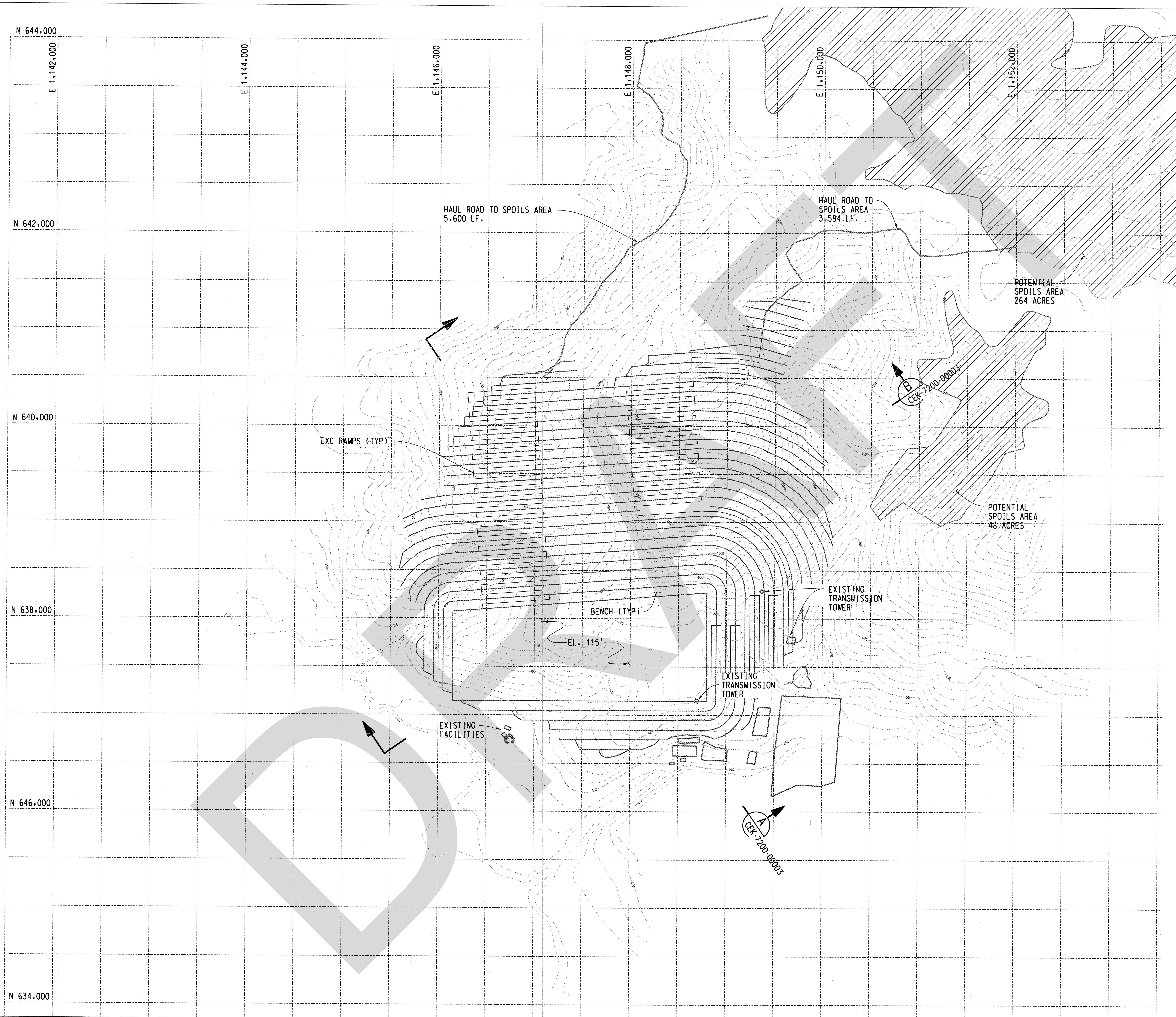
FORMATS.CEL AC=DSTD 5/9/05



N

D

C

B

A

FOR INFORMATION ONLY.
DO NOT USE FOR CONSTRUCTION

NOTES:

1. CONTOURS SHOWN ON THIS DRAWING ORIGINATED FROM USGS QUAD MAP TITLED "PORT SAN LUIS, CALIF."

0 500 1000 1500FT

SCALE: 1" = 500'

NO.	DATE	REVISIONS	BY	CHK	DESIGN SUPV	ENGR	PROJ ENGR
△	/ /						
△	/ /						
△	/ /						
△	/ /						
A	7/24/13	ISSUED FOR ESTIMATE	MHN MHN	-	[signature]	-	[signature]

SCALE 1"=500'	DESIGNED	DRAWN MHN	CHIEF ENGR

BECHTEL
FREDERICK, MARYLAND

PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

TWO COOLING TOWER ARRANGEMENT -
EXCAVATION PLAN

JOB NO.	DRAWING NO.	REV
25762-110	CEK-7200-00001	00A

PSC-BEN-BFN=E

6 5 4 3 2

22 x 34 "D" SIZE

LEVELS 111111111122222222223333333333444444444455555555 56666
1234567890123456789012345678901234567890123456789012345678901234567890123


FORMATS.CEL AC=DSTD 5/9/05
N 644,000
N 642,000
N 640,000
N 638,000
N 646,000
N 634,000
E 1,142,000
E 1,144,000
E 1,146,000
E 1,148,000
E 1,150,000
E 1,152,000
N
HAUL ROAD TO SPOILS AREA
5,600 LF.
HAUL ROAD TO
SPOILS AREA
3,594 LF.
POTENTIAL
SPOILS AREA
264 ACRES
POTENTIAL
SPOILS AREA
46 ACRES
B
CEK-7200-00003
EXC RAMPS (TYP)
BENCH (TYP)
EXISTING
TRANSMISSION
TOWER
EL. 115'
EXISTING
TRANSMISSION
TOWER
EXISTING
FACILITIES
A
CEK-7200-00003
DRAFT
FOR INFORMATION ONLY.
DO NOT USE FOR CONSTRUCTION
NOTES:
1. CONTOURS SHOWN ON THIS DRAWING ORIGINATED FROM USGS QUAD MAP TITLED "PORT SAN LUIS, CALIF."
0
500
1000
1500FT
SCALE: 1" = 500'
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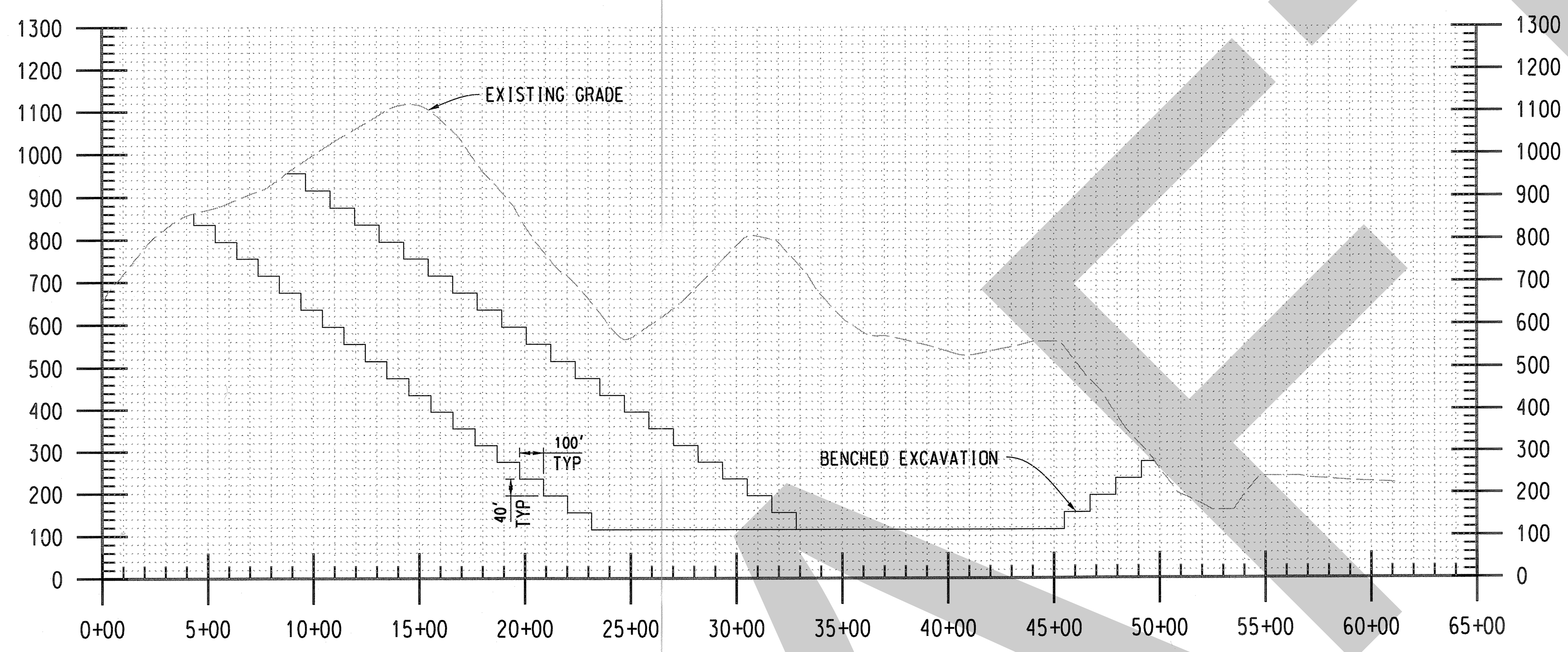
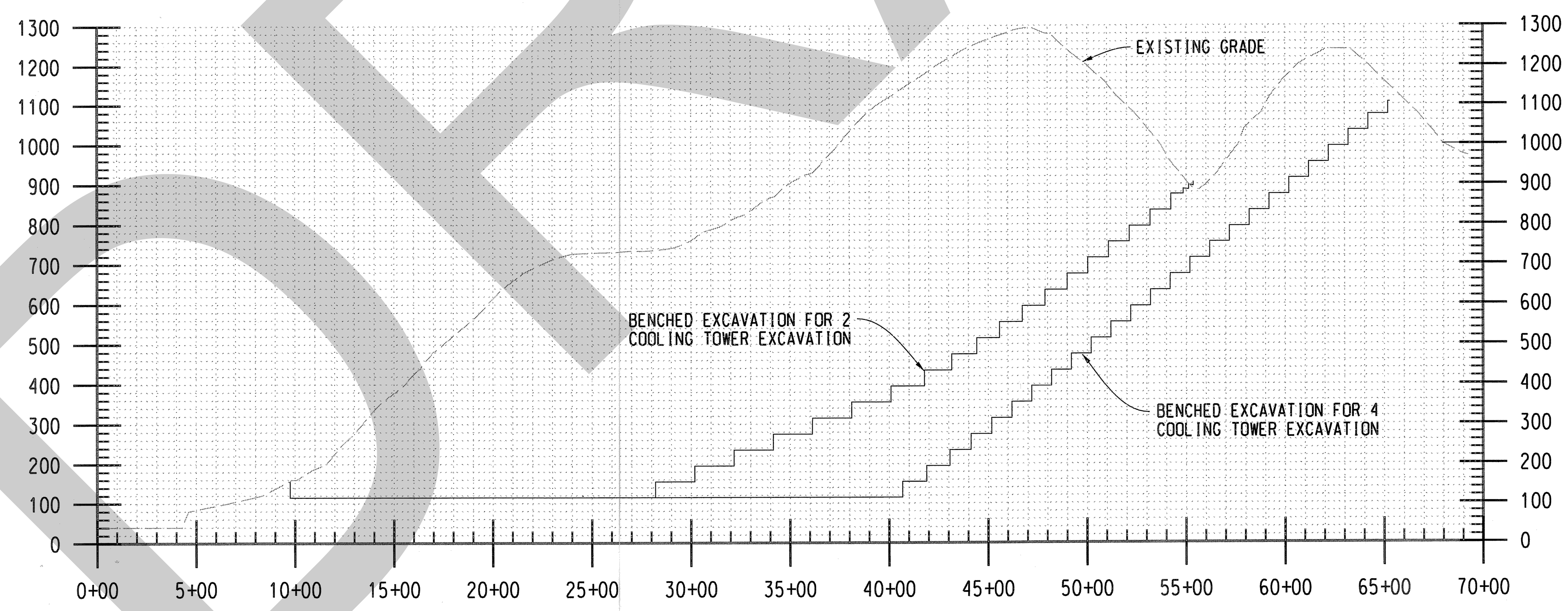
A 9/24/13 ISSUED FOR ESTIMATE MHN - -
NO. DATE REVISIONS BY CHK DESIGN SUPV ENGR PROJ ENGR
SCALE 1"=500' DESIGNED DRAWN MHN CHIEF ENGR
BECHTEL
FREDERICK, MARYLAND
PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT
FOUR COOLING TOWER ARRANGEMENT -
EXCAVATION PLAN
JOB NO. 25762-110
DRAWING NO. CEK-7200-00002
REV 00A
22 x 34 "D" SIZE
6
5
4
3
2
D
C
B
A
PSC-BER=BFN=E



SECTION A
CEK-7200-00001
CEK-7200-00002



SECTION B
CEK-7200-00001
CEK-7200-00002

FOR INFORMATION ONLY.
DO NOT USE FOR CONSTRUCTION

0 500 1000 1500FT
HORIZONTAL SCALE: 1" = 500'

0 250 500 1000FT
VERTICAL SCALE: 1" = 250'

NO.	DATE	REVISIONS	BY	CHK	DESIGN SUPV	ENGR	PROJ ENGR
	/ /						
	/ /						
	/ /						
	/ /						
A	7/24/13	ISSUED FOR ESTIMATE	MHN	-		-	

