

START

ENGINEERING CHANGE NOTICE

Page 1 of 19

1. ECN ~~XXXXXX~~

Proj. ECN B-714-115

2. ECN Category (mark one)
- Supplemental
 - Direct Revision
 - Change ECN
 - Temporary
 - Supersedure
 - Discovery
 - Cancel/Void

3. Originator's Name, Organization, MSIN, and Telephone No.
A.R. SNOWHITE, KEH, E6-42, 6-0324

4. Date
02-25-92

5. Project Title/No./Work Order No. B-714/ER8007
Grouted Waste Diposal Facilities

6. Bldg./Sys./Fac. No.
218-E-16

7. Impact Level
3 /SC-2

8. Document Number Affected (include rev. and sheet no.)
SEE BLOCK 12

9. Related ECN No(s).
B-714-95

10. Related PO No.
N/A

11a. Modification Work
 Yes (fill out Blk. 11b)
 No (NA Blks. 11b, UNKNOWN c, 11d)

11b. Work Package Doc. No.
N/A
UNKNOWN

11c. Complete Installation Work
N/A
Cog. Engineer Signature & Date

11d. Complete Restoration (Temp. ECN only)
Cog. Engineer Signature & Date

12. Description of Change

BLOCK 8: DRAWINGS

- | | |
|-----------------------------|------------------------------|
| H-2-77573, SH 1, REV 1 | H-2-78443, SH 1, REV 1 |
| 2228/H-2-77636, SH 2, REV 2 | H-2-78502, SH 2, REV 2 2228/ |
| 2228/H-2-77636, SH 4, REV 2 | H-2-78502, SH 4, REV 2 2228/ |
| H-2-77638, SH 1, REV 1 | H-2-78504, SH 1, REV 1 |
| H-2-77638, SH 3, REV 1 | H-2-78504, SH 3, REV 1 |
| H-2-77639, SH 1, REV 2 | H-2-78505, SH 1, REV 2 2228/ |
| H-2-77639, SH 2, REV 2 | H-2-78505, SH 2, REV 2 2228/ |
| H-2-77640, SH 1, REV 1 | H-2-78509, SH 1, REV 1 |
| H-2-77643, SH 1, REV 1 | |
| H-2-77643, SH 2, REV 1 | |

SC-2: Items as noted on pg 3, 4 & 5

SC-3: All other items



SEE SUCCEEDING PAGES FOR DESCRIPTION OF CHANGES

- 13a. Justification (mark one)
- Criteria Change
 - Design Improvement
 - Environmental
 - As-Found
 - Facilitate Const.
 - Const. Error/Omission
 - Design Error/Omission

13b. Justification Details
 (CC): Control Stations & Annunciator structural framing upgraded to meet Safety Class 2 requirements to support Leak Detection & Level Instrumentation (Item 1, 5B & C, 6, 7, 8, 11, 15A & B, 16, 17 & 19).
 (CC): Duplication of details (Ref ECN B-714-111, page 9) [Item 15C].
JUSTIFICATION DETAILS CONTINUED ON PAGE 3



14. Distribution (include name, MSIN, and no. of copies)

KEH DISTRIBUTION		O. A. Halvorson	R3-10
Const Doc Cntl	E2-50	J. S. Hill [2]	H4-57
		K. S. McCullough	N1-83
WHC DISTRIBUTION		D. B. Powell [4]	R4-03
Project Files	R1-28	T. W. Staehr (PE)	R3-27
J. K. Epperley	R1-29	J. E. Vanbeek	R3-27
T. K. Cordray	S1-54	DOE	
Sta. 6	T2-03	A. G. Lassila	A5-10
Sta. 10	A3-87		

RELEASE STAMP

OFFICIAL RELEASE
 BY WHC
 RECEIVED DATE APR 24 1992
 MAY 07 1992
 Station 4
 R.K. SANAN

92126580619

ENGINEERING CHANGE NOTICE

Page 2 of 19

1. ECN (use no. from pg. 1)
B-714-115

15. Design Verification Required

Yes
 No

16. Cost Impact

ENGINEERING

Additional \$ 6674⁰⁰
Savings \$ _____

CONSTRUCTION

Additional \$ 5,000⁰⁰
Savings \$ _____

17. Schedule Impact (days)

Improvement N/A
Delay _____

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

<input type="checkbox"/> SDD/DD	<input type="checkbox"/> Seismic/Stress Analysis	<input type="checkbox"/> Tank Calibration Manual
<input type="checkbox"/> Functional Design Criteria	<input type="checkbox"/> Stress/Design Report	<input type="checkbox"/> Health Physics Procedure
<input type="checkbox"/> Operating Specification	<input type="checkbox"/> Interface Control Drawing	<input type="checkbox"/> Spares Multiple Unit Listing
<input type="checkbox"/> Criticality Specification	<input type="checkbox"/> Calibration Procedure	<input type="checkbox"/> Test Procedures/Specification
<input type="checkbox"/> Conceptual Design Report	<input type="checkbox"/> Installation Procedure	<input type="checkbox"/> Component Index
<input type="checkbox"/> Equipment Spec.	<input type="checkbox"/> Maintenance Procedure	<input type="checkbox"/> ASME Coded Item
<input type="checkbox"/> Const. Spec.	<input type="checkbox"/> Engineering Procedure	<input type="checkbox"/> Human Factor Consideration
<input type="checkbox"/> Procurement Spec.	<input type="checkbox"/> Operating Instruction	<input type="checkbox"/> Computer Software
<input type="checkbox"/> Vendor Information	<input type="checkbox"/> Operating Procedure	<input type="checkbox"/> Electric Circuit Schedule
<input type="checkbox"/> OM Manual	<input type="checkbox"/> Operational Safety Requirement	<input type="checkbox"/> ICRS Procedure
<input type="checkbox"/> FSAR/SAR	<input type="checkbox"/> IEFD Drawing	<input type="checkbox"/> Process Control Manual/Plan
<input type="checkbox"/> Safety Equipment List	<input type="checkbox"/> Cell Arrangement Drawing	<input type="checkbox"/> Process Flow Chart
<input type="checkbox"/> Radiation Work Permit	<input type="checkbox"/> Essential Material Specification	<input type="checkbox"/> Purchase Requisition
<input type="checkbox"/> Environmental Impact Statement	<input type="checkbox"/> Fac. Proc. Samp. Schedule	_____
<input type="checkbox"/> Environmental Report	<input type="checkbox"/> Inspection Plan	_____
<input type="checkbox"/> Environmental Permit	<input type="checkbox"/> Inventory Adjustment Request	_____

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number/Revision
_____	_____	_____
_____	_____	_____
_____	_____	_____

20. Approvals

Signature	Date	Signature	Date
<u>OPERATIONS AND ENGINEERING</u>		<u>ARCHITECT-ENGINEER</u>	
Cog./Project Engineer <u>[Signature]</u>	<u>4/16/92</u>	PE <u>[Signature]</u>	<u>4/10/92</u>
Cog./Project Engr. Mgr. <u>[Signature]</u>	<u>4/16/92</u>	QA <u>[Signature]</u>	<u>4-10-92</u>
QA <u>[Signature]</u>	<u>4/16/92</u>	Safety <u>[Signature]</u>	<u>4/10/92</u>
Safety _____	_____	Design <u>ELEC: [Signature]</u>	<u>4/10/92</u>
Security _____	_____	Other <u>STRL: [Signature]</u>	<u>4-10-92</u>
Proj. Prog./Dept. Mgr. _____	_____	<u>ENVIR: [Signature]</u>	<u>4-10-92</u>
Def. React. Div. _____	_____	<u>PLE: [Signature]</u>	<u>4-10-92</u>
Chem. Proc. Div. _____	_____	<u>CQA: [Signature]</u>	<u>4-14-92</u>
Def. Wst. Mgmt. Div. _____	_____	<u>DEPARTMENT OF ENERGY</u>	
Adv. React. Dev. Div. _____	_____	_____	
Proj. Dept. _____	_____	_____	
Environ. Div. _____	_____	<u>ADDITIONAL</u>	
IRM Dept. _____	_____	_____	
Facility Rep. (Ops) _____	_____	_____	
Other _____	_____	_____	

BLOCK 13b CONTINUED:

(DI): Use of #6 copper wire requires connection to galvanized steel ground rod above grade per Construction Spec (Item 4C, 5A)4 & 5A)5). Connection diagrams updated to match equipment requirements for Project W-125 (Item 2, 3, 12 & 13). (FC): Elimination of conduits crossing at Leachate Pit Control Station (Item 4A & 14A). (AF): Catalog Nos. are no longer valid (Item 5A)1). (DE): Conductor & Cutout/Arrester incorrectly located (Item 5A)2). Spare conduit not shown (Item 5A)3). Conduit spacing dimensions conflict with mfg standard conduit spacers (Item 4B & 14B). Wire numbers incorrect (Item 9 & 18). Match elementary wiring diagram corrected on previously issued ECN (Item 10).

