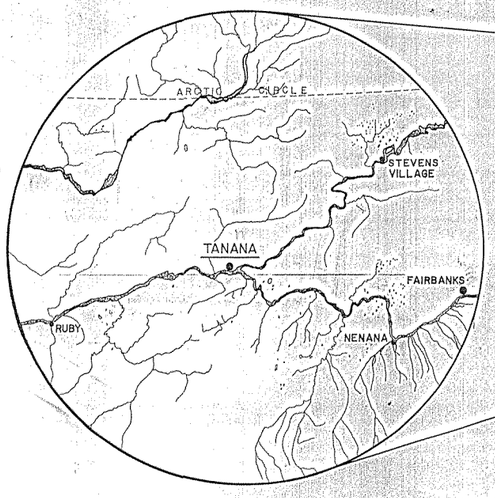
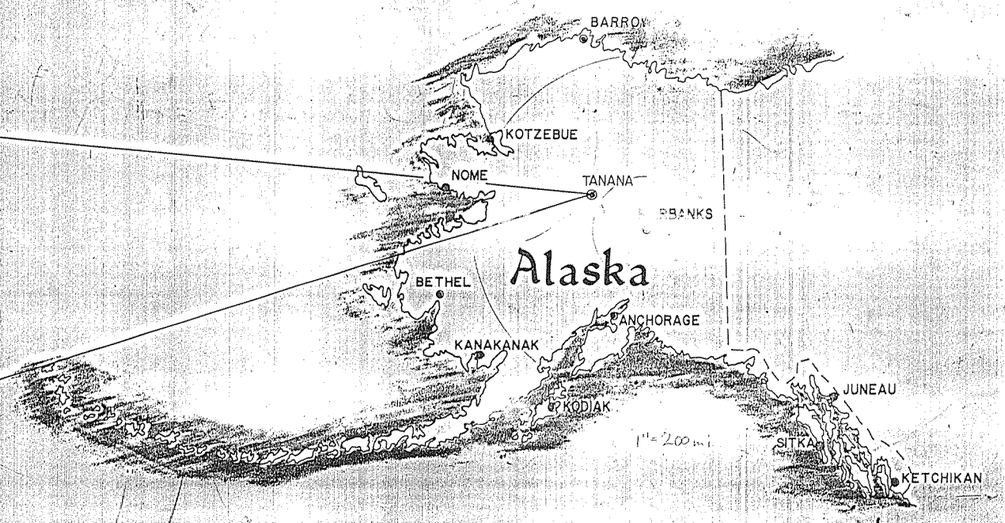
1996

CONSTRUCTION PLANS

SANITATION FACILITIES

TANANA, ALASKA





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ALASKA AREA NATIVE HEALTH SERVICE
OFFICE OF ENVIRONMENTAL HEALTH
P.O. BOX 7-741
ANCHORAGE, ALASKA 99510

PUBLIC LAW 86-121 PROJECT

PROJECT NO. AN- 86-338

U. S. DEPT. OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE

INDIAN HEALTH SERVICE

☆ U. S. GOVERNMENT PRINTING OFFICE: 1972—787-787

LEGEND AND GENERAL NOTES

SITE PLAN

EXISTING		PROPOSED THIS PROJECT
	STRUCTURES	
	ROADS (PAVED)	
	ROADS (UNPAVED)	
—P—	POWER LINE	—P—
	R.O.W. & PROPERTY LINE	
—C—	COMMUNICATIONS LINE	—C—
CC —S—	CLEANOUT	CO —S—
—S—	SEWER LINE	—S—
—W—	WATER LINE	—W—
—FM—	FORCE MAIN	—FM—
FH	FIRE HYDRANT, IN-LINE	FH
FH	FIRE HYDRANT, OFFSET	FH
MH	MANHOLE	MH
	VALVE	
—POL—	POL LINE (FUEL OIL)	—POL—
	LIFT STATION W/BUILDING	
	WELL	
—x—x—	FENCE	—x—x—
—U—	UTILIDOR	—U—
—R—	RACEWAY	—R—
	RAILROAD	
	BENCHMARK	
	TEST HOLE	
EL.	ELEVATION	
ST	SEPTIC TANK	ST
LF	LEACHFIELD	LF
—W—	CORPORATION STOP	—W—
BC	BRASS CAP	
—W—	WATERING POINT	—W—
PP	POWER POLE	PP
CS —W—	CURB STOP	CS —W—
DT REPS	RESIDENTIAL EFFLUENT PUMPING STATION (DOSING TANK)	DT REPS
	PEDESTAL	
	TRANSFORMER	
WTP or WTB	WATER TREATMENT PLANT or WATER TREATMENT BUILDING	
WST	WATER STORAGE TANK	
WWTF	WASTE WATER TREATMENT FACILITY	

MECHANICAL

	PRIMARY SYSTEM
HW	HOT WATER LINES
HWR	HOT WATER RETURN LINES
D	DRAIN & OVERFLOW LINE
CWM	COLD WATER MAKE-UP LINE
BP	BY-PASS LINE
BW	BACK WASH LINE
CW	COLD WATER LINES
LWC	LOW WATER CUT-OFF
CP	CHEMICAL PUMP
C	CIRCULATING PUMP
M	WATER METER
	GATE VALVE
	CHECK VALVE
	UNION
DE	DIELECTRIC UNION
	AUTOMATIC AIR RELIEF
	PRESSURE RELIEF VALVE
	ADAPTOR
	FLEX PIPE
	FLEX COUPLING
A	AQUASTAT
FS	FLOW SWITCH
PS	PRESSURE SWITCH
	THERMOMETER
	PRESSURE REDUCING VALVE
	PRESSURE GAUGE
	FLOW INDICATOR
	THERMOFLO INDICATOR
T	CIRCUIT SETTER
	DIRECTION OF FLOW
V	VACUUM BREAKER
TI	TANK LEVEL INDICATOR

PIPE FITTING & VALVE SYMBOLS

	ANGLE VALVE
	CAP
	CROSS
	ELBOW (ELL), 45°
	ELBOW, 90°
	LATERAL
	TEE
	STRAINER
DE	DIELECTRIC FLANGE PKG.
	FLANGE JOINT
	SCREWED JOINT
	WELDED JOINT
	SOLDERED JOINT
	SLEEVE
	DRESSER COUPLING
	EXPANSION JOINT
	REDUCER, CONCENTRIC
	REDUCER, ECCENTRIC
HB	HOSE BIBB W/ BACKFLOW PREVENTER. MINITROL
	90° LONG RADIUS ELBOW
	VICTAULIC COUPLING
V	VACUUM BREAKER
	FLOOR DRAIN
	BALL VALVE
	CHECK BALL VALVE
S	SOLENOID VALVE
M	MOTORIZED VALVE
M	MOTORIZED 3-WAY VALVE
	GLOBE VALVE
	BALANCING VALVE
2-WAY	AUTO. TEMP. CONTROL VALVE
3-WAY	AUTO. TEMP. CONTROL VALVE
	QUICK OPENING VALVE
	FUSIBLE VALVE
	BUTTERFLY VALVE
FC 3gpm	FLOW CONTROL VALVE
3gpm	PLUG VALVE

