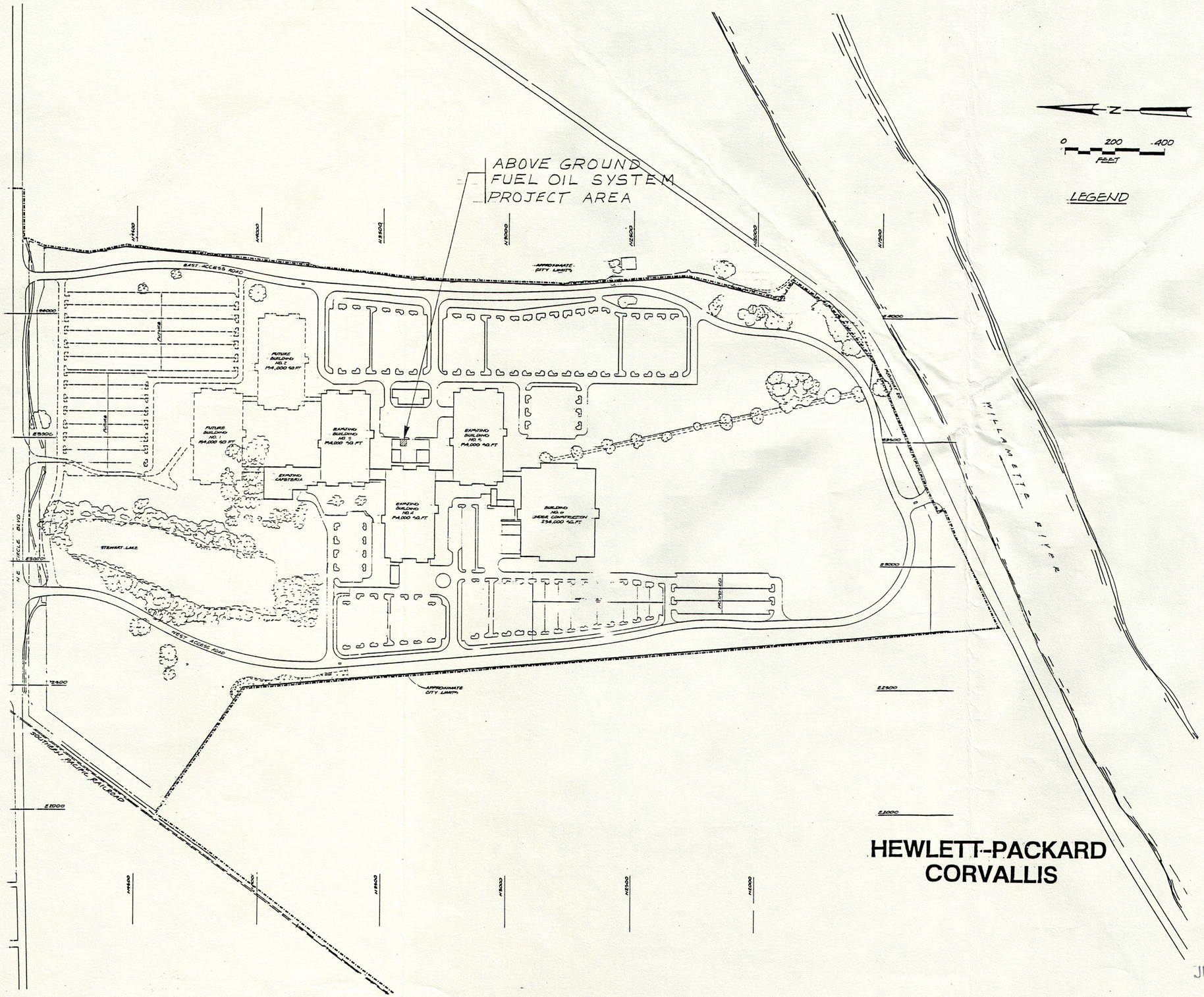


REDUCED

JUL 30 1986

HEWLETT - PACKARD

1000 N.E. CIRCLE BLVD.
CORVALLIS, OREGON 97330
(503) 757-2000

FACILITIES ENGINEERING

DRAWING TITLE ABOVE GROUND FUEL OIL SYST. LOCATION PLAN

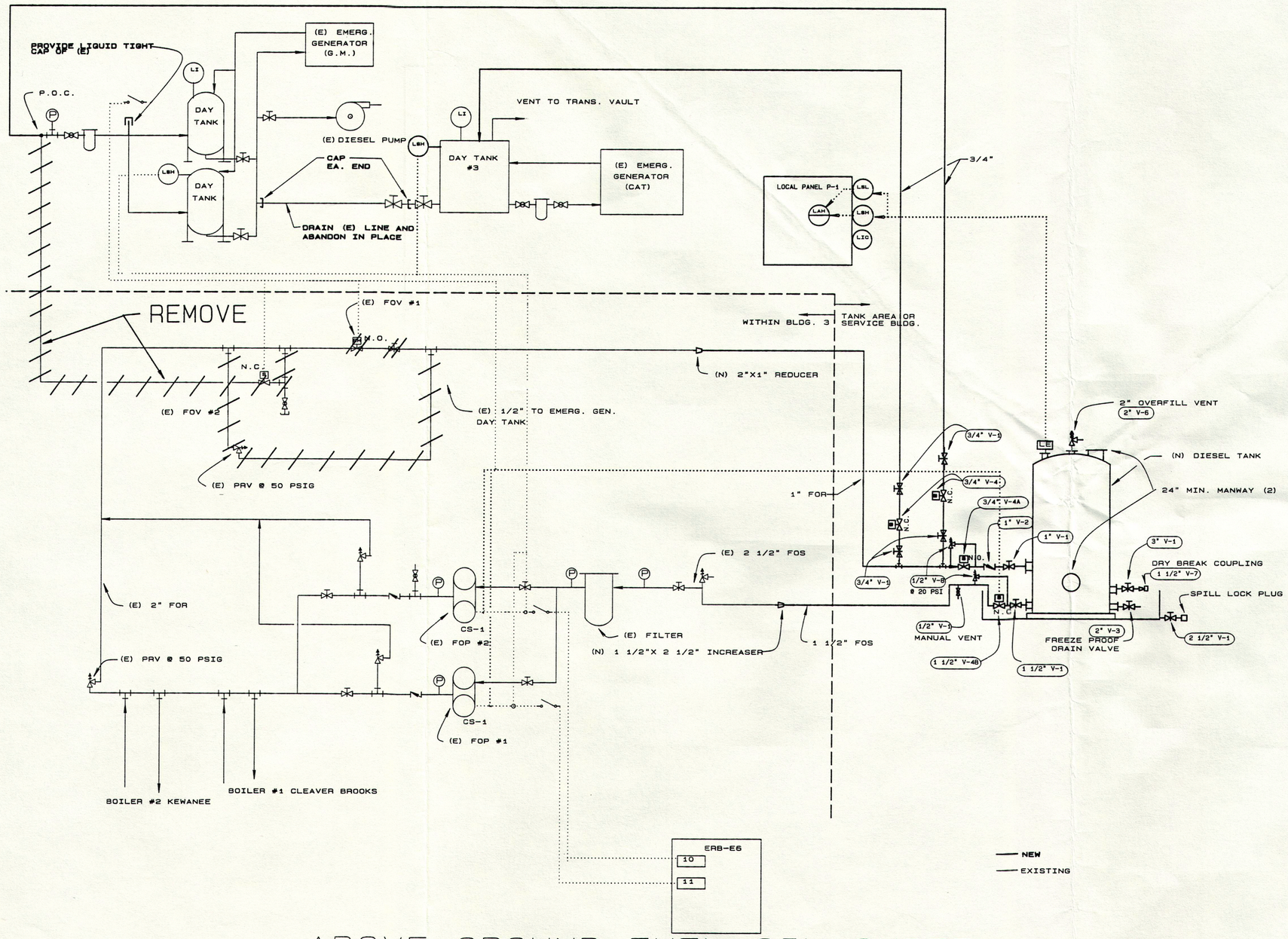
FILE NO. = 337-SP 1

ENGINEER M Wheeler
DRAWN BY
DATE 7/22/86
SCALE AS NOTED

DATA FILE

REVISIONS
A
B
C
D
AS BUILT

SHEET NO. SP-1
OF SHEETS



ABOVE GROUND FUEL OIL SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM

JUL 30 1986

HEWLETT - PACKARD

1000 N.E. CIRCLE BLVD.
