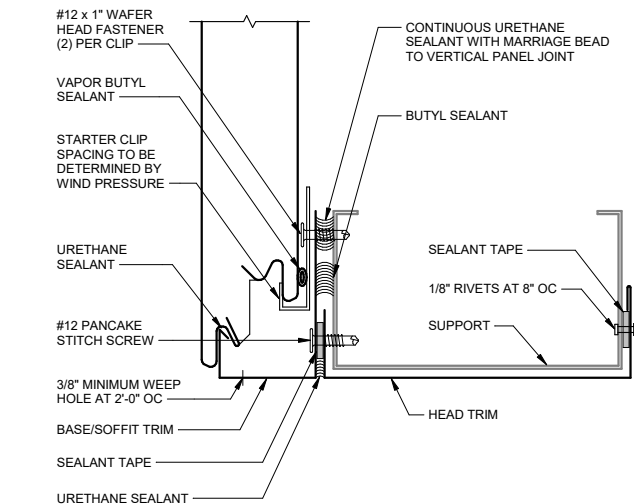
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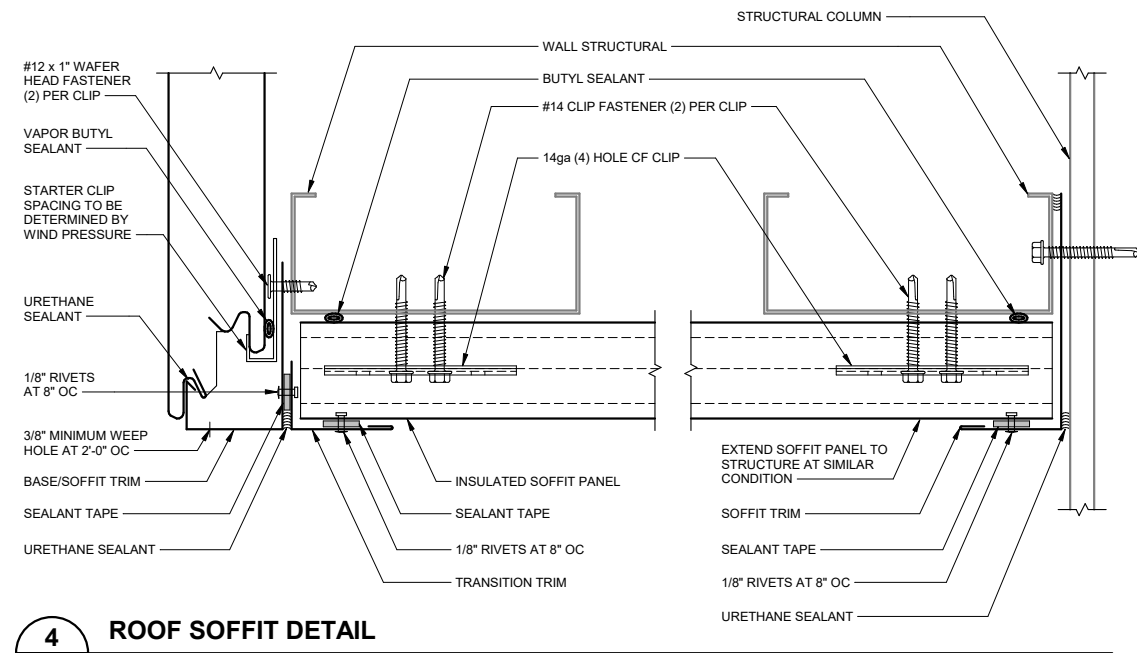
1 ROOF LOW EAVE DETAIL
A-302 SCALE: 6" = 1'-0"



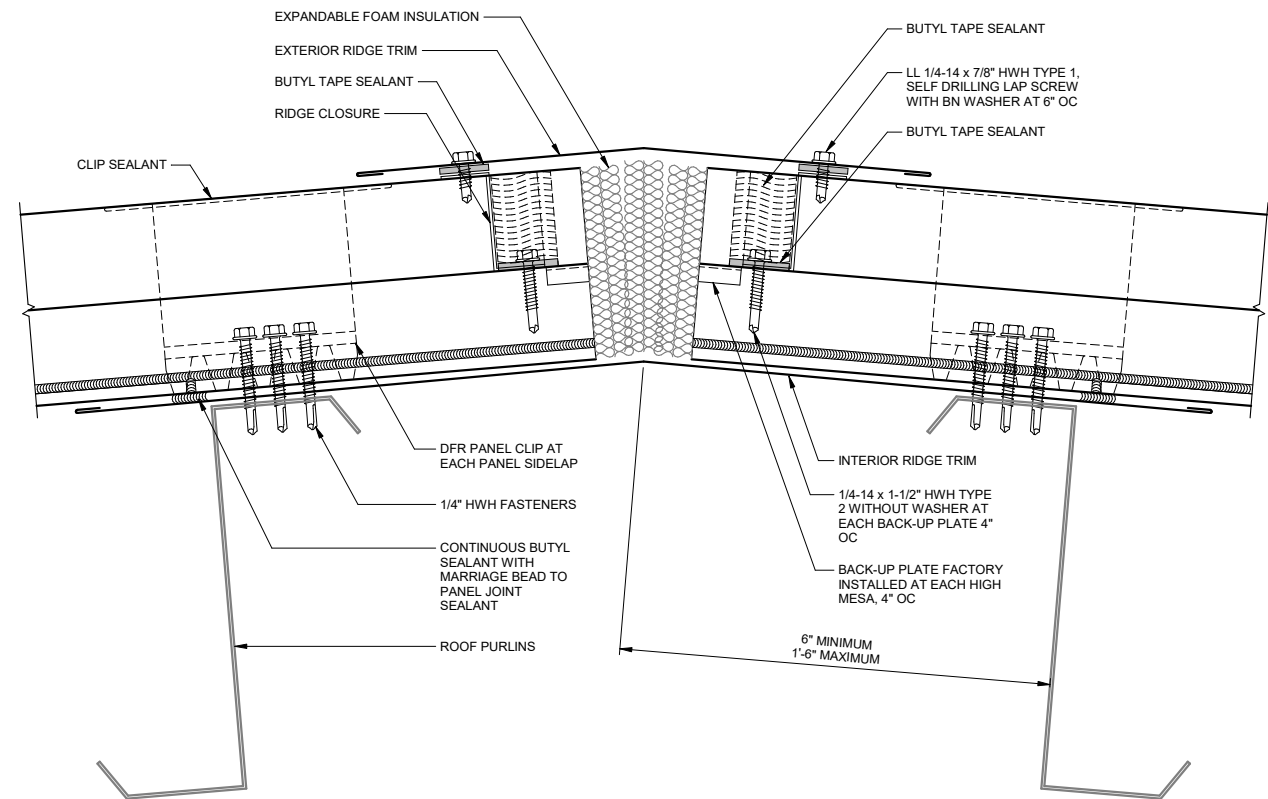
2 ROOF RAKE DETAIL
A-302 SCALE: 6" = 1'-0"



3 ROOF SOFFIT AT COVERED EXTERIOR DETAIL
A-302 SCALE: 6" = 1'-0"



4 ROOF SOFFIT DETAIL
A-302 SCALE: 6" = 1'-0"



5 ROOF RIDGE DETAIL
A-302 SCALE: 6" = 1'-0"

CONSULTANT :



Juneau, AK
9103 Wendenhall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC/63270

RESPEC

PROJECT :
**CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION**

YAKUTAT, ALASKA

SHEET TITLE :
ROOF DETAILS

DESIGN	TKM
DRAWN	DJM
CHECKED	TKM
DATE	04-16-2025

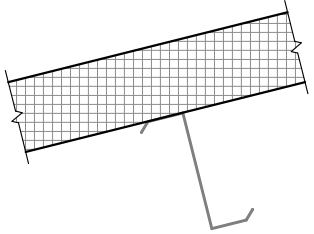
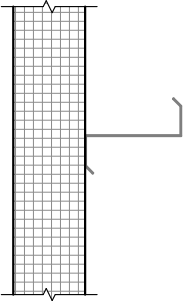
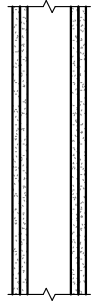
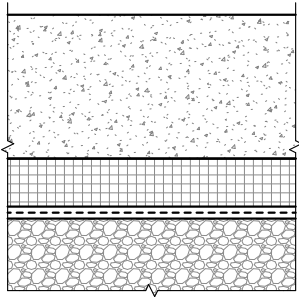
PROJECT No.
10297.24002

SHEET NUMBER
A-302

No.	Date	Item
REVISIONS		

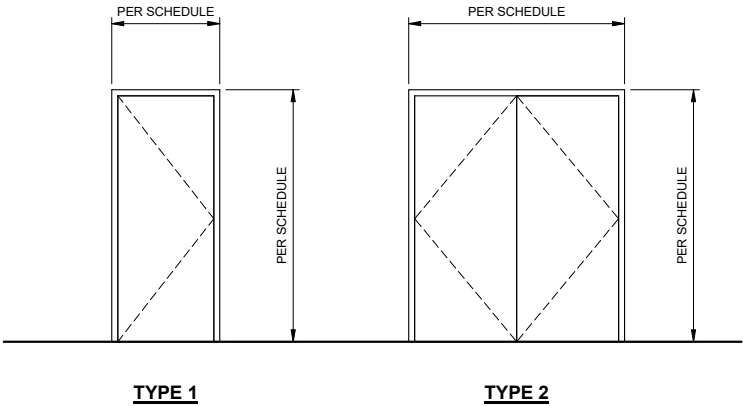
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TYPICAL ASSEMBLIES	
ROOF DIAGRAM	ROOF ASSEMBLY TYPE
	RF-1 - PEMB 5" INSULATED METAL PANEL (U-.029 MAX) - FINISH, AS SELECTED BY OWNER - PEMB METAL PURLIN - PEMB STRUCTURE
WALL DIAGRAM	WALL ASSEMBLY TYPE
	EXT-1 - PEMB 2-1/2" INSULATED METAL PANEL (U-.050 MAX) - FINISH, AS SELECTED BY OWNER - PEMB METAL GIRT - PEMB STRUCTURE
	INT-1 (1) LAYER 5/8" GYPSUM BOARD 3-5/8" METAL STUDS (1) LAYER 5/8" GYPSUM BOARD INT-2 2-HR RATED (UL U419) (2) LAYERS 5/8" TYPE X GYPSUM BOARD 3-5/8" METAL STUDS (2) LAYERS 5/8" TYPE X GYPSUM BOARD NOTE: PROVIDE DEFLECTION TRACK AT TOP OF WALL CONDITIONS FOR INTERIOR PARTITIONS.
FLOOR DIAGRAM	FLOOR ASSEMBLY TYPE
	FL-1 - SEALED CONCRETE PER STRUCTURAL - RIGID INSULATION - VAPOR RETARDER PROVIDE A MINIMUM OF 3" RIGID INSULATION BELOW GRADE AT FOUNDATION.

DOOR SCHEDULE										
DOOR NUMBER	WIDTH	HEIGHT	DOOR MATERIAL	DOOR TYPE	DOOR FINISH	FRAME MATERIAL	FRAME FINISH	HARDWARE GROUP	FIRE RATING	COMMENTS
1	3'-0"	7'-0"	IHM	1	PAINT, PTD	IHM	PAINT, PTD	HWG-1	-	COLOR AS SELECTED BY OWNER
2	6'-0"	7'-0"	IHM	2	PAINT, PTD	IHM	PAINT, PTD	HWG-2	-	COLOR AS SELECTED BY OWNER
3	3'-0"	7'-0"	IHM	1	PAINT, PTD	IHM	PAINT, PTD	HWG-3	-	COLOR AS SELECTED BY OWNER

DOOR TYPES



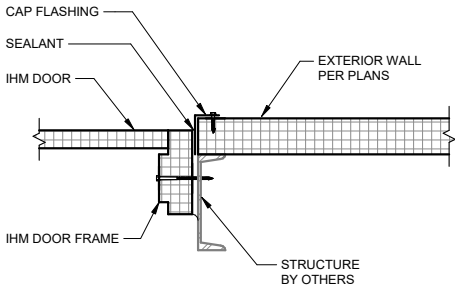
DOOR HARDWARE GROUPS

HWG-1			
(3) EA	HINGE	FBB199NRP 4-1/2x4-1/2	STA
(1) EA	CYLINDER, RIM	12E-7-2-S2-RP XL/C	BES
(1) EA	CORE	1CX-7-X-2-626	BES
(1) EA	CLOSER	QCD115 R X S/TAP	STC
(1) EA	KICK PLATE	K0050 x 10" x 34"	TRI
(1) EA	FLOOR STOP	1201	TRI
HWG-2			
(6) EA	HINGE	FBB199NRP 4-1/2x4-1/2	STA
(1) EA	CYLINDER, RIM	12-E-7-2-ST-RP XL/C	BES
(1) EA	CORE	1CX-7-X-2-626	BES
(2) EA	CLOSER	QCD115 R X S/TAP	STC
(2) EA	KICK PLATE	K0050 x 10" x 34"	TRI
(2) EA	FLOOR STOP	1201	TRI
HWG-3			
(3) EA	HINGE	FBB168 4-1/2x4-1/2	STA
(1) EA	MORTISE LOCKSET	45-7-AB-15-J X L/C	BES
(1) EA	CORE	1CX-7-X-2-626	BES
(1) EA	DOOR SEAL	5050B x 17"	NGP
(1) EA	KICK PLATE	K0050 x 10" x 34"	TRI
(1) EA	FLOOR STOP	1201	TRI

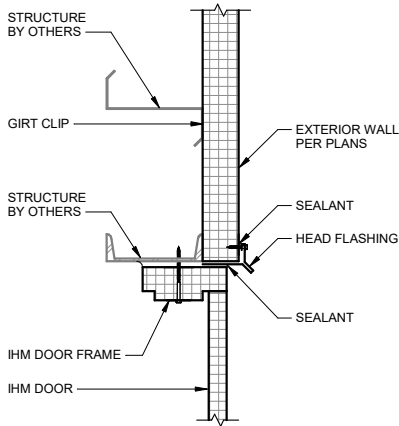
FINISH SCHEDULE									
ROOM NUMBER	ROOM NAME	MATL		WALL 1 - NORTH	WALL 2 - EAST	WALL 3 - SOUTH	WALL 4 - WEST	CEILING	COMMENTS
		MAT	BASE	FINISH	FINISH	FINISH	FINISH	MAT	
001	COVERED EXTERIOR	FL-1	-	FACTORY	N/A	FACTORY	FACTORY	OTS, FACTORY	SEE NOTES
002	STORAGE	FL-1	-	FACTORY	FACTORY	PTD	FACTORY	OTS, FACTORY	SEE NOTES
003	GENERATOR	FL-1	-	FACTORY	PTD	FACTORY	FACTORY	OTS, FACTORY	SEE NOTES
004	MECHANICAL	FL-1	-	FACTORY, PTD	FACTORY, PTD	FACTORY	PTD	OTS, FACTORY	SEE NOTES
005	CHLORINE ROOM	FL-1	-	PTD	FACTORY	PTD	PTD	OTS, FACTORY	SEE NOTES

FINISH SCHEDULE

FL-1	CONCRETE SEALER (BASIS OF DESIGN: CHEMICAL PRODUCTS INDUSTRIES, CP-1007 DENSIFIER).
PTD	PAINTED, COLOR TO BE DECIDED.
FACTORY	STANDARD FINISH BY PEMB PANEL MANUFACTURER, TO BE DECIDED.
OTS	OPEN TO STRUCTURE



1 **IHM DOOR JAMB**
A-401 SCALE: 1 1/2" = 1'-0"



2 **IHM DOOR HEAD**
A-401 SCALE: 1 1/2" = 1'-0"

No.	Date	Item
REVISIONS		

CONSULTANT :

STATE OF ALASKA
49 TH
Trent Mullins
No. AEA11194
4/16/25
REGISTERED PROFESSIONAL ARCHITECT

Juneau, AK
9103 Mendocino Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC163270

RESPEC

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

ASSEMBLIES, DOOR SCHEDULE,
DETAILS

DESIGN	TKM
DRAWN	DJM
CHECKED	TKM
DATE	04-16-2025

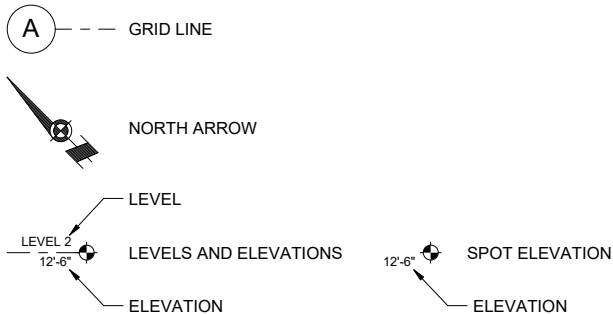
PROJECT No.
10297.24002
SHEET NUMBER

A-401

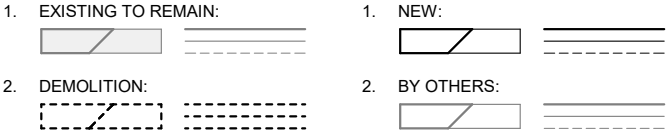
1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES

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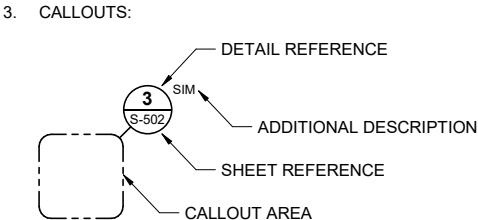
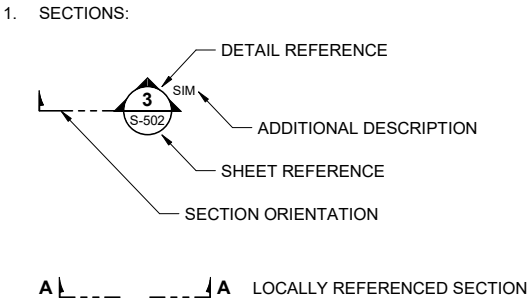
DATUM



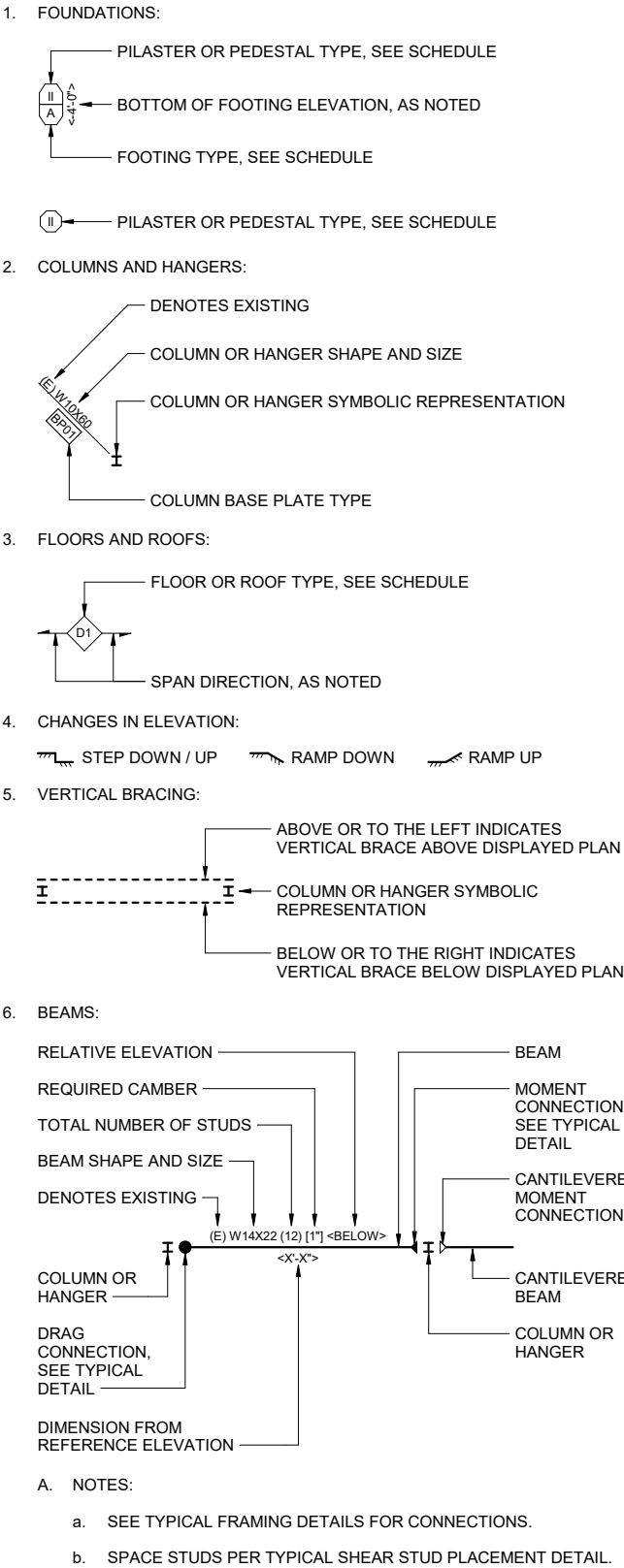
LINEWORK



REFERENCES



TAGS AND SYMBOLS



STRUCTURAL ABBREVIATIONS

NOTE: NOT ALL ABBREVIATIONS USED.	
@	AT
AB	ANCHOR BOLT
AFF	ABOVE FINISH FLOOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
APPROX	APPROXIMATELY
ARCH	ARCHITECTURAL
ASD	ALLOWABLE STRENGTH DESIGN
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
ATR	ALL THREAD ROD
AWS	AMERICAN WELDING SOCIETY
AWW	ALL WEATHER WOOD
BET / BTWN	BETWEEN
BLKG	BLOCKING
BM	BEAM
BN	BOUNDARY NAILING
BOF	BOTTOM OF FOOTING
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BP	BUTTON PUNCH
BPL	BOTTOM PLATE
BRKT	BRACKET
BS	BOTH SIDES
CANT	CANTILEVER
CJ	CONTROL JOINT
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
CONTR'S	CONTRACTORS
CP	COMPLETE PENETRATION
CBY	CITY AND BOROUGH OF YAKUTAT
DBL	DOUBLE
DIA / DIAM / Ø	DIAMETER
DIAG	DIAGONAL
DICA	DRILLED IN CONCRETE ANCHOR
DIM	DIMENSION
DL	DEAD LOAD
DP	DEEP
DWG	DRAWING
(E)	EXISTING
EA	EACH
EJ	EXPANSION JOINT
ELEV	ELEVATION
ELF	EQUIVALENT LATERAL FORCE PROCEDURE
EMBED	EMBEDDED
EN	END NAILING
EOR	ENGINEER OF RECORD
EQ	EQUAL
EQUIV	EQUIVALENT
ES	EQUALLY SPACED
EW	EACH WAY
FB	FLAT BAR
FDN	FOUNDATION
FF	FINISH FLOOR
FRMG	FRAMING
FS	FAR SIDE
FT	FOOT/FEET
FTG	FOOTING
GA	GAGE
GALV	GALVANIZED
GLB	GLULAM BEAM
GR	GRADE
GWB	GYPSUM WALL BOARD
HD	HOLDOWN
H / HORIZ	HORIZONTAL
HSS	HOLLOW STRUCTURAL SECTION
IBC	INTERNATIONAL BUILDING CODE
ICF	INSULATED CONCRETE FORM
IN	INCH(ES)
INSUL	INSULATION
INT	INTERIOR
JT	JOINT
K	KIP (1000 LB)
KSI	KIPS PER SQUARE INCH
LL	LIVE LOAD
LLV	LONG LEG VERTICAL
LOC	LOCATION
LONG	LONGITUDINAL

STRUCTURAL ABBREVIATIONS (CONTINUED)

NOTE: NOT ALL ABBREVIATIONS USED.	
MANUF	MANUFACTURER
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MID	MIDDLE
MIN	MINIMUM
MPH	MILES PER HOUR
MTL	METAL
(N)	NEW
NIC	NOT IN CONTRACT
NS	NEAR SIDE
NTS	NOT TO SCALE
OC	ON CENTER
OCBF	ORDINARY CONCENTRIC BRACE FRAME
OMF	ORDINARY MOMENT FRAME
OPP	OPPOSITE HAND
OSB	ORIENTED STRAND BOARD
OWSJ	OPEN WEB STEEL JOIST
PDF	POWDER DRIVEN FASTENER
PC	PRECAST
PEN	PENETRATION
PJP	PARTIAL JOINT PENETRATION
PL	PLATE
PLB	PARALLAM BEAM
PLF	POUNDS PER LINEAL FOOT
PLY	PLYWOOD
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
PWJ	PLYWOOD WEB JOIST
REF	REFERENCE
REINF	REINFORCEMENT
REQ'D	REQUIRED
RO	ROUGH OPENING
SCH / SCHED	SCHEDULE
SIM	SIMILAR
SIP	STRUCTURAL INSULATED PANELS
SFRS	SEISMIC FORCE RESISTING SYSTEM
SMS	SHEET METAL SCREWS
SOG	SLAB-ON-GRADE
SQ	SQUARE
STAGG	STAGGERED
STD	STANDARD
STL	STEEL
STR / STRUCT	STRUCTURAL
T&B	TOP & BOTTOM
T&G	TONGUE & GROOVE
TEMP	TEMPERATURE
THRD	THREADED
TO	TOP OF
TOC	TOP OF CONCRETE
TOS	TOP OF STEEL
TS	TUBE STEEL
TYP	TYPICAL
UFC	UNIFIED FACILITIES CRITERIA
UNO	UNLESS NOTED OTHERWISE
V / VERT	VERTICAL
W/	WITH
WD	WIDE
WF	WIDE FLANGE
WP	WORKING POINT
WWF	WELDED WIRE FABRIC

CONSULTANT :



Juneau, AK
9103 Mendernall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC163270



PROJECT :

**CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION**

YAKUTAT, ALASKA

SHEET TITLE :

LEGEND AND ABBREVIATIONS

DESIGN	JCL / ZJM
DRAWN	DJM
CHECKED	JEH
DATE	04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

S-001

No.	Date	Item
REVISIONS		

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES. 4/19/2025 4:42:41 PM AutodesK Docs://10297_24002-CBY Airport Water System Extension\INF-STRU\10297_24002_RV23.rvt

STRUCTURAL DESIGN DATA

1. RISK CATEGORY

IV
2. LIVE LOADS:

A. TYPICAL FLOOR, MECHANICAL

125 PSF OR 2 KIP
CONCENTRATED & STORAGE
ROOMS

B. ROOF

20 PSF
3. DEAD LOADS:

A. ROOF

20 PSF MAX
4. WATER RESERVOIR & PEMB SNOW LOADS:

A. GROUND SNOW LOAD

$P_g = 186$ PSF

B. EXPOSURE FACTOR

$C_e = 1.0$

C. THERMAL FACTOR

$C_t = 1.2$

D. IMPORTANCE FACTOR

$I_s = 1.2$

E. FLAT ROOF SNOW LOAD

$P_f = 188$ PSF

F. SLOPED ROOF SNOW LOAD

$P_s = 188$ PSF

G. UNBALANCED SNOW LOADING

• WINDWARD

$P_{WD} = 0$ PSF

• LEEWARD

$P_{LD} = 223$ PSF
5. WATER RESERVOIR & PEMB WIND LOADS:

A. WIND SPEED

$V_{ULT} = 161$ MPH

B. WIND EXPOSURE CATEGORY

C

C. ENCLOSURE CLASSIFICATION

PARTIALLY ENCLOSED

D. INTERNAL PRESSURE COEFFICIENT

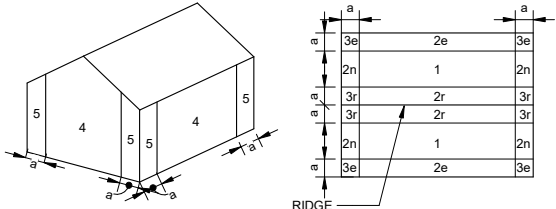
$GC_{pi} = \pm 0.55$
6. COMPONENT AND CLADDING WIND PRESSURES:

A. COMPONENT AND CLADDING WIND PRESSURES ARE FOR REFERENCE ONLY. PEMB MANUFACTURE SHALL PROVIDE FINALIZED C&C PRESSURES USED FOR DESIGN.

B. COMPONENT AND CLADDING WIND PRESSURE TABLE:

WIND ZONE	10 SQ FT		20 SQ FT		50 SQ FT		100 SQ FT	
ROOF 1, & 2e	-122	52	-122	49	-81	44	-50	41
ROOF 2n, 2r, & 3e	-170	52	-150	49	-122	44	-102	41
ROOF 3r	-199	52	-173	49	-139	44	-113	41
OVERHANG 1, & 2e	-120	52	-120	49	-93	44	-72	41
OVERHANG 2n, 2r	-168	52	-152	49	-132	44	-116	41
OVERHANG 3e	-196	52	-170	49	-134	44	-107	41
OVERHANG 3r	-225	52	-170	49	-145	44	-110	41
WALL 4	-79	74	-77	72	-73	68	-71	66
WALL 5	-94	74	-88	72	-82	68	-77	66

- a. WIND PRESSURES ARE BASED ON THE ULTIMATE WIND SPEED AND ARE REPORTED AT STRENGTH LEVELS. TO OBTAIN ASD PRESSURES, MULTIPLY TABLE VALUES BY 0.6.
- b. POSITIVE (+) PRESSURES ACT TOWARDS STRUCTURE
NEGATIVE (-) PRESSURES ACT AWAY FROM STRUCTURES
- C. COMPONENT AND CLADDING ZONE DIAGRAM:



- a. GABLE ROOF DIMENSION $a = 3.5$ FT
7. DESIGN RAIN INTENSITY

A. 15 MINUTE PRECIPITATION INTENSITY

$i = 3.83$ IN/HR

B. 30 MINUTE PRECIPITATION INTENSITY

$i = 1.74$ IN/HR

STRUCTURAL DESIGN DATA (CONTINUED)

8. PRE-ENGINEERED METAL BUILDING (PEMB) SEISMIC LOADS:

A. NORTH / SOUTH SEISMIC FORCE RESISTING SYSTEM

• ORDINARY MOMENT FRAME (OMF)

B. EAST / WEST SEISMIC FORCE RESISTING SYSTEM

a. ORDINARY CONCENTRICALLY BRACED FRAME (OCBF)

C. SEISMIC IMPORTANCE FACTOR

$I_e = 1.5$

D. SITE CLASS

D

E. MAPPED ACCELERATIONS

a. SHORT-PERIOD

$S_S = 1.63$ g

b. 1-SECOND

$S_1 = 0.76$ g

F. DESIGN ACCELERATIONS

a. SHORT-PERIOD

$S_{DS} = 1.09$ g

b. 1-SECOND

$S_{D1} = 0.86$ g

G. SEISMIC DESIGN CATEGORY

F

H. NORTH / SOUTH RESPONSE MODIFICATION FACTOR

• $R = 3.5$ ORDINARY MOMENT FRAME (OMF)

I. EAST / WEST RESPONSE MODIFICATION FACTOR

• $R = 3.25$ ORDINARY CONCENTRICALLY BRACED FRAME (OCBF)

J. ANALYSIS PROCEDURE USED

PER PEMB MANUFACTURER

K. NORTH / SOUTH SEISMIC RESPONSE COEFFICIENT

• $C_s = 0.47$

L. EAST / WEST SEISMIC RESPONSE COEFFICIENT

• $C_s = 0.50$

M. DESIGN BASE SHEAR

PER PEMB MANUFACTURER

N. MAXIMUM INTER-STORY DRIFT

PER PEMB MANUFACTURER
9. WATER RESERVOIR SEISMIC LOADS:

A. SEISMIC FORCE RESISTING SYSTEM

• STEEL, FLAT BOTTOM, GROUND SUPPORTED, MECHANICALLY ANCHORED WATER RESERVOIR

B. SEISMIC IMPORTANCE FACTOR

$I_e = 1.5$

C. SITE CLASS

D

D. MAPPED ACCELERATIONS

a. SHORT-PERIOD

$S_S = 1.63$ g

b. 1-SECOND

$S_1 = 0.76$ g

E. DESIGN ACCELERATIONS

a. SHORT-PERIOD

$S_{DS} = 1.09$ g

b. 1-SECOND

$S_{D1} = 0.86$ g

F. SEISMIC DESIGN CATEGORY

F

G. RESPONSE MODIFICATION FACTOR

$R =$ PER MANUFACTURER

H. ANALYSIS PROCEDURE USED

PER MANUFACTURER

I. SEISMIC RESPONSE COEFFICIENTS

• $A_1 =$ PER MANUFACTURER

DESIGN IMPULSIVE

• $A_2 =$ PER MANUFACTURER

DESIGN CONVECTIVE

• $A_3 =$ PER MANUFACTURER

DESIGN VERTICAL

J. DESIGN BASE SHEAR

PER MANUFACTURER

STRUCTURAL GENERAL NOTES

1. PERFORM ALL WORK IN COMPLIANCE WITH THE MINIMUM STANDARDS OF THE FOLLOWING CODES:

A. THE INTERNATIONAL BUILDING CODE (IBC) 2021 AND ITS REFERENCED STANDARDS, HEREIN REFERRED TO AS "THE CODE", AND OTHER REGULATORY CRITERIA WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK.
2. PERFORM THE FOLLOWING TASKS PRIOR TO STARTING CONSTRUCTION:

A. SURVEY AND FIELD VERIFY ALL EXISTING CONDITIONS ASSOCIATED WITH THE WORK.

B. INVESTIGATE THE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES, SUCH AS FOUNDATIONS, ETC.

C. ALL OMISSIONS OR CONFLICTS BETWEEN ELEMENTS OF THE CONTRACT DOCUMENTS MUST BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER OF RECORD, PRIOR TO PROCEEDING WITH THE RELATED WORK.

3. THE STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION. CONSTRUCTION LOADS MUST NOT EXCEED THE DESIGN LIVE LOADS.

4. IF THE STRUCTURAL ENGINEER OF RECORD IS NOT RETAINED BY THE OWNER TO OVERSEE CONSTRUCTION ACTIVITIES, THE STRUCTURAL ENGINEER OF RECORD IS NOT IN RESPONSIBLE CHARGE OF THE CONSTRUCTION PER SECTION 107.3.4 OF THE CODE. CONSTRUCTION ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO, REVIEW OF SPECIAL INSPECTION AND STRUCTURAL OBSERVATION REPORTS, REVIEW OF SUBMITTAL DOCUMENTS, AND REVIEW DELEGATED DESIGN SUBMITTALS.

5. THE FOLLOWING ITEMS ARE PART OF THE LATERAL FORCE RESISTING SYSTEM (LFRS):

A. MOMENT FRAMES, BRACED FRAMES, AND ALL ASSOCIATED CONNECTIONS.
- STRUCTURAL DELEGATED DESIGN NOTES
1. THE DESIGN OF THE FOLLOWING ELEMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR:

A. ALL ARCHITECTURAL, MECHANICAL AND ELECTRICAL EQUIPMENT BRACING AND ANCHORAGE TO THE STRUCTURE

B. PRE-ENGINEERED METAL BUILDING (PEMB)

a. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF ALL PRE-ENGINEERED METAL BUILDING COMPONENTS, INCLUDING BASE PLATES AND ANCHOR RODS. SEE SPECIFICATIONS FOR FURTHER DETAILS.

C. BOLTED STEEL WATER RESERVOIR

a. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF ALL BOLTED STEEL WATER STORAGE TANK COMPONENTS, CONNECTIONS, TANK ANCHORAGE, TANK DESIGN, TANK ROOF AND TO REVIEW THE TANK FOUNDATION PROVIDED TO CONFIRM THAT IT IS ADEQUATE TO RESIST THE OVERTURNING FORCES OF THE FINAL TANK PROVIDED FOR THE PROJECT. SEE SPECIFICATIONS FOR FURTHER DETAILS.

2. PROVIDE SUBMITTALS TO THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD FOR REVIEW.

3. SUBMITTALS MUST INCLUDE DRAWINGS AND CALCULATIONS SEALED BY A CIVIL OR STRUCTURAL ENGINEER LICENSED IN THE STATE OF ALASKA.
- STRUCTURAL FOUNDATION NOTES
1. THE FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT BY SHANNON & WILSON , DATED APRIL 2025.

2. FOUNDATION DESIGN CRITERIA

A. ALLOWABLE BEARING PRESSURE:

STATIC

DYNAMIC

a. MAT FOUNDATION

3,000 PSF

4,000 PSF

B. LATERAL EARTH PRESSURES AND COEFFICIENTS

a. ALL LATERAL EARTH PRESSURES ARE GIVEN AS AN EQUIVALENT FLUID PRESSURE.

