THE CONTENTS OF THIS SECTION ARE
THE HIGHEST QUALITY AVAILABLE

INITIAL qf DATE 11/27/01

ABQ11

CALCULATION COVER SHEET

Project:	**INEEL V-Tank Remediation Project**				**Number of Sheets:** 1 of 28
Site:	Test Area North, Idaho Falls, Idaho.				
Calculation Number:	ABQ11-CE007		**Work Order Number:**	12393.002.001	
Subject:	**INEEL/BBWI Utility Location and Type**				
Rev #:	**Date:**	**Revision:**	**Calculated by:**	**Checked:**	**Approved:**
RAA	5-11-01	90% Design	Chris Ehrsam	Dan Brennecke	Berg Keshian
RAB	9-27-01	Draft Final	Chris Ehrsam	Dan Brennecke	

Problem Statement:

Locate all utilities with the area, this includes abandoned in place utilities. Locate the utility by a horizontal and vertical tie to reference point such as a building, the natural ground or a significant structure. Find the material used for these utilities, ie concrete, cast iron, or stainless steel.
Method of Solution: Review Autocad and PDF drawings provided by INEEL and site visit.

Assumptions:

Not all Utilities lines are shown on drawings. The utilities shown on drawings may or may not be as shown and must be field verified.

Sources of Formulas and References:

Autocad and PDF Drawings provided by INEEL, and site visit.

Calculation:

Locate and map utility location and material on design drawings.

Summary of Results:

The location and material type for all utilities was not available on the drawings provided.

The drawings are inconsistent in showing the location of utilities within the area of concern. Often the lines representing a utility are not dimensioned to a building or significant structure therefore leaving room for error. Most of the drawings are in PDF format, therefore scaling off the drawings was not feasible. The drawings provided do not show, gas, propane, electric, or telephone lines.

It is recommended that utility locates be performed prior to excavation, that excavation be done in increments no greater than 12 inches at a time, and that a spotter be provided during remediation/excavation to lessen the chance of breaking lines during excavation.

WESTON MANAGERS DESIGNERS CONSULTANTS

SHEET ____ of ____

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

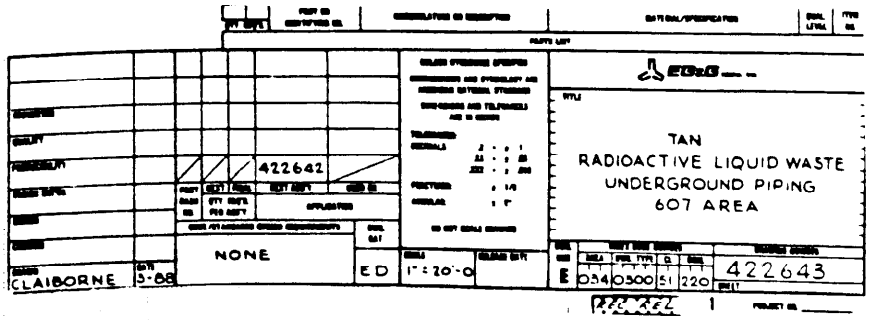
MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

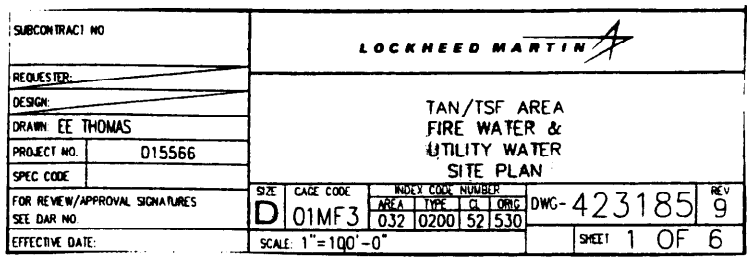
APPROVED BY

DEPT _____ DATE _____

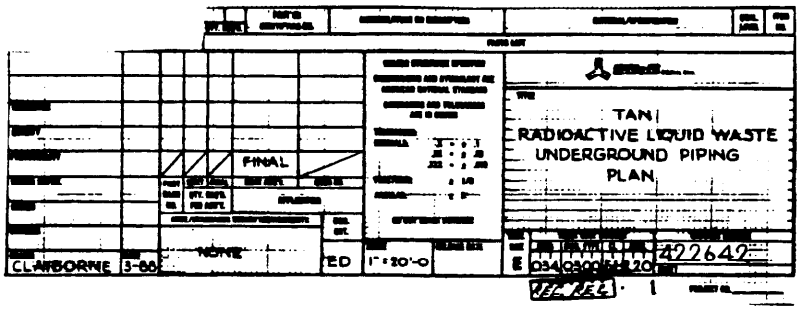
This drawing shows the location and side of contaminated waste (wc) and concentrated Contaminated waste (wcc)



This drawing shows the location of FIRE water and Utility Water site Plan.



Drawing shows Radioactive liquid waste underground piping.



WESTON MANAGERS DESIGNERS CONSULTANTS

SHEET ____ of ____

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

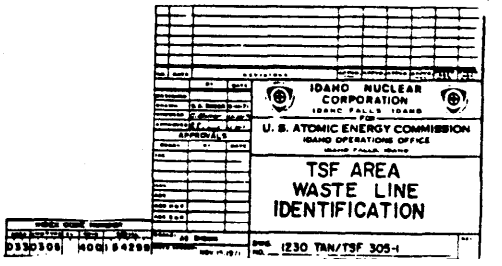
MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

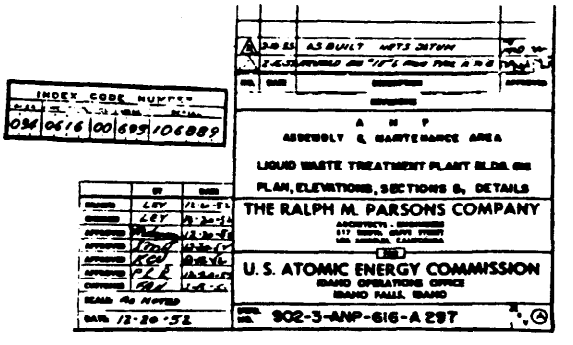
APPROVED BY

DEPT _____ DATE _____

Drawing shows waste line IDENTIFICATION

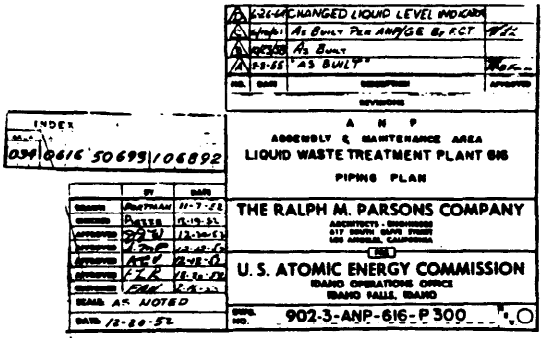


This drawing shows the horizontal and vertical location of V_1, V_2 and V_3 tanks.

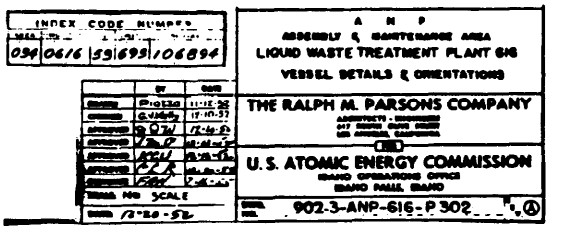


This drawing shows the horizontal and vertical location of V_1, V_2, V_3 and V_9 tanks and location of valves from building to V. Tanks

Plan View and cross. section of V. 9.



This drawing includes the dimension, material, opening locations for V_1, V_2, V_3 and V_9



WESTON
MANAGERS DESIGNERS/CONSULTANTS

SHEET ____ of ____

CLIENT/SUBJECT _____ W.O. NO. _____

TASK DESCRIPTION _____ TASK NO. _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY _____

DEPT _____ DATE _____

This drawing shows location of valves, dimensions and elevation of lines for V_1, V_2 and V_3 tanks.

NO.	DATE	DESCRIPTION	APPROVED
5		SEE E DCN	
4	5-26-64	CHANGED LIQ. LEVEL WORK	
3	5-2-64	AS BUILT PER ANP/GE & R.C.T.	
2	6-12-55	AS BUILT	
1	2-3-55	"AS BUILT"	

REVISIONS

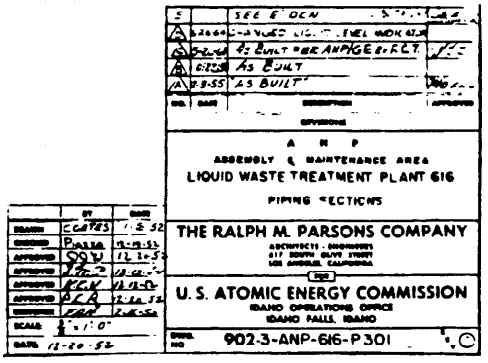
A N P
ASSEMBLY & MAINTENANCE AREA
LIQUID WASTE TREATMENT PLANT 616
PIPING SECTIONS

THE RALPH M. PARSONS COMPANY
ARCHITECTS - ENGINEERS
617 SOUTH OLIVE STREET
LOS ANGELES, CALIFORNIA

U.S. ATOMIC ENERGY COMMISSION
IDAHO OPERATIONS OFFICE
IDAHO FALLS, IDAHO

DWG. NO. 902-3-ANP-616-P301

	BY	DATE
DRAWN	CCATES	1-5-52
CHECKED	PIASSA	12-19-52
APPROVED	[illegible]	12-20-52
APPROVED	[illegible]	12-20-52
APPROVED	KCN	12-12-52
APPROVED	PCR	12-20-52
APPROVED	[illegible]	12-20-52
SCALE	3/8" = 1'-0"	
DATE	12-20-52	



Drawing shows size & location of site utilities. Dimensions of tanks, V-9 and Valve Pit #1.

		DATE
DRAWN BY	F. BUMATAY	6-6-79
DESIGN SUPRV.	[illegible]	6-7-79
DESIGN	N. PATEL	6-1-79
CHECKED	T. CHENG	6-7-79
APPROVED ON	[illegible]	8-10-79
EGG: DESIGN REVIEW	D. F. WALRATH	10-12-79
SAFETY	D. P. HALLS	10-15-79
FUEL & MAT. PROG.	H. H. CLARK	10-23-79
PROJ. MGR.	R. E. OHLIN	10-24-79

KAISER ENGINEERS
KAISER ENGINEERS, INC.
300 LAKESIDE DRIVE
P.O. BOX 23210
OAKLAND, CALIFORNIA 94623

FOR

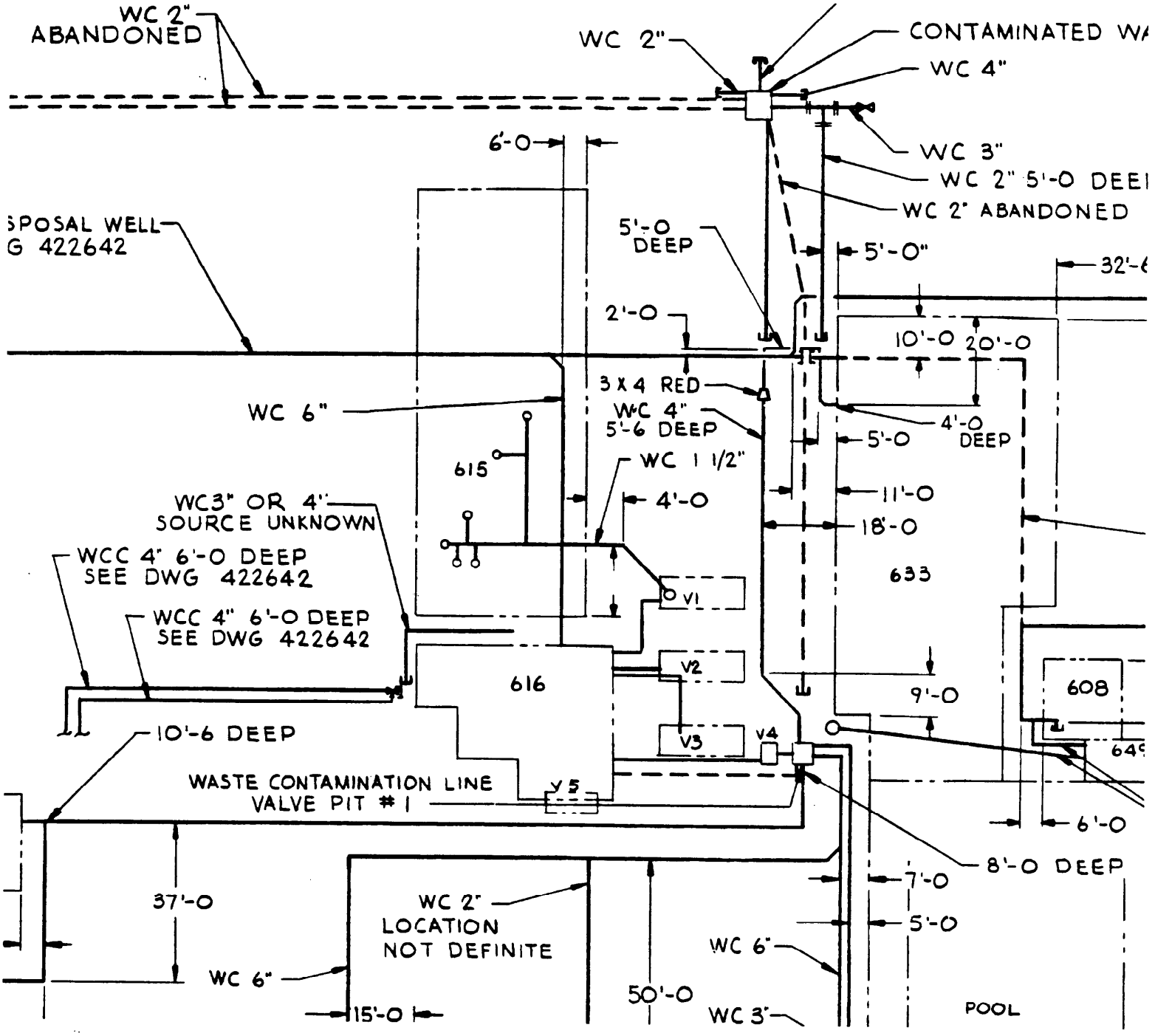
U.S. DEPARTMENT OF ENERGY
IDAHO OPERATIONS OFFICE
IDAHO FALLS, IDAHO

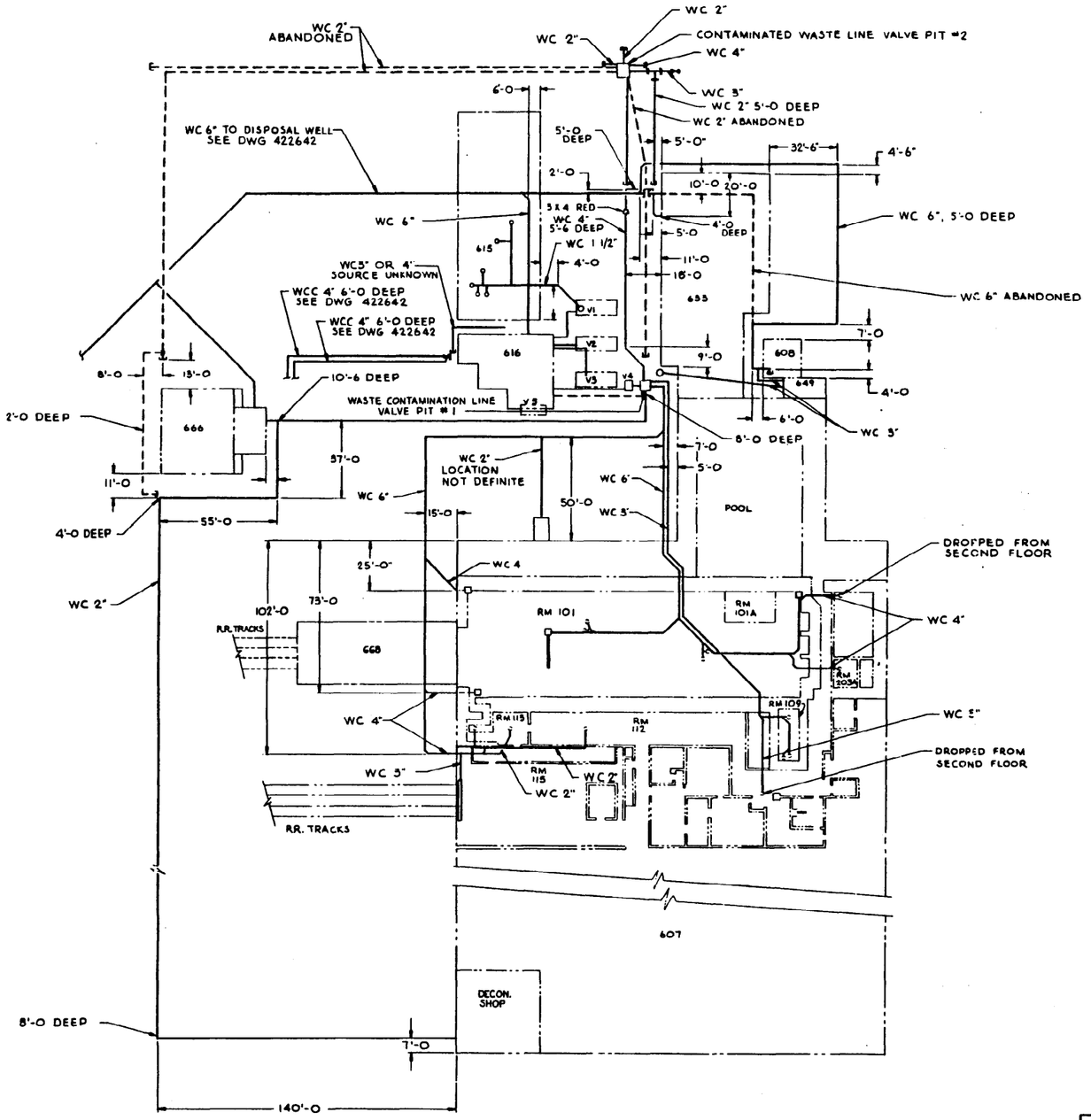
TAN RADIOACTIVE LIQUID WASTE STORAGE AND TRANSFER SYSTEM

SITE PLAN
(INCLUDING PAVING, GRADING & UTILITIES)

