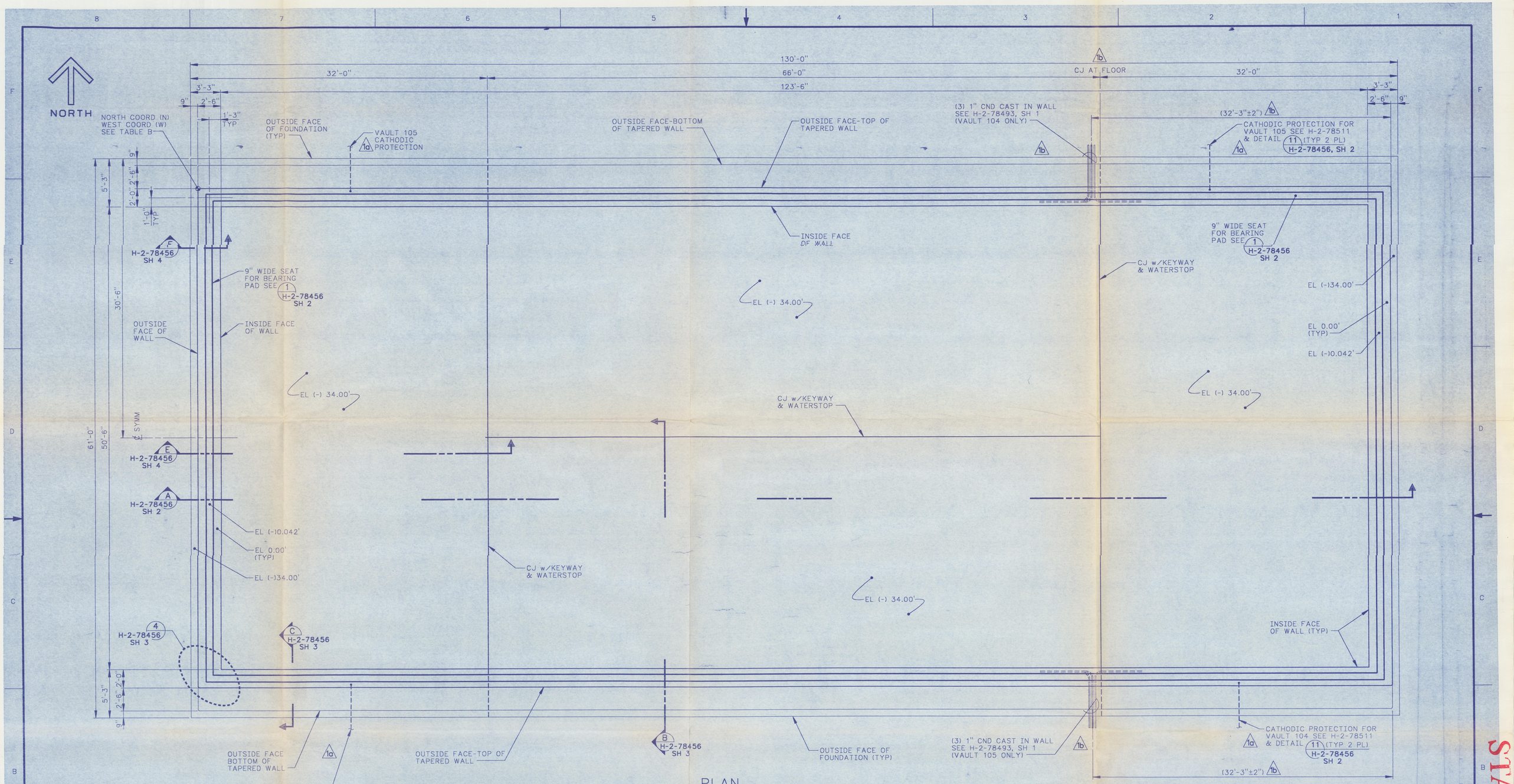


PLAN

SCALE: 1/4" = 1'-0"

FOR GENERAL NOTES SEE H-2-78456, SHEET 2

TABLE B			
VAULT NO	NORTH COORD	WEST COORD	EL-TOP OF CONC
104	N40336.00	W45611.50	650.50
105	N40249.50	W45611.50	650.50

NOTE: FOR VAULT NUMBERS SEE H-2-78444, SHEET 1

START

DOES NOT CONTAIN CLASSIFIED OR UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION

Reviewing Official/ADC
Kaiser Engineers Hanford Company
Date 2/4/91

NAR 1991 RECEIVED EDMC

NUMBER	TITLE	NUMBER	TITLE
		H-2-78443	DRAWING LIST
DRAWING TRACEABILITY LIST		REFERENCES	
		NEXT USED ON H-2-78447	

MF	REV NO.	DESCRIPTION	BY	DATE	KEH APPROVALS	APVD FOR IMPL/INC FOR DATE
M RS	1	b) B-714-51; ZF2-3, B2-3 a) B-714-35; ZF6, B7, F2, B2 THRU B-714-71 GENL REV; INCORP ALL ECNs	TKE 1-11-91	SHS	DRL 2-11-91	GLK 2/14/91 Tad 2-8-91