THE CHANGES MADE TO SAFETY CLASS 2 ITEMS DO NOT IMPACT THE INTEGRITY OF THE ORIGINAL FACILITY DESIGN.

START OF BLOCK 12 - DESCRIPTION OF CHANGES

1) H-2-77573, SH 1, REV 1

Add the following dwg to the CIVIL discipline:

H-2-77594 1000 CIVIL MISC DETAILS

2) H-2-77636, SH 2, REV 2

(sc-2) Leachate Level Syst Conn Diag (Z B3): Modify - see page 6 of this ECN.

3) H-2-77636, SH 4, REV 2

(sc-2) Leachate Level Syst Conn Diag (Z B6): Modify - see page 6 of this ECN.

4) H-2-77638, SH 1, REV 1

(sc-2) A) Detail 9 (Z D4) & Detail 10 (Z D3): Modify - see page 7 of this ECN.

(sc-2) B) Section D (Z C3), Section J (Z C4) & Section K (Z D3): Delete Conduit spacing dimension, dimension lines and associated center lines.

C) Note 18: Delete first sentence.

5) H-2-77638, SH 3, REV 1

A) Elevation 4 (Z A7-D8): Modify - see page 8 of this ECN.

1) Delete all manufacturer's catalog numbers.

2) Relocate "B" phase conductor and cutout/arrester to opposite side of pole.

3) Show the location of spare conduit.

4) Replace #6 iron wire (note 18) with #6 copper wire.

5) Replace (2) ground rods with (1) 10' ground rod.

(sc-2) B) Detail 5 (Z D1 - F2): Replace with new detail 5 as shown on page 9 of this ECN. (Incorporates ECN B-714-95, page 7, item 25)

(sc-2) C) Detail 14 (Z D3-F4): Replace with new detail 14 as shown on page 10 of this ECN. (Incorporates ECN B-714-95, page 7, item 25)

6) H-2-77639, SH 1, REV 2

(sc-2) A) Elevation J, Front View (Z C6-E7): Modify - see page 11 of this ECN.

(sc-2) B) Elevation J, Rear View (Z C3-E4): Replace with new view as shown on page 12 of this ECN.

7) H-2-77639, SH 2, REV 2

(sc-2) A) Elevation K, Front View (Z C6-E7): Modify - see page 11 of this ECN.

(sc-2) B) Elevation K, Rear View (Z C2-E4): Replace with new view as shown on page 13 of this ECN.

8) H-277640, SH 1, REV 1

(sc-2) (Z C1-F4): Replace Elevation B & C with new elevations as shown on page 14 of this ECN.

9) H-2-77643, SH 1, REV 1

Power Terminal Boxes, P-TB-LS-102 & P-TB-LS-103 (Z A6-8): Change wire designations "P-LP" to P-LS", typical 12 places

10) H-2-77643, SH 2, REV 1

(sc-2) (Z A7): Modify - see page 15 of this ECN.

11) H-2-78443, SH 1, REV 1

Add the following dwg to the REFERENCE BLOCK:

H-2-77594 CIVIL MISC DETAILS

12) H-2-78502, SH 2, REV 2

(sc-2) Leachate Level Syst Conn Diag (Z A6): Modify - see page 6 of this ECN.

13) H-2-78502, SH 4, REV 2

(sc-2) Leachate Level Syst Conn Diag (Z A6): Modify - see page 6 of this ECN.

14) H-2-78504, SH 1, REV 1

(sc-2) A) Stub-up Detail, Typical 2 places (Z D3-4): Modify - see page 7 of this ECN.

(sc-2) B) Section G (Z C4) & Section H (Z C3): Delete conduit spacing dimension, dimension lines and associated centerlines.

15) H-2-78504, SH 3, REV 1

- (sc-2) A) Elevation J (Z E3-F4): Replace with new elevation as shown on page 16 of this ECN. (Incorporates ECN B-714-95, page 10, item 41)
- (sc-2) B) Elevation K (Z E1-F2): Replace with new elevation as shown on page 17 of this ECN. (Incorporates ECN B-714-95, page 10, item 41)
- C) (Z D5-F8): Delete Enlarged Plan 1 & Section T in their entirety. (Duplicate transformer details. Required information shown in ECN B-714-111, page 9)

16) H-2-78505 SH 1, REV 2

- (sc-2) A) Elevation, Front (Z D6-E7): Modify - see page 11 of this ECN.
- (sc-2) B) Elevation, Rear (Z C3-E5): Replace with new view as shown on page 18 of this ECN.

17) H-2-78505, SH 2, REV 2

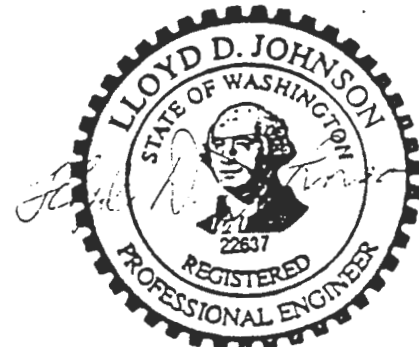
- (sc-2) A) Elevation, Front (Z C6-E7); Modify - see page 11 of this ECN.
- (sc-2) B) Elevation, Rear (Z C2-E4): Replace with new view as shown on page 19 of this ECN.

18) H-2-78509, SH 1 REV 1

Power Terminal Box P-TB-LS-105 (Z D3): Change wire designations "P-LP" TO "P-LS", typical 6 places

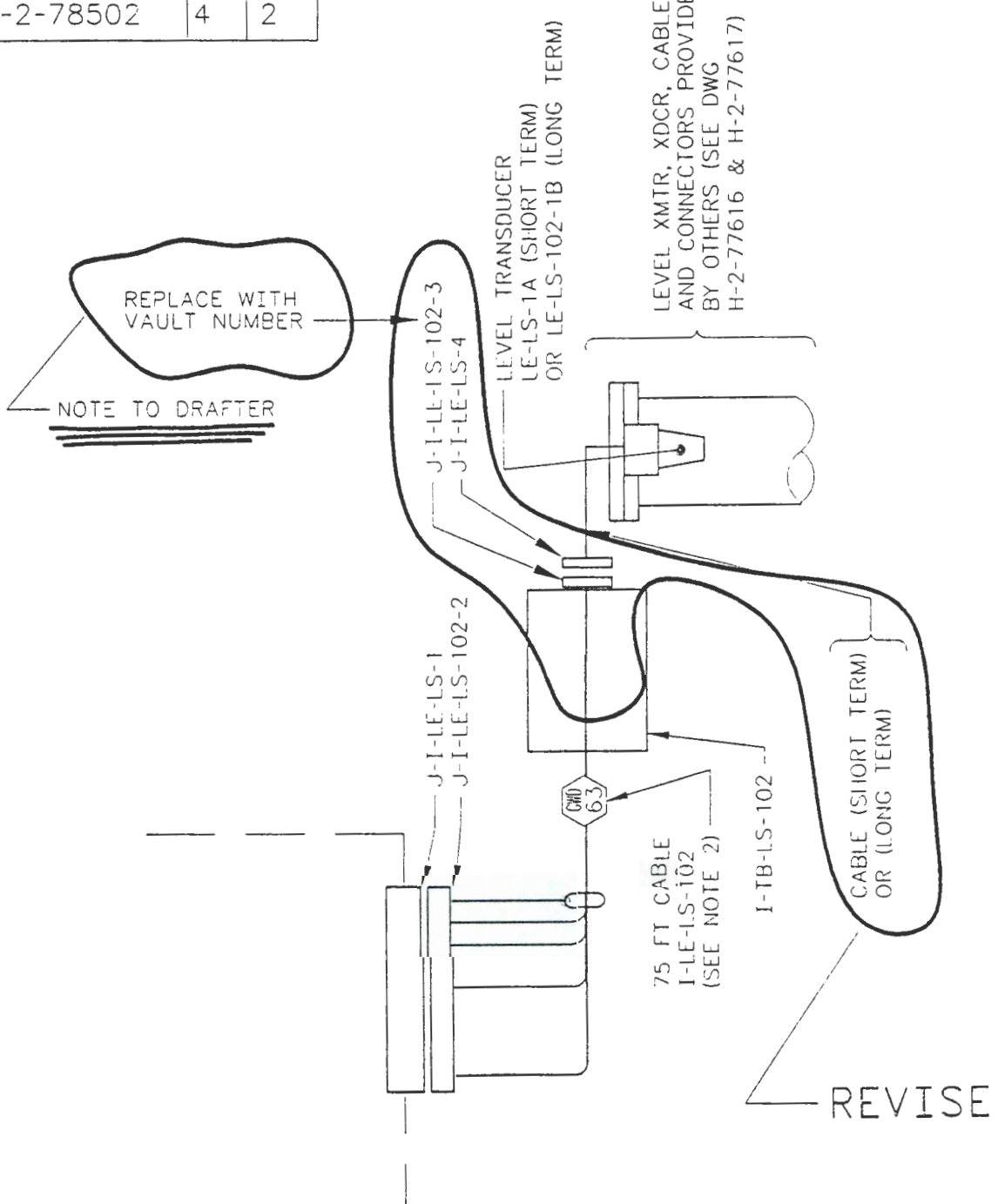
19) ADD new drawing H-2-77594, Rev 0 to project package.