SCALE 1"=500' | DESIGNED | DRAWN MHN | CHIEF ENGR

BECHTEL
FREDERICK, MARYLAND

PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

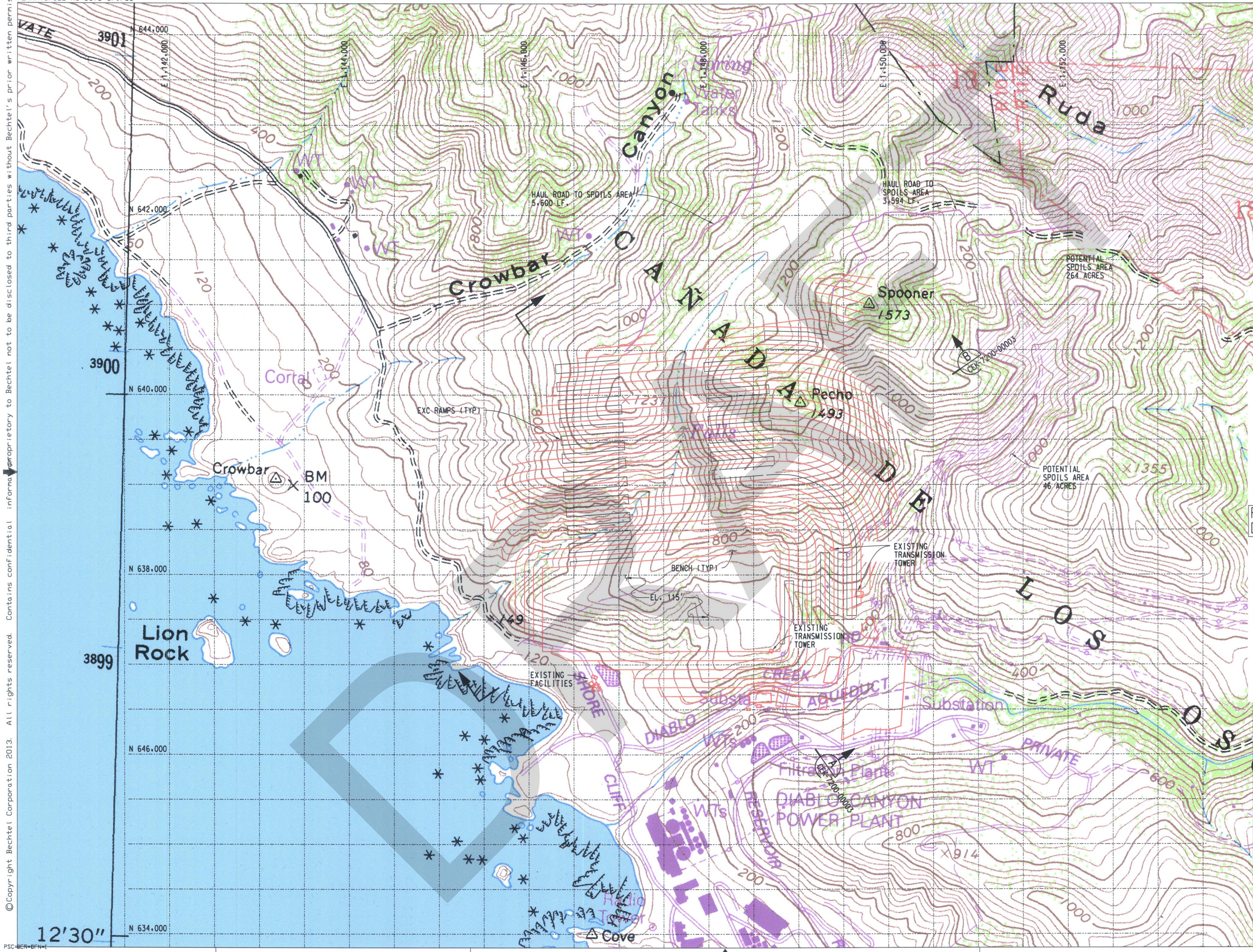
TWO AND FOUR COOLING TOWER
ARRANGEMENT - EXCAVATION SECTIONS

JOB NO.	DRAWING NO.	REV
25762-110	CEK-7200-00003	00A

22 x 34 'D' SIZE

PSC-BER-BFN-E

FORMATS.CEL AC=DSTD 5/9/05



FOR INFORMATION ONLY.
DO NOT USE FOR CONSTRUCTION

NOTES:

1. CONTOURS SHOWN ON THIS DRAWING ORIGINATED FROM USGS QUAD MAP TITLED "PORT SAN LUIS, CALIF."

0 500 1000 1500FT

SCALE: 1" = 500'

NO.	DATE	REVISIONS	BY	CHK	DESIGN SUPV	ENGR	PROJ ENGR
A	7/24/13	ISSUED FOR ESTIMATE	MHN	-		-	

SCALE 1"=500' | DESIGNED | DRAWN MHN | CHIEF ENGR

BECHTEL
FREDERICK, MARYLAND

PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

TWO COOLING TOWER ARRANGEMENT - EXCAVATION PLAN WITH USGS TOPO MAP

JOB NO.	DRAWING NO.	REV
25762-110	CEK-7200-00004	00A

22 x 34 'D' SIZE

FORMATS.CEL AC=DSTD 5/9/05

FOR INFORMATION ONLY.
DO NOT USE FOR CONSTRUCTION

NOTES:

1. CONTOURS SHOWN ON THIS DRAWING ORIGINATED FROM USGS QUAD MAP TITLED "PORT SAN LUIS, CALIF."

0 500 1000 1500FT

SCALE: 1" = 500'

NO.	DATE	REVISIONS	BY	CHK	DESIGN SUPV	ENGR	PROJ ENGR
A	7/24/13	ISSUED FOR ESTIMATE	MHN	–	[signature]	–	[signature]

SCALE 1"=500'	DESIGNED	DRAWN MHN	CHIEF ENGR

BECHTEL
FREDERICK, MARYLAND

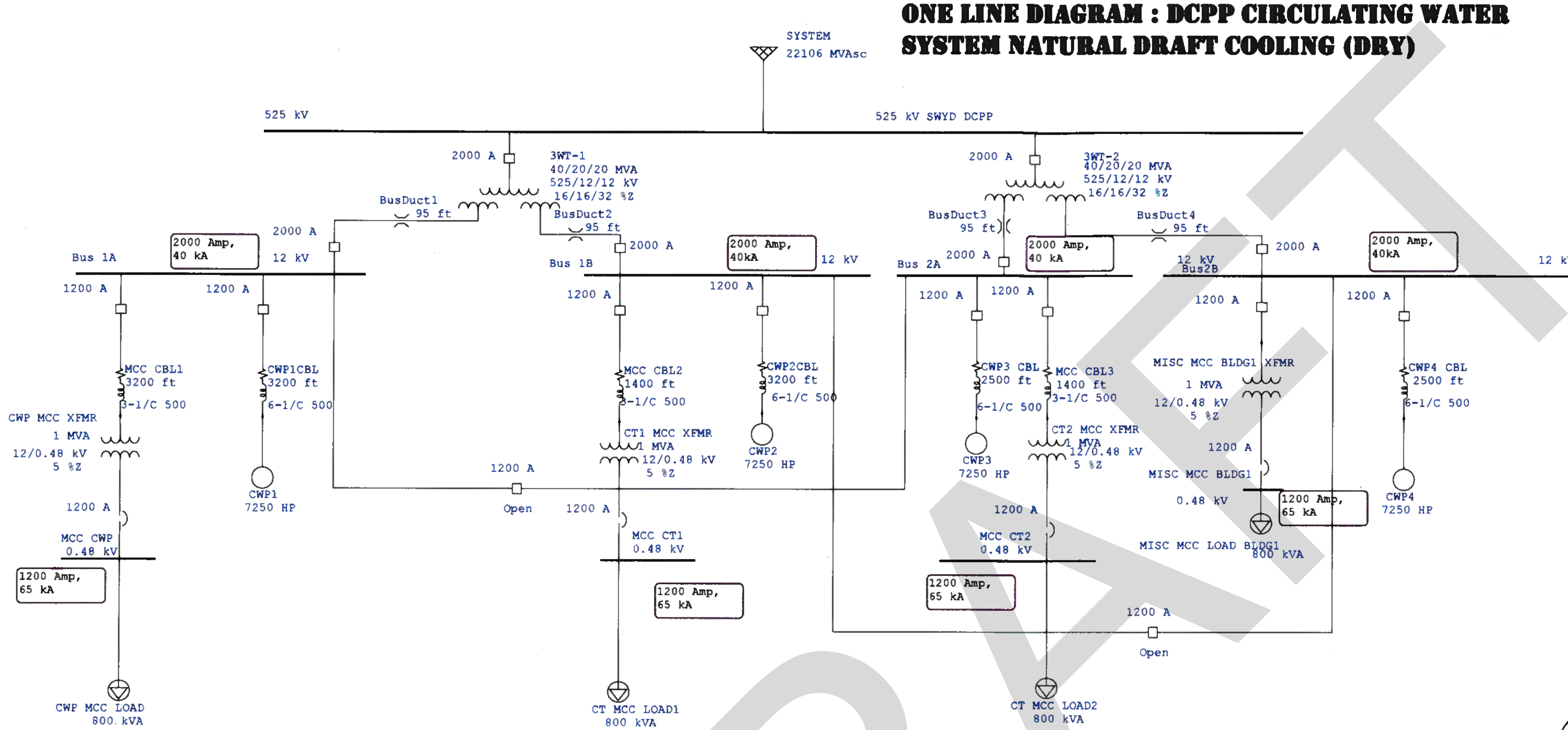
PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

FOUR COOLING TOWER ARRANGEMENT - EXCAVATION PLAN WITH USGS TOPO MAP

JOB NO.	DRAWING NO.	REV
25762-110	CEK-7200-00005	00A

22 x 34 'D' SIZE

ONE LINE DIAGRAM : DCPP CIRCULATING WATER SYSTEM NATURAL DRAFT COOLING (DRY)



NOTES :

1. THE NEW ELECTRICAL SYSTEM FOR UNIT 2 IS IDENTICAL

REFERENCES :

1. MECHANICAL EQUIPMENT LIST M0X-YA-00001

2. PIPING AND INSTRUMENTATION DIAGRAM M6K-WL-00001

ELECTRICAL EQUIPMENT REQUIRED :

1.) 3 WINDING TRANSFORMERS
-QUANTITY; RATING : 2; 40MVA/20MVA/20MVA, 525KV/12KV/12KV

2.) 2 WINDING TRANSFORMERS
-QUANTITY; RATING : 4; 1MVA, 12KV/0.48KV

3.) 13.8 KV SWITCHGEAR (OPERATED AT 12 KV)
-QUANTITY; RATING : 4; 2000A, 40KA

4.) 0.48KV MCC
-QUANTITY; RATING : 2; 1200A, 65KA

NOTE : CT MCC LOAD 1 AND CT MCC LOAD 2 IN VENDOR'S SCOPE. THEREFORE, NOT COUNTED HERE.

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION OR CONSTRUCTION.

JOB NO. : 25762-110

DRAWING NO. : E1K-0000-00001

REVISION/DATE: B 7/29/13

REASON FOR ISSUE : FOR ESTIMATION

TITLE : ONE LINE DIAGRAM : DCPP CIRCULATING WATER SYSTEM NATURAL DRAFT COOLING (DRY)

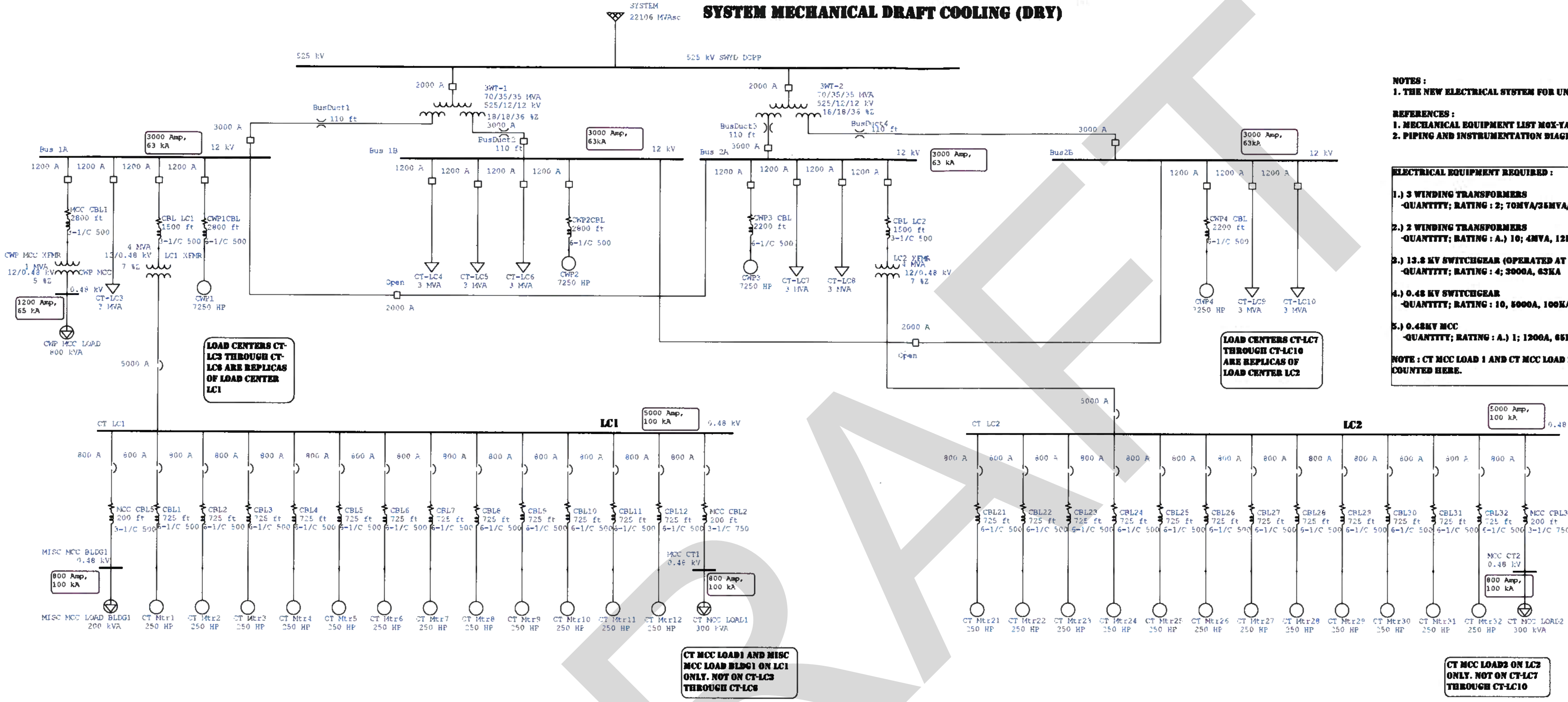
ORIGINATED BY : J.S.