C. LATERAL EARTH PRESSURES (EQUIVALENT FLUID PRESSURE)

a. AT REST PRESSURE

58 PSF / FT

b. ACTIVE PRESSURE

37 PSF / FT

c. ADDITIONAL SEISMIC ACTIVE PRESSURE

19 PSF / FT

d. PASSIVE PRESSURE

NORMAL

350 PSF / FT

SATURATED

150 PSF / FT

e. STATIC COEFFICIENT OF FRICTION

0.4

D. REFER TO THE PROJECT GEOTECHNICAL REPORT FOR FURTHER DETAILS.

3. PERFORM ALL FOUNDATION WORK IN CONFORMANCE WITH THE REFERENCED GEOTECHNICAL REPORT. THE REFERENCED GEOTECHNICAL REPORT IS PART OF THESE CONTRACT DOCUMENTS.

4. THE CONTRACTOR MUST FOLLOW ALL RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT.

5. PLACE PROPERLY COMPACTED STRUCTURAL FILL BELOW ALL FOUNDATION ELEMENTS, UNLESS NOTED OTHERWISE.

6. COMPACT ALL FOOTING SUBGRADES, ALL SLAB SUBGRADES INCLUDING PIT SLABS, AND ALL BACKFILL AROUND AND ABOVE ALL FOUNDATION ELEMENTS TO 95 PERCENT OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.

7. REMOVE ALL ORGANIC AND OTHER UNSUITABLE MATERIALS FROM SUBGRADE AND BACKFILL. BACKFILL WITH ACCEPTABLE GRANULAR FILL, COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.

8. PROVIDE THE DESIGN AND INSTALLATION OF TEMPORARY SHORING, EXCAVATION BRACING, AND OTHER TEMPORARY WORKS REQUIRED. THE DESIGN MUST PROTECT EXISTING STRUCTURES, STREETS, UTILITIES, AND ADHERE TO ALL NATIONAL, STATE, AND LOCAL REQUIREMENTS AND SAFETY ORDINANCES.

9. PROVIDE ALL NECESSARY MEASURES TO PREVENT ANY FROST OR ICE FROM PENETRATING ANY FOOTING OR SLAB SUBGRADES BEFORE AND AFTER PLACING OF CONCRETE UNTIL SUCH SUBGRADES ARE FULLY PROTECTED BY THE PERMANENT BUILDING STRUCTURE.

10. PROPERLY BACKFILL ALL EXCAVATIONS.

11. DO NOT COMMENCE CONSTRUCTION OF FOUNDATION ELEMENTS UNTIL ALL SEASONAL FROST HAS THAWED OR BEEN REMOVED.

CONSULTANT :

Juneau, AK
9109 Wendenhall Mar Rd, Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.rspspec.com
AECC163270

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

GENERAL NOTES

DESIGN	JCL / ZJM
DRAWN	DJM
CHECKED	JEH
DATE	04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

S-002

No.	Date	Item
REVISIONS		

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION. AFFECTING ALL LABELED SCALES. 4/19/2025 4:42:42 PM Autodesk Docs://10297_24002-CBY Airport Water System Extension\\NF-STRU-10297_24002_RV23.rvt

STRUCTURAL CONCRETE NOTES

1. PERFORM ALL CONCRETE WORK IN ACCORDANCE WITH CHAPTER 19 OF THE IBC, AND ALL REFERENCED STANDARDS.
2. USE NORMAL WEIGHT (150 PCF) CAST-IN-PLACE CONCRETE WITH 28 DAY COMPRESSIVE STRENGTHS (F'c) AS FOLLOWS:

CONDITION	MINIMUM STRENGTH (PSI)	EXPOSURE CATEGORY	MAX W/C RATIO	AIR ENTRAINMENT
MAT FOUNDATION	5,000	F2, S0, C1, W1	0.40	4% - 7%

3. CONCRETE MATERIAL REQUIREMENTS:
- A. USE PORTLAND CEMENT CONFORMING TO ASTM STANDARD C-150 AND TYPE I, IL, OR III, UNLESS NOTED OTHERWISE.
- B. USE NORMAL WEIGHT AGGREGATE OF NATURAL SAND AND ROCK CONFORMING TO THE REQUIREMENTS AND TESTS OF ASTM C-33.
- C. USE AN AIR ENTRAINING ADMIXTURE CONFORMING TO ASTM C-260 IN ALL CONCRETE PERMANENTLY EXPOSED TO THE WEATHER.
4. REINFORCING MATERIAL REQUIREMENTS:
- A. USE DEFORMED REINFORCING BARS CONFORMING TO THE STANDARDS OF ASTM A615, GRADE 60. WHERE WELDING OF REINFORCING BARS OCCURS, USE ASTM A706 GRADE 60.
5. PROVIDE DOWELS, WHERE REQUIRED, THAT MATCH THE SIZE AND NUMBER OF MAIN REINFORCING.
6. SPLICE REINFORCING BARS WHERE INDICATED ON THE DRAWINGS. LAP HORIZONTAL REINFORCING AT CORNERS AND INTERSECTIONS. STAGGER ALL SPLICES UNLESS NOTED OTHERWISE. IF SPLICE LOCATIONS ARE NOT SPECIFICALLY INDICATED, VERIFY PLANNED LOCATION WITH THE EOR.
7. DETAIL, FABRICATE, LABEL, SUPPORT, AND SPACE ALL CONCRETE REINFORCEMENT CONFORMING TO THE PROCEDURES AND REQUIREMENTS OF THE LATEST EDITION OF CHAPTER 19 OF THE CODE, ACI 318, AND THE "ACI DETAILING MANUAL: DETAILS AND DETAILING CONCRETE REINFORCEMENT", ACI 315.
8. PROVIDE A MINIMUM CONCRETE COVER OVER REINFORCING OF:
- A. 3" FOR CONCRETE CAST AGAINST THE EARTH.
- B. 1 1/2" FOR BARS EXPOSED TO WEATHER AND BEAMS AND COLUMNS.
- C. 3/4" FOR INTERIOR SLABS.
9. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF SHORING,THE DESIGN, REMOVAL, AND RESHORING OF FORMWORK MUST CONFORM TO ACI 318, AND IS THE RESPONSIBILITY OF THE CONTRACTOR.
10. PROVIDE CONCRETE WITH A MAXIMUM SLUMP OF 8 INCHES ± 1 INCH WITH VERIFIED SLUMP OF 3 INCHES ± 1 INCH BEFORE ADDING HIGH-RANGE WATER REDUCING OR PLASTICIZING ADMIXTURES AT THE PROJECT SITE.
11. SUBMIT THE FOLLOWING TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL:
- A. CONCRETE MIX DESIGN DATA FOR EACH TYPE AND COMPRESSIVE STRENGTH OF CONCRETE REQUIRED. BASE MIX DESIGNS ON FIELD EXPERIENCE, TRIAL MIXTURES, OR BOTH, IN CONFORMANCE WITH ACI 318.MIX DESIGNS MUST BE SIGNED BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER.
- B. REINFORCING BAR SHOP DRAWINGS, CONTAINING ALL REINFORCING DETAILS, SPACING, PLACEMENT, AND PLANNED CONSTRUCTION JOINTS. PREPARE SHOP DRAWINGS IN CONFORMANCE WITH ACI 315
12. CONCRETE CURING REQUIREMENTS:
- A. MAINTAIN CONCRETE ABOVE 50 DEGREES FAHRENHEIT AND IN A MOIST CONDITION FOR A MINIMUM OF SEVEN DAYS AFTER PLACEMENT UNLESS OTHERWISE NOTED.
- B. WHEN THE TEMPERATURE IS EXPECTED TO FALL BELOW 40 DEGREES F FOR THREE CONSECUTIVE DAYS, COMPLY WITH ACI 306.1. DO NOT USE FROZEN MATERIALS, MATERIALS CONTAINING ICE OR SNOW, OR CALCIUM CHLORIDE, SALT, OR OTHER MATERIALS CONTAINING ANTIFREEZE AGENTS OR CHEMICAL ACCELERATORS. A TEMPERATURE OF 50 DEGREES FAHRENHEIT MUST BE MAINTAINED DURING CURING VIA USE OF TENTING OR OTHER ACCEPTABLE ENCLOSURES.

STRUCTURAL CONCRETE ANCHOR NOTES

1. USE POST INSTALLED ANCHORS AS INDICATED ON THE DRAWINGS. ANY SUBSTITUTION MUST BE SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL.
2. MEET THE MINIMUM EMBEDMENT, EDGE DISTANCE AND SPACING REQUIREMENTS OF THE APPLICABLE ICC-ES REPORT FOR POST INSTALLED CONCRETE ANCHORS AND INSERTS.
3. DO NOT CUT OR DAMAGE EXISTING REINFORCING STEEL WHEN PLACING POST INSTALLED ANCHORS INTO EXISTING CONCRETE.
4. DO NOT SUBSTITUTE CAST-IN-PLACE BOLTS AND RODS WITH POST-INSTALLED ANCHORS WITHOUT PRIOR APPROVAL FROM THE ENGINEER OF RECORD.
5. USE HOT-DIPPED GALVANIZED OR STAINLESS ANCHORS WHEN EXPOSED TO EXTERIOR OR DAMP CONDITIONS, IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
6. INSTALL AND TEST POST INSTALLED ANCHORS IN ACCORDANCE WITH CHAPTER 17 OF THE CURRENT IBC CODE AND THE APPLICABLE ICC-ES REPORT.
7. PERFORM ALL TESTING IN THE PRESENCE OF THE PROJECT INSPECTOR OF RECORD.

STRUCTURAL STEEL NOTES

1. DETAIL, FABRICATE, AND ERECT ALL WORK IN CONFORMANCE WITH CHAPTER 22 OF THE IBC AND ALL REFERENCED STANDARDS.
2. USE STRUCTURAL STEEL CONFORMING TO THE FOLLOWING STANDARDS, UNLESS NOTED OTHERWISE:

SHAPE	YIELD STRENGTH	MATERIAL NOTES
W, WF, WT	50 KSI	ASTM A992
HSS	50 KSI	ASTM A500, GR C OR A1080
PIPE	35 KSI	ASTM A53, GR B
C, L, PLATES, MISCELLANEOUS	36 KSI	ASTM A36

3. BOLT AND ANCHOR ROD REQUIREMENTS:
- A. USE BOLTS AND ANCHOR RODS WITH A MINIMUM DIAMETER OF 3/4", UNLESS NOTED OTHERWISE.
- B. USE BOLTS, NUTS AND WASHERS CONFORMING TO THE REQUIREMENTS OF ASTM F3125 GRADE A325 OR A490.
- C. USE ANCHOR RODS THAT MEET OR EXCEED THE REQUIREMENTS OF ASTM F1554 GR. 36, UNLESS NOTED OTHERWISE.
4. BOLTED CONNECTION REQUIREMENTS:
- A. USE SIMPLE SHEAR CONNECTIONS WITH A MINIMUM OF TWO HIGH-STRENGTH BOLTS IN BEARING TYPE CONNECTIONS, THREADS MAY BE INCLUDED OR EXCLUDED FROM SHEAR PLANE(S), UNLESS NOTED OTHERWISE.
- B. TIGHTEN ALL BOLTS TO A SNUG-TIGHT CONDITION, SUCH THAT ALL PLIES ARE IN SNUG CONTACT, UNLESS NOTED OTHERWISE
- C. PREPARE FAYING SURFACES FOR ALL BOLTED CONNECTIONS THAT ARE PART OF THE SEISMIC FORCE RESISTING SYSTEM (SFRS) AS SLIP-CRITICAL CLASS 'A' OR BETTER.
5. WELDING REQUIREMENTS:
- A. WELDING MUST BE DONE BY QUALIFIED WELDERS AND MUST CONFORM TO THE AWS "D1.1 STRUCTURAL WELDING CODE-STEEL", LATEST EDITION.
6. REQUIREMENTS FOR STRUCTURAL STEEL LOCATED OUTSIDE OF THE HEATED BUILDING ENVELOPE (EXTERIOR STEEL):
- A. HOT-DIP GALVANIZE ALL EXTERIOR STEEL.
- B. PROVIDE A 1/4"ø WEEP HOLE AT THE BASE OF ALL VERTICAL MEMBERS AND AT THE LOWEST POINT OF ALL HORIZONTAL AND SLOPED HSS MEMBERS.
7. FABRICATE AND ERECT ALL BEAMS, JOISTS AND TRUSSES WITH THE REQUIRED CAMBER UP. PROVIDE CAMBERS AS INDICATED ON THE DRAWINGS.
8. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE CONTROL OF ALL ERECTION PROCEDURES AND SEQUENCE. SPECIAL CONSIDERATION SHOULD BE GIVEN TO TEMPERATURE DIFFERENTIALS.
9. DO NOT FIELD CUT OR MODIFY STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
10. SUBMIT THE FOLLOWING TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL:
- A. SHOP DRAWINGS SHOWING, FABRICATION DETAILS, FIELD ASSEMBLY DETAILS, AND ERECTION DIAGRAMS OF ALL STRUCTURAL STEEL.

CONSULTANT :



Juneau, AK
9103 Mendernall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.rspspec.com
AECC163270

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

GENERAL NOTES

DESIGN	JCL / ZJM
DRAWN	DJM
CHECKED	JEH
DATE	04-16-2025

PROJECT No.	10297.24002
SHEET NUMBER	

S-003

No.	Date	Item
REVISIONS		

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION. AFFECTING ALL LABELED SCALES

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SPECIAL INSPECTION NOTES

1. ALL SPECIAL INSPECTIONS AND REPORTING REQUIREMENTS PER SECTION 1704 OF THE IBC AND REFERENCED STANDARDS, INCLUDING THE TASKS OUTLINED IN THE TABLES ON THIS SHEET, SHALL BE PROVIDED.
2. THE OWNER OR OWNER'S AGENT, OTHER THAN THE CONTRACTOR, SHALL EMPLOY QUALIFIED AGENCIES TO PROVIDE SPECIAL INSPECTION AND TESTS FOR THE WORK SPECIFIED IN SECTION 1705 OF THE IBC. SPECIAL INSPECTION AGENCIES SHALL BE QUALIFIED PER 1704.2.1 OF THE IBC.
3. THE SPECIAL INSPECTORS SHALL, AT A MINIMUM, PROVIDE SPECIAL INSPECTION REPORTS TO THE BUILDING OFFICIAL, OWNER OR OWNER'S AUTHORIZED AGENT, ARCHITECT, AND THE ENGINEER OF RECORD. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE NOTICE OF THE CONTRACTOR, OWNER OR OWNER'S AUTHORIZED AGENT, ARCHITECT, AND THE ENGINEER OF RECORD.
4. THE SPECIAL INSPECTORS SHALL SUBMIT A FINAL SIGNED REPORT DOCUMENTING ALL SPECIAL INSPECTIONS AND TESTS, AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS OR TESTS.
5. QUALITY ASSURANCE AS REQUIRED BY TABLES ON THIS SHEET SHALL BE THE RESPONSIBILITY OF THE OWNER'S REPRESENTATIVE. QUALITY CONTROL AS REQUIRED BY THE SPECIAL INSPECTION SCHEDULES SHALL BE PROVIDED BY THE FABRICATOR AND/OR ERECTOR.
6. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 7 WORKING DAYS OF ADVANCE NOTICE PRIOR TO A REQUIRED SPECIAL INSPECTION AND PROVIDE ACCESS TO THE SITE AS REQUIRED FOR THE SPECIAL INSPECTOR TO COMPLETE THEIR WORK.
7. THE COST OF ANY REINSPECTION REQUIRED DUE TO CONSTRUCTION ERROR IS THE RESPONSIBILITY OF THE CONTRACTOR.
8. DEFINITIONS:

A. QC - QUALITY CONTROL, TO BE PROVIDED BY THE FABRICATOR AND ERECTOR, PER AISC 360 CHAPTER N.1.

B. QA - QUALITY ASSURANCE, TO BE PROVIDED BY OTHERS WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION, BUILDING CODE, PURCHASER, OWNER, OR ENGINEER OF RECORD, PER AISC 360 CHAPTER N.1

C. O - OBSERVE THESE ITEMS ON A RANDOM BASIS, OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.

D. P - PERFORM THESE TASKS FOR EACH JOINT OR MEMBER

E. D - DOCUMENT INSPECTION ACTIVITIES.

F. FREQUENCY

a. P - PERIODIC

b. C - CONTINUOUS

STRUCTURAL OBSERVATION NOTES

1. THE OWNER OR OWNER'S AUTHORIZED AGENT SHALL EMPLOY A CIVIL OR STRUCTURAL ENGINEER, REGISTERED IN THE STATE OF ALASKA, TO PERFORM STRUCTURAL OBSERVATIONS IN ACCORDANCE WITH SECTION 1704.6 OF THE IBC.
2. PRIOR TO THE COMMENCEMENT OF OBSERVATIONS THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL, A WRITTEN STATEMENT IDENTIFYING THE FREQUENCY AND EXTENT OF STRUCTURAL OBSERVATIONS.
3. AT THE CONCLUSION OF THE WORK INCLUDED IN THE PERMIT, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.

TABLE 1 - REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS		
REFERENCE IBC TABLE 1705.6 AND THE REFERENCED GEOTECHNICAL REPORT		
REQUIRED VERIFICATION AND INSPECTION		FREQUENCY
1.	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	P
2.	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	P
3.	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	P
4.	DURING FILL PLACEMENT, VERIFY USE OF PROPER MATERIALS AND PROCEDURES IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT. VERIFY DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	C
5.	PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	P

TABLE 2 - REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION		
REFERENCE IBC TABLE 1705.3 AND ASSOCIATED SECTIONS FROM ACI318-19		
REQUIRED VERIFICATION AND INSPECTION		FREQUENCY
1.	INSPECT REINFORCEMENT, INCLUDING PRESTRESSED TENDONS, AND VERIFY PLACEMENT.	P
2.	REINFORCING BAR WELDING: A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706; B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND C. INSPECT ALL OTHER WELDS.	P P C
3.	INSPECT ANCHORS CAST IN CONCRETE.	P
4.	INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS. A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.	C P
5.	VERIFY USE OF REQUIRED DESIGN MIX.	P
6.	PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	C
7.	INSPECT CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	C
8.	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	P
9.	VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	P
10.	INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	P

CONSULTANT :



Juneau, AK
9103 Mendernall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.0060
www.rspect.com
AECC163270

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PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

SPECIAL INSPECTIONS

DESIGN	JCL / ZJM
DRAWN	DJM
CHECKED	JEH
DATE	04-16-2025
PROJECT No. 10297.24002	
SHEET NUMBER	
S-004	

No.	Date	Item
REVISIONS		

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES

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LAP SPLICE LENGTH SCHEDULE: CLASS B										
F'C (PSI)	BAR SIZE (GR 60)	#3	#4	#5	#6	#7	#8	#9	#10	#11
	BAR DIAMETER (IN)	0.375	0.500	0.625	0.750	0.875	1.000	1.128	1.270	1.410
5,000	TOP BAR	22	29	36	43	63	72	81	92	102
	OTHER	17	23	28	34	49	56	63	70	78
CLASS A LAP LENGTH SCHEDULE: DIVIDE SCHEDULE VALUES BY 1.3										

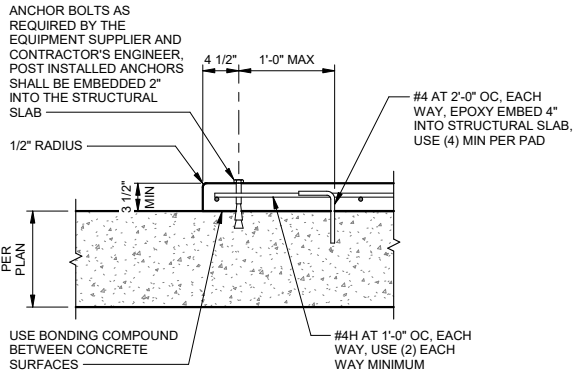
- NOTES:
- SCHEDULE VALUES ARE VALID FOR NORMAL WEIGHT CONCRETE WITH REBAR LAYOUTS MEETING THE REQUIREMENTS OF EITHER A, B, OR C:
 - CLEAR SPACING AND CLEAR COVER OF BARS BEING DEVELOPED OR LAP SPliced IS NOT LESS THAN (1) BAR DIAMETER AND WITHIN STIRRUPS OR TIES THROUGHOUT.
 - CLEAR SPACING OF BARS BEING DEVELOPED OR LAP SPliced IS AT LEAST (2) BAR DIAMETERS AND CLEAR COVER IS AT LEAST (1) BAR DIAMETER.
 - LAP SPLICE LENGTHS ARE INCREASED BY 1.5.
 - TOP BAR REFERS TO HORIZONTAL REINFORCEMENT WITH MORE THAN 1'-0" OF FRESH CONCRETE PLACED BELOW THE BAR.
 - OTHER REFERS TO ALL OTHER CONDITIONS NOT DEFINED AS TOP BARS.

1

TYPICAL LAP SPLICE SCHEDULE

S-101

SCALE: 12" = 1'-0"



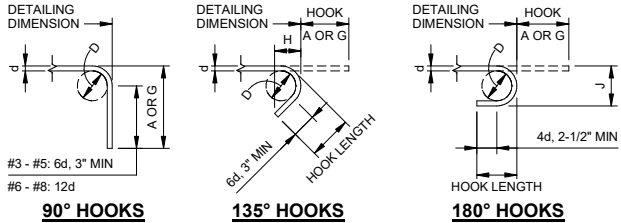
- NOTES:
- CONTRACTOR TO COORDINATE QUANTITY, SIZE, AND LOCATIONS REQUIRED WITH MECHANICAL AND ELECTRICAL DRAWINGS.

4

TYPICAL HOUSEKEEPING PAD

S-101

SCALE: 1" = 1'-0"



BEND DIMENSION SCHEDULE										
BAR SIZE	90° HOOKS			135° HOOKS				180° HOOKS		
	D	A OR G	H	D	A OR G	H	HOOK LENGTH	D	A OR G	HOOK LENGTH
#3	2"	4-1/2"	2"	4-1/2"	2-3/4"	2"	4-1/4"	2"	5"	2-3/4"
#4	2-1/2"	4-3/4"	2-1/2"	5"	3"	4-3/4"	2-1/2"	5-1/2"	3-1/2"	4-1/4"
#5	3-1/4"	6"	3-1/4"	6"	3-3/4"	6"	3-1/4"	6-1/2"	4-1/2"	4-3/4"
#6	4-1/2"	1'-0"	4-1/2"	8"	4-1/2"	7-3/4"	4-1/2"	8-1/4"	6"	6"
#7	5-1/4"	1'-2"	5-1/4"	9"	5-1/4"	8-3/4"	5-1/4"	9-3/4"	7"	7"
#8	6"	1'-4"	6"	10-1/2"	6"	10"	6"	11"	8"	8"

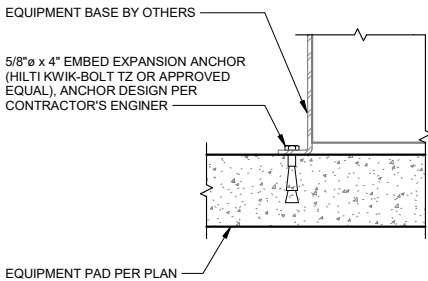
D = FINISHED INSIDE BEND DIAMETER (INCLUDES SPRING BACK), d = BAR DIAMETER, ACI 318 MINIMUM BEND DIAMETER: #3 - #5: 4d (5d USED IN TABLE), #6 - #8: 6d

2

TYPICAL STANDARD HOOK DIMENSIONS

S-101

SCALE: 1" = 1'-0"

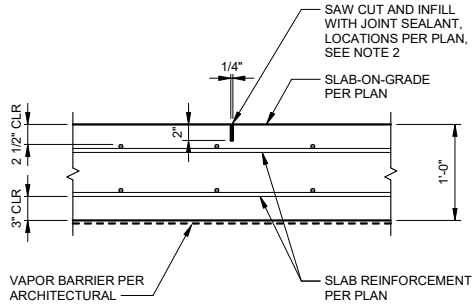


5

TYPICAL EQUIPMENT HOLDOWN

S-101

SCALE: 1 1/2" = 1'-0"



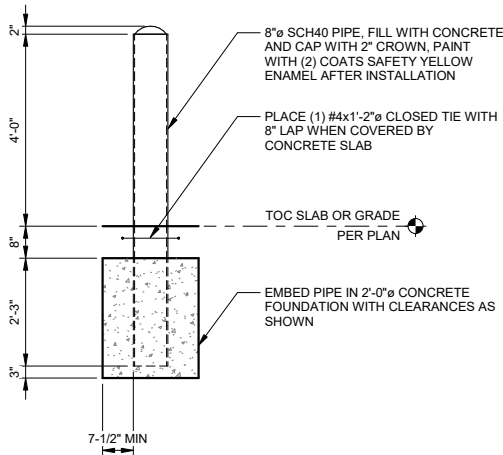
- NOTES:
- SAWED JOINTS SHALL BE MADE AS SOON AS THE JOINT CAN BE CUT WITHOUT EDGES RAVELING AND WITHIN 24 HOURS OF SLAB PLACEMENT.
 - PRE-MOLDED JOINT MATERIAL MAY BE SUBSTITUTED FOR SAW CUT.

3

TYPICAL CONTROL JOINT AT 1'-0" SLAB

S-101

SCALE: 1" = 1'-0"



6

TYPICAL BOLLARD

S-101

SCALE: 1/2" = 1'-0"

CONSULTANT :



Juneau, AK
9103 Mendocino Mall Rd, Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC163270



PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

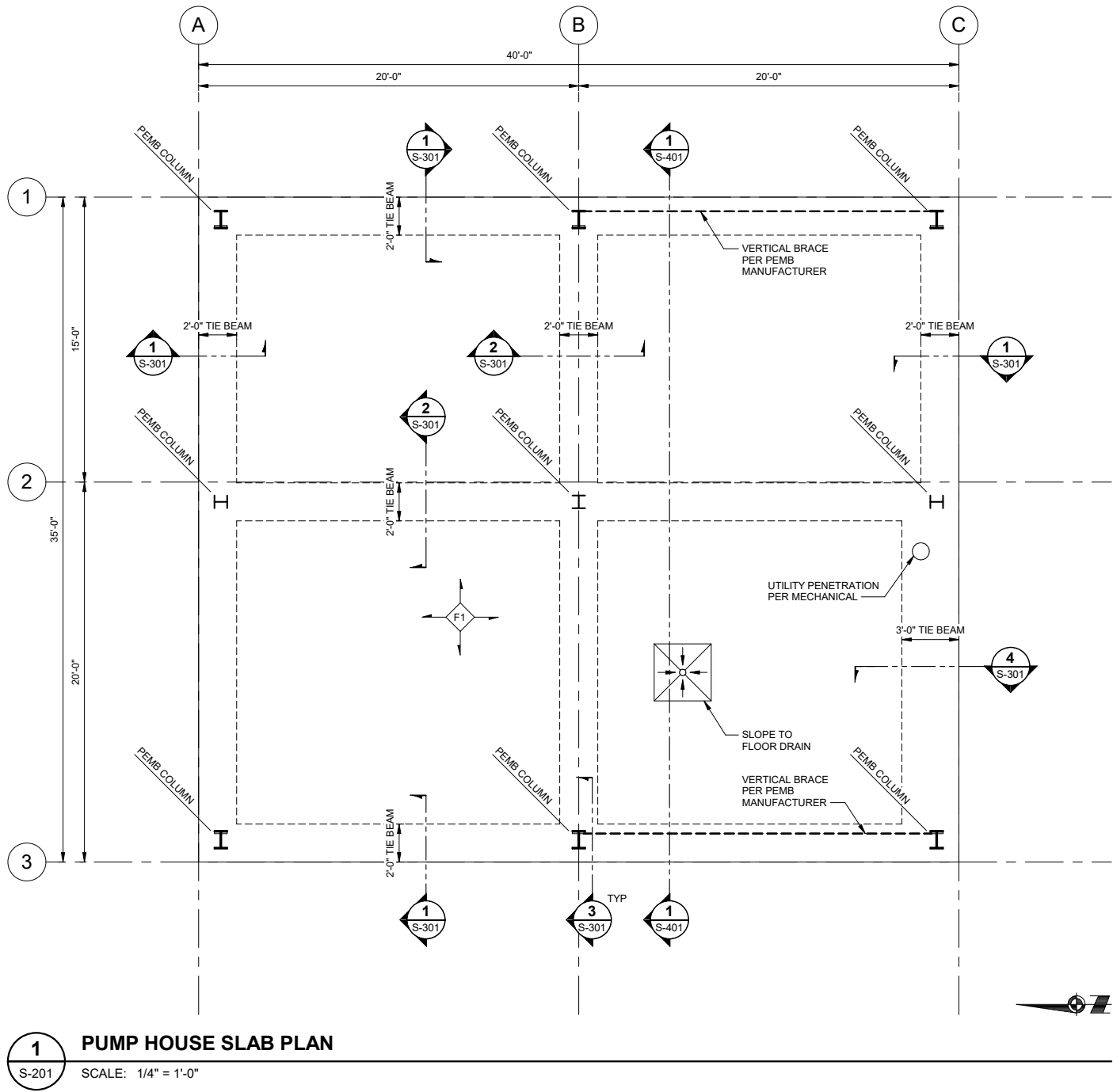
TYPICAL DETAILS

DESIGN JCL / ZJM
DRAWN DJM
CHECKED JEH
DATE 04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

S-101

No.	Date	Item
REVISIONS		



SHEET NOTES

- THE REFERENCE ELEVATION OF THE FIRST FLOOR IS 0'-0". TOP OF CONCRETE OF SLAB-ON-GRADE IS TO BE AT THE REFERENCE ELEVATION, UNLESS NOTED OTHERWISE.
- COORDINATE DOOR LOCATIONS AND ROUGH OPENING REQUIREMENTS WITH ARCHITECTURAL.
- THE COMPLETE BUILDING, ANCHOR RODS, AND EMBEDMENT OF ANCHOR RODS INTO THE FOUNDATION ARE THE RESPONSIBILITY OF THE CONTRACTOR. SEE GENERAL NOTES FOR ADDITIONAL INFORMATION.
- THE PEMB REACTIONS ARE BASED ON THE STRUCTURAL LAYOUT SHOWN. REACTIONS ARE ASSUMED TO BE EQUAL TO OR LESS THAN THE VALUES PROVIDED. IF THE LAYOUT CHANGES AND/OR THE REACTIONS ARE LARGER, CHANGES TO THE FOUNDATION MAY BE REQUIRED. THE COST OF ANY RE-DESIGN ASSOCIATED WITH LAYOUT CHANGES IS THE RESPONSIBILITY OF THE CONTRACTOR.

DESIGN LOADS			
LOCATION	P _u (MAX)	T _u (MAX)	V _u (MAX)
CENTER COLUMN (GRID 1B, 2A, 2B, 2C, 3B)	125.5 KIPS	26 KIPS	49.5 KIPS
CORNER COLUMN (GRID 1A, 1C, 3A, 3C)	69.5 KIPS	13.5 KIPS	49.5 KIPS

LOADS ARE ULTIMATE REACTIONS, IN LRFD.

NOTES:

Tu = AXIAL TENSION AT PEMB COLUMN BASE.

Pu = AXIAL COMPRESSION AT PEMB COLUMN BASE.

Vu = MAJOR AXIS SHEAR AT PEMB COLUMN BASE.

FLOOR SCHEDULE	
TYPE	FLOOR DESCRIPTION
F1	1'-0" SLAB-ON-GRADE REINFORCED WITH #6 AT 1'-0" OC EACH WAY, TOP AND BOTTOM.

CONSULTANT :

JUNE 12, 2025

Juneau, AK
9103 Mendocino Mall Rd, Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC 163270

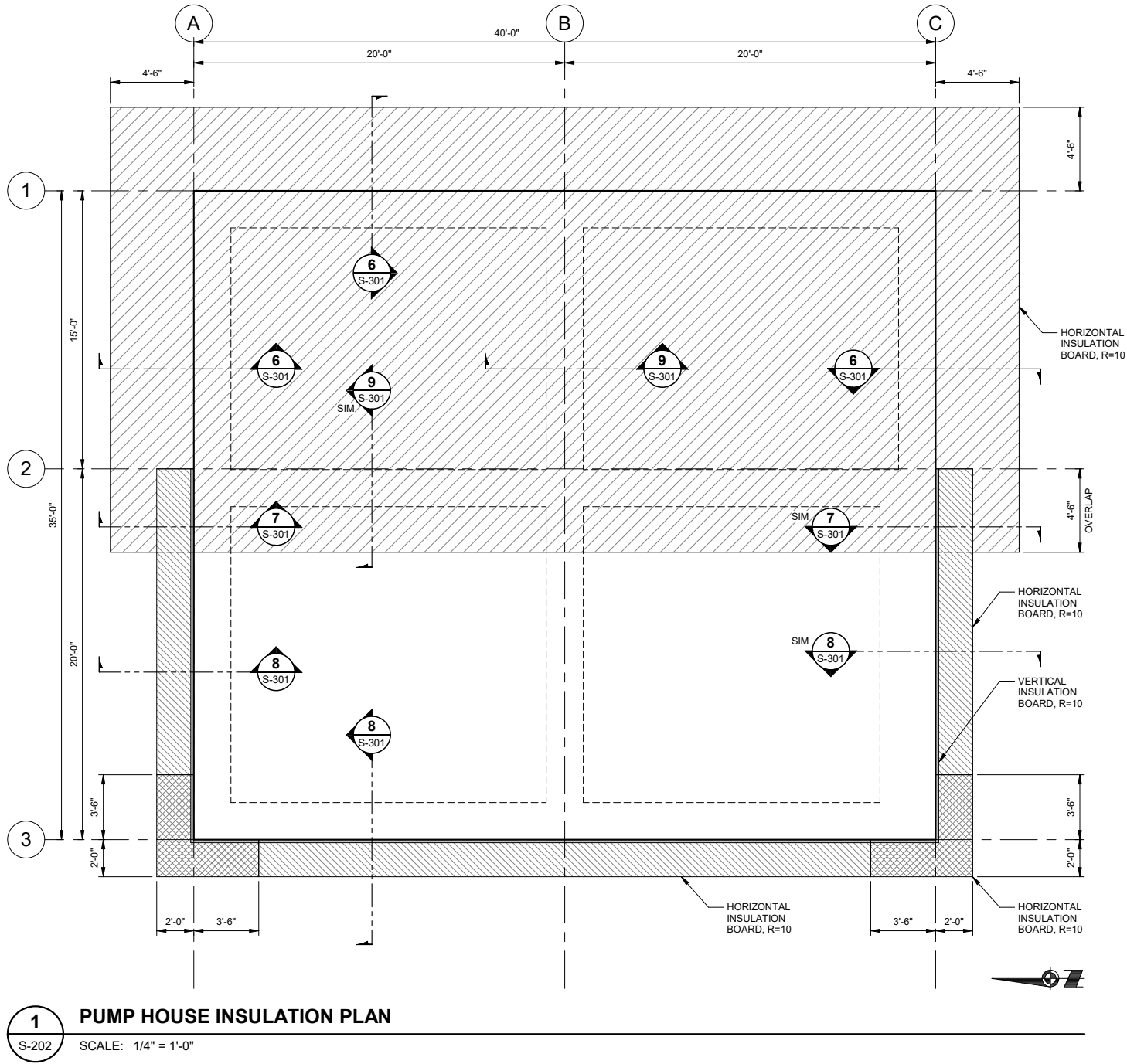
PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :
PUMP HOUSE FOUNDATION AND
SLAB PLAN

DESIGN JCL
DRAWN DJM
CHECKED JEH
DATE 04-16-2025
PROJECT No.
10297.24002
SHEET NUMBER
S-201

No.	Date	Item
REVISIONS		



SHEET NOTES

1. THE REFERENCE ELEVATION OF THE FIRST FLOOR IS 0'-0". TOP OF CONCRETE OF SLAB-ON-GRADE IS TO BE AT THE REFERENCE ELEVATION, UNLESS NOTED OTHERWISE.
2. SEE CIVIL FOR ADDITIONAL INFORMATION.