SCALE	RELEASE DATE	DWG SIZE	INDEX CODE NUMBER: AREA	DWG TYPE	CL	ORIG	DRAWING NUMBER
1" = 20'	11-3-82 DMR		034	0300	51	486	138651 1-C

SHEET


WC 2" ABANDONED
WC 2"
CONTAMINATED WA
WC 4"
WC 3"
WC 2" 5'-0 DEEI
WC 2" ABANDONED
SPOSAL WELL G 422642
6'-0
5'-0 DEEP
5'-0"
32'-6
2'-0
10'-0
20'-0
3 X 4 RED
WC 6"
WC 4" 5'-6 DEEP
4'-0 DEEP
5'-0
615
WC 1 1/2"
4'-0
11'-0
18'-0
WC3" OR 4" SOURCE UNKNOWN
WCC 4" 6'-0 DEEP SEE DWG 422642
633
V1
WCC 4" 6'-0 DEEP SEE DWG 422642
616
V2
9'-0
608
10'-6 DEEP
V3
V4
WASTE CONTAMINATION LINE VALVE PIT # 1
V5
6'-0
8'-0 DEEP
7'-0
37'-0
WC 2" LOCATION NOT DEFINITE
5'-0
WC 6"
WC 6"
50'-0
15'-0
WC 3"
POOL



LEGEND
WC CONTAMINATED WASTE
WCC CONCENTRATED CONTAMINATED WASTE
— — — LINE ABANDOND INPLACE
——— EXISTING UNDERGROUND LINE

RELEASED
FOR RECORD ONLY
DO NOT FABRICATE
CHECKER [signature]
DATE 8-17-89

PARTS LIST

QTY REQ'D	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL/SPECIFICATION	QUAL. LEVEL	ITEM NO.

422643

TAN
RADIOACTIVE LIQUID WASTE
UNDERGROUND PIPING
607 AREA

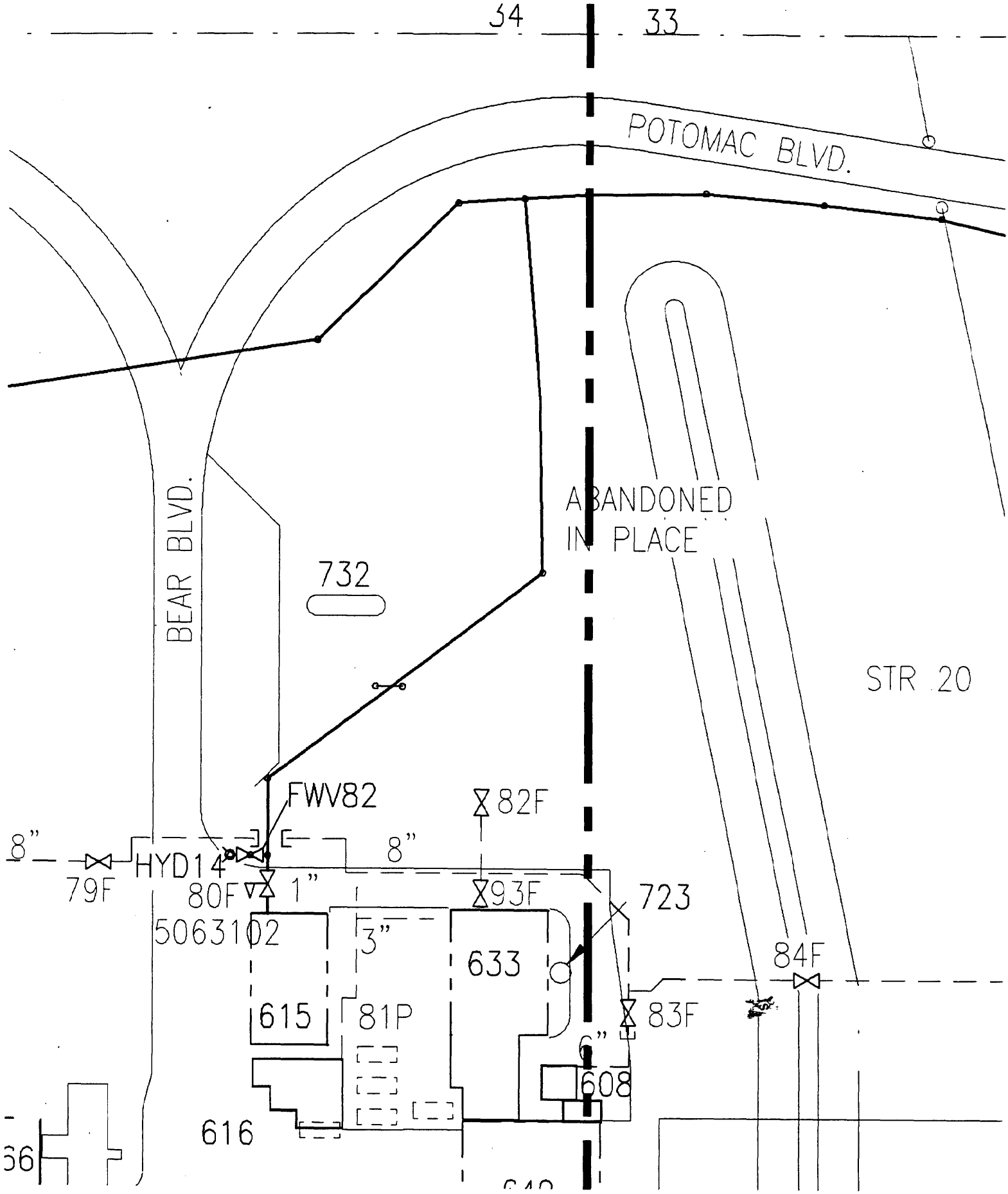
DRAWN	DATE	SCALE	SHEET SIZE	DWG. SIZE	SHEET NO.	DWG. NO.
CLAIBORNE	3-88	1" = 20'-0	E	034	0300	51	220

422643

NONE

ED

137995



FIRE WATER LINE ABANDONED IN PLACE.

REVISIONS		
REV	DESCRIPTION	EFFECTIVE DATE
8	MULTIPLE REVISIONS TO FACE OF DRAWING AS BUILT. SEE DAR #14390	6-02-98
9	REVISED TO REFLECT AS-BUILT. SEE DAR #71892	1/23/01

6	5	4	3	2	SHEET
9	9	8	9	8	REV

REV STATUS OF SHEETS

LEGEND

- POST INDICATOR VALVE
- ISOLATION VALVE
- FIRE HYDRANT
- FIRE HYDRANT NUMBER
- REDUCER-CONCENTRIC OR ECCENTRIC
- CAPPED LINE
- PIPE TURNS UP
- FIRE WATER LINE - ACTIVE
- FIRE WATER LINE - ABANDONED IN PLACE
- FWVXX ISOLATION VALVE NUMBER
- HYDXX HYDRANT NUMBER
- PIVXX POST INDICATOR VALVE NUMBER
- XXF FIRE WATER VALVE NUMBER
- XXP POTABLE WATER VALVE NUMBER
- XXRW RAW WATER VALVE NUMBER
- 5 05 26 03 FIRE ALARM EVENT NUMBER
  - MODULE
  - DCP (DATA COLLECTION POINT)
  - MIP NUMBER
  - AREA (LINE NUMBER)
- AREAS CONTROLLED BY SMC

NOTES:

1. FOR PIPING SYMBOLS AND ABBREVIATIONS SEE DRAWING 422623.
2. SOME, BUT NOT ALL, POST INDICATOR VALVES ARE WIRED AND HAVE 7 DIGIT EVENT NUMBERS. SEE LEGEND FOR EVENT NUMBER CODING.
3. 1" POTABLE WATER LINE IS ROUTED WITHIN ABANDONED 8" FIRE WATER LINE.

BASE COORDINATE SITE: N. 795,187.69 E. 358,763.11

FOR ENLARGED PLAN SEE SHEET 2 OF 6
FOR ENLARGED PLAN SEE SHEET 4 OF 6
FOR ENLARGED PLAN SEE SHEET 5 OF 6
FOR ENLARGED PLAN SEE SHEET 3 OF 6

TSF FIREWATER SYSTEM PLAN

A.L. CATES	DATE 12/15/88	SUBCONTRACTOR
J.C. PACHIBUSH	DATE 12/15/88	REQUESTER
REQUESTER T.L. TRACE	DATE 12/28/88	DESIGN
		DRAWN EE THOMAS
		PROJECT NO. 015566
		SPEC CODE
		FOR REVIEW/APPROVAL SIGNATURES SEE DAR NO.
		EFFECTIVE DATE