VERIFIED BY : P.L.

EGS : Vr

PE : DEL

ONE LINE DIAGRAM : DCPP CIRCULATING WATER SYSTEM MECHANICAL DRAFT COOLING (DRY)



NOTES :
1. THE NEW ELECTRICAL SYSTEM FOR UNIT 2 IS IDENTICAL

REFERENCES :
1. MECHANICAL EQUIPMENT LIST M0X-YA-00002
2. PIPING AND INSTRUMENTATION DIAGRAM M6K-WL-00002

ELECTRICAL EQUIPMENT REQUIRED :

1.) 3 WINDING TRANSFORMERS
-QUANTITY; RATING : 2; 70MVA/35MVA/35MVA, 525KV/12KV/12KV

2.) 2 WINDING TRANSFORMERS
-QUANTITY; RATING : A.) 10; 4MVA, 12KV/0.48KV AND B.) 1; 1MVA, 12KV/0.48KV

3.) 13.8 KV SWITCHGEAR (OPERATED AT 12 KV)
-QUANTITY; RATING : 4; 3000A, 63KA

4.) 0.48 KV SWITCHGEAR
-QUANTITY; RATING : 10, 5000A, 100KA

5.) 0.48KV MCC
-QUANTITY; RATING : A.) 1; 1200A, 65KA AND B.) 1; 800A, 100KA

NOTE : CT MCC LOAD 1 AND CT MCC LOAD 2 IN VENDOR'S SCOPE. THEREFORE, NOT COUNTED HERE.

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION OR CONSTRUCTION.

JOB NO. : 25762-110

DRAWING NO. : E1K-0000-00002

REVISION/DATE: B 7/25/13

REASON FOR ISSUE : FOR ESTIMATION

TITLE : ONE LINE DIAGRAM : DCPP CIRCULATING WATER SYSTEM MECHANICAL DRAFT COOLING (DRY)

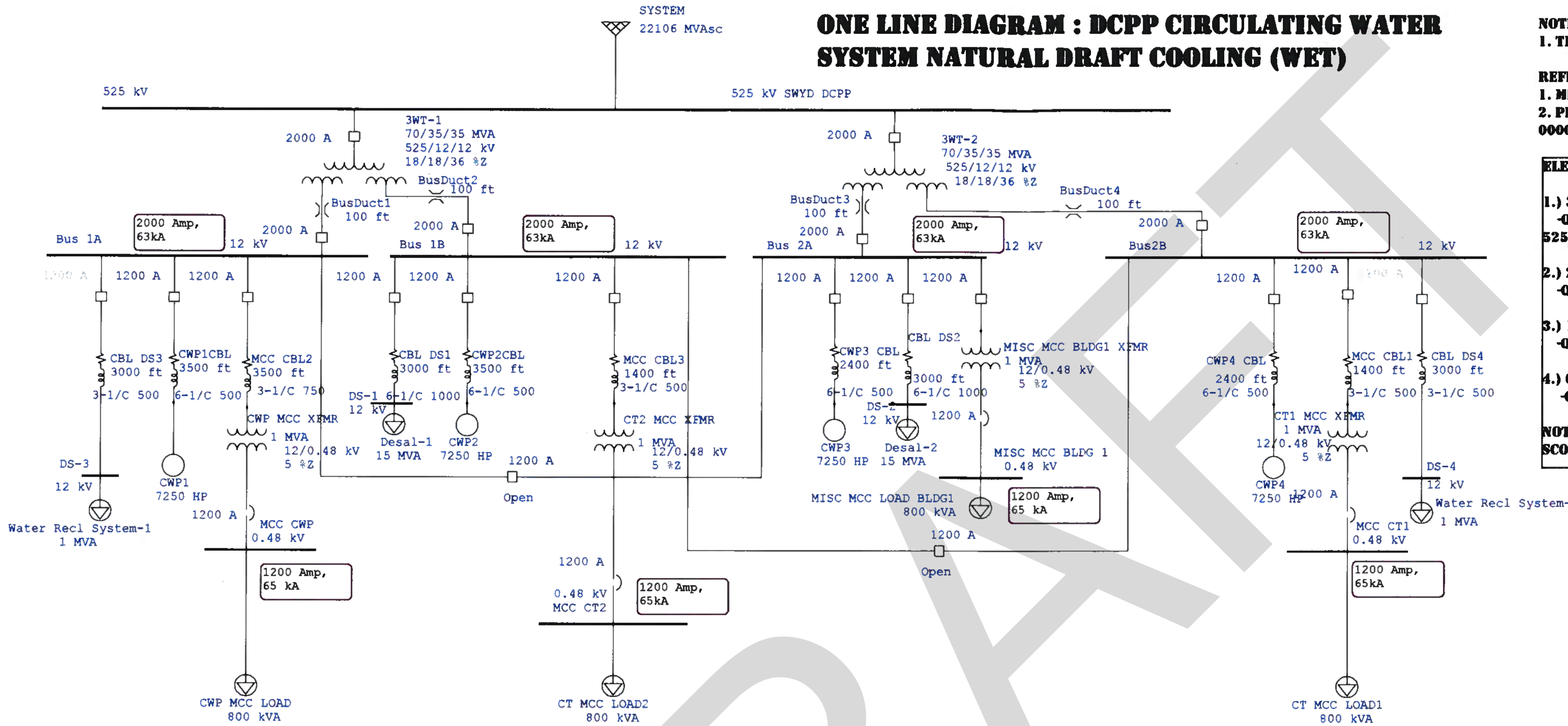
ORIGINATED BY : J.S.

VERIFIED BY :

EGS :

PE :

ONE LINE DIAGRAM : DCPP CIRCULATING WATER SYSTEM NATURAL DRAFT COOLING (WET)



NOTES :
1. THE NEW ELECTRICAL SYSTEM FOR UNIT 2 IS IDENTICAL

REFERENCES :
1. MECHANICAL EQUIPMENT LIST : M0X-YA-00003
2. PIPING AND INSTRUMENTATION DIAGRAM : M6K-WL-00003

ELECTRICAL EQUIPMENT REQUIRED :

1.) 3 WINDING TRANSFORMERS
-QUANTITY; RATING : 2; 70MVA/35MVA/35MVA, 525KV/12KV/12KV

2.) 2 WINDING TRANSFORMERS
-QUANTITY; RATING : 4; 1MVA, 12KV/0.48KV

3.) 13.8 KV SWITCHGEAR (OPERATED AT 12 KV)
-QUANTITY; RATING : 4; 2000A, 63KA

4.) 0.48KV MCC
-QUANTITY; RATING : 2; 1200A, 65KA

NOTE : CT MCC LOAD 1 AND CT MCC LOAD 2 IN VENDOR'S SCOPE. THEREFORE, NOT COUNTED HERE.

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION OR CONSTRUCTION.

JOB NO. : 25762-110

DRAWING NO. : E1K-0000-00003

REVISION/DATE: B 7/25/13

REASON FOR ISSUE : FOR ESTIMATION

TITLE : ONE LINE DIAGRAM : DCPP CIRCULATING WATER SYSTEM NATURAL DRAFT COOLING (WET)

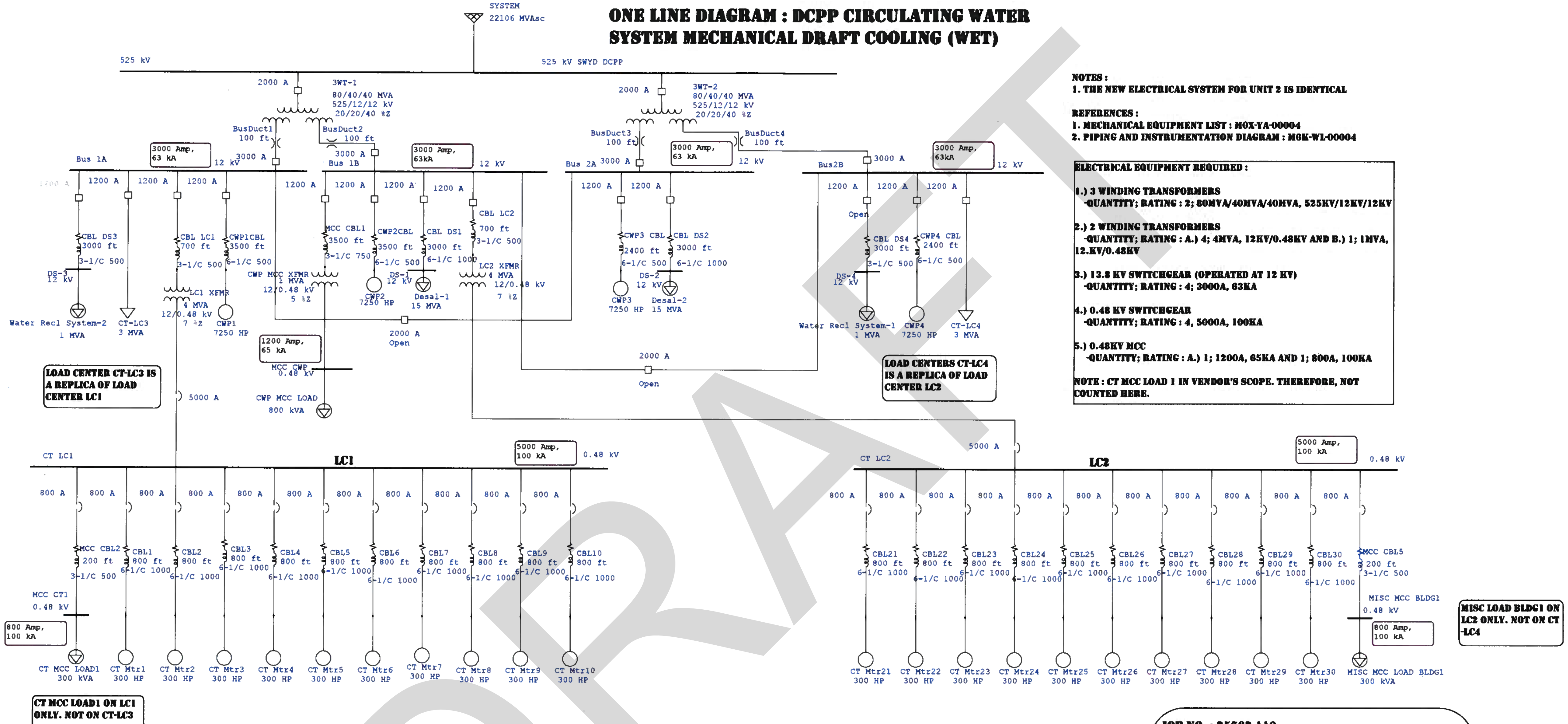
ORIGINATED BY : J.S.

VERIFIED BY :

EGS :

PE : DEC

ONE LINE DIAGRAM : DCPP CIRCULATING WATER SYSTEM MECHANICAL DRAFT COOLING (WET)



NOTES :

1. THE NEW ELECTRICAL SYSTEM FOR UNIT 2 IS IDENTICAL

REFERENCES :

1. MECHANICAL EQUIPMENT LIST : MOX-YA-00004
2. PIPING AND INSTRUMENTATION DIAGRAM : M6K-WL-00004

ELECTRICAL EQUIPMENT REQUIRED :

1.) 3 WINDING TRANSFORMERS
-QUANTITY; RATING : 2; 80MVA/40MVA/40MVA, 525KV/12KV/12KV

2.) 2 WINDING TRANSFORMERS
-QUANTITY; RATING : A.) 4; 4MVA, 12KV/0.48KV AND B.) 1; 1MVA, 12.KV/0.48KV

3.) 13.8 KV SWITCHGEAR (OPERATED AT 12 KV)
-QUANTITY; RATING : 4; 3000A, 63KA

4.) 0.48 KV SWITCHGEAR
-QUANTITY; RATING : 4, 5000A, 100KA

5.) 0.48KV MCC
-QUANTITY; RATING : A.) 1; 1200A, 65KA AND 1; 800A, 100KA

NOTE : CT MCC LOAD 1 IN VENDOR'S SCOPE. THEREFORE, NOT COUNTED HERE.

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION OR CONSTRUCTION.

JOB NO. : 25762-110

DRAWING NO. : E1K-0000-00004

REVISION/DATE: B 7/28/13

REASON FOR ISSUE : FOR ESTIMATION

TITLE : ONE LINE DIAGRAM : DCPP CIRCULATING WATER SYSTEM MECHANICAL DRAFT COOLING (WET)

ORIGINATED BY : J.S.