ELL - ELBOW MJ - MECHANICAL JOINT

ELECTRICAL

	CONDUIT, SURFACE MOUNTED
	CONDUIT, BURIED OR IN-SLAB
	HOMERUN TO CIRCUIT BREAKER PANEL
	CONDUIT W/No. OF WIRES INDICATED, ONE NEUTRAL, TWO HOT, AWG 12, CU
	INCANDESCENT FIXTURE
	INCANDESCENT FIXTURE, WALL MOUNTED
	FLUORESCENT FIXTURE
V	VAPOR TIGHT LIGHT FIXTURE
	HIGH PRESSURE SODIUM LIGHT FIXTURE
	INCANDESCENT FIXTURE, RECESSED
	FLUORESCENT FIXTURE, RECESSED
	DUPLEX RECEPTACLES
	QUADRAPLEX RECEPTACLES
	SPECIAL PURPOSE RECEPTACLES
S	SINGLE POLE SWITCH
S_3	3-WAY SWITCH
J	JUNCTION BOX
T	THERMOSTAT
T	TRANSFORMER
A	AQUASTAT
PC	PHOTO CELL
R	RELAY
M	MOTOR OPERATED VALVE (ZONE VALVE)
S	SOLENOID VALVE
	CONTROLLER
	MOTOR STARTER, MANUAL
	MOTOR STARTER, MAGNETIC
	SWITCHING PANEL
	CIRCUIT BREAKER PANEL
	ALARM PANEL
H	HEAT DETECTOR
S	SMOKE DETECTOR
B	BELL
	ALARM HORN
M	METER BASE
HP	MOTOR W/HORSEPOWER INDICATED
FLS	FLOAT SWITCH
PS	PRESSURE SWITCH
FS	FLOW SWITCH
UH	UNIT HEATER
	EMERGENCY LIGHT
	EXIT LIGHT
T	SYSTEM GROUND THERMOSTAT
S_{PB}	SWITCHED RECEPTACLE PUSH-BUTTON SWITCH
F	FAN
PC	FIXTURE W/PULL CHAIN
S_T	SWITCH W/TIMER
TO	TELEPHONE OUTLET
CU	COPPER

NOTES

CIVIL

1. MINIMUM VERTICAL SEPARATION BETWEEN WATER LINE & SEWER LINE AT THE CROSSING POINT SHALL BE 18".
2. MINIMUM HORIZONTAL SEPARATION BETWEEN WATER LINE & SEWER LINE SHALL BE 10.0'.
3. MINIMUM BURY ON WATER LINE SHALL BE
4. LOCATION OF ALL WELLS, SEPTIC TANKS, MANHOLES, CLEANOUTS, VALVES, ETC. SHALL BE REFERENCED TO THREE PERMANENT ABOVE GROUND STRUCTURES.
5. CLEANOUTS, LEACHFIELDS AND SEPTIC TANKS ARE NUMBERED ACCORDING TO CORRESPONDING MANHOLE, i.e., MH-1, ST-1A, LF-1A AND CO-1A.

MECHANICAL

1. ALL EXPOSED PIPING SHALL BE PAINTED USING THE FOLLOWING COLOR CODE:
   GREEN - RAW WATER
   BLUE - POTABLE WATER
   BLACK - HEATING
   RED - FIRE
   BROWN - SEWAGE
   GRAY - COMPRESSED AIR
   ORANGE - FUEL
   YELLOW - WASTE HEAT RECOVERY
2. TYPE OF PAINT TO BE USED SHALL BE GARLOCK OR APPROVED EQUAL.
3. DIRECTION OF FLOW SHALL BE INDICATED BY ARROWS AND A NAME PLATE SHALL BE ATTACHED DESCRIBING MATERIAL BEING CARRIED.
4. ALL PIPING SHALL BE COPPER UNLESS OTHERWISE INDICATED.
5. ALL SOLDER CONNECTIONS SHALL BE MADE W/TIN-ANTIMONY 95-5 SOLDER.
6. ALL HOT WATER LINES SHALL BE INSULATED.
7. ALL PIPE SUPPORTS AND HANGERS SHALL HAVE 1/2" INSULATION BETWEEN COPPER PIPE AND SUPPORTS OR HANGERS.

ELECTRICAL

1. CLEAR AREA REQUIRED FOR ELECTRICAL PANELS:
   36" FROM FACE OF PANEL
   75" FROM FLOOR UP TO FIRST OBSTRUCTION
   15" CLEAR EACH SIDE FROM CENTER LINE OF PANEL
2. GROUND SYSTEM NEUTRAL AND ALL METALLIC SURFACES PER 1984 NATIONAL ELECTRICAL CODE (N.E.C.).
3. ALL WIRING SHALL BE IN CONDUIT. UNLESS OTHERWISE SPECIFIED