REVISIONS

CAD FILE B078456A | CAD CODE 2J:DEC:DDM2:5.0:NN

DRAWN	TK EHRHARD	DATE
CHECKED	WE STYNER	10-30-89
SAFETY	J ARCHIBALD	10-30-89
ENVIR.	RG HOLLENBECK	10-31-89
QE.	LA GADDIS/TD HAYS	11-1-89
LEAD ENG. APVD.	GL KOCI	10-31-89

APPROVED FOR IMPLEMENTATION BY SR BRIGGS FOR WHC DATE 10-31-89

IMPACT LEVEL 2 | EDT 151655

M U.S. DEPARTMENT OF ENERGY
Richland Operations Office
KAISER ENGINEERS HANFORD COMPANY

STRL
CONCRETE VAULT
PLAN

PROJECT B-714, GROUT VAULT PAIR (218-E-16-104 & 105)

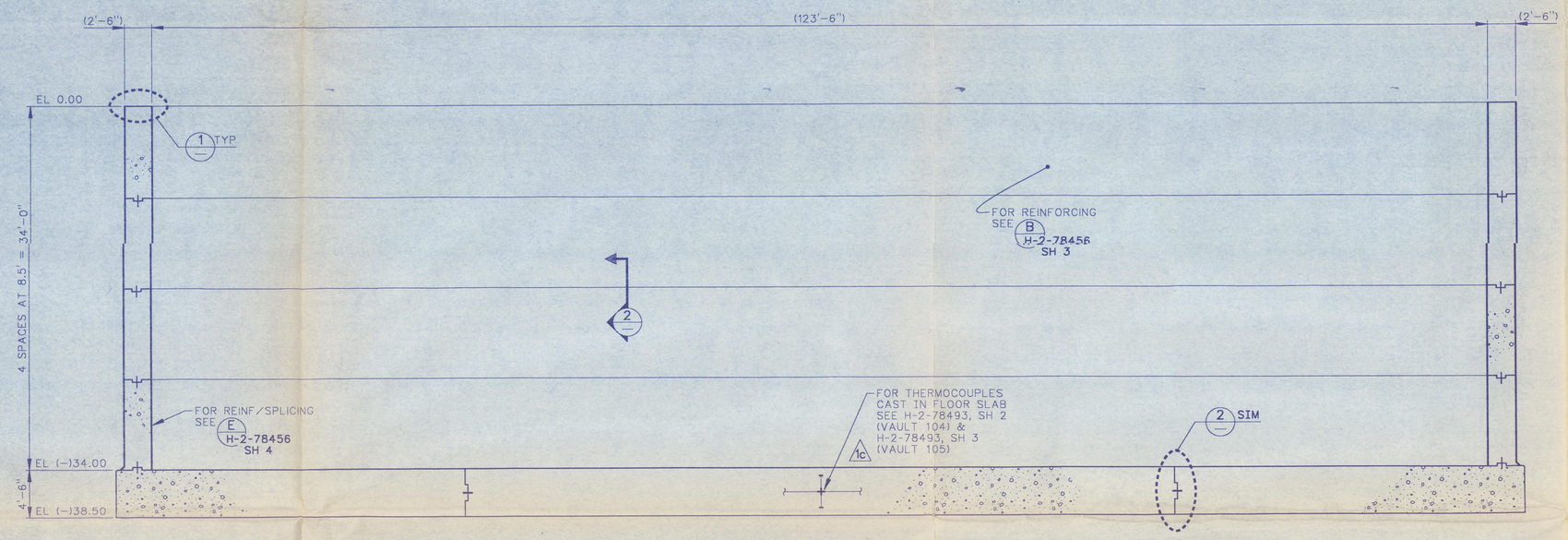
SIZE	BLDG NO.	INDEX NO.	DWG NO.	REV NO.
F	218-E-16	0900, 0901	H-2-78456	1