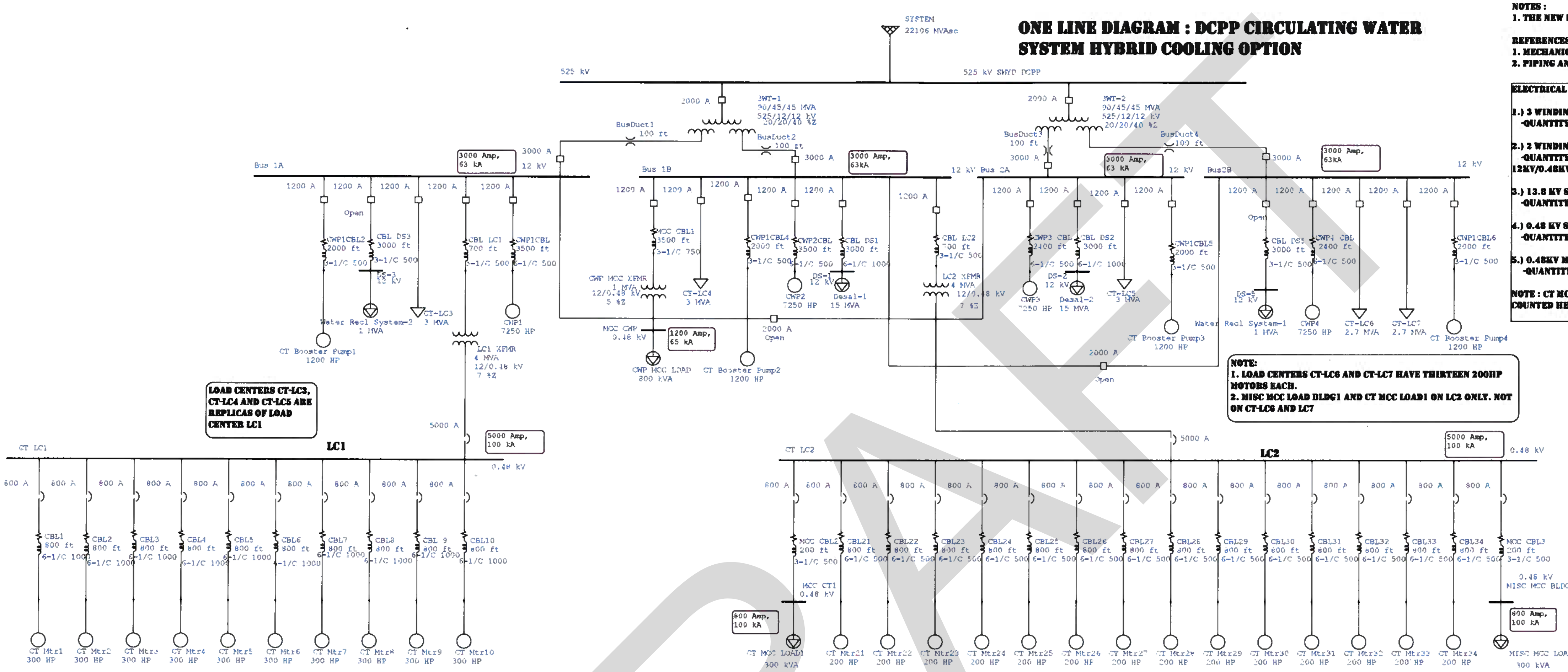
VERIFIED BY : P.L.

EGS : P.b

PE : DEL

DRAFT

ONE LINE DIAGRAM : DCPP CIRCULATING WATER SYSTEM HYBRID COOLING OPTION



NOTES :

1. THE NEW ELECTRICAL SYSTEM FOR UNIT 2 IS IDENTICAL

REFERENCES :

1. MECHANICAL EQUIPMENT LIST M0X-YA-00005
2. PIPING AND INSTRUMENTATION DIAGRAM MGH-WL-00005

ELECTRICAL EQUIPMENT REQUIRED :

1.) 3 WINDING TRANSFORMERS
-QUANTITY; RATING : 2; 90MVA/45MVA/45MVA, 525KV/12KV/12KV

2.) 2 WINDING TRANSFORMERS
-QUANTITY; RATING : A.) 7; 4MVA, 12KV/0.48KV AND B.) 1; 1MVA, 12KV/0.48KV

3.) 13.8 KV SWITCHGEAR (OPERATED AT 12 KV)
-QUANTITY; RATING : 4; 3000A, 63KA

4.) 0.48 KV SWITCHGEAR
-QUANTITY; RATING : 7, 5000A, 100KA

5.) 0.48KV MCC
-QUANTITY; RATING : A.) 1; 800A, 100KA AND B.) 1; 1200A, 65KA

NOTE : CT MCC LOAD 1 IN VENDOR'S SCOPE. THEREFORE, NOT COUNTED HERE.

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION OR CONSTRUCTION.

JOB NO. : 25762-110

DRAWING NO. : E1K-0000-00005

REVISION/DATE: B 7/25/13

REASON FOR ISSUE : FOR ESTIMATION

TITLE : ONE LINE DIAGRAM : DCPP CIRCULATING WATER SYSTEM HYBRID COOLING OPTION

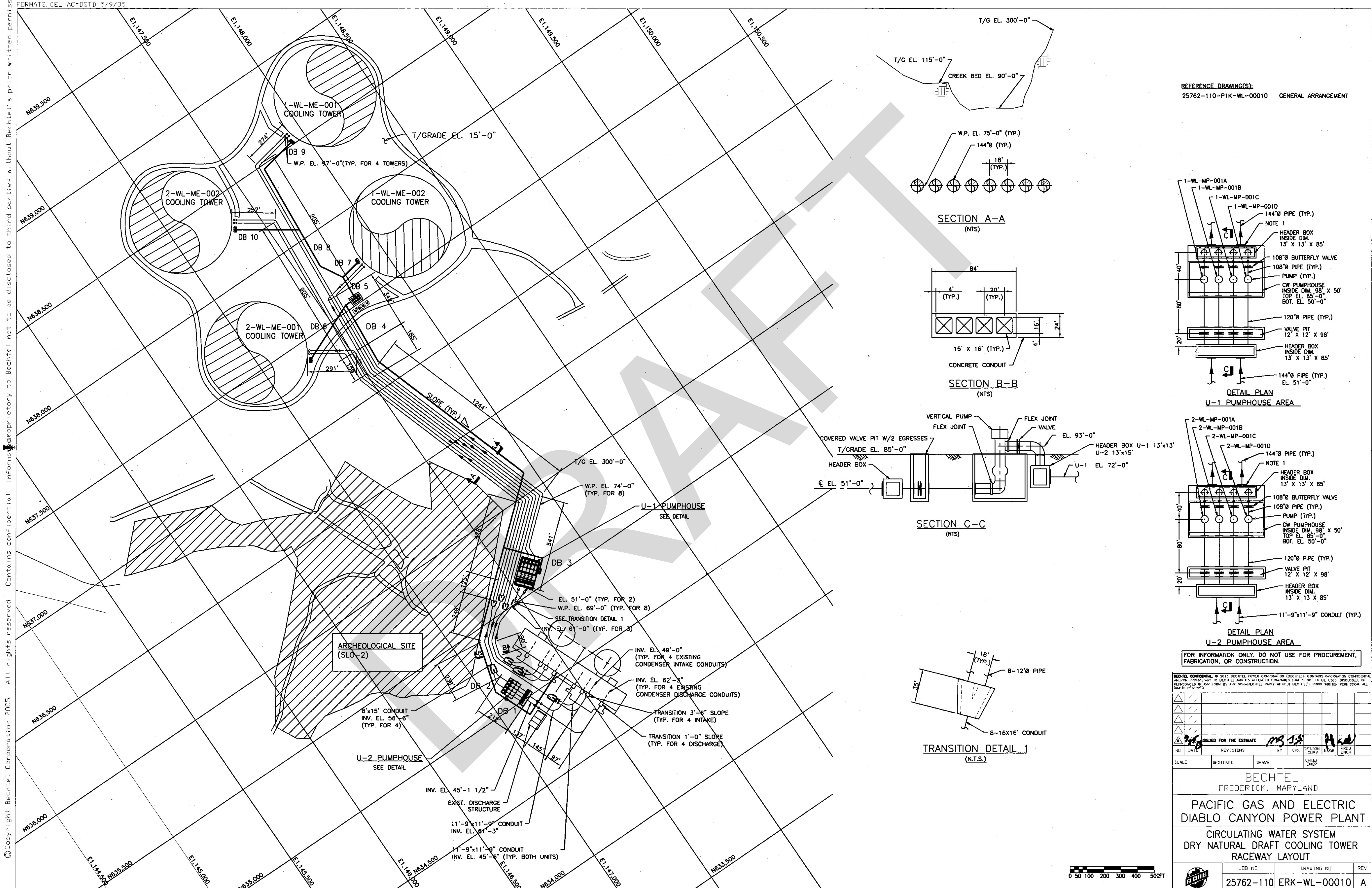
ORIGINATED BY : J.S.

VERIFIED BY :

EGS :

PE :

FORMATS.CEL AC=DSTD 5/9/05



REFERENCE DRAWING(S):
25762-110-P1K-WL-00010 GENERAL ARRANGEMENT

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION, OR CONSTRUCTION.