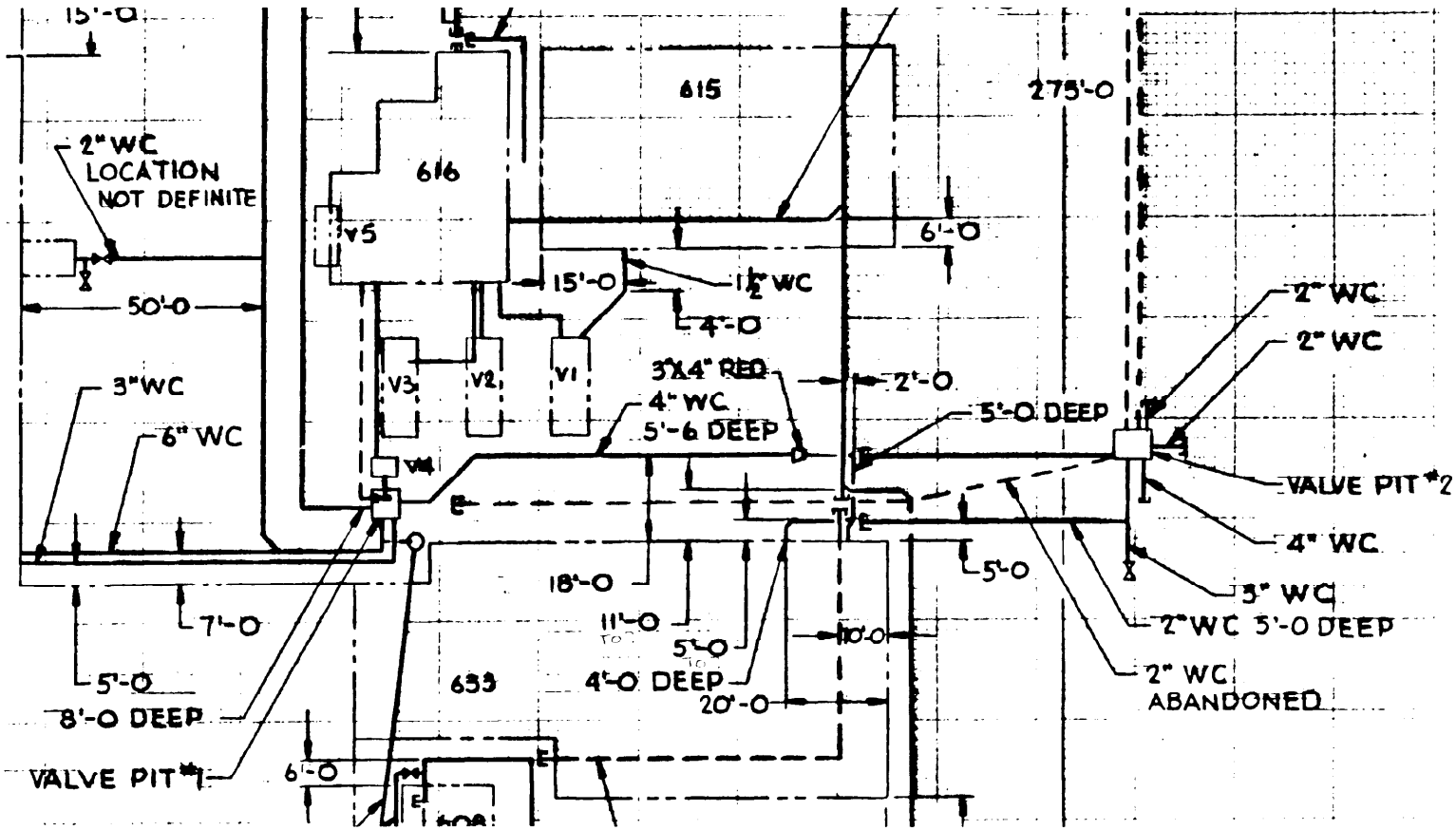
LOCKHEED MARTIN

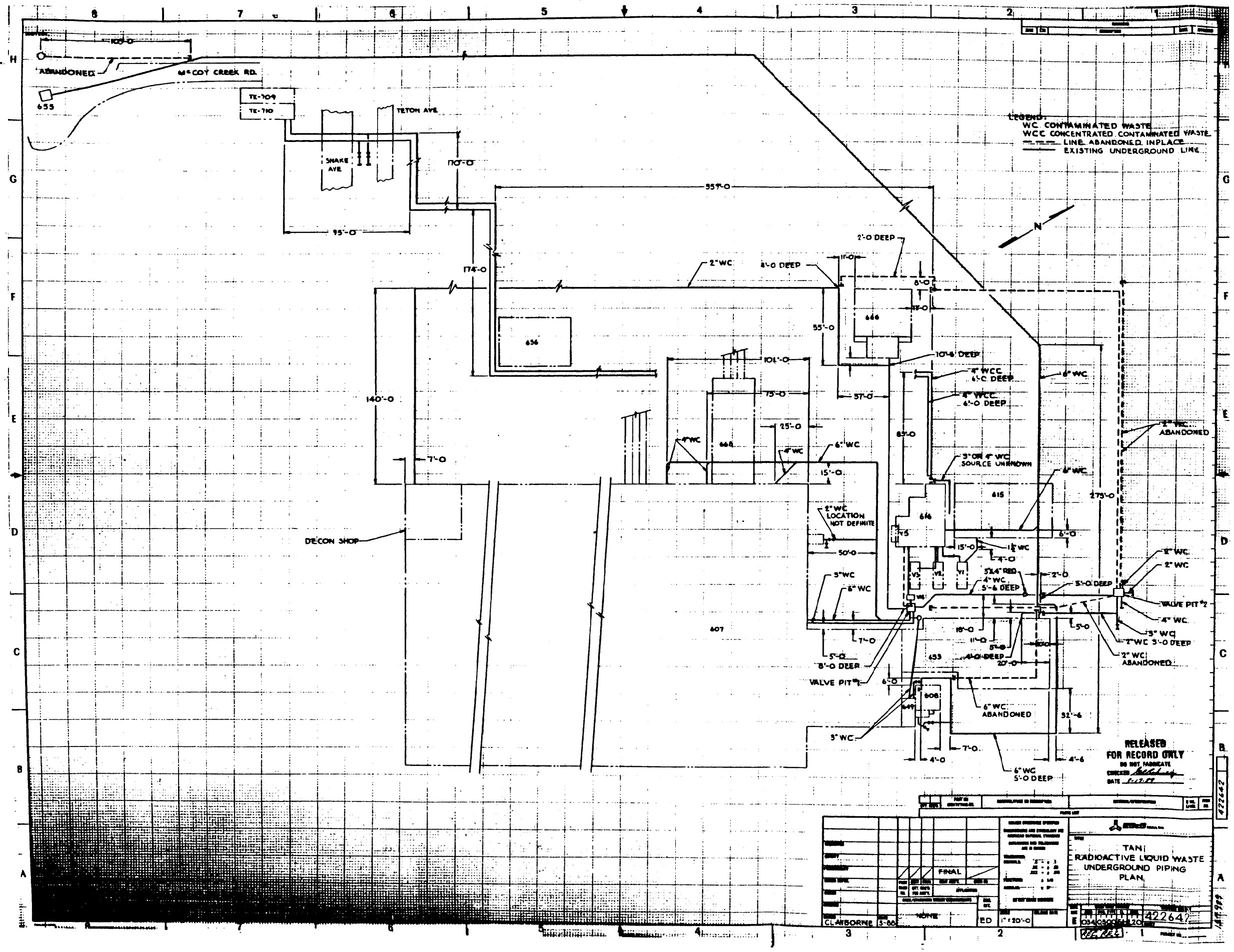
TAN/TSF AREA FIRE WATER & UTILITY WATER SITE PLAN

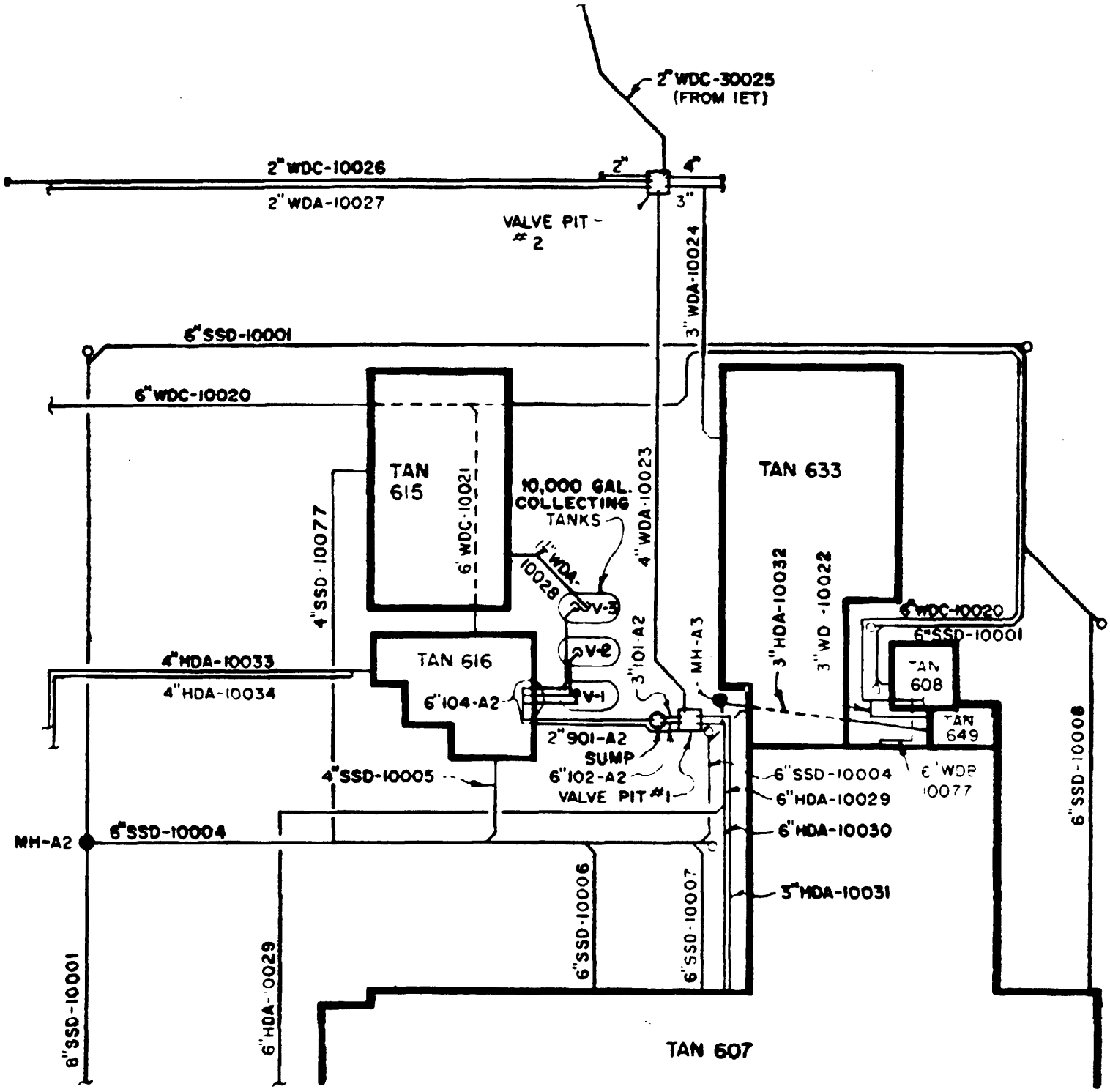
INDEX CODE NUMBER					
AREA	TYPE	CL	DRG	SERIAL	
033	0200	52	530		

SIZE	CAGE CODE	INDEX CODE NUMBER AREA	TYPE	CL	DRG	DWG-	REV
D	01MF3	032	0200	52	530	423185	9

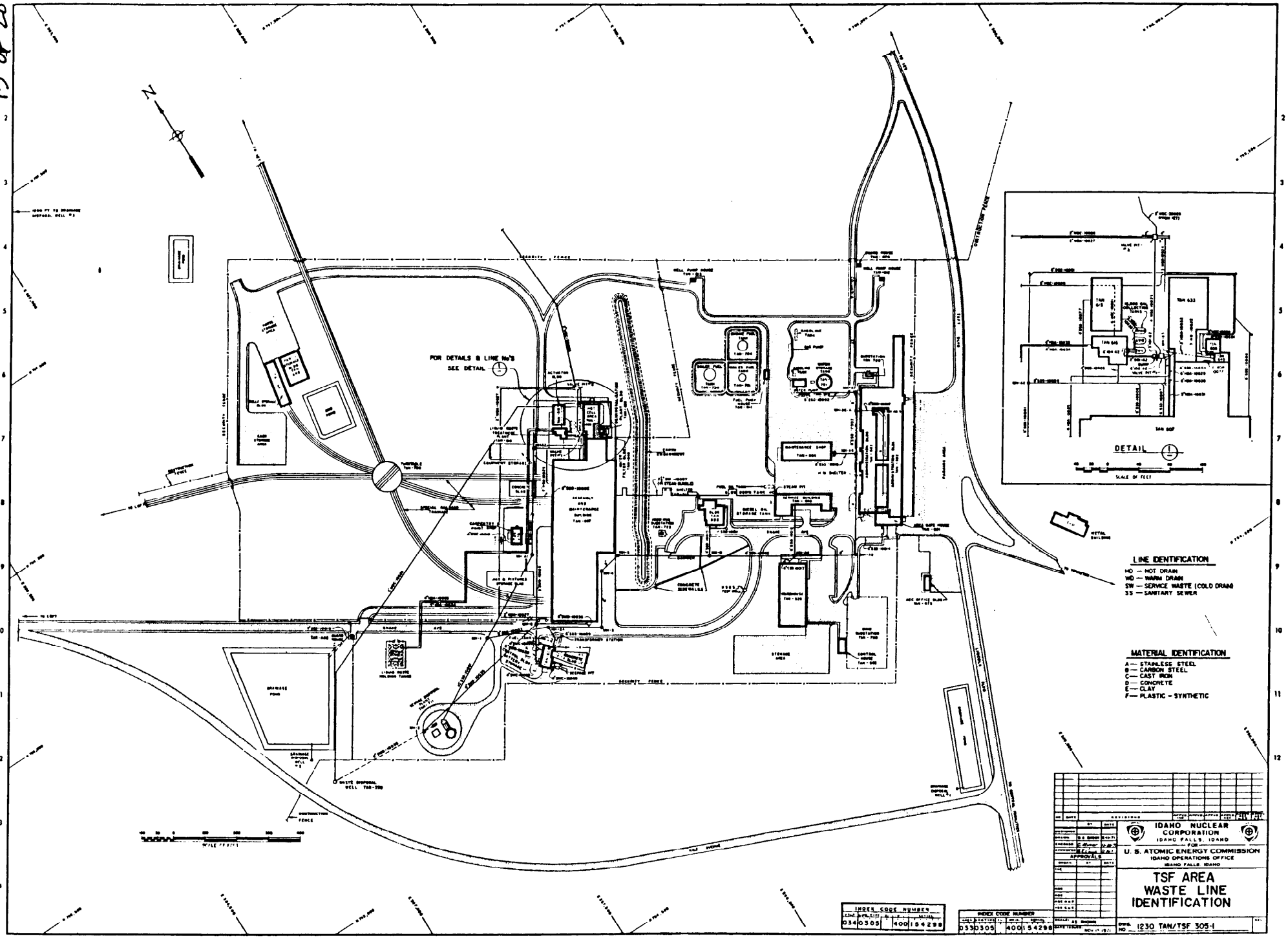
SCALE 1"=100'-0" SHEET 1 OF 6


15'-0
2" WC
LOCATION
NOT DEFINITE
50'-0
3" WC
6" WC
7'-0
5'-0
8'-0 DEEP
VALVE PIT #1
6'-0
616
V5
V3
V2
V1
V4
615
15'-0
1½" WC
4'-0
3"X4" RED
4" WC
5'-6 DEEP
2'-0
6'-0
275'-0
5'-0 DEEP
2" WC
2" WC
VALVE PIT #2
4" WC
3" WC
2" WC 5'-0 DEEP
2" WC
ABANDONED
5'-0
18'-0
11'-0
5'-0
10'-0
633
4'-0 DEEP
20'-0


LEGEND:
WC CONTAMINATED WASTE
WCC CONCENTRATED CONTAMINATED WASTE
LINE ABANDONED INPLACE
EXISTING UNDERGROUND LINE
ABANDONED
McCOY CREEK RD.
TETON AVE
SNAKE AVE
DECON SHOP
2" WC
4" WCC 6'-0 DEEP
3" OR 4" WC SOURCE UNKNOWN
2" WC LOCATION NOT DEFINITE
VALVE PIT #1
VALVE PIT #2
6" WC ABANDONED
6" WC 5'-0 DEEP
RELEASED FOR RECORD ONLY
DO NOT FABRICATE
TAN
RADIOACTIVE LIQUID WASTE UNDERGROUND PIPING PLAN
FINAL
CLAIBORNE
NONE
ED
1" = 20'-0
422642

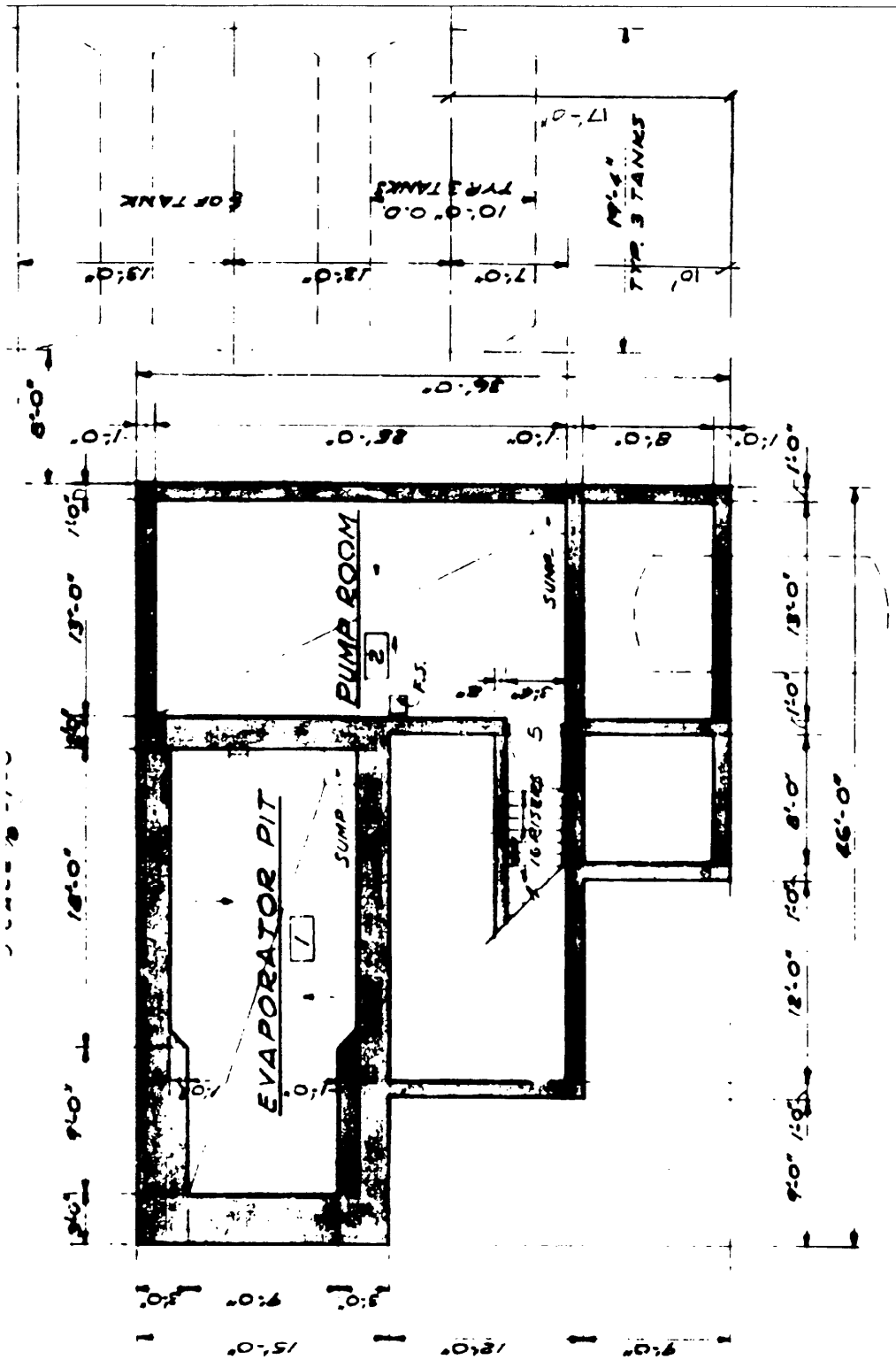

2"WDC-30025
(FROM IET)
2"WDC-10026
2"WDA-10027
2"
4"
3"
VALVE PIT #2
3"WDA-10024
6"SSD-10001
6"WDC-10020
TAN 615
6"WDC-10021
4"SSD-10077
10,000 GAL. COLLECTING TANKS
4"WDA-10023
3"WDA-10028
V-3
V-2
V-1
TAN 633
3"HDA-10032
3"WD-10022
6"WDC-10020
6"SSD-10001
TAN 608
TAN 649
4"HDA-10033
4"HDA-10034
TAN 616
6"104-A2
3"101-A2
MH-A3
2"901-A2
SUMP
6"102-A2
VALVE PIT #1
4"SSD-10005
6"SSD-10004
6"WDB 10077
6"HDA-10029
6"HDA-10030
3"HDA-10031
6"SSD-10008
MH-A2
6"SSD-10004
6"SSD-10006
6"SSD-10007
8"SSD-10001
6"HDA-10029
TAN 607

