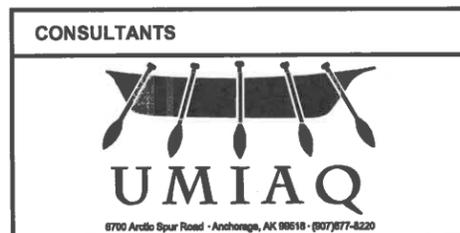


TAKOTNA TRIBAL COUNCIL

TAKOTNA WASHETERIA AND FILTER BACKWASH DRAINFIELD REPLACEMENT

TAKOTNA, ALASKA

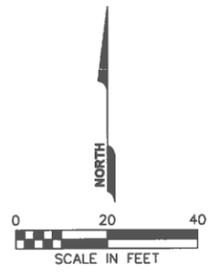
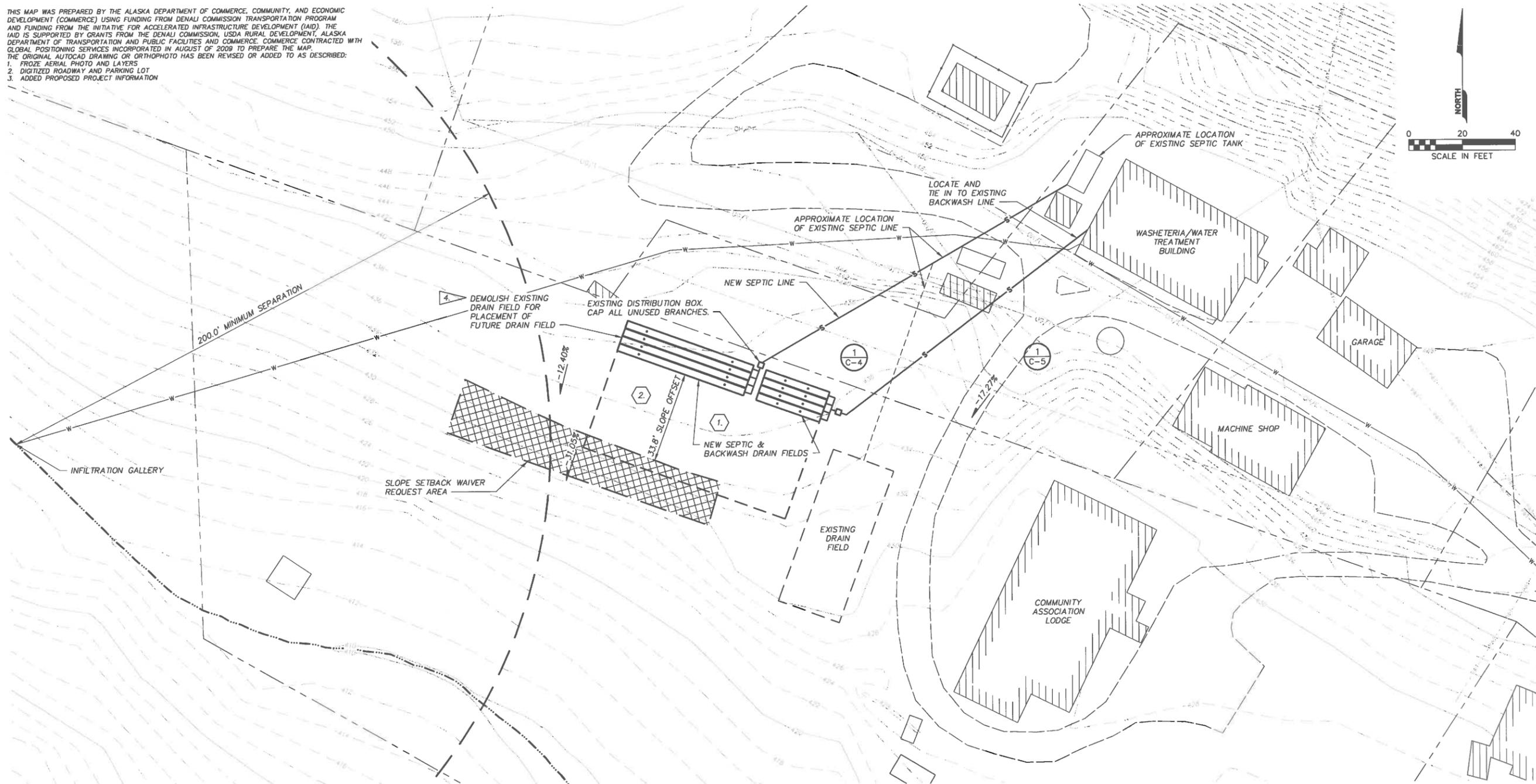
PERMIT DRAWINGS
JULY 15, 2014
NOT FOR CONSTRUCTION