NO.	DATE	REVISIONS	BY	CHK	DESIGN SUPV	ENGR	PROJ ENGR
A		ISSUED FOR THE ESTIMATE					

SCALE | DESIGNED | DRAWN | CHIEF ENGR

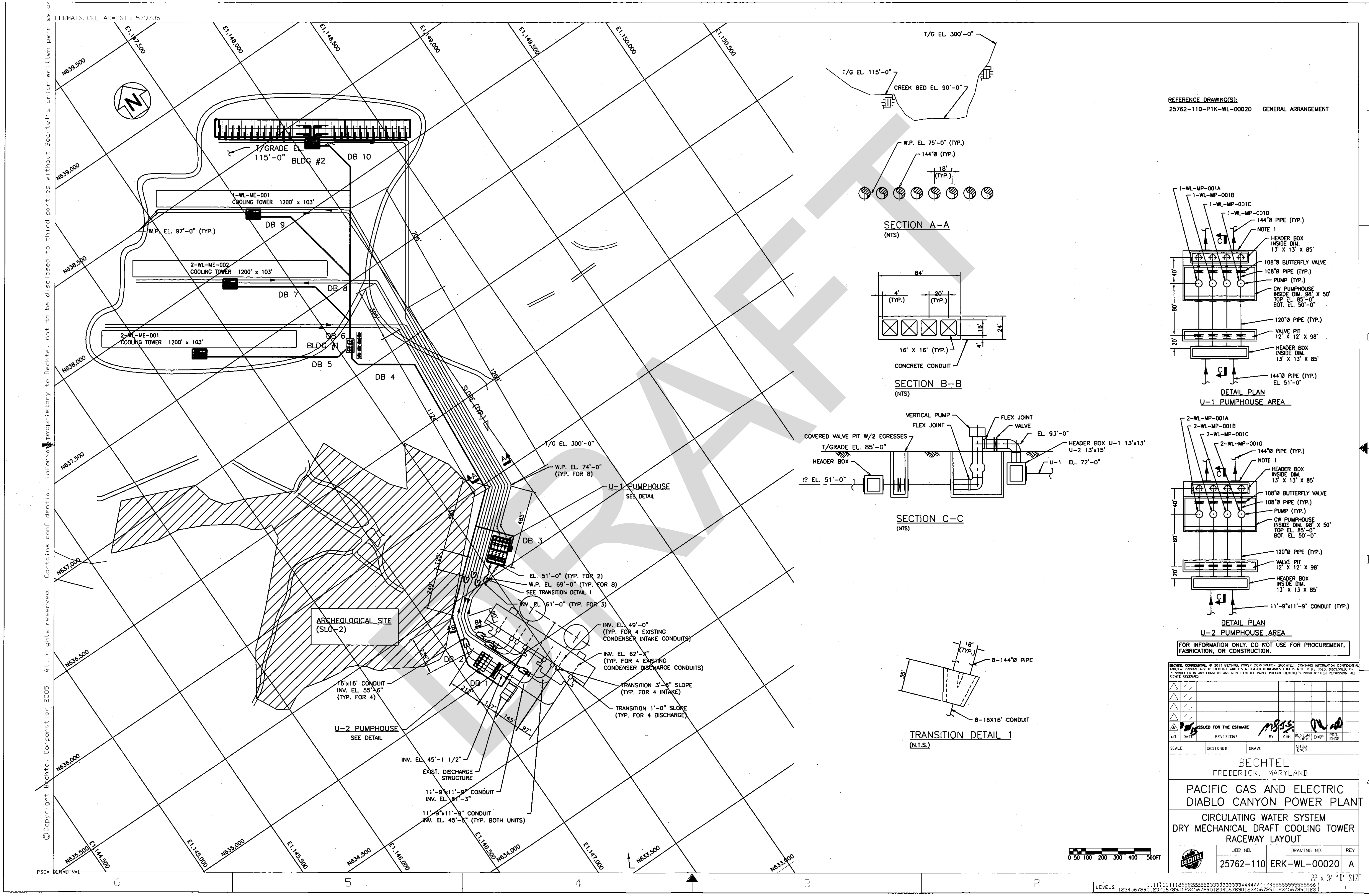
BECHTEL
FREDERICK, MARYLAND

PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

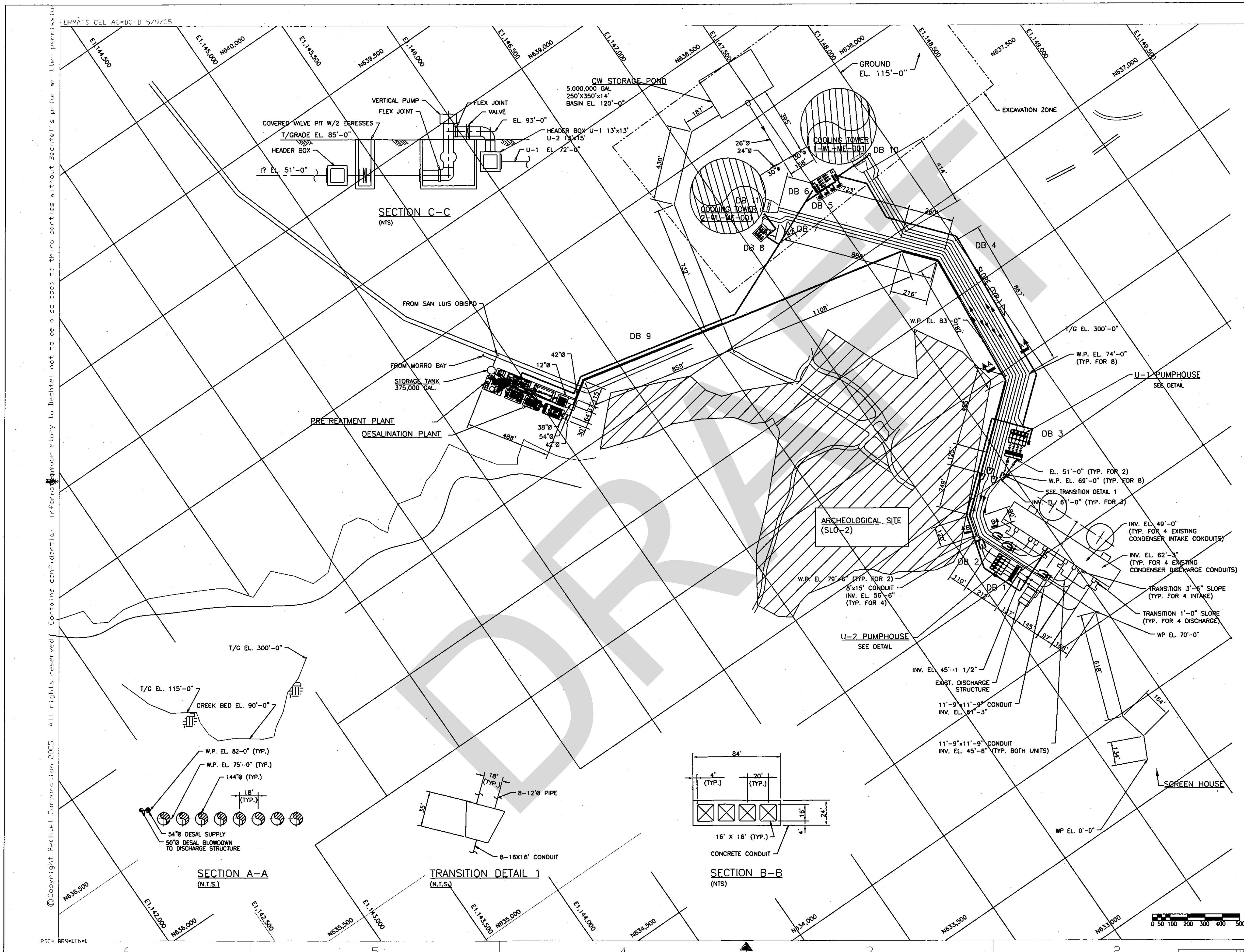
CIRCULATING WATER SYSTEM
DRY NATURAL DRAFT COOLING TOWER
RACEWAY LAYOUT

JOB NO.	DRAWING NO.	REV
25762-110	ERK-WL-00010	A

22 x 34 'D' SIZE



FORMATS.CEL AC=DSTD 5/9/05
T/GRADE EL. 115'-0"
BLDG #2
DB 10
1-WL-ME-001 COOLING TOWER 1200' x 103'
W.P. EL. 97'-0" (TYP.)
DB 9
2-WL-ME-002 COOLING TOWER 1200' x 103'
DB 7
DB 8
2-WL-ME-001 COOLING TOWER 1200' x 103'
DB 6
BLDG #1
DB 5
DB 4
SLOPE (TYP.)
T/G EL. 300'-0"
W.P. EL. 74'-0" (TYP. FOR 8)
U-1 PUMPHOUSE
SEE DETAIL
DB 3
EL. 51'-0" (TYP. FOR 2)
W.P. EL. 69'-0" (TYP. FOR 8)
SEE TRANSITION DETAIL 1
INV. EL. 61'-0" (TYP. FOR 3)
INV. EL. 49'-0" (TYP. FOR 4 EXISTING CONDENSER INTAKE CONDUITS)
INV. EL. 62'-3" (TYP. FOR 4 EXISTING CONDENSER DISCHARGE CONDUITS)
TRANSITION 3'-6" SLOPE (TYP. FOR 4 INTAKE)
TRANSITION 1'-0" SLOPE (TYP. FOR 4 DISCHARGE)
ARCHEOLOGICAL SITE (SLO-2)
DB 2
DB 1
16'x16' CONDUIT INV. EL. 55'-6" (TYP. FOR 4)
U-2 PUMPHOUSE
SEE DETAIL
INV. EL. 45'-1 1/2"
EXIST. DISCHARGE STRUCTURE
11'-9"x11'-9" CONDUIT INV. EL. 61'-3"
11'-9"x11'-9" CONDUIT INV. EL. 45'-6" (TYP. BOTH UNITS)
T/G EL. 300'-0"
T/G EL. 115'-0"
CREEK BED EL. 90'-0"
W.P. EL. 75'-0" (TYP.)
144"Ø (TYP.)
18' (TYP.)
SECTION A-A
(NTS)
84'
4' (TYP.)
20' (TYP.)
16'
24'
4'
16' x 16' (TYP.)
CONCRETE CONDUIT
SECTION B-B
(NTS)
VERTICAL PUMP
FLEX JOINT
FLEX JOINT
VALVE
EL. 93'-0"
COVERED VALVE PIT W/2 EGRESSES
T/GRADE EL. 85'-0"
HEADER BOX
HEADER BOX U-1 13'x13' U-2 13'x15'
U-1 EL. 72'-0"
!? EL. 51'-0"
SECTION C-C
(NTS)
18' (TYP.)
8-144"Ø PIPE
35'
8-16X16' CONDUIT
TRANSITION DETAIL 1
(N.T.S.)
REFERENCE DRAWING(S):
25762-110-P1K-WL-00020 GENERAL ARRANGEMENT
1-WL-MP-001A
1-WL-MP-001B
1-WL-MP-001C
1-WL-MP-001D
144"Ø PIPE (TYP.)
NOTE 1
HEADER BOX INSIDE DIM. 13' X 13' X 85'
108"Ø BUTTERFLY VALVE
108"Ø PIPE (TYP.)
PUMP (TYP.)
CW PUMPHOUSE INSIDE DIM. 98' X 50' TOP EL. 85'-0" BOT. EL. 50'-0"
120"Ø PIPE (TYP.)
VALVE PIT 12' X 12' x 98'
HEADER BOX INSIDE DIM. 13' X 13' X 85'
144"Ø PIPE (TYP.) EL. 51'-0"
DETAIL PLAN
U-1 PUMPHOUSE AREA
2-WL-MP-001A
2-WL-MP-001B
2-WL-MP-001C
2-WL-MP-001D
144"Ø PIPE (TYP.)
NOTE 1
HEADER BOX INSIDE DIM. 13' X 13' X 85'
108"Ø BUTTERFLY VALVE
108"Ø PIPE (TYP.)
PUMP (TYP.)
CW PUMPHOUSE INSIDE DIM. 98' X 50' TOP EL. 85'-0" BOT. EL. 50'-0"
120"Ø PIPE (TYP.)
VALVE PIT 12' X 12' x 98'
HEADER BOX INSIDE DIM. 13' X 13 X 85'
11'-9"x11'-9" CONDUIT (TYP.)
DETAIL PLAN
U-2 PUMPHOUSE AREA
FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION, OR CONSTRUCTION.
ISSUED FOR THE ESTIMATE
NO. DATE REVISIONS BY CHK DESIGN SUPV ENGR PROJ ENGR
SCALE DESIGNED DRAWN CHIEF ENGR
BECHTEL
FREDERICK, MARYLAND
PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT
CIRCULATING WATER SYSTEM
DRY MECHANICAL DRAFT COOLING TOWER
RACEWAY LAYOUT
JOB NO. DRAWING NO. REV
25762-110 ERK-WL-00020 A
0 50 100 200 300 400 500FT
22 x 34 'D' SIZE
DRAFT



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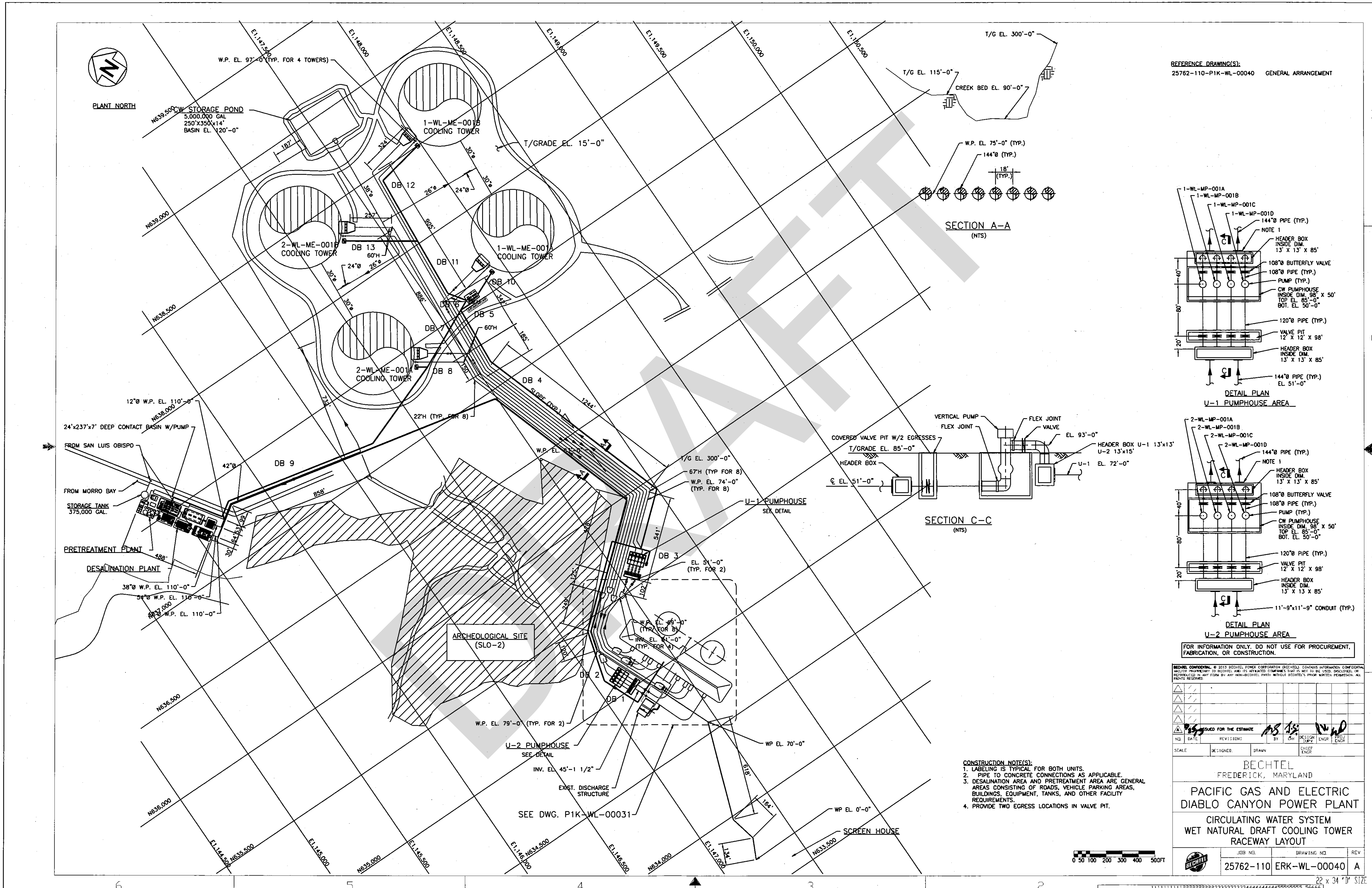
NO.	DATE	REVISIONS	BY	CHK	DESIGN SUPV.	ENGR	PROJ ENGR
A		ISSUED FOR THE ESTIMATE					