CONSULTANT :

JACOB E. HORAZDOVSKY
No. 126203
12/21/2025
REGISTERED STRUCTURAL ENGINEER

Juneau, AK
9103 Mendernall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC163270

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION
YAKUTAT, ALASKA

SHEET TITLE :

PUMP HOUSE INSULATION PLAN

DESIGN	JCL
DRAWN	DJM
CHECKED	JEH
DATE	04-16-2025

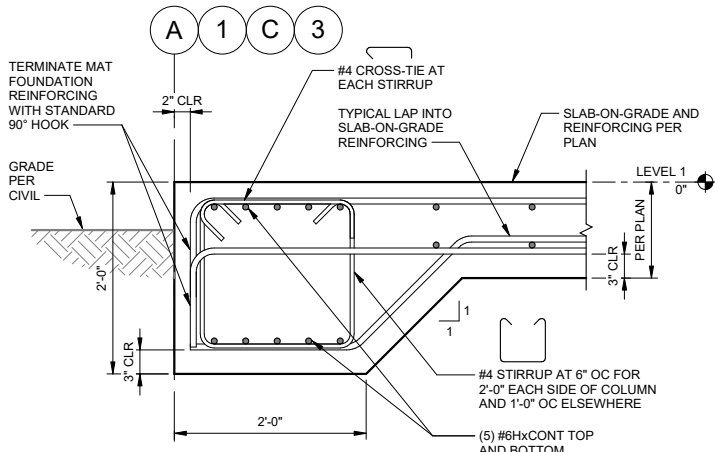
PROJECT No.
10297.24002
SHEET NUMBER

S-202

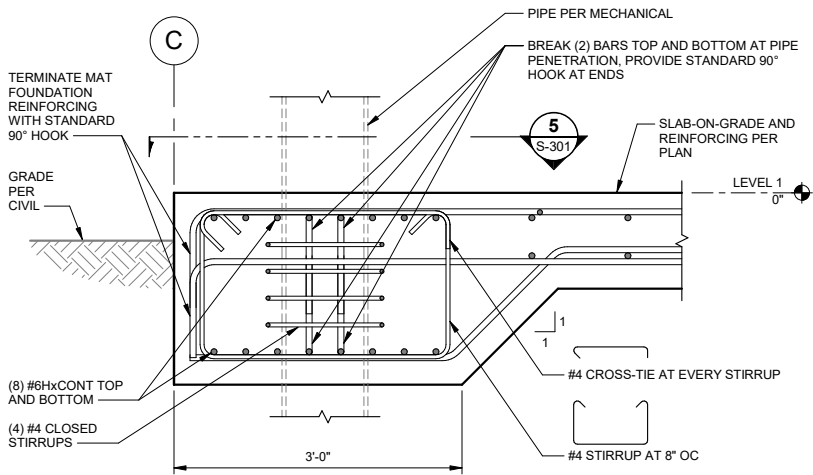
No.	Date	Item
REVISIONS		

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES

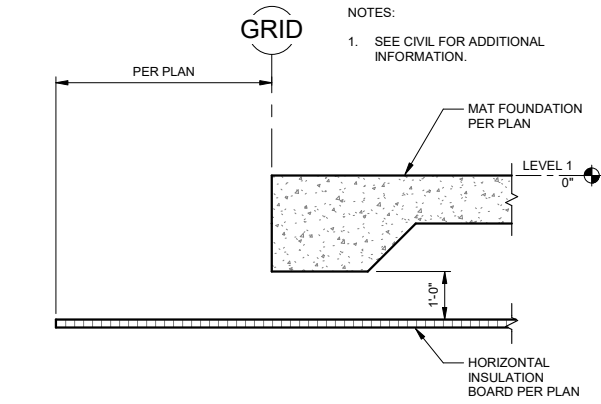
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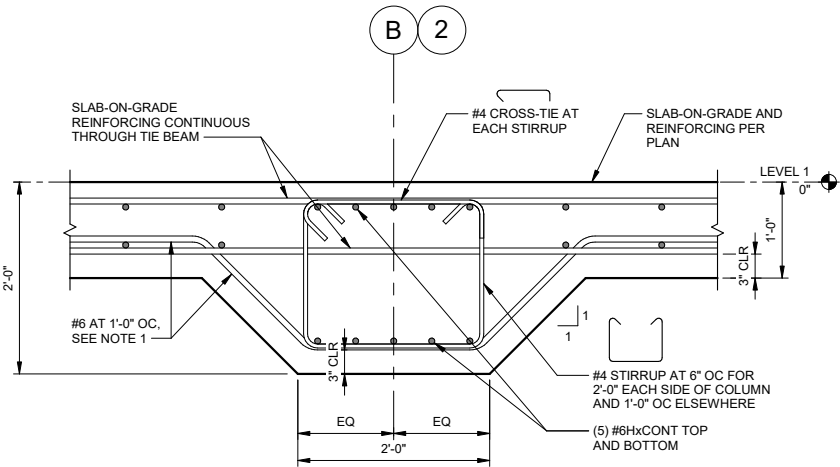
1 PERIMETER TIE BEAM SECTION
S-301 SCALE: 1" = 1'-0"



4 PERIMETER TIE BEAM SECTION
S-301 SCALE: 1" = 1'-0"

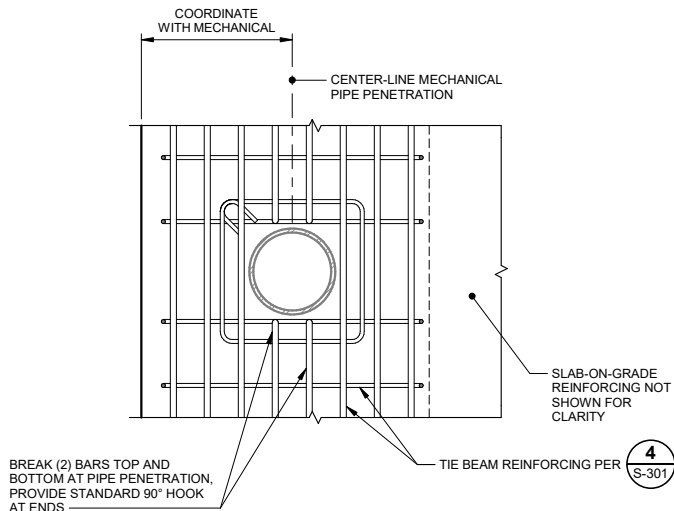


6 FOUNDATION INSULATION
S-301 SCALE: 1/2" = 1'-0"

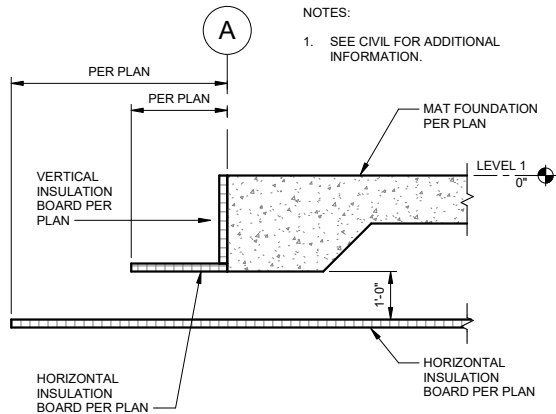


2 INTERIOR TIE BEAM SECTION
S-301 SCALE: 1" = 1'-0"

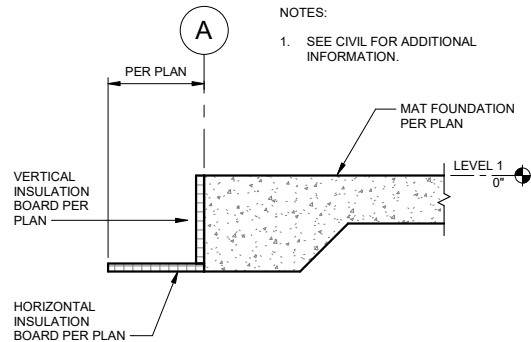
NOTES:
1. PROVIDE TYPICAL LAP LENGTH INTO SLAB-ON-GRADE REINFORCING, TYP EACH DIRECTION.



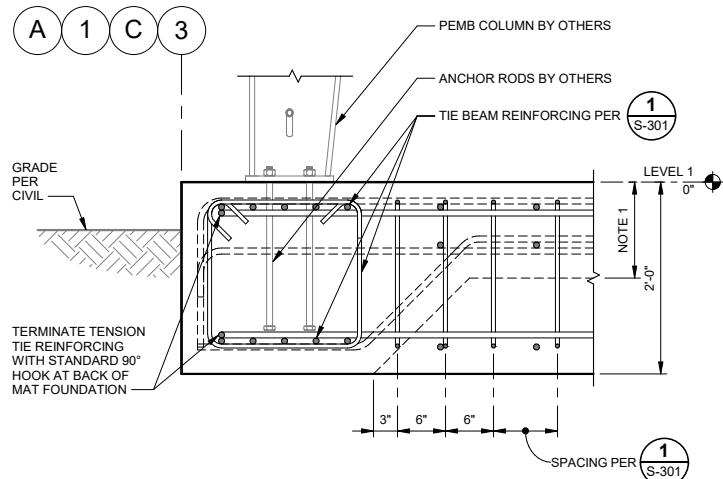
5 PERIMETER TIE BEAM DETAIL
S-301 SCALE: 1" = 1'-0"



7 FOUNDATION INSULATION
S-301 SCALE: 1/2" = 1'-0"

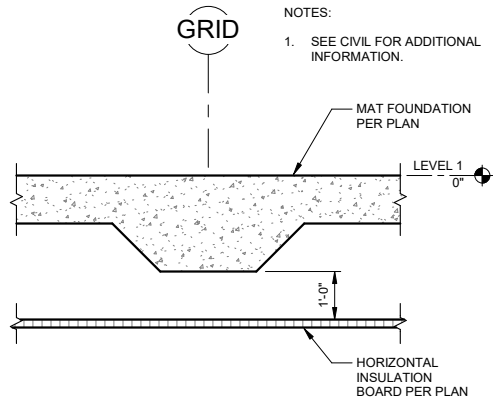


8 FOUNDATION INSULATION
S-301 SCALE: 1/2" = 1'-0"



3 PERIMETER TENSION TIE SECTION
S-301 SCALE: 1" = 1'-0"

NOTES:
1. SLAB-ON-GRADE AND REINFORCING BEYOND PER PLAN.



9 FOUNDATION INSULATION
S-301 SCALE: 1/2" = 1'-0"

No.	Date	Item
REVISIONS		

CONSULTANT :

STATE OF ALASKA
49TH
JACOB E. HORAZDOVSKY
SE 126203
REGISTERED STRUCTURAL ENGINEER

Juneau, AK
9103 Mendocino Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC163270

RESPEC

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

PUMP HOUSE FOUNDATION
DETAILS

DESIGN	JCL
DRAWN	DJM
CHECKED	JEH
DATE	04-16-2025

PROJECT No.
10297.24002

SHEET NUMBER
S-301

IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING IT'S PRODUCTION, AFFECTING ALL LABELED SCALES



SCALE: 3/16" = 1'-0"

1. THE REFERENCE ELEVATION OF THE FIRST FLOOR IS 0'-0". TOP OF CONCRETE OF SLAB-ON-GRADE IS TO BE AT THE REFERENCE ELEVATION, UNLESS NOTED OTHERWISE.
2. SEE MECHANICAL DRAWINGS, CIVIL DRAWING AND THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. DESIGN ANCHOR BOLTS, ANCHOR BOLT CHAIRS, AND ATTACHMENTS TO THE AWWA D103-19 DESIGN STANDARD AND ALL APPLICABLE DESIGN CODES.
4. ANCHOR BOLT AND CHAIRS TO BE HOT-DIPPED GALVANIZED.
5. THE TANK VENDOR'S ENGINEER IS RESPONSIBLE FOR VERIFYING THAT THE PROVIDED FOUNDATION DESIGN IS ADEQUATE TO SUPPORT THE FINAL TANK LOADS AND REACTIONS. THE CONTRACTOR SHALL INCLUDE IN THEIR BUDGET AN ALLOWANCE FOR UP TO 15% ADDITIONAL CONCRETE AND REINFORCING STEEL BEYOND THE QUANTITIES SHOWN IN THE DRAWINGS, TO ACCOMMODATE ANY MODIFICATIONS REQUIRED BASED ON THE FINAL TANK REACTIONS.
6. SEE CIVIL FOR INSULATION UNDER TANK.

FLOOR SCHEDULE	
TYPE	FLOOR DESCRIPTION
F1	1'-0" SLAB-ON-GRADE REINFORCED WITH #6 AT 1'-0" OC EACH WAY, TOP AND BOTTOM.



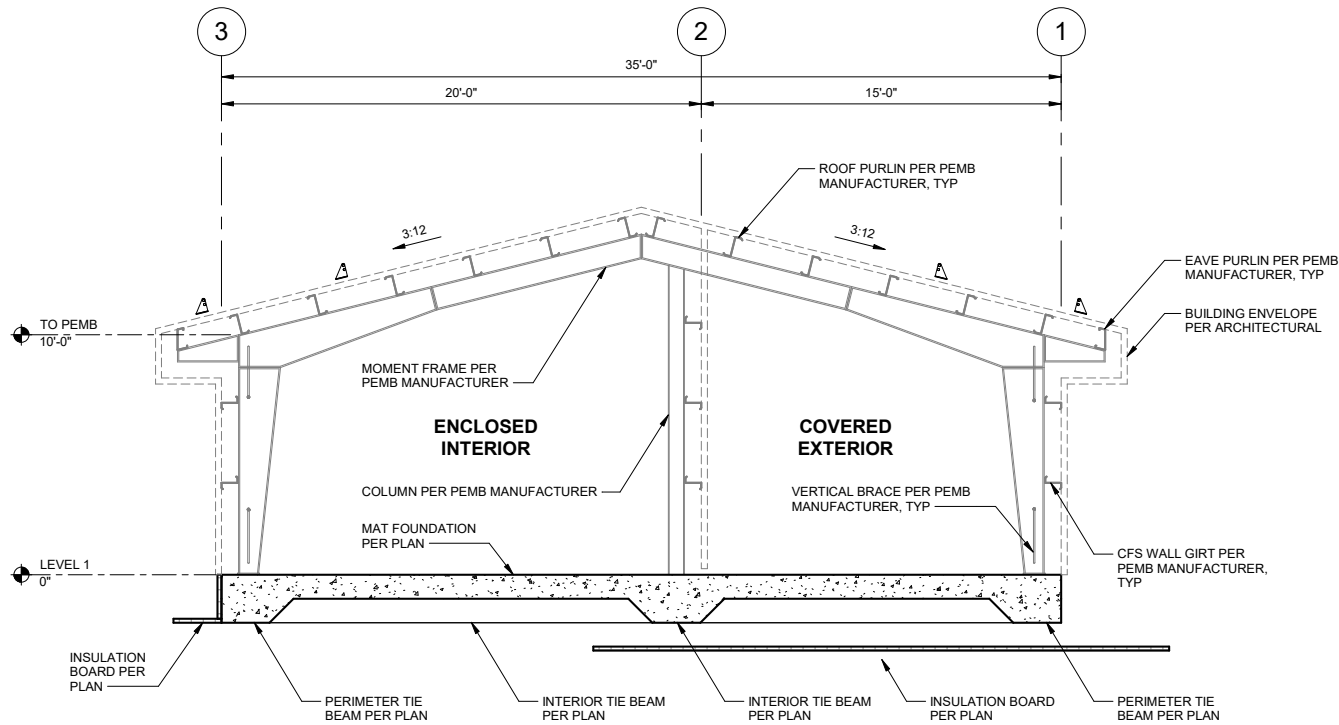
No.	Date	Item
REVISIONS		



YAKUTAT, ALASKA

ESIGN	ZJM
RAWN	DJM
CHECKED	JEH
DATE	04-16-2025

S-302



1 TYPICAL BUILDING SECTION
S-401 SCALE: 1/4" = 1'-0"

No.	Date	Item
REVISIONS		

CONSULTANT :



Juneau, AK
9103 Mendentral Mall Rd, Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC 163270



SHEET TITLE :

PUMP HOUSE BUILDING SECTIONS

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

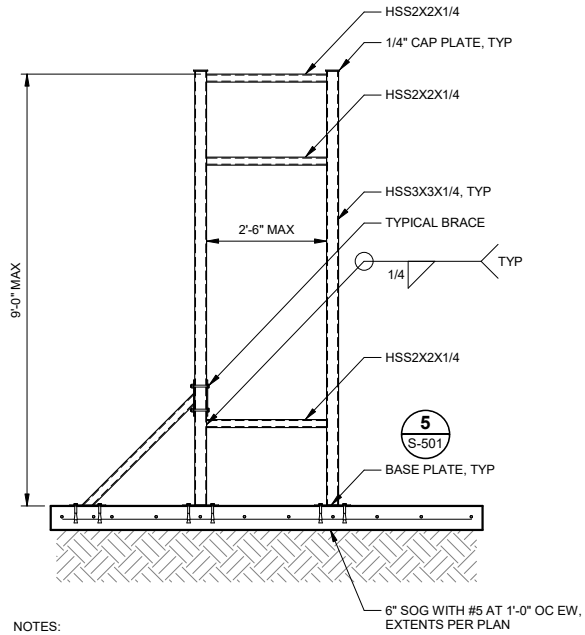
YAKUTAT, ALASKA

DESIGN	JCL
DRAWN	DJM
CHECKED	JEH
DATE	04-16-2025

PROJECT No.
10297.24002

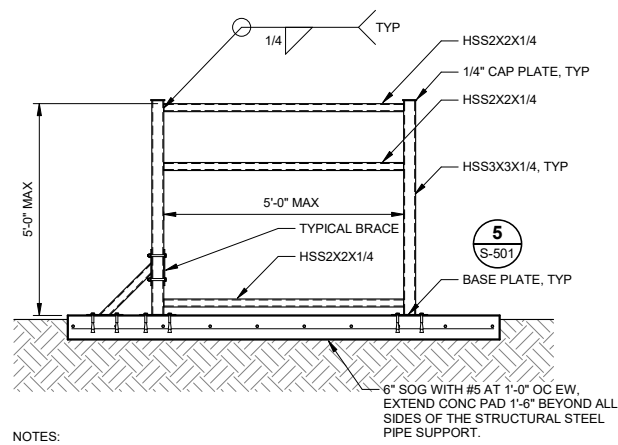
SHEET NUMBER
S-401

4/19/2025 4:42:45 PM Autodesk Docs//10297_24002-CBY Airport Water System Extension/INF-STRU-10297_24002_RV23.rvt IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION. AFFECTING ALL LABELED SCALES 1"



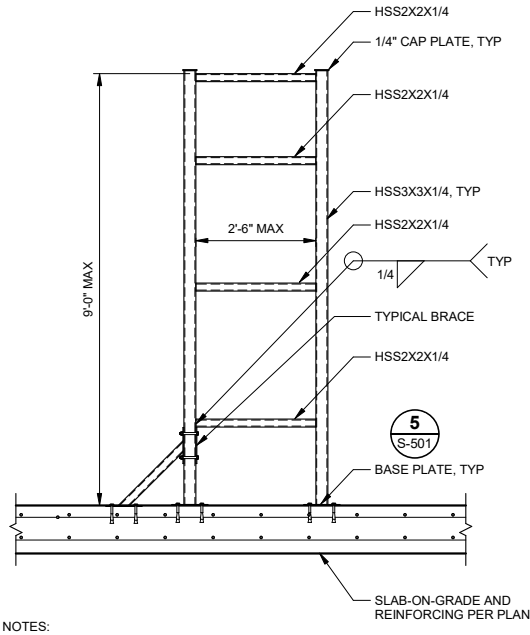
NOTES:
1. PIPING NOT SHOWN. COORDINATE SIZE AND LAYOUT WITH MECHANICAL.

1 EXTERIOR PIPE BRIDGE - (2) PIPES
S-501 SCALE: 1/2" = 1'-0"



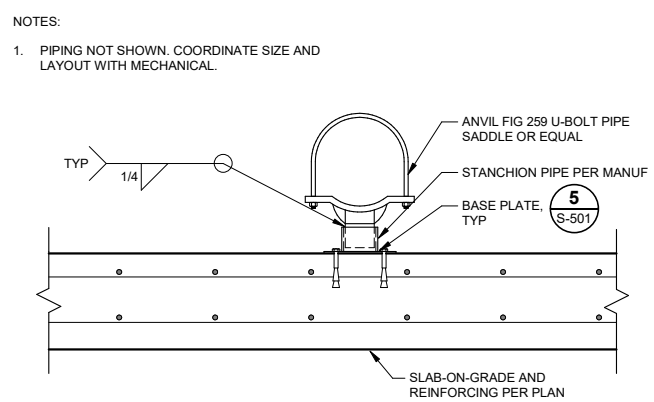
NOTES:
1. PIPING NOT SHOWN. COORDINATE SIZE AND LAYOUT WITH MECHANICAL.

2 EXTERIOR PIPE BRIDGE - (3) PIPES
S-501 SCALE: 1/2" = 1'-0"



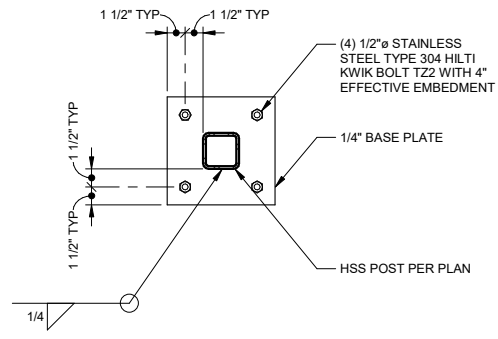
NOTES:
1. PIPING NOT SHOWN. COORDINATE SIZE AND LAYOUT WITH MECHANICAL.

3 TYPICAL INTERIOR PIPE BRIDGE
S-501 SCALE: 1/2" = 1'-0"

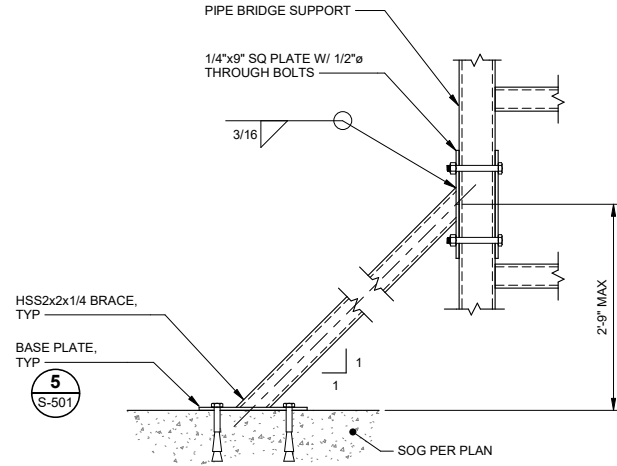


NOTES:
1. PIPING NOT SHOWN. COORDINATE SIZE AND LAYOUT WITH MECHANICAL.

4 INTERIOR PIPE RISER
S-501 SCALE: 1" = 1'-0"



5 PIPE BRIDGE BASE PLATE
S-501 SCALE: 1 1/2" = 1'-0"



6 PIPE BRIDGE BRACING
S-501 SCALE: 1 1/2" = 1'-0"

CONSULTANT :

Jacob E. Horazdovsky
SE 126203
MECHANICAL ENGINEER

PROJECT :
**CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION**

YAKUTAT, ALASKA

SHEET TITLE :
PUMP HOUSE FRAMING DETAILS

DESIGN	JCL
DRAWN	DJM
CHECKED	JEH
DATE	04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER
S-501

No.	Date	Item
REVISIONS		

GENERAL

DETAIL SYMBOL	1 M-101	DETAIL IDENTIFICATION DRAWING ON WHICH DETAIL IS SHOWN
SECTION SYMBOL	A M-101	SECTION IDENTIFICATION DRAWING ON WHICH SECTION IS SHOWN
MATCHLINE VIEW REFERENCE	1/M-102A	DETAIL IDENTIFICATION DRAWING ON WHICH CONTINUATION OF VIEW IS SHOWN
ROOM NAME AND NUMBER DESIGNATION	ROOM NAME 101	
SHEET KEYNOTE	1	
GENERAL SHEET NOTE	3.	
POINT OF CONNECTION		
NORTH ARROW		

MECHANICAL TAGS

EQUIPMENT DESIGNATION, SEE EQUIPMENT SCHEDULE	EF-1	EQUIPMENT DESIGNATION
VALVE DESIGNATION,SEE SCHEDULE	P-01	VALVE DESIGNATION

PIPE ACCESSORY LEGEND

SCHEMATIC	1 LINE PLAN VIEW	2 LINE PLAN VIEW	ELEVATION	SECTION	
					FLEXIBLE PUMP CONNECTOR (CRV FLEX)
					Y" STRAINER
					Y" STRAINER, WITH BLOWDOWN
					CHECK VALVE
					CHECK VALVE
					ISOLATION BUTTERFLY VALVE
					ISOLATION GATE VALVE
					ISOLATION BALL VALVE
					PRESSURE ACTIVATED VALVE
					BALANCE COCK
					THERMOMETER
					PRESSURE GAUGE
					PRESSURE SENSOR
					CHLORINE SENSOR
					FLOW METER
					UNION
					REDUCER
					SUCTION DIFFUSER
					FLANGE
					THERMOSTAT
					GAS DETECTOR
					BACKFLOW PREVENTER ASSEMBLY
					TANK VENT

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	NC	NORMALLY CLOSED
AHAP	AS HIGH AS POSSIBLE	NO	NORMALLY OPEN
APPROX	APPROXIMATE	NO.	NUMBER
AS	AIR SEPARATOR	NPCW	NON POTABLE COLD WATER
BTU	BRITISH THERMAL UNIT	OA	OUTSIDE AIR
CA	COMPRESSED AIR	OC	ON CENTER
CFM	CUBIC FEET PER MINUTE	OF	OVERFLOW
CIRC	CIRCULATION	ORD	OVERFLOW ROOF DRAIN
CH	CHILLER	ORL	OVERFLOW RAIN LEADER
CLNG	CEILING	OSA	OUTSIDE AIR SUPPLY
CO	CARBON MONOXIDE	P	PUMP
CO2	CARBON DIOXIDE	PD	PRESSURE DROP
CONT	CONTINUATION, CONTINUED	PDI	PLUMBING & DRAINAGE INSTITUTE
CP	CIRCULATING PUMP	PH	PHASE
CU	COPPER	POC	POINT OF CONNECTION
CW	COLD WATER	PRV	PRESSURE REDUCING VALVE
DDC	DIRECT DIGITAL CONTROLS	PSIG	POUNDS PER SQUARE INCH GAUGE
DIA	DIAMETER	PSI	POUNDS PER SQUARE INCH
DN	DOWN	PSV	PRESSURE SUSTAINING VALVE
DX	DIRECT EXPANSION	PTFE	TEFLON (POLYTETRAFLUOROETHYLENE)
EA	EXHAUST AIR	PW	POTABLE WATER
EBB	ELECTRIC BASEBOARD	RA	RETURN AIR
EF	EXHAUST FAN	RC	RECIRCULATION WATER
ENT	ENTERING	RCP	RADIANT CEILING PANEL
ET	EXPANSION TANK	RD	ROOF DRAIN
ESP	EXTERNAL STATIC PRESSURE	RECIRC	RECIRCULATION
EUH	ELECTRIC UNIT HEATER	RFM	RADIANT FLOOR MANIFOLD
EWT	ENTERING WATER TEMPERATURE	RL	RAINLEADER
FCO	FLOOR CLEANOUT	RPBP	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
FCV	FLOW CONTROL VALVE		
FD	FIRE DAMPER	RWL	RAIN WATER LEADER
FD	FLOOR DRAIN	SA	SUPPLY AIR
FM	FORCED MAIN	SCH	SCHEDULE
FT	FEET	SOFT	SQUARE FEET
FSD	FIRE SMOKE DAMPER	SF	SUPPLY FAN
GAL	GALLONS	SP	SUMP PUMP
GALV	GALVANIZED	SS	STAINLESS STEEL
GPM	GALLONS PER MINUTE	TA	TRANSFER AIR
HB	HOSE BIBB	TEMP	TEMPERATURE
HP	HORSE POWER	TDH	TOTAL DEVELOPED HEAD
HW	HOT WATER	TP	TRAP PRIMER
HWC	HOT WATER CIRCULATION	TYP	TYPICAL
HX	HEAT EXCHANGER	UL	UNDERWRITER'S LABORATORY
HZ	HERTZ	UON	UNLESS OTHERWISE NOTED
ID	INSIDE DIAMETER	UH	UNIT HEATER
IN	INCHES	V	VENT
LF	LINEAL FEET	VTR	VENT THROUGH ROOF
LVG	LEAVING	VR	VENT RISER
MAX	MAXIMUM	W	WASTE
MBH	THOUSAND BTU's PER HOUR	W/	WITH
MIN	MINIMUM	W.C.	WATER COLUMN
MISC	MISCELLANEOUS	WCO	WALL CLEANOUT
		WHA	WATER HAMMER ARRESTOR
		WPD	WATER PRESSURE DROP
		WRT	WITH RESPECT TO

CONSULTANT :



Juneau, AK
9103 Mendenhall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC163270

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

PROCESS LEGENDS &
ABBREVIATIONS

DESIGN	ALN
DRAWN	TRS
CHECKED	LAR
DATE	04-16-2025

PROJECT No.	10297.24002
SHEET NUMBER	

D-001

No.	Date	Item
REVISIONS		

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES

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PUMP SCHEDULE

NOTES:
1. PUMPS SHALL BE NSF-61 COMPLIANT.
2. REFERENCE SPECIFICATION 46 33 00.
3. REFERENCE SPECIFICATION 43 23 31.
4. INJECTION PUMP SHALL BE HAVE STROKE FREQUENCY CONTROL VIA 4-20mA SIGNAL INPUT.

MARK	PUMP NAME	FLOW GPM [GPH]	HEAD FT	SETPPOINT PSIG	FLUID	RPM	ELECTRICAL DATA				BASIS OF DESIGN		NOTES
							HP [W]	V	PH	CONTROLLER	MANUFACTURER	MODEL	
RC-01	RECIRCULATION PUMP 01	20	150	65	POTABLE WATER	3550	3	480	3	VFD	GRUNDFOS	CR 10-4 A-FJ-A-E-HQQE	1,2
BP-01	BOOSTER PUMP 01	120	145	63	POTABLE WATER	3530	7.5	480	3	VFD	GRUNDFOS	CR 20-3 A-GJ-A-E-HQQE	1,2
BP-02	BOOSTER PUMP 02	120	145	63	POTABLE WATER	3530	7.5	480	3	VFD	GRUNDFOS	CR 20-3 A-GJ-A-E-HQQE	1,2
BP-03	BOOSTER PUMP 03	500	141	61	POTABLE WATER	3530	30	480	3	VFD	GRUNDFOS	NBS 030-070 2P	1,2
CP-01	CHLORINE PUMP 01	0.63 [3.8]	150	65	CALCIUM HYPOCHLORITE SOLUTION	-	[44]	115	1	-	LMI	C92	1,3,4

CHEMICAL TANK SCHEDULE

NOTES:
1. TANK SHALL NSF 61 COMPLIANT AND COMPATIBLE FOR CONTAINMENT OF CALCIUM HYPOCHLORITE.
2. REFERENCE SPECIFICATION DIV 46 33 00 LIQUID CHEMICAL FEED EQUIPMENT.

MARK	SERVICE	DIMENSIONS	VOLUME (GAL)	BASIS OF DESIGN		NOTES
				MANUFACTURER	MODEL	
CT-01	CHLORINE SYSTEM	19 5/8"D x 21"H	15	PEABODY ENGINEERING	GEMINI DUAL CONTAINMENT TANK	1,2

ACTUATED VALVE SCHEDULE

NOTES:
1. VALVES SHALL BE NSF-61, AIS, AND BABA COMPLIANT.
2. INITIAL VALVE SIZING WAS BASED ON HYDRANT FLOW DATA. VALVE PRESSURE SETTING SHALL BE MODIFIED AS NEEDED IN THE FIELD.
3. CONTROL VALVE WITH ROTORK IQT ELECTRIC ACTUATOR OR APPROVED EQUAL.
4. VALVE SHALL BE INITIALLY SET TO REDUCE PRESSURE TO 25 PSI DOWNSTREAM AND SUSTAIN PRESSURE AT 55 PSI UPSTREAM.
5. VALVE SHALL BE INTIALLY SET TO SUSTAIN PRESSURE TO 35 PSI UPSTREAM.
6. VALVE SHALL BE SET TO SUSTAIN 20 PSIG UPSTREAM.
7. NOT USED.
8. VALVE SHALL INCLUDE INTEGRAL PRESSURE GAUGES FOR READING UPSTREAM AND DOWNSTREAM PRESSURES.
9. REFERENCE SPECIFICATION DIV 40 05 51 PLANT VALVES.

MARK	VALVE TYPE	LOCATION	FLUID	NOMINAL SIZE	BASIS OF DESIGN		NOTES
					MANUFACTURER	MODEL	
ARV-01	AIR RELIEF VALVE	CBY INTERTIE LINE	POTABLE WATER	-	VAL-MATIC	15A	1,9
ARV-02	AIR/VACUUM VALVE	AIRPORT SUPPLY LINE	POTABLE WATER	1-IN	VAL-MATIC	101S	1,9
LV-002	MOTORIZED BUTTERFLY VALVE	WATER TANK FILL LINE	POTABLE WATER	4-IN	DEZURIK	AWWA BUTTERFLY VALVE	1,3,9
PRV-01	PRESSURE SUSTAINING/REDUCING VALVE	CBY INTERTIE LINE	POTABLE WATER	4-IN	CLA-VAL	92G-01	1,2,4,8,9
PSV-01	PRESSURE SUSTAINING VALVE	WATER TANK FILL LINE	POTABLE WATER	4-IN	CLA-VAL	650G-90	1,2,5,8,9
PSV-02	PRESSURE SUSTAINING VALVE	RE-CIRCULATION LINE	POTABLE WATER	1 1/2-IN	CLA-VAL	50G-90	1,6,8,9
SV-01	PRESSURE RELIEF VALVE	AIRPORT SUPPLY LINE	POTABLE WATER	1 1/2-IN	CLA-VAL	50G-01	1,9

FLOW METER SCHEDULE

NOTES:
1. SELECT METER WITH PTFE LINER OR COMPARABLE NSF-61 APPROVED LINER.
2. INTIAL FILL RATE SETPOINT SHALL BE 200 GPM; OPERATOR TO FIELD ADJUST AS NECESSARY BASED ON AVAILABLE FLOW FROM CYB.
3. REFERENCE SPECIFICATION 40 71 13 MAGNETIC FLOW METER.
4. BASIS OF DESIGN PART NUMBER: 2M-A-040FAAC2PJAS-SAABCXWWDBABXX-NAF.
5. BASIS OF DESIGN PART NUMBER: 2M-A-060FAAC2PJAS-SAABCXWWDBABXX-NAF.
6. BASIS OF DESIGN PART NUMBER: 2M-A-010DAAC2PAXS-SAABCXWWDBABXX-NAF.
7. CONTRACTOR TO VERIFY METER CONFIGURATION OPTIONS AT THE TIME OF PURCHASE.

MARK	LOCATION	FLUID	TYPE	SIZE	GPM		ELECTRICAL DATA		BASIS OF DESIGN		NOTES
					MIN	MAX	V	W	MANUFACTURER	MODEL	
FIT-001	WATER TANK FILL LINE	WATER	MAGNETIC	4"	0	200	24V DC	14	BADGER	M2000	1,3,4,7
FIT-005	CBY INTERTIE LINE	WATER	MAGNETIC	4"	0	600	24V DC	14	BADGER	M2000	1,3,4,7
FIT-006	AIRPORT SUPPLY LINE	WATER	MAGNETIC	6"	20	600	24V DC	14	BADGER	M2000	1,2,3,5,7
FIT-008	RE-CIRCULATION LINE	WATER	MAGNETIC	1"	20	20	24V DC	14	BADGER	M2000	1,3,6,7

MANUAL VALVE SCHEDULE

NOTES:
1. BASIS OF DESIGN: DEZURIK AWWA BUTTERFLY VALVE WITH MANUAL LEVER.
2. BASIS OF DESIGN: NIBCO LEAD-FREE, FULL PORT BALL VALVES; T-585-80-LF
3. REFERENCE SPECIFICATION DIV 40 05 51 PLANT VALVES.

TYPE	SERVICE	MATERIAL		SIZE	CONNECTION TYPE	OPERATOR	NOTES
		BODY	SEAT				
BUTTERFLY VALVE	POTABLE WATER	CAST IRON	NBR	>= 3"	FLANGED	QUARTER TURN	1,3
BALL VALVE	POTABLE WATER	SILICON BRONZE	REINFORCED PTFE	< 3"	THREADED	QUARTER TURN	2,3

PIPE SCHEDULE

NOTES:
1. PIPE SHALL BE NSF-61 CERTIFIED.
2. PIPE FITTINGS ARE TO MATCH TYPE, SCHEDULE, AND CERTIFICATIONS.
3. REFERENCE SPECIFICATION 40 05 20 PLANT PIPE AND FITTINGS.
4. REFERENCE SPECIFICATION 22 11 16 DOMESTIC WATER PIPING.