DATE	REVISIONS	INITIALS

U. S. Department of Health, & Human Services
Public Health Service
Indian Health Service

TANANA, ALASKA

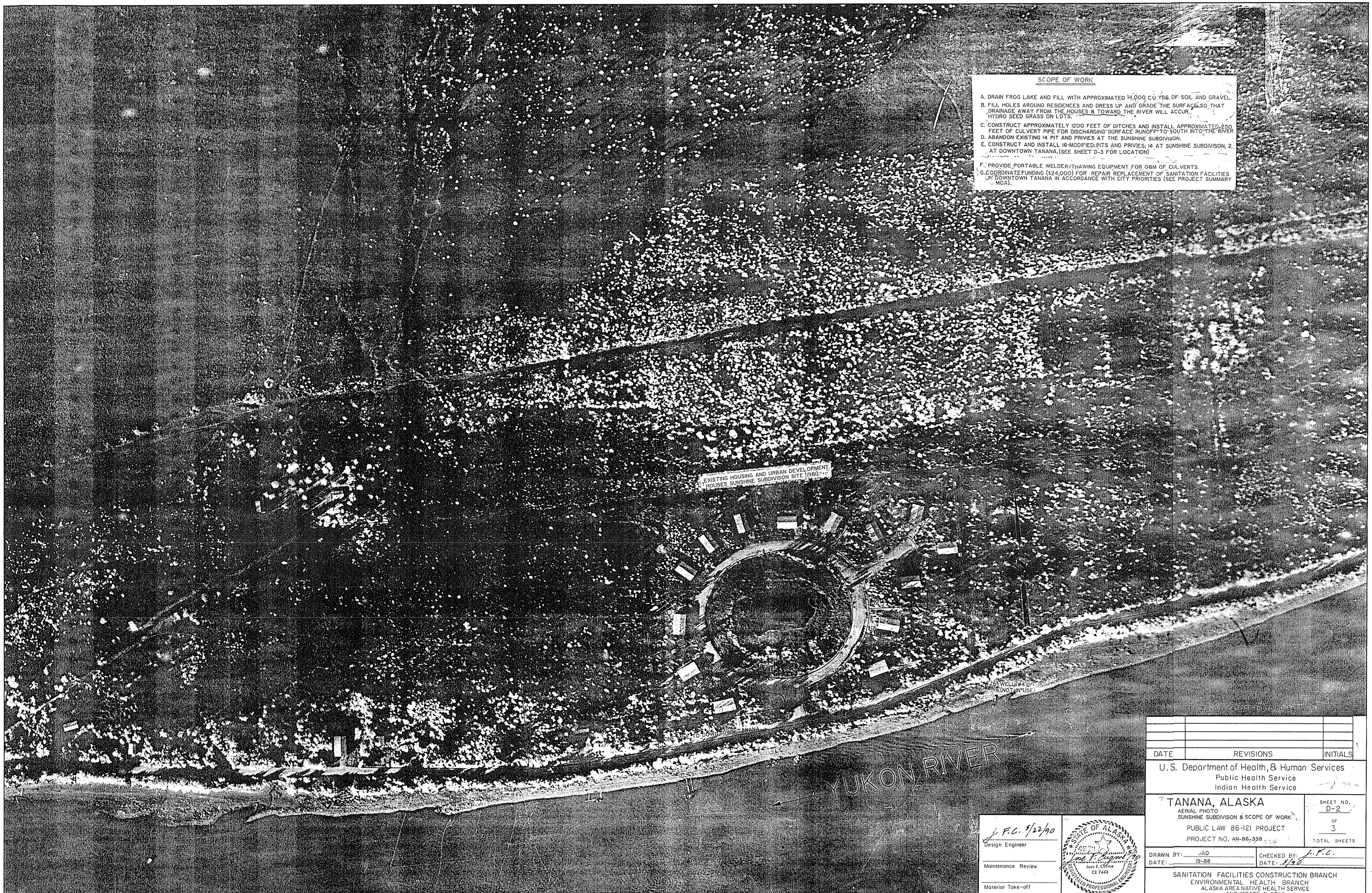
LEGEND & NOTES
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-86-338

SHEET NO. L-1 OF 1 TOTAL SHEETS

Design Engineer
Maintenance Review
Material Take-off

DRAWN BY: LOWDERMILK DATE: 9/82
CHECKED BY: DATE:

SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA



SCOPE OF WORK

A. DRAIN FROG LAKE AND FILL WITH APPROXIMATED 14,000 CU YDS. OF SOIL AND GRAVEL.

B. FILL HOLES AROUND RESIDENCES AND DRESS UP AND GRADE THE SURFACE SO THAT DRAINAGE AWAY FROM THE HOUSES & TOWARD THE RIVER WILL ACCUR. HYDRO SEED GRASS ON LOTS.

C. CONSTRUCT APPROXIMATELY 1200 FEET OF DITCHES AND INSTALL APPROXIMATED 250 FEET OF CULVERT PIPE FOR DISCHARGING SURFACE RUNOFF TO SOUTH INTO THE RIVER

D. ABANDON EXISTING 14 PIT AND PRIVIES AT THE SUNSHINE SUBDIVISON.

E. CONSTRUCT AND INSTALL 16-MODIFIED PITS AND PRIVIES: 14 AT SUNSHINE SUBDIVISON, 2 AT DOWNTOWN TANANA. (SEE SHEET D-3 FOR LOCATION)

F. PROVIDE PORTABLE WELDER/THAWING EQUIPMENT FOR OBM OF CULVERTS.

G. COORDINATE FUNDING ($24,000) FOR REPAIR REPLACEMENT OF SANITATION FACILITIES IN DOWNTOWN TANANA IN ACCORDANCE WITH CITY PRIORITIES (SEE PROJECT SUMMARY MOA).

DATE	REVISIONS	INITIALS

U.S. Department of Health, & Human Services
Public Health Service
Indian Health Service