CORVALLIS, OREGON 97330
(503) 757-2000

FACILITIES ENGINEERING

DRAWING TITLE FUEL OIL SYSTEM PROCESS & INST. DIAGRAM

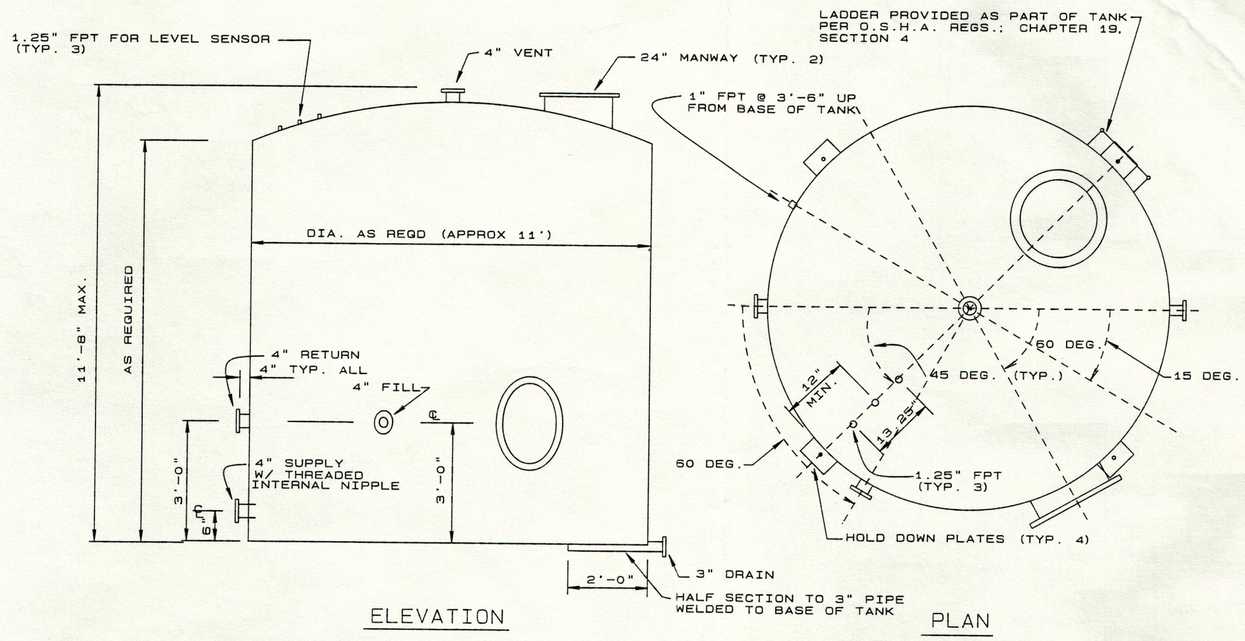
FILE NO. = S- 337-IC-1

ENGINEER M. WARNER
DRAWN BY "
DATE 7/21/86
SCALE

DATA FILE 337-IC-1

REVISIONS
A 7/21/86
B 7/30/86
C
D
AS BUILT

SHEET NO. IC-1
OF ___ SHEETS



SPECIFICATIONS

1) TANK TO BE OF CARBON STEELCOMPLYING W/ U.L. 142

2) COMPLETE TANK EXTERIOR TO BE SHOP PRIMED W/TNEMEC #66-1211 @ 4 MDFT IN ADDITION BOTTOM EXTERIOR TO BE COATED W/TNEMEC 4645 @ 8 MDFT