REGISTERED ENGINEER REVIEW - ELEC (All items EXCEPT item 1, 11 & 19)



EXPIRES 5/31/74

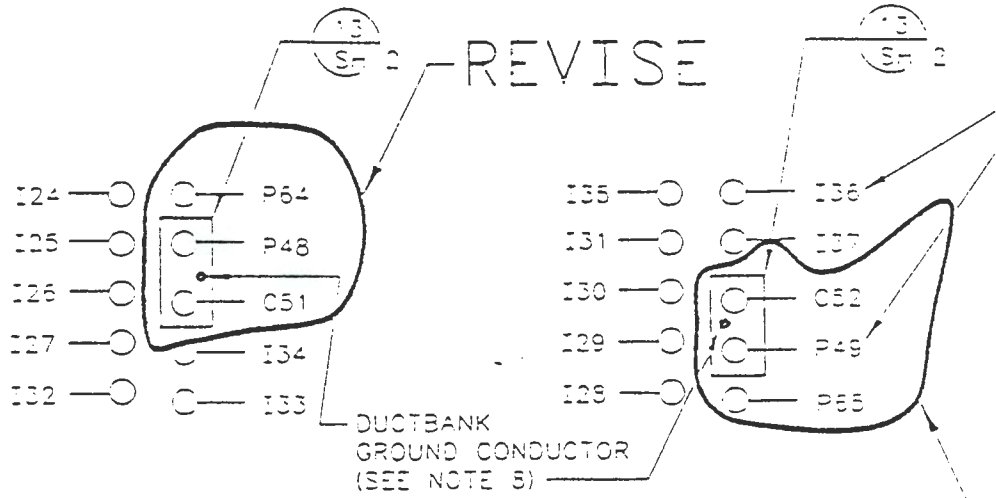
Ref. Dwg.	Sh.	Rev.	Prepared By	Checked By	ECN No.	Page
* H-2-77636	2	2	TE COYNE	L.D. JOHNSON	B-714-115	6/19
H-2-77636	4	2				
H-2-78502	2	2				
H-2-78502	4	2				



* H-2-77636 SHEET 2 SHOWN, LISTED REFERENCE DRAWINGS NAMED ARE SIMILAR

Ref. Dwg. H-2-77638	Sn. 1	Rev. 1	Prepared By TE COYNE	Checked By 2/27/92 P.K. Marlowe	ECN No. E-714-115	Page 7/19
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H-2-78504 1 1