13 of 28



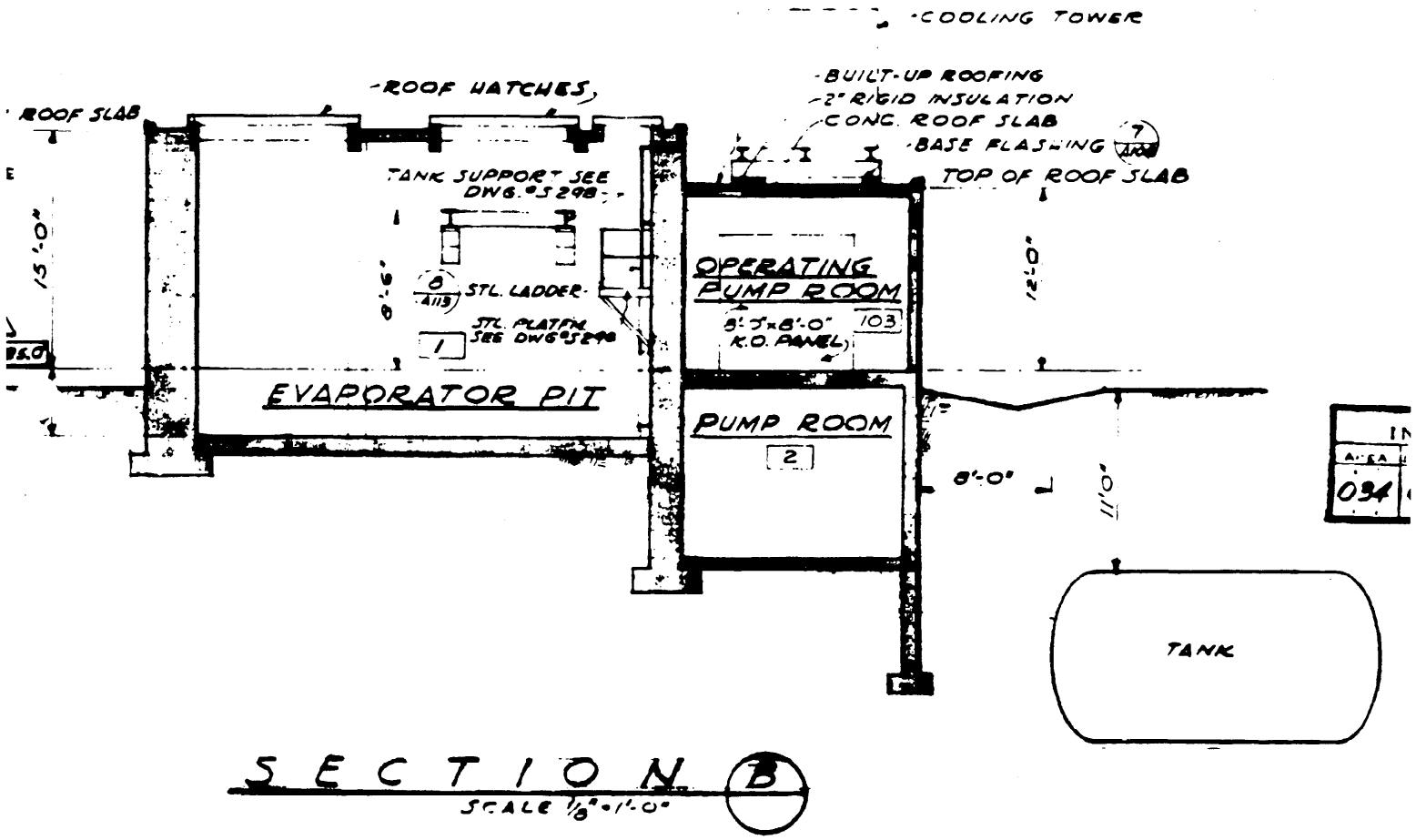
FOR DETAILS & LINE No'S SEE DETAIL
DETAIL
SCALE OF FEET
LINE IDENTIFICATION
HO — HOT DRAIN
WD — WARM DRAIN
SW — SERVICE WASTE (COLD DRAIN)
SS — SANITARY SEWER
MATERIAL IDENTIFICATION
A — STAINLESS STEEL
B — CARBON STEEL
C — CAST IRON
D — CONCRETE
E — CLAY
F — PLASTIC - SYNTHETIC
IDAHO NUCLEAR CORPORATION
IDAHO FALLS, IDAHO
FOR
U. S. ATOMIC ENERGY COMMISSION
IDAHO OPERATIONS OFFICE
IDAHO FALLS, IDAHO
TSF AREA
WASTE LINE
IDENTIFICATION
DWG. NO. 1230 TAN/TSF 305-1
INDEX CODE NUMBER
034 0305 400 154298
INDEX CODE NUMBER
033 0305 400 154298

Drawing



BASEMENT PLAN

SCALE 1/8"=1'-0"



SECTION B

SCALE 1/8"=1'-0"

ROOM FINISH SCHEDULE

ROOM NO. & SPACE NO.	ROOM NAME OR SPACE NAME	FLOOR CONCRETE	FLOOR PAINT	WALL CONCRETE	WALL PAINT	CLG. EXP. CONC.	CLG. PAINT	REMARKS
	EVAPORATOR PIT	•	P1	•	P1	•	P1	
<	PUMP ROOM	•		•		•		
101	VESTIBULE	•		•		•		
102	CAUSTIC PUMP RM	•	P1 P3	•	P1	•	P1	
103	OPERATG PUMP RM	•	P1	•	P1	•	P1	
104	CONTROL ROOM	•	P1	•	P1	•	P1	
201	PENTHOUSE	•		•		•		

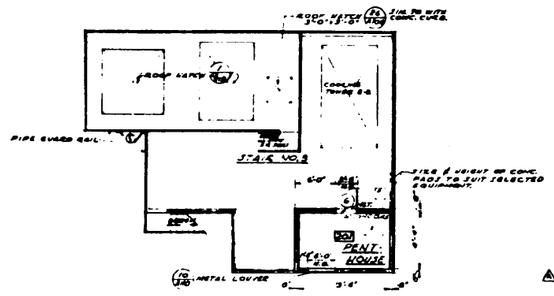
LEGEND

P1 - 2 COAT INTERIOR FLAT OIL PAINT
PC 33 - PROTECTIVE COATING "AMERCOAT #33"
PC 38 - PROTECTIVE COATING "AMERCOAT #38"

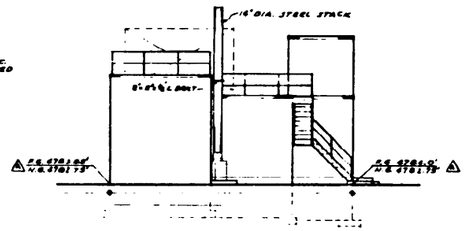
DOOR SCHEDULE

DOOR	TYPE	WIDTH	HEIGHT	TH.	MATERIAL	FRAME DETAILS HEAD	JAMB	SILL	HARDWARE	LOUVERS	REMARKS
1	D	3'-0"	7'-0"	1 3/4	HOLLOW MET	4/3001	5/3001		H-10		MET. THRESH'D.
2	F	3'-0"	7'-0"	1 3/4	HOLLOW MET	5/3001	6/3001		H-6	8'-0"x1'-0"	
3	B	3'-0"	7'-0"	1 3/4	HOLLOW MET	5/3001	6/3001		H-6		
4	F	3'-0"	7'-0"	1 3/4	HOLLOW MET	4/3001	5/3001		H-6	8'-0"x1'-0"	
5	F	3'-0"	7'-0"	1 3/4	HOLLOW MET	4/3001	5/3001		H-6	8'-0"x1'-0"	
6	A	3'-0"	7'-0"	1 3/4	HOLLOW MET	4/3001	5/3001		H-14		MET. THRESH'D.

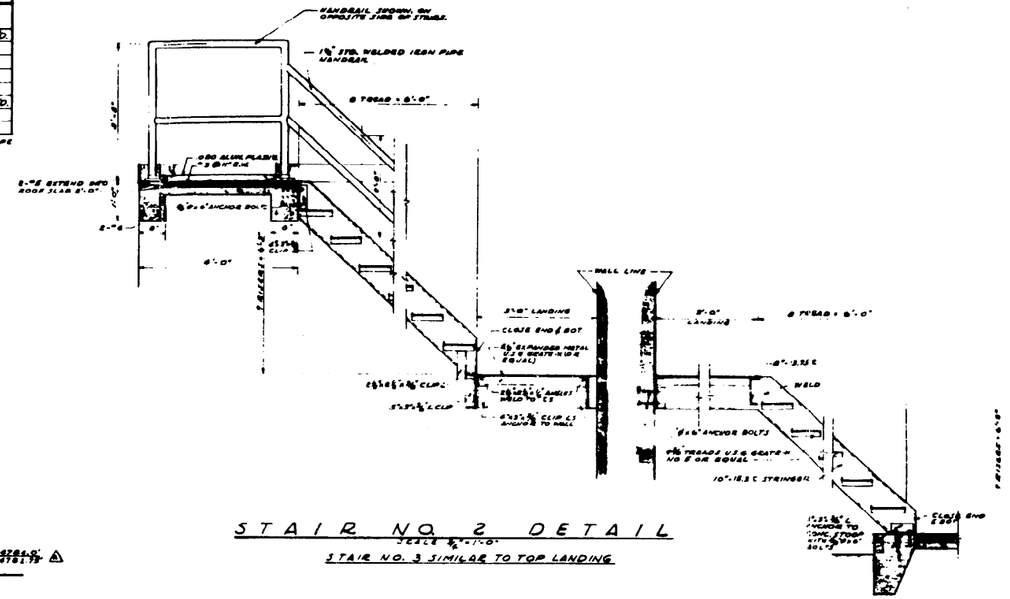
THRESHOLD TO BE METAL INTERLOCKING TYPE



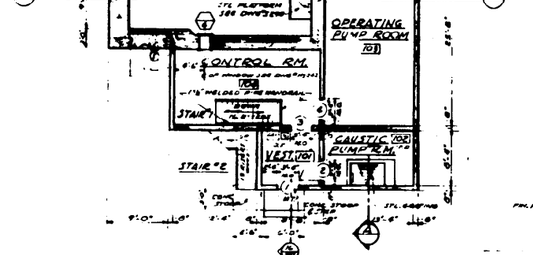
ROOF PLAN
SCALE 1/8"=1'-0"



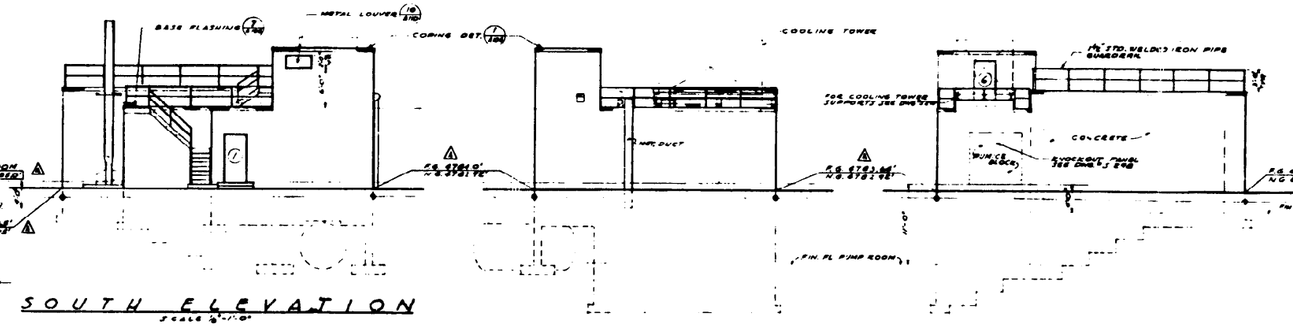
WEST ELEVATION
SCALE 1/8"=1'-0"



STAIR NO. 2 DETAIL
SCALE 3/4"=1'-0"
STAIR NO. 3 SIMILAR TO TOP LANDING



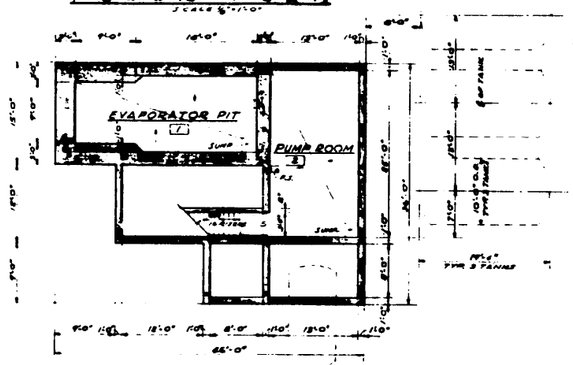
FLOOR PLAN
SCALE 1/8"=1'-0"



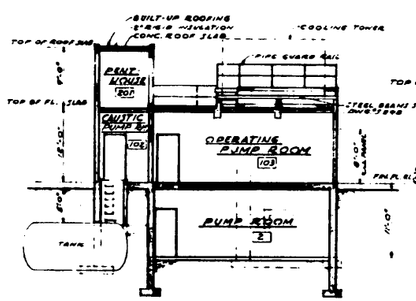
SOUTH ELEVATION
SCALE 1/8"=1'-0"

EAST ELEVATION
SCALE 1/8"=1'-0"

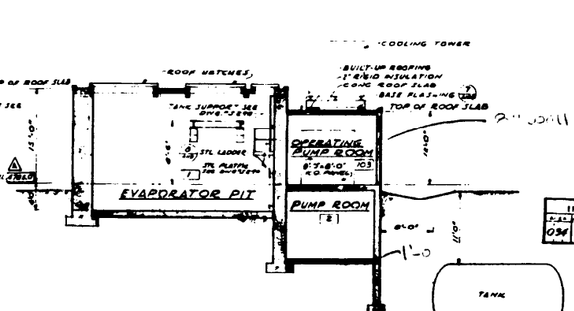
NORTH ELEVATION
SCALE 1/8"=1'-0"



BASEMENT PLAN
SCALE 1/8"=1'-0"



SECTION A
SCALE 1/8"=1'-0"



SECTION B
SCALE 1/8"=1'-0"