3) TANK EXTERIOR TO BE FIELD COATED BY CONTRACTOR ONCE INSTALLED

4) ALL TANK FITTINGS TO BE 150 LB. ANSI FLANGED CONNECTIONS AND SHALL BE PROTECTED AND SEALED PRIOR TO SHIPMENT

5) TANK BOTTOM TO BE CONSTRUCTED TO INSURE COMPLETE DRAINAGE OF CONTENTS THROUGH DRAIN NOZZLE

6) TANK SHALL BE BUILT TO ACCOMODATE A SHAND & JURS MODEL #92020-34-01-01 AUTOMATIC TANK LEVEL GUAGE W/FLOAT LIFTING HAND CRANK AND LIMIT SWITCH ASSEMBLY. LEVEL FLOAT ANCHOR BAR TO BE WELDED TO TANK BOTTOM INTERIOR.

7) TANK TO BE DESIGNED FOR ABOVE GROUND STORAGE OF NO. 1 & NO. 2 FUEL OILS AT AMBIENT CONDITIONS, PER U.B.C. SEISMIC ZONE 2, AND SHALL BE SECURED WITH FOUR 7/8" THREADED ANCHOR BOLTS.

8) TANK TO BE PROVIDED W/PERMENATELY SECURED CORROSSION RESISTANT LABEL INDICATING TANK NAME "FUEL OIL TANK #1", GALLONS PER INCH, TANK SPECIFICATIONS, MANUFACTURER, DATE, CAPACITY, PRESSURE RATING, AS WELL AS OTHER U.L. LABELING REQUIREMENTS.

9) TANK SHALL BE SIZED SUCH THAT NO APPURTENANCES SUCH AS LEVEL SENSOR, LADDER, OR VENT SHALL EXTEND MORE THAN 11'-8" ABOVE TANK BASE.

10) TANK SHALL BE DELIVERED TO SITE W/INTERIOR CLEAN AND READY FOR USE.

11) PROPOSALS SHALL INCLUDE A MINIMUM 3 COMPLETE SETS OF SUBMITTALS TO INCLUDE--

- A) ACCURATE, DETAILED, SUBMITTAL DRAWINGS
- B) COMPLETE MANUFACTURER'S SPECIFICATIONS, INCLUDING MATERIALS DESCRIPTION
- C) APPROXIMATE SHIPPING WEIGHT
- D) SHIPPING METHOD
- E) RECOMMENDED HANDLEING METHOD
- F) REQUIREMENTS FOR STORAGE AND PROTECTION PRIOR TO INSTALLATION
- G) DETAILED INSTALLATION INSTRUCTIONS
- H) DETAILED TEMPLATE SHOWING LOCATION OF HOLES IN HOLD DOWN LUGS TO ALLOW CONTRACTOR TO ACCURATELY PLACE ANCHOR BOLTS.
- I) REALISTIC FABRICATION AND DELIVERY SCHEDULE.

12) QUOTED PRICE SHALL BE FOB JOB SITE.

ABOVE GROUND FUEL OIL TANK

N.T.S.

JUL 30 1986

HEWLETT - PACKARD
FACILITIES ENGINEERING
1000 N.E. CIRCLE BLVD.
CORVALLIS, OREGON 97330
(503) 757-2000

DRAWING TITLE FUEL OIL TANK

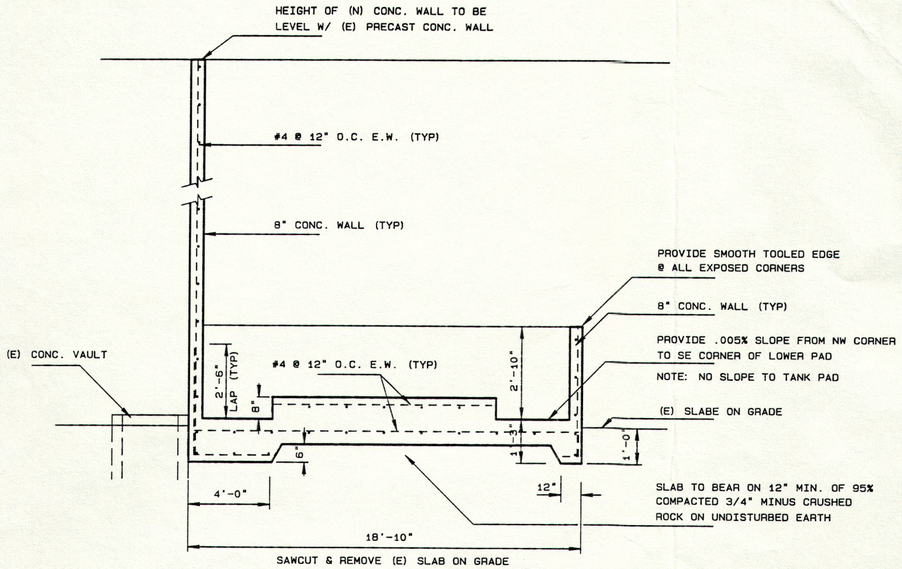
FILE NO. = S. - 337-M-1

ENGINEER M. Warnock
DRAWN BY "
DATE 7/30/86
SCALE N.T.S.