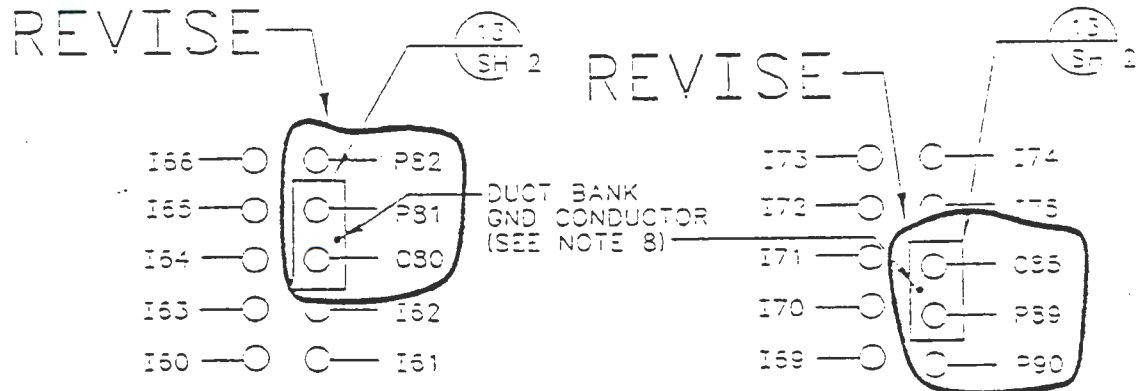


DETAIL 9
LEACHATE PIT CONTROL STATION
102 STUB-UP

DETAIL 10
LEACHATE PIT CONTROL STATION
103 STUB-UP

REVISE

H-2-77638 SH 1



STUB-UP DETAIL
LEACHATE PIT CONTROL STATION 104
SEE ELEVATION, DWG H-2-78505 SH 1

STUB-UP DETAIL
LEACHATE PIT CONTROL STATION 105
SEE ELEVATION, DWG H-2-78505 SH 2

H-2-78504 SH 1

Ref. Dwg.
H-2-77638

Sh.
3

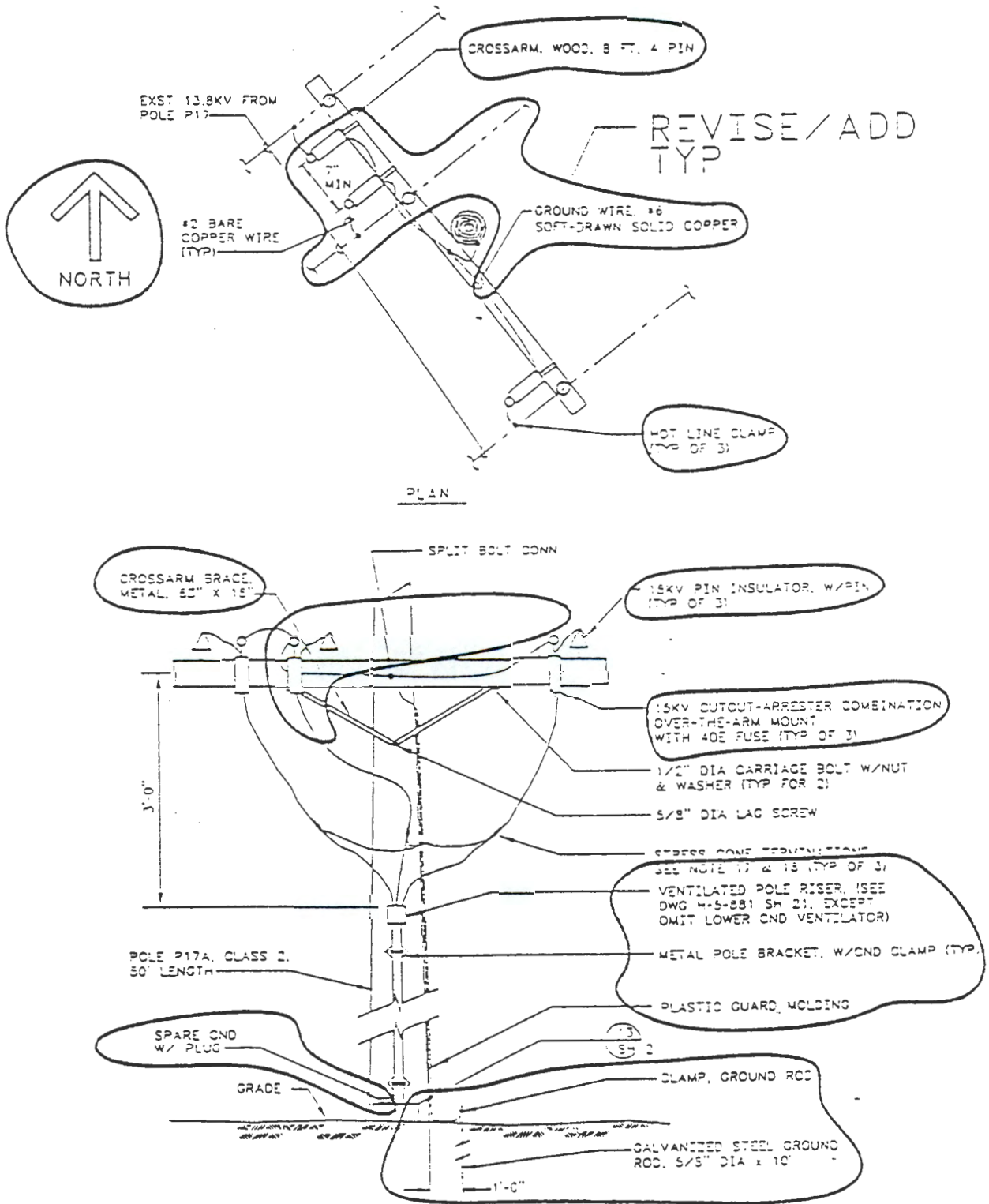
Rev.
1

Prepared by
TE COYNE

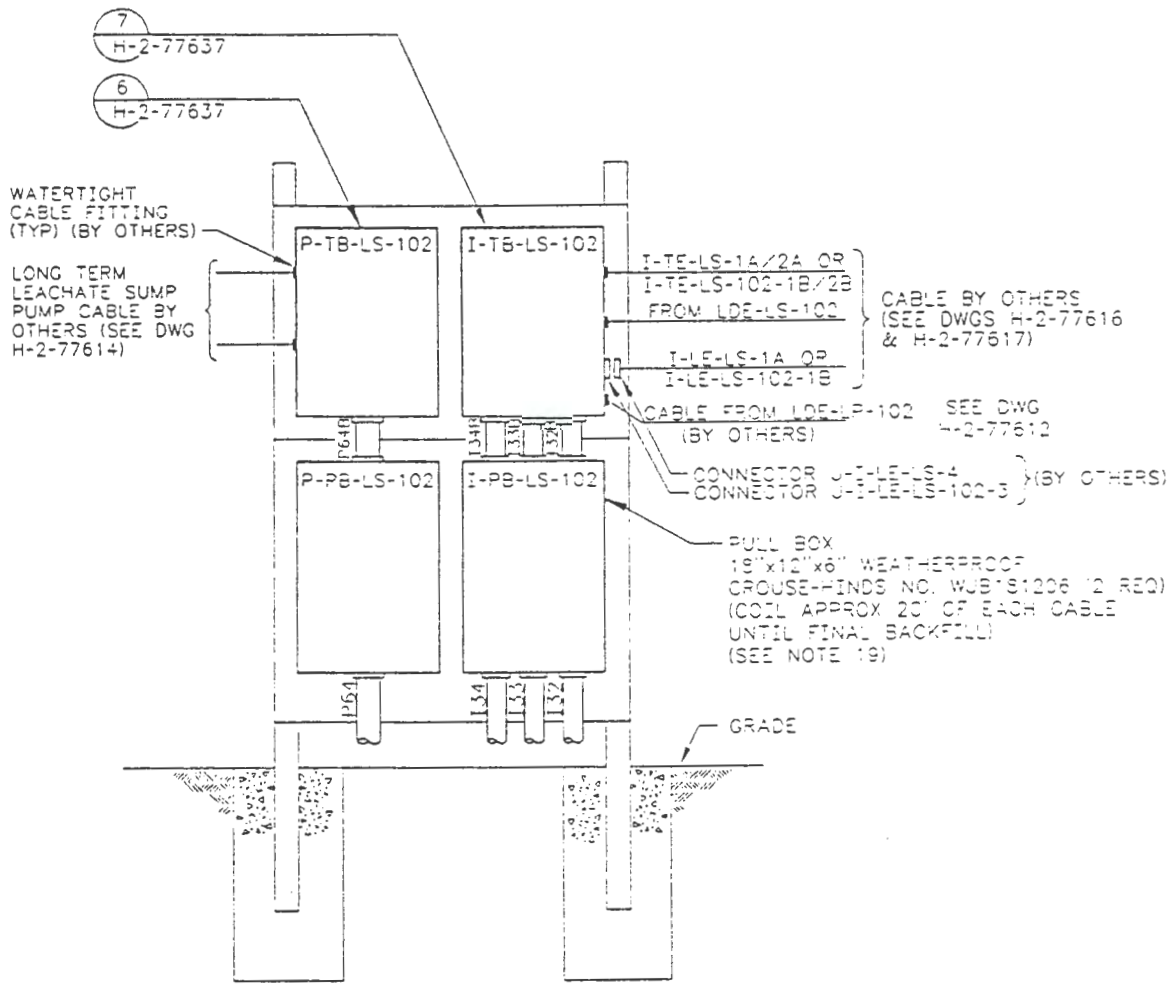
Checked By
2/27/92
R.K. Newhouse

EON No.
E-714-115

Page
8/19



Ref. Dwg. H-2-77638	Sh. 3	Rev. 1	Prepared By TE COYNE	Checked By 4-2-92 R.K. [Signature]	ECN NO. 3-714-115	Page 9/19
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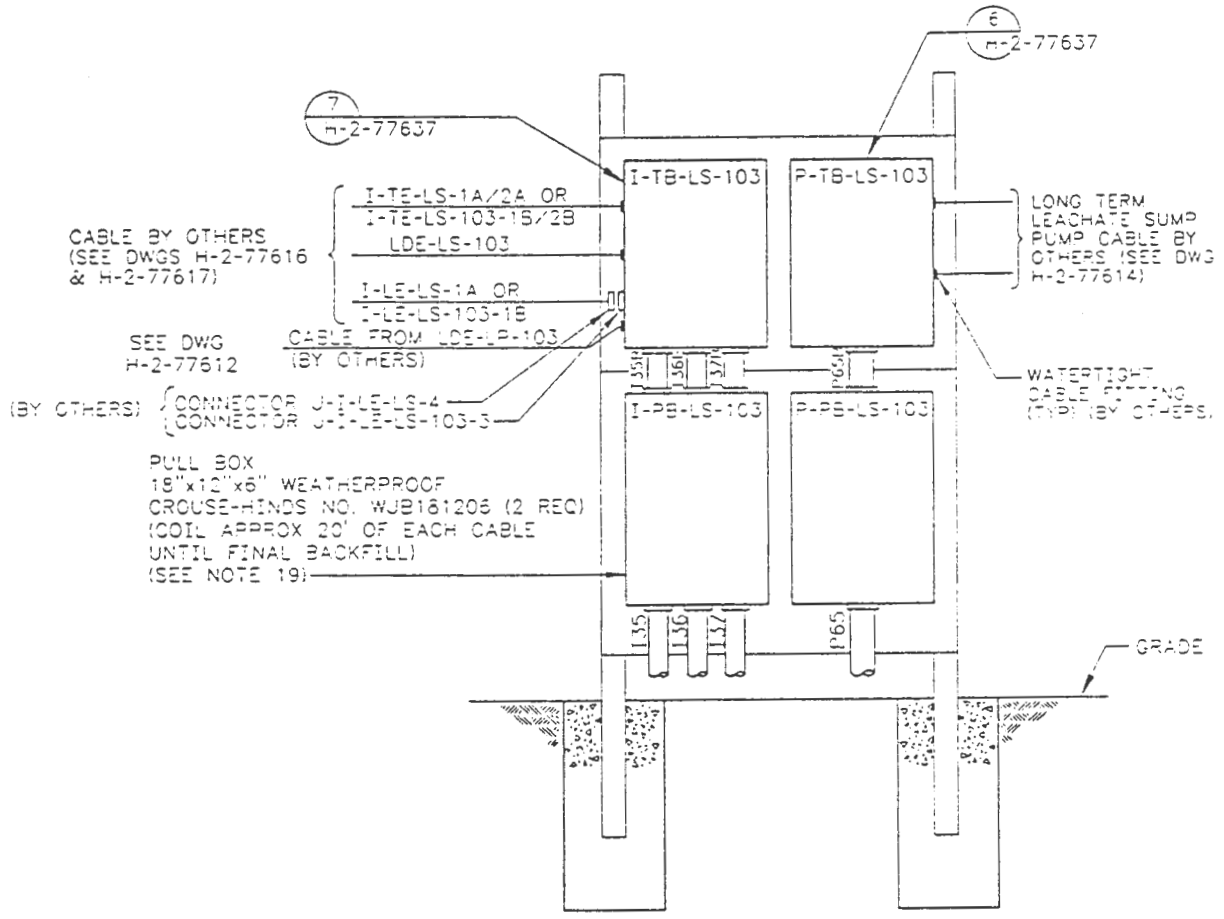


DETAIL

5

VAULT 102 LEACHATE PIT RACK THIS DWG & H-2-77635 SH 1
(SEE DWG H-2-77594 FOR STRUCTURAL FRAMING DETAILS AND MATERIALS REQUIRED FOR FASTENING EQUIPMENT)