FLOW STREAM ID	FLOW STREAM	PIPE MATERIAL	PIPE SIZE	PRESSURE CLASS	NOTES
PW	POTABLE WATER	DUCTILE IRON	4",6",10"	52 OR GREATER	1,2,3
PW	POTABLE WATER	COPPER	<3"	TYPE L	1,2,4
RC	RECIRCULATION WATER	DUCTILE IRON	4"	52 OR GREATER	1,2,3
RC	RECIRCULATION WATER	COPPER	<3"	TYPE L	1,2,4

3	9/24/25	ADDENDUM #3
No.	Date	Item
REVISIONS		

CONSULTANT :

Juneau, AK
9103 Mendertall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC163270


PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION
YAKUTAT, ALASKA

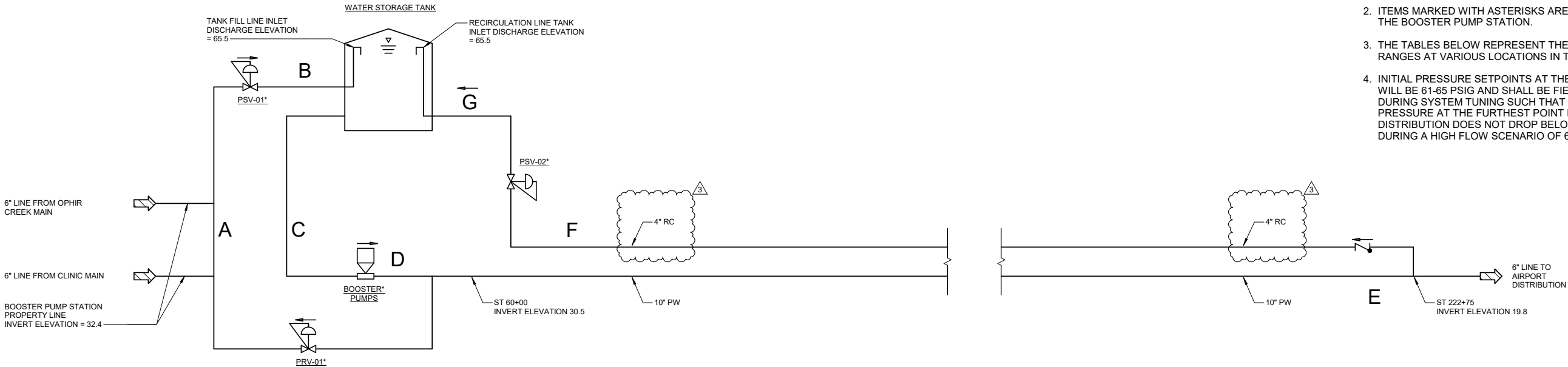
SHEET TITLE :
PROCESS SCHEDULES

DESIGN ALN
DRAWN TRS
CHECKED LAR
DATE 04-16-2025
PROJECT No.
10297.24002
SHEET NUMBER
D-002

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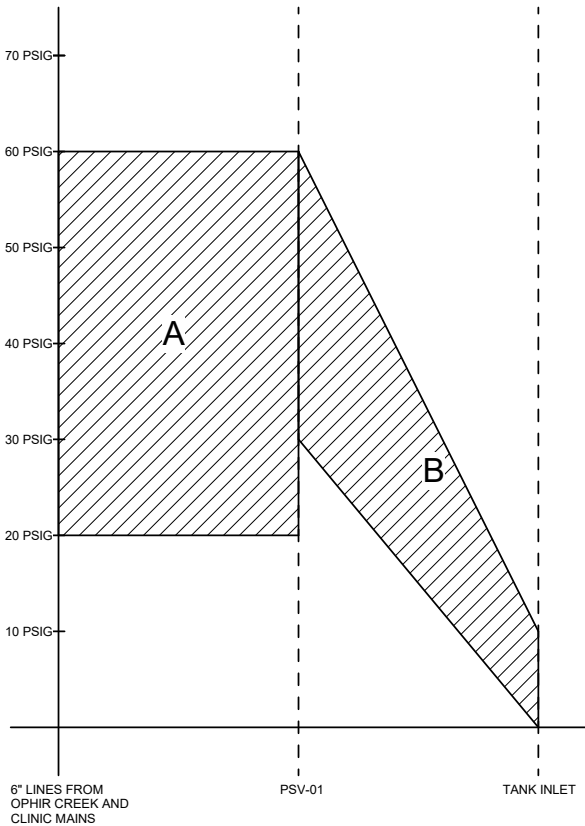
SHEET NOTES

- SEE D-002 FOR PRESSURE AND FLOW INFORMATION FOR THE BOOSTER PUMPS, PSV'S, AND PRV.
- ITEMS MARKED WITH ASTERISKS ARE LOCATED IN THE BOOSTER PUMP STATION.
- THE TABLES BELOW REPRESENT THE PRESSURE RANGES AT VARIOUS LOCATIONS IN THE SYSTEM.
- INITIAL PRESSURE SETPOINTS AT THE PUMPHOUSE WILL BE 61-65 PSIG AND SHALL BE FIELD ADJUSTED DURING SYSTEM TUNING SUCH THAT THE PRESSURE AT THE FURTHEST POINT IN THE DISTRIBUTION DOES NOT DROP BELOW 30 PSIG DURING A HIGH FLOW SCENARIO OF 650 GPM.



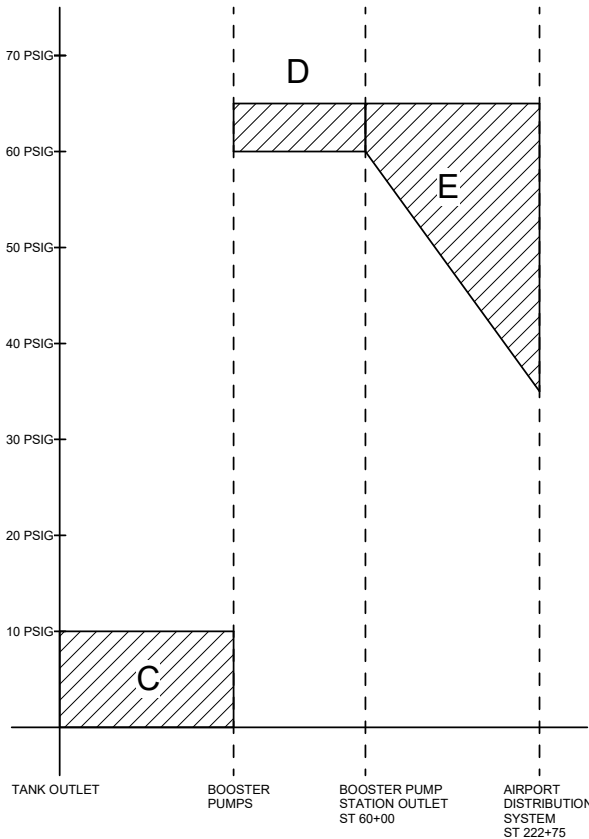
1 HYDRAULIC PROFILE DIAGRAM

D-003 SCALE: NO SCALE



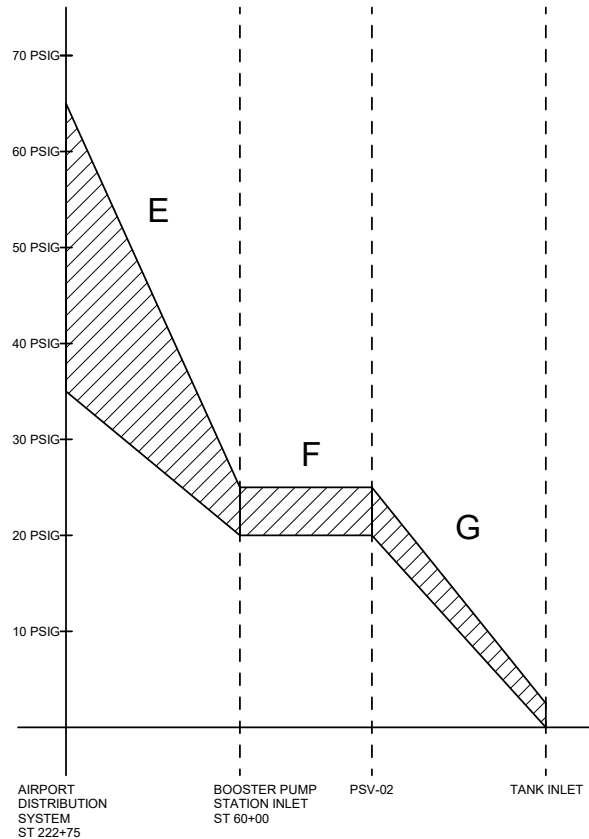
2 TANK FILL LINE

D-003 SCALE: NO SCALE



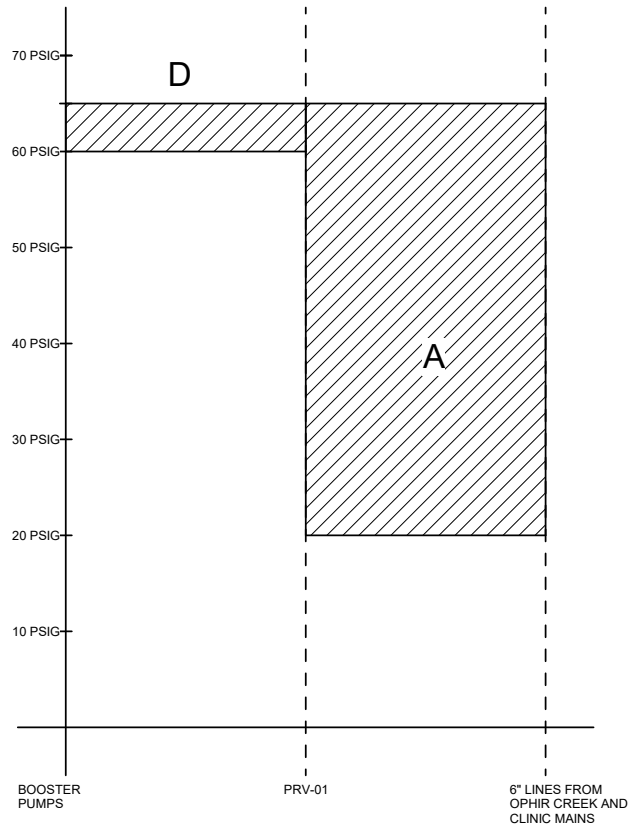
3 AIRPORT SUPPLY LINE

D-003 SCALE: NO SCALE



4 CIRCULATION LINE

D-003 SCALE: NO SCALE



5 SYSTEM INTERTIE LINE

D-003 SCALE: NO SCALE

REVISIONS		
No.	Date	Item
3	9/24/25	ADDENDUM #3

CONSULTANT :



Juneau, AK
9103 Mendenhall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC163270



PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :
HYDRAULIC PROFILES

DESIGN ALN
DRAWN TRS
CHECKED LAR
DATE 04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

D-003

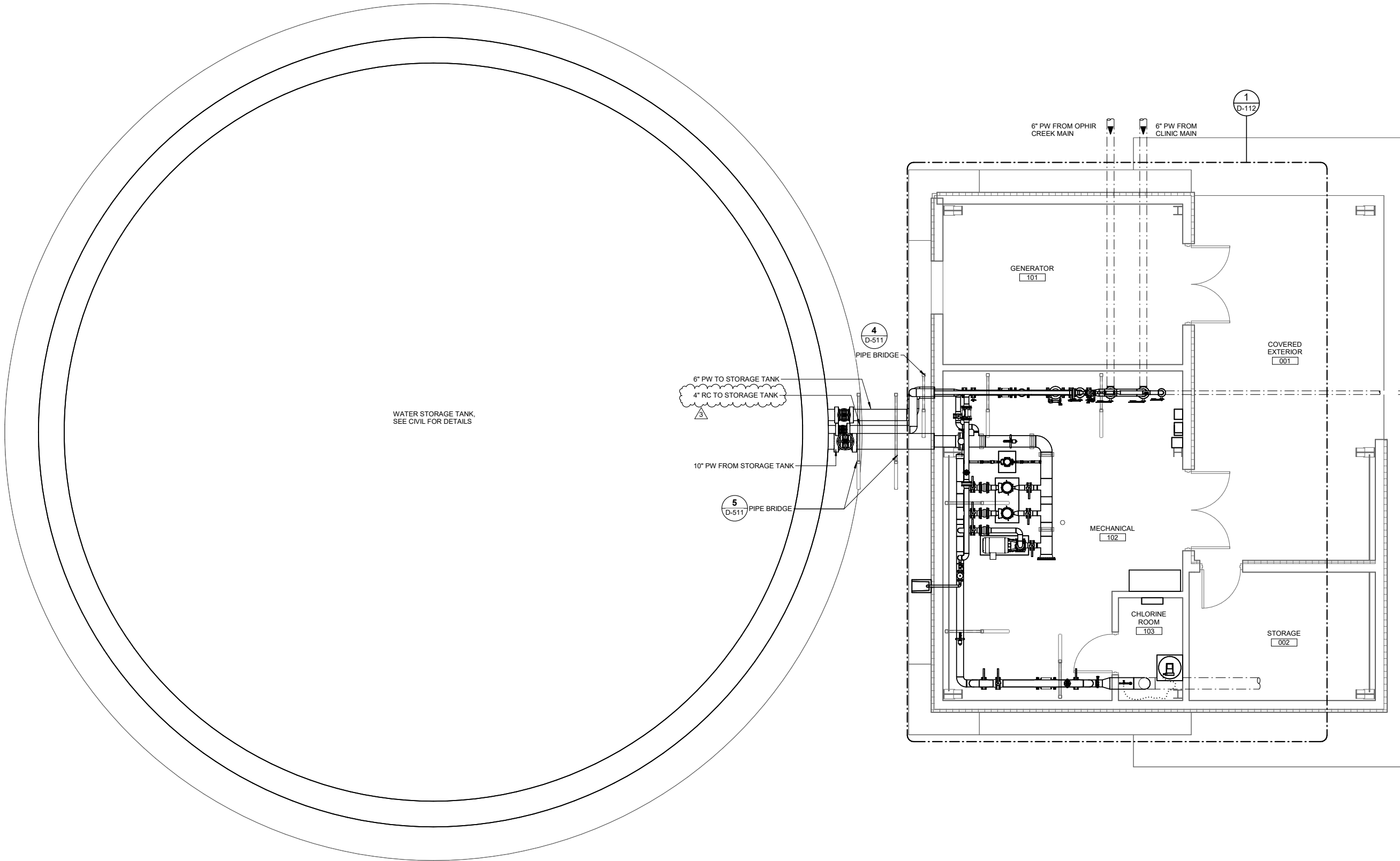
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1

D-111

PROCESS SITE PLAN

SCALE: 1/4" = 1'-0"



REVISIONS			
No.	Date	Item	
3	9/24/25	ADDENDUM #3	

DESIGN	ALN
DRAWN	TRS
CHECKED	LAR
DATE	04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

D-111

SHEET TITLE :
SITE PLAN - PROCESS

PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

Juneau, AK
9103 Mendenhall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AEC0163270



CONSULTANT :



SHEET KEYNOTES

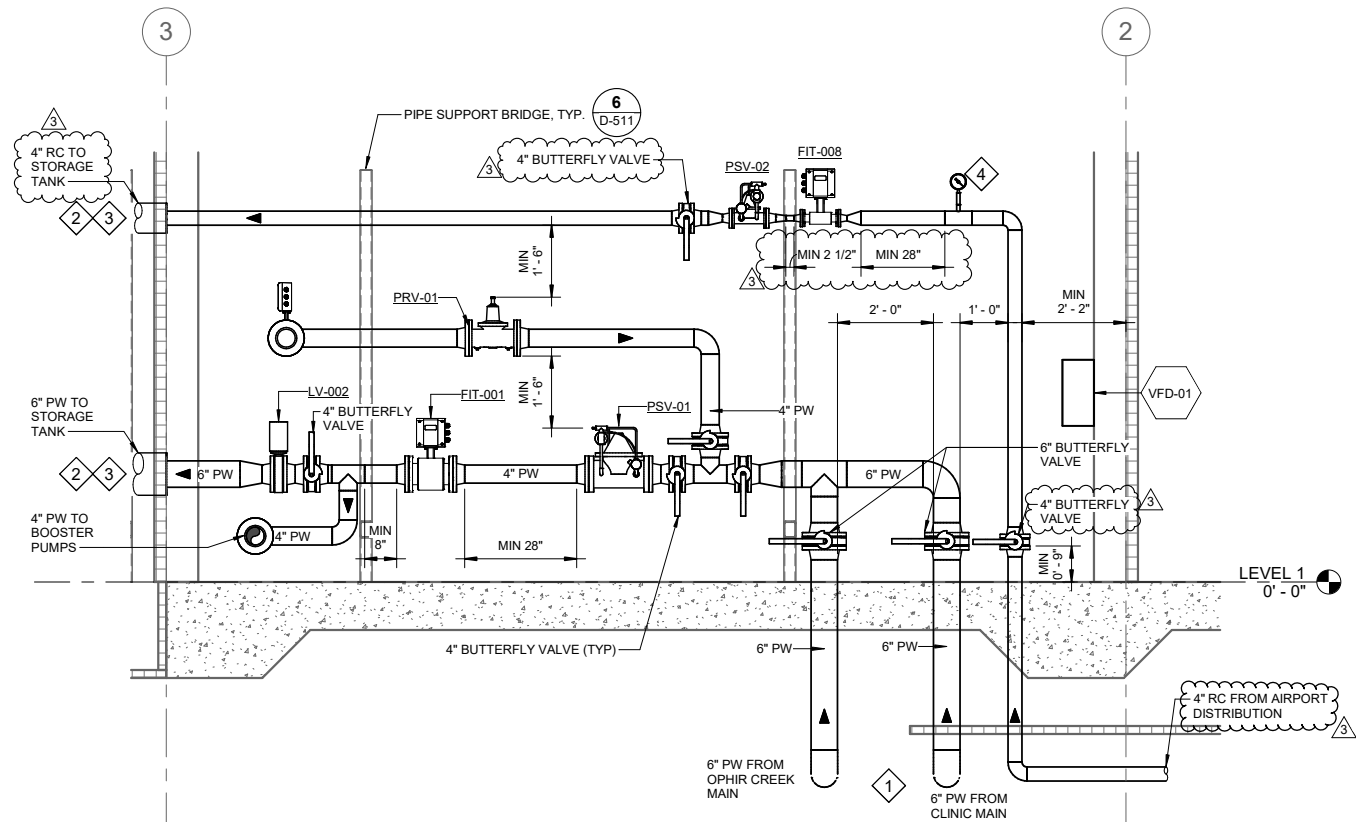
1. ROUTE PIPES BELOW GRADE AND UP THROUGH SLAB. TRANSITION FROM HDPE TO DUCTILE IRON OUTSIDE OF BUILDING FOOTPRINT. SEE CIVIL FOR LOCATION.
2. ROUTE PIPES THROUGH EXTERIOR WALL. SEAL WALL PENETRATION WEATHER-TIGHT AND FINISHED APPEARANCE.
3. ROUTE PIPE ABOVE GRADE TO WATER STORAGE TANK. SEE CIVIL FOR TANK PIPE CONNECTION DETAILS. EXTERIOR PIPE SHALL BE INSULATED AND HEAT TRACED WITH WEATHER-TIGHT ALUMINUM JACKETING
4. SV-01 SHALL HAVE A SETPOINT PRESSURE OF 75 PSIG.

DESIGN	ALN
DRAWN	TRS
CHECKED	LAR
DATE	04-16-2025
PROJECT No.	
10297.24002	
SHEET NUMBER	

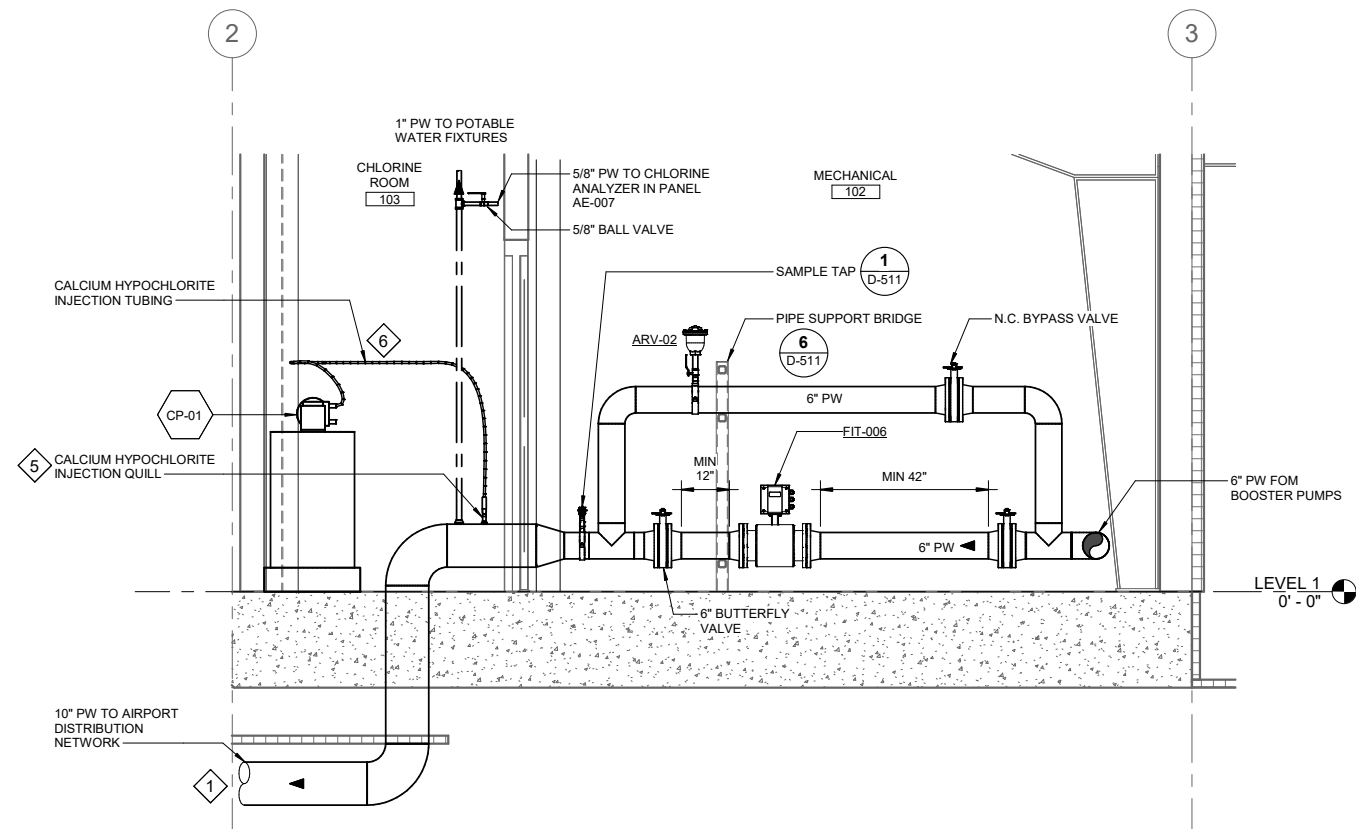
D-112

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES

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1 PROCESS SECTION - WEST
D-301 SCALE: 1/2" = 1'-0"



2 PROCESS SECTION - EAST
D-301 SCALE: 1/2" = 1'-0"

SHEET NOTES

1. CONTRACTOR TO SANITIZE ALL PIPE, VALVES, AND FITTINGS PRIOR TO INSTALLATION PER AWWA C-651.
2. ALL WETTED COMPONENTS SHALL BE NSF-61 CERTIFIED.
3. SPACE PIPE A MINIMUM OF 12-IN FROM BUILDING WALL UNLESS OTHERWISE NOTED.

SHEET KEYNOTES

1. ROUTE PIPES BELOW GRADE AND UP THROUGH SLAB. TRANSITION FROM HDPE TO DUCTILE IRON OUTSIDE OF BUILDING FOOTPRINT. SEE CIVIL FOR LOCATION.
2. ROUTE PIPES THROUGH EXTERIOR WALL. SEAL WALL PENETRATION WEATHER-TIGHT AND FINISHED APPEARANCE.
3. ROUTE PIPE ABOVE GRADE TO WATER STORAGE TANK. SEE CIVIL FOR TANK PIPE CONNECTION DETAILS. EXTERIOR PIPE SHALL BE INSULATED AND HEAT TRACED WITH WEATHER-TIGHT ALUMINUM JACKETING.
4. PRESSURE GAUGE SHALL HAVE A 4-1/2" DIAL WITH 270° DEGREE MOVEMENT AND MINIMUM 1/2% ACCURACY. GAUGE SHALL BE LIQUID FILLED AND RATED FOR 0 TO 100 PSIG.
5. INSTALL CALCIUM HYPOCHLORITE INJECTION QUILL PER MANUFACTURER'S SPECIFICATION. INSTALL IN TREATMENT ROOM AND UPSTREAM OF CHLORINE SENSOR. MAXIMIZE DISTANCE BETWEEN INJECTION QUILL AND SENSOR AS PRACTICAL TO ALLOW FOR SOLUTION MIXING BEFORE SENSOR.
6. ROUTE AND SECURE CALCIUM HYPOCHLORITE INJECTION TUBING NEATLY ALONG WALL WHILE MINIMIZING UNNECESSARY LOW AND HIGH POINTS.

CONSULTANT :



Juneau, AK
9103 Mendenhall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
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PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :
PROCESS SECTIONS

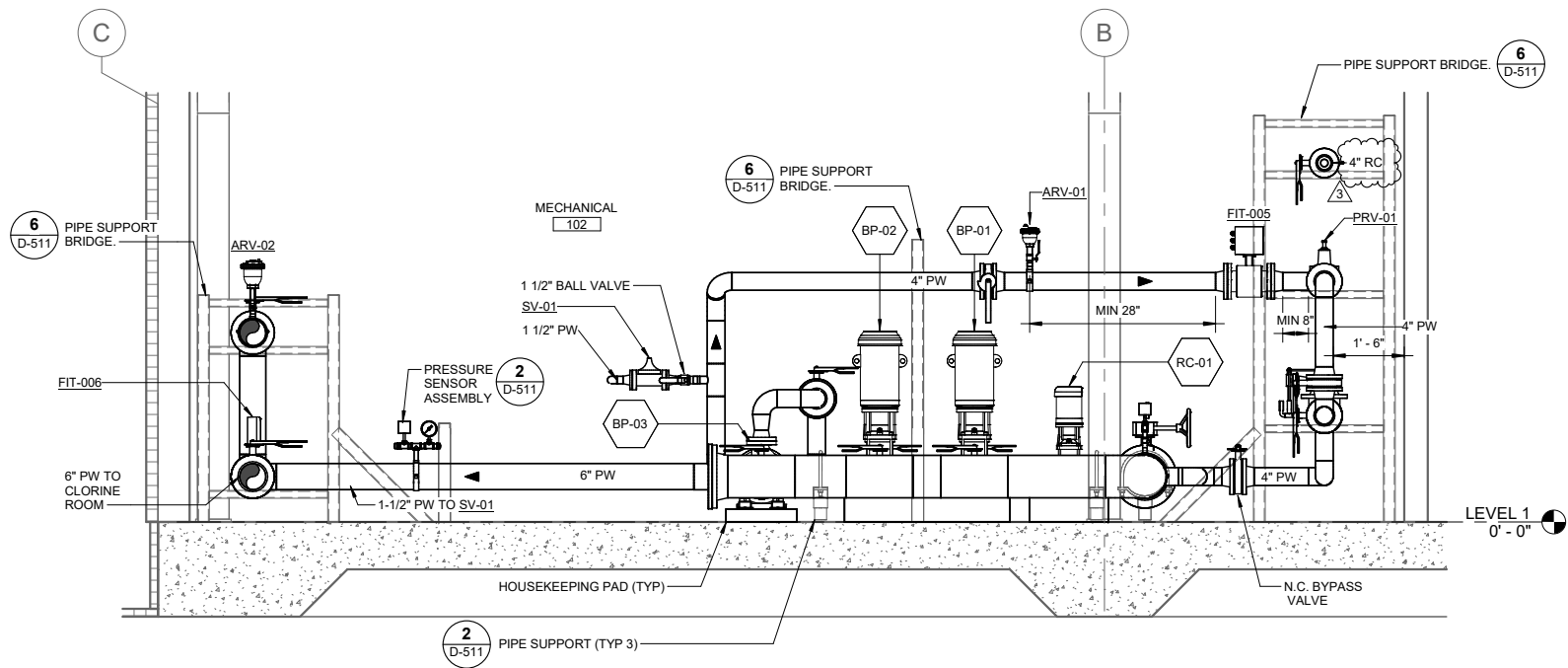
DESIGN ALN
DRAWN TRS
CHECKED LAR
DATE 04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

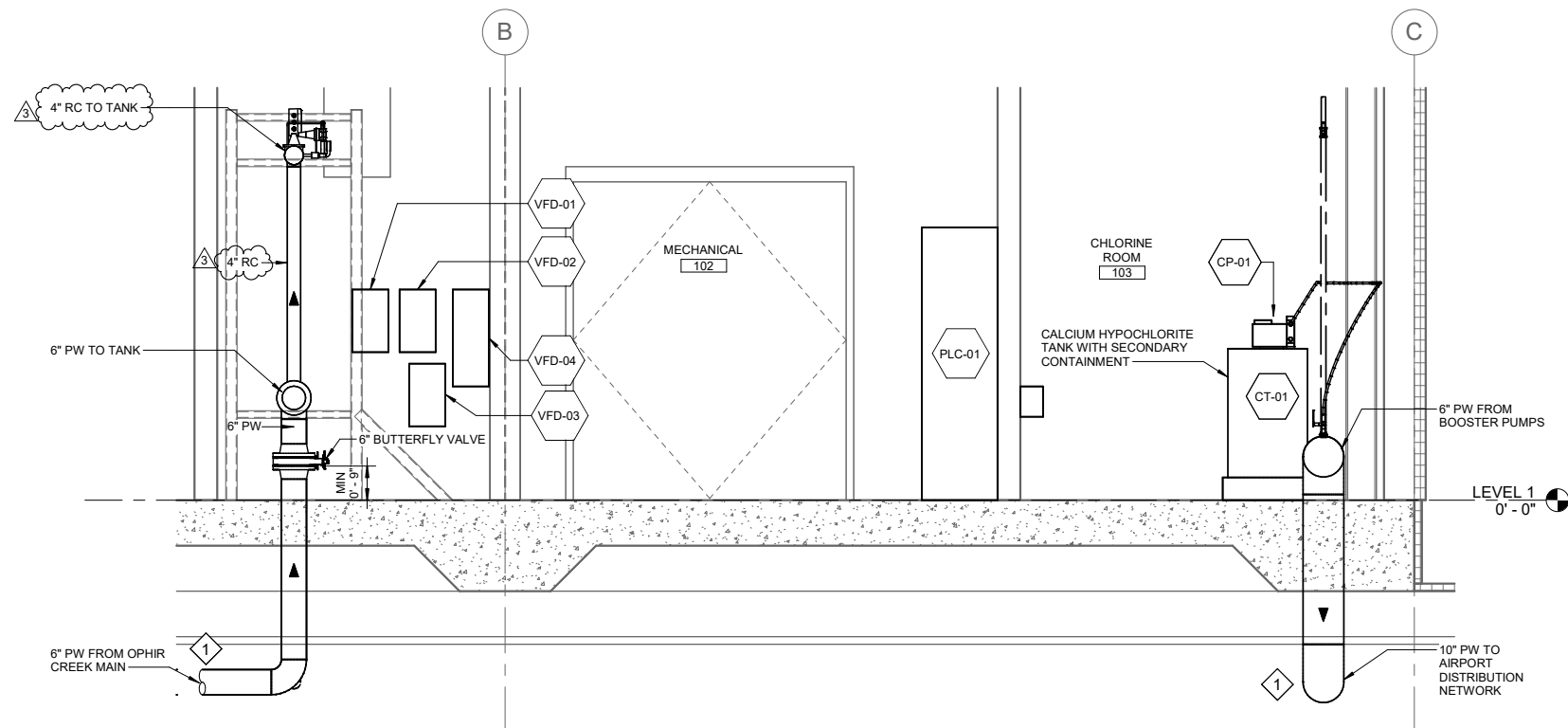
D-301

No.	Date	Item
3	9/24/25	ADDENDUM #3
REVISIONS		

9/24/2025 11:28:23 AM Autodesk Docs\\10297.24002\\CBY Airport Water System Extension\\NF-MECH-10297.24002_RV23.rvt IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES 1"



1 PROCESS SECTION - SOUTH
D-302 SCALE: 1/2" = 1'-0"



2 PROCESS SECTION - NORTH
D-302 SCALE: 1/2" = 1'-0"

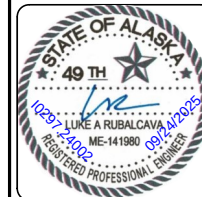
SHEET NOTES

- CONTRACTOR TO SANITIZE ALL PIPE, VALVES, AND FITTINGS PRIOR TO INSTALLATION PER AWWA C-651.
- ALL WETTED COMPONENTS SHALL BE NSF-61 CERTIFIED.
- SPACE PIPE A MINIMUM OF 12-IN FROM BUILDING WALL UNLESS OTHERWISE NOTED.

SHEET KEYNOTES

- ROUTE PIPES BELOW GRADE AND UP THROUGH SLAB. TRANSITION FROM HDPE TO DUCTILE IRON OUTSIDE OF BUILDING FOOTPRINT. SEE CIVIL FOR LOCATION.