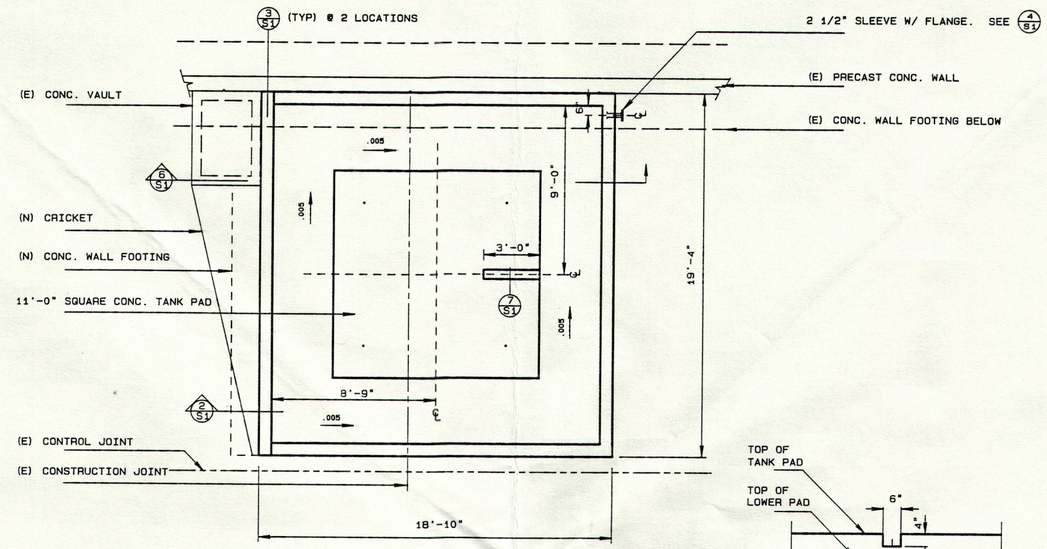
DATA FILE 337-M-1

REVISIONS
A 7/17/86
B 7/21/86
C 7/30/86
D
AS BUILT

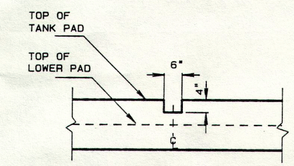
SHEET NO. M-1
OF ___ SHEETS



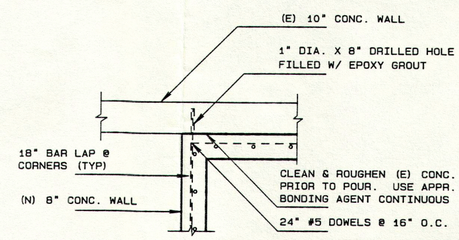
1/S-1 **SECTION**
NTS



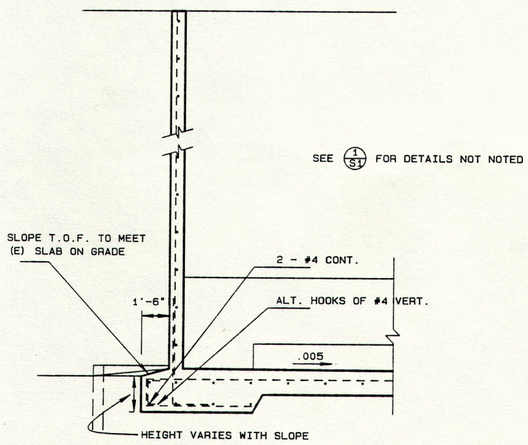
5/S-1 **PLAN**
1/4" SCALE



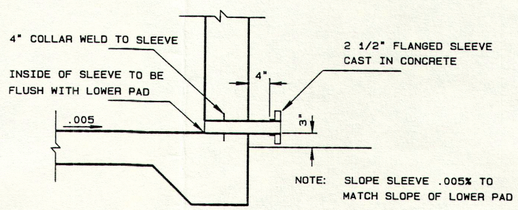
7/S-1 **DETAIL**
1/2" SCALE



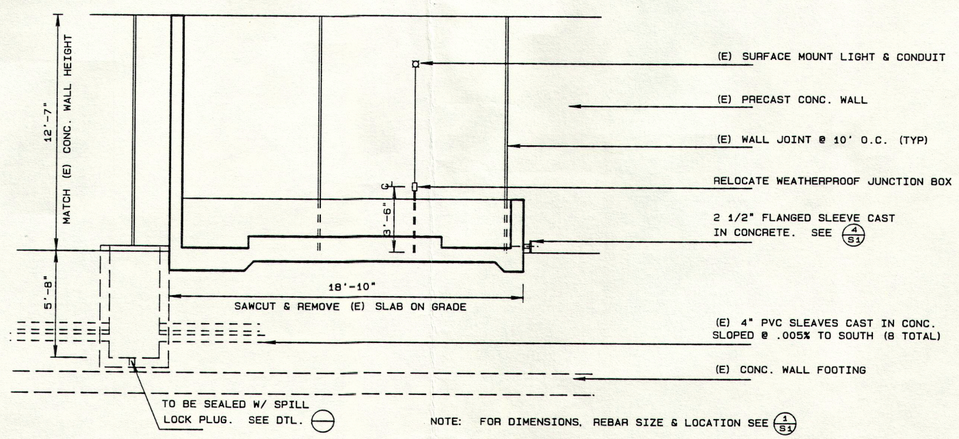
3/S-1 **DETAIL**
1/2" SCALE



2/S-1 **SECTION**
NTS



4/S-1 **DETAIL**
NTS



6/S-1 **SECTION**
1/4" SCALE

JUL 30 1986

HEWLETT - PACKARD
1000 N.E. CIRCLE BLVD.
CORVALLIS, OREGON 97330
(503) 757-2000
FACILITIES ENGINEERING

DRAWING TITLE: FUEL OIL SYSTEM STRUCTURAL PLAN & DETAILS

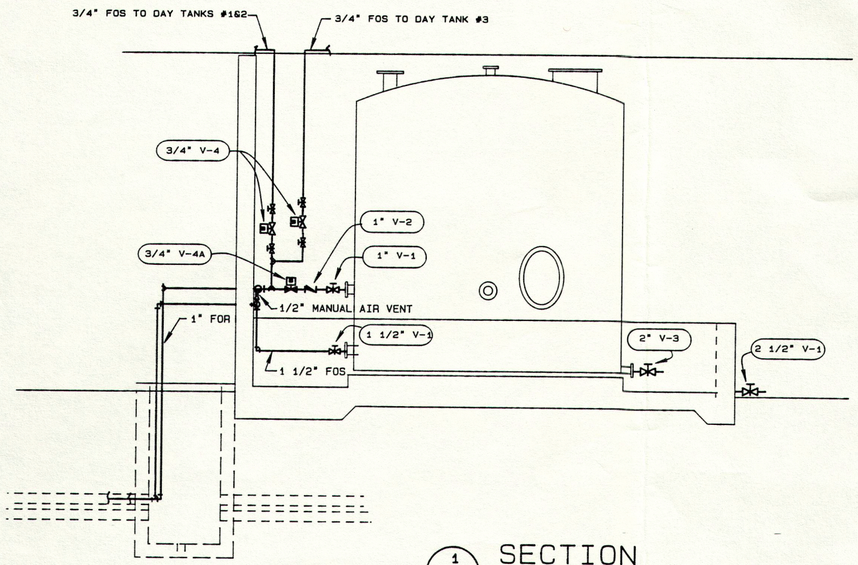
FILE NO. = S- . 337-S-1

ENGINEER: M. Wagner
DRAWN BY: T. Cornelius
DATE: JUL 22 1986
SCALE: AS NOTED

DATA FILE: 337-S-1

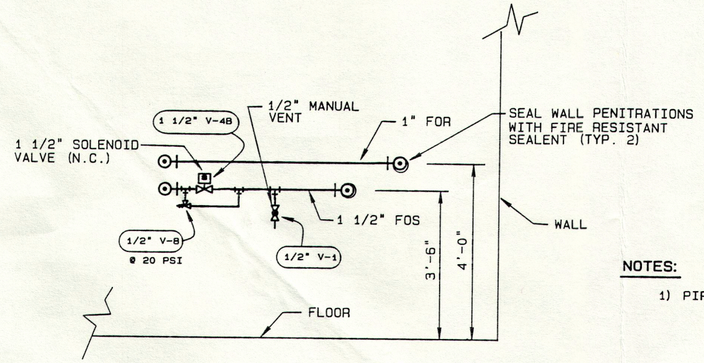
REVISIONS
A
B
C
D
AS BUILT

SHEET NO. S-1 OF ___ SHEETS



1 / P-1 SECTION

N.T.S.



2 / P-1 SECTION