INDEX TO DRAWINGS	
COVER SHEET	
CIVL	
C-1	SEPTIC SITE PLAN
C-2	DRAIN FIELD LAYOUT AND DETAILS
C-3	DOSING TANK PLAN AND DETAILS

THIS MAP WAS PREPARED BY THE ALASKA DEPARTMENT OF COMMERCE, COMMUNITY, AND ECONOMIC DEVELOPMENT (COMMERCE) USING FUNDING FROM DENALI COMMISSION TRANSPORTATION PROGRAM AND FUNDING FROM THE INITIATIVE FOR ACCELERATED INFRASTRUCTURE DEVELOPMENT (IAD). THE IAD IS SUPPORTED BY GRANTS FROM THE DENALI COMMISSION, USDA RURAL DEVELOPMENT, ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES AND COMMERCE. COMMERCE CONTRACTED WITH GLOBAL POSITIONING SERVICES INCORPORATED IN AUGUST OF 2009 TO PREPARE THE MAP. THE ORIGINAL AUTOCAD DRAWING OR ORTHOPHOTO HAS BEEN REVISED OR ADDED TO AS DESCRIBED:

1. FROZE AERIAL PHOTO AND LAYERS
2. DIGITIZED ROADWAY AND PARKING LOT
3. ADDED PROPOSED PROJECT INFORMATION



NOTES

1. FIELD PERCOLATION TEST #1. PERCOLATION RATE = 0.5 MIN/IN AT DEPTH OF APPROXIMATELY 9'.
2. FIELD PERCOLATION TEST #2. PERCOLATION RATE = 41 MIN/IN AT DEPTH OF APPROXIMATELY 8'.
3. LOCATE EXTENTS OF EXISTING FAILED DRAIN FIELD FOR PLACEMENT OF NEW DRAIN FIELD. VERIFY SEPARATION DISTANCES WITH THE FOLLOWING PARAMETERS:

NEW DRAIN FIELD SEPARATION DISTANCES	
CLASS A PUBLIC WATER SYSTEM	200'
RIVER, LAKE OR STREAM	100'
FOUNDATION	10'
OTHER ABSORPTION FIELDS	6'
SEASONAL HIGH WATER TABLE	4'
BEDROCK, CLAY	6'
SLOPES GRATER THAN 25%*	50'

* IF SLOPE EXCEEDS 10' IN ELEVATION CHANGE
4. DRAIN CONTAMINATED SOIL SURROUNDING THE EXISTING INFILTRATOR CHAMBERS AND HAUL TO THE LANDFILL OR OTHER APPROVED DISPOSAL SITE. DISINFECT SOIL WITH LIME PRIOR TO BURIAL.
5. AN ON-SITE ENGINEER IS REQUIRED FOR INSPECTIONS AND VERIFICATION OF PERCOLATION RATES AT THE FINAL DEPTH OF THE SOIL ABSORPTION SYSTEM.
6. UTILITIES SHOWN ARE IN APPROXIMATE LOCATIONS. LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION ACTIVITIES.
7. PROPERTY LINES SHOWN ARE IN APPROXIMATE LOCATIONS. VERIFY LOCATIONS OF PROPERTY LINES AND OFFSETS TO PROPOSED DRAIN FIELD.