TANANA, ALASKA

AERIAL PHOTO
SUNSHINE SUBDIVISON & SCOPE OF WORK

PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-86-338

SHEET NO. D-2 OF 3 TOTAL SHEETS

J.F.C. 5/22/90
Design Engineer

Maintenance Review

Material Take-off

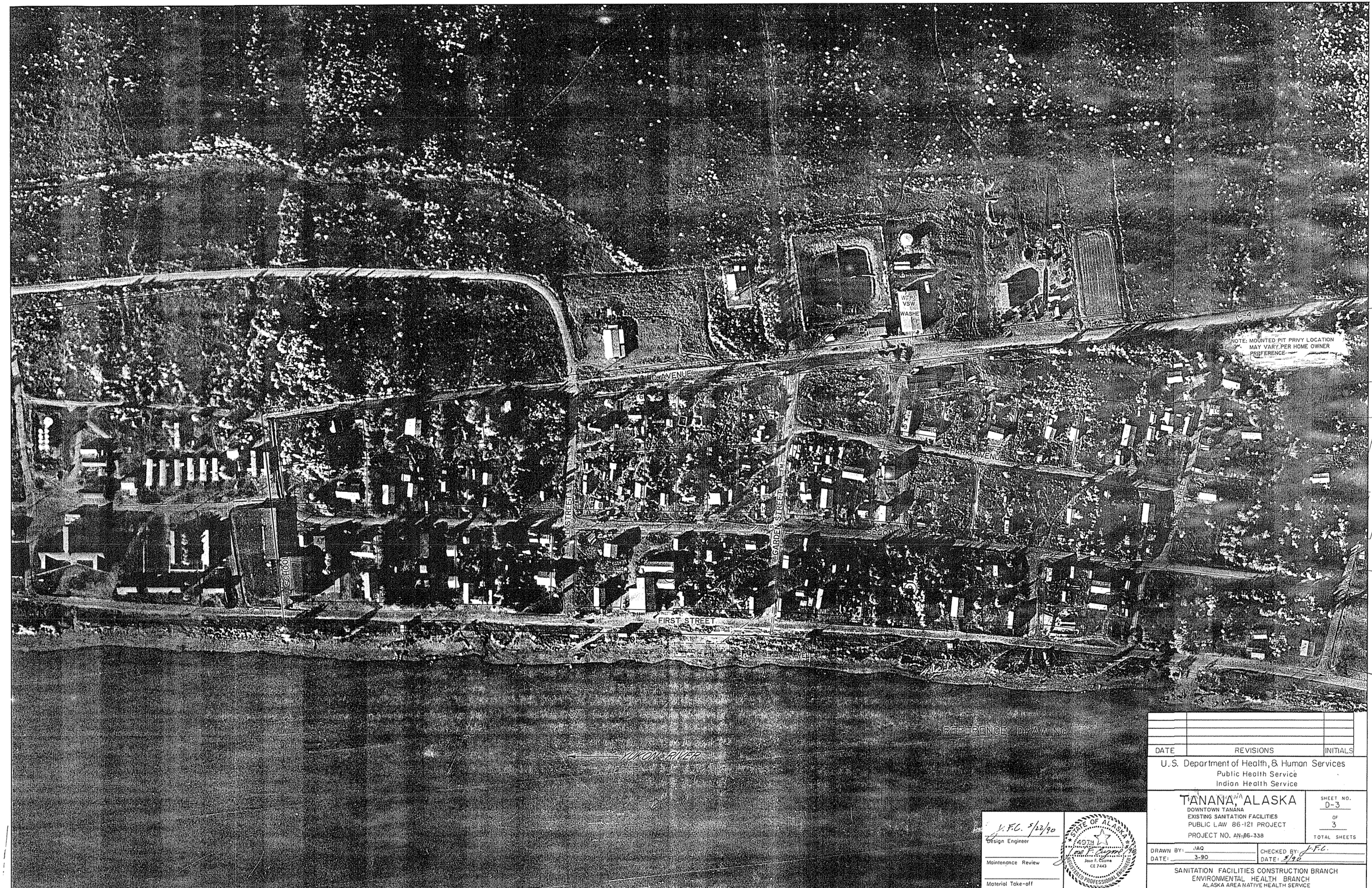
STATE OF ALASKA
49TH
Jose F. Cuzme
CE 7443
REGISTERED PROFESSIONAL ENGINEER

DRAWN BY: JAQ
DATE: 19-88

CHECKED BY: J.F.C.
DATE: 5/90

SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA

Prepared By NORTH PACIFIC AERIAL SURVEYS INC.



DATE	REVISIONS	INITIALS

U.S. Department of Health, & Human Services
Public Health Service
Indian Health Service

TANANA, ALASKA

DOWNTOWN TANANA
EXISTING SANITATION FACILITIES
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-86-338

SHEET NO. D-3 OF 3 TOTAL SHEETS

DRAWN BY: JAQ DATE: 3-90
CHECKED BY: J.F.C. DATE: 5/90

J.F.C. 5/22/90
Design Engineer

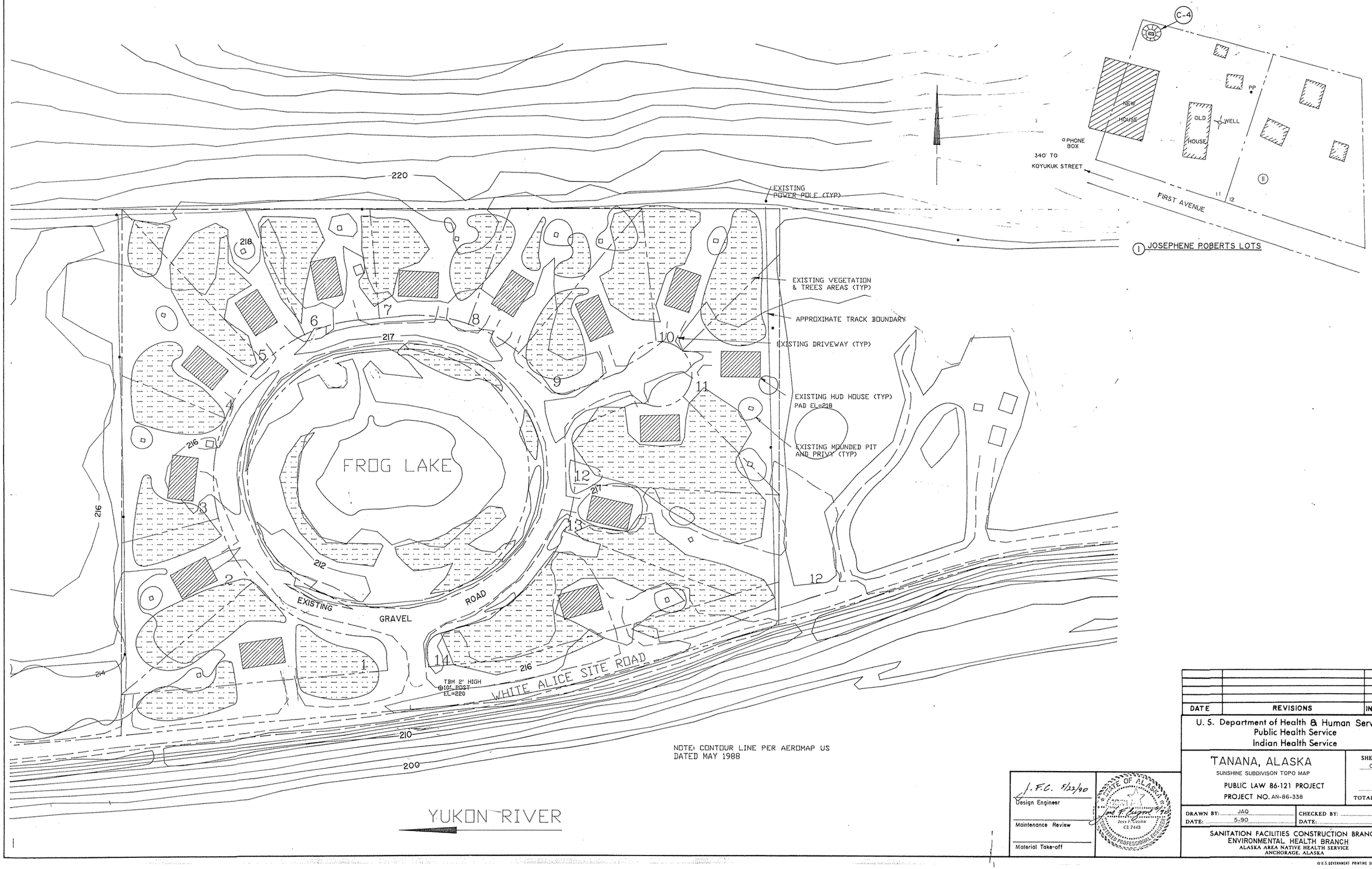
Maintenance Review

Material Take-off

STATE OF ALASKA
749TH
Jack F. Coons
CE 7443
REGISTERED PROFESSIONAL ENGINEER

SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA

Prepared By NORTH PACIFIC AERIAL SURVEYS INC.