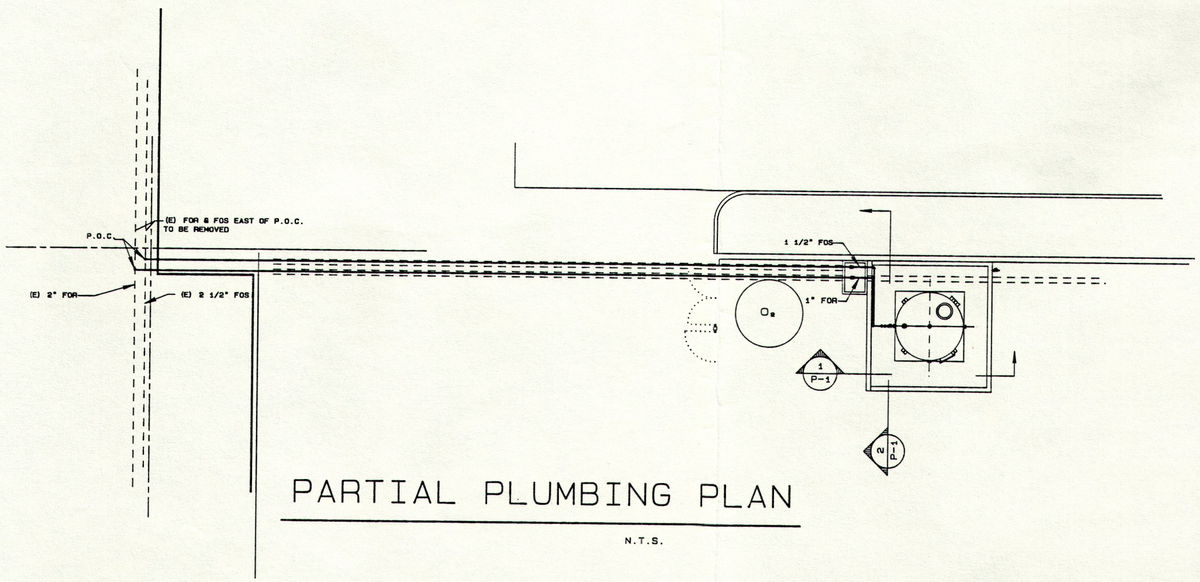
N.T.S.

NOTES:

1) PIPING TO BE TYPE "L" COPPER, OR SCH. 40 BRASS

VALVE SCHEDULE

VALVE NO.	DESCRIPTION
V-1	LOCKABLE MANUAL GATE OR BALL VALVE, BRONZE, APOLLO 70-200 SERIES, MORRISON NO. 235-B, OR APPROVED EQUAL.
V-2	BRASS SPRING LOADED SWING CHECK VALVE; E.B.W. OR VERTICAL SPRING CHECK, MORRISON NO. 158-A-100; OR APPROVED EQUAL.
V-3	LOCKABLE, FREEZE PROOF, MANUAL DRAIN VALVE, MORRISON NO. 128; OR APPROVED EQUAL
V-4	BRONZE, NORMALLY CLOSED, EXPLOSION PROOF, WATERTIGHT, ZERO DIFFERENTIAL PRESSURE, TWO WAY ELECTERIC SOLENOID VALVE; ASCO MODEL 8211D95V, 120VAC OR APPROVED EQUAL.
V-4A	SAME AS V-4 EXCEPT NORMALLY OPEN, ASCO MODEL 8211C35V, 120VAC
V-4B	SAME AS V-4 EXCEPT 1 1/2" NORMALLY CLOSED, ASCO MODEL 8211B56V, 120VAC
V-5	NOT USED
V-6	VENT VALVE; MORRISON 155-S, OR APPROVED EQUAL
V-7	DRY BREAK, QUICK CONNECT ADAPTER; EMCO WHEATON MODEL J1302-001, W/ DUST CAP
V-8	BRASS, ADJUSTABLE, PRESSURE RELIEF VALVE; KINGSTON OR APPROVED EQUAL SETTING AS INDICATED ON DRAWINGS



PARTIAL PLUMBING PLAN

N.T.S.