SCALE SHOWN | JOB NO. ER8159 | SHEET 1 OF 4

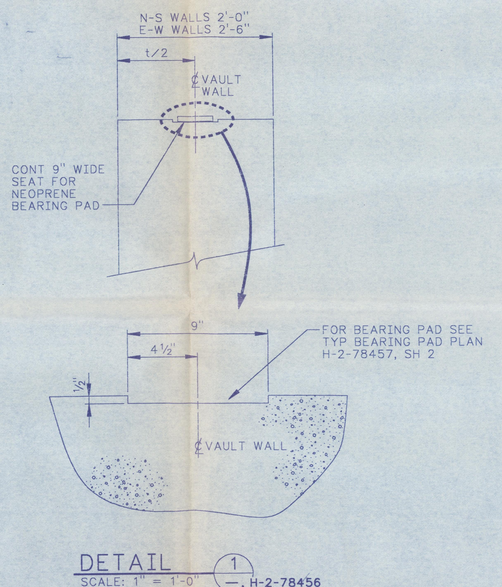
KEHCAD

H278456B1
C 01/30/91

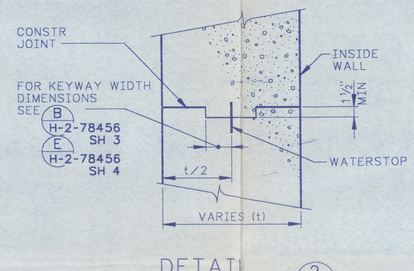
0013128
1 of 4



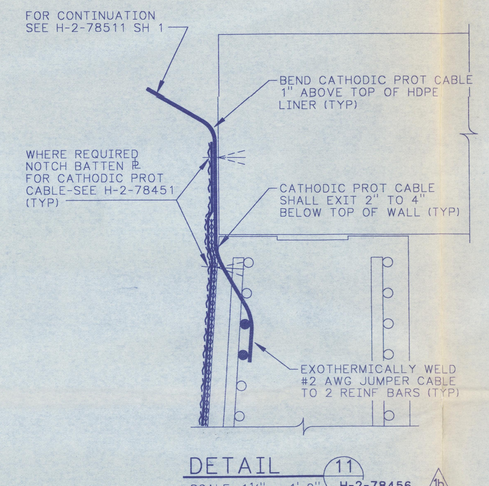
SECTION A H-2-78456 SH 1
SCALE: 3/16" = 1'-0"



DETAIL 1 —, H-2-78456 SH 1
SCALE: 1" = 1'-0"



DETAIL 2 —
SCALE: 1" = 1'-0"



DETAIL 11 H-2-78456 SH 1 1b
SCALE: 1 1/2" = 1'-0"

GENERAL NOTES

1- SEE CONSTRUCTION SPECIFICATION B-714-C2, AND FOR CONCRETE, USE SECTION 03301 VAULT/BASIN CAST-IN-PLACE CONCRETE.

2- EL 0.00'=DATUM EL 650.5 TOP OF CONCRETE. REFERENCE TABLE B ON H-2-78456, SHEET 1.

3- DESIGN MATERIAL AND STRENGTH:

CONCRETE	SPEC B-714-C2, SECT 03301
REINFORCING STEEL	F_y = 60,000 PSI
STRUCTURAL STEEL	F_y = 36,000 PSI
WELDING ELECTRODES:	
REINFORCING STEEL	E90XX
STRUCTURAL STEEL	E70XX

4- CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:

FOOTINGS	3" CLEAR BOTTOM AND SIDES
WALLS/SLABS	2" CLEAR

1e 5- ALL GROUT VAULT VERTICAL WALL REINFORCEMENT SHALL BE MADE CONTINUOUS BY BUTT WELDING OR MECHANICAL COUPLERS EXCEPT AS NOTED (SEE DETAIL 3, H-2-78456, SH 3).

6- LAP SPLICES NOT OTHERWISE SHOWN SHALL CONFORM TO ACI 349-85, CLASS C SPLICE.

7- WELDING REINFORCING STEEL SHALL CONFORM TO AWS D1.4-79.

8- DESIGN CODES:

ACI 349-85	CODE REQUIREMENTS FOR NUCLEAR SAFETY RELATED CONCRETE STRUCTURES
ACI 350R-83	CONCRETE SANITARY ENGINEERING STRUCTURES
SDC-4.1 (REV 10)	STANDARD ARCH-CIVIL DESIGN CRITERIA DESIGN LOADS FOR FACILITIES

9- DESIGN LOADS:

SEISMIC	SSE AND OBE PER SDC 4.1, CATEGORY 1
LIVE	300 PSF SURCHARGE
SOIL:	
GRAVITY	116 PCF
LATERAL	P = 116 KH
ACTIVE	K = 0.23
AT REST	K = 0.36
PASSIVE	K = VARIES (SEE SOILS REPORT)
FLUIDS	62.4 PSF PER FT (HYDRO TEST)
THERMAL	90°C MAX GROUT TEMPERATURE

10- WATERSTOPS REQUIRED AT ALL CONSTRUCTION JOINTS. SEE SPECIFICATION SECTION 05500 FOR WATERSTOP FABRICATION AND INSTALLATION. STIRRUPS MAY BE OFFSET A DISTANCE OF ½ THE STIRRUP SPACING WHEN INTERFERING WITH WATERSTOP. FOR OPTIONAL WATERSTOP SPLICE SEE DWG H-2-78456, SH 3. 1b

1a 11- PLACE GEOTEXTILE SHEETING ON DRAINAGE GRAVEL PRIOR TO CONCRETE PLACEMENT.