CONSULTANT :



PROJECT :
**CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION**
YAKUTAT, ALASKA

SHEET TITLE :
PROCESS SECTIONS

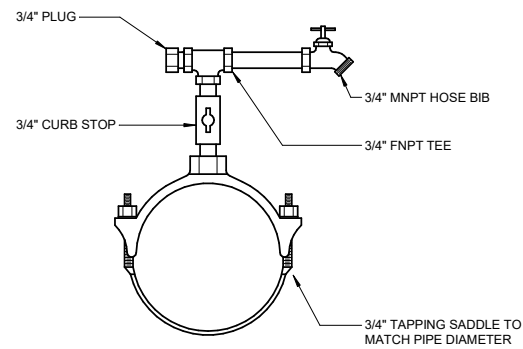
DESIGN ALN
DRAWN TRS
CHECKED LAR
DATE 04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

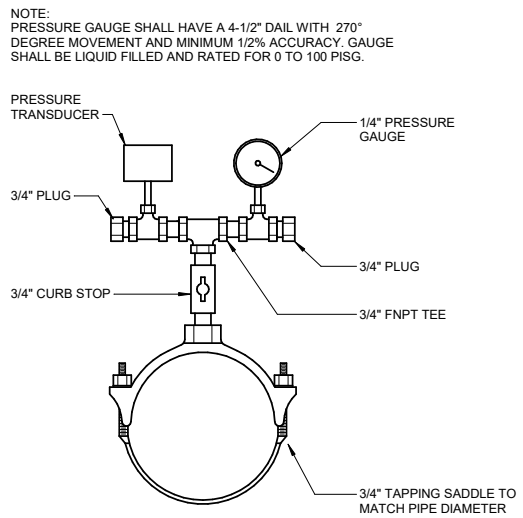
D-302

3	9/24/25	ADDENDUM #3	
No.	Date	Item	
REVISIONS			

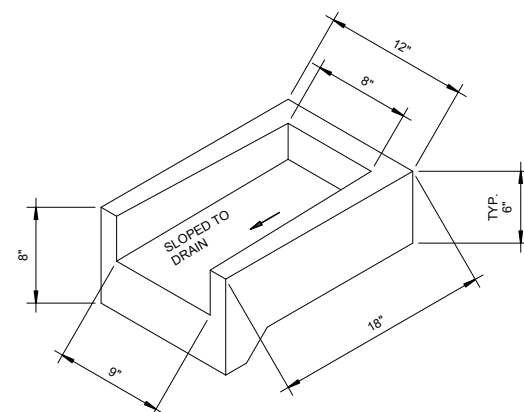
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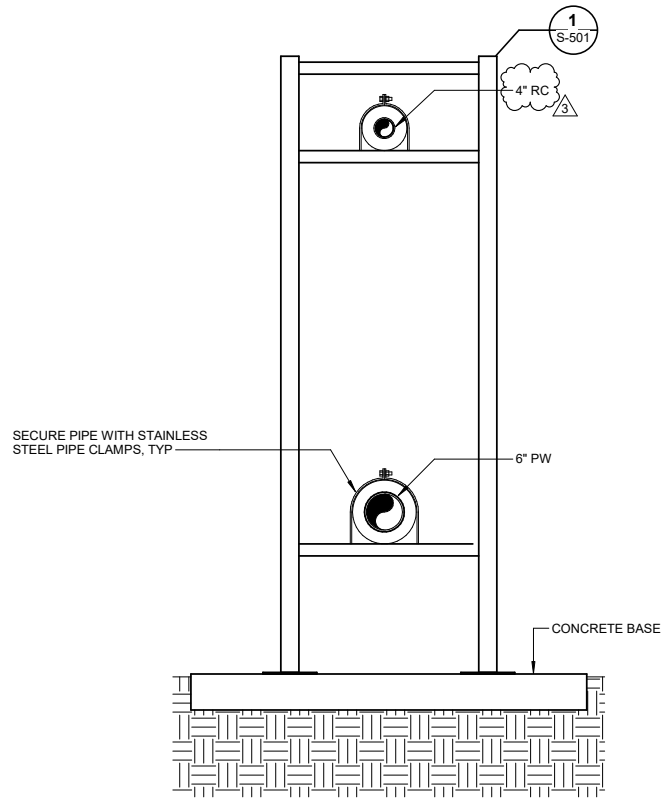
1 SAMPLE TAP ASSEMBLY DETAIL
D-511 SCALE: NO SCALE



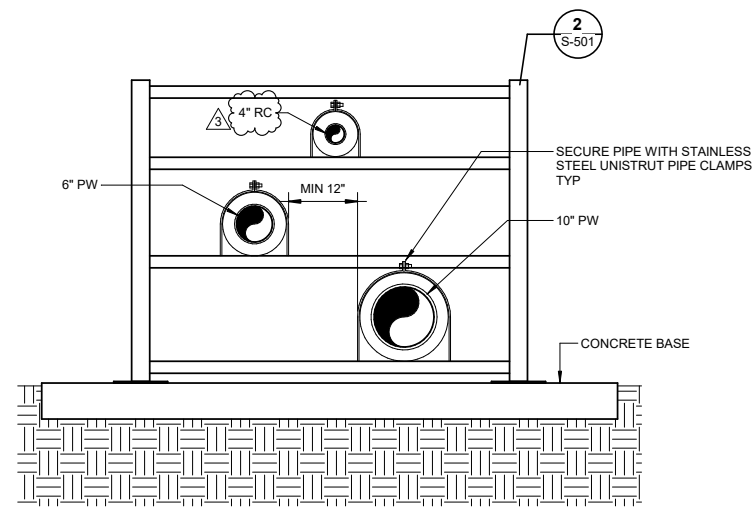
2 PRESSURE INDICATOR/TRANSMITTER ASSEMBLY DETAIL
D-511 SCALE: NO SCALE



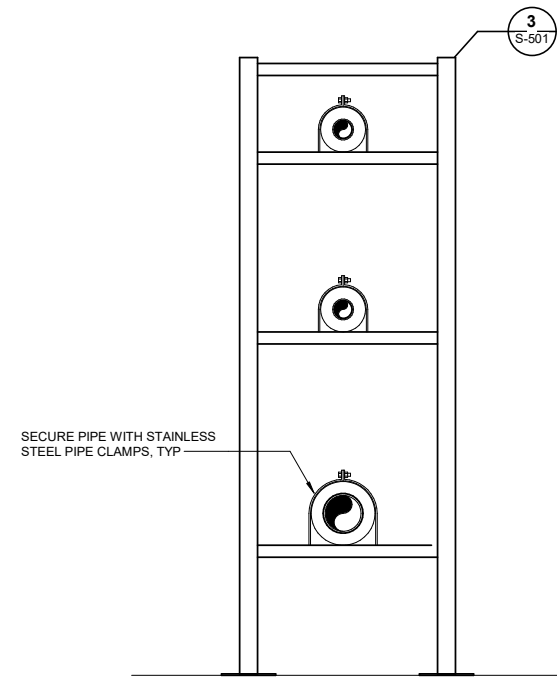
3 SPLASH BLOCK
D-511 SCALE: NO SCALE



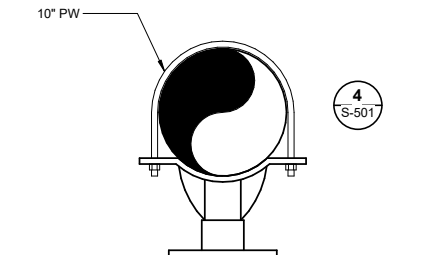
4 EXTERIOR PIPE BRIDGE DETAIL - 2 PIPE
D-511 SCALE: NO SCALE



5 EXTERIOR PIPE BRIDGE DETAIL - 3 PIPE
D-511 SCALE: NO SCALE



6 INTERIOR PIPE BRIDGE DETAIL
D-511 SCALE: NO SCALE



7 INTERIOR PIPE SUPPORT DETAIL
D-511 SCALE: NO SCALE

NOTE: TYPICAL PIPE BRIDGE LAYOUT. ADJUST NUMBER OF LEVELS PER NUMBER OF PIPES SUPPORTED

REVISIONS		
No.	Date	Item
3	9/24/25	ADDENDUM #3

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Juneau, AK
9103 Mendocino Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
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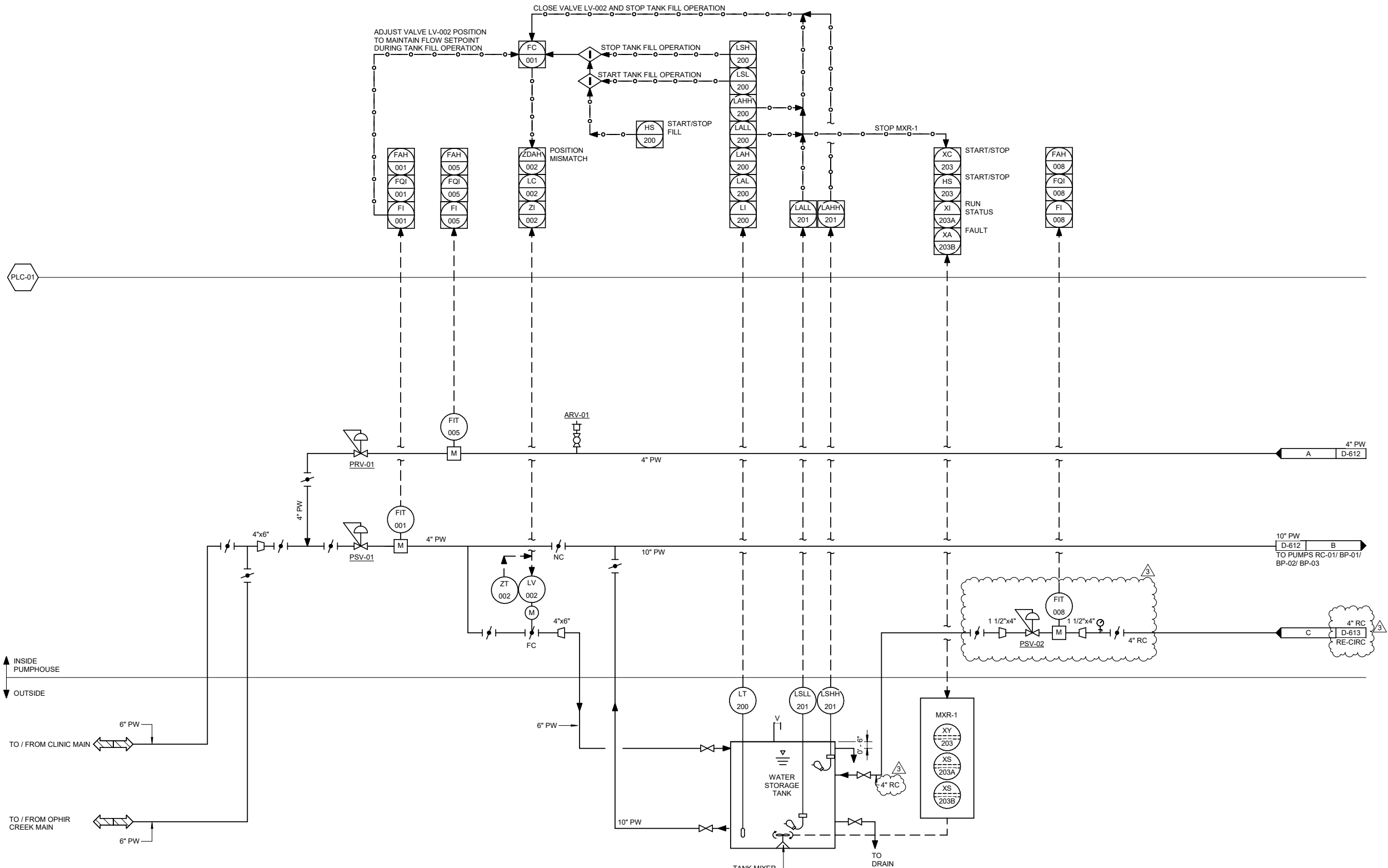
PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION
YAKUTAT, ALASKA

SHEET TITLE :
PROCESS DETAILS

DESIGN ALN
DRAWN TRS
CHECKED LAR
DATE 04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

D-511



1

WATER TANK P&ID

D-611

SCALE: NO SCALE

REVISIONS		
No.	Date	Item
3	9/24/25	ADDENDUM #3

CONSULTANT :

STATE OF ALASKA
49 TH
Nick Keyuravong
EE 14569
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA
49 TH
LUKE A RUBALCAVA
ME-141986
REGISTERED PROFESSIONAL ENGINEER

Juneau, AK
9103 Mendelhall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC163270

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PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION
YAKUTAT, ALASKA

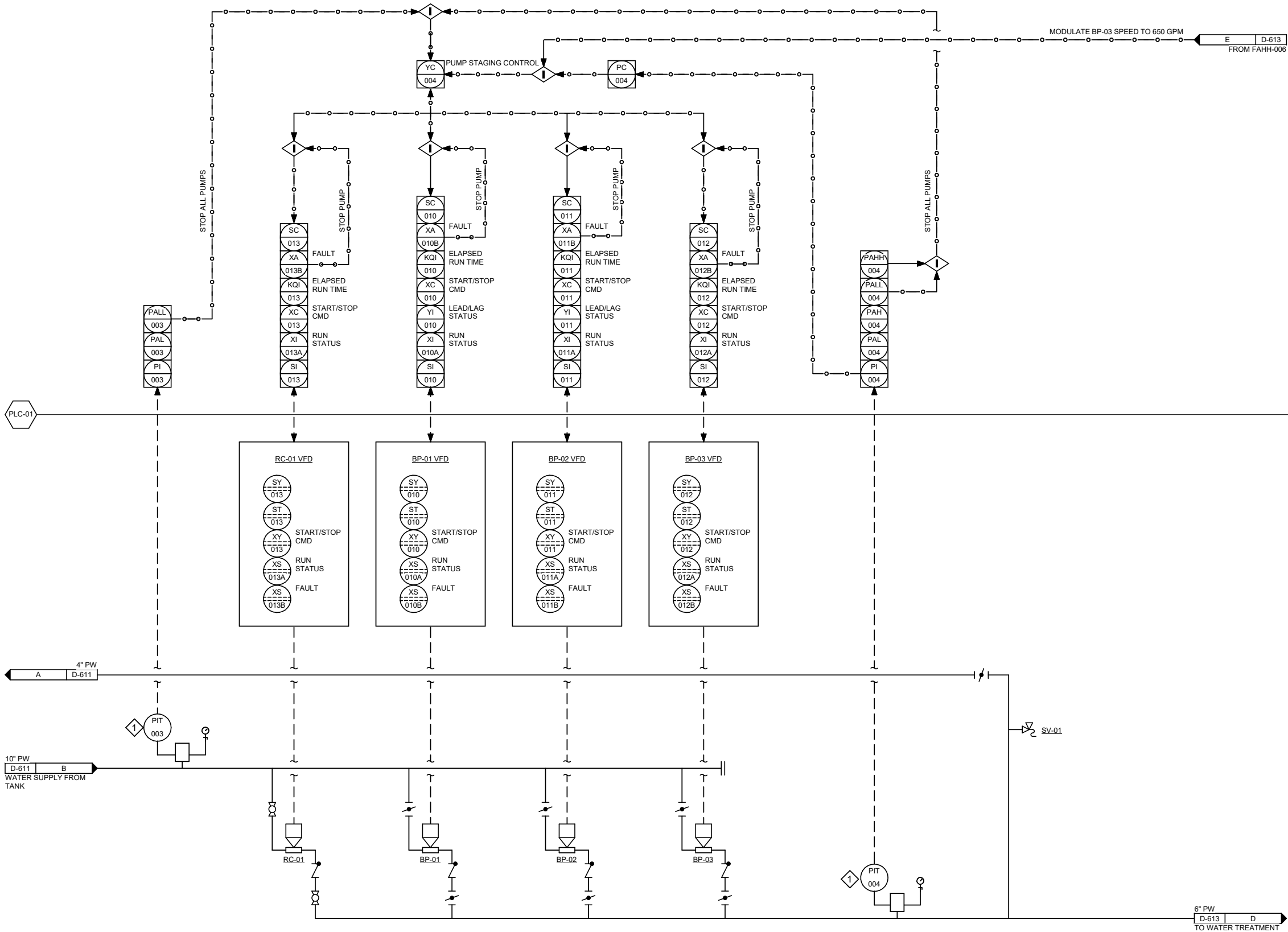
SHEET TITLE :
WATER TANK P&ID

DESIGN	ALN
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DATE	04-16-2025

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SHEET NUMBER

D-611

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1 PUMP WATER P&ID
D-612 SCALE: NO SCALE

SHEET KEYNOTES #

1. SEE DETAIL 4 / SHEET D-511 FOR PRESSURE INDICATOR / TRANSMITTER ASSEMBLY DETAIL.



Juneau, AK
9103 Mendenhall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.rspect.com
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PROJECT :
**CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION**

YAKUTAT, ALASKA

SHEET TITLE :
PUMP WATER P&ID

DESIGN	ALN
DRAWN	TRS
CHECKED	LAR
DATE	04-16-2025
PROJECT No.	10297.24002
SHEET NUMBER	

D-612

No.	Date	Item
REVISIONS		

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3	9/24/25	ADDENDUM #3
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9109 Mendenhall Mall Rd, Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
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PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

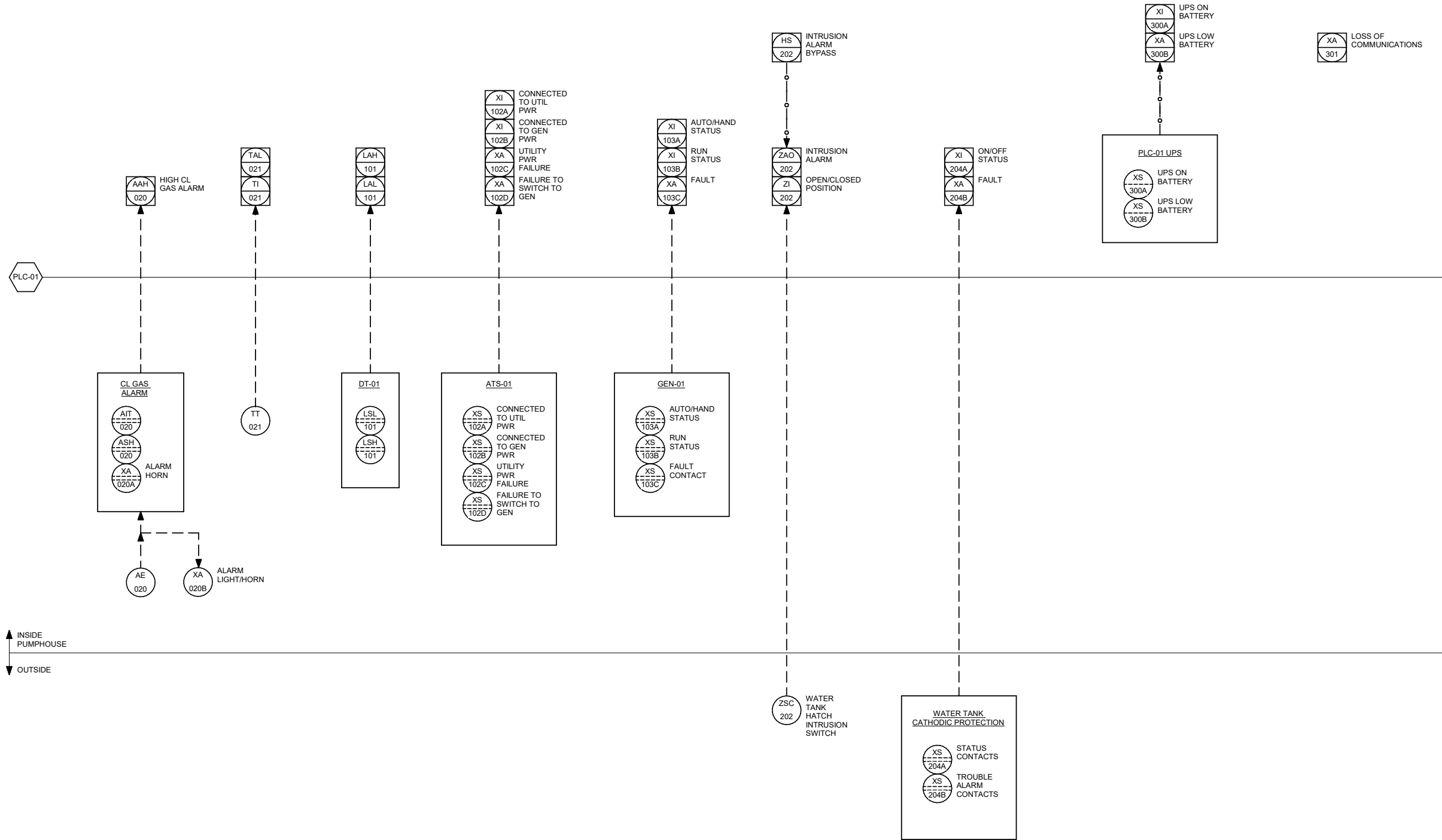
YAKUTAT, ALASKA

SHEET TITLE :
WATER TREATMENT P&ID

DESIGN	AL
DRAWN	TR
CHECKED	LA
DATE	04-16-202

PROJECT No.
10297.24002
SHEET NUMBER

D-613



1

MISCELLANEOUS PUMP HOUSE MONITORING AND ALARMS

D-614SCALE: NO SCALE

No.	Date	Item
REVISIONS		

CONSULTANT :



Juneau, AK

9103 Mendenhall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
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PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

MISC PUMP HOUSE MONITORING
AND ALARMS

DESIGN	ALN
DRAWN	TRS
CHECKED	LAR
DATE	04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

D-614

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES

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GENERAL

DETAIL SYMBOL		DETAIL IDENTIFICATION
		DRAWING ON WHICH DETAIL IS SHOWN
SECTION SYMBOL		SECTION IDENTIFICATION
		DRAWING ON WHICH SECTION IS SHOWN
ROOM NAME AND NUMBER DESIGNATION	ROOM NAME 	
SHEET KEYNOTE		
GENERAL SHEET NOTE	3.	
POINT OF CONNECTION		
NORTH ARROW		

MECHANICAL TAGS

EQUIPMENT DESIGNATION, SEE EQUIPMENT SCHEDULE		EQUIPMENT DESIGNATION
PLUMBING FIXTURE DESIGNATION, SEE FIXTURE CONNECTION SCHEDULE		EQUIPMENT DESIGNATION
OCCUPANCY SENSOR		
THERMOSTAT		
GAS DETECTOR		

DUCT LEGEND

DUCT (1ST FIGURE, SIDE SHOWN 2ND FIGURE, SIDE NOT SHOWN)	
DIRECTION OF FLOW	
FLEXIBLE DUCT CONNECTION	
INSULATED DUCTWORK DIMENSIONS = INTERIOR FACE OF SHEET METAL THICKNESS OF INSULATION IN INCHES	
LINED DUCTWORK DIMENSIONS = INTERIOR FACE OF SHEET METAL THICKNESS OF LINING IN INCHES	
BACKDRAFT DAMPER	
MOTORIZED CONTROL DAMPER	
RECTANGULAR DUCTWORK - X\" X Y\" WHERE X = DIMENSION ON THE PAGE AND Y = DIMENSION INTO THE PAGE	
RECTANGULAR MITERED ELBOW WITH TRUNING VANES	
RECTANGULAR ELBOW UP (OUT OF THE PAGE)	
RECTANGULAR ELBOW DOWN (INTO THE PAGE)	

PLUMBING

WASTE	W	
COLD WATER	CW	
HOT WATER	HW	
VENT	V	
VENT THROUGH ROOF	VTR	
DOUBLE CHECK VALVE BACKFLOW PREVENTER		
HOSE BIBB	HB	
CLEAN-OUT	CO	
WALL CLEANOUT	WCO	
FLOOR CLEANOUT	FCO	
FLOOR DRAIN	FD	

PIPE FITTINGS & VALVES

ELBOW, TURNED DOWN	
ELBOW, TURNED UP	
TEE, OUTLET DOWN	
TEE, OUTLET UP	
FLOW DIRECTION	
CONCENTRIC REDUCER	
ISOLATION VALVE	
BALL VALVE	
CHECK VALVE	
DRAIN ISOLATION VALVE AND CAP	
UNION	

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AHAP	AS HIGH AS POSSIBLE
APPROX	APPROXIMATE
BTU	BRITISH THERMAL UNIT
CFM	CUBIC FEET PER MINUTE
CIRC	CIRCULATION
CLNG	CEILING
CONT	CONTINUATION, CONTINUED
CP	CIRCULATING PUMP
CU	COPPER
CW	COLD WATER
DIA	DIAMETER
DN	DOWN
EA	EXHAUST AIR
EF	EXHAUST FAN
ENT	ENTERING
ESP	EXTERNAL STATIC PRESSURE
EUH	ELECTRIC UNIT HEATER
FCO	FLOOR CLEANOUT
FD	FIRE DAMPER
FD	FLOOR DRAIN
FT	FEET
GAL	GALLONS
GALV	GALVANIZED
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HP	HORSE POWER
HW	HOT WATER
HX	HEAT EXCHANGER
HZ	HERTZ
ID	INSIDE DIAMETER
IN	INCHES
LF	LINEAL FEET
LVG	LEAVING
MAX	MAXIMUM
MBH	THOUSAND BTU's PER HOUR
MIN	MINIMUM
MISC	MISCELLANEOUS
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NO.	NUMBER
OA	OUTSIDE AIR
OC	ON CENTER
OSA	OUTSIDE AIR SUPPLY
P	PUMP
PD	PRESSURE DROP
PDI	PLUMBING & DRAINAGE INSTITUTE
PH	PHASE
POC	POINT OF CONNECTION
PRV	PRESSURE REDUCING VALVE
PSIG	POUNDS PER SQUARE INCH GAUGE
PSI	POUNDS PER SQUARE INCH
PW	POTABLE WATER
RA	RETURN AIR
RECIRC	RECIRCULATION
SA	SUPPLY AIR
SCH	SCHEDULE
SOFT	SQUARE FEET
SF	SUPPLY FAN
SS	STAINLESS STEEL
TA	TRANSFER AIR
TEMP	TEMPERATURE
TDH	TOTAL DEVELOPED HEAD
TP	TRAP PRIMER
TYP	TYPICAL
UL	UNDERWRITER'S LABORATORY
UON	UNLESS OTHERWISE NOTED
UH	UNIT HEATER
V	VENT
VTR	VENT THROUGH ROOF
VR	VENT RISER
W	WASTE
W/	WITH
W.C.	WATER COLUMN
WCO	WALL CLEANOUT
WPD	WATER PRESSURE DROP
WRT	WITH RESPECT TO

CONSULTANT :



Juneau, AK

9103 Mendenhall Mall Rd. Ste 4

Juneau, AK 99801

Phone: 907.780.6060

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PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :
MECHANICAL LEGENDS &
ABBREVIATIONS

DESIGN	RM
DRAWN	TRS
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DATE	04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

M-001

No.	Date	Item
REVISIONS		

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22 34 00 - ELECTRIC WATER HEATER SCHEDULE

MARK	TANK SIZE (GAL)	HEATING CAPACITY	ELECTRICAL				BASIS OF DESIGN		NOTES
			WATTS	HZ	V	PH	MANUFACTURER	MODEL	
WH-01	10	90F RISE AT 8GPM	1,650	60	120	1	AO SMITH	PROLINE COMPACT EJC-10	PROVIDE: COMPACT ELECTRIC HEATER WITH 10 GALLON STORAGE WITH SIDE MOUNTED PLUMBING AND ELECTRICAL CONNECTIONS.

22 40 00 - PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE DESCRIPTION	HW	CW	TRAP	WASTE	VENT	BASIS OF DESIGN		NOTES
EW-1	EMERGENCY EYWASH	-	-	-	-	-	BRADLEY MODEL S19-921		PROVIDE WITH WALL MOUNT OPTION.
EW-2	EMERGENCY EYWASH	-	-	-	-	-	BRADLEY MODEL S19-788		
FCO	FLOOR CLEANOUT	-	-	-	3"	-	REFER TO SPECIFICATION.		
FD-1	FLOOR DRAIN	-	-	3"	3"	2"	JR SMITH MODEL 2110		PROVIDE WITH 1/2" JR SMITH TRAP PRIMING ADAPTOR BETWEEN FLOOR DRAIN AND VENT CONNECTION FOR TP-1
HB-1	INTERIOR HOSE BIBB	-	3/4"	-	-	-	WOODFORD MODEL 24P, ANTI-SIPHON		PROVIDE WITH INTEGRAL ANTI-SIPHON VACUUM BREAKER
HB-2	EXTERIOR HOSE BIBB	-	3/4"	-	-	-	WOODFORD MODEL 65, ANTI-SIPHON FREEZELESS WALL HYDRANT		PROVIDE WITH INTEGRAL ANTI-SIPHON VACUUM BREAKER
P-1	UTILITY SINK	1/2"	1/2"	2"	3"	1-1/2"	TABCO REGALINE T9-1-24		16"X20" BOWL WITH LEFT HAND DRAINBOARD. PROVIDE WITH TABCO 8" SWING SPOUT FAUCET.
TP-1	TRAP PRIMER	-	1/2"	-	-	-	PRECISION PLUMBING PRODUCTS PR-500		PROVIDE TRAP PRIMING ADAPTOR ON WASTE LINE BETWEEN TRENCH DRAIN AND P-TRAP.

23 12 00 - FUEL TANK SCHEDULE

MARK	SERVICE	DIMENSIONS	VOLUME (GAL)	BASIS OF DESIGN		NOTES
				MANUFACTURER	MODEL	
DT-01	TO GENERATOR	-	-	-	-	REFER TO ELECTRICAL GENERATOR SPECIFICATION
FT-01	TO DAY TANK	77"L X 52"W	550	ACETANK	SKIDLITE II	PROVIDE: DOUBLE WALL STEEL WITH CORROSION PROTECTION, FILL CONNECTION, HIGH LEVEL SHUT OFF, LEVEL GAUGE, SIZED REGULAR AND EMERGENCY VENTS, REMOTE LEVEL MONITOR, ALL OTHER APPURTENANCES AS SHOWN ON THE DRAWINGS AND SPECIFICATIONS.

23 34 00 - FAN SCHEDULE

NOTES:													
1. ESP VALUE INDICATED IS REQUIRED PRESSURE DOWNSTREAM OF DUCT CONNECTION TO FAN EQUIPMENT (I.E. EXCLUSIVE OF FAN CABINET AND DUCT OUTLET CONNECTION) ON DISCHARGE END.													
MARK	SERVICE	CFM	ESP (IN W.C.)	TYPE	DRIVE TYPE	RPM	ELECTRICAL DATA				BASIS OF DESIGN		NOTES
							HP	V	HZ	PH	MANUFACTURER	MODEL	
EF-01	WATER TREATMENT ROOM	100	0.5	PROPELLER	DIRECT	1725	1/6	120	60	1	GREENHECK	AER-20	CONTROLLED BY HAZARDOUS GAS DETECTOR AND OCCUPANCY SENSOR.
VF-01	PUMP ROOM	1000	.4	PROPELLER	BELT	1725	1/3	120	60	1	GREENHECK	SBS-1H20-3	CONTROLLED BY THERMOSTAT FOR SUMMER COOLING.

23 82 00 CONVECTOR HEATER SCHEDULE

MARK	TYPE	CAPACITY (W)	LENGTH (IN)	WIDTH (IN)	ELECTRICAL				BASIS OF DESIGN		NOTES
					W	V	PH	HZ	MANUFACTURER	MODEL	
CH-1	CONVECTION HEATER	500	17.5	5.5	500	120	1	60	CHROMALOX	CPHH	UNIT SHALL BE CONTROLLED BY INTEGRAL THERMOSTAT.
CH-2	CONVECTION HEATER	500	17.5	5.5	500	120	1	60	CHROMALOX	CPHH	UNIT SHALL BE CONTROLLED BY INTEGRAL THERMOSTAT.
CH-3	CONVECTION HEATER	500	17.5	5.5	500	120	1	60	CHROMALOX	CPHH	UNIT SHALL BE CONTROLLED BY INTEGRAL THERMOSTAT.

23 82 00 - ELECTRIC UNIT HEATER SCHEDULE

NOTES:											
MARK	TYPE	ELECTRICAL DATA					AIR FLOW (CFM)	RPM	BASIS OF DESIGN		NOTES
		CAPACITY (KW)	HP	V	PH	HZ			MANUFACTURER	MODEL	
UH-01	HORIZONTAL DISCHARGE	2.6	1/40	208	1	60	410	1650	CHROMOLOX	LUH-02-81-34	PROVIDE WITH MOUNTING BRACKET AND INTEGRAL THERMOSTAT
UH-02	HORIZONTAL DISCHARGE	2.6	1/40	208	1	60	410	1650	CHROMOLOX	LUH-02-81-34	PROVIDE WITH MOUNTING BRACKET AND INTEGRAL THERMOSTAT

CONSULTANT :



Juneau, AK
9103 Mendenhall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC163270

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

SCHEDULES

DESIGN	RM
DRAWN	TRS
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PROJECT No.
10297.24002

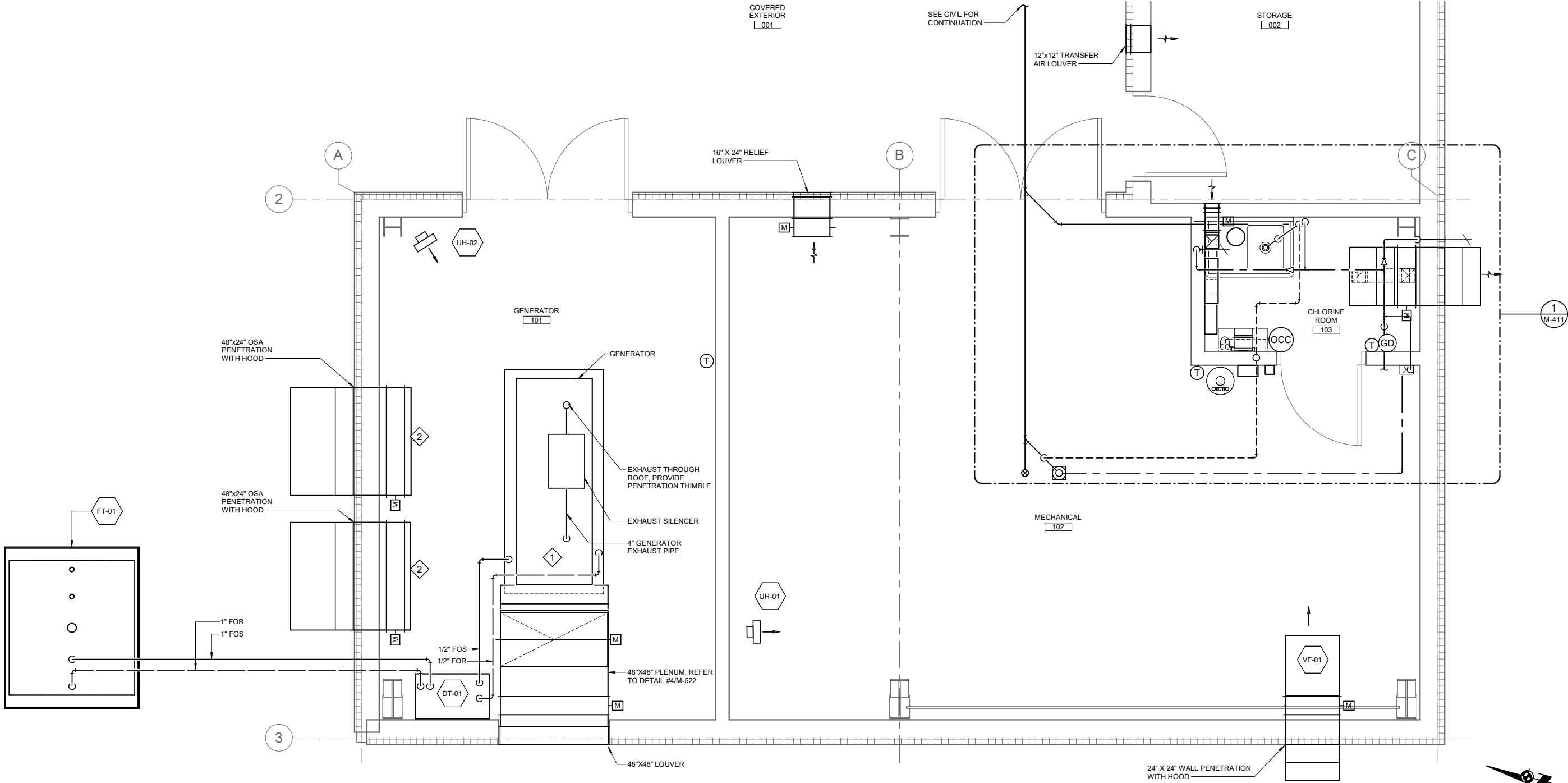
SHEET NUMBER

M-002

No.	Date	Item
REVISIONS		

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1 MECHANICAL FLOOR PLAN
M-111 SCALE: 1/2" = 1'-0"

- SHEET NOTES**
1. REFER TO PLUMBING FIXTURE CONNECTION SCHEDULE FOR INDIVIDUAL FIXTURE ROUGH-IN PIPING SIZES.
 2. PROVIDE ALL PIPING PER UPC REQUIREMENTS.
 3. PROVIDE ISOLATION VALVES AT CONNECTION TO WATER MAIN, AND AT EACH HOSE BIB AND PLUMBING FIXTURE.
 4. REFER TO SHEET M-511 FOR PLUMBING DETAILS.
 5. REFER TO SHEET M-521 FOR VENTILATION DETAILS.
 6. REFER TO SHEET M-522 FOR GENERATOR AND FUEL DETAILS.
 7. COORDINATE PIPING AND EQUIPMENT LOCATIONS WITH ELECTRICAL TRADE.
 8. AT CHLORINE ANALYZER DISCHARGE, PROVIDE FIXED AIR GAP FITTING TO WASTE CONNECTION.

- SHEET KEYNOTES** #
1. REFERENCE ELECTRICAL FOR GENERATOR SPECIFICATIONS. CONTRACTOR TO COORDINATE ALL PIPING, EXHAUST, AND DUCT CONNECTION SIZES OF THE GENERATOR UNIT SUPPLIED.
 2. 48"x24" MAKE UP AIR. REFER TO DETAIL # 7/M-521. GENERATOR MAKE UP AIR OPENING DIMENSIONS SHALL BE COORDINATED AND ADJUSTED AS REQUIRED FOR GENERATOR UNIT SUPPLIED.