JUL 30 1986

HEWLETT - PACKARD
1000 N.E. CIRCLE BLVD.
CORVALLIS, OREGON 97330
(503) 757-2000
FACILITIES ENGINEERING

DRAWING TITLE: FUEL OIL SYSTEM PLUMBING DETAILS

FILE NO.: S- - 337-P-1

ENGINEER: M. Weaver
DRAWN BY: "
DATE: 7/18/86
SCALE: AS NOTED

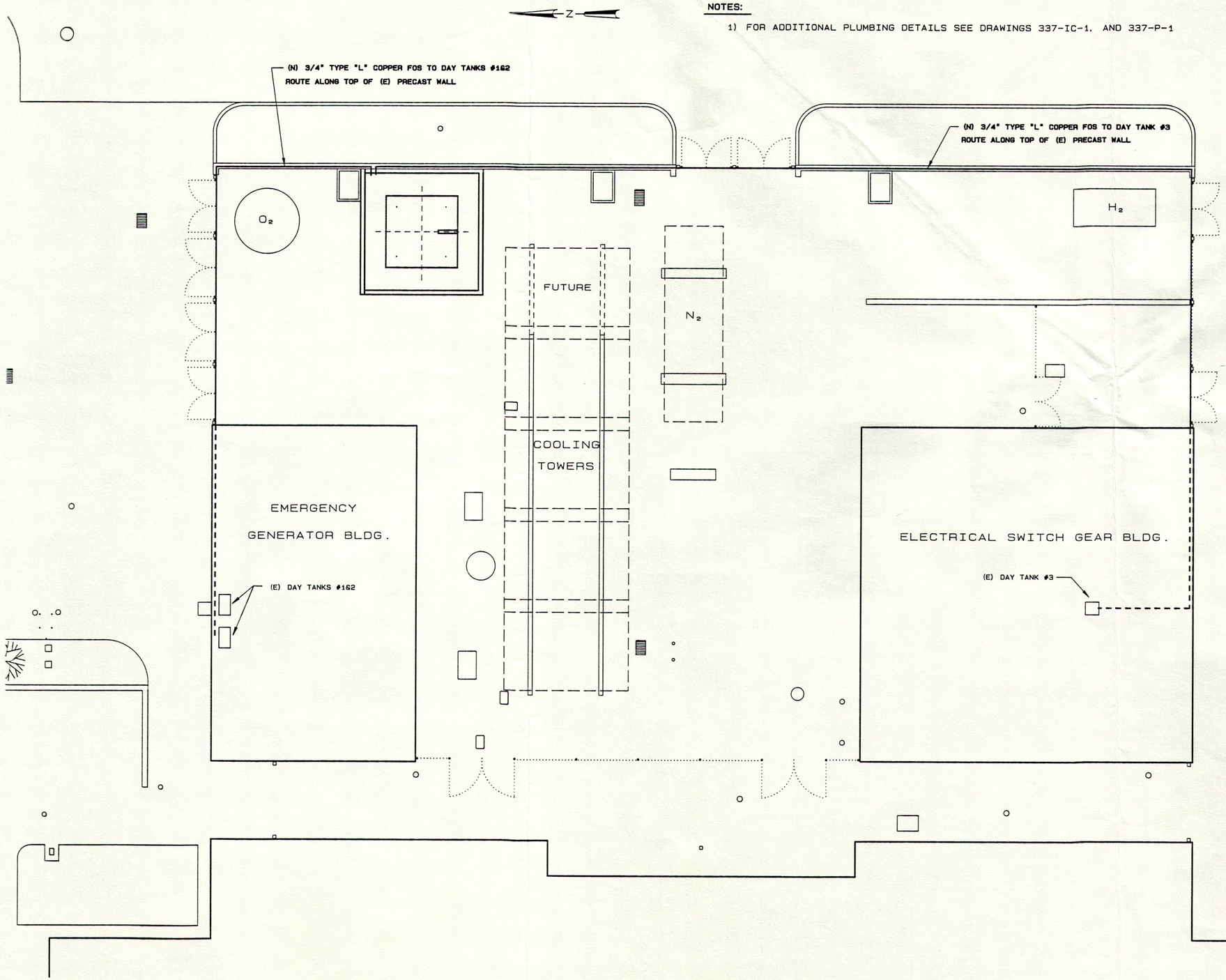
DATA FILE: 337-P-1

REVISIONS
A: 7/25/86
B: 7/30/86
C:
D:
AS BUILT

SHEET NO. P-1 OF ___ SHEETS

NOTES:

1) FOR ADDITIONAL PLUMBING DETAILS SEE DRAWINGS 337-IC-1, AND 337-P-1



JUL 30 1986

HEWLETT - PACKARD

1000 N.E. CIRCLE BLVD.
CORVALLIS, OREGON 97330
(503) 757-2000

FACILITIES ENGINEERING

DRAWING TITLE ABOVE-GROUND FUEL OIL SYSTEM PLUMB. PLAN

FILE NO. = S- 337-P-2

ENGINEER M. WARNER
DRAWN BY "
DATE 7/30/86
SCALE 1/8" = 1'-0"