NOTE: CONTOUR LINE PER AEROMAP US
DATED MAY 1988

DATE	REVISIONS	INITIALS

U. S. Department of Health & Human Services
Public Health Service
Indian Health Service

TANANA, ALASKA
SUNSHINE SUBDIVISON TOPO MAP
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-86-338

SHEET NO. C-1 OF 4 TOTAL SHEETS

DRAWN BY: JAQ DATE: 5-90
CHECKED BY: DATE:

J.F.C. 5/23/90
Design Engineer
Maintenance Review
Material Take-off

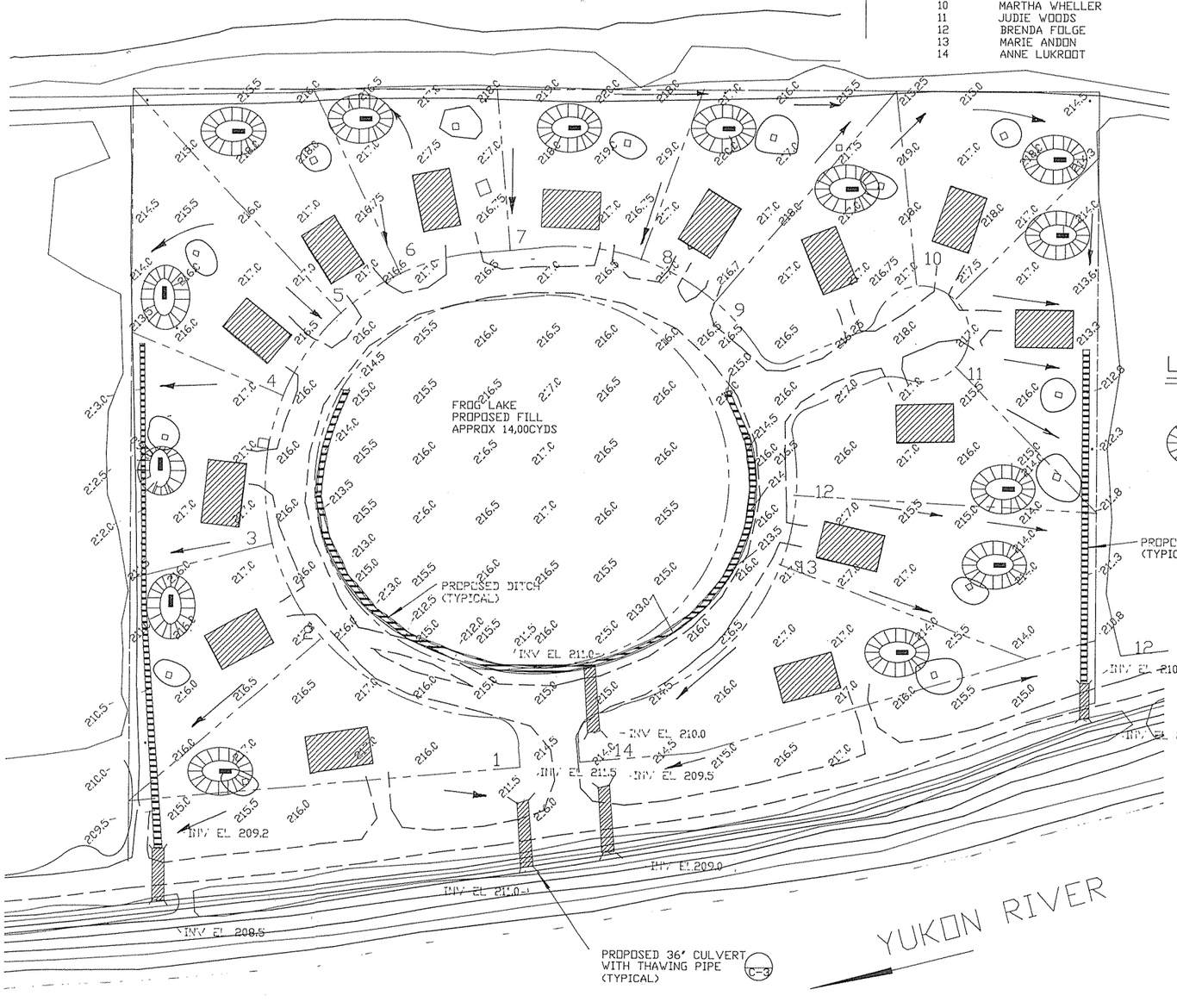
STATE OF ALASKA
Jess F. Cuzzino
CE 7443
REGISTERED PROFESSIONAL ENGINEER

SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA

☆ U.S. GOVERNMENT PRINTING OFFICE 1979—286-315

SCALE 1" = 50'

LIST OF HOME OWNERS	
LOT NO	OWNER
1	GLORIA ALBERT
2	LIZ HARDING
3	JULIE ROBERTS
4	JUDIE EDWIN
5	CONNIE SOMMERS
6	ALBERT GUTHRIE
7	DORIS EDWIN
8	JOANNE SOMMERS
9	FRANCIS ROBERTS
10	MARTHA WHELLER
11	JUDIE WOODS
12	BRENDA FOLGE
13	MARIE ANDON
14	ANNE LUKROOT



GENERAL REQUIREMENTS:

1. CLEARING- THE IHS CONSTRUCTION REPRESENTATIVE AND LOT HOMEOWNER SHALL DESIGNATE THE TREES, SHRUBS, PLANTS AND OTHER OBSTRUCTIONS TO REMAIN ON SITE PRIOR TO INITIATE WORK. THE IHS FOREMAN SHALL MAKE ARRANGEMENTS WITH THE CITY FOR DISPOSING OF SURFACE OBJECTS, TREES, STUMPS, AND ROOTS INCLUDING BERM PILES NOT DESIGNATED TO REMAIN ON THE LOT. TREES DESIGNATED FOR REMOVAL SHALL BE CUT OFF NO MORE THAN SIX INCHES ABOVE THE GROUND SURFACE.
2. FILLS: SHALL BE CONSTRUCTED IN LIFTS OF 8 INCHES MAXIMUM THICKNESS. ALL FILLS SHALL SLOPE TO DRAIN AND SHALL BE MAINTAINED FREE OF HOLES WHERE WATER MAY ACCUMULATE. PLAN OPERATIONS IN A SEQUENCE THAT WILL PROVIDE DRAINAGE AT ALL TIMES, BORROW MATERIAL COMPACTION SHALL BE OBTAINED BY ROUTING CONSTRUCTION EQUIPMENT OVER THE FILLS.
3. BORROW: MATERIAL TYPE SHALL BE SAND, EARTH, SILT, GRAVEL, ROCK OR COMBINATIONS THEROF. A SEPARATION FABRIC MAT (AMOCO TYPE OR EQUAL) SHALL BE PLACED 6 INCHES BELOW FINISH GRADE, PLACE 4 INCHES OF GRAVEL ON MAT AND PROVIDE TWO INCHES OF TOP SOIL WITH GRASS SEED AS RECOMMENDED BY THE MANUFACTURER. DESIGNATED GRASS SEEDED AREAS SHALL BE COORDINATED WITH THE HOMEOWNERS.
4. GRASS SEED MIXTURE AT 100 POUNDS PER ACRE FOR THE TANANA ENVIRONMENT IS AS FOLLOW: ANNUAL RYE GRASS 10% ARCTARED GRASS (RED FESCUE) 30% KENTUCKY BLUE GRASS 40% BOYLE HARD FESCUE 20% THE BEST TIME OF APPLICATION IS BETWEEN JUNE AND JULY.
5. EXISTING PRIVIES ABANDONMENT: INSTALLER SHALL ENSURE THAT THE CRIBS ARE WITHIN THE LAST 4' BELOW FINISHED SURFACE.

NOTES:

1. EXISTING HOUSE PAD ELEVATION = 218.00' (TYPICAL)
2. PROPOSED FINISHED ELEVATIONS ARE SHOWN AT A GRID 50 FEET APART.
3. PROPOSED PRIVY SITES ARE APPROXIMATE. SITE CLEARING AND ACCESS MAY DICTATE LOCATION, HOMEOWENER COORDINATION IS REQUIRED.
4. PLACE ACCESS RAMP TO PRIVIY AT 4:1 SLOPE TOWARD THE HOUSE. GRAVEL MOUND MATERIAL FOR PRIVY SITE SHALL BE GW AND NOT EXCEED 5% NON PLASTIC FINES (SILTS) PASSING No 200 SIEVE. THESE MATERIAL SHALL BE PLACE FROM THE CRIB TO A 5 FOOT BOUNDARY (SEE CRIB DETAIL SHEET C-4).

LEGEND

- DRAINAGE DIRECTION REQUIRED
- PROPOSED PIT PRIVY SITE
- EXISTING PIT PRIVY LOCATION
- PROPOSED DITCH (TYPICAL) (4 / C-3)

DATE	REVISIONS	INITIALS

U. S. Department of Health & Human Services
Public Health Service
Indian Health Service

TANANA, ALASKA
SUNSHINE SUBDIVISION
PROPOSED DRAINAGE AND PIT PRIVIES
PUBLIC LAW 86-121 PROJECT
PROJECT NO.

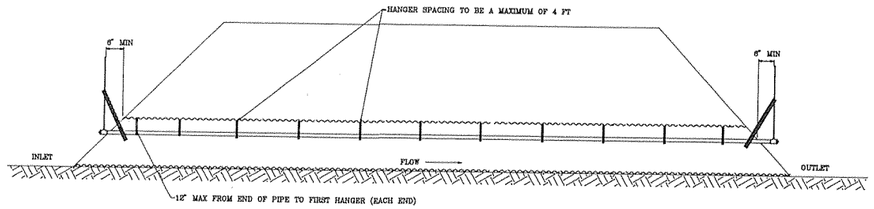
SHEET NO. C-2 OF 4 TOTAL SHEETS

DRAWN BY: JAQ DATE: 5-90
CHECKED BY: J.F.C. DATE: 5/90

J.F.C. 5/22/90
Design Engineer
Maintenance Review
Material Take-off

STATE OF ALASKA — REGISTERED PROFESSIONAL ENGINEER — Jose F. Cuzmo CE 7443

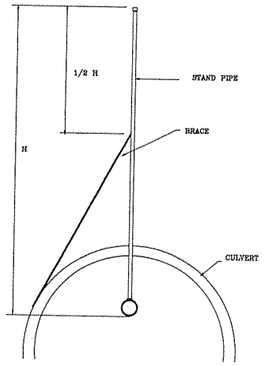
SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA



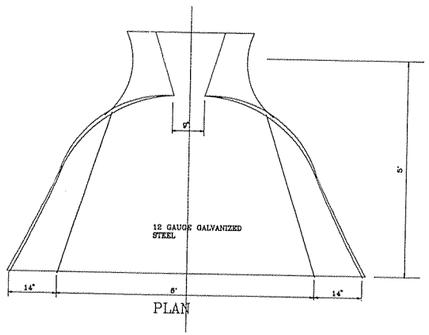
LOCATION OF THAW PIPE
NTS

NOTES:

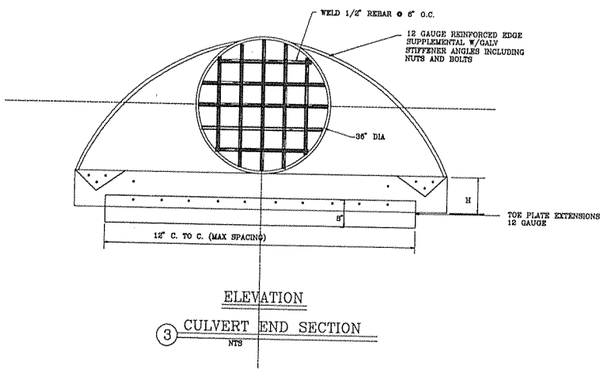
1. HEIGHT OF ALL STANDPIPES TO BE THE HEIGHT OF CULVERT COVER.
2. STANDPIPE BRACES TO BE FIELD BENT AND ATTACHED TO CULVERT WITH STANDARD STRUCTURAL PLATE PIPE BOLTS.
3. INSTALL ETHYLENE CLYCOL IN THAW PIPE PRIOR TO CAPPING PIPE.