1b 12- CONSTRUCTION JOINTS IN BASIN AND VAULT SLABS MAY BE DELETED OR FEWER INSTALLED WITH APPROVAL BY KEH ENGINEERING OF FORMWORK AND CONCRETE PLACEMENT SCHEDULE SUBMITTALS PER SPECIFICATION SECTION 03301. CONSTRUCTION JOINTS SHOWN IN SLABS ARE NOMINAL LIMITS AND LOCATIONS.

1d 13- STIRRUPS IN WALLS AND FLOOR MAY BE INSTALLED WITH EITHER END (90° OR 135°) AT EITHER FACE.

EDGAR A. GOAREN — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER
Rev 2/11/91

DOES NOT CONTAIN CLASSIFIED OR UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION
Reviewing Official/ADC Kaiser Engineers Hanford Company
2/4/91
Date

NUMBER	TITLE
H-2-78443	DRAWING LIST

DRAWING TRACEABILITY LIST — REFERENCES — NEXT USED ON H-2-78456, SH 1

REV NO.	DESCRIPTION	BY DATE	KEH APPROVALS	APVD FOR IMPL/INC FOR DATE
1	e) B-714-61; ZE1 d) B-714-58; ZC1-2 c) B-714-51; ZD5 b) B-714-35; ZC1-2,B2-C3,D1-2 a) B-714-22; ZC1-2 THRU B-714-71 GENL REV; INCORP ALL ECNs	TKE 1-11-91	SHS; DAL 2-7-91; GAG 2/11/91; TDH 3-8-91; DR 2/13/91	

REVISIONS — CAD FILE B078456B — CAD CODE 2J:DEC:DDM2:5.0:NN

IMPACT LEVEL 2 — EDT 151655

		DATE
DRAWN	TK EHRHARD	
CHECKED	WE STYNER	10-30-89
SAFETY	J ARCHIBALD	10-30-89
ENVIR.	RG HOLLENBECK	10-31-89
QE	LA GADDIS/TD HAYS	11-1-89
LEAD ENG. APVD.	GL KOCI	10-31-89

APPROVED FOR IMPLEMENTATION BY SR BRIGGS FOR WHC DATE 10-31-89

M U.S. DEPARTMENT OF ENERGY
Richland Operations Office
KAISER ENGINEERS HANFORD COMPANY

STRL CONCRETE VAULT SECTION & DETAILS

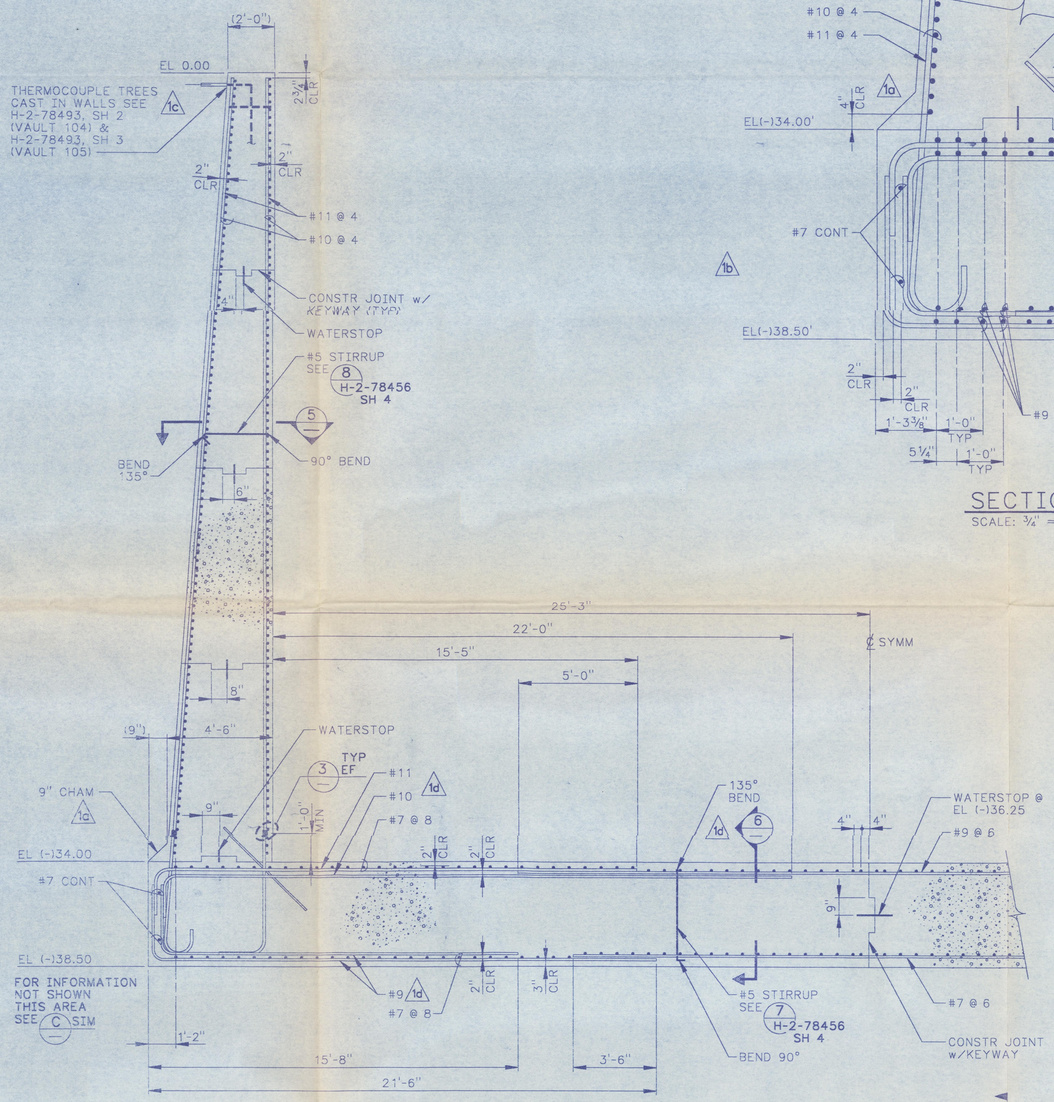
PROJECT: B-714, GROUT VAULT PAIR (218-E-16-104 & 105)