Ref. Dwg. H-2-77638	Sh. 3	Rev. 1	Prepared By TE COYNE	Checked By 4-2-92 <i>R.K. Newhouse</i>	ECN No. B-714-115	Page 10/19
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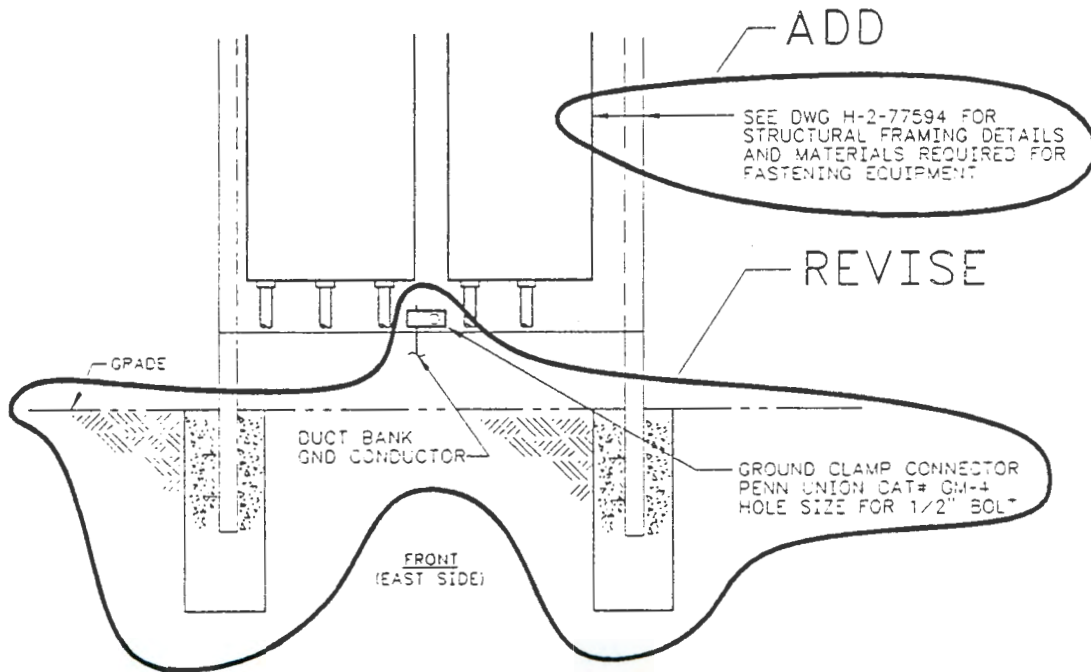


DETAIL

Vault 103 Leachate Pit Rack 14 THIS DWG & H-2-77635 SH 2
(SEE DWG H-2-77594 FOR STRUCTURAL FRAMING DETAILS AND MATERIALS REQUIRED FOR FASTENING EQUIPMENT)

9 2 1 2 3 0 1 3

Ref. Dwg. H-2-77639	Sh. 1	Rev. 2	Prepared By TE COYNE	Checked By 4-2-92 <i>R.K. Newhouse</i>	ECN No. B-714-115	Page 11/19
H-2-77639	2	2				
H-2-78505	1	2				
H-2-78505	2	2				



* H-2-77639 SHEET 1 SHOWN, LISTED REFERENCE DRAWINGS ARE SIMILAR

Ref. Dwg.
H-2-77639

Sh.
1

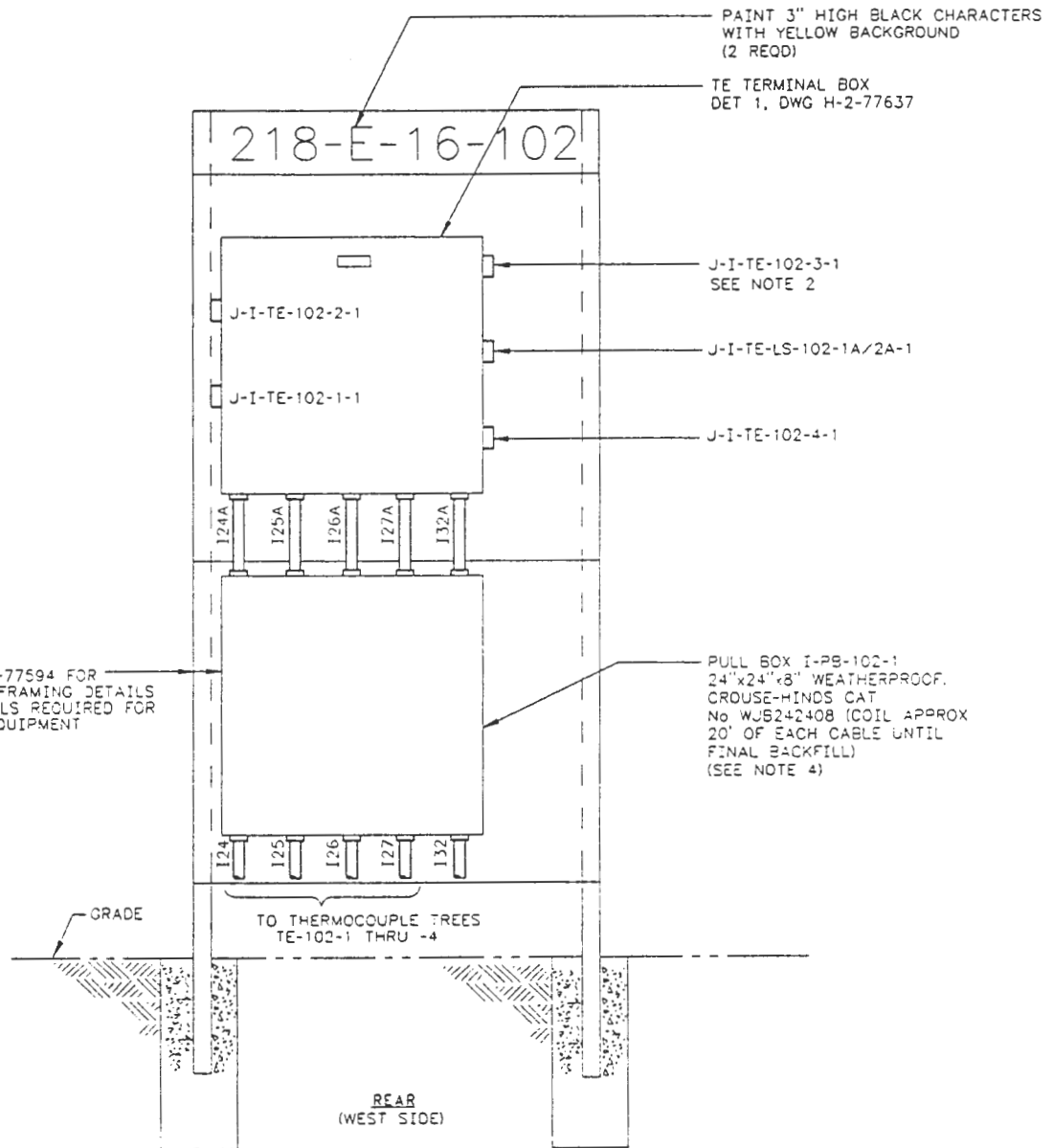
Rev.
2

Prepared By
TE COYNE

Checked by
R.K. Newhouse 4-2-92

ECN No.
B-714-115

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12/19



92120-31510

Ref. Dwg. H-2-77639	Sh. 2	Rev. 2	Prepared By TE COYNE	Checked By 4-2-92 R. K. [Signature]	ECN No. B-714-115	Page 13/19
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PAINT 3" HIGH BLACK CHARACTERS
WITH YELLOW BACKGROUND
(2 REQD)