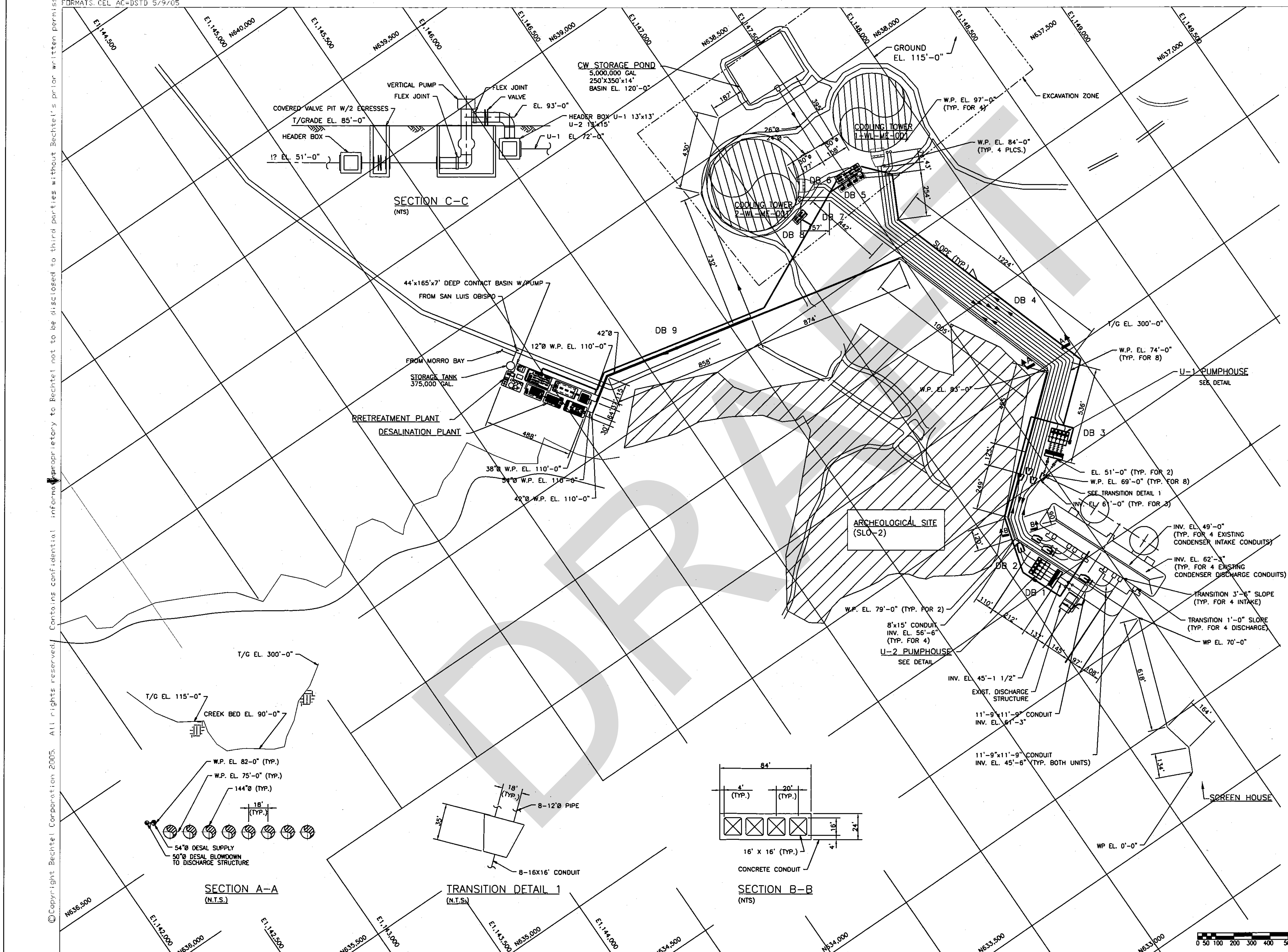
BECHTEL
FREDERICK, MARYLAND

PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

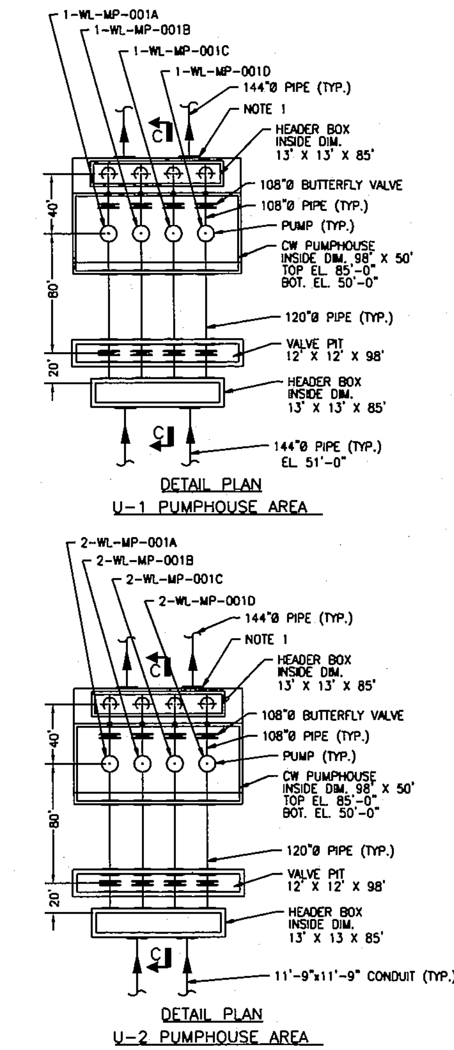
CIRCULATING WATER SYSTEM
HYBRID DRAFT COOLING TOWER
RACEWAY LAYOUT

JOB NO.	DRAWING NO.	REV
25762-110	ERK-WL-00030	A


PLANT NORTH
CW STORAGE POND
5,000,000 GAL
250'X350'x14'
BASIN EL. 120'-0"
W.P. EL. 97'-0"(TYP. FOR 4 TOWERS)
1-WL-ME-001B
COOLING TOWER
T/GRADE EL. 15'-0"
2-WL-ME-001B
COOLING TOWER
1-WL-ME-001A
COOLING TOWER
2-WL-ME-001A
COOLING TOWER
DB 1
DB 2
DB 3
DB 4
DB 5
DB 6
DB 7
DB 8
DB 9
DB 10
DB 11
DB 12
DB 13
SLOPE (TYP.)
12"Ø W.P. EL. 110'-0"
24'x237'x7' DEEP CONTACT BASIN W/PUMP
FROM SAN LUIS OBISPO
FROM MORRO BAY
STORAGE TANK
375,000 GAL.
PRETREATMENT PLANT
DESALINATION PLANT
38"Ø W.P. EL. 110'-0"
54"Ø W.P. EL. 110'-0"
W.P. EL. 110'-0"
22'H (TYP. FOR 8)
T/G EL. 300'-0"
67'H (TYP FOR 8)
W.P. EL. 74'-0"
(TYP. FOR 8)
U-1 PUMPHOUSE
SEE DETAIL
EL. 51'-0"
(TYP. FOR 2)
W.P. EL. 69'-0"
(TYP FOR 8)
INV. EL. 61'-0"
(TYP. FOR 4)
ARCHEOLOGICAL SITE
(SLO-2)
W.P. EL. 79'-0" (TYP. FOR 2)
U-2 PUMPHOUSE
SEE DETAIL
INV. EL. 45'-1 1/2"
EXIST. DISCHARGE
STRUCTURE
SEE DWG. P1K-WL-00031
WP EL. 70'-0"
WP EL. 0'-0"
SCREEN HOUSE
T/G EL. 300'-0"
T/G EL. 115'-0"
CREEK BED EL. 90'-0"
W.P. EL. 75'-0" (TYP.)
144"Ø (TYP.)
18' (TYP.)
SECTION A-A
(NTS)
VERTICAL PUMP
FLEX JOINT
FLEX JOINT
VALVE
EL. 93'-0"
COVERED VALVE PIT W/2 EGRESSES
T/GRADE EL. 85'-0"
HEADER BOX
HEADER BOX U-1 13'x13'
U-2 13'x15'
℄ EL. 51'-0"
U-1 EL. 72'-0"
SECTION C-C
(NTS)
REFERENCE DRAWING(S):
25762-110-P1K-WL-00040 GENERAL ARRANGEMENT
1-WL-MP-001A
1-WL-MP-001B
1-WL-MP-001C
1-WL-MP-001D
144"Ø PIPE (TYP.)
NOTE 1
HEADER BOX INSIDE DIM. 13' X 13' X 85'
108"Ø BUTTERFLY VALVE
108"Ø PIPE (TYP.)
PUMP (TYP.)
CW PUMPHOUSE INSIDE DIM. 98' X 50' TOP EL. 85'-0" BOT. EL. 50'-0"
120"Ø PIPE (TYP.)
VALVE PIT 12' X 12' X 98'
HEADER BOX INSIDE DIM. 13' X 13' X 85'
144"Ø PIPE (TYP.) EL. 51'-0"
DETAIL PLAN
U-1 PUMPHOUSE AREA
2-WL-MP-001A
2-WL-MP-001B
2-WL-MP-001C
2-WL-MP-001D
144"Ø PIPE (TYP.)
NOTE 1
HEADER BOX INSIDE DIM. 13' X 13' X 85'
108"Ø BUTTERFLY VALVE
108"Ø PIPE (TYP.)
PUMP (TYP.)
CW PUMPHOUSE INSIDE DIM. 98' X 50' TOP EL. 85'-0" BOT. EL. 50'-0"
120"Ø PIPE (TYP.)
VALVE PIT 12' X 12' X 98'
HEADER BOX INSIDE DIM. 13' X 13' X 85'
11'-9"x11'-9" CONDUIT (TYP.)
DETAIL PLAN
U-2 PUMPHOUSE AREA
FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION, OR CONSTRUCTION.
CONSTRUCTION NOTE(S):
1. LABELING IS TYPICAL FOR BOTH UNITS.
2. PIPE TO CONCRETE CONNECTIONS AS APPLICABLE.
3. DESALINATION AREA AND PRETREATMENT AREA ARE GENERAL AREAS CONSISTING OF ROADS, VEHICLE PARKING AREAS, BUILDINGS, EQUIPMENT, TANKS, AND OTHER FACILITY REQUIREMENTS.
4. PROVIDE TWO EGRESS LOCATIONS IN VALVE PIT.
ISSUED FOR THE ESTIMATE
NO. DATE REVISIONS BY CHK DESIGN SUPV ENGR PROJ ENGR
SCALE DESIGNED DRAWN CHIEF ENGR
BECHTEL
FREDERICK, MARYLAND
PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT
CIRCULATING WATER SYSTEM
WET NATURAL DRAFT COOLING TOWER
RACEWAY LAYOUT
JOB NO. 25762-110
DRAWING NO. ERK-WL-00040
REV A
0 50 100 200 300 400 500FT
22 x 34 'D' SIZE
DRAFT



REFERENCE DRAWING(S):
25762-110-P1K-WL-00050 GENERAL ARRANGEMENT



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NO	DATE	REVISIONS	BY	CHK	DESIGN SUPV	ENGR	PROJ ENGR
A	9/25/13	ISSUED FOR THE ESTIMATE					

SCALE | DESIGNED | DRAWN | CHIEF ENGR

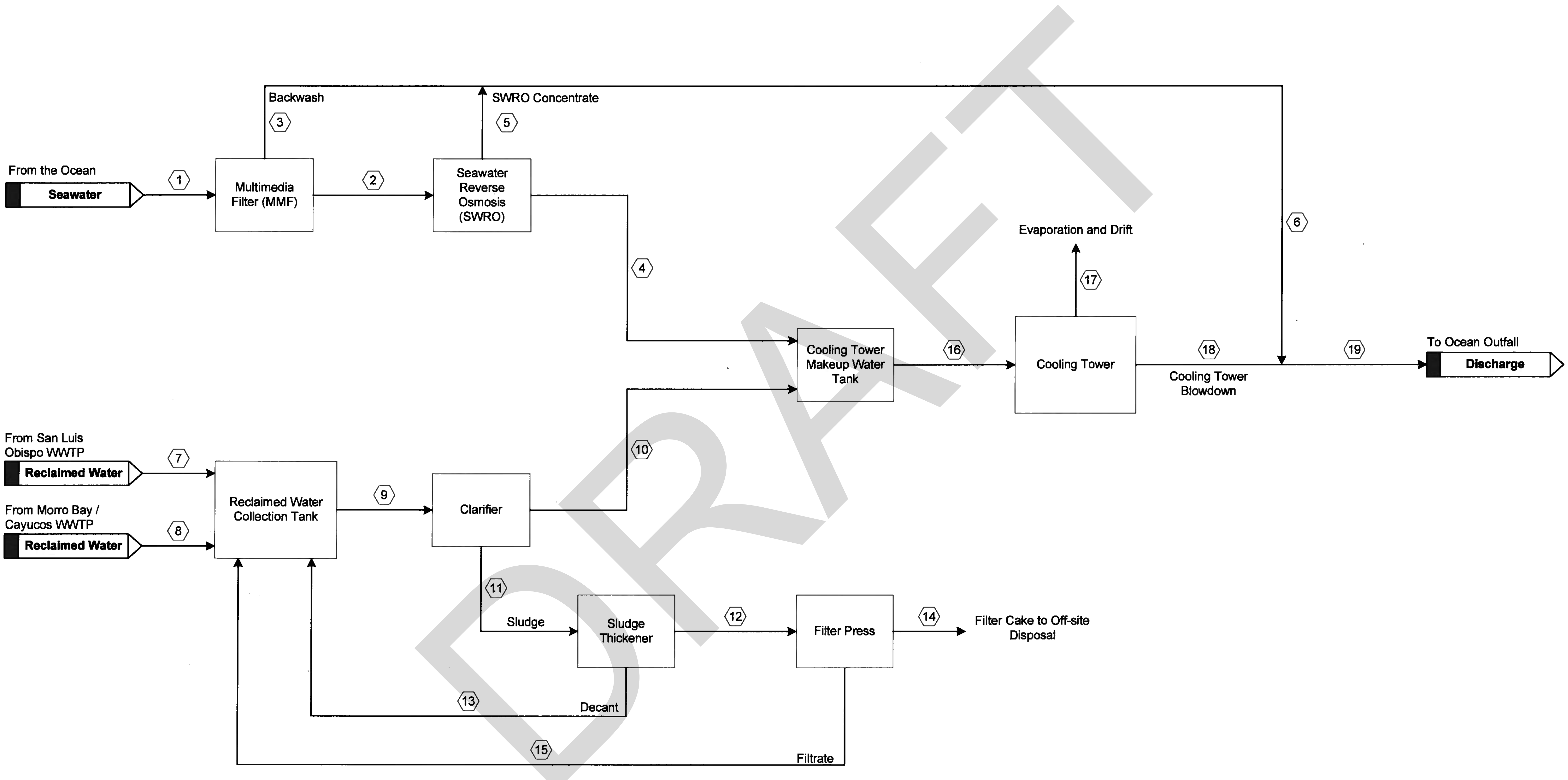
BECHTEL
FREDERICK, MARYLAND

PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

CIRCULATING WATER SYSTEM
WET MECHANICAL DRAFT COOLING TOWER
RACEWAY LAYOUT

JOB NO.	DRAWING NO.	REV
25762-110	ERK-WL-00050	A

22 x 34 'D' SIZE



THIS IS A PRELIMINARY DOCUMENT

Rev	Date	Reason for Revision	Resp. Engr.	Checker	EGS	Project Engineer
00B	9/11/13	Issued for Final Report	CRH	[illegible]	RP	DEO
00A	1/16/13	Preliminary Issue	EJT	JMD	RP	DED