ABSORPTION SYSTEM DESIGN CRITERIA

1. AVERAGE WASTEWATER FLOW = 500 GPD
2. WATER SYSTEM BACKWASH: TWO 1000 GALLON SURGE TANKS WILL BE PROVIDED TO COLLECT THE BACKWASH FROM THE SAND FILTERS AND EMPTY IN 7 DAYS.
 BACKWASH QUANTITY = 2,000 GAL ONCE A MONTH
 FLOW RATE FROM SURGE TANK = 285 GPD
3. TOTAL WASTEWATER FLOW = 930 GPD
4. MAXIMUM WASTEWATER APPLICATION RATE = 1.2 GAL/SQ FT/DAY
5. SOIL ABSORPTION SIZING WITH 1.2 FACTOR OF SAFETY:
 SEPTIC DRAIN FIELD AREA = $\frac{500 \text{ GPD}}{1.2 \text{ GAL/SQ FT/DAY}} = 417 \text{ SQ FT} \cdot 1.2 = 500 \text{ SQ FT REQUIRED}$
 BACKWASH DRAIN FIELD AREA = $\frac{285 \text{ GPD}}{1.2 \text{ GAL/SQ FT/DAY}} = 237.5 \text{ SQ FT} \cdot 1.2 = 285 \text{ SQ FT REQUIRED}$

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TAKOTNA WASHETERIA AND FILTER BACKWASH DRAINFIELD REPLACEMENT
TAKOTNA, ALASKA



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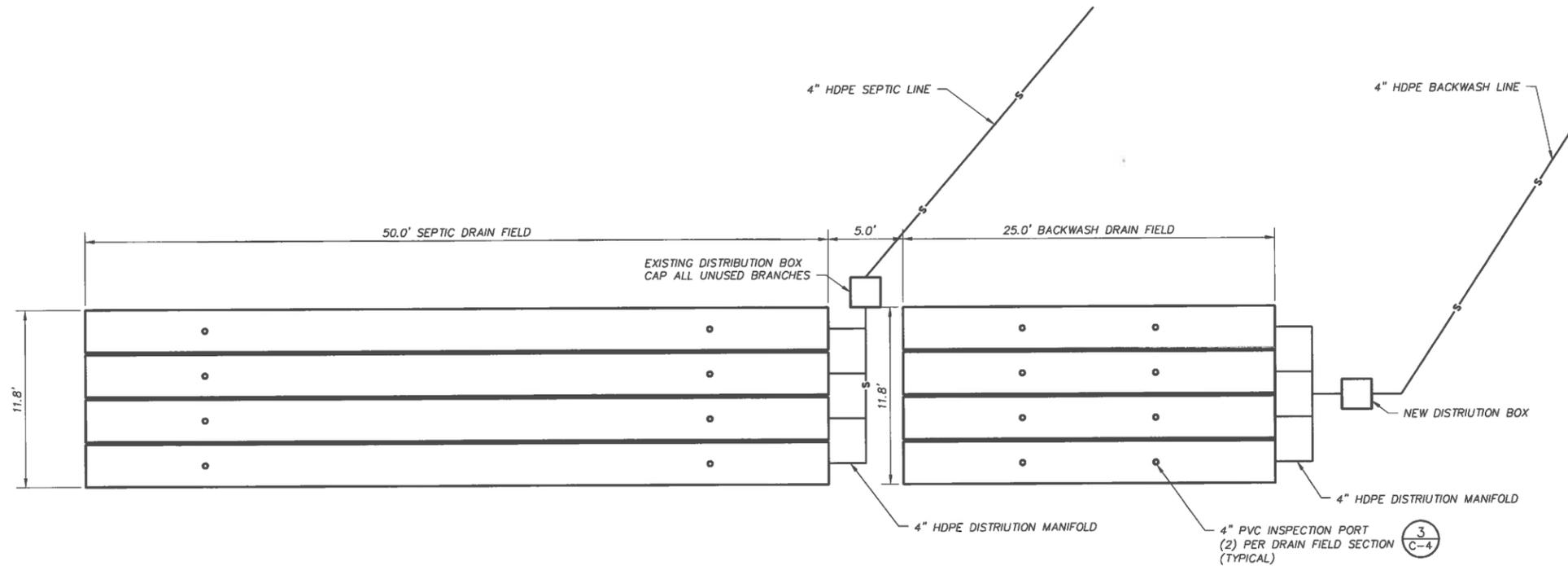