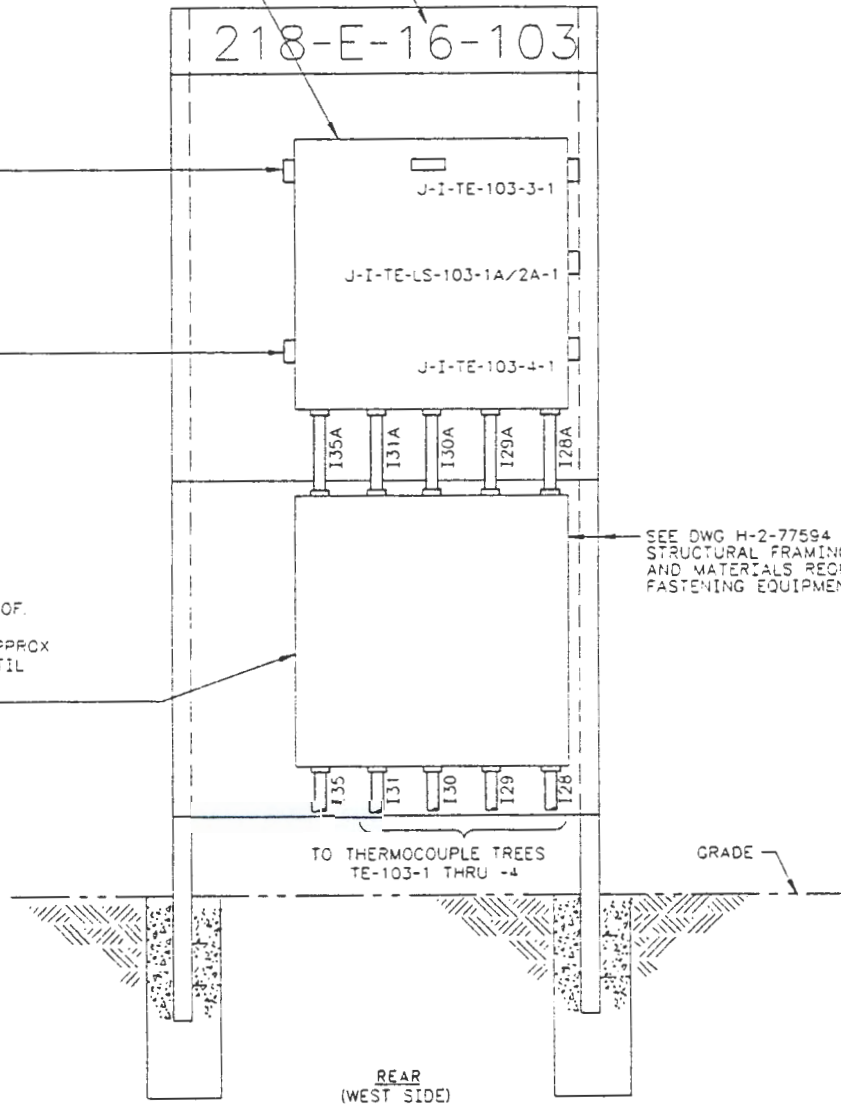
TE TERMINAL BOX
DET 1, DWG H-2-77637

J-I-TE-103-2-1
SEE NOTE 2

J-I-TE-103-1-1

PULL BOX I-PB-103-1
24"x24"x8" WEATHERPROOF.
CROUSE-HINDS CAT
No WJB242408 (COIL APPROX
20' OF EACH CABLE UNTIL
FINAL BACKFILL)
(SEE NOTE 5)