INDEX CODE NUMBER
034 06 16 00 595 106881

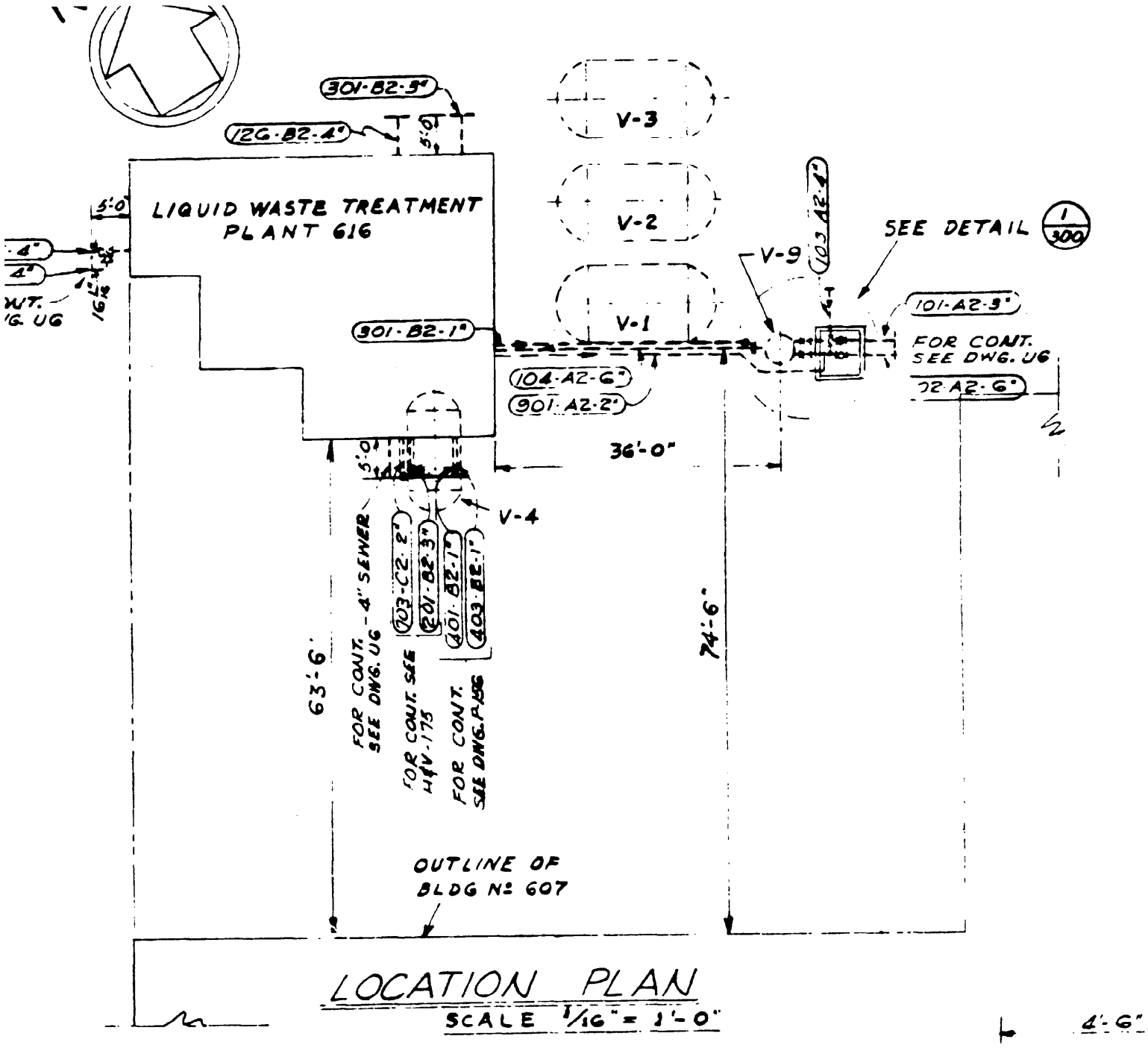
NO.	DATE	REVISIONS	APPROVED
2	10-8-52	AS BUILT NOTES ADDED	
1	7-8-52	APPROVED FOR ISSUE FROM PHILCO	

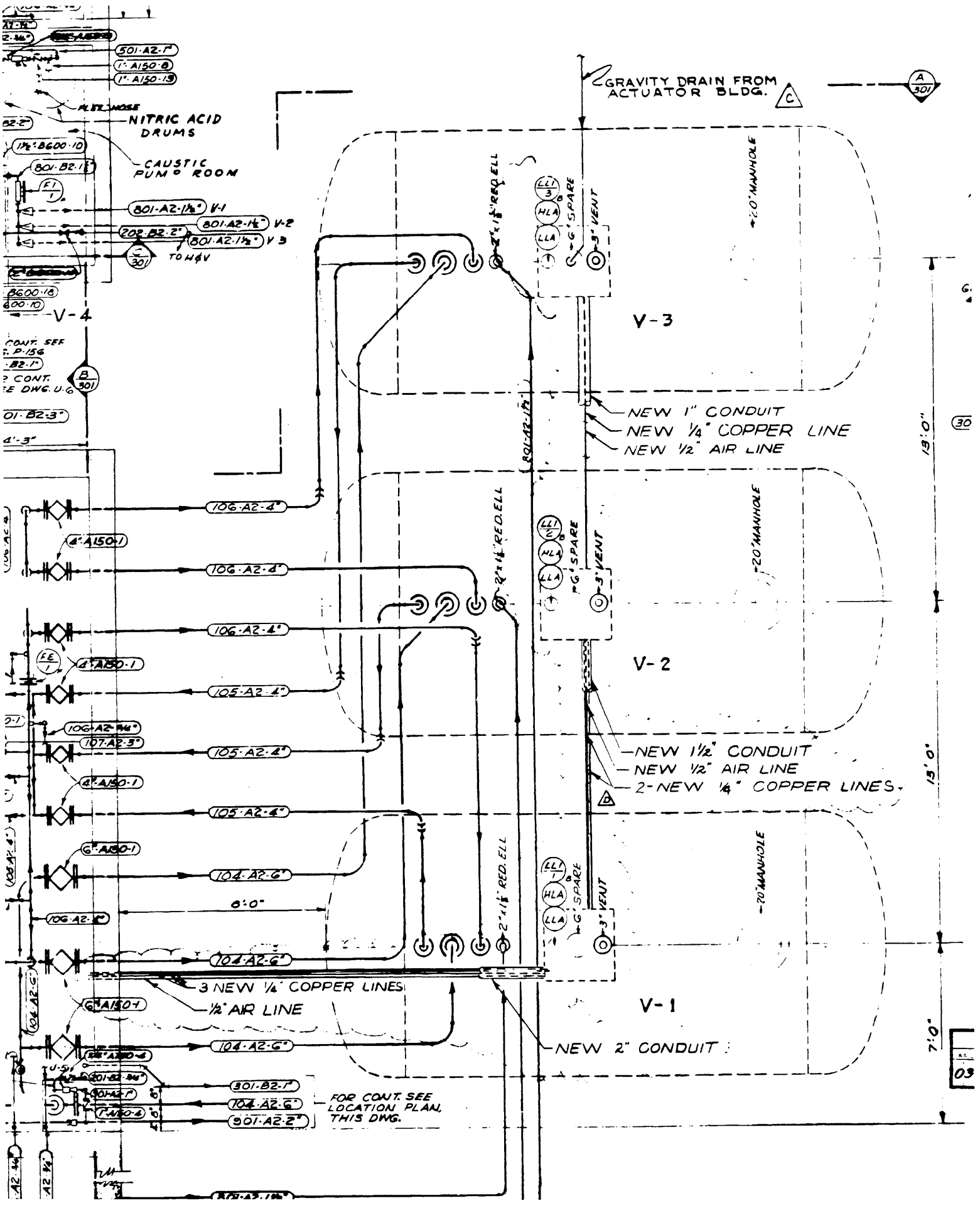
A N P
ASSEMBLY & MAINTENANCE AREA
LIQUID WASTE TREATMENT PLANT BLDG. 616
PLAN, ELEVATIONS, SECTIONS & DETAILS
THE RALPH M. PARSONS COMPANY
ARCHITECTS - ENGINEERS
U.S. ATOMIC ENERGY COMMISSION
IDAHO OPERATIONS OFFICE
IDAHO FALLS, IDAHO
DRWG. NO. 902-3-ANP-616-A 297

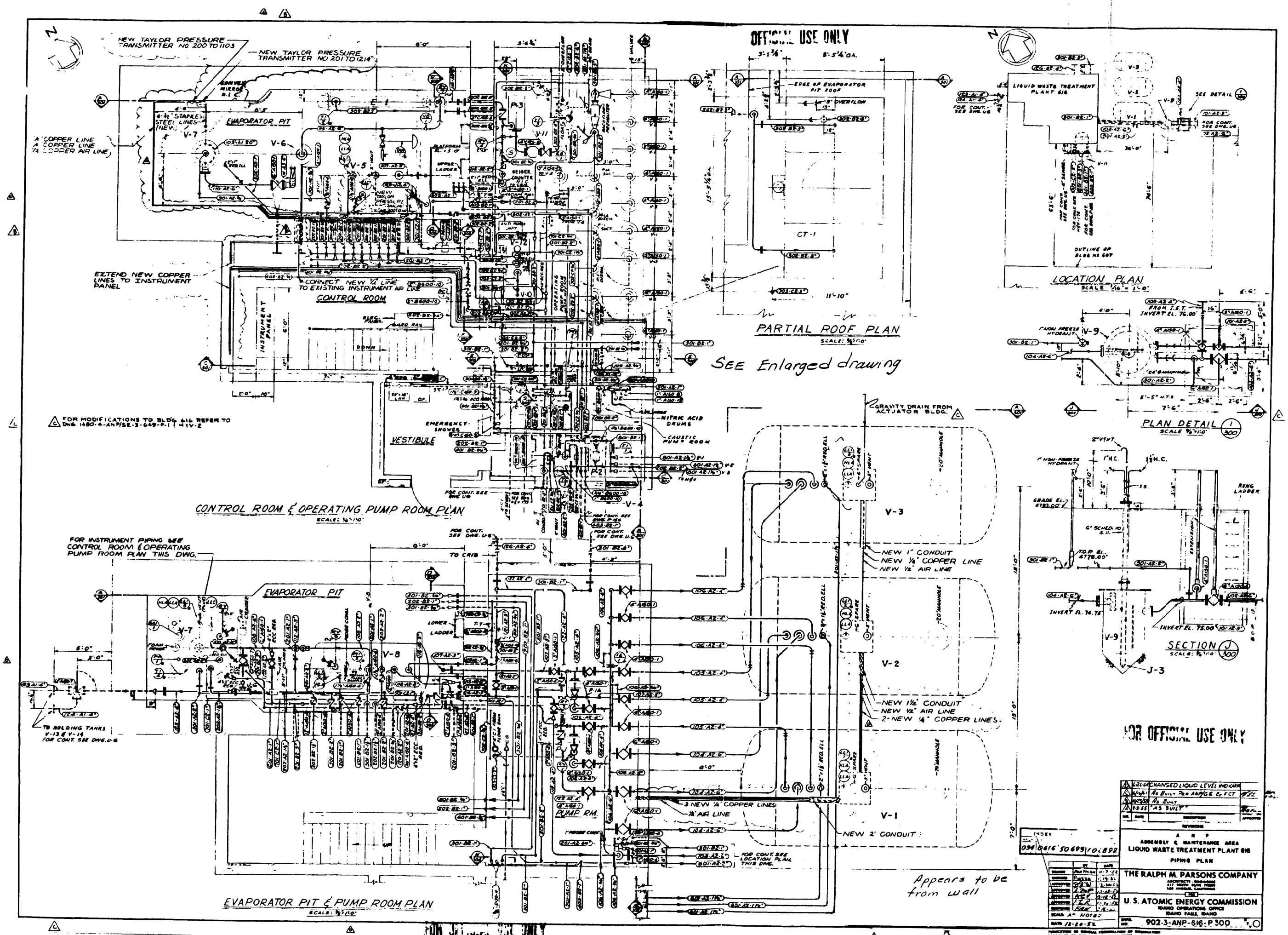
	BY	DATE
DESIGNED	LCT	11-5-51
DRAWN	LCT	9-3-52
APPROVED		12-3-52
APPROVED	Prall	12-26-52
APPROVED	RCH	12-26-52
APPROVED	RCH	1-5-53
CONTRACT	TRW	1-5-53

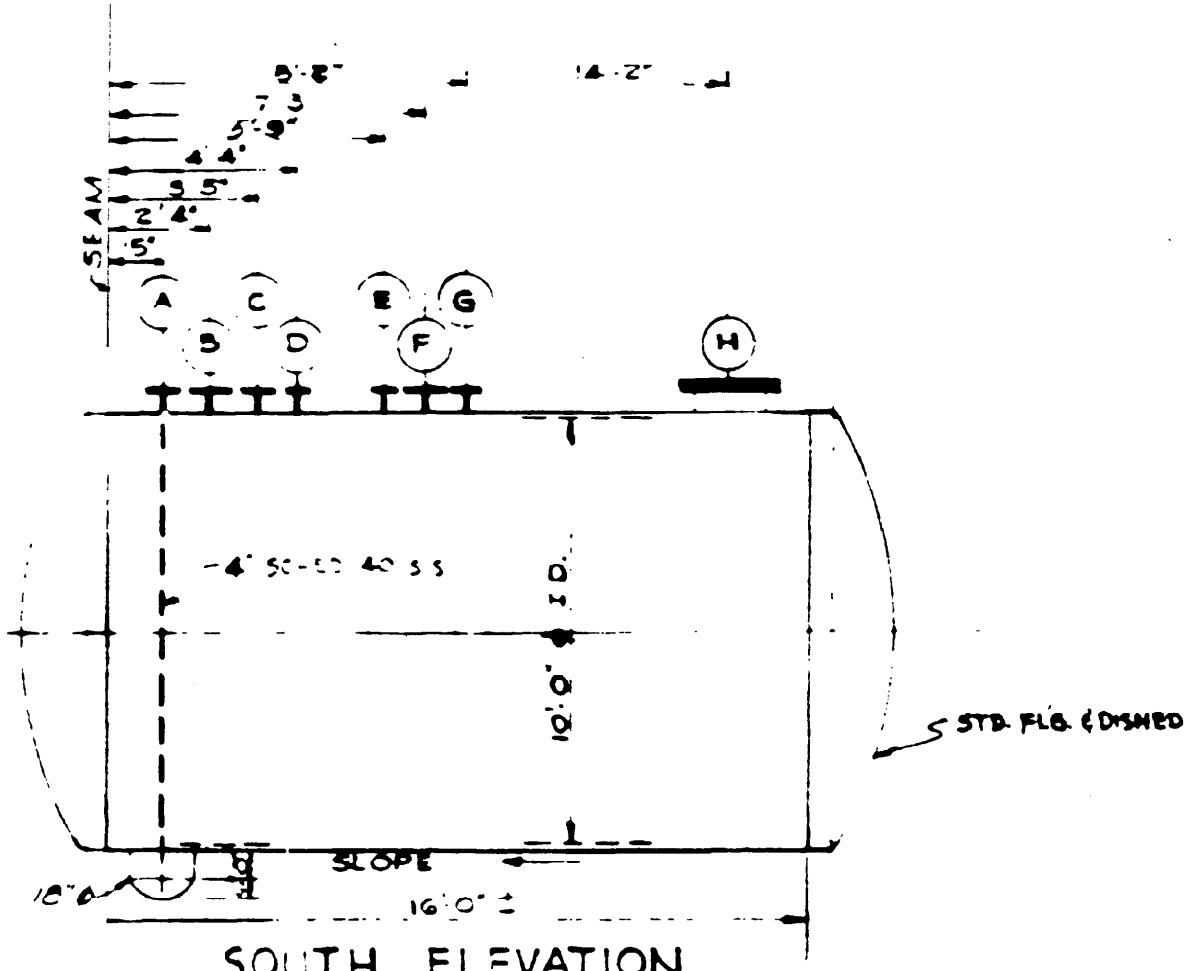
SCALE AS NOTED
DATE 12-26-52

5'-6 3/16"
23"
3" OVERFLOW
3/4" DRAIN
VALVES
15"
Basement wall 1'-0" THK
1st level, wall 8" THK
P-3
V-11
4" C125-3
302-B2-2"
303-B2-4"
FLOAT
BACKFLOW PREVENTER
301-B2-3"
301-B2-3/4"
GEIGER COUNTER N.I.C.
TO CRIB
3" A150-1
VACUUM FLASK SAMPLE
TO VACUUM SAMPLE FLASK
201-B2-2"
TO V-5
3'-0"
P-1A SUCT.
P-1A DISCH.
P-1 SUCT.
P-1 DISCH.
4" A150-1
502-A2-1"
3" A150-1 FROM V-8
ANTI-FOAM UNIT
V-12
701-C2-3/4"
201-B2-2"
701-C2-1 1/2"
RED. ELL
V-10
OPERATING PUMP ROOM SEE H&V 305
702-C2-3/4"
202-B2-2"
301-B2-3/4"
201-B2-3"
202-B2-2"
301-A2-1"
703-C2-2"
401-B2-3/4"
301-B2-2"
2" C150-3
201-B2-3/4"
106-A2-3/4"
V-1
V-2
V-3
2'-4"
3'-3"
3'-1"
2'-0"
6"
17"
2'-3 3/8"
15'-5 1/4" O.A.
15 3/8"
302-B2-
301-B2-1"
A/301
K/301
E/305


301-B2-5"
12G-B2-4"
5'-0"
LIQUID WASTE TREATMENT PLANT 616
V-3
V-2
V-1
V-9
103-A2-4"
SEE DETAIL 1/300
101-A2-3"
FOR CONT. SEE DWG. UG
102-A2-6"
901-B2-1"
104-A2-6"
901-A2-2"
36'-0"
V-4
103-C2-2"
201-B2-3"
401-B2-1"
403-E2-1"
FOR CONT. SEE DWG. UG - 4" SEWER
FOR CONT. SEE DWG. 4V-175
FOR CONT. SEE DWG. P356
63'-6"
74'-6"
OUTLINE OF BLDG No 607
LOCATION PLAN
SCALE 1/16" = 1'-0"
4'-6"