SIZE	BLDG NO.	INDEX NO.	DWG NO.	REV NO.
F	218-E-16	090.1	H-2-78456	1

SCALE: SHOWN — JOB NO. ER8159 — SHEET 2 OF 4

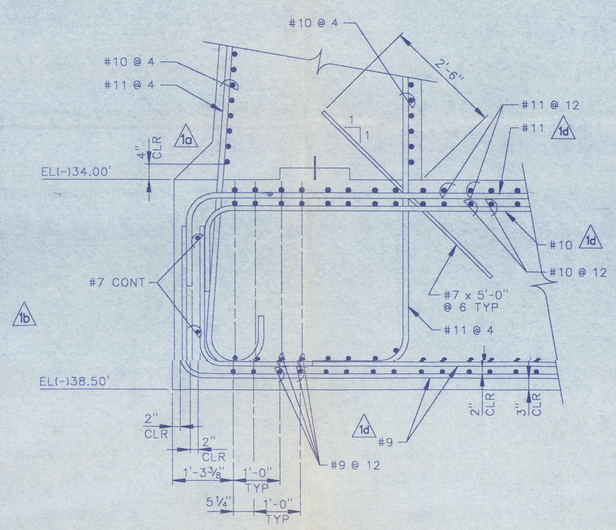
KEHCAD — H27845682 C 01/30/91

013728



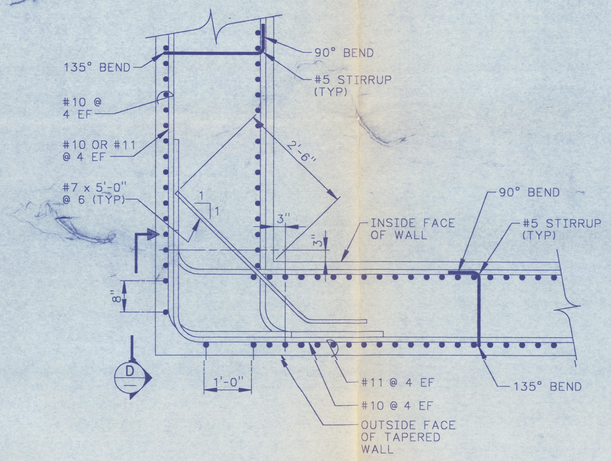
SECTION B

SCALE: 3/8" = 1'-0" — H-2-78456 SH 1



SECTION C

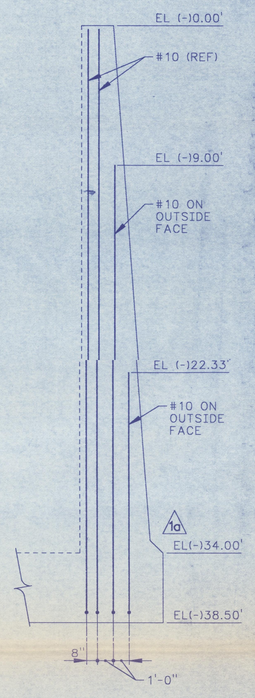
SCALE: 3/4" = 1'-0" — H-2-78456 SH 1



TYP HORIZ WALL CORNER PLAN VIEW AT TOP OF WALL

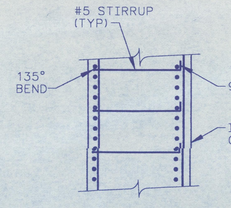
ENLARGED PLAN

SCALE: 3/4" = 1'-0" — 4 H-2-78456 SH 1



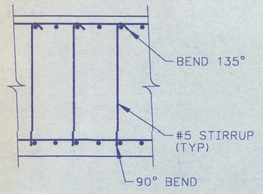
SECTION D

SCALE: 1/4" = 1'-0" — D



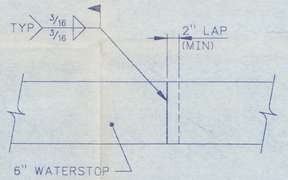
DETAIL 5

SCALE: NONE — H-2-78456 SH 4



DETAIL 6

SCALE: NONE



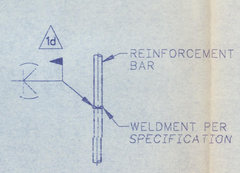
ALTERNATE WATERSTOP SPLICE (BASIN & VAULT) 1b