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 CHECKED BY: MEW
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 JOB NUMBER: 70108
 SCALE: AS SHOWN

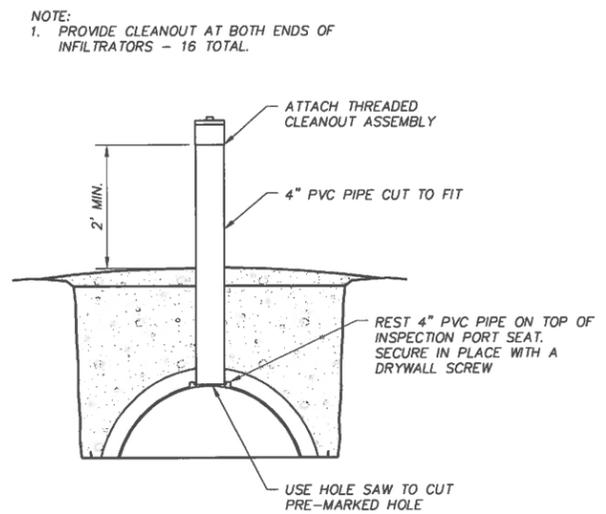
DRAWING TITLE:
SEPTIC SITE PLAN

SHEET: 2 OF 4
C-1

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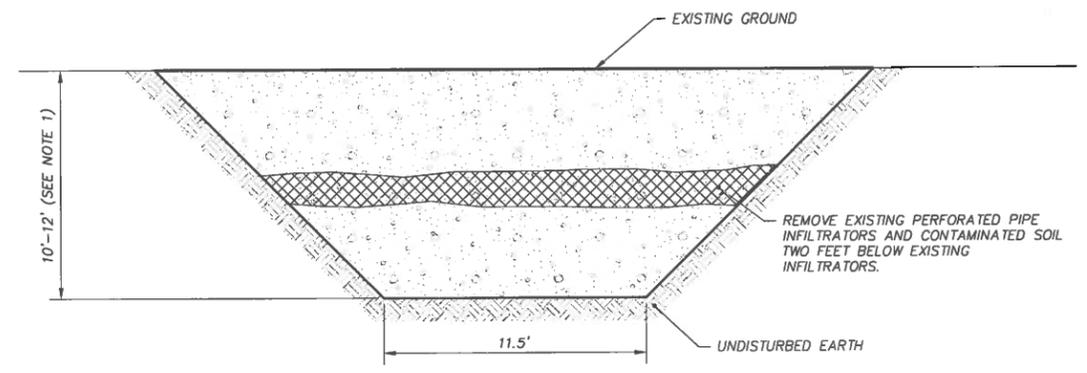