GRAVITY DRAIN FROM ACTUATOR BLDG.
NITRIC ACID DRUMS
CAUSTIC PUMP ROOM
501-A2-1"
1"-A150-8
1"-A150-19
801-A2-1½" V-1
801-A2-1½" V-2
801-A2-1½" V-3
202-B2-2"
TO H&V
V-4
V-3
V-2
V-1
NEW 1" CONDUIT
NEW ¼" COPPER LINE
NEW ½" AIR LINE
NEW 1½" CONDUIT
NEW ½" AIR LINE
2-NEW ¼" COPPER LINES
3 NEW ¼" COPPER LINES
½" AIR LINE
NEW 2" CONDUIT
106-A2-4"
105-A2-4"
104-A2-6"
301-B2-1"
901-A2-2"
FOR CONT. SEE LOCATION PLAN, THIS DWG.
6" SPARE
3" VENT
20" MANHOLE
13'-0"
7'-0"
8'-0"


OFFICIAL USE ONLY
NEW TAYLOR PRESSURE TRANSMITTER NO. 200 TO 1103
NEW TAYLOR PRESSURE TRANSMITTER NO. 201 TO 1214
EVAPORATOR PIT
EXTEND NEW COPPER LINES TO INSTRUMENT PANEL
CONNECT NEW 1/2" LINE TO EXISTING INSTRUMENT AIR LINE
CONTROL ROOM
INSTRUMENT PANEL
VESTIBULE
EMERGENCY SHOWER
NITRIC ACID DRUMS
CAUSTIC PUMP ROOM
CONTROL ROOM & OPERATING PUMP ROOM PLAN
FOR MODIFICATIONS TO BLDG 616 REFER TO DWG 1480-4-ANP/GE-3-649-P-1 & 1V-2
FOR INSTRUMENT PIPING SEE CONTROL ROOM & OPERATING PUMP ROOM PLAN THIS DWG.
EVAPORATOR PIT
TO HOLDING TANKS V-13 & V-14 FOR CONT. SEE DWG. U-6
PUMP RM.
EVAPORATOR PIT & PUMP ROOM PLAN
PARTIAL ROOF PLAN
SEE Enlarged drawing
GRAVITY DRAIN FROM ACTUATOR BLDG.
NEW 1" CONDUIT
NEW 1/4" COPPER LINE
NEW 1/2" AIR LINE
NEW 1 1/2" CONDUIT
NEW 1/2" AIR LINE
2-NEW 1/4" COPPER LINES
3 NEW 1/4" COPPER LINES
1/2" AIR LINE
NEW 2" CONDUIT
FOR CONT. SEE LOCATION PLAN THIS DWG.
Appears to be from wall
LIQUID WASTE TREATMENT PLANT 616
LOCATION PLAN
PLAN DETAIL
SECTION
FOR OFFICIAL USE ONLY
CHANGED LIQUID LEVEL INDICATOR
AS BUILT PER ANP/GE BY FCT
AS BUILT
"AS BUILT"
REVISIONS
A N P
ASSEMBLY & MAINTENANCE AREA
LIQUID WASTE TREATMENT PLANT 616
PIPING PLAN
THE RALPH M. PARSONS COMPANY
U. S. ATOMIC ENERGY COMMISSION
IDAHO OPERATIONS OFFICE
IDAHO FALLS, IDAHO
SCALE AS NOTED
DATE 12-20-52
902-3-ANP-616-P 300
FOR OFFICIAL USE ONLY



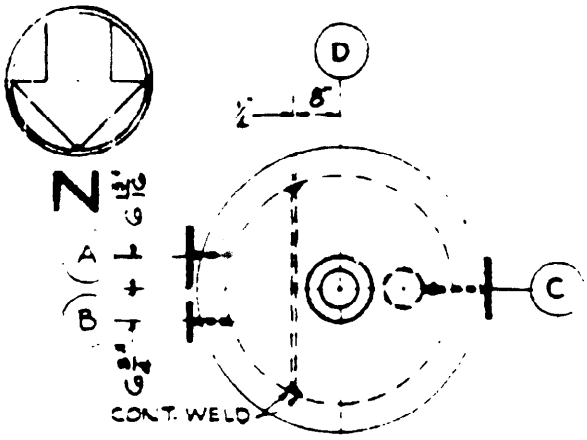
SOUTH ELEVATION

ITEM	SIZE	PRESS	SERVICE	MATL.
A	4"	50#	PUMP SUCTION	S.S.
B	6	50#	LOADING	S.S
C	4	50#	PUMP RETURN	S.S.
D	2	50#	CAUSTIC INLET	S.S
E	2"	50#	HLA LLA LL CONN.	S.S.
F	6	50#	SPARE	S.S
G	3	50#	VENT	S.S.
H	20"	I.D.	MANHOLE W/BLIND FLG.	S S

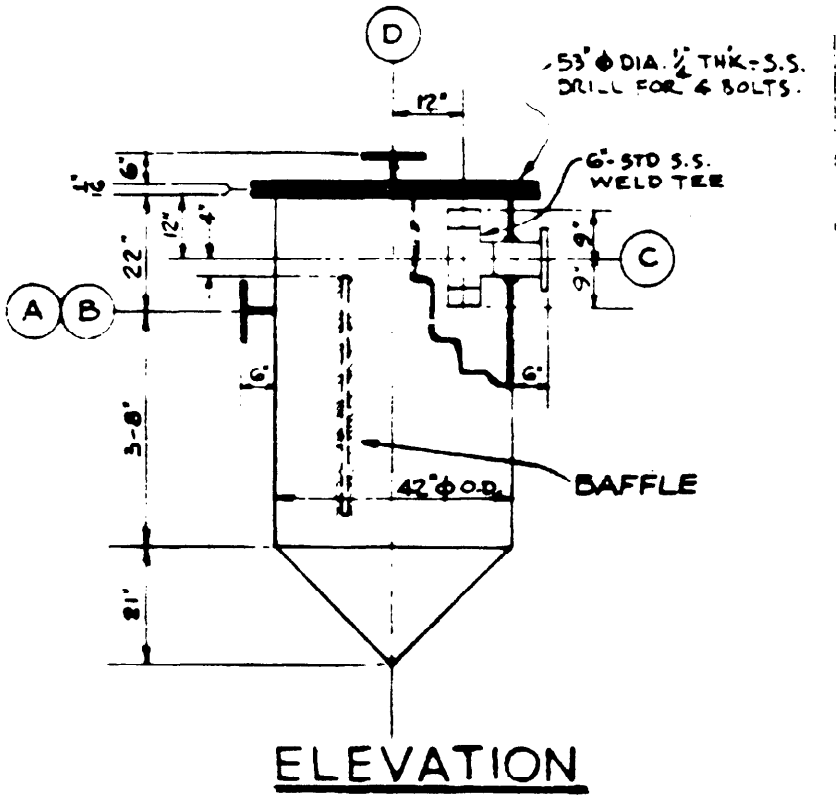
NOTE:
PROJECTION OF ALL FLGD. NOZZLES SHALL BE 6" UNLESS OTHERWISE SHOWN.

VESSEL SHALL BE FABRICATED FOR 10,000 GAL. CAPACITY.

V-1 TO V-3 (INCL) - COLLECTING TANKS - NO. REQD. 3



PLAN

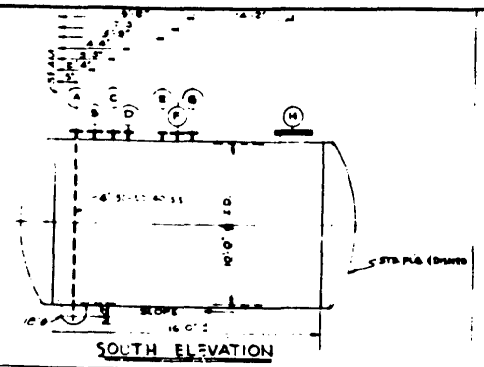


ELEVATION

ITEM	SIZE	PRESS	SERVICE	MAT'L.
(A)	6"	150#	INLET	S.S
(B)	3"	150#	INLET	S.S
(C)	6"	150#	OUTLET	S.S
(D)	6"	150#	VENT	S.S.

NOTE:
VESSEL SHALL BE FABRICATED FOR 400 GAL. CAPACITY.

V-9 SUMP No. REQ'D. 1

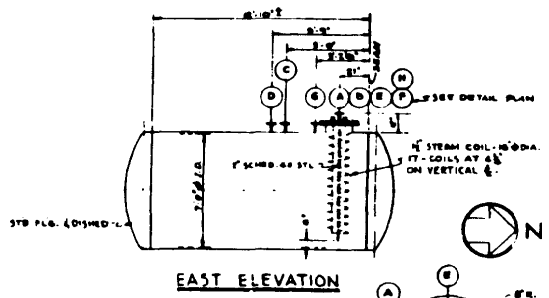


SOUTH ELEVATION

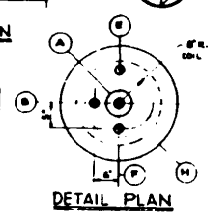
ITEM	SIZE	PRESS	SERVICE	MAT'L
A	4"	50#	PUMP SUCT'N	S.S
B	4"	50#	LOADING	S.S
C	4"	50#	PUMP RETURN	S.S
D	2"	50#	CAUSTIC INLET	S.S
E	2"	50#	MLA, LLA, LLI CONN.	S.S
F	3"	50#	SPARE	S.S
G	3"	50#	VENT	S.S.
H	22" O.D.	STD	MAN-HOLE W/BLIND FLG.	S.S

NOTE:
PROJECTION OF ALL FLGD. NOZZLES SHALL BE 6" UNLESS OTHERWISE SHOWN.
VESSEL SHALL BE FABRICATED FOR 10,000 GAL. CAPACITY.

V-1 to V-3 (INCL) - COLLECTING TANKS - No. Reqd. 3



EAST ELEVATION

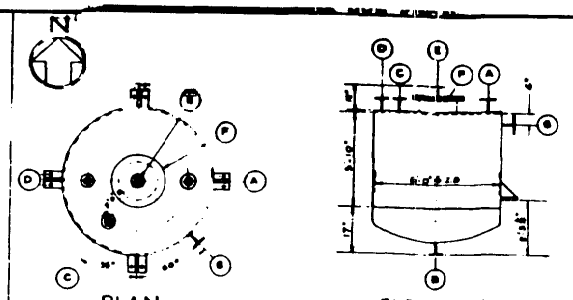


DETAIL PLAN

ITEM	SIZE	PRESS	SERVICE	MAT'L
A	2"	150#	PUMP SUCTION	STL.
B	1½"	3000#	TC CONN., FULL CPLG.	STL
C	2"	150#	VENT	STL.
D	1"	150#	FILL LINE	STL.
E	¾"	3000#	STEAM IN - FULL CPLG	STL
F	1½"	3000#	COND. OUT - FULL CPLG.	STL
G	2"	150#	MLA, LLA, LLI	STL
H	20"	STD	MANHOLE - W/BLIND FLG.	STL.

NOTE:
PROJECTION OF ALL FLGD NOZZLES SHALL BE 6" UNLESS OTHERWISE SHOWN.
VESSEL SHALL BE FABRICATED FOR 4000 GAL. CAPACITY.

V-4 CAUSTIC TANK No. Reqd. 1



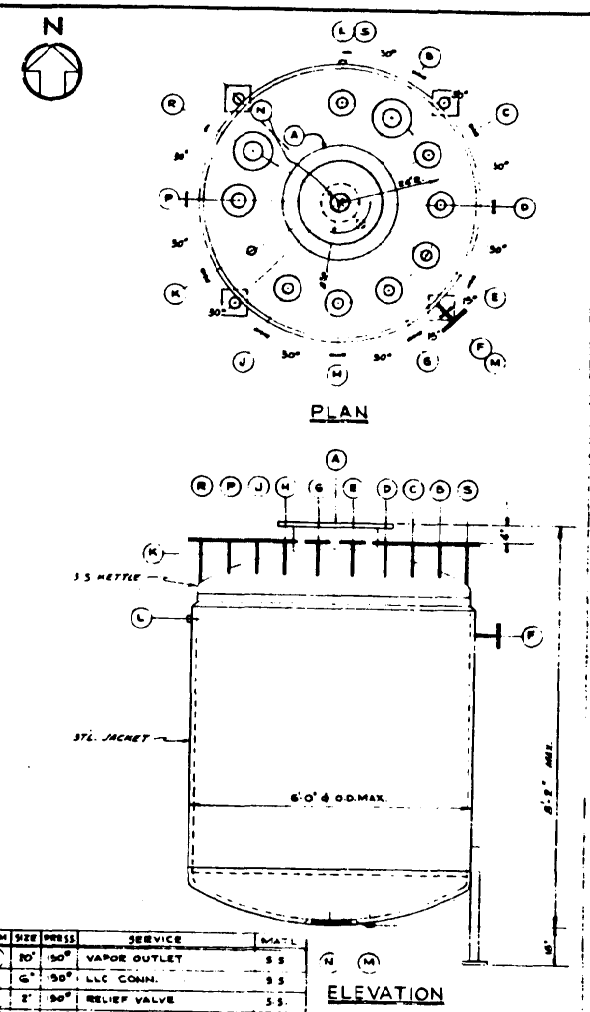
PLAN

ELEVATION

ITEM	SIZE	PRESS	SERVICE	MAT'L
A	3"	150#	FEED INLET	S.S.
B	2"	150#	OUTLET	S.S.
C	2"	150#	WATER INLET	S.S
D	2"	150#	MLA, LLA, LLI	S.S
E	2"	150#	VENT	S.S
F	18"	STD.	MANHOLE - W/BLIND FLG.	S.S
G	4"	150#	OVERFLOW	S.S.

NOTE:
PROJECTION OF ALL FLGD NOZZLES SHALL BE 6" UNLESS OTHERWISE SHOWN.
VESSEL SHALL BE FABRICATED FOR 1000 GAL. CAPACITY.

V-5 HEAD TANK No. Reqd. 1



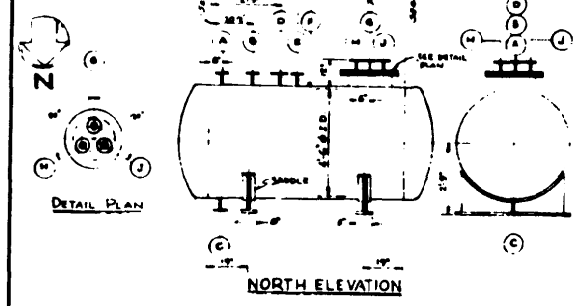
PLAN

ELEVATION

ITEM	SIZE	PRESS	SERVICE	MAT'L
A	20"	150#	VAPOR OUTLET	S.S
B	6"	150#	LLC CONN.	S.S
C	2"	150#	RELIEF VALVE	S.S.
D	2"	150#	ANTI-FOAM INLET	S.S
E	2"	150#	ACID INLET	S.S
F	2"	150#	100° STEAM INLET	STL
G	2"	150#	25° STEAM INLET	S.S
H	2"	150#	WATER INLET	S.S
J	2"	150#	TIC CONN.	S.S
K	¾"	3000#	PVI CONN.	S.S
L	1"	8000#	VENT	STL
M	¾"	8000#	CONDENSATE OUTLET	STL
N	4"	150#	BOTTOMS INLET - OUTLET	S.S
P	3"	150#	FOAM PROBE	S.S.
Q	6"	150#	SPECIFIC GRAVITY INDICATOR	S.S.
R	2"	150#	MLA, LLA, LLI CONN.	S.S.

NOTE:
PROJECTION OF ALL FLGD NOZZLES SHALL BE 6" UNLESS OTHERWISE SHOWN.
VESSEL SHALL BE FABRICATED FOR 1000 GAL. CAPACITY.