SCALE: NONE

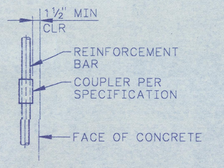
NOTES: 1- CONTRACTOR OPTION FOR SPECIFIED BUTT WELD.

2- ALTERNATE SPLICE NOT ALLOWED WITHIN 2 FEET OF HORIZONTAL OR VERTICAL WALL CORNERS.

1e 3- TOLERANCE FOR THE SPLICE LOCATION SHALL BE ±3 INCHES.



ARC WELDED BUTT SPLICE



MECHANICAL COUPLER

TYPICAL WALL BAR SPLICE

SCALE: NONE — 3 H-2-78456 SH 4

SPLICE NOTES

1- CONTRACTOR OPTION ON TYPE OF SPLICE AND SPACING

2- STAGGER CONSECUTIVE SPLICES MINIMUM 2'-6"

NOTES

1- FOR GENERAL NOTES SEE H-2-78456, SHEET 2.

2- FOR CATHODIC PROTECTION OF REINFORCING STEEL SEE ELECTRICAL DWG H-2-78511.

EDGAR A. GOATLEY — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

Rev 1 2/4/91

DOES NOT CONTAIN CLASSIFIED OR UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION

Reviewing Official/ADC Kaiser Engineers Hanford Company

2/4/91 Date

NUMBER	TITLE

DRAWING TRACEABILITY LIST

NUMBER	DRAWING LIST TITLE
H-2-78443	

REFERENCES

NEXT USED ON H-2-78456, SH 1

REV NO.	DESCRIPTION	BY	DATE	KEH APPROVALS	APVD FOR IMPL/INC FOR DATE
1	a) B-714-58; ZA5 d) B-714-55; ZB7,C6,C7,E4-5 c) B-714-51; ZF7-8 b) B-714-35; ZE5-6; A4-B5 a) B-714-22; ZC8, F5, D1 THRU B-714-71. GENL REV; INCORP ALL ECNs	TKE 1-11-91		SHS; IXL 2-11-91; RJH; BLW 2/4/91; TEL 2-5-91; AR 2/13/91; DWM 2/13/91; DHC	

REVISIONS

CAD FILE B078456C — CAD CODE 2J:DEC:DDM2:5.0:NN

DRAWN	TK EHRHARD	DATE
CHECKED	WE STYNER	10-30 89
SAFETY	J ARCHIBALD	10-30 89
ENVIR.	RG HOLLENBECK	10-31 89
QE.	LA GADDIS/TD HAYS	11-1 89
LEAD ENG. APVD.	GL KOCI	10-31 89

APPROVED FOR IMPLEMENTATION BY SR BRIGGS FOR WHC DATE 10-31-89

IMPACT LEVEL 2 — EDT 151655

M U.S. DEPARTMENT OF ENERGY
Richland Operations Office
KAISER ENGINEERS HANFORD COMPANY

STRL CONCRETE VAULT SECTIONS

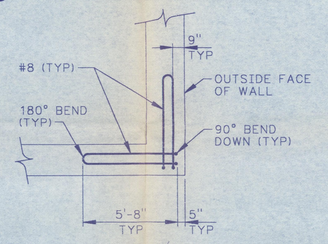
PROJECT B-714, GROUT VAULT PAIR (218-E-16-104 & 105)