DATA FILE 337-P-27

REVISIONS
A
B
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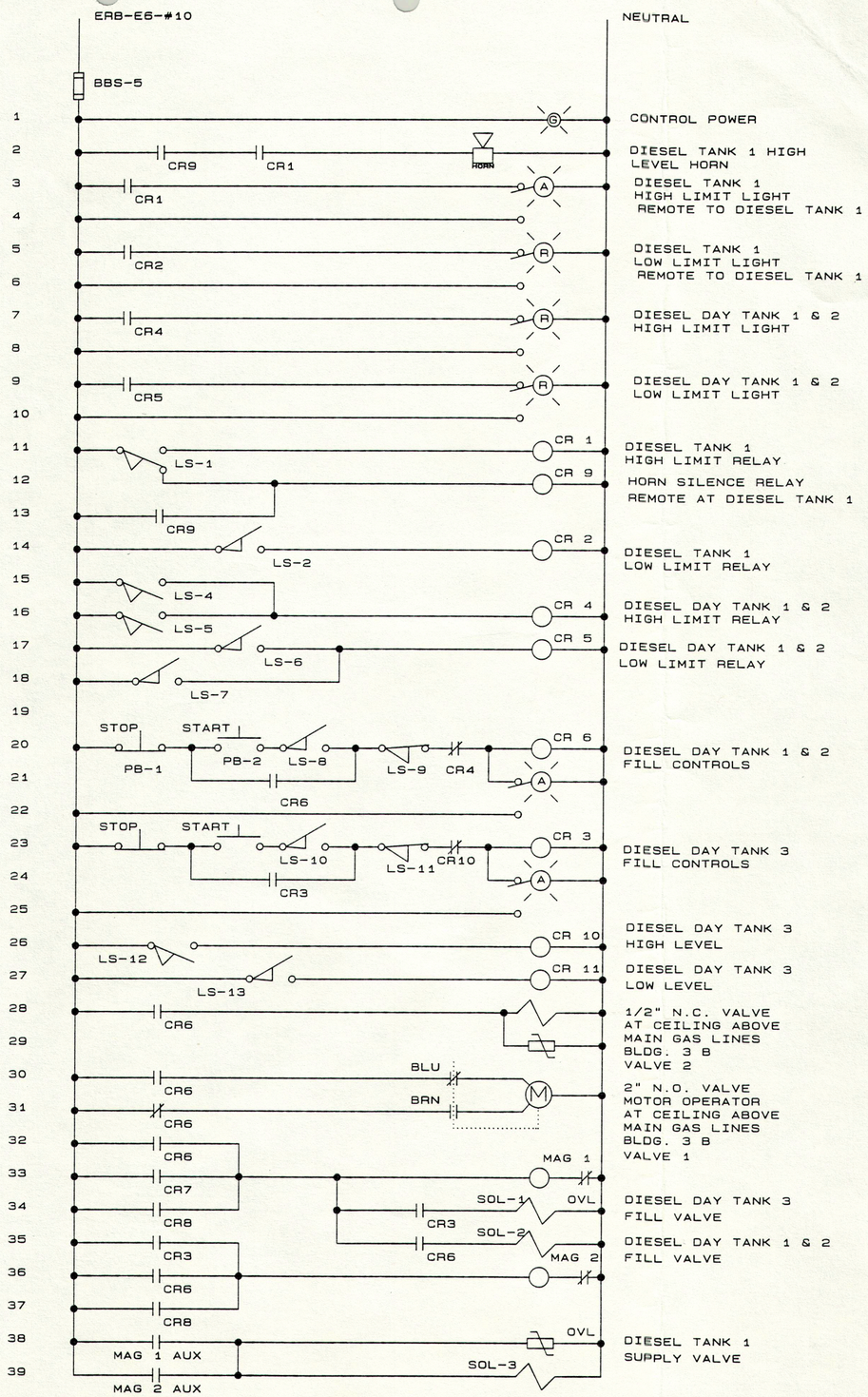
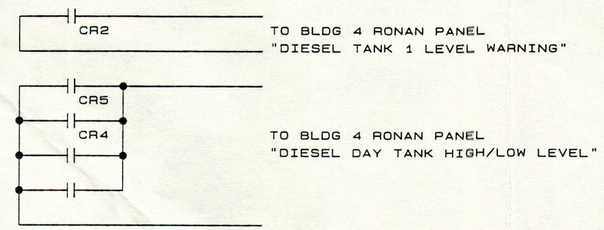
D
AS BUILT

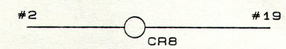
SHEET NO. P-2
OF ___ SHEETS



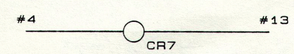
FUEL OIL PUMP CONTROLS



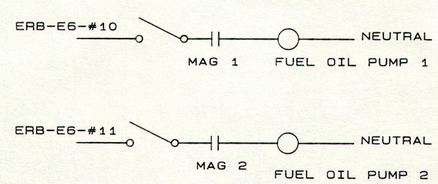
BLDG 4 RONAN PANEL CONNECTIONS



KEWANEE FUEL OIL PUMP INTERLOCK RELAY



CLEAVER BROOKS FUEL OIL PUMP INTERLOCK RELAY



FUEL OIL PUMPS

NOTES:

A) LS-1 DIESEL TANK 1 HIGH LIMIT SWITCH AT DIESEL TANK 1
B) LS-2 DIESEL TANK 1 LOW LIMIT SWITCH AT DIESEL TANK 1
C) LS-3 DIESEL TANK 1 LIMIT SWITCH AT DIESEL TANK 1
D) LS-4 DIESEL DAY TANK 1 HIGH LIMIT SWITCH AT DIESEL DAY TANK 1
E) LS-5 DIESEL DAY TANK 2 HIGH LIMIT SWITCH AT DIESEL DAY TANK 2
F) LS-6 DIESEL DAY TANK 1 LOW LIMIT SWITCH AT DIESEL DAY TANK 1
G: LS-7 DIESEL DAY TANK 2 LOW LIMIT SWITCH AT DIESEL DAY TANK 2
H) LS-8 DIESEL DAY TANK 1 & 2 FILL START LIMIT SWITCH
I) LS-9 DIESEL DAY TANK 1 & 2 FILL STOP LIMIT SWITCH
J) PB-1 DIESEL DAY TANK 1 & 2 FILL STOP PUSH BUTTON
K) PB-2 DIESEL DAY TANK 1 & 2 FILL START PUSH BUTTON
L) LS-10 DIESEL DAY TANK 3 FILL START
M) LS-11 DIESEL DAY TANK 3 FILL STOP
N) LS-12 DIESEL DAY TANK 3 HIGH LIMIT SWITCH AT DIESEL DAY TANK 3
O) LS-12 DIESEL DAY TANK 3 LOW LIMIT SWITCH AT DIESEL DAY TANK 3
P) PB-3 DIESEL DAY TANK 3 FILL STOP PUSH BUTTON
Q) PB-4 DIESEL DAY TANK 3 FILL STOP PUSH BUTTON
R) START-STOP STATIONS ARE LOCATED AT DIESEL DAY TANKS
S) SOL-1, SOL-2 AND SOL-3 ARE LOCATED NEAR DIESEL TANK 1