SEE DWG H-2-77594 FOR
STRUCTURAL FRAMING DETAILS
AND MATERIALS REQUIRED FOR
FASTENING EQUIPMENT



1 2 3 4 5 6

1 2 1 2 5 3 3 3 3 2

KAISER ENGINEERS
HANFORD

ENGINEERING CHANGE NOTICE SKETCH

Ref. Dwg. H-2-77640

Sh. 1

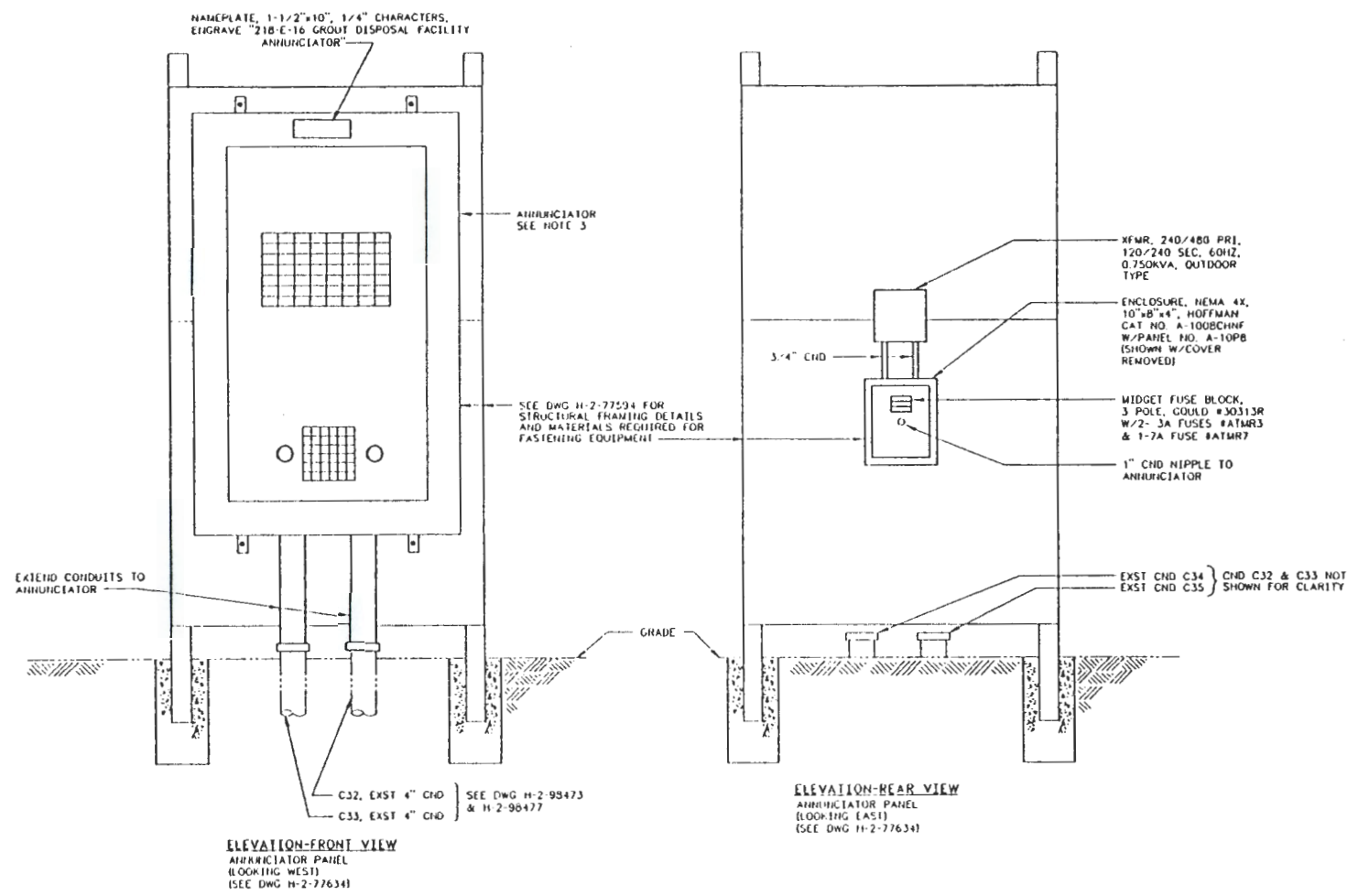
Rev. 1

Prepared By
TE COYNE

Checked By
R. K. Johnson

ECN No. B-714-115

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14/19



KEH-0153 00 (1/7/81) ACA0
B714/ECNRACK4

Ref. Dwg.
H-2-77643

Sn.
2

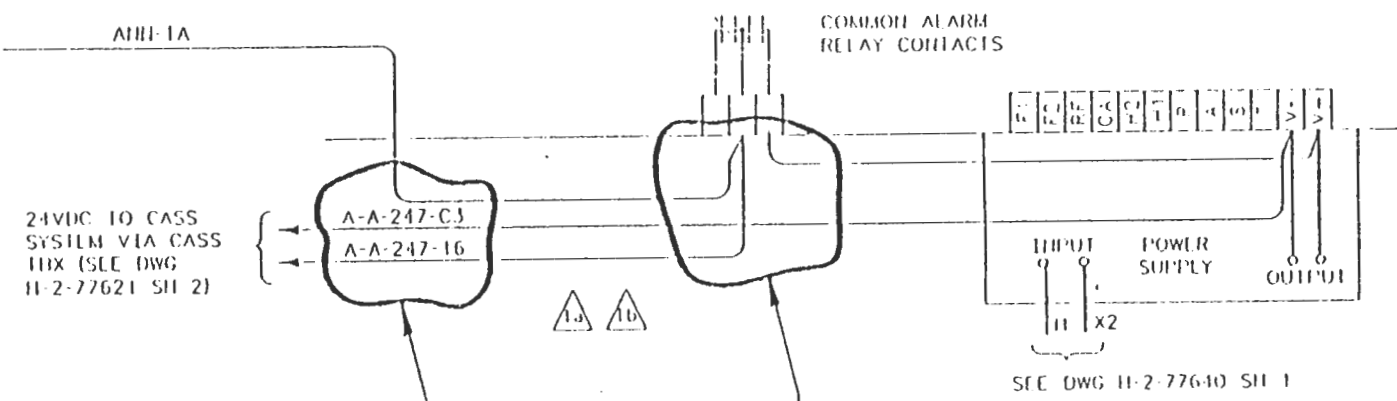
Rev.
1

Prepared by
TE COYNE

Checked by
R. P. Moursund

EDN No.
E-714-115

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15/19



REVISE
REVISE
REVISE
NUMBERS

Ref. Dwg.
H-2-78504

Sh.
3

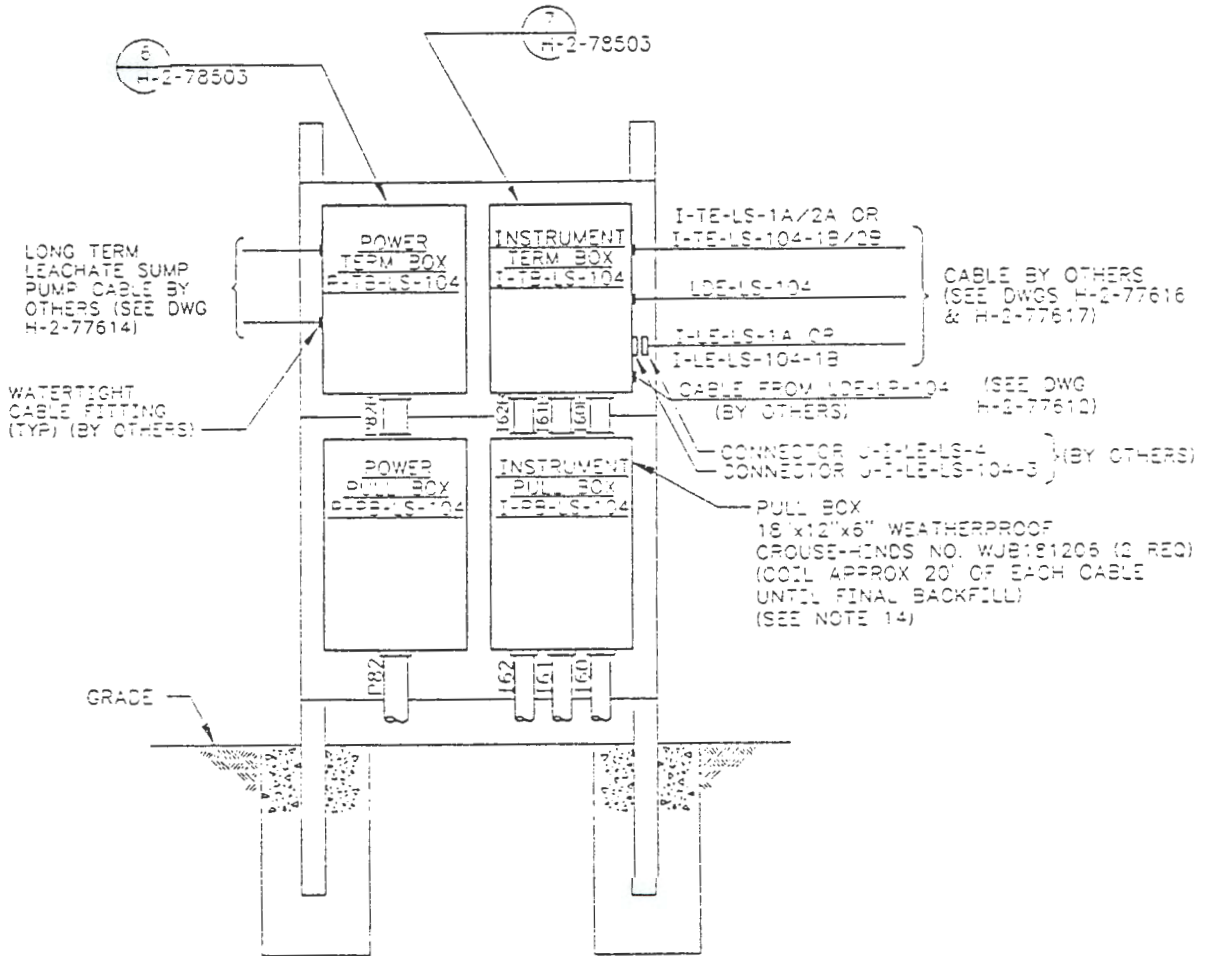
Rev.
1

Prepared By
TE COYNE

Checked By
4-2-92
R.K. Newland

ECN No.
B-714-115

Page
16/19



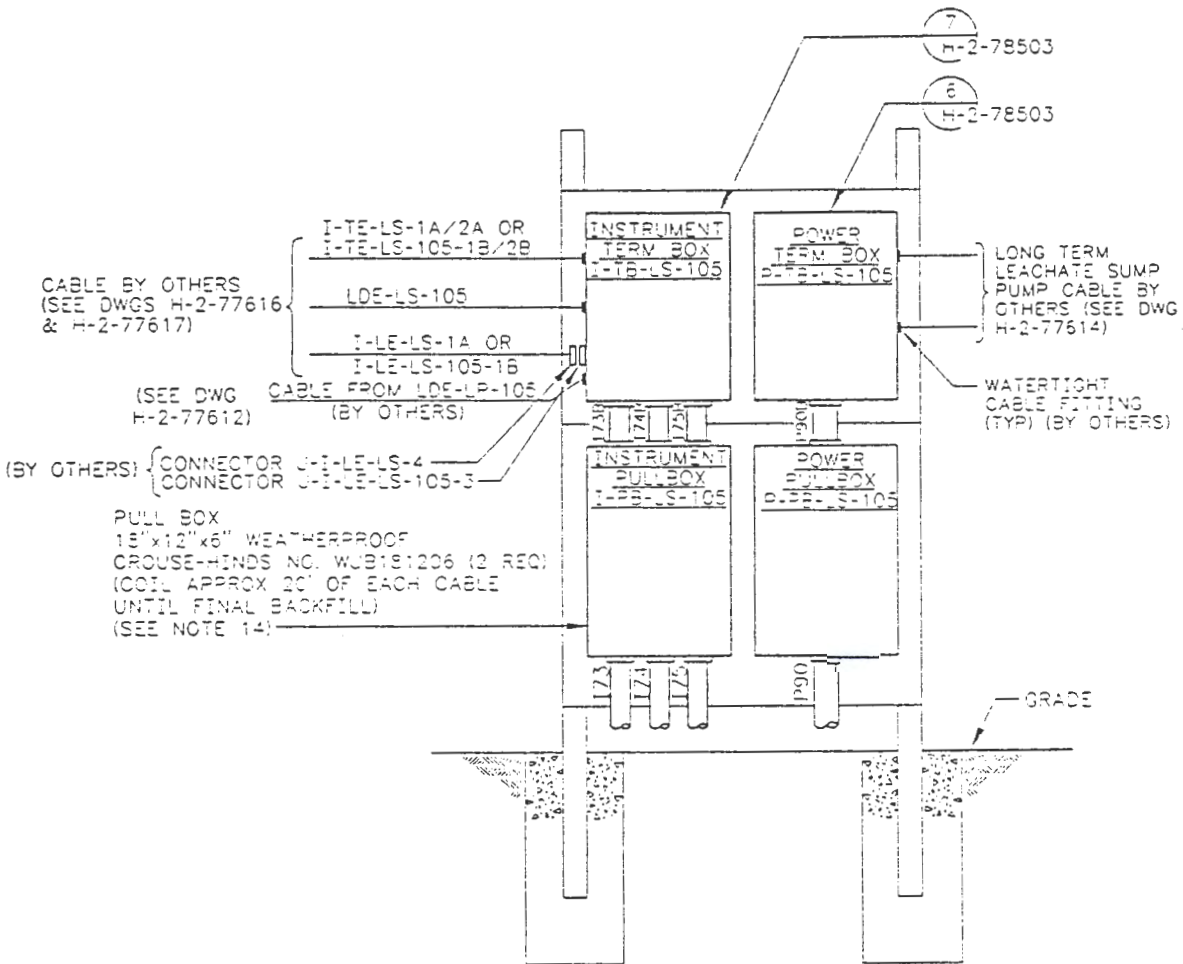
ELEVATION

J
H-2-78501 SH 1

Vault 104 Leachate Pit Rack
(SEE DWG H-2-77594 FOR STRUCTURAL FRAMING DETAILS AND MATERIALS REQUIRED FOR FASTENING EQUIPMENT)

9212031674

Ref. Dwg. H-2-78504	Sh. 3	Rev. 1	Prepared By TE COYNE	Checked By 4-2-82 R.K. Newhouse	ECN No. E-714-115	Page 17/19
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ELEVATION