BECHTEL POWER CORPORATION

Pacific Gas & Electric
Diablo Canyon Power Plant

Water Balance Diagram

JOB NO.	DWG. NO.	REV.	Sheet:
25762	25762-110-M5K-YA-00001	00B	1 of 2

WATER BALANCE STREAM FLOW RATE TABLE								
	WATER BALANCE CASE DESCRIPTION	Wet Natural Draft Cooling		Wet Mechanical (Forced) Draft Cooling		Hybrid Wet/Dry Cooling		
	NUMBER OF UNITS OPERATING	2		2		2		
	DRY BULB TEMPERATURE (°F)	83		83		83		
	WET BULB TEMPERATURE (°F)	68		68		68		
	RELATIVE HUMIDITY (%)	46		46		46		
	SEASON DESCRIPTION	HOT DAY		HOT DAY		HOT DAY		
	MAKEUP WATER TYPE	BLEND	DESAL ONLY	BLEND	DESAL ONLY	BLEND	DESAL ONLY	
STREAM NO.	STREAM DESCRIPTION	Flow Rate GPM	Flow Rate GPM	Flow Rate GPM	Flow Rate GPM	Flow Rate GPM	Flow Rate GPM	Notes
1	Seawater from the Ocean	70,800	77,300	70,800	77,300	63,100	69,500	
2	SWRO Influent	67,400	73,600	67,400	73,600	60,100	66,200	
3	MMF Backwash	3,400	3,700	3,400	3,700	3,000	3,300	Note 2
4	Desalinated Water to Makeup Water Tank	30,310	33,100	30,340	33,100	27,040	29,800	Note 3
5	SWRO Concentrate to Outfall	37,090	40,500	37,060	40,500	33,060	36,400	
6	Combined MMF Backwash and SWRO Concentrate	40,490	44,200	40,460	44,200	36,060	39,700	
7	Reclaimed Water from the San Luis Obispo WWTP	2,000	0	2,000	0	2,000	0	Note 4
8	Reclaimed Water from the Morro Bay / Cayucos WWTP	800	0	800	0	800	0	Note 5
9	Influent to Clarifier	2,890	0	2,860	0	2,860	0	
10	Clarified Reclaimed Water to Makeup Water Tank	2,790	0	2,760	0	2,760	0	
11	Sludge Thickener Influent	100	0	100	0	100	0	Note 6
12	Filter Press Influent	40	0	40	0	40	0	
13	Sludge Thickener Decant to Reclaimed Water Collection Tank	60	0	60	0	60	0	
14	Filter Press Filtrate in Filter Cake to Off-site Disposal	10	0	10	0	10	0	
15	Filtrate to Reclaimed Water Collection Tank	30	0	30	0	30	0	
16	Makeup Water to Cooling Tower	33,100	33,100	33,100	33,100	29,800	29,800	
17	Cooling Tower Evaporation and Drift	29,000	29,000	29,000	29,000	26,100	26,100	Note 7
18	Cooling Tower Blowdown	4,100	4,100	4,100	4,100	3,700	3,700	Note 8
19	Combined Discharge to the Ocean	44,590	48,300	44,560	48,300	39,760	43,400	

NOTES:

1. Water flow rates are based on the specified process conditions for the plant configuration shown on Sheet 1 and are shown in gpm unless otherwise specified. These cases may or may not represent the appropriate design flow for a particular stream. Therefore, it is not appropriate to reference this drawing alone as a basis for establishing system, equipment or line sizing design flows.
2. MMF Backwash is estimated to be 5% of the seawater influent.
3. Permeate from the SWRO is estimated to be 45% of the influent flow.
4. Reclaimed water from the San Luis Obispo WWTP is estimated to be 2000 gpm in both the summer and winter. This was the average daily recycled water availability from this facility in 2009.
5. Reclaimed water from the Morro Bay / Cayucos WWTP is estimated to be 800 gpm in both the summer and winter. This was the average water availability in 2011.
6. Clarifier underflow is estimated to be 3% of the reclaim water clarifier influent flow.
7. Cooling tower drift is estimated to be 0.0005% of the circulating water flow (864,300 gpm), which is 4 gpm.
8. Cooling tower cycles of concentration is estimated to be 8. It is assumed to be limited by the 31 ton/year presumed limit for PM-10 emissions in the cooling tower drift.

NOTES:

1. P&ID SHOWS UNIT 1 SYSTEM AND SCREEN WASH PUMPS OF BOTH UNITS. UNIT 2 IS IDENTIACAL EXCEPT NEW EQUIPMENT NUMBERS BEGINNING WITH "1" ARE CHANGED TO BEGIN WITH "2".
2. THIS P&ID DOES NOT SHOW ALL THE DETAILS OF THE EXISTING PORTION OF THE SYSTEM
3. PUMP AND STRAINER CONTROLS WILL BE FROM A LOCAL PANEL.
4. RAKE, FISH RETURN, AND SCREEN SYSTEMS ARE CONTROLLED BY VENDOR SUPPLIED PANELS.
5. EXISTING LEVEL TRANSMITTER WILL BE REUSED, TUBING MAY NEED TO BE REPLACED BASED ON FINAL SCREEN CONFIGURATION.
6. TRAVELING SCREEN MOTORS ARE CONTROLLED BY A NEW LOCAL VENDOR-SUPPLIED PANEL. COMMON TROUBLE ALARM TO MAIN CONTROL PANEL.
7. ALL SCREENS ARE TO OPERATE AT ALL TIMES.
8. FINE MESH SCREEN SPRAY VALVES, FLUSHING ARRANGEMENT AND LOCAL INSTRUMENTATION ARE IN VENDOR SCOPE.
9. FOR STRAINER, LOCAL INSTRUMENTS ARE IN VENDOR SCOPE.
10. STRAINER WILL BE LOCATED AT LOWER DECK, EL. (-) 2'-1", IN FRONT OF WCP 1-2.
11. NEW SCREEN WASH PUMPS 1-WT-MP-003 AND 2-WT-MP-003 WILL BE LOCATED IN CWP 1-2 FOREBAY AND CWP 2-1 FOREBAY RESPECTIVELY.
12. Y-STRAINER BLOW OFF ROUTED TO INTAKE ON INLET SIDE OF TRAVELING SCREEN.

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NO.	DATE	REVISIONS	BY	CHK	MECH SUPV	CS SUPV	PD SUPV	PROJ ENGR
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B	6/25/13	ISSUED FOR ESTIMATE	RP	RKD	RP	—	MB	[illegible]
A	3/15/13	PRELIMINARY ISSUE	JEA	RKT	RP	-	-	DED

SCALE	DESIGNED	DRAWN	CHIEF ENGR

BECHTEL
DEDICATED TO SAFETY EXCELLENCE - ZERO ACCIDENTS
FREDERICK, MARYLAND

PACIFIC GAS & ELECTRIC
DIABLO CANYON

PIPING & INSTRUMENT SCHEMATIC
TRAVELING SCREEN WASH
AND FISH RETURN SYSTEM

JOB NO.	DRAWING NO.	REV
25762-110	M6K-WT-00001	B

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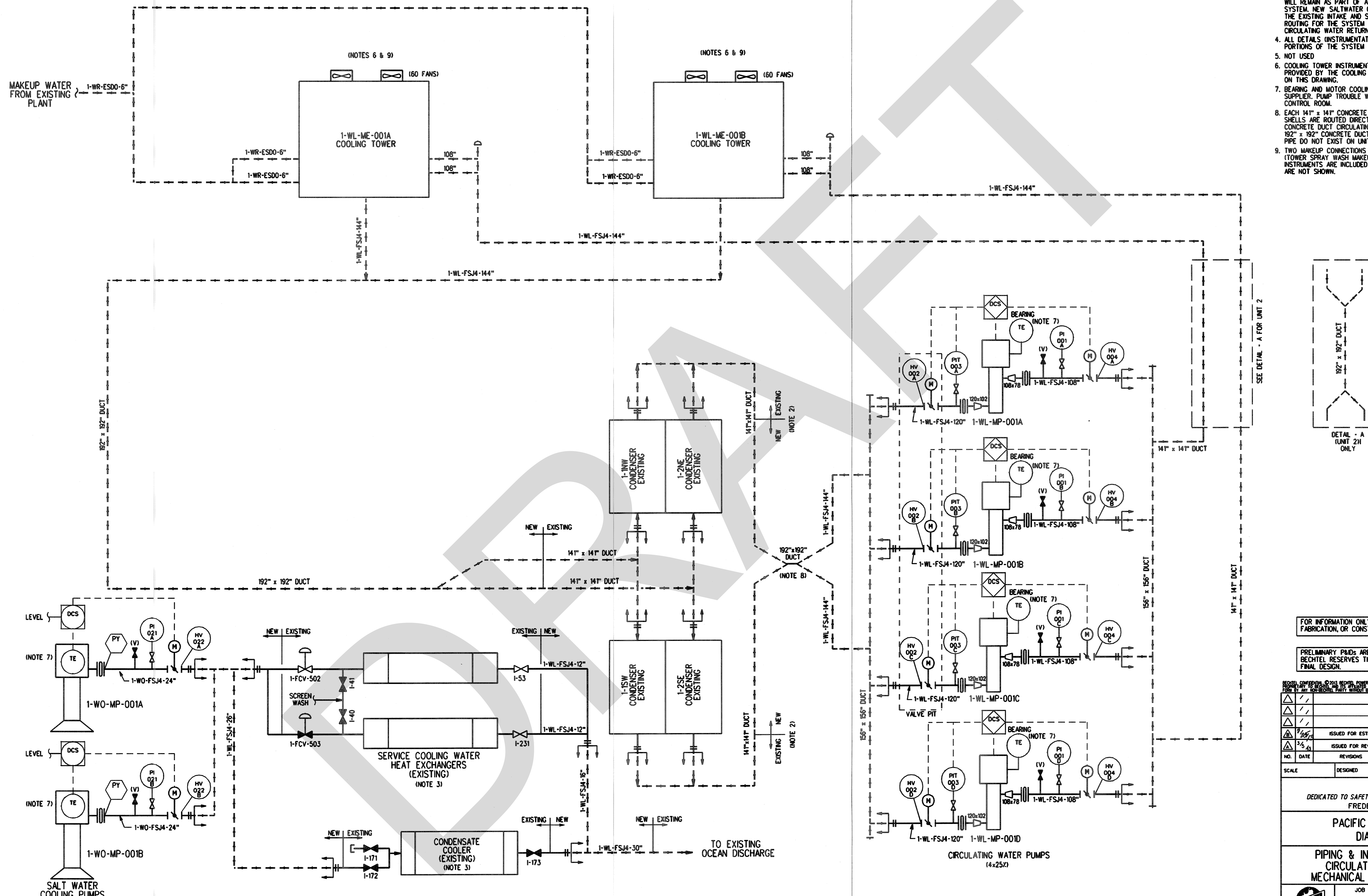

NOTES:

1. P&ID SHOWS UNIT 1 SYSTEM. UNIT 2 SYSTEM IS IDENTICAL EXCEPT AS NOTED AND EQUIPMENT NUMBERS BEGINNING WITH "2".
2. BURIED PIPING CONCRETE DUCTS TO AND FROM THE CONDENSERS ARE MODIFIED/REROUTED OUTSIDE OF THE TURBINE BUILDING. THE EXISTING DUCTS TO/FROM THE INTAKE AND PLANT OUTFALL ARE SEALED AS NEEDED.
3. SERVICE COOLING WATER HEAT EXCHANGER CONDENSATE COOLER WILL REMAIN AS PART OF A ONCE THROUGH SALTWATER COOLING SYSTEM. NEW SALTWATER COOLING PUMPS WILL BE PROVIDED IN THE EXISTING INTAKE AND SUPPLY PIPING WILL BE FURNISHED. ROUTING FOR THE SYSTEM RETURN IS THROUGH THE EXISTING CIRCULATING WATER RETURN PIPING TO THE PLANT OUTFALL.
4. ALL DETAILS (INSTRUMENTATION, VENTS, AND DRAINS) OF EXISTING PORTIONS OF THE SYSTEM ARE NOT SHOWN ON THIS DRAWING.
5. NOT USED
6. COOLING TOWER INSTRUMENTATION AND CONTROL DEVICES WILL BE PROVIDED BY THE COOLING TOWER SUPPLIER AND ARE NOT SHOWN ON THIS DRAWING.
7. BEARING AND MOTOR COOLING WILL BE PROVIDED BY THE PUMP SUPPLIER. PUMP TROUBLE WILL BE ANNUNCIATED IN THE MAIN CONTROL ROOM.
8. EACH 141" x 141" CONCRETE DUCT FROM THE UNIT 2 CONDENSER SHELLS ARE ROUTED DIRECTLY TO THE UNIT 2 - 156" x 156" CONCRETE DUCT CIRCULATING WATER PUMP SUCTION HEADER (THE 192" x 192" CONCRETE DUCT AND THE WL-FSJ4-144" SUCTION PIPE DO NOT EXIST ON UNIT 2).
9. TWO MAKEUP CONNECTIONS ARE PROVIDED AT EACH TOWER (TOWER SPRAY WASH MAKEUP). MAKEUP VALVES AND LEVEL INSTRUMENTS ARE INCLUDED IN TOWER SUPPLIER SCOPE AND ARE NOT SHOWN.