SIZE	BLDG NO.	INDEX NO.	DWG NO.	REV NO.
F	218-E-16	0901	H-2-78456	1

SCALE SHOWN — JOB NO. ER8159 — SHEET 3 OF 4

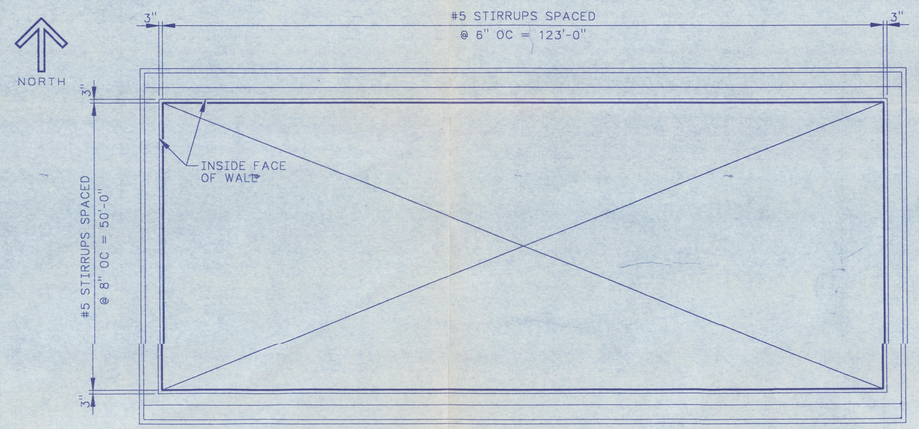
KEHCAD — H278456B3 C 01/30/91

03/26/91

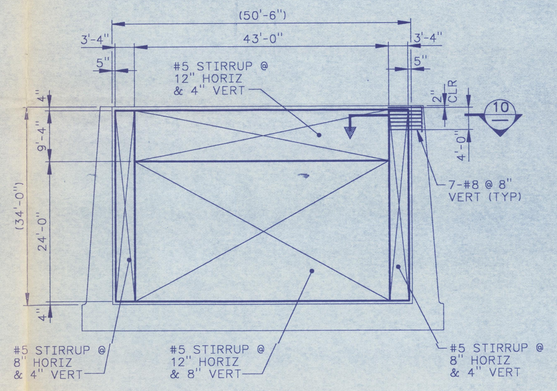


PLAN
ADDITIONAL CORNER REINFORCEMENT
TYPICAL 4 CORNERS

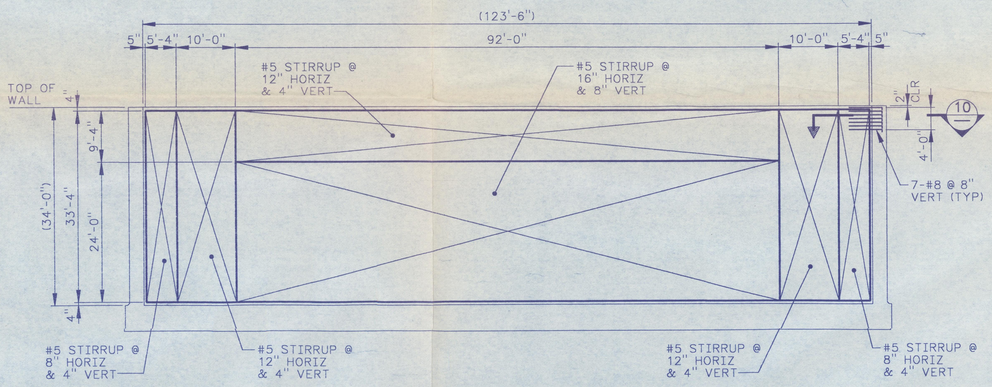
DETAIL 10
SCALE: NONE



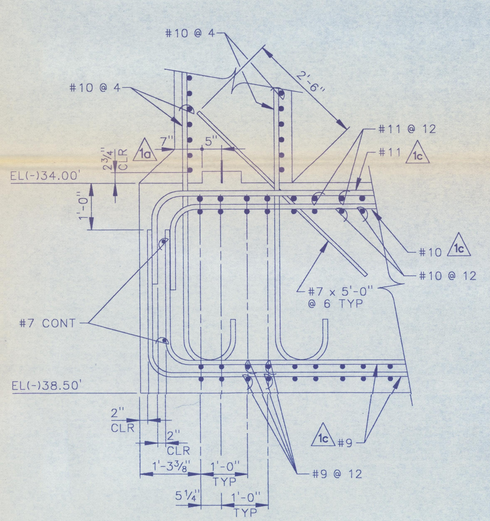
PLAN VIEW
STIRRUP LAYOUT 7 — , H-2-78456 SH 3
SCALE: NONE



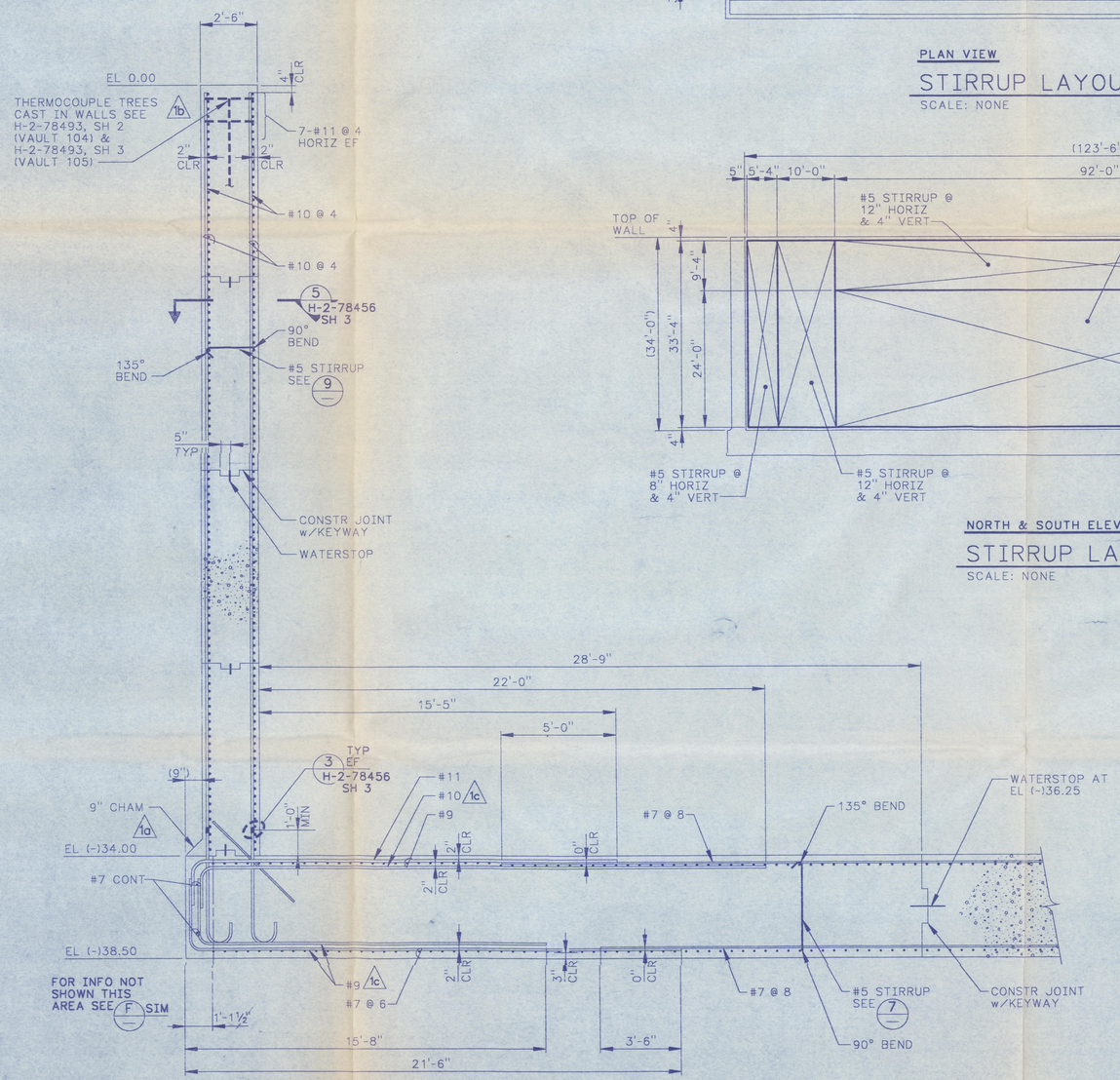
EAST & WEST ELEVATION
STIRRUP LAYOUT 9
SCALE: NONE



NORTH & SOUTH ELEVATION
STIRRUP LAYOUT 8 H-2-78456 SH 3
SCALE: NONE



SECTION F — , H-2-78456 SH 1
SCALE: ¾" = 1'-0"



SECTION E H-2-78456 SH 1
SCALE: ⅜" = 1'-0"

NOTES

1- FOR GENERAL NOTES SEE H-2-78456, SHEET 2.

2- FOR CATHODIC PROTECTION OF REINFORCING STEEL SEE ELECTRICAL DWG H-2-78511.

EDGAR A. GOAKEY — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

Rev 1 2/11/91

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Reviewing Official/ADC