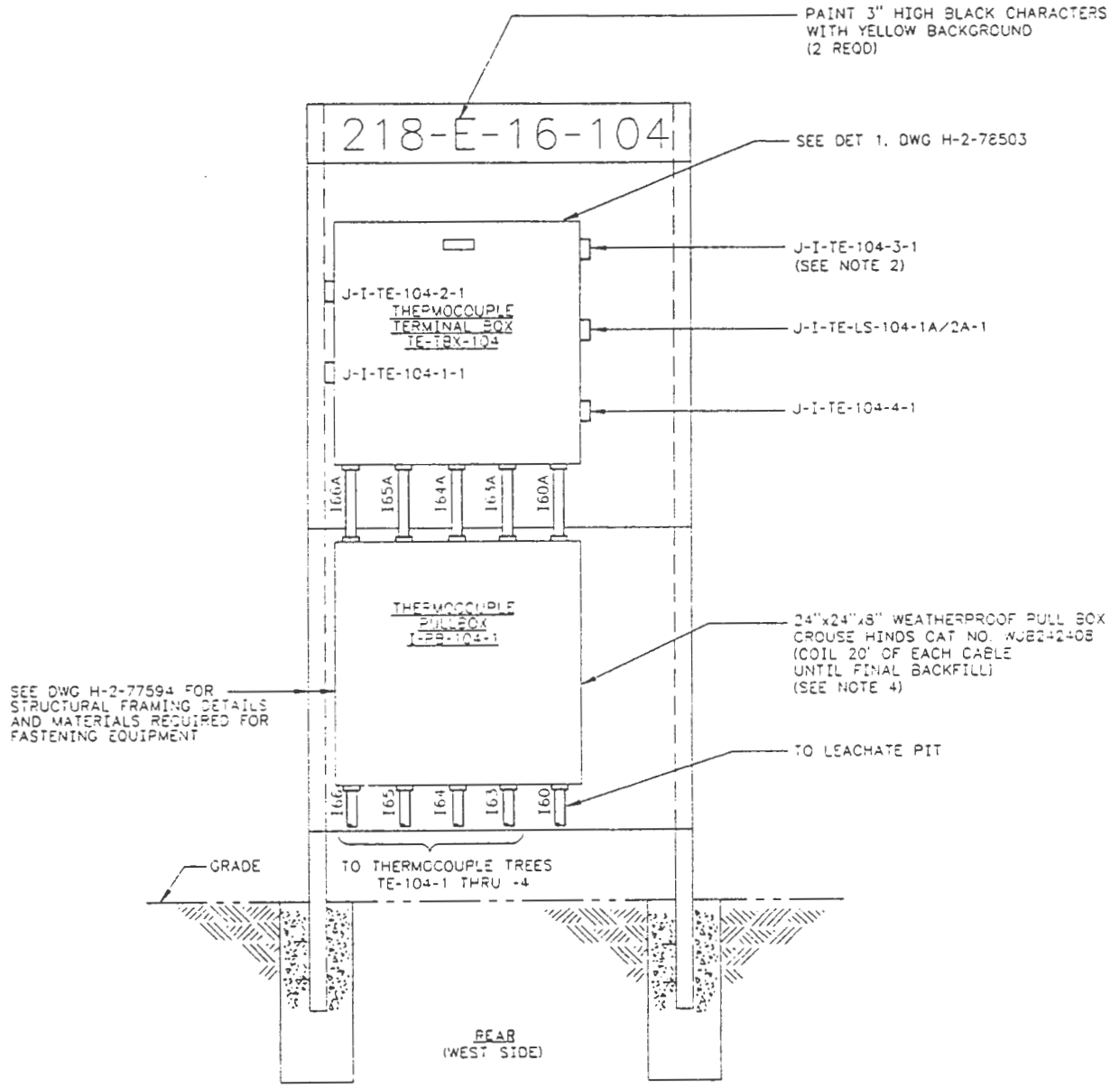
(K)

VAULT 105 LEACHATE P17 RACK H-2-78501 SH 2

(SEE DWG H-2-77594 FOR STRUCTURAL FRAMING DETAILS AND MATERIALS REQUIRED FOR FASTENING EQUIPMENT)

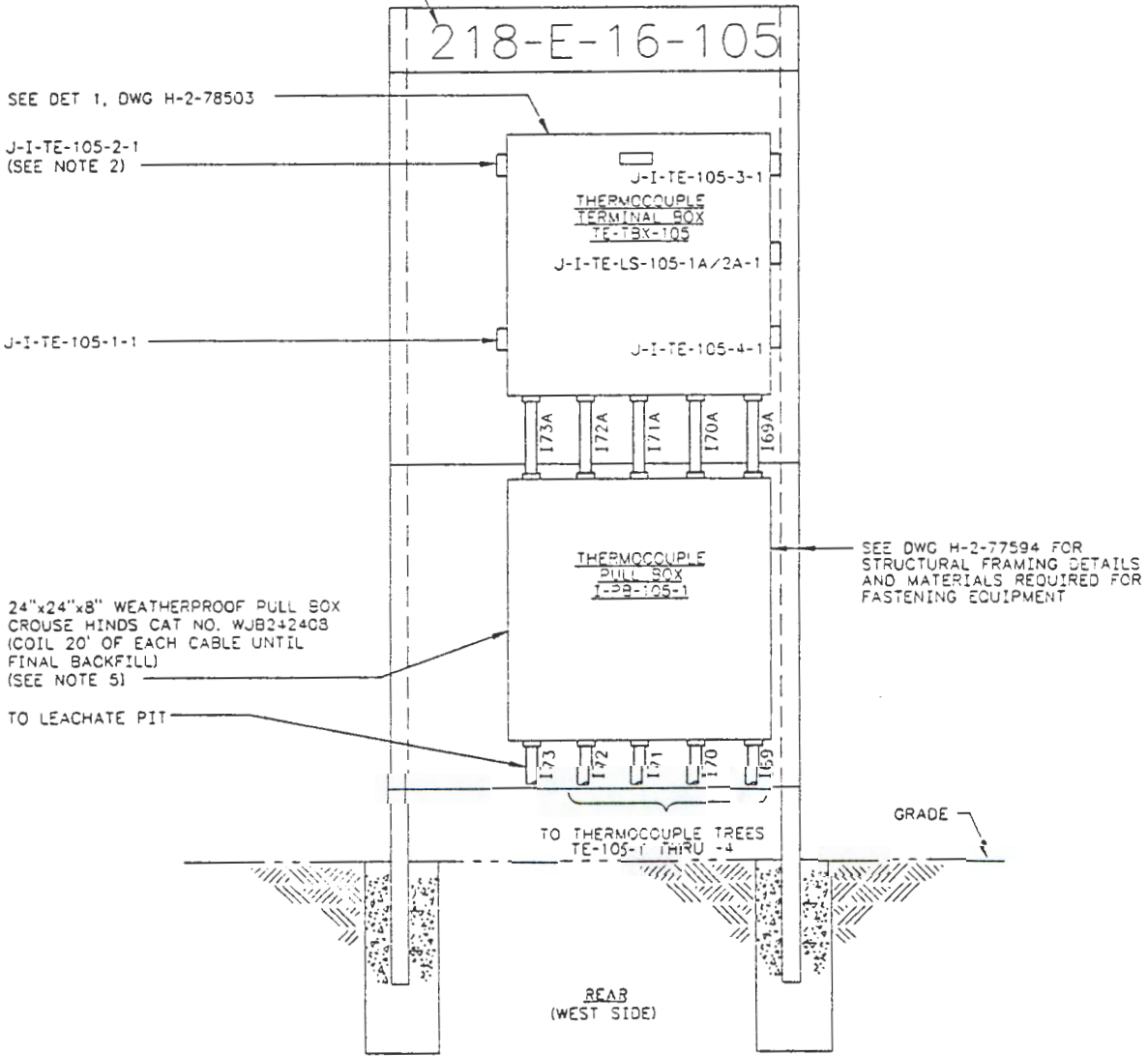
9 2 1 2 3 4 5 6 7 8 9

Ref. Dwg. H-2-78505	Sh. 1	Rev. 2	Prepared By TE COYNE	Checked By 4-2-92 <i>R.K. Newhouse</i>	ECN No. B-714-115	Page 18/19
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Ref. Dwg. H-2-78505	Sh. 2	Rev. 2	Prepared By TE COYNE	Checked By R.K. [Signature] 4-2-92	ECN No. B-714-115	Page 19/19
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PAINT 3" HIGH BLACK CHARACTERS
WITH YELLOW BACKGROUND
(2 REQD)



9212510007