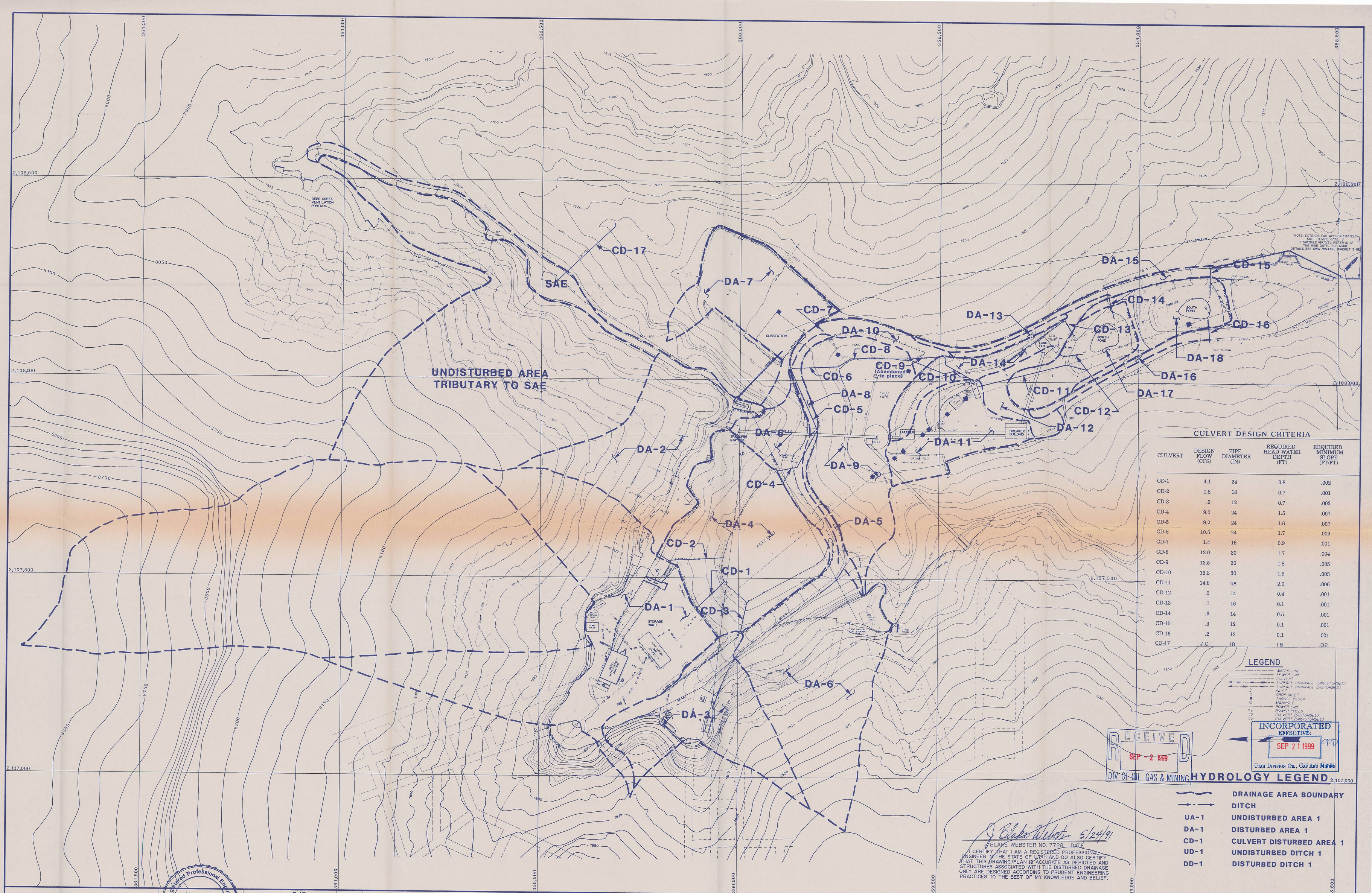

NOTE: EXTENDS FOR APPROXIMATELY 500' TO MINE GATE. A STRAWBALE/GRAVEL FILTER IS 6" TO MINE GATE. FOR MORE DETAILS SEE DWG. W5449E (PACKET 3-16)

CULVERT DESIGN CRITERIA

CULVERT	DESIGN FLOW (CFS)	PIPE DIAMETER (IN)	REQUIRED HEAD WATER DEPTH (FT)	REQUIRED MINIMUM SLOPE (FT/FT)
CD-1	4.1	24	0.8	.002
CD-2	1.8	18	0.7	.001
CD-3	.9	12	0.7	.003
CD-4	9.0	24	1.5	.007
CD-5	9.2	24	1.6	.007
CD-6	10.5	24	1.7	.009
CD-7	1.4	16	0.9	.001
CD-8	12.0	30	1.7	.004
CD-9	13.5	30	1.8	.005
CD-10	13.8	30	1.9	.005
CD-11	14.8	48	2.0	.006
CD-12	.3	14	0.4	.001
CD-13	.1	16	0.1	.001
CD-14	.6	14	0.5	.001
CD-15	.3	12	0.1	.001
CD-16	.2	12	0.1	.001
CD-17	7.0	18	1.8	.02

LEGEND

WATER LINE
SEWER LINE
CULVERT
SURFACE DRAINAGE (UNDISTURBED)
SURFACE DRAINAGE (DISTURBED)
INLET
DROP INLET
THRUST BLOCK
MANHOLE
POWER LINE
POWER POLES
CULVERT (DISTURBED)
CULVERT (UNDISTURBED)

RECEIVED
SEP - 2 1999
DIV. OF OIL, GAS & MINING

INCORPORATED
EFFECTIVE:
SEP 21 1999
UTAH DIVISION OIL, GAS AND MINING

HYDROLOGY LEGEND

	DRAINAGE AREA BOUNDARY
	DITCH
UA-1	UNDISTURBED AREA 1
DA-1	DISTURBED AREA 1
CD-1	CULVERT DISTURBED AREA 1
UD-1	UNDISTURBED DITCH 1
DD-1	DISTURBED DITCH 1

J. Blake Webster 5/24/91
J. BLAKE WEBSTER NO. 7728 DATE

I CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF UTAH AND DO ALSO CERTIFY THAT THIS DRAWING/PLAN IS ACCURATE AS DEPICTED AND STRUCTURES ASSOCIATED WITH THE DISTURBED DRAINAGE ONLY ARE DESIGNED ACCORDING TO PRUDENT ENGINEERING PRACTICES TO THE BEST OF MY KNOWLEDGE AND BELIEF.

HANSEN ALLEN & LUCE INC
CONSULTANTS ENGINEERS
Salt Lake City Utah

Registered Professional Engineer No. 6503 GREGORY J. BOONE State of Utah
PROJECT ENGINEER

DESIGNED	GJP	3			
DRAFTED	SDM	2	8-13-91	REVISED TO REFLECT THE CURRENT DISTURBED DRAINAGE	KJL
CHECKED	MEA	1	5-23-91	REVISED TO REFLECT THE CURRENT DISTURBED DRAINAGE	KJL
DATE	JUNE, 1989	NO.	DATE	REVISIONS	BY / APVD.

SCALE 1" = 100'

VERIFY SCALE 0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

UTAH POWER & LIGHT COMPANY
MINING DIVISION

COTTONWOOD / WILBERG MINE PORTAL DISTURBED AREA RUNOFF CONTROL FACILITIES

SHEET NO. MAP 2 OF
5-1-310