V-7 EVAPORATOR
No. Reqd. 1



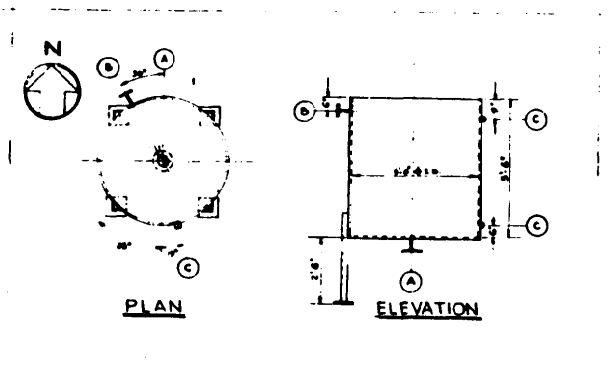
DETAIL PLAN

NORTH ELEVATION

ITEM	SIZE	PRESS	SERVICE	MAT'L
A	2"	150#	VAPOR OUTLET	S.S
B	2"	50#	CONDENSATE INLET	S.S
C	3"	150#	BOTTOMS OUTLET	S.S.
D	2"	50#	STEAM INLET	S.S
E	2"	150#	WATER INLET	S.S
F	¾"	3000#	PVI - CONN. FULL CPLG	S.S
G	2"	150#	LLI, MLA - CONN	S.S
H	2"	150#	PROBE CONN	S.S
I	2"	150#	RELIEF VALVE	S.S
J	20"	STD	MANHOLE - W/BLIND FLG.	S.S.

NOTE:
PROJECTION OF ALL FLGD NOZZLES SHALL BE 6" UNLESS OTHERWISE SHOWN.
VESSEL SHALL BE FABRICATED FOR 1000 GAL. CAPACITY.

V-8 RECEIVER No. Reqd. 1



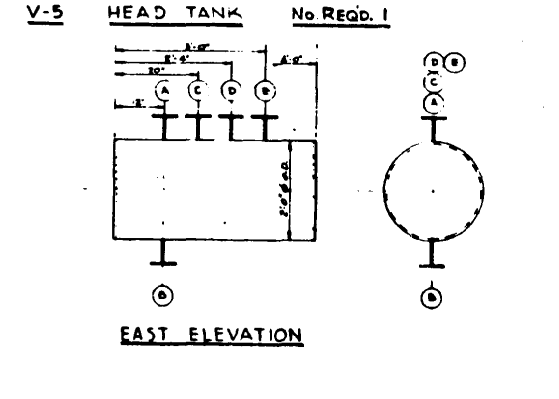
PLAN

ELEVATION

ITEM	SIZE	PRESS	SERVICE	MAT'L
A	4"	150#	PUMP SUCTION	STL.
B	2"	150#	OVERFLOW	STL.
C	¾"	3000#	LG - CONN. FULL CPLG.	STL.

NOTE:
PROJECTION OF ALL FLGD NOZZLES SHALL BE 6" UNLESS OTHERWISE SHOWN.
VESSEL SHALL BE FABRICATED FOR 825 GAL. CAPACITY

V-11 WATER TANK No. Reqd. 1

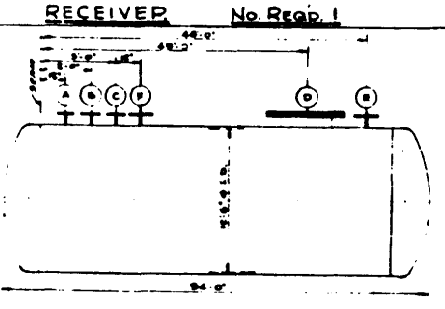


EAST ELEVATION

ITEM	SIZE	PRESS	SERVICE	MAT'L
A	3"	150#	VENT	STL
B	8"	150#	BOTTOMS OUTLET	STL
C	2"	150#	L.P. CONDENSATE INLET	STL.
D	2"	150#	H.P. CONDENSATE INLET	STL
E	6"	150#	SPARE	STL

NOTE:
PROJECTION OF ALL FLGD NOZZLES SHALL BE 6" UNLESS OTHERWISE SHOWN.
VESSEL SHALL BE FABRICATED FOR 100 GAL. CAPACITY

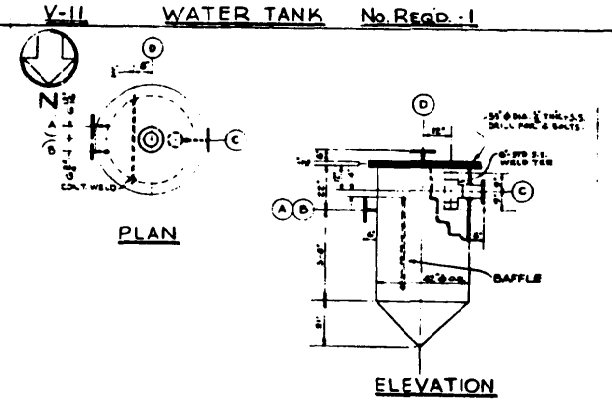
V-12 FLASH TANK No. Reqd. 1



WEST ELEVATION

ITEM	SIZE	PRESS	SERVICE	MAT'L
A	3"	50#	LLI CONN.	STL
B	4"	150#	INLET	STL
C	4"	150#	INLET	STL
D	36"	150#	MANHOLE - W/S. AND FLG	STL
E	6"	150#	VENT	STL
F	6"	150#	SPARE	STL

NOTE:
PROJECTION OF ALL FLGD NOZZLES SHALL BE 6" UNLESS OTHERWISE SHOWN.
VESSEL SHALL BE FABRICATED FOR 50,000 CAPACITY.



PLAN

ELEVATION

ITEM	SIZE	PRESS	SERVICE	MAT'L
A	6"	150#	INLET	S.S
B	3"	150#	INLET	S.S
C	6"	150#	OUTLET	S.S
D	6"	150#	VENT	S.S.

NOTE:
VESSEL SHALL BE FABRICATED FOR 600 GAL. CAPACITY.

V-13 & V-14 HOLDING TANKS No. Reqd. 2

V-9 SUMP No. Reqd. 1

OFFICIAL USE ONLY

FOR OFFICIAL USE ONLY

INDEX CODE NUMBER				
WBS #				
034	0616	559695	106894	

	BY	DATE
DRAWN	Diotte	11-12-52
CHECKED	G.Hall	11-10-52
APPROVED	[illegible]	12-16-52
APPROVED	[illegible]	12-18-52
APPROVED	[illegible]	12-18-52
APPROVED	[illegible]	12-18-52
ISSUED FOR SCALE		
ISSUED		12-20-52

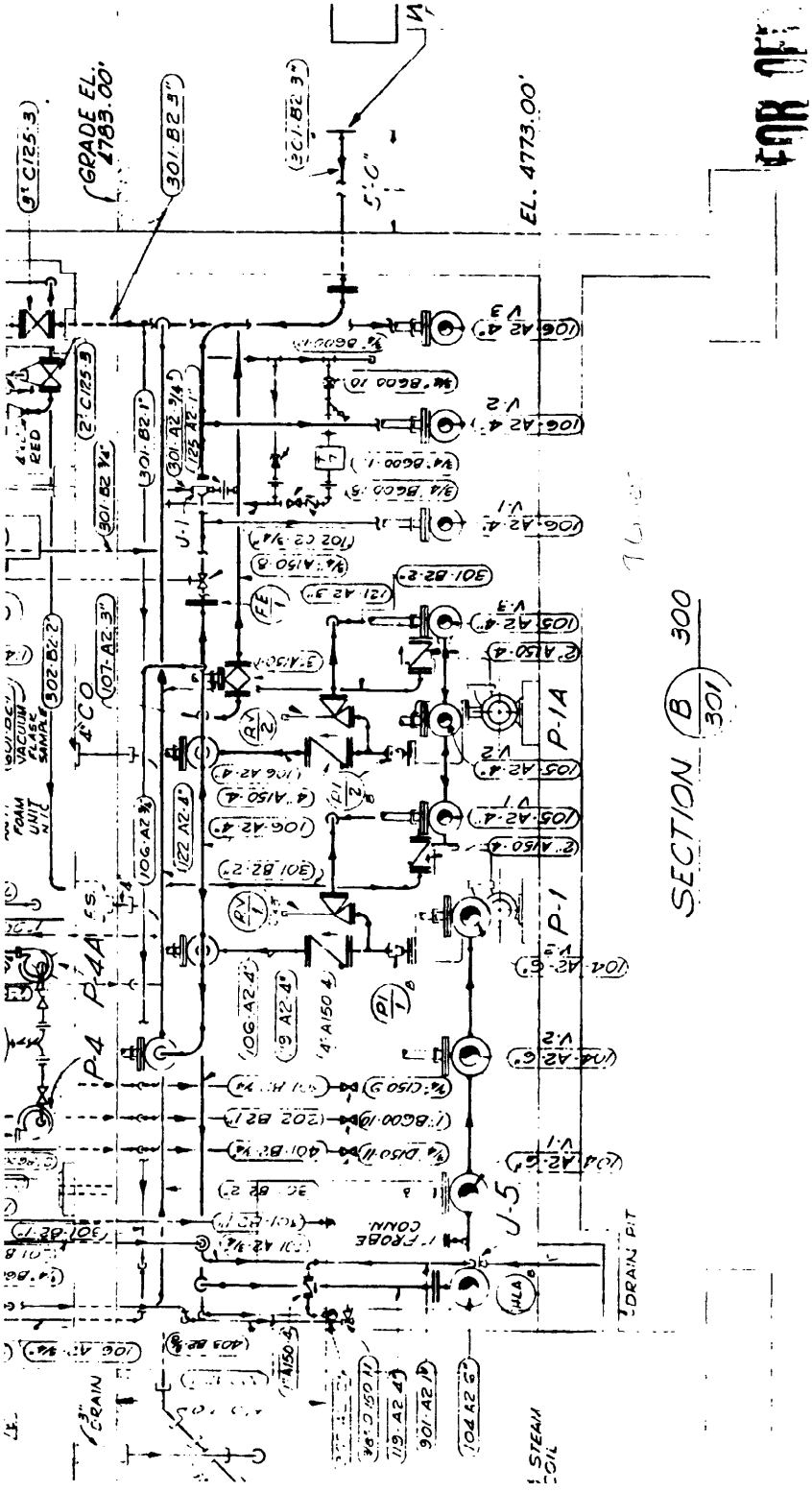
A	4-1-53	"AS BUILT"
NO.	DATE	REVISIONS

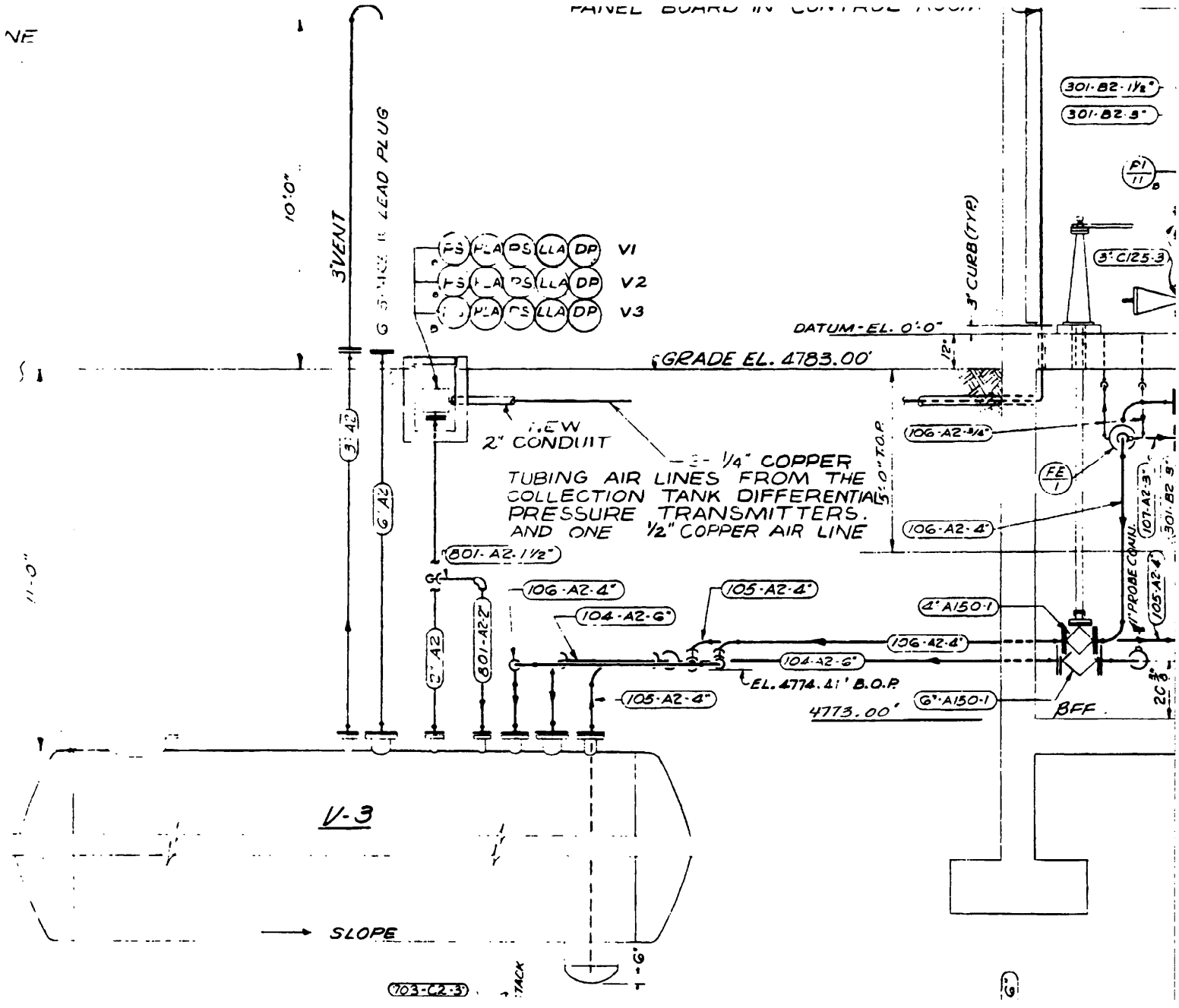
A N P
ASSEMBLY & MAINTENANCE AREA
LIQUID WASTE TREATMENT PLANT 616
VESSEL DETAILS & ORIENTATIONS

THE RALPH M. PARSONS COMPANY
ARCHITECT - ENGINEERS
LOS ANGELES, CALIFORNIA

U.S. ATOMIC ENERGY COMMISSION
IDAHO OPERATIONS OFFICE
IDAHO FALLS, IDAHO

DWG. NO. 902-3-ANP-616-P 302 A


GRADE EL. 4783.00'
EL. 4773.00'
SECTION B 300 / 301
P-1A
P-1
P-4A
P-4
J-5
J-1
DRAIN PIT
STEAM COIL
FOAM UNIT
VACUUM FLASK SAMPLE
1" PROBE CONN.


PANEL BOARD IN CONTROL ROOM
NE
10'0"
3" VENT
LEAD PLUG
FS LLA PS LLA DP V1
FS LLA PS LLA DP V2
FS LLA PS LLA DP V3
3" CURB (TYP)
DATUM-EL. 0'-0"
GRADE EL. 4783.00'
12"
5'-0" T.O.P.
NEW 2" CONDUIT
3/4" COPPER TUBING AIR LINES FROM THE COLLECTION TANK DIFFERENTIAL PRESSURE TRANSMITTERS. AND ONE 1/2" COPPER AIR LINE
301-B2-1 1/2"
301-B2-3"
P1 11
3"C125-3
106-A2-3/4"
FE 1
106-A2-4"
107-A2-3"
301-B2-3"
1" PROBE CONN.
105-A2-4"
801-A2-1 1/2"
106-A2-4"
105-A2-4"
104-A2-6"
4"A150-1
106-A2-4"
104-A2-6"
EL. 4774.41' B.O.P.
4773.00'
105-A2-4"
6"A150-1
BFF
3"A2
6"A2
2"A2
801-A2-2"
11'-0"
V-3
SLOPE
703-C2-3
TACK
1'-6"

FOR OFFICIAL USE ONLY

TAYLOR DIFFERENTIAL PRESSURE TRANSMITTER

¼" MALE PIPE BY ⅛ FLARE ADAPTOR
⅜ FLARE NUT

⅜ GATE VALVE
HIGH LEVEL ALARM
LOW LEVEL ALARM
HIGH SPECIFIC GRAVITY ALARM
PRESSURE SWITCH
⅜ STAINLESS STEEL TUBING

3- ¼" COPPER LINES TO INSTRUMENT PANEL BOARD IN CONTROL ROOM

FLASH TANK EXHAUST STACK

CT-1

HEATING & VENTILATING EQUIPMENT PENTHOUSE

V-5

V-6

V-7

V-11

V-9

V-10

V-12

V-2

V-4

P-1

P-1A

P-2

P-3

P-4

P-4A

P-A

P-B

J-1

J-5

FOAM PROBE

GEIGER COUNTER

BACKFLOW PREVENTER

EMERGENCY SHOWER

INSTRUMENT PANEL

SAMPLE LADDER

VENT-4" I.D.