② STANDPIPE BRACE – THAW PIPE LOCATION
NTS

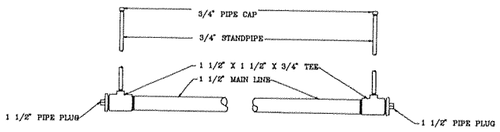


PLAN



ELEVATION

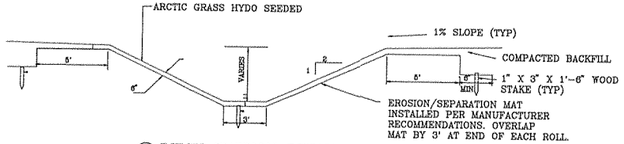
③ CULVERT END SECTION
NTS



① CULVERT SINGLE THAW PIPE DETAIL
NTS

THAWING PROCEDURE

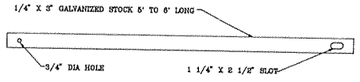
1. UNTHREAD 3/4" CAP FROM STANDPIPE OR REMOVE STANDPIPE AS NEEDED.
2. DRAIN ETHYLENE GLYCOL FROM THAW PIPE.
3. APPLY CIRCULATING STEAM OR HOT WATER UNTILL DESIRED RESULT IS ACHIEVED (FLOW IS ESTABLISHED WITHIN THE CULVERT.
4. REFILL THAW PIPE WITH ETHYLENE GLYCOL AND REPLACE CAP AND/OR STANDPIPE.



④ DITCH SECTION DETAIL
NTS

NOTE: USE GRASS MIXTURE 100 lbs PER ACRE AS FOLLOWS:

ANNUAL RYE GRASS	10%
ARCTARED GRASS (RED FESCUE)	30%
KENTUCKY BLUE GRASS	40%
BOYLE HARD FESCUE	20%



⑤ STANDPIPE BRACE DETAIL
NTS

DATE	REVISIONS	INITIALS

U. S. Department of Health & Human Services
Public Health Service
Indian Health Service

TANANA, ALASKA
THAW PIPE AND DITCH DETAILS
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-86-338

SHEET NO. C-3 OF 4 TOTAL SHEETS

DRAWN BY: JAQ DATE: 5-90
CHECKED BY: DATE:

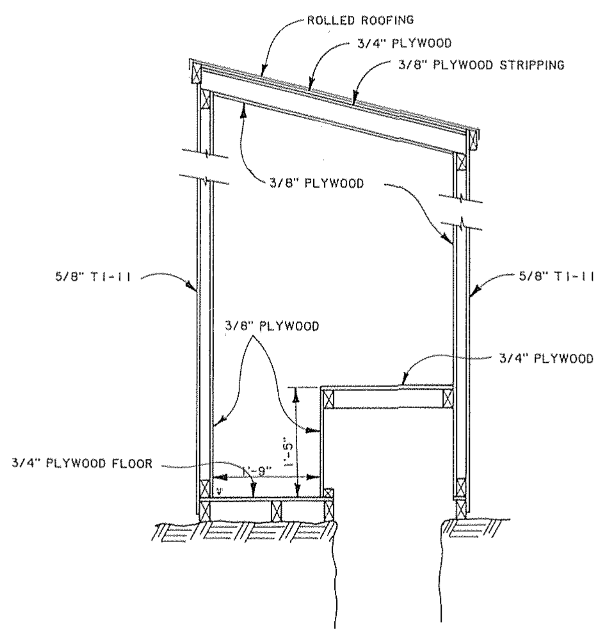
J.F.C. 5/22/90
Design Engineer
Maintenance Review
Material Take-off

STATE OF ALASKA — Jose F. Cuzmo CE 7443 — REGISTERED PROFESSIONAL ENGINEER

SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA

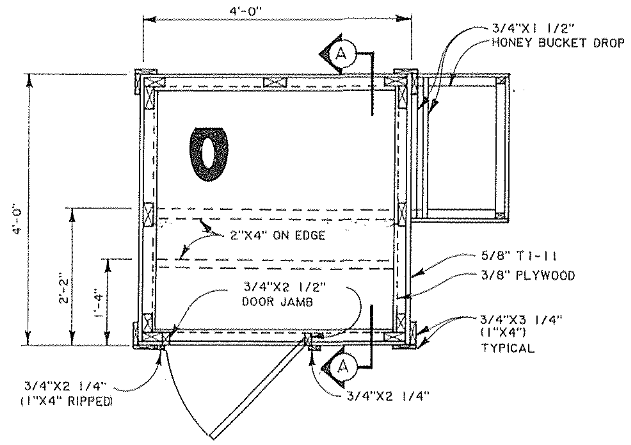
NOTES:

1. ALL FRAMING SHALL BE 2"X4" NOMINAL LUMBER EXCEPT WHERE OTHERWISE SHOWN.
2. DOOR HANDLE- 5" ZINC PLATED.
3. ACTUAL PLEXIGLASS DIMENSIONS- 8"X16"X1/4".
4. DOOR CLOSURE- 1" DIA., 11" LONG SPRING.
5. PIT PRIVIES SHALL BE FIELD LOCATED.