No.	Date	Item
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Juneau, AK
9103 Mendenhall Mall Rd. Ste 4
Juneau, AK 99801
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PROJECT :

**CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION**

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SHEET TITLE :

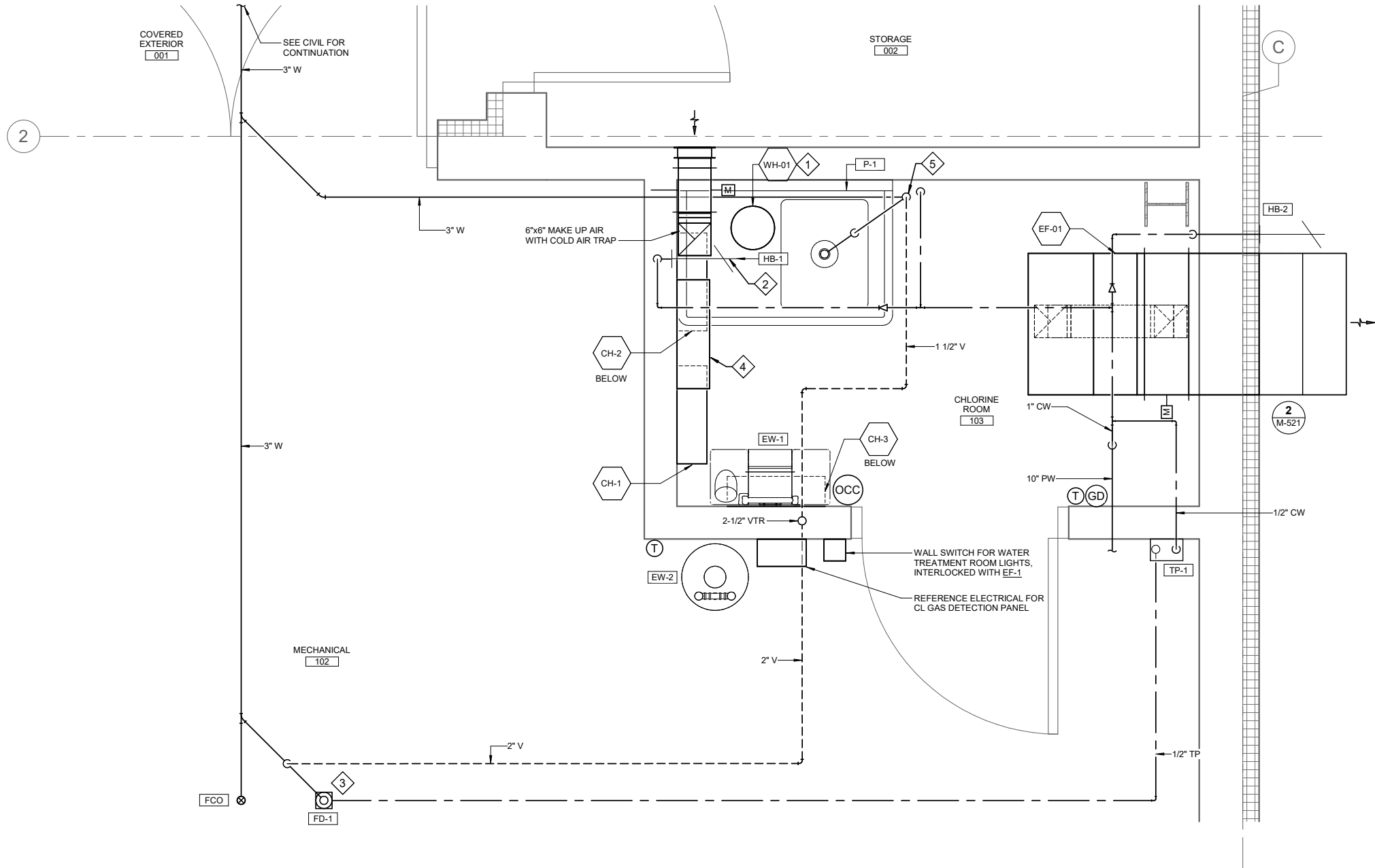
**PUMP HOUSE FLOOR PLAN -
MECHANICAL**

DESIGN	RM
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PROJECT No.
10297.24002
SHEET NUMBER

M-111

4/17/2025 3:35:47 PM Autodesk Docs/10297.24002.CBY Airport Water System Extension/INF-MECH-10297.24002_RV23.rvt 1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES



1 MECHANICAL FLOOR PLAN
M-411 SCALE: 1" = 1'-0"

SHEET NOTES

1. REFER TO PLUMBING FIXTURE CONNECTION SCHEDULE FOR INDIVIDUAL FIXTURE ROUGH-IN PIPING SIZES.
2. PROVIDE ALL PIPING PER UPC REQUIREMENTS.
3. PROVIDE ISOLATION VALVES AT CONNECTION TO WATER MAIN, AND AT EACH HOSE BIB AND PLUMBING FIXTURE.
4. REFER TO SHEET M-511 FOR PLUMBING DETAILS.
5. REFER TO SHEET M-521 FOR VENTILATION DETAILS.
6. REFER TO SHEET M-522 FOR GENERATOR AND FUEL DETAILS.
7. COORDINATE PIPING AND EQUIPMENT LOCATIONS WITH ELECTRICAL TRADE.

SHEET KEYNOTES

1. MOUNT WH-1 UNDER SINK. REFER TO DETAIL #2/M-511.
2. MOUNT HOSE BIBB ABOVE SINK DRAINBOARD.
3. PROVIDE TRAP PRIMING ADAPTOR ON WASTE LINE BETWEEN FLOOR DRAIN AND P-TRAP.
4. REFERENCE PROCESS DRAWINGS FOR CHLORINE ANALYZER. ROUTE DISCHARGE FROM CHLORINE ANALYZER TO 2" ABOVE RIM OF SINK TO PROVIDE FIXED AIR GAP.
5. PROVIDE CLEANOUT TEE IN PIPE RISER.

CONSULTANT :



Juneau, AK
9103 Mendenhall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC163270



PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :
ENLARGED PLANS - MECHANICAL

DESIGN	RM
DRAWN	TRS
CHECKED	LAR
DATE	04-16-2025

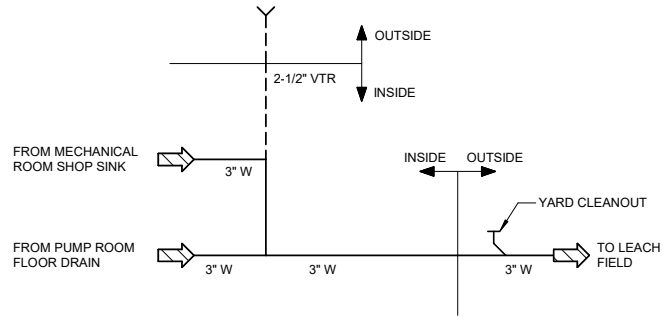
PROJECT No.
10297.24002
SHEET NUMBER

M-411

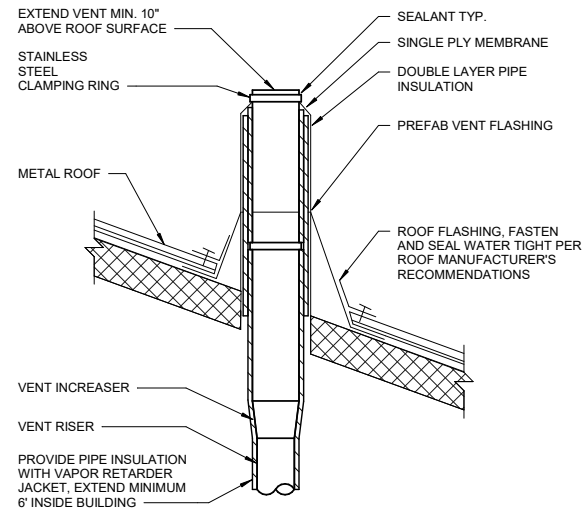
No.	Date	Item
REVISIONS		

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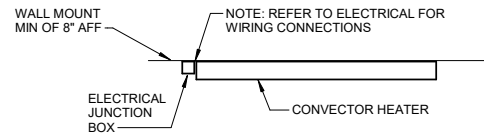
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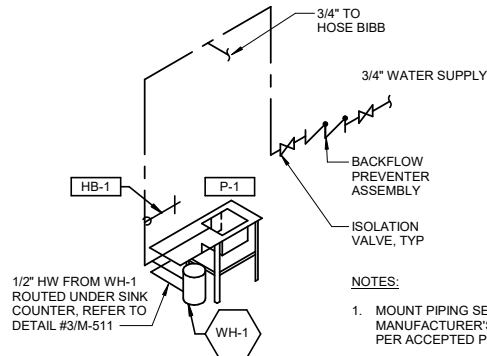
1 WASTE AND VENT SYSTEM DIAGRAM
M-511 SCALE: NO SCALE



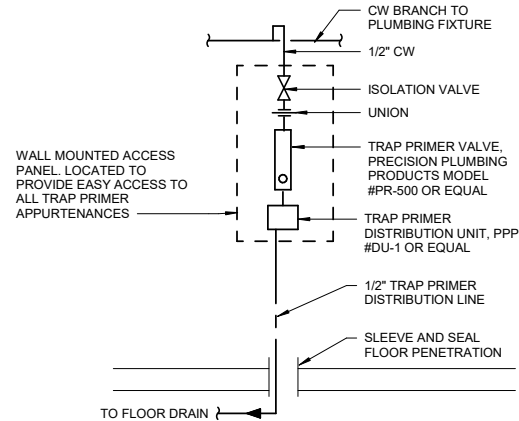
4 VENT THROUGH ROOF DETAIL
M-511 SCALE: NO SCALE



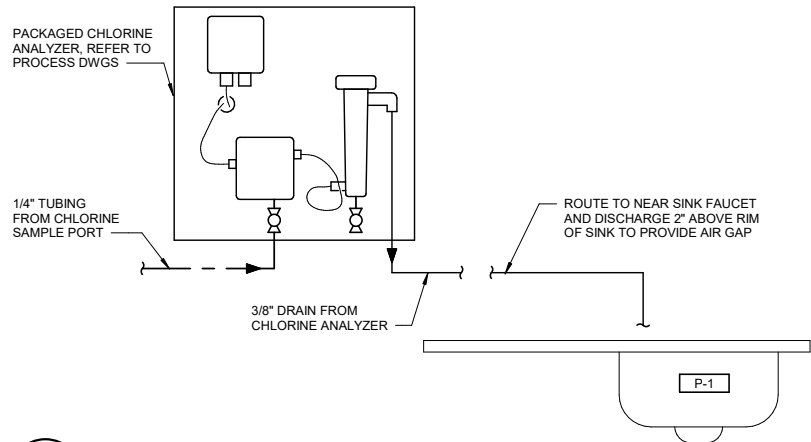
7 ELECTRIC CONVECTOR HEATER DETAIL
M-511 SCALE: NO SCALE



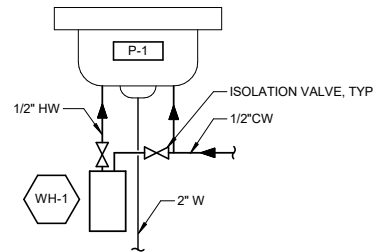
2 WATER PIPING DIAGRAM
M-511 SCALE: NO SCALE



5 TRAP PRIMER DETAIL
M-511 SCALE: NO SCALE

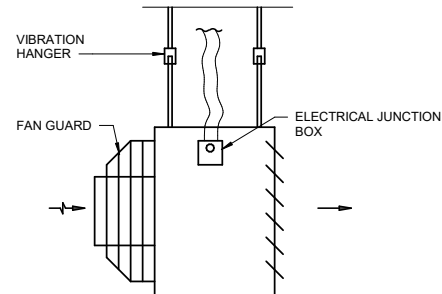


8 CHLORINE ANALYZER PIPING DETAIL
M-511 SCALE: NOT TO SCALE



3 WATER HEATER DIAGRAM
M-511 SCALE: NO SCALE

- NOTE:**
1. REFER TO ELECTRICAL FOR WIRING CONNECTIONS.
 2. PROVIDE STRUCTURAL SUPPORT AS REQUIRED.



6 ELECTRIC HORIZONTAL UNIT HEATER DETAIL
M-511 SCALE: NO SCALE

CONSULTANT :

Rachel E. Marvin
No. 12598
04/17/2025
REGISTERED PROFESSIONAL ENGINEER
P202124002

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

PLUMBING & HEATING DETAILS &
DIAGRAMS

DESIGN	RM
DRAWN	TRS
CHECKED	LAR
DATE	04-16-2025

PROJECT No.
10297.24002

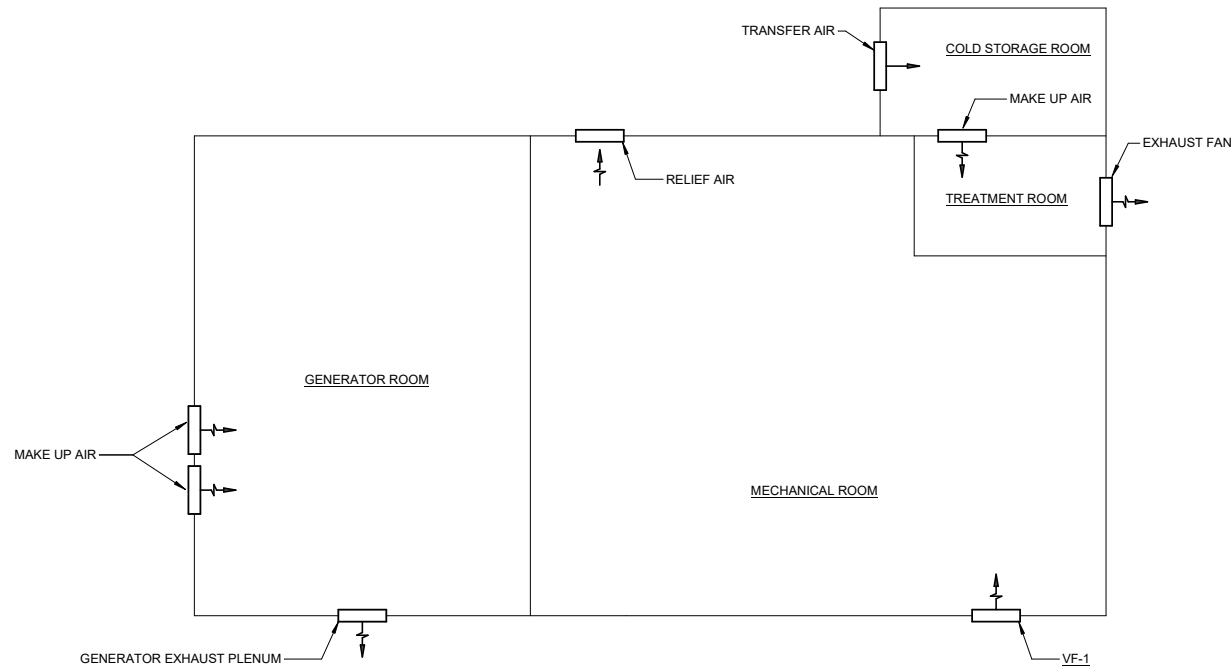
SHEET NUMBER
M-511

No.	Date	Item
REVISIONS		

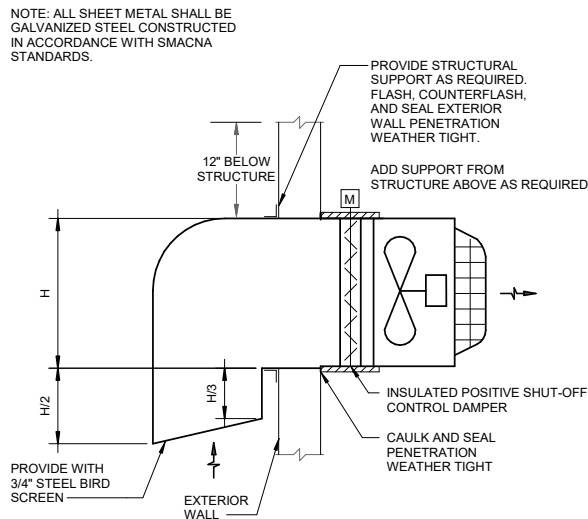
IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES.

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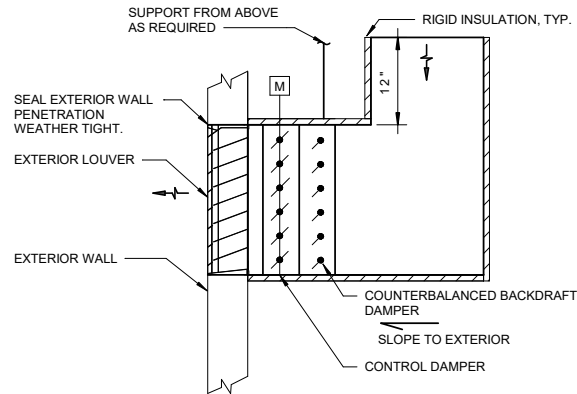
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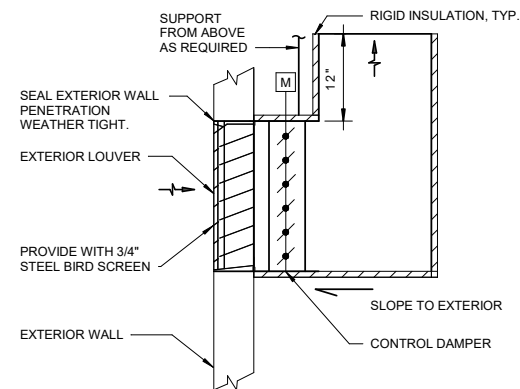
1 VENTILATION SYSTEM DIAGRAM
M-521 SCALE: NO SCALE



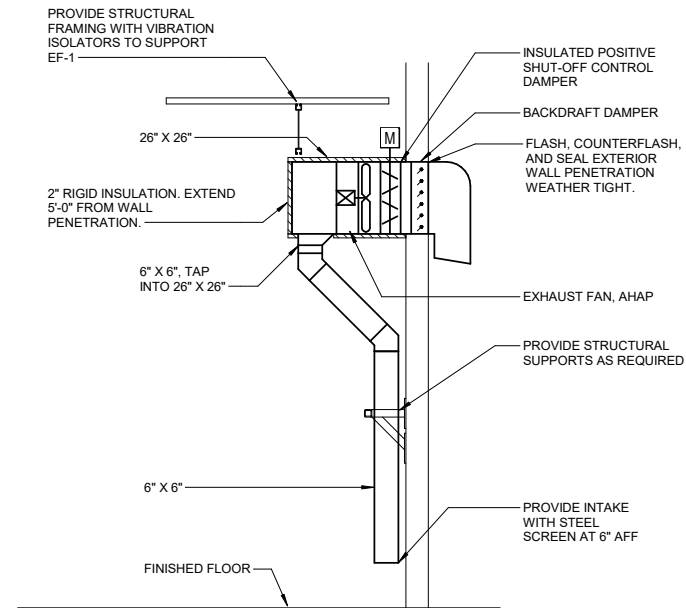
4 PUMP ROOM VENTILATION FAN DETAIL
M-521 SCALE: NO SCALE



5 PUMP ROOM RELIEF OPENING DETAIL
M-521 SCALE: NO SCALE

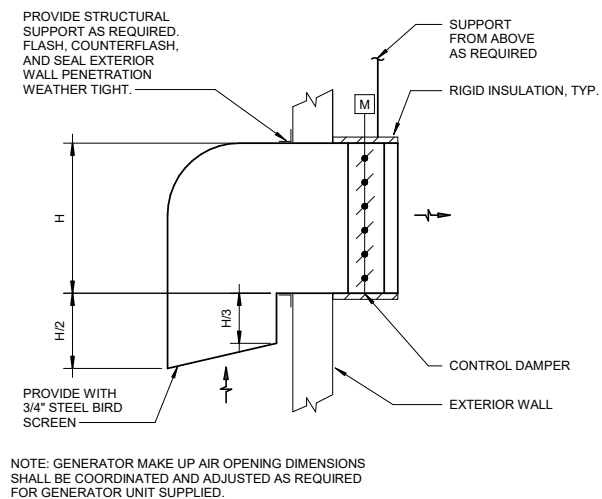


6 CHLORINE ROOM MAKE-UP AIR OPENING DETAIL
M-521 SCALE: NO SCALE



NOTES:
INSTALL VERTICAL DUCT AS CLOSE TO WALL AS POSSIBLE AND HORIZONTAL DUCT AND FAN AS HIGH AS POSSIBLE TO ALLOW ACCESS.

2 CHLORINE ROOM EXHAUST FAN SECTION
M-521 SCALE: NO SCALE



NOTE: GENERATOR MAKE UP AIR OPENING DIMENSIONS SHALL BE COORDINATED AND ADJUSTED AS REQUIRED FOR GENERATOR UNIT SUPPLIED.

7 GENERATOR ROOM MAKE-UP AIR OPENING DETAIL
M-521 SCALE: NO SCALE

CONSULTANT :



Juneau, AK
9103 Mendenhall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC163270

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PROJECT :
**CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION**
YAKUTAT, ALASKA

SHEET TITLE :
**VENTILATION DETAILS &
DIAGRAMS**

DESIGN RM
DRAWN TRS
CHECKED LAR
DATE 04-16-2025

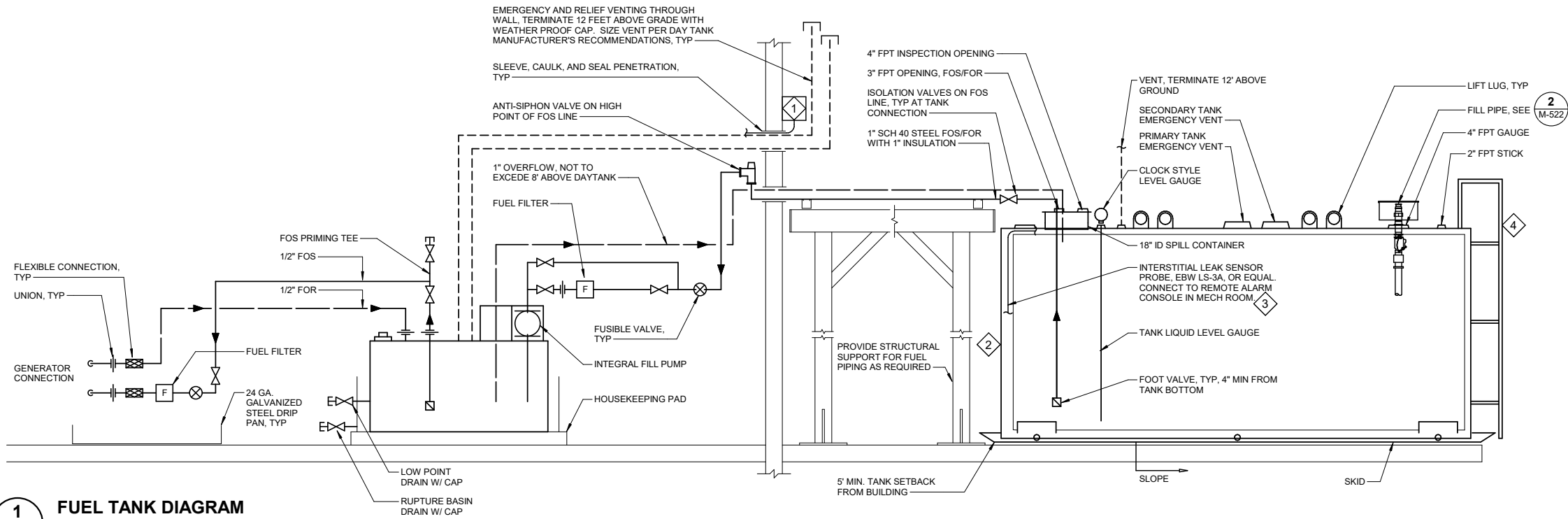
PROJECT No.
10297.24002
SHEET NUMBER

M-521

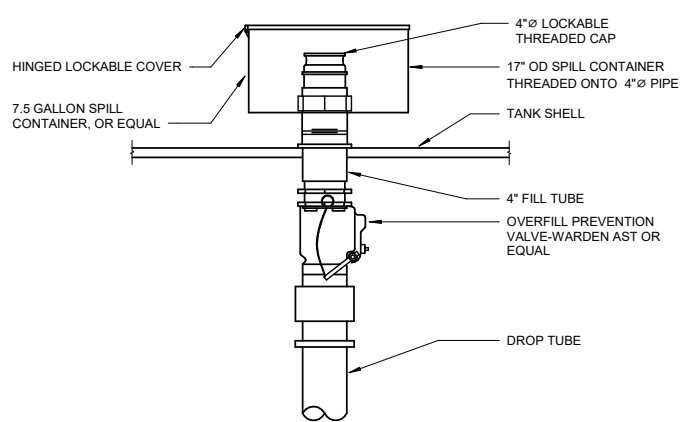
No.	Date	Item
REVISIONS		

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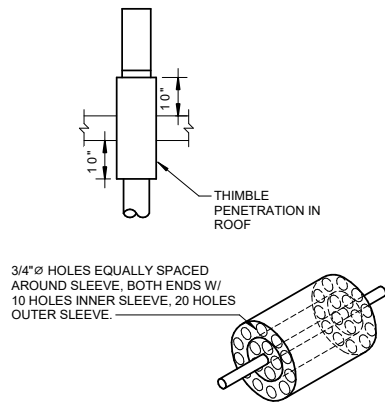
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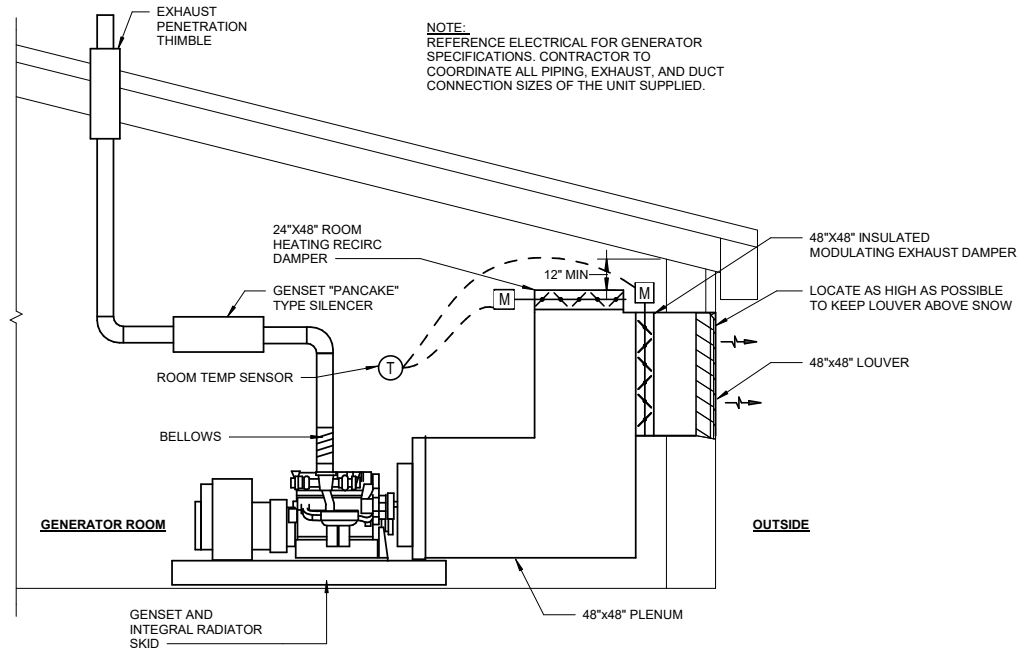
1 FUEL TANK DIAGRAM
M-522 SCALE: NO SCALE



2 FUEL OIL CONNECTION DETAIL
M-522 SCALE: NO SCALE



3 GENERATOR THIMBLE DETAIL
M-522 SCALE: NO SCALE



4 GENERATOR ROOM DIAGRAM
M-522 SCALE: NO SCALE

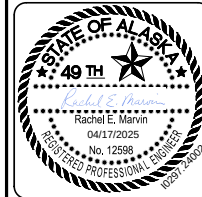
SHEET NOTES

1. DIAGRAMS ARE SCHEMATIC. LOCATE AND ORIENT EQUIPMENT AS SHOWN ON PLANS WITH MANUFACTURER'S REQUIRED CLEARANCES.
2. REFERENCE ELECTRICAL FOR GENERATOR SPECIFICATIONS. CONTRACTOR TO COORDINATE ALL PIPING, EXHAUST, AND DUCT CONNECTION SIZES TO MATCH THE REQUIREMENTS OF THE GENERATOR PROVIDED.

SHEET KEYNOTES

1. AUDIBLE OVERFILL ALARM FOR FUEL STORAGE TANK, T-1.
2. ORIENT FUEL TANK AS SHOWN ON CIVIL DRAWINGS. PROVIDE FOUNDATION AS REQUIRED BY STRUCTURAL.
3. RUN FUEL LEVEL INDICATOR AND LEAK DETECTION LEADS INSIDE CONDUIT TO GENERATOR ROOM.
4. TANK MOUNTED LADDER SHALL BE INCLUDED WITH TANK.

CONSULTANT :



Juneau, AK
9103 Meridian Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AEC0163270

RESPEC

PROJECT :
**CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION**

YAKUTAT, ALASKA

SHEET TITLE :
**GENERATOR & FUEL SYSTEM
DETAILS & DIAGRAMS**

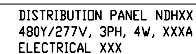
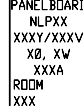
DESIGN RM
DRAWN TRS
CHECKED LAR
DATE 04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

M-522

No.	Date	Item
REVISIONS		

GENERAL SCHEDULE		
SHEET WHERE DRAWING IS REFERENCED	 DRAWING IDENTIFICATION	VIEW TITLE SYMBOL
	 DRAWING IDENTIFICATION	CALLOUT SYMBOL
SHEET WHERE DRAWING IS REFERENCED	 DRAWING IDENTIFICATION	SECTION SYMBOL
	 DRAWING IDENTIFICATION	MATCHLINE VIEW REFERENCE
ROOM NAME		ROOM NAME AND NUMBER DESIGNATION
		SHEET KEYNOTE
1.		SHEET NOTE
		NORTH ARROW

ONE-LINE SYMBOLS (600V AND BELOW)	
	SWITCHBOARD/DISTRIBUTION PANEL/MCC
	PANELBOARD
	CIRCUIT BREAKER
	FUSIBLE SWITCH
	NONFUSIBLE SWITCH
	TRANSFORMER
	TRANSFER SWITCH
	CURRENT TRANSFORMER
	METER
	WYE GROUND CONNECTION
	GENERATOR
	MOTOR CONNECTION
	VARIABLE FREQUENCY CONTROLLER W/DISCONNECT
	COMBINATION MAGNETIC MOTOR STARTER AND DISCONNECT
	GROUND CONNECTION

LIGHTING SYMBOLS	
	SURFACE LUMINAIRE, 1'x4'
	PENDANT LUMINAIRE
	WALL MOUNTED LUMINAIRE
	POLE MOUNTED LUMINAIRE
	POLE MOUNTED LUMINAIRE

WIRING AND LIGHTING CONTROL DEVICE SYMBOLS	
	DUPLEX RECEPTACLE
	GROUND-FAULT CIRCUIT INTERRUPTER (GFCI) DUPLEX RECEPTACLE
	JUNCTION/PULL BOX
	LINE VOLTAGE THERMOSTAT
	EQUIPMENT CONNECTION
	MOTOR-STARTING SWITCH, WITHOUT OVERLOAD PROTECTION
	PILOT LIGHT SWITCH; ILLUMINATED WHEN SWITCH IS ON

GENERAL NOTES

1. COMPLY WITH NFPA 70, NATIONAL ELECTRICAL CODE, 2020 EDITION, AND NECA 1, STANDARD FOR GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION. WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL STATE, FEDERAL, AND OSHA SAFETY REQUIREMENTS.
2. THE DRAWING PLANS ILLUSTRATE THE GENERAL LOCATIONS OF THE ELECTRICAL FEATURES, UNLESS OTHERWISE INDICATED. MAKE MINOR LOCATION ADJUSTMENTS AS REQUIRED FOR PROJECT CONDITIONS WHEN NECESSARY TO PRESENT SYMMETRICAL APPEARANCES OR TO AVOID INTERFERENCE WITH OTHER INSTALLATIONS.
3. COORDINATE START-UP, TESTING, AND ENERGIZING OF ALL ELECTRICALLY POWERED EQUIPMENT WITH THE PROJECT MANAGER.

ABBREVIATIONS

#	NUMBER
A	AMPERES
AC	ALTERNATING CURRENT
AF	AMP FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISH GRADE
AIC	AMPS INTERRUPTING CAPACITY
AL	ALUMINUM
AMP	AMPERES
APPX	APPROXIMATE
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
BCU	BARE COPPER WIRE
BFG	BELOW FINISHED GRADE
BLDG	BUILDING
BPB	BRANCH-CIRCUIT PANELBOARD, CB BRANCHES
C	CONDUIT
C/L	CENTERLINE
CAM	CAMERA
CAT	CATEGORY
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CI	CHLORINE
CIRC	CIRCULATING
CKT	CIRCUIT
CL	CLASS
CLG	CEILING
CNDR	CONDUCTOR
COL	COLUMN
CT	CURRENT TRANSFORMER
CTC	CORDOVA TELECOM COOPERATIVE
CTRL	CONTROL
CU	COPPER
DC	DIRECT CURRENT
DEGF	DEGREES FAHRENHEIT
DG	DIESEL GENERATOR
DIA	DIAMETER
DIM	DIMENSION
DISC	DISCONNECT
DIST	DISTRIBUTION
DIV	DIVISION
DP	DISTRIBUTION PANELBOARD
DPB	DISTRIBUTION PANELBOARD, CB BRANCHES
DPDT	DOUBLE POLE DOUBLE THROW
DWG	DRAWING
E	EAST
EBJ	EQUIPMENT BONDING JUMPER
EGB	EQUIPMENT GROUND BUS
EGC	EQUIPMENT GROUNDING CONDUCTOR
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EST	ESTIMATED
FDN	FOUNDATION
FG	FINISH GRADE
FLA	FULL LOAD AMPS
FMC	FLEXIBLE METAL CONDUIT
FO	FIBER OPTIC
FR	FULLY RATED
FRC	FIBERGLASS RIGID CONDUIT
FTL	FEED-THRU LUGS
FU	FUSE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GEC	GROUNDING ELECTRODE CONDUCTOR
GFCI	GROUND-FAULT CIRCUIT INTERRUPTER (5mA)
GFPE	GROUND-FAULT PROTECTION OF EQUIPMENT (30mA)
GND	GROUND OR GROUNDED
GRC	GALVANIZED RIGID STEEL CONDUIT (HOT-DIPPED)
HDPE	HIGH-DENSITY POLYETHYLENE
HH	HANDHOLE
HMI	HUMAN MACHINE INTERFACE
HT	HEAT TRACE
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER

ABBREVIATIONS

IES	ILLUMINATING ENGINEERING SOCIETY
IMC	INTERMEDIATE METALLIC CONDUIT
JB	JUNCTION BOX
KO	KNOCKOUT
KVA	KILOVOLT AMPERES
L	LINE
LED	LIGHT EMITTING DIODE
LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
LFNC	LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT
LSW	LIMIT SWITCH
LTG	LIGHTING
LV	LOW VOLTAGE
MAN	MANUAL
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MECH	MECHANICAL
MED	MEDIUM
MEZ	MEZZANINE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MTD	MOUNTED
N	NEUTRAL, NORTH
NAC	NOTIFICATION APPLIANCE CIRCUIT (FIRE ALARM)
NC	NORMALLY CLOSED
NECA	NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALL
OFOI	OWNER FURNISHED OWNER INSTALL
P	POLE
PC	PHOTOELECTRIC CONTROL/SWITCH
PF	POWER FACTOR
PH	PHASE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL(BOARD)
PR	PAIR
PRI	PRIMARY
PS	PRESSURE SWITCH
PVC	POLYVINYL CHLORIDE CONDUIT
RCPT	RECEPTACLE
REQD	REQUIRED
REV	REVISION, REVERSE
RM	ROOM
RMC	RIGID METAL CONDUIT (HOT-DIPPED GALVANIZED)
RMS	ROOT MEAN SQUARED
ROW	RIGHT OF WAY
RTRC	REINFORCED THERMOSETTING RESIN CONDUIT
SEC	SECONDARY
SHT	SHEET (REFER TO DRAWING)
SM	SINGLE MODE
SN	SOLID NEUTRAL
SPD	SURGE PROTECTION DEVICE
SPDT	SINGLE POLE DOUBLE THROW
SPEC	SPECIFICATION
SPST	SINGLE POLE SINGLE THROW
SR	SERIES RATED
SS	STAINLESS STEEL, SOFT-START
SSBJ	SUPPLY-SIDE BONDING JUMPER
STBY	STAND-BY
STP	SHIELDED TWISTED PAIR
SVD	SERVICE DISCONNECT
SW	SWITCH
SWD	SWITCHED
TUP	TRIP UNIT POWER SUPPLY
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITERS' LABORATORIES
UON	UNLESS OTHERWISE NOTED

ABBREVIATIONS

UPS	UNINTERRUPTIBLE POWER SUPPLY
USWD	UNSWITCHED CIRCUIT
UTP	UNSHIELDED TWISTED PAIR
V	VOLTS
VA	VOLT AMPERES
VAR	VOLT-AMPS REACTIVE
VFC	VARIABLE FREQUENCY CONTROLLER
W	WATT, WEST or WIRE
W/	WITH
W/O	WITHOUT
WH	WATTHOUR
WP	WEATHERPROOF
XC	AUXILIARY CONTACT
XFER	TRANSFER
XFMR	TRANSFORMER
XMTR	TRANSMITTER
XP	EXPLOSION PROOF

CONSULTANT :



Juneau, AK
9103 Wendenhall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC163270



PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :
LEGEND AND ABBREVIATIONS

DESIGN	NK
DRAWN	CSB
CHECKED	BCH
DATE	04-16-2025

PROJECT No.	
10297.24002	
SHEET NUMBER	
E-001	

No.	Date	Item
REVISIONS		

INSTRUMENT IDENTIFICATION LETTERS					
BASED ON ANSI/ISA-5.1-2009 STANDARD IDENTIFICATION					
	FIRST LETTERS		SUCCEEDING LETTERS		
	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
	MEASURING / INITIATING VARIABLE	VARIABLE MODIFIER	READOUT / PASSIVE FUNCTION	OUTPUT / ACTIVE FUNCTION	FUNCTION MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	CONDUCTIVITY			CONTROL	CLOSE
D	DENSITY	DIFFERENCE, DIFFERENTIAL			DEVIATION
E	VOLTAGE		SENSOR, PRIMARY ELEMENT		
F	FLOW, FLOW RATE	RATIO			
G	USER'S CHOICE		GLASS, GAUGE, VIEWING DEVICE		
H	HAND				HIGH
I	CURRENT		INDICATE		
J	POWER		SCAN		
K	TIME, SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	MOISTURE ANALYSIS				MIDDLE, INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE, RESTRICTION		OPEN
P	PRESSURE		POINT (TEST CONNECTION)		
Q	QUANTITY	INTEGRATE, TOTALIZE	INTEGRATE, TOTALIZE		
R	RADIATION		RECORD		RUN
S	SPEED, FREQUENCY	SAFETY		SWITCH	STOP
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL, PROBE		
X	UNCLASSIFIED	X-AXIS	ACCESSORY DEVICES, UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT STATE, PRESENCE	Y-AXIS		AUXILIARY DEVICES	
Z	POSITION, DIMENSION	Z-AXIS, SAFETY INSTRUMENTED SYSTEM		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