1 DRAIN FIELD LAYOUT
 SCALE: N.T.S.

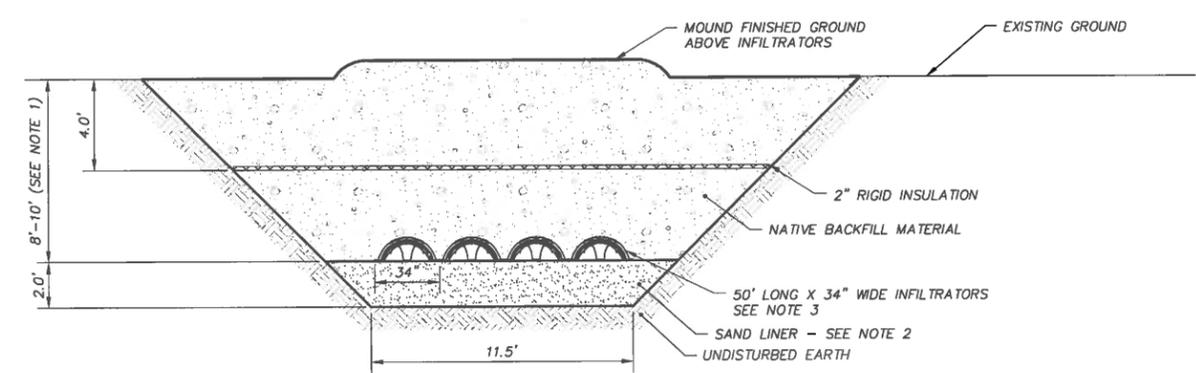


2 INSPECTION PORT DETAIL
 SCALE: N.T.S.

- NOTES:**
1. FINAL DEPTH BASED ON DEPTH OF CONTAMINATED SOIL
 2. VERIFY PERCOLATION RATES AT FINAL DEPTH. SAND LINER REQUIRED WHEN PERCOLATION RATES ARE LESS THAN 1 MINUTE PER INCH.
 3. PROVIDE QUICK4 PLUS INFILTRATORS MANUFACTURED BY INFILTRATOR SYSTEMS INC. OR APPROVED EQUAL. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
 4. INSTALL TWO INSPECTION PORTS PER INFILTRATOR. SEE DETAIL 2/C-4
 5. NO GROUNDWATER OR BEDROCK WAS ENCOUNTERED DURING EXCAVATION OF TEST PITS. NOTIFY ENGINEER IF GROUNDWATER OR BEDROCK IS ENCOUNTERED DURING CONSTRUCTION.
 6. MOUND FINISHED GRADE 4"-6" TO ALLOW FOR SETTLEMENT AND TO PROVIDE SURFACE DRAINAGE AWAY FROM ABSORPTION BED.



3 EXISTING DRAIN FIELD SECTION
 SCALE: N.T.S.



4 PROPOSED DRAIN FIELD SECTION
 SCALE: N.T.S.

TAKOTNA TRIBAL COUNCIL
TAKOTNA WASTEWATER AND FILTER
BACKWASH DRAINFIELD REPLACEMENT
TAKOTNA, ALASKA



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 REVISIONS:

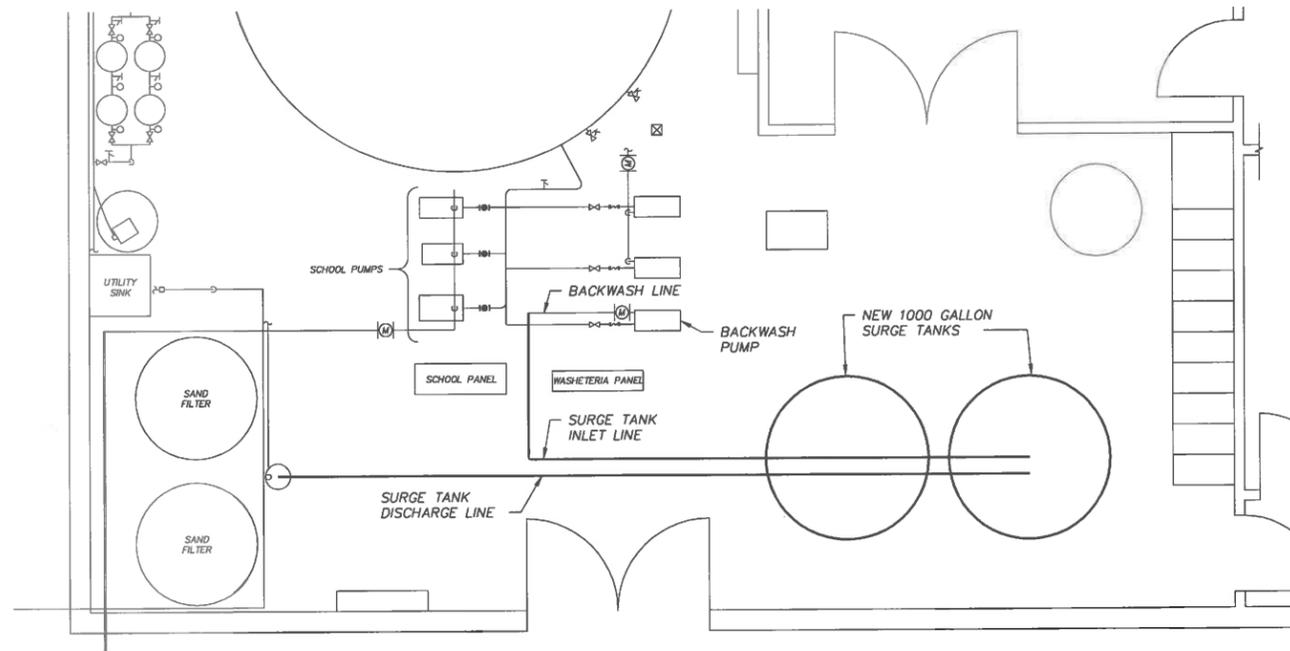


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DRAWING TITLE:
DRAIN FIELD LAYOUT AND DETAILS

SHEET: 3 OF 4
C-2

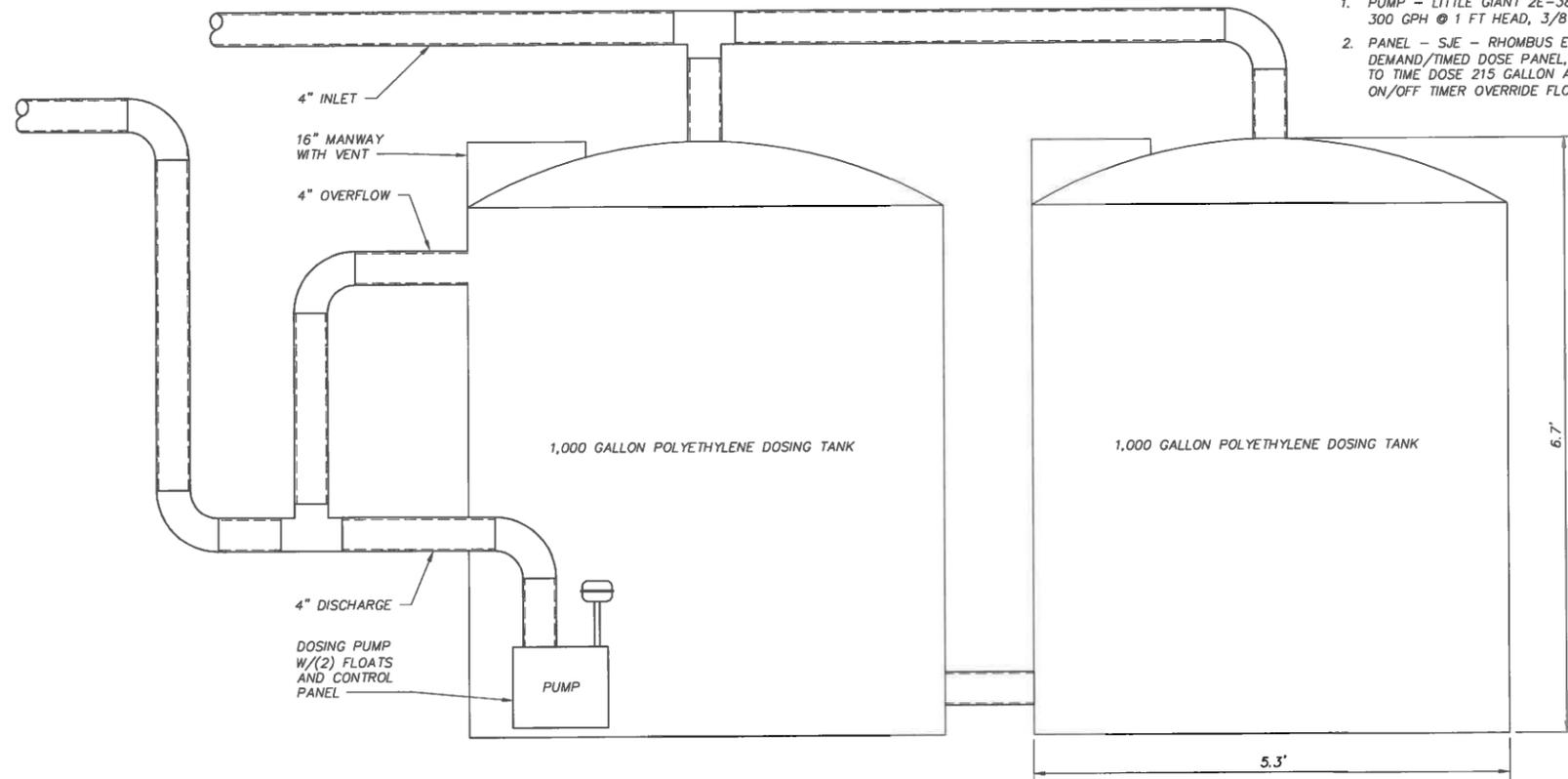
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 PRINTED: 07/15/2014 20:50 David.Hardy LAYOUT: C-3 Dosing Tank Details