WINDOW

3 VENT

2" CONDUIT

⅛" COPPER TUBING AIR LINES FROM THE COLLECTION TANK DIFFERENTIAL PRESSURE TRANSMITTERS AND ONE ⅛" COPPER AIR LINE

NEW ⅜" COPPER LINES FROM THE COLLECTION TANK DIFFERENTIAL PRESSURE TRANSMITTERS

NEW ⅜" COPPER LINES FROM THE COLLECTION TANK DIFFERENTIAL PRESSURE TRANSMITTERS

NEW ⅜ COPPER LINES FROM THE COLLECTION TANK DIFFERENTIAL PRESSURE TRANSMITTERS

DATUM-EL. 0'-0"

GRADE EL. 4789.00'

EL. 4773.00'

EL. 4774.41' B.O.P.

INVERT EL. 4777.00' TO HOLDING TANKS V-13 & V-14 FOR CONT. SEE DWG. U-6

TUNNEL

¾" GATE VALVE

6" O.D.

30' ABOVE FLOOR

⅜ GATE VALVE

½" DRAIN

EXISTING STEAM LINE

ADDITION TO THIS AREA SEE ABOVE

SECTION (A 301) 300

SECTION (B 301) 300

SECTION (C 301) 300

SECTION (K 301) 300

C	SEE E DCN	
6-24-54	CHANGED LIQUID LEVEL INDICATORS	
5-2-54	AS BUILT PER ANP/GE & R.C.T.	
8-15-53	AS BUILT	
3-3-53	AS BUILT	
NO.	DATE	DESCRIPTION / APPROVED

DIVISION: A N P

ASSEMBLY & MAINTENANCE AREA
LIQUID WASTE TREATMENT PLANT 616
PIPING SECTIONS

THE RALPH M. PARSONS COMPANY
ARCHITECTS - ENGINEERS
617 SOUTH OLIVE STREET
LOS ANGELES, CALIFORNIA

U. S. ATOMIC ENERGY COMMISSION
IDAHO OPERATIONS OFFICE
IDAHO FALLS, IDAHO

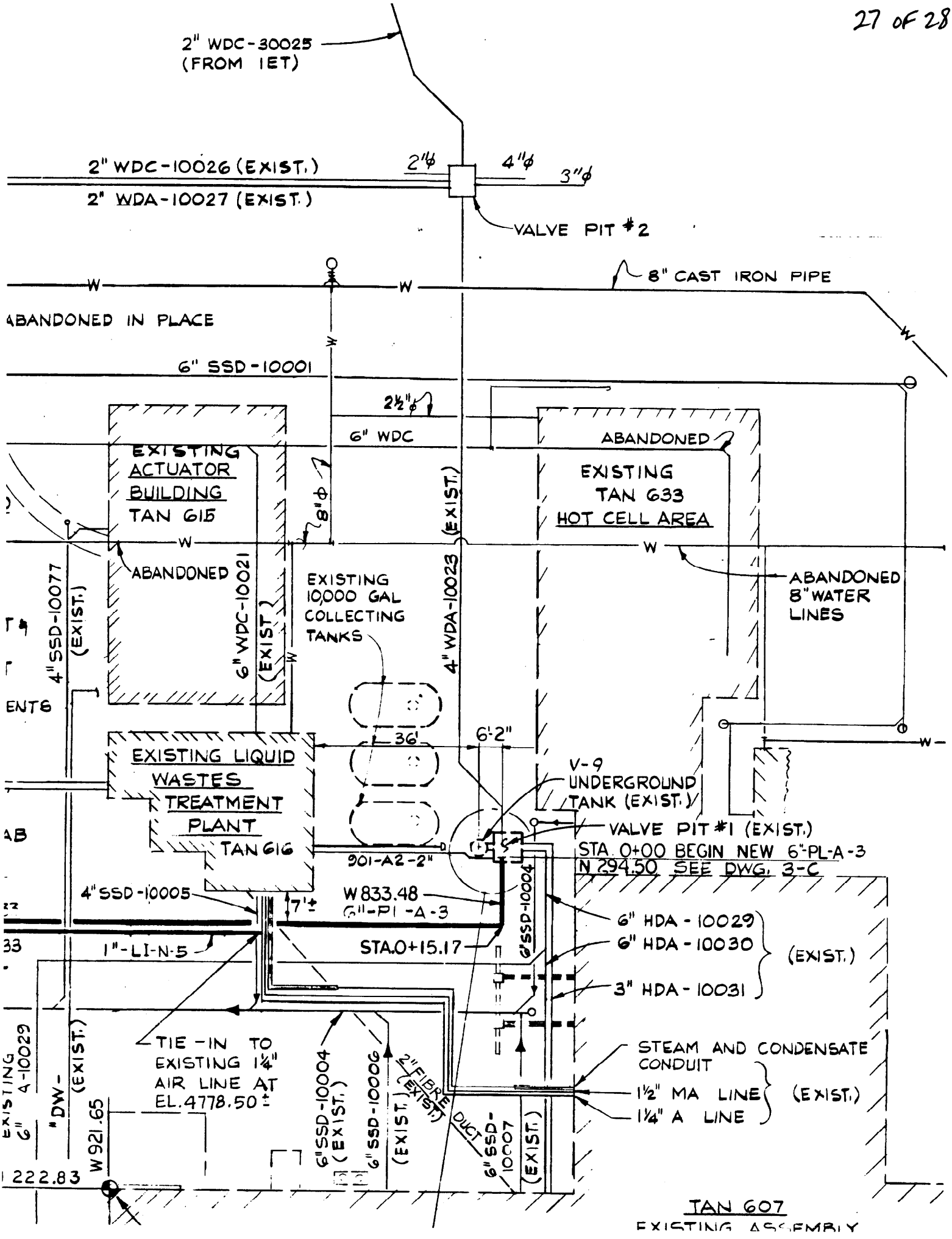
	BY	DATE
DRAWN	CDATE	2-52
DESIGNED	DCASD	11-31-51
APPROVED	SDW	11-31-51
APPROVED	WMC	12-6-51
APPROVED	RCA	12-20-51
APPROVED	FAC	12-20-51
SCALE	1/4" = 1'-0"	
DATE	12-20-51	

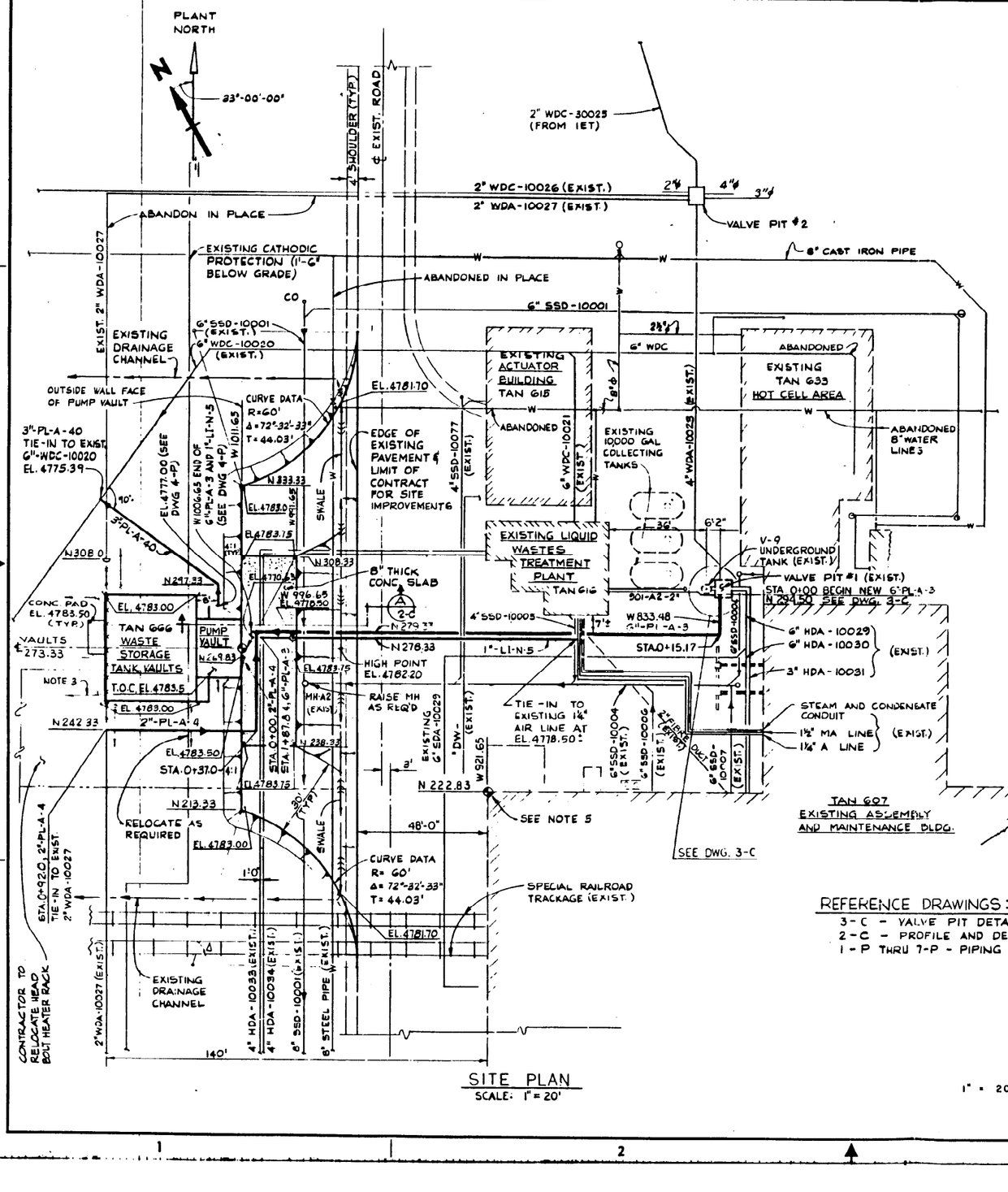
CODE NUMBER
034 0616 50 693 106893

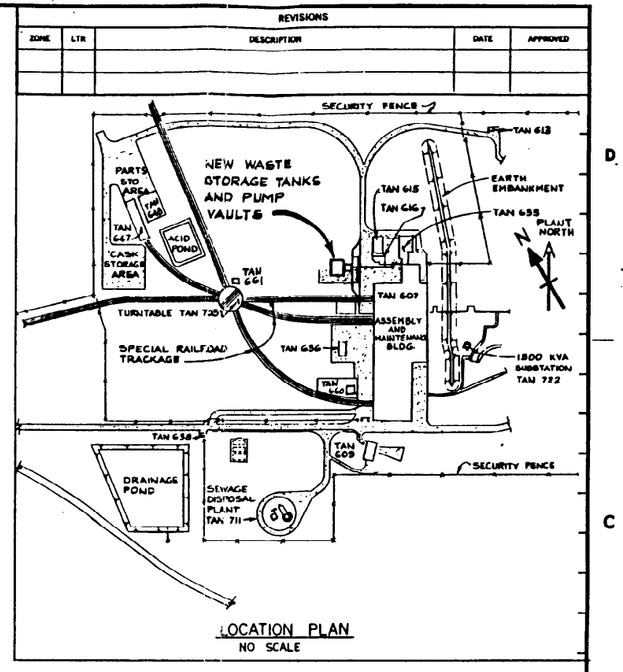
SHEET NO. 902-3-ANP-616-P301

PUBLICATION OR GENERAL DISSEMINATION OF INFORMATION CONTAINED ON THIS DRAWING IS PROHIBITED

FOR OFFICIAL USE ONLY


2" WDC-30025
(FROM IET)
2" WDC-10026 (EXIST.)
2" WDA-10027 (EXIST.)
2"ϕ
4"ϕ
3"ϕ
VALVE PIT #2
8" CAST IRON PIPE
ABANDONED IN PLACE
6" SSD-10001
2½"ϕ
6" WDC
EXISTING ACTUATOR BUILDING TAN 615
8"ϕ
ABANDONED
4" SSD-10077 (EXIST.)
6" WDC-10021 (EXIST.)
EXISTING 10,000 GAL COLLECTING TANKS
4" WDA-10023 (EXIST.)
ABANDONED
EXISTING TAN 633 HOT CELL AREA
ABANDONED 8" WATER LINES
36'
6'-2"
EXISTING LIQUID WASTES TREATMENT PLANT TAN 616
V-9 UNDERGROUND TANK (EXIST.)
VALVE PIT #1 (EXIST.)
STA. 0+00 BEGIN NEW 6"-PL-A-3
N 294.50 SEE DWG. 3-C
901-A2-2"
4" SSD-10005
7'±
W 833.48
6"-PI-A-3
6" SSD-10004
1"-LI-N-5
STA.0+15.17
6" HDA-10029
6" HDA-10030
3" HDA-10031
(EXIST.)
TIE-IN TO EXISTING 1¼" AIR LINE AT EL. 4778.50±
STEAM AND CONDENSATE CONDUIT
1½" MA LINE
1¼" A LINE
(EXIST.)
EXISTING 6" 4-10029
"DW-
(EXIST.)
W 921.65
1222.83
6" SSD-10004 (EXIST.)
6" SSD-10006 (EXIST.)
2" FIBRE DUCT (EXIST.)
6" SSD-10007 (EXIST.)
TAN 607
EXISTING ASSEMBLY





LOCATION PLAN
NO SCALE

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED

NOTES:

1. FOR LEGEND AND ABBREVIATIONS SEE PIPING DWG. 1-P
2. A MINIMUM EARTH COVER OF 6'-0" WILL BE PROVIDED OVER ALL PIPES FOR PROTECTION AGAINST FREEZING WEATHER. OUR TANKS ARE EXISTING
3. SLOPE AREAS ADJACENT TO PUMP AND TANK VAULTS A MINIMUM OF 1.0% AWAY FROM THE STRUCTURES.
4. FIELD VERIFY LOCATIONS AND ELEVATIONS OF EXISTING FACILITIES AND UTILITIES.
5. ALL COORDINATES ARE CALCULATED FROM 0+00 BASE. LOCATED 36.0' EAST OF TAN 608 ON ℄ SNAKE AVE. COORDINATES ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.

REFERENCE DRAWINGS:

3-C - VALVE PIT DETAILS
2-C - PROFILE AND DETAILS
1-P THRU 7-P - PIPING DRAWINGS

QUALITY ASSURANCE ESSENTIALITY LEVEL III

GRAPHIC SCALE
1" = 20'
20' 0' 20' 40'

RELEASED NO. 1112

DRAWN BY F. BUMATAY	DATE 6-6-79	
DESIGN SUPRV. W. KELLY	6-7-79	
DESIGN N. PATEL	6-1-79	
CHECKED T. CHENG	6-7-79	
APPROVED D.J.	8-10-79	
EGS: DESIGN REVIEW D.P. WALRATH	10-12-79	
SAFETY D.P. HALL	10-15-79	
FUEL MAT. PROG. I.M. CLARK	10-23-79	
PROJ. MGR. R.E. OHLIN	10-24-79	
SCALE 1" = 20'	RELEASE DATE 11-3-82 DMR	

KAISER ENGINEERS
KAISER ENGINEERS, INC. 300 LAKESIDE DRIVE P.O. BOX 23910 OAKLAND, CALIFORNIA 94623

FOR
U.S. DEPARTMENT OF ENERGY
IDAHO OPERATIONS OFFICE
IDAHO FALLS, IDAHO

TAN RADIOACTIVE LIQUID WASTE STORAGE AND TRANSFER SYSTEM

SITE PLAN
(INCLUDING PAVING, GRADING & UTILITIES)

DWG SIZE	INDEX CODE NUMBER				DRAWING NUMBER
	AREA	DWG TYPE	CL	ORIG	
	034	030	05	486	138651 1-C

SHEET

PROJECT NO. 7715B-143

138651 1-C