INSTRUMENT DEVICE NOTATION IDENTIFICATION	
(TAG PREFIX)	AAA (SETPOINT OR FUNCTION DESCRIPTION)
(CONTROL SYSTEM)	### (INSTRUMENT/EQUIPMENT DESCRIPTION)

INSTRUMENT BLOCK INTERCONNECTION LEGEND	
(2) #18-STP	DENOTES CIRCUIT TYPE 2/C #14 = 2 CONDUCTOR, #14 AWG #18-STP = #18 AWG SHIELDED TWISTED PAIR CABLE 120 VAC PWR = 2 CONDUCTOR, #14 AWG 24 VDC OR VAC PWER = 2 CONDUCTOR, #14 AWG
	DENOTES QUANTITY OF CIRCUITS

INSTRUMENT DEVICE AND FUNCTION SYMBOLS					
BASED ON ANSI/ISA-5.1-2009 STANDARD IDENTIFICATION					
	FIELD MOUNTED	LOCATED IN MAIN (CENTRAL) PANEL/CONSOLE (ACCESSIBLE TO OPERATOR)	LOCATED IN MAIN (CENTRAL) PANEL/CONSOLE (INACCESSIBLE TO OPERATOR)	LOCATED IN SECONDARY OR LOCAL PANEL/CONSOLE (ACCESSIBLE TO OPERATOR)	LOCATED IN SECONDARY OR LOCAL PANEL/CONSOLE (INACCESSIBLE TO OPERATOR)
DISCRETE INSTRUMENTS					
SHARED DISPLAY, SHARED CONTROL (PRIMARY CONTROL SYSTEMS)					
COMPUTER FUNCTION					
SHARED DISPLAY, SHARED CONTROL (ALTERNATE CONTROL SYSTEMS)					
PILOT LIGHT					

CONSULTANT :



Juneau, AK
9103 Mendenaal Mall Rd, Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC-163270



PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

INSTRUMENTATION & CONTROLS
LEGENDS

DESIGN	NK
DRAWN	CSB
CHECKED	BCH
DATE	04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

E-002

No.	Date	Item
REVISIONS		

EQUIPMENT SCHEDULE											
TYPE MARK	DESCRIPTION	LOCATION	HP	VOLTAGE	KILOWATTS	PHASE	RATING	CONDUCTORS	DISCONNECT SWITCH/FUSE	STARTER	NOTES
BC-01	BATTERY CHARGER	GENERATOR		120 V	0.3	1	20/1	2 NO. 12, 1 NO. 12 GND			
BP-01	BOOSTER PUMP NO. 1	MECHANICAL	7.5	480 V	7.299	3	30/3	3 NO. 10, 1 NO. 10 GND	30 A DISC	VFD*	SUPPLIED WITH PUMP
BP-02	BOOSTER PUMP NO. 2	MECHANICAL	7.5	480 V	7.299	3	30/3	3 NO. 10, 1 NO. 10 GND	30 A DISC	VFD*	SUPPLIED WITH PUMP
BP-03	HIGH FLOW PUMP	MECHANICAL	30	480 V	29.25	3	70/3	3 NO. 4, 1 NO. 8 GND	100 A DISC	VFD*	SUPPLIED WITH PUMP
CH-01	CONVECTION HEATER	CHLORINE ROOM		120 V	0.5	1	20/1	2 NO. 12, 1 NO. 12 GND			SINGLE THERMOSTAT FEEDING CH-01, 02, & 03
CH-02	CONVECTION HEATER	CHLORINE ROOM		120 V	0.5	1	20/1	2 NO. 12, 1 NO. 12 GND			SINGLE THERMOSTAT FEEDING CH-01, 02, & 03
CH-03	CONVECTION HEATER	CHLORINE ROOM		120 V	0.5	1	20/1	2 NO. 12, 1 NO. 12 GND			SINGLE THERMOSTAT FEEDING CH-01, 02, & 03
CP-01	CALCIUM HYPOCHLORITE PUMP	CHLORINE ROOM	1/6	120 V	0.3	1	20/1	2 NO. 12, 1 NO. 12 GND			
CTP-01	CATHODIC PROTECTION	BUILDING EXTERIOR		120 V		1	20/1	2 NO. 12, 1 NO. 12 GND			
DT-1	GENERATOR DAY TANK	GENERATOR	1/3	120 V	0.11	1	20/1	2 NO. 12, 1 NO. 12 GND			
EF-01	EXHAUST FAN	CHLORINE ROOM	1/6	120 V	0.08	1	15/1	2 NO. 12, 1 NO. 12 GND	SWITCH		
HT-01	HEAT TRACE - VENT	TANK		120 V	0.05	1	20/1GFEB	2 NO. 12, 1 NO. 12 GND			
HT-02	HEAT TRACE - DRAIN	TANK		120 V	0.05	1	20/1GFEB	2 NO. 12, 1 NO. 12 GND			
HT-03	HEAT TRACE - 6" PW TO TANK	MECHANICAL		120 V	0.08	1	20/1GFEB	2 NO. 12, 1 NO. 12 GND			
HT-04	HEAT TRACE - 3" RC TO TANK	MECHANICAL		120 V	0.05	1	20/1GFEB	2 NO. 12, 1 NO. 12 GND			
HT-05	HEAT TRACE - 10" PW FROM TANK	MECHANICAL		120 V	0.17	1	20/1GFEB	2 NO. 12, 1 NO. 12 GND			
MXR-01	STORAGE TANK MIXER	EXTERIOR TANK	1	120 V	1.1	1	30/1	2 NO.10, 1 NO. 10 GND	30 A DISC		
RC-01	RECIRC PUMP	MECHANICAL	3	480 V	2.931	3	15/3	3 NO. 12, 1 NO. 12 GND	30 A DISC	VFD*	SUPPLIED WITH PUMP
UH-01	UNIT HEATER - HORIZONTAL DISCHARGE	MECHANICAL	1/40	208 V	2.6	1	20/2	2 NO. 12, 1 NO. 12 GND			
UH-02	UNIT HEATER - HORIZONTAL DISCHARGE	GENERATOR	1/40	208 V	2.6	1	20/2	2 NO. 12, 1 NO. 12 GND			
VF-01	VENTILATION FAN	MECHANICAL	1/3	120 V	0.3	1	15/1	2 NO. 12, 1 NO. 12 GND	SWITCH		
WH-01	WATER HEATER	CHLORINE ROOM		120 V	1.65	1	20/1	2 NO. 12, 1 NO. 12 GND	SWITCH		

* COORDINATE PROVISION OF DISCONNECT WITH THE VFD - IT MAY BE INTEGRATED WITH THE VFD.

LUMINAIRE SCHEDULE							
TYPE MARK	LOAD	DESCRIPTION	MANUFACTURER	MODEL NUMBER	MOUNTING TYPE	VOLTAGE	NOTES
BULL HORN	0	BULLHORN LIGHT POLE ADAPTOR, 2 ARMS AT 180 DEGREES, 36" ARM SPREAD, GALVANIZED FINISH	KW IINDUSTRIES	FA2180-36-2-G-2			
C1	150	HOLOPHANE PREDATOR SMALL LED FLOODLIGHT, DIE CAST ALUMINUM HOUSING, 22000 LUMENS, 3000K CCT, NARROW TYPE FLOOD DISTRIBUTION, IP66 RATED, TENON SLIPFITTER, BRONZE FINISH, AND ACCESSORRY UPPER VISOR BRONZE PAINT	ACUITY	PSLED-P5-30K-MVOLT-44-KM-BZSDP PSLEDUBV BZSDP	TENON MOUNT TO ROUND POLE	120-277V	
OA	0	CEILING MOUNT TYPE, LINE VOLTAGE OCCUPANCY SENSOR	SENSOR SWITCH	CMR PDT 10LT	SUSPENDE ON ROD TO + 10 FT	120-277V	
P1	24	48" LOW PROFILE ENCLOSED AND GASKETED LINEAR PENDANT, FIBERGLASS HOUSING, ACRYLIC LOW PROFILE CLEAR LENS, MEDIUM DISTRIBUTION, 3500K, 80CRI, 4000 LUMENS, WITH 3 FT JACK CHAIN MOUNTING ACCESSORY	LITHONIA	FEM L48 8000LM LPACL MD MVOLT GZ10 35K 80CRI MHCH 36	SUSPENDE	120-277V	
P1E	24	SAME AS P1, WITH EMERGENCY BATTERY	LITHONIA	FEM L48 8000LM LPACL MD MVOLT GZ10 35K 80CRI E10WMCP MHCH 36	SUSPENDE	120-277V	
P2	38	48" LOW PROFILE ENCLOSED AND GASKETED LINEAR PENDANT, FIBERGLASS HOUSING, ACRYLIC LOW PROFILE CLEAR LENS, MEDIUM DISTRIBUTION, 3500K, 6000 LUMENS, 80CRI, WITH 3 FT JACK CHAIN MOUNTING ACCESSORY	LITHONIA	FEM L48 6000LM LPACL MD MVOLT GZ10 35K 80CRI MHCH 36	CEILING MOUNTED	120-277V	
POLE	0	30FT X 6" DIA, 7 GAUGE, ROUND STRAIGHT STEEL POLE, 2.38" X 4" TENON, GALVANIZED FINISH, HUB LOCATIONS AT 20FT & 25FT	KW IINDUSTRIES	RSP30-6-7-G-2NPL			
S1	32	48" LED SURFACE LINEAR, STEEL HOUSING AND ACRYLIC LENS, 5000 LUMENS WITH LESS LENS OPTION, STANDARD EFFICIENCY PERFORMANCE PACKAGE, LESS LOUVER OPTION	LITHONIA	CLX L48 5000LM SEF L/LENS MVOLT 35K 80CRI WH	SUSPENDE	120-277V	
SENSOR	0	POLE MOUNTED, STEP DIMMING, MONTION SENSOR, HIGH MOUNTING HEIGHT, MEDIUM EXTE4NSION BODY, HIGH BACK BRACKET, NATURAL ALUMINUM COLOR.	nLIGHT	rSBOR-6-EB4-NA	POLE MOUNTED AT 25'	120-277V	STEP DIM TYPE C1 FLOODLIGHTS TO 30% OUTPUT W/ NO MOTION SENSED
W1	10	11" ARCHITECTURAL WALL SCONCE WEDGE LED WITH VISUAL COMFORT OPTICS, P1 PERFORMANCE PACKAGE, 3500K COLOR TEMPERATURE, 80CRI, VISUAL COMFORT WIDE DISTRIBUTION, 1284 LUMENS, 0 BUG RATING, AND SURFACE MOUNTING BRACKET, PE CELL OPTION, DARK BRONZE FINISH	LITHONIA	WDGE2 LED P1 35K 80CRI VW MVOLT SRM PE DDBXD	WALL MOUNT @ 8'0" UON	120-277V	
W2	10	A360 ALUMINUM LOW COPPER CONTENT, MARINE SERIES WITH 20WATT LED, 3500K CCT, HEAT RESISTANT FROSTED GLASS GLOBE, GUARD AND WALL MOUNT BOX	AZZ RIGALITE	AVP-20L2-U-HF-G-W-35	WALL MOUNT	120-277V	MOUNT TO TANK GUARD RAIL

No.	Date	Item
REVISIONS		

CONSULTANT :



Juneau, AK
9103 Mendocino Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.0060
www.rspect.com
AECC-163270



PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

SCHEDULES

DESIGN	SH
DRAWN	CSB
CHECKED	BCH
DATE	04-16-2025

PROJECT No.
10297.24002

SHEET NUMBER

E-003

INSTRUMENT INDEX							
TAG NUMBER	DESCRIPTION	INSTRUMENT TYPE	PROCESS RANGE	P&ID	PLAN DWG	DEVICE RANGE	NOTES
AE-007	CHLORINE ANALYZER SENSOR	CHLORINE ANALYZER SENSOR	0-10 PPM	D-613	E-113	0-20 PPM	
AE-020	CHLORINE GAS DETECTOR	CHLORINE GAS DETECTOR SENSOR	0-5 PPM	D-614	E-113	0-20 PPM	REFER TO SPECIFICATION 230900.
AIT-007	CHLORINE ANALYZER CONTROLLER	CHLORINE ANALYZER CONTROLLER	0-10 PPM	D-613	E-113	0-10 PPM	
AIT-020	CHLORINE GAS DETECTOR PANEL	CHLORINE GAS DETECTOR PANEL	0-5 PPM	D-614	E-113	0-10 PPM	REFER TO SPECIFICATION 230900.
FIT-001	WATER TANK FILL LINE FLOWMETER	MAGNETIC FLOW METER	0-300 GPM	D-611	E-113	0-1400 GPM	
FIT-005	CBY INTERTIE LINE FLOWMETER	MAGNETIC FLOW METER	0-600 GPM	D-611	E-113	0-1400 GPM	
FIT-006	AIRPORT SUPPLY LINE FLOWMETER	MAGNETIC FLOW METER	0-600 GPM	D-613	E-113	0-3300 GPM	
FIT-008	RE-CIRCULATION LINE FLOWMETER	MAGNETIC FLOW METER	0-20 GPM	D-611	E-113	0-90 GPM	
LSHH-201	WATER STORAGE TANK HIGH HIGH LEVEL SWITCH	FLOAT LEVEL SWITCH	N/A	D-611	E-100	N/A	
LSLL-201	WATER STORAGE TANK LOW LOW LEVEL SWITCH	FLOAT LEVEL SWITCH	N/A	D-611	E-100	N/A	
LT-200	WATER STORAGE TANK LEVEL SENSOR	HYDROSTATIC LEVEL SENSOR	0-24 FT	D-611	E-100	0-30 FT H2O	
LV-002	WATER STORAGE TANK LEVEL CONTROL VALVE	ACTUATED VALVE	0-100% OPEN	D-611	E-113	0-100% OPEN	REFER TO PROCESS SCHEDULE D-002.
PIT-003	BOOSTER PUMP SUCTION WATER PRESSURE	PRESSURE TRANSMITTER	0-100 PSIG	D-612	E-113	0-300 PSIG	
PIT-004	BOOSTER PUMP DISCHARGE WATER PRESSURE	PRESSURE TRANSMITTER	0-100 PSIG	D-612	E-113	0-300 PSIG	
TT-021	PUMP ROOM AMBIENT TEMPERATURE TRANSMITTER	SPACE AIR TEMPERATURE SENSOR	0-120 DEG F	D-614	E-113	-40-185 DEG F	
XA-020B	CHLORINE GAS ALARM HORN/LIGHT	GAS DETECTOR PANEL ALARM LIGHT/HORN	N/A	D-614	E-113	N/A	REFER TO SPECIFICATION 230900.
ZSC-202	WATER STORAGE TANK HATCH INTRUSION SWITCH	POSITION LIMIT SWITCH	OPEN/CLOSE	D-614	E-100	N/A	

CONSULTANT :



Juneau, AK
9103 Wendenhall Mall Rd Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC-163270



PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

INSTRUMENTATION SCHEDULES

DESIGN

NK

DRAWN

CSB

CHECKED

BCH

DATE

04-16-2025

PROJECT No.

10297.24002

SHEET NUMBER

E-004

No.

Date

Item

REVISIONS



1. ALL CONDUITS ILLUSTRATED OUTSIDE THE BUILDING AND TANK SHALL BE INSTALLED UNDERGROUND.
2. COORDINATE PLACEMENT OF ELECTRICAL AND INSTRUMENTATION EQUIPMENT WITH WATER STORAGE TANK APPURTENANCES. REFER TO WATER STORAGE TANK DETAILS ON CIVIL SHEETS.

1. COORDINATE WITH ELECTRICAL UTILITY (AVEC). AVEC TO PROVIDE LINE EXTENSION TO POLE WITH TRANSFORMERS, AND THE TRANSFORMER INSTALLATION; CONTRACTOR TO INSTALL SERVICE RACEWAY AND CONDUCTORS. FOLLOW AVEC STANDARDS.
2. MOUNT TO RAILING, SECOND RAIL FROM TOP. PROVIDE STRUT, HARDWARE, FITTINGS AS REQUIRED. RECEPTACLE HAS GFCI PROTECTION AT ITS CIRCUIT BREAKER. PROVIDE LABEL, "GFCI PROTECTION AT CIRCUIT BREAKER IN PANEL NL01."
3. TO HEAT TRACE CONTROLS IN THE COVERED EXTERIOR.
4. COORDINATE WITH TANK MANUFACTURER. TANK MANUFACTURER TO PROVIDE MOUNTING PROVISIONS FOR ELECTRICAL EQUIPMENT. THIS INCLUDES, BUT IS NOT NECESSARILY LIMITED TO ATTACHMENT POINTS FOR CHANNEL STRUT AND CONDUIT INCLUDING ROUTING CABLE THROUGH TANK WALL. ELECTRICAL EQUIPMENT IN TANK, IF ANY, SHALL COMPLY WITH AK DEC REGULATIONS AS REQUIRED.
5. COORDINATE WITH TANK MANUFACTURER TO FURNISH NOZZLES AND MOUNTING PROVISIONS FOR LEVEL TRANSMITTER AND LEVEL FLOAT SWITCHES. SEE SHEET C-506 FOR WATER STORAGE TANK LEVEL INSTRUMENT NOZZLES.
6. SUSPEND THE TANK MIXER THROUGH THE ROOF MANWAY. ROUTE THE CABLE THROUGH A HUB AND CABLE GRIP IN THE MANWAY FLANGE PER MANUFACTURER TO THE JUNCTION BOX. PROVIDE TERMINALS IN THE JUNCTION BOX FOR THE MIXER CABLE AND CONDUCTORS ROUTED TO TANK MIXER CONTROL PANEL MOUNTED ADJACENT TO THE GENERATOR ROOM DOORS.
7. MOUNT THE TYPE W2 LUMINAIRE AND RECEPTACLE TO THE GUARDRAIL. MOUNT THE TYPE W2 LUMINAIRE AT 4 FOOT ABOVE THE TANK ROOF.
8. COORDINATE THE CATHODIC PROTECTION EQUIPMENT LOCATIONS AND MOUNTING PER THE MANUFACTURER.
9. INSTALL INTRUSION LIMIT SWITCH ON WATER STORAGE TANK MANWAY ACCESS HATCH.
10. ROUTE CONTROLS CONDUIT TO CONTROL PANEL PLC-01 INSIDE PUMPHOUSE PUMP ROOM.
11. CONTRACTOR TO COORDINATE WITH LOCAL TELECOM PROVIDER CORDOVA TELECOM COOPERATIVE (CTC) TO FURNISH AND INSTALL FIBER OPTIC CABLE HAND HOLE, 1-INCH CONDUIT WITH MICRODUCT, AND FIBER WALL BOX IN COMPLIANCE WITH CTC STANDARDS. CONTRACTOR TO ROUTE SERVICE DROP TO CONTROL PANEL PLC-01 IN 3/4-INCH RMC. COORDINATE WITH CTC FOR INSTALLATION OF FIBER OPTIC TELECOM SERVICE.



YAKUTAT, ALASKA

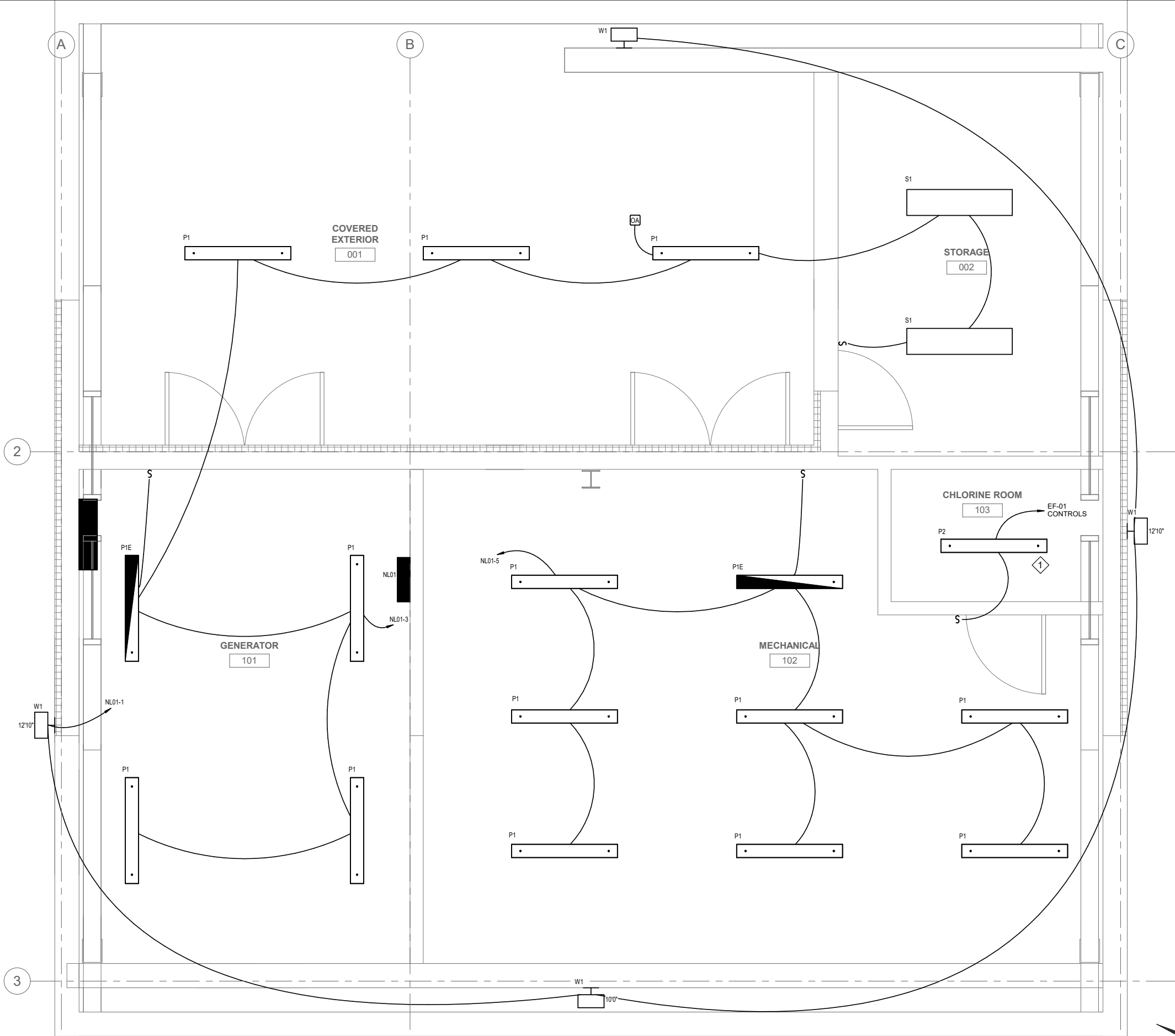
ELECTRICAL SITE PLAN

PROJECT No.
10297.24002
SHEET NUMBER

E-100

No.	Date	Item
REVISIONS		

4/17/2025 10:58:09 AM Autodesk Docs://10297_24002-CBY Airport Water System Extension/INF-ELEC-10297_24002_RV23.v1 IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION. AFFECTING ALL LABELED SCALES 1"



SHEET KEYNOTES #

1. PROVIDE CONTROLS FOR LIGHTING AND EXHAUST FAN EF-01 USING A LOW VOLTAGE SWITCH OUTSIDE THE ROOM AND AN OCCUPANCY SENSOR INSIDE THE ROOM. THE LIGHT AND EXHAUST FAN SHALL OPERATE WHEN SWITCHED ON AND WHEN OCCUPANCY IS SENSED. THE OCCUPANCY SENSOR SHALL MAINTAIN LIGHT AND EXHAUST FAN OPERATION A MINIMUM OF 20 MINUTES AFTER THE ROOM BECOMES UNOCCUPIED. IF THE ROOM IS NOT OCCUPIED, THE SWITCH MANY OPERATE AND SECURE OPERATION OF THE LIGHT AND EXHAUST FAN WITHOUT DELAYS. REFER TO THE CONTROL DIAGRAM ON SHEET E-502.

1 ELECTRICAL FLOOR PLAN - LIGHTING
E-111 SCALE: 1/2" = 1'-0"

No.	Date	Item
REVISIONS		

CONSULTANT :

Juneau, AK
9103 Mendocino Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC 63270

PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION
YAKUTAT, ALASKA

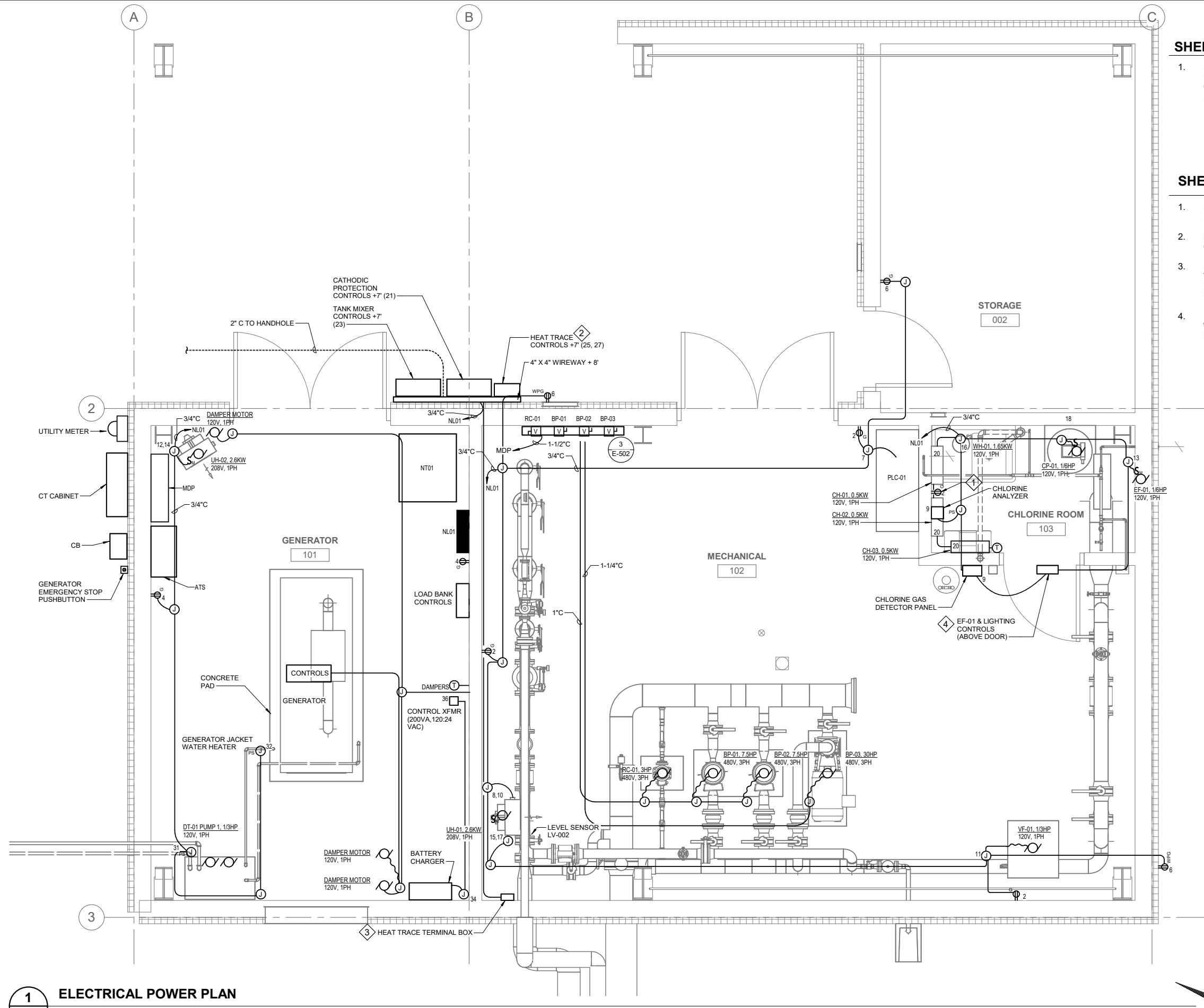
SHEET TITLE :
ELECTRICAL FLOOR PLAN -
LIGHTING

DESIGN	SH
DRAWN	CSB
CHECKED	BCH
DATE	04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER
E-111

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES

4/17/2025 10:58:10 AM AutodesK Docs//10297_24002-CBY Airport Water System Extension/INF-ELEC-10297_24002_RV23.vrt



- SHEET NOTES**
1.

PROVIDE CORROSION RESISTANT RACEWAYS, BOXES, RECEPTACLES, ENCLOSURES, AND SWITCHES IN THE CHLORINE TREATMENT ROOM. ALL BOXES AND ENCLOSURES SHALL BE NEMA TYPE 4X.
- SHEET KEYNOTES**
1.

PROVIDE WEATHER-PROOF, CORROSION RESISTANT RECEPTACLE INSIDE CHLORINE TREATMENT ROOM.
2.

LOCATE THE REMOTE TEMPERATURE SENSOR IN AN OPEN 1" STEEL BELOW THE CONTROL PANEL.
3.

PROVIDE HEAT TRACE BENEATH THE INSULATION ON THE 3", 6", AND 10" PIPES FROM INSIDE THE MECHANICAL ROOM TO THE WATER STORAGE TANK. REFER TO THE HEAT TRACE SCHEMATIC DIAGRAM.
4.

INTEGRATE THE CONTROLS FOR EXHAUST FAN EF-01 WITH THE LIGHTING FOR THE ROOM. REFER TO SHEETS E-111 AND E-502.

1

E-112

ELECTRICAL POWER PLAN
SCALE: 1/2" = 1'-0"

No.	Date	Item
REVISIONS		

CONSULTANT :

Juneau, AK
9103 Mendocino Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC 63270

RESPEC

PROJECT :

**CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION**
YAKUTAT, ALASKA

SHEET TITLE :

ELECTRICAL FLOOR PLAN - POWER
10297.24002
SHEET NUMBER

DESIGN	NK
DRAWN	CSB
CHECKED	BCH
DATE	04-16-2025

PROJECT No.

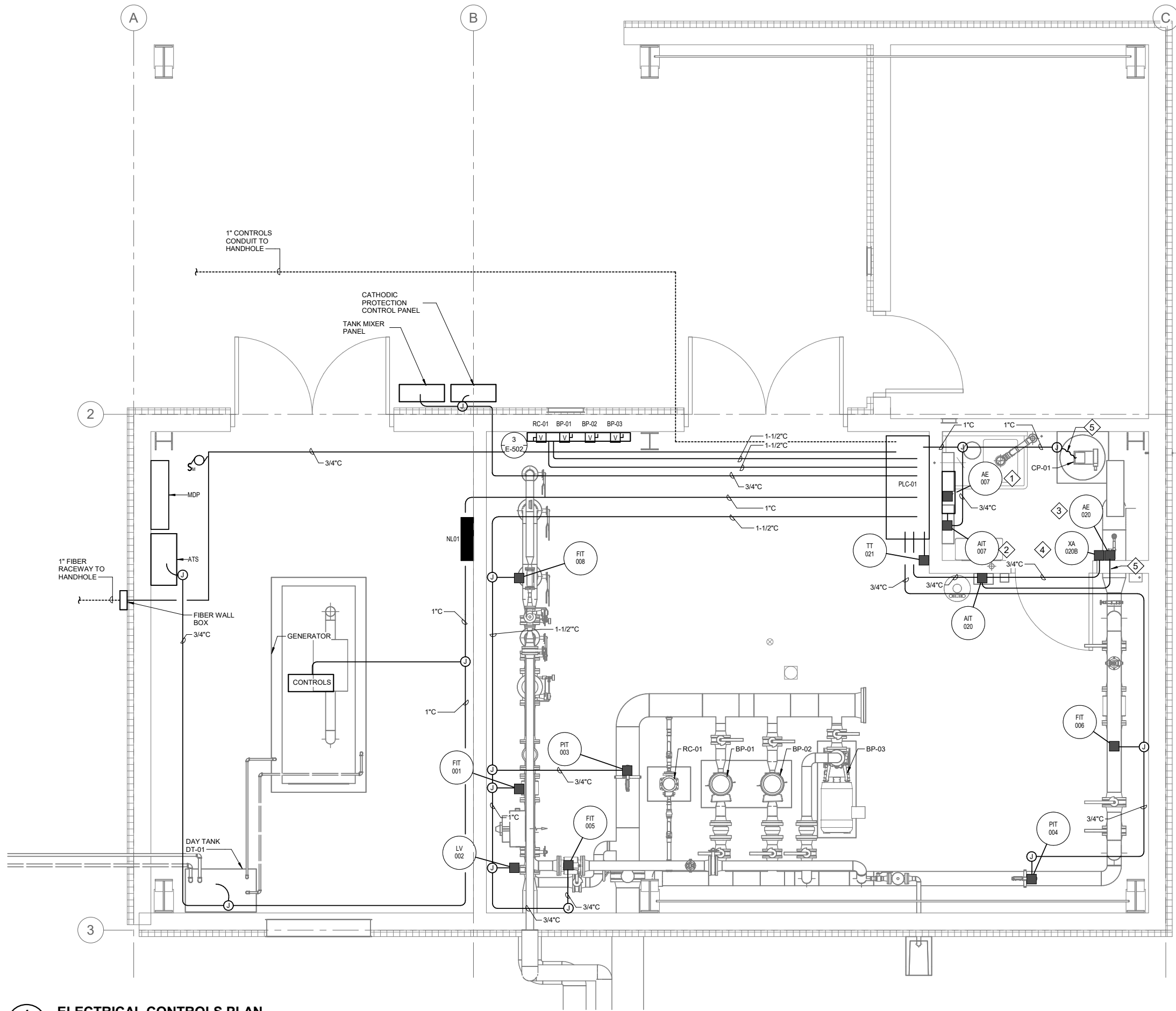
10297.24002

SHEET NUMBER

E-112

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES

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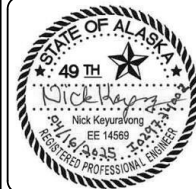
SHEET NOTES

1. REFER TO INSTRUMENT BLOCK DIAGRAM FOR INFORMATION ON CONTROL CIRCUITS ROUTED TO EACH FIELD DEVICE AND EQUIPMENT CONNECTED TO THE SCADA SYSTEM.
2. PROVIDE CORROSION RESISTANT RACEWAYS, BOXES, ENCLOSURES, AND SWITCHES IN THE CHLORINE TREATMENT ROOM. ALL BOXES AND ENCLOSURES SHALL BE NEMA TYPE 4X.
3. THIS DRAWING SHOWS RACEWAYS AND BOXES FOR CONTROL CIRCUITS CONNECTED TO PLC-01. REFER TO SHEET E-112 FOR ALL POWER CIRCUIT RACEWAYS, BOXES, ENCLOSURES, AND SWITCHES.

SHEET KEYNOTES

1. CHLORINE ANALYZER SENSOR AND SAMPLING SYSTEM ASSEMBLY AE-007 IS MOUNTED ON A 19.5" (W) BY 19" (H) PANEL. ATTACH AE-007 PANEL TO WALL AT A MOUNTING HEIGHT OF 6'-0" ABOVE FINISHED FLOOR (MEASURED TO TOP OF PANEL).
2. MOUNT CHLORINE ANALYZER TRANSMITTER AIT-007 AT A HEIGHT OF 5'-6" ABOVE FINISHED FLOOR.
3. MOUNT CHLORINE GAS SENSOR AE-020 AT A HEIGHT OF 20" ABOVE FINISHED FLOOR.
4. MOUNT CHLORINE GAS ALARM STROBE/HORN AT A HEIGHT OF 8'-0" ABOVE FINISHED FLOOR.
5. SIZE RACEWAY TO ACCOMMODATE VENDOR CABLE(S).