1 DOSING TANK PLAN VIEW
 C-3 SCALE: NTS

GENERAL NOTES

- OWNER: VILLAGE OF TAKOTNA TRADITIONAL COUNCIL
 P.O. BOX 7529
 TAKOTNA, AK 99675
 CONTACT: 907-298-2212
- ELECTRIC UTILITY: TAKOTNA COMMUNITY ASSOCIATION INCORPORATED
 CONTACT: 888-856-6186
- ALL ADDITIVES AND MATERIALS USED FOR THE POTABLE WATER SYSTEM SHALL BE APPROVED FOR USE BY THE NATIONAL SANITATION FOUNDATION (NSF) STANDARDS, NSF 61, NSF 53, AS APPLICABLE..
- ALL MATERIALS FOR THE POTABLE WATER SYSTEM SHALL BE LEAD-FREE. ONLY LEAD FREE PIPE, FLUX, AND SOLDER SHALL BE USED.
- DESIGN DRAWINGS ARE SCHEMATIC IN NATURE, THEY ARE NOT INTENDED TO BE DETAILED DRAWINGS.
- PROVIDE BACKFLOW AND CROSS CONNECTION CONTROL PER 18AAC80.
- ALL PIPING MATERIALS TO BE SCHEDULE 40 PVC.
- DISINFECT SYSTEMS AND DISPOSE OF NEUTRALIZED WATER PER THE REQUIREMENTS OF ANSI/AWWA C651, C652, C653. PRESSURE TESTING MAY BE CONDUCTED AT THE SAME TIME AS DISINFECTION PER ASNI/AWWA C605.



NOTES:

- PUMP - LITTLE GIANT 2E-38NT WITH 502286 CABLE, 115V, 1/40 HP, 300 GPH @ 1 FT HEAD, 3/8" FNTP INLET, 1/4" MNTP DISCHARGE.
- PANEL - SJE - RHOMBUS EZ SERIES SINGLE PHASE SIMPLEX DEMAND/TIMED DOSE PANEL, NEMA 4X ENCLOSURE. PROGRAM PANEL TO TIME DOSE 215 GALLON AT 12 HOUR INCREMENTS. ORDER WITH ON/OFF TIMER OVERRIDE FLOATS.

2 DOSING TANK DETAILS
 C-3 SCALE: 1" = 1'

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TAKOTNA WASTEWATER AND FILTER
BACKWASH DRAINFIELD REPLACEMENT
TAKOTNA, ALASKA



PERMIT DRAWINGS
 REVISIONS:



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 CHECKED BY: MEW
 DATE: 07/15/2014
 JOB NUMBER: 70108
 SCALE: AS SHOWN

DRAWING TITLE:
 DOSING TANK SITE PLAN AND DETAILS

SHEET: 4 OF 4

C-3