JUL 30 1986

HEWLETT - PACKARD
1000 N.E. CIRCLE BLVD.
CORVALLIS, OREGON 97330
(503) 757-2000
FACILITIES ENGINEERING

DRAWING TITLE: ABOVE-GROUND FUEL OIL SYSTEM ELECT. CONTROL DIAG.

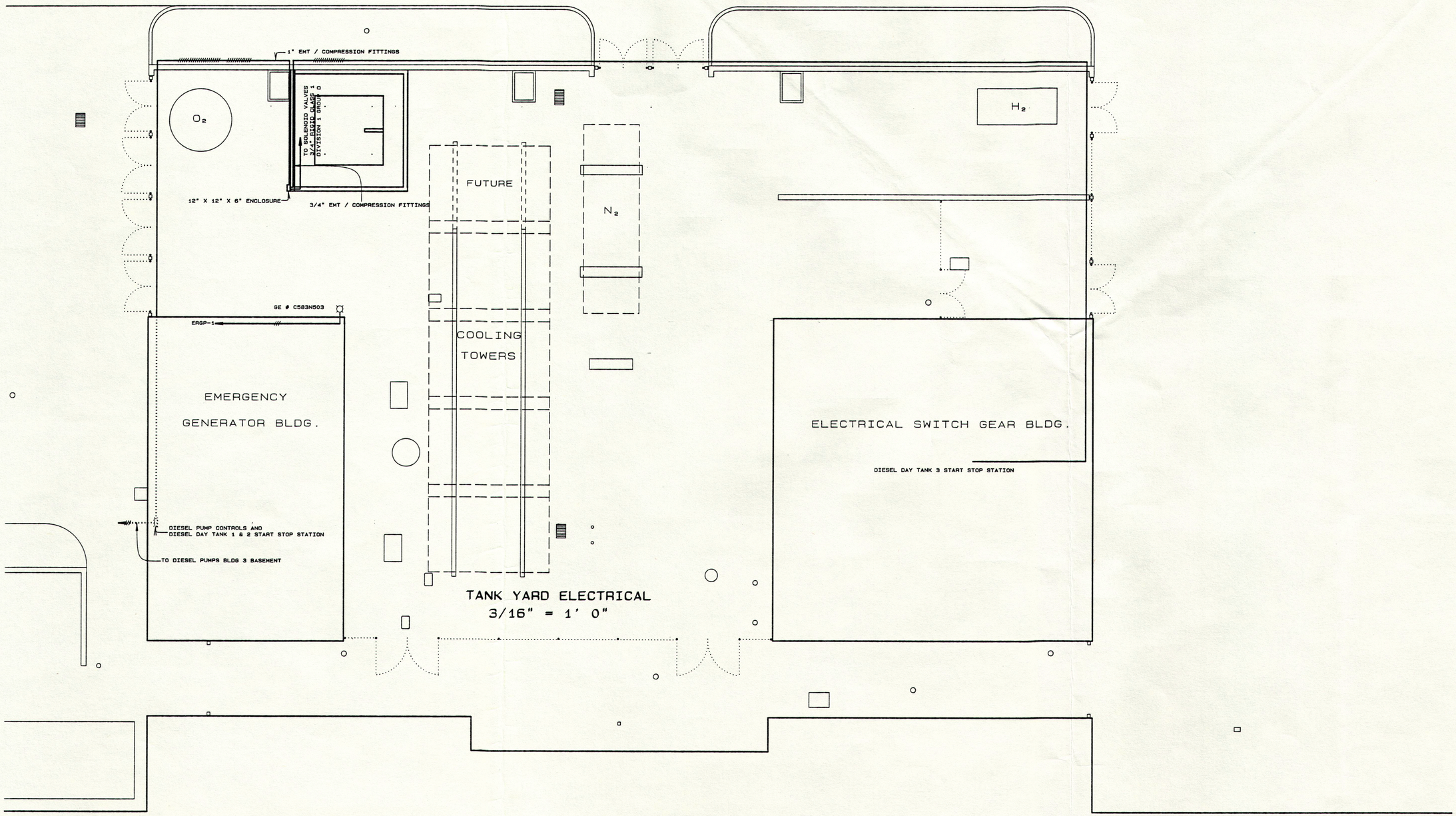
FILE NO. = - - NR - E - 1

ENGINEER: M. Gordon
DRAWN BY: "
DATE: 7/23/86
SCALE: N/A

DATA FILE: 272-E-1

REVISIONS: A, B, C, D, AS BUILT

SHEET NO. E-1 OF ___ SHEETS



BUILDING #4

JUL 30 1986

HEWLETT - PACKARD

1000 N.E. CIRCLE BLVD.
CORVALLIS, OREGON 97330
(503) 757-2000

FACILITIES ENGINEERING

DRAWING TITLE FUEL OIL SYSTEM ELECTRICAL PLAN

FILE NO. = 5. - 337-E-2

ENGINEER M. Gaskow
DRAWN BY "
DATE 7/30/86
SCALE 1/8" = 1'0"

DATA FILE 337-E-T

REVISIONS
A
B
C
D
AS BUILT

SHEET NO. E-2
OF ____ SHEETS