CONSULTANT :



Juneau, AK
9103 Wendenhall Mall Rd, Ste 4
Juneau, AK 99801
Phone: 907.780.5060
www.respec.com
AECC-63270



PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :
ELECTRICAL FLOOR PLAN -
CONTROLS

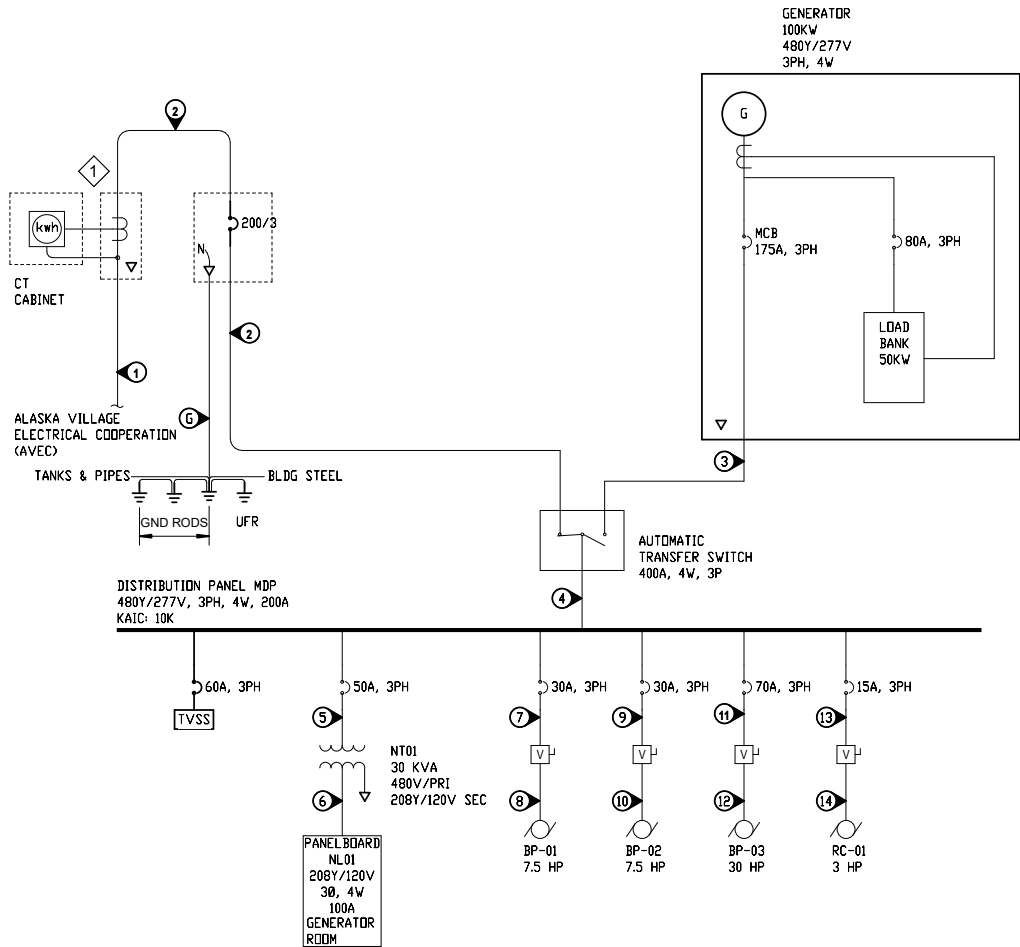
DESIGN	NK
DRAWN	CSB
CHECKED	BCH
DATE	04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

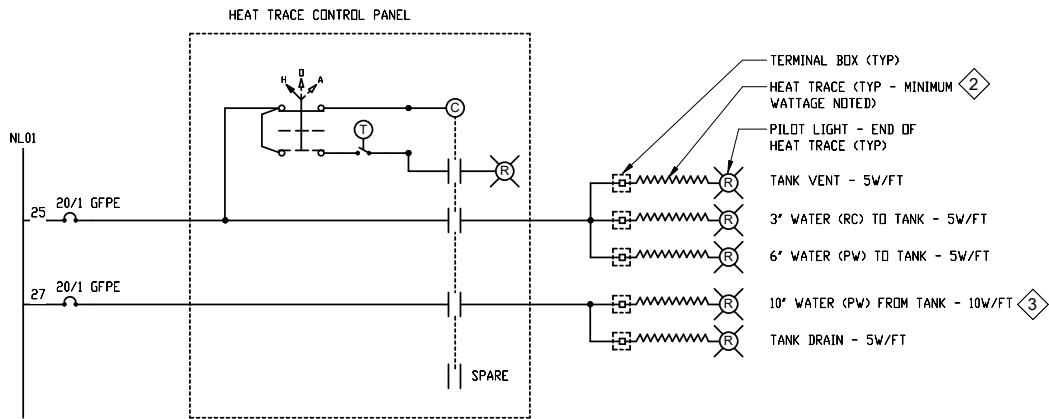
E-113

No.	Date	Item
REVISIONS		

1 ELECTRICAL CONTROLS PLAN
E-113 SCALE: 1/2" = 1'-0"



1 ONE-LINE DIAGRAM
E-501 SCALE: NO SCALE



2 SCHEMATIC DIAGRAM - HEAT TRACE SYSTEM
E-501 SCALE: NO SCALE

SHEET KEYNOTES #

- PROVIDE CT ENCLOSURE AND METER BASE/SOCKET. CURRENT TRANSFORMERS AND METER PROVIDED BY AVEC. COORDINATE INSTALLATION REQUIREMENTS WITH AVEC.
- ACCOMMODATE FLANGES AND EXPANSION JOINTS PER MANUFACTURER. PROVIDE SLACK IN THE CABLE AT THE EXPANSION JOINTS.
- WRAP THE HEAT TRACE ON THE 10" PIPE AS NEEDED TO OBTAIN A MINIMUM OF 14W/FT.

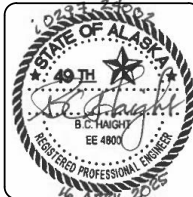
FEEDER SCHEDULE

NO.	CONDUCTORS	INSUL	RACEWAY	RUNS	REMARKS
1	3#3/0, 1#2N	XHHW	2" PVC OR RTRC	1	SERVICE
2	3#3/0, 1#2N, 1#4EGC	XHHW	2" RMC	1	
2	3#3/0, 1#2N, 1#4EGC	XHHW	2" RMC	1	
3	3#3/0, 1#2N, 1#4EGC	XHHW	2" RMC	1	
4	3#3/0, 1#2N, 1#4EGC	XHHW	2" EMT	1	
5	3#6 AWG 1#8 EGC	XHHW	1" EMT	1	
6	4#2 AWG 1#8 EGC	XHHW	1-1/4" EMT	1	
7	3#10 AWG 1#10 EGC	XHHW	1/2" EMT	1	
8	3#10 AWG 1#10 EGC	XHHW	1/2" EMT	1	
9	3#10 AWG 1#10 EGC	XHHW	1/2" EMT	1	
10	3#10 AWG 1#10 EGC	XHHW	1/2" EMT	1	
11	3#4 AWG 1#8 EGC	XHHW	1-1/4" EMT	1	
12	3#4 AWG 1#8 EGC	XHHW	1-1/4" EMT	1	
13	3#12 AWG 1#12 EGC	XHHW	1/2" EMT	1	
14	3#12 AWG 1#12 EGC	XHHW	1/2" EMT	1	
G	#2 BCU	-	-	1	GROUNDING ELECTRODE CONDUCTOR

LOAD ANALYSIS

ITEM	DESIGNATION	NORMAL		HIGH FLOW	
		CONTINUOUS (HP)	CONTINUOUS (KW)	CONTINUOUS (HP)	CONTINUOUS (KW)
	STORAGE TANK MIXER	1.000	0.83	1.000	0.83
BP-01	BOOSTER PUMP NO. 1	7.500	6.22	7.500	6.22
BP-02	BOOSTER PUMP NO. 2			7.500	6.22
BP-03	HIGH FLOW PUMP			30.000	24.87
RC-01	RECIRC. PUMP	3.000	2.49	3.000	2.49
BP-04	BOOSTER PUMP NO. 3 (FUTURE)			7.500	6.22
CP-01	CALCIUM HYPOCHLORITE PUMP	0.333	0.28	0.333	0.28
UH-01	UNIT HEATER - HORIZONTAL DISCHARGE	0.025	2.62	0.025	2.62
UH-02	UNIT HEATER - HORIZONTAL DISCHARGE	0.025	2.62	0.025	2.62
EF-01	EXHAUST FAN	0.167	0.14	0.167	0.14
VF-01	VENTILATION FAN	0.167	0.14	0.167	0.14
CH-01	CONVECTION HEATER				0.50
CH-02	CONVECTION HEATER				0.50
CH-03	CONVECTION HEATER				0.50
WH-01	WATER HEATER				1.65
DT-01	GENERATOR DAY TANK	0.333	0.28	0.333	0.28
	LIGHTING		1.40		1.40
	RECEPTACLES		1.08		1.08
	GENERATOR HEATER		1.50		1.50
	BATTERY CHARGER		0.60		0.60
	HEAT TRACE		3.00		3.00
	CONTROLS		1.00		1.00
TOTAL LOAD (KW)		12.4	33.2	57.5	69.4
GENERATOR (KW)					57.3
SERVICE (KVA)					64.8
CURRENT (AMPS)					78.1

CONSULTANT :



Juneau, AK
9103 Mendocino Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.0060
www.respec.com
AECC-63270



PROJECT :
**CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION**

YAKUTAT, ALASKA

SHEET TITLE :
ONE-LINE DIAGRAM

DESIGN *NK*
DRAWN *CSB*
CHECKED *BCH*
DATE 04-16-2025

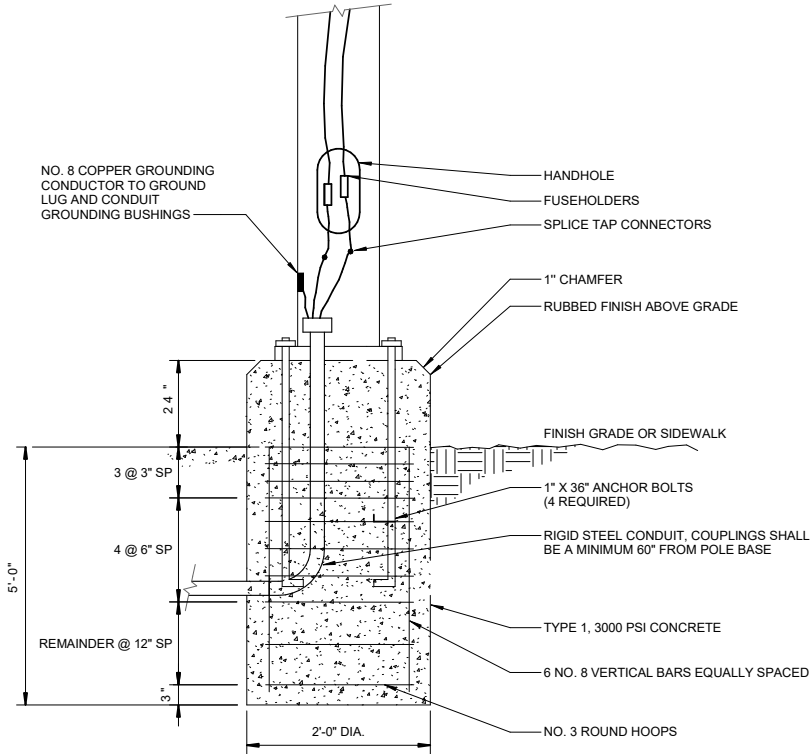
PROJECT No.
10297.24002
SHEET NUMBER

E-501

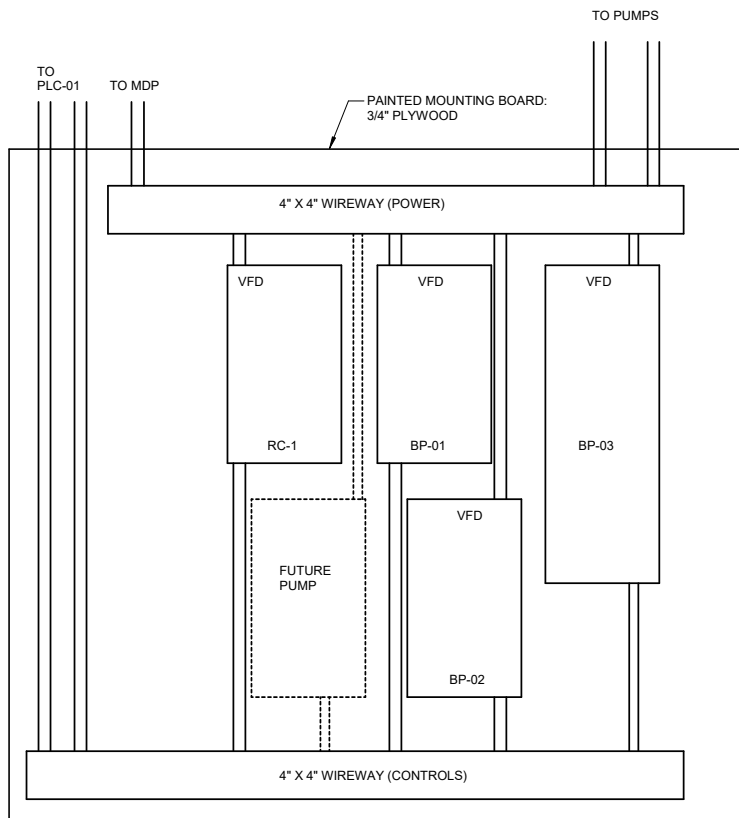
No.	Date	Item
REVISIONS		

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES

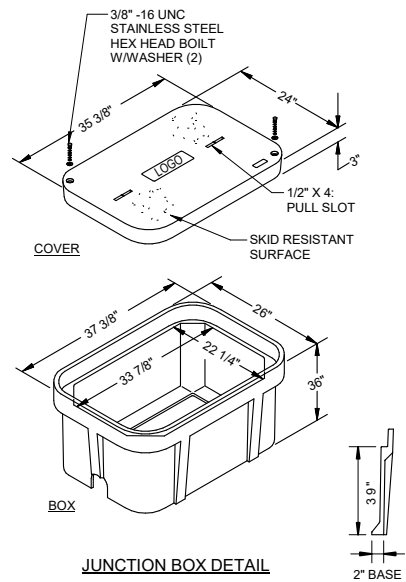
4/17/2025 10:58:12 AM Autodesk Docs://10297.24002-CBY Airport Water System Extension/INF-ELEC-10297.24002_RV23.v1



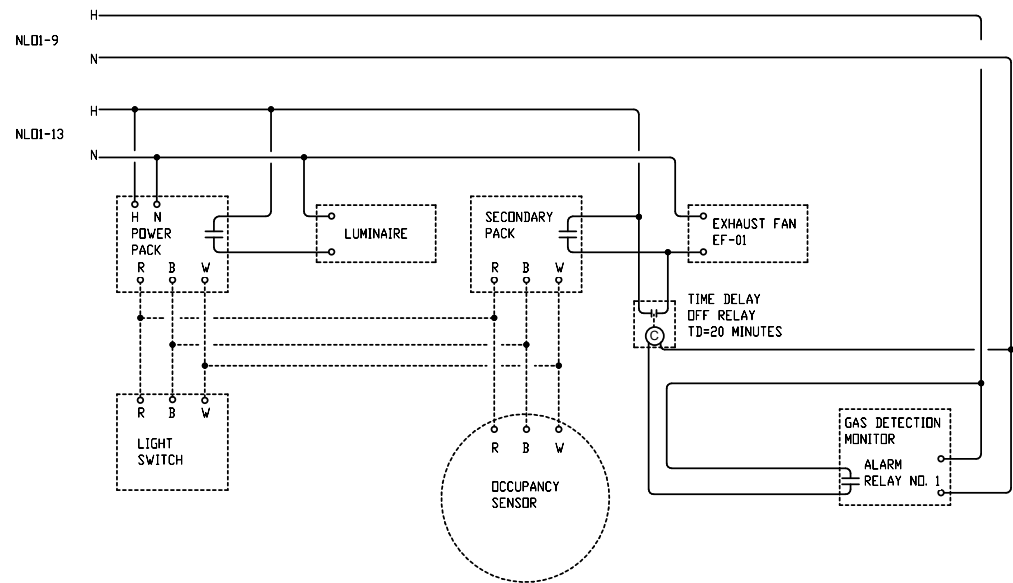
1 LIGHT POLE FOUNDATION DETAIL
E-502 SCALE: NTS



3 ELEVATION - MOTOR CONTROL BOARD
E-502 SCALE: NTS



2 HAND HOLE DETAIL
E-502 SCALE: NTS



4 SCHEMATIC DIAGRAM - CHLORINE ROOM LIGHTING/EXHAUST FAN CONTROLS
E-502 SCALE: NO SCALE

BASIC OF DESIGN	
POWER PACK	SENSOR SWITCH PP20 BAA
SECONDARY PACK	SENSOR SWITCH SP20 BAA
LIGHT SWITCH	SENSOR SWITCH sPODM - GY
OCCUPANCY SENSOR	SENSOR SWITCH CM BAA

- NOTE:
- PROGRAM OCCUPANCY AND TIME DELAY RELAY "OFF" DELAY TO 20 MINUTES.
 - MOUNT POWER PACK, SECONDARY PACK, AND TIME-DELAY RELAY IN A NEMA 12 ENCLOSURE ABOVE THE DOOR OUTSIDE THE CHLORINE ROOM.

CONSULTANT :



STATE OF ALASKA
40TH
B. C. HAIGHT
EE 48001
REGISTERED PROFESSIONAL ENGINEER

Juneau, AK
9103 Wendenhall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC 163270



PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION
YAKUTAT, ALASKA

SHEET TITLE :
DETAILS

DESIGN	SH
DRAWN	CSB
CHECKED	BCH
DATE	04-16-2025

PROJECT No.	10297.24002
SHEET NUMBER	E-502

No.	Date	Item
REVISIONS		

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION. AFFECTING ALL LABELED SCALES

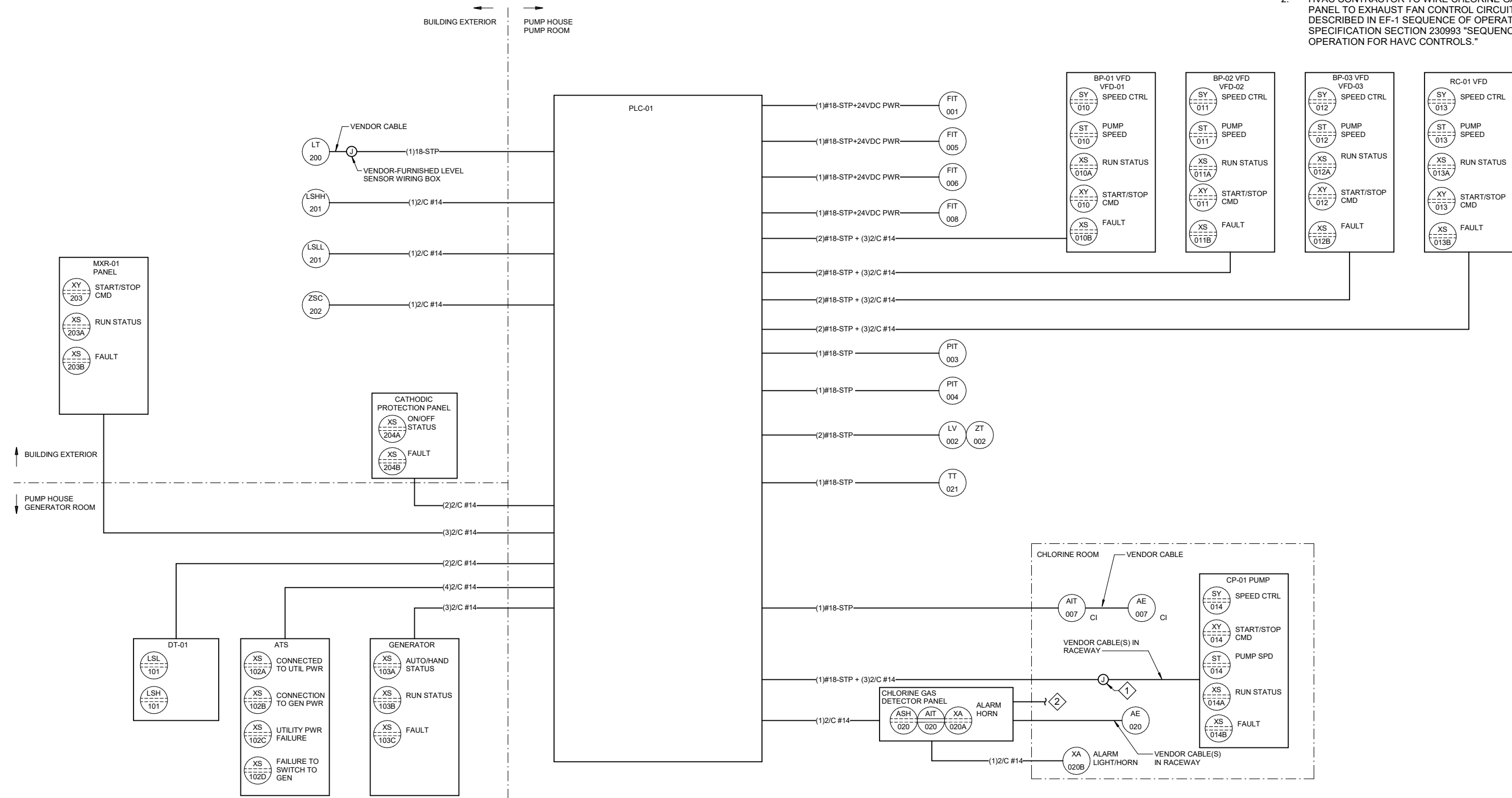
4/17/2025 10:58:12 AM Autodesk Docs://10297_24002-CBY Airport Water System Extension/INF-ELEC-10297_24002_RV23.v1

1

E-601

INSTRUMENT BLOCK DIAGRAM

SCALE: NO SCALE



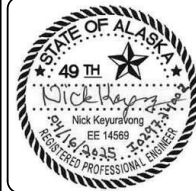
SHEET NOTES

- CIRCUITING ON THIS DRAWING IS LIMITED TO HARD-WIRED I/O CIRCUITS. CIRCUIT QUANTITIES ARE SHOWN FOR EACH INTER-CONNECTION. THIS DRAWING ONLY SHOWS INTER-CONNECTIONS BETWEEN ENCLOSURES, TERMINAL BOXES, AND FIELD DEVICES.
- ALL INSTRUMENTATION AND CONTROL CIRCUITS ARE 24 VDC UNLESS NOTED OTHERWISE.
- REFER TO SHEETS E-100 AND E-113 FOR DETAILS ON ROUTING CONTROL CIRCUIT RACEWAYS.

SHEET KEYNOTES

- FURNISH AND INSTALL JUNCTION BOX WITH FIELD TERMINALS TO CONNECT SIGNAL WIRES TO VENDOR CABLE(S).
- HVAC CONTRACTOR TO WIRE CHLORINE GAS DETECTOR PANEL TO EXHAUST FAN CONTROL CIRCUIT AS DESCRIBED IN EF-1 SEQUENCE OF OPERATION IN SPECIFICATION SECTION 230993 "SEQUENCE OF OPERATION FOR HAVC CONTROLS."

CONSULTANT :



Juneau, AK

9103 Mendonhall Mall Rd. Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AECC 63270

PROJECT :

CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

SHEET TITLE :

INSTRUMENT BLOCK DIAGRAM

DESIGN	NK
DRAWN	CSB
CHECKED	BCH
DATE	04-16-2025

PROJECT No.
10297.24002

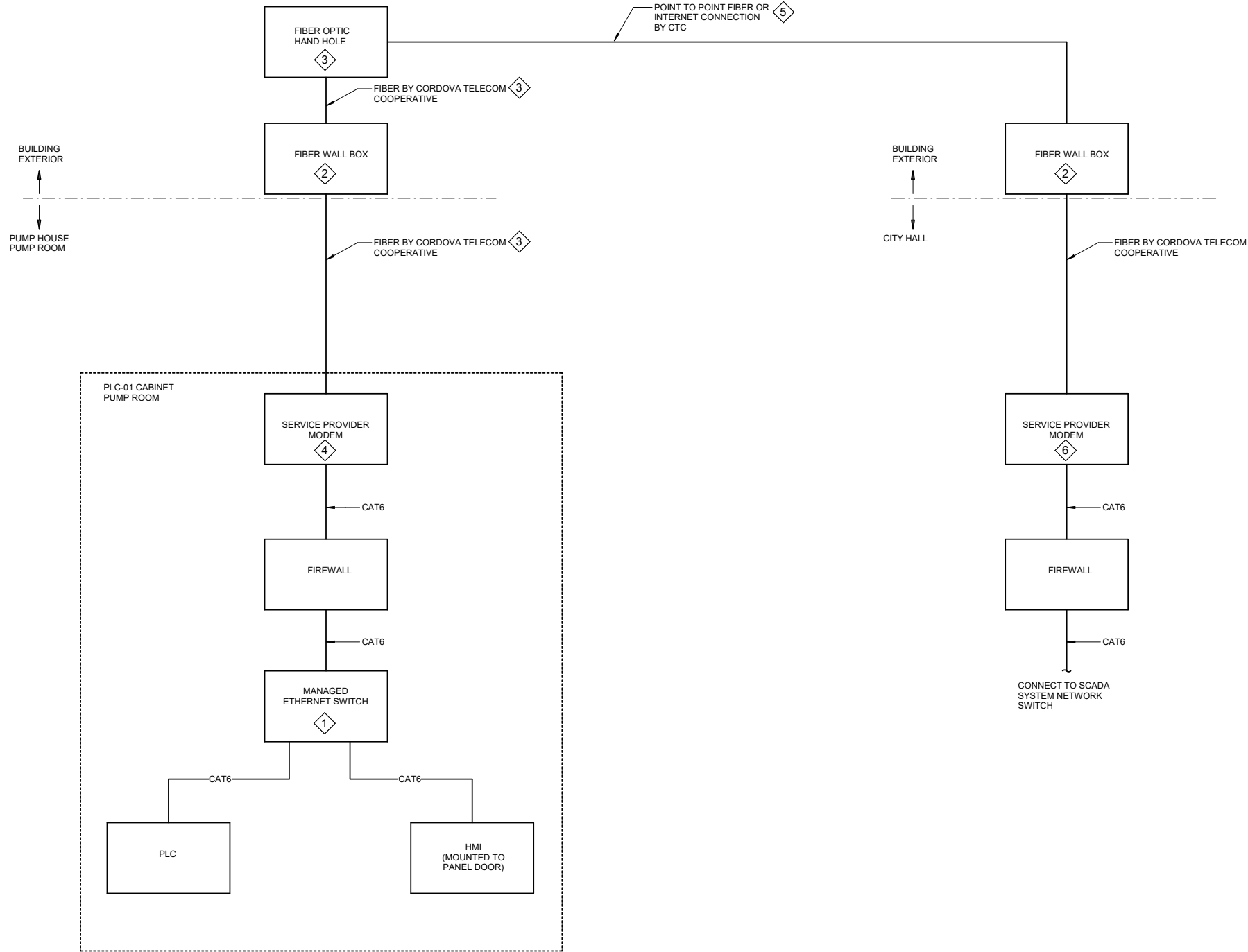
SHEET NUMBER

E-601

No.	Date	Item
REVISIONS		

1" IF THIS BAR DOES NOT MEASURE EXACTLY ONE INCH, THE SCALE OF THIS DRAWING HAS BEEN ALTERED DURING ITS PRODUCTION, AFFECTING ALL LABELED SCALES

4/17/2025 10:58:13 AM Autodesk Docs://10297.24002-CBY Airport Water System Extension/INF/ELEC/10297.24002_RV23.rvt



1 NETWORK & DATA COMMUNICATION CABLING DIAGRAM
E-602 SCALE: NO SCALE

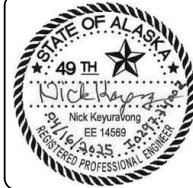
SHEET NOTES

- CONNECTIONS SHOWN ON THIS DRAWING ARE LIMITED TO NETWORK AND DATA COMMUNICATIONS CABLING ONLY. REFER TO INSTRUMENT BLOCK DIAGRAMS FOR HARD-WIRED I/O CONNECTIONS.
- CONTRACTOR SHALL CONNECT PLC-01 TO THE CITY'S SCADA NETWORK INTERFACE POINT AT CITY HALL. NETWORK CONNECTION SHALL BE OVER THE TELECOM PROVIDER'S FIBER CONNECTION. CONTRACTOR SHALL COORDINATE WITH THE SCADA SYSTEM NETWORK ADMINISTRATOR AND THE CITY HALL IT DEPARTMENT FOR CONNECTION DETAILS AT THE SCADA SYSTEM NETWORK SWITCH. CONTRACTOR SHALL PROVIDE EQUIPMENT, PROGRAMMING, CONFIGURATION, AND ALL SERVICES NECESSARY TO ENSURE SECURE AND FUNCTIONAL INTEGRATION OF PLC-01 WITH THE CITY'S SCADA NETWORK.

SHEET KEYNOTES

- SUPPLY NETWORK SWITCH WITH ONE ADDITIONAL PORT FOR PORTABLE WORKSTATION CONNECTION AND A MINIMUM OF TWO ADDITIONAL SPARE PORTS FOR FUTURE CONNECTIONS.
- FURNISH AND INSTALL FIBER WALL BOX PER LOCAL TELECOM UTILITY CORDOVA TELECOM COOPERATIVE (CTC) STANDARDS.
- FIBER OPTIC CABLE AND FIBER CONNECTIONS BY LOCAL TELECOM PROVIDER CORDOVA TELECOM COOPERATIVE (CTC). CONTRACTOR TO INSTALL RACEWAYS PER CTC STANDARDS. SERVICE DROP FROM FIBER WALL BOX TO MODEM SHALL BE ROUTED IN 3/4 INCH RMC.
- MODEM PROVIDED BY CTC. MOUNT MODEM INSIDE PLC-01 CABINET.
- FIBER CONNECTION BETWEEN PUMP HOUSE AND CITY HALL SHALL BE POINT TO POINT FIBER CONNECTION OR VIA THE INTERNET. COORDINATE WITH SCADA SYSTEM NETWORK ADMINISTRATOR AND CITY HALL IT DEPARTMENT FOR DETAILS ON THIS LINK.
- MODEM PROVIDED BY CTC.

CONSULTANT :



Juneau, AK
9103 Mendena Hall Rd Ste 4
Juneau, AK 99801
Phone: 907.780.6060
www.respec.com
AEC0163270



PROJECT :

**CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION**

YAKUTAT, ALASKA

SHEET TITLE :

**NETWORK & DATA
COMMUNICATION CABLING
DIAGRAM**

DESIGN NK
DRAWN CSB
CHECKED BCH
DATE 04-16-2025

PROJECT No.
10297.24002
SHEET NUMBER

E-602

No.	Date	Item
REVISIONS		

DISTRIBUTION PANELBOARD MDP														
VOLTAGE: 480Y/277V, 3PH, 4W					SPECIFICATION TYPE:					ENCLOSURE: NEMA 1				
BUS AMPS: 400 A					MIN AIC RATING: 35,000					MOUNTING: SURFACE				
MAIN: MLO; SEE SCHEDULE										LOCATION: GENERATOR 101				
CKT	AMPS	FRAME	P	TRIP	FEATURES				LOAD DESCRIPTION	NOTES	CONNECTED VA			LOAD
											PH A	PH B	PH C	
1	30 A		3	MTM					PUMP BP-01, 7.5 HP		2433	2433	2433	3
2	30 A		3	MTM					PUMP BP-02, 7.5 HP		2433	2433	2433	3
3	125 A		3	MTM					PUMP BP-03, 30 HP		9750	9750	9750	4
4	15 A		3	MTM					PUMP RC-01, 3 HP		977	977	977	3
5	50 A		3	MTM					NT01, TRANSFORMER, 30 KVA, TO NL01		7710	7710	7710	9
6	30 A		3						TVSS		0	0	0	5
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														
LOAD SUMMARY AND CODE DEFINITIONS					CONNECTED LOAD		NEC		ESTIMATED DEMAND		PANEL TOTALS		NOTES:	
1	LIGHTING =				0 VA		125%		0 VA		TOTAL CONN LOAD: 70 kVA			
2	RECEPTACLES =				0 VA		10K+50%		0 VA		TOTAL EST DEMAND: 77 kVA			
3	MOTORS =				17529 VA		100%		17529 VA		TOTAL CONN: 84 A			
4	LARGEST MOTOR =				29250 VA		125%		36563 VA		TOTAL EST DEMAND: 93 A			
5	MISC. NON-CONTINUOUS =				0 VA		100%		0 VA					
6	MISC. CONTINUOUS =				0 VA		125%		0 VA					
7	NON-COINCIDENTAL =				0 VA		0%		0 VA					
8	SPARE =				0 VA		100%		0 VA					
9	OTHER =				23130 VA		100%		23130 VA					

PANELBOARD NL01																	
VOLTAGE: 208Y/120V, 3PH, 4W						SPECIFICATION TYPE: BPB						ENCLOSURE: NEMA 1					
BUS AMPS: 100 A						MIN AIC RATING: 10,000						MOUNTING: SURFACE					
MAIN: MCB; 100 A						CIRCUITS: 42						LOCATION: GENERATOR 101					
L O A D	CIRCUIT DESCRIPTION	NOTES	AMPS	P	CKT	CONNECTED VA			CONNECTED VA			CKT	P	AMPS	NOTES	CIRCUIT DESCRIPTION	L O A D
						PH A	PH B	PH C	PH A	PH B	PH C						
1	LTG, EXTERIOR & SITE		20 A	1	1	650			720	360		2	1	20 A		RCPT, PUMP RM AND CHLORINE RM	2
1	LTG, GENERATOR RM		20 A	1	3		232					4	1	20 A		RCPT, GENERATOR RM	2
1	LTG, PUMP ROOM		20 A	1	5			230			540	6	1	20 A		RCPT, EXTERIOR	2
5	PLC-01 CONTROL PANEL		20 A	1	7	1000			1300			8	2	20 A		UH-01	3
5	CHLORINE ANALYZER & DETECTION PANEL		20 A	1	9		1000			1300		10	--	--		--	--
4, 5	VF-01		20 A	1	11			300			1300	12	2	20 A		UH-02	3
3	EF-01, CHLORINE RM		20 A	1	13	80			1300			14	--	--		--	--
6	LEVEL SENSOR LV-002		20 A	2	15		0			1650		16	1	20 A		WH-01	5
--	--		--	--	17			0			300	18	1	15 A		CP-01	3
--	SPACE W/ HARDWARE		--	1	19	--			1500			20	1	20 A		CONVECTION HEATERS, CH-01, 02, 03	3
6, 3	TANK CATHODIC PROTECTION		20 A	1	21		1340			--		22	1	--		SPACE W/ HARDWARE	--
6, 3	TANK MIXER		20 A	1	23			1340			--	24	1	--		SPACE W/ HARDWARE	--
5	TANK ROOF VENT HEAT TRACE	2	20 A	1	25	50			--			26	1	--		SPACE W/ HARDWARE	--
5	TANK DRAIN HEAT TRACE	2	20 A	1	27		50			360		28	1	20 A	1	RCPT, TANK	2
--	SPACE W/ HARDWARE		--	1	29			--			--	30	1	--		SPACE W/ HARDWARE	--
3	DT-01		20 A	1	31	110			1500			32	1	20 A		GENERATOR JACKET WATER HEATER	5
--	SPACE W/ HARDWARE		--	1	33		--			300		34	1	20 A		BATTERY CHARGER	5
--	SPACE W/ HARDWARE		--	1	35		--	--			300	36	1	20 A		GENERATOR RM, OA, RA, EA DAMPER	5, 3
--	SPACE W/ HARDWARE		--	1	37	--		--	--			38	1	--		SPACE W/ HARDWARE	--
--	SPACE W/ HARDWARE		--	1	39		--	--	--	--		40	1	--		SPACE W/ HARDWARE	--
--	SPACE W/ HARDWARE		--	1	41			--	--	--		42	1	--		SPACE W/ HARDWARE	--
TOTAL LOAD:						8210 VA		PH B CONN		6592 VA		PH C CONN		4310 VA			
TOTAL AMPS:						71 A				58 A				36 A			
PHASE BALANCE:						A-B		A-C				B-C					
PERCENT:						25 %		90 %				53 %					
LOAD SUMMARY AND CODE DEFINITIONS			CONNECTED LOAD	NEC	ESTIMATED DEMAND	PANEL TOTALS			NOTES:								
1	LIGHTING =		1112 VA	125%	1390 VA	TOTAL CONN LOAD: 19 kVA			1. GFCI BREAKER (5mA).								
2	RECEPTACLES =		1980 VA	10K+50%	1980 VA	TOTAL EST DEMAND: 20 kVA			2. GFPE BREAKER (30mA).								
3	MOTORS =		9690 VA	100%	9690 VA	TOTAL CONN: 53 A											
4	LARGEST MOTOR =		300 VA	125%	375 VA	TOTAL EST DEMAND: 54 A											
5	MISC. NON-CONTINUOUS =		5550 VA	100%	5550 VA												
6	MISC. CONTINUOUS =		480 VA	125%	600 VA												
7	NON-COINCIDENTAL =		0 VA	0%	0 VA												
8	SPARE =		0 VA	100%	0 VA												
9	OTHER =		0 VA	100%	0 VA												

CONSULTANT :

Juneau, AK
9103 Mendocino Mall Rd Ste 4
Juneau, AK 99801
Phone: 907.780.0060
www.respec.com
AECC 63270

SHEET TITLE :
PANEL SCHEDULES

PROJECT :
CITY & BOROUGH OF YAKUTAT
WATER SYSTEM EXTENSION

YAKUTAT, ALASKA

DESIGN SH
DRAWN CSB
CHECKED BCH
DATE 04-16-2025

PROJECT No:
10297.24002
SHEET NUMBER

E-701

No.	Date	Item
REVISIONS		