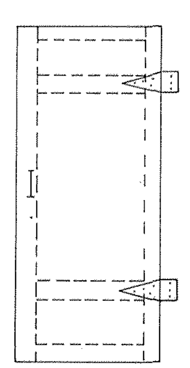
SECTION A - A

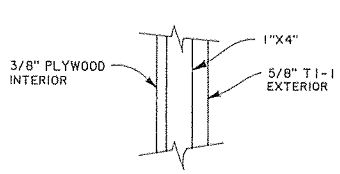
NOT TO SCALE



PRIVY PLAN VIEW

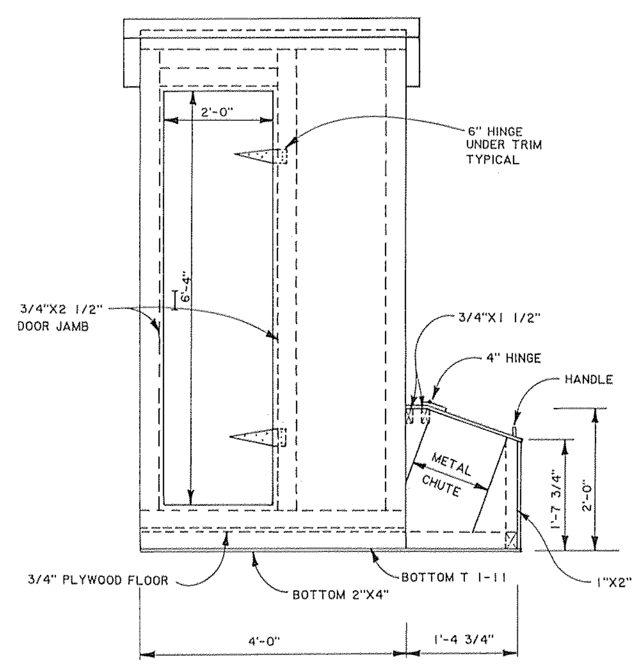
NOT TO SCALE





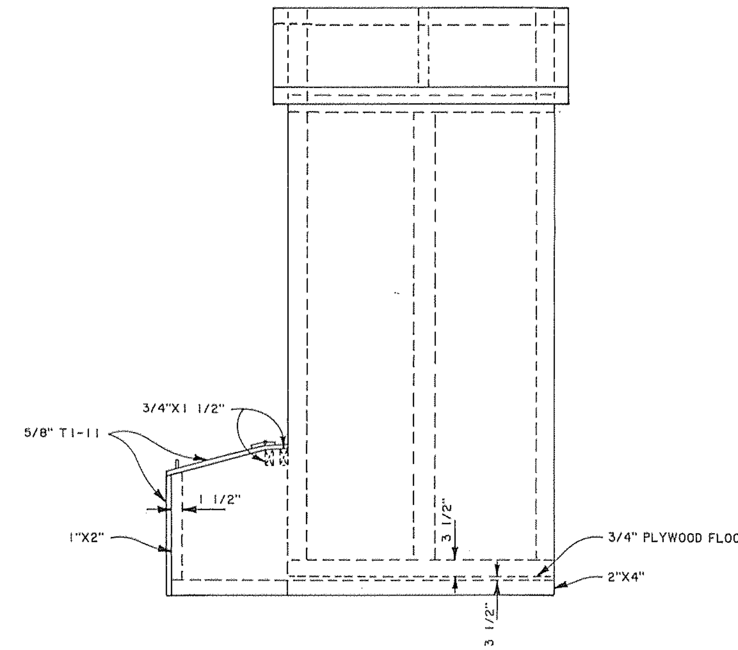
DOOR

NOT TO SCALE



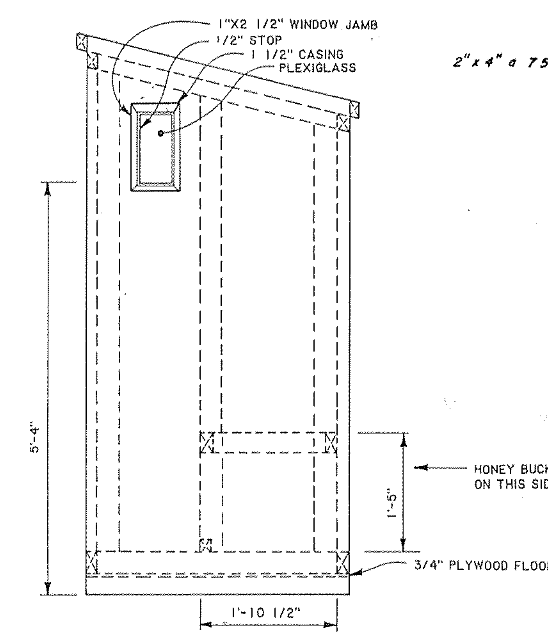
PRIVY FRONT VIEW

NOT TO SCALE



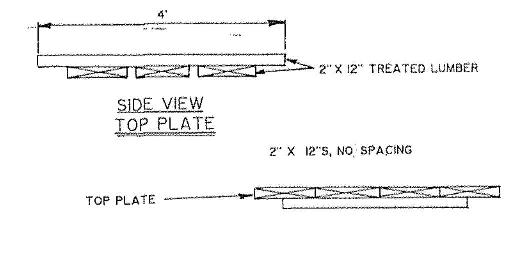
PRIVY REAR VIEW

NOT TO SCALE



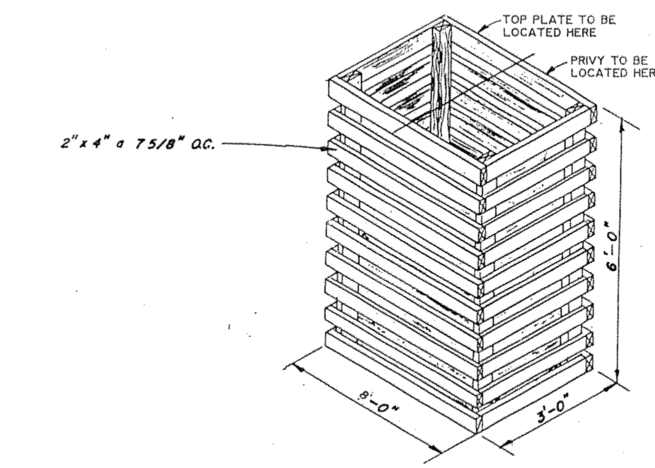
PRIVY SIDE VIEW

NOT TO SCALE



CRIB TOP PLATE

NTS



PIT CRIBBING DETAIL

NTS

NOTES:

1. EXISTING GROUND SHALL BE EXCAVATED 2' AND CRIB SET IN BOTTOM OF EXCAVATION. PERMAFROST IS EXPECTED TO BE ENCOUTERED.
2. PROVIDE SEPARATION FILTER FABRIC AROUND CRIB PRIOR TO PLACING MOUND GRAVEL MATERIAL.
3. GRAVEL MOUND SHALL BE PLACED FROM THE CRIB TO A 5' MINIMUM PERIMETER.

DATE	REVISIONS	INITIALS

U. S. Department of Health & Human Services
Public Health Service
Indian Health Service

TANANA, ALASKA PIT PRIVY AND CRIBBING DETAIL PUBLIC LAW 86-121 PROJECT PROJECT NO. AN-86-338	SHEET NO. C-4 OF 4 TOTAL SHEETS
DRAWN BY: J. PARKER DATE: JULY, 85	CHECKED BY: J.F.C. DATE: 5/90

SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA

J. F.C. 5/22/90
Design Engineer

Maintenance Review

Material Take-off

STATE OF ALASKA
Jose F. Cayme
CE 7643
REGISTERED PROFESSIONAL ENGINEER