Kaiser Engineers Hanford Company
Date

DRAWING TRACEABILITY LIST	
NUMBER	TITLE

H-2-78443 DRAWING LIST

NUMBER	TITLE
	REFERENCES

NEXT USED ON H-2-78456, SH 1

REVISIONS					
MF	REV NO.	DESCRIPTION	BY / DATE	KEH APPROVALS	APVD FOR IMPL/INC FOR DATE
M RS	1	c) B-714-55; ZA-B7,C-D1 b) B-714-51; ZD7-8 a) B-714-22; ZB8, D2 THRU B-714-71 GENL REV; INCORP ALL ECNs	TKE 1-11-91	SHS DRL 2-11-91	GLK CHW TDH 2-8-91 DJP 2/13/91 DJC

CAD FILE B078456D — CAD CODE 2J DEC:DDM2:5.0:NN

APPROVED FOR IMPLEMENTATION BY SR BRIGGS FOR WHC DATE 10-31-89

IMPACT LEVEL 2 — EDT 151655

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M U.S. DEPARTMENT OF ENERGY
Richland Operations Office
KAISER ENGINEERS HANFORD COMPANY

STRL CONCRETE VAULT SECTION

PROJECT B-714, GROUT SPLIT VAULT PAIR (218-E-16-104 & 105)

SIZE	BLDG NO.	INDEX NO.	DWG NO.	REV NO.
F	218-E-16	0901	H-2-78456	1
SCALE SHOWN	JOB NO. ER8159	SHEET 4	OF 4	

KEHCAD — H278456B4 C 01/30/91

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