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NO.	DATE	REVISIONS	BY	CHK	MECH SUPV	CS SUPV	PD SUPV	PROJ ENGR
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B	7/25/13	ISSUED FOR ESTIMATE	RP	PKD	RP	AKK		DED
A	3/5/13	ISSUED FOR REVIEW	EMH	RKT	RP	AKK	-	DED

SCALE	DESIGNED	DRAWN	CHIEF ENGR

BECHTEL
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FREDERICK, MARYLAND

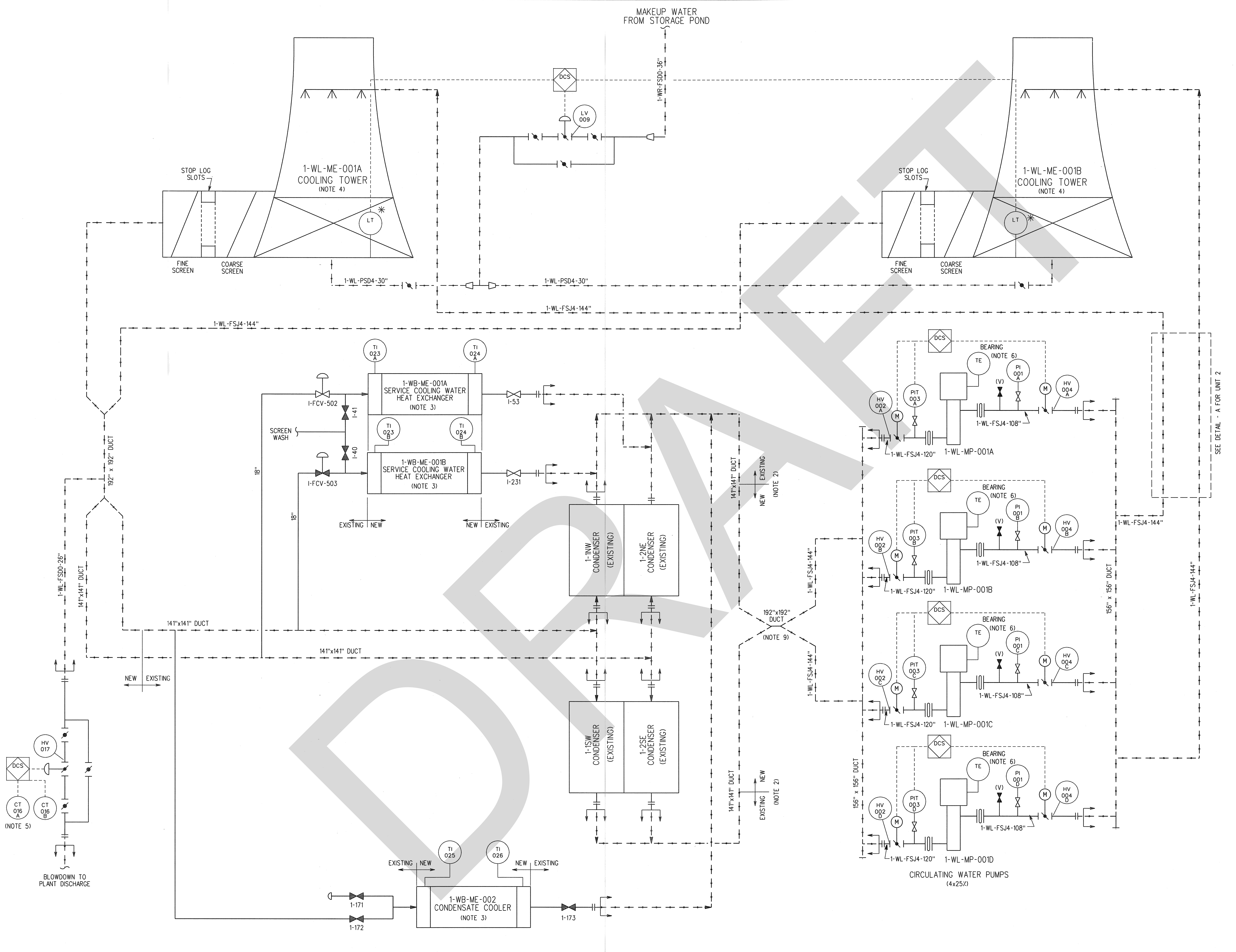
PACIFIC GAS & ELECTRIC
DIABLO CANYON

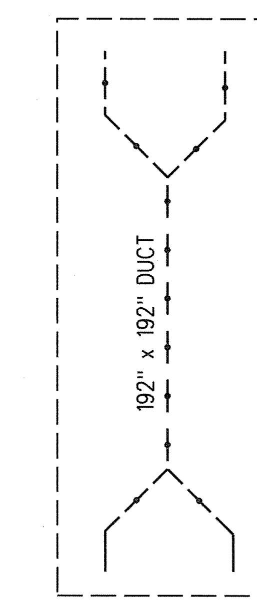
PIPING & INSTRUMENT SCHEMATIC
CIRCULATING WATER SYSTEM
MECHANICAL DRAFT COOLING (DRY)

JOB NO.	DRAWING NO.	REV
25762-110	M6K-WL-00002	B

D C B A
6 5 4 3 2
A R I

LEVELS 1111111111222222222233333333334444444444555555555566666 1234567890123456789012345678901234567890123456789012 3





DETAIL - A
(UNIT 2)
ONLY

NOTES:

1. P&ID SHOWS UNIT 1 SYSTEM. UNIT 2 SYSTEM IS IDENTICAL EXCEPT AS NOTED AND EQUIPMENT NUMBERS BEGINNING WITH "2".
2. PLANT DISCHARGE DUCT MODIFIED WHERE THE CONDENSER RETURNS FROM EACH UNIT JOIN THE DUCT. THE COMBINED DUCTS ARE JOINED AND SEALED FROM THE PLANT DISCHARGE TO THE OCEAN.
3. SERVICE COOLING WATER HEAT EXCHANGERS AND CONDENSATE COOLER HAVE BEEN REPLACED.
4. COOLING TOWER INSTRUMENTATION AND CONTROL DEVICES WILL BE PROVIDED BY COOLING TOWER PACKAGE VENDOR.
5. CONDUCTIVITY IS MEASURED AT OUTLET OF COOLING TOWER.
6. BEARING AND MOTOR COOLING WILL BE PROVIDED BY THE PUMP SUPPLIER. TROUBLE COOLING ANNUNCIATED IN THE MAIN CONTROL ROOM.
7. NOT USED
8. EXISTING INSTRUMENTATION, VENTS, DRAINS, ETC. ARE NOT DEPICTED ON P&ID.
9. EACH 141" x 141" CONCRETE DUCT FROM THE UNIT 2 CONDENSER SHELLS ARE ROUTED DIRECTLY TO THE UNIT 2 156" x 156" CONCRETE DUCT CIRCULATING WATER PUMP SUCTION HEADER (THE 192" x 192" CONCRETE DUCT AND WL-FSJ4-144" SUCTION PIPE DO NOT EXIST ON UNIT 2).

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NO.	DATE	REVISIONS	BY	CHK	MECH SUPV	CS SUPV	PD SUPV	PROJ ENGR
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A	3/5/13	ISSUED FOR REVIEW	EMH	RKT	RP	AKK	-	DED

SCALE	DESIGNED	DRAWN	CHIEF ENGR

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FREDERICK, MARYLAND

PACIFIC GAS & ELECTRIC
DIABLO CANYON

PIPING & INSTRUMENT SCHEMATIC
CIRCULATING WATER SYSTEM
NATURAL DRAFT COOLING (WET)

JOB NO.	DRAWING NO.	REV
25762-110	M6K-WL-00003	B

22 x 34 "D" SIZE

6 5 4 3 2

A R I

LEVELS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

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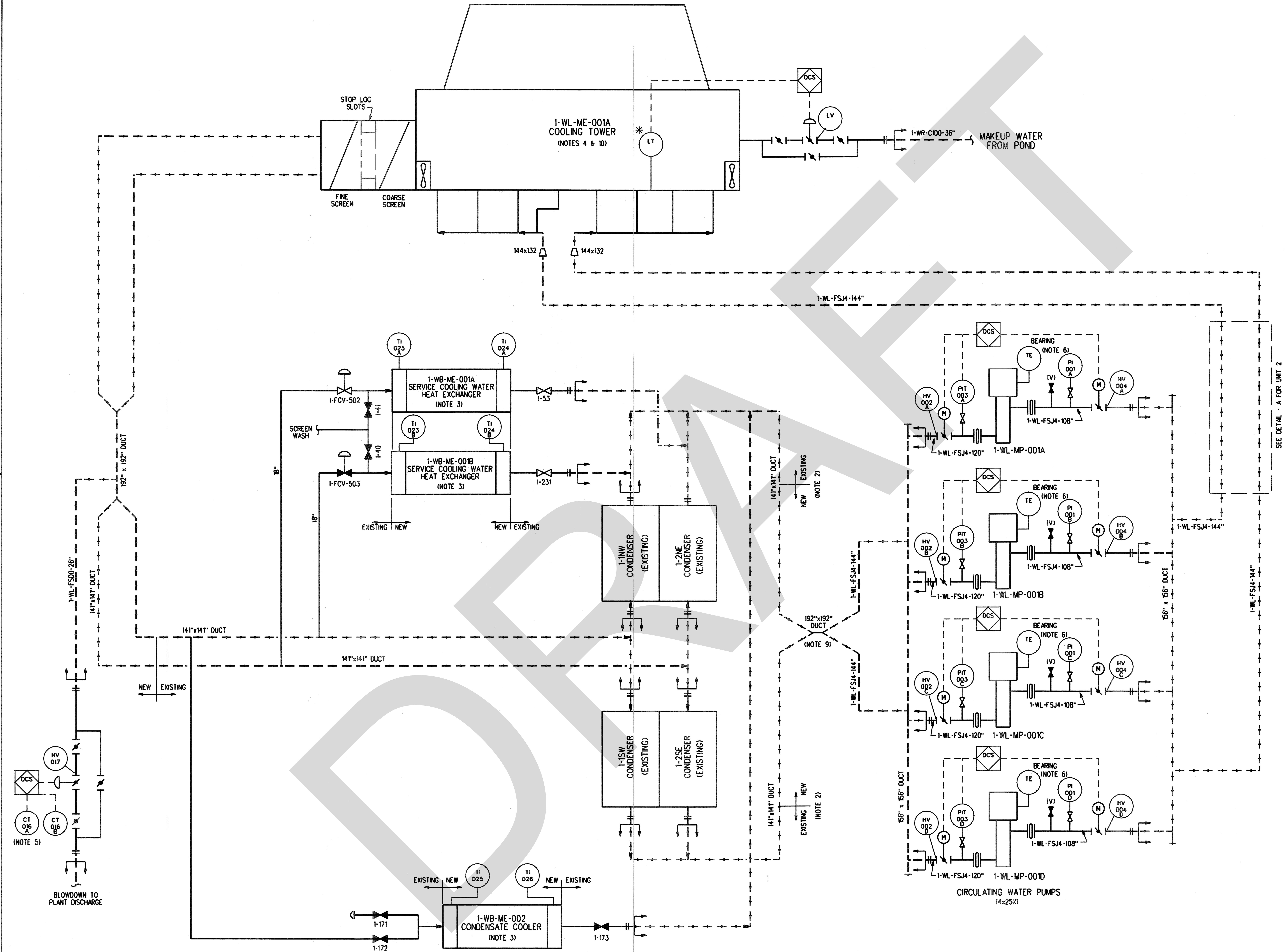

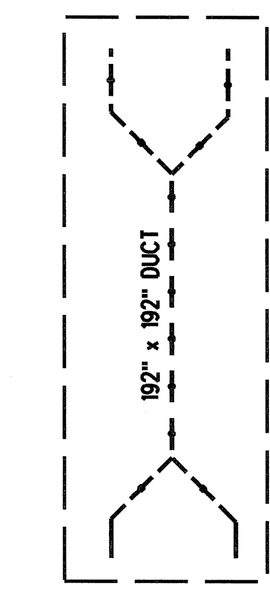

DETAIL - A
(UNIT 2)
ONLY

NOTES:

1. P&ID SHOWS UNIT 1 SYSTEM. UNIT 2 SYSTEM IS IDENTICAL EXCEPT AS NOTED AND EQUIPMENT NUMBERS BEGINNING WITH "2".
2. PLANT DISCHARGE DUCT MODIFIED WHERE THE CONDENSER RETURNS FROM EACH UNIT JOIN THE DUCT. THE COMBINED DUCTS ARE JOINED AND SEALED FROM THE PLANT DISCHARGE TO THE OCEAN.
3. SERVICE COOLING WATER HEAT EXCHANGERS AND CONDENSATE COOLER HAVE BEEN REPLACED.
4. COOLING TOWER INSTRUMENTATION AND CONTROL DEVICES WILL BE PROVIDED BY COOLING TOWER PACKAGE VENDOR.
5. CONDUCTIVITY IS MEASURED AT OUTLET OF COOLING TOWER.
6. BEARING AND MOTOR COOLING WILL BE PROVIDED BY THE PUMP SUPPLIER. TROUBLE COOLING ANNUNCIATED IN THE MAIN CONTROL ROOM.
7. NOT USED
8. EXISTING INSTRUMENTATION, VENTS, DRAINS, ETC. ARE NOT DEPICTED ON P&ID.
9. EACH 141" x 141" CONCRETE DUCT FROM THE UNIT 2 CONDENSER SHELLS ARE ROUTED DIRECTLY TO THE UNIT 2 156" x 156" CONCRETE DUCT CIRCULATING WATER PUMP SUCTION HEADER (THE 192" x 192" CONCRETE DUCT AND WL-FSJ4-144" SUCTION PIPE DO NOT EXIST ON UNIT 2).
10. CIRCULAR MECHANICAL DRAFT, 40 FAN COOLING TOWER.

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NO.	DATE	REVISIONS	BY	CHK	MECH SUPV	CS SUPV	PD SUPV	PROJ ENGR
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	/ /							
C	9/11/13	ADDED NOTE 10, ISSUED FOR FINAL REPORT	RP	WDD	RP	AW	-	DED
B	7/15/13	ISSUED FOR ESTIMATE	RP	PKD	RP	AKK	-	DED
A	3/5/13	ISSUED FOR REVIEW	EMH	RKT	RP	AKK	-	DED

SCALE	DESIGNED	DRAWN	CHIEF ENGR

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FREDERICK, MARYLAND

PACIFIC GAS & ELECTRIC
DIABLO CANYON

PIPING & INSTRUMENT SCHEMATIC
CIRCULATING WATER SYSTEM
MECHANICAL DRAFT COOLING (WET)

JOB NO.	DRAWING NO.	REV
25762-110	M6K-WL-00004	C

6 5 4 3 2

A R I

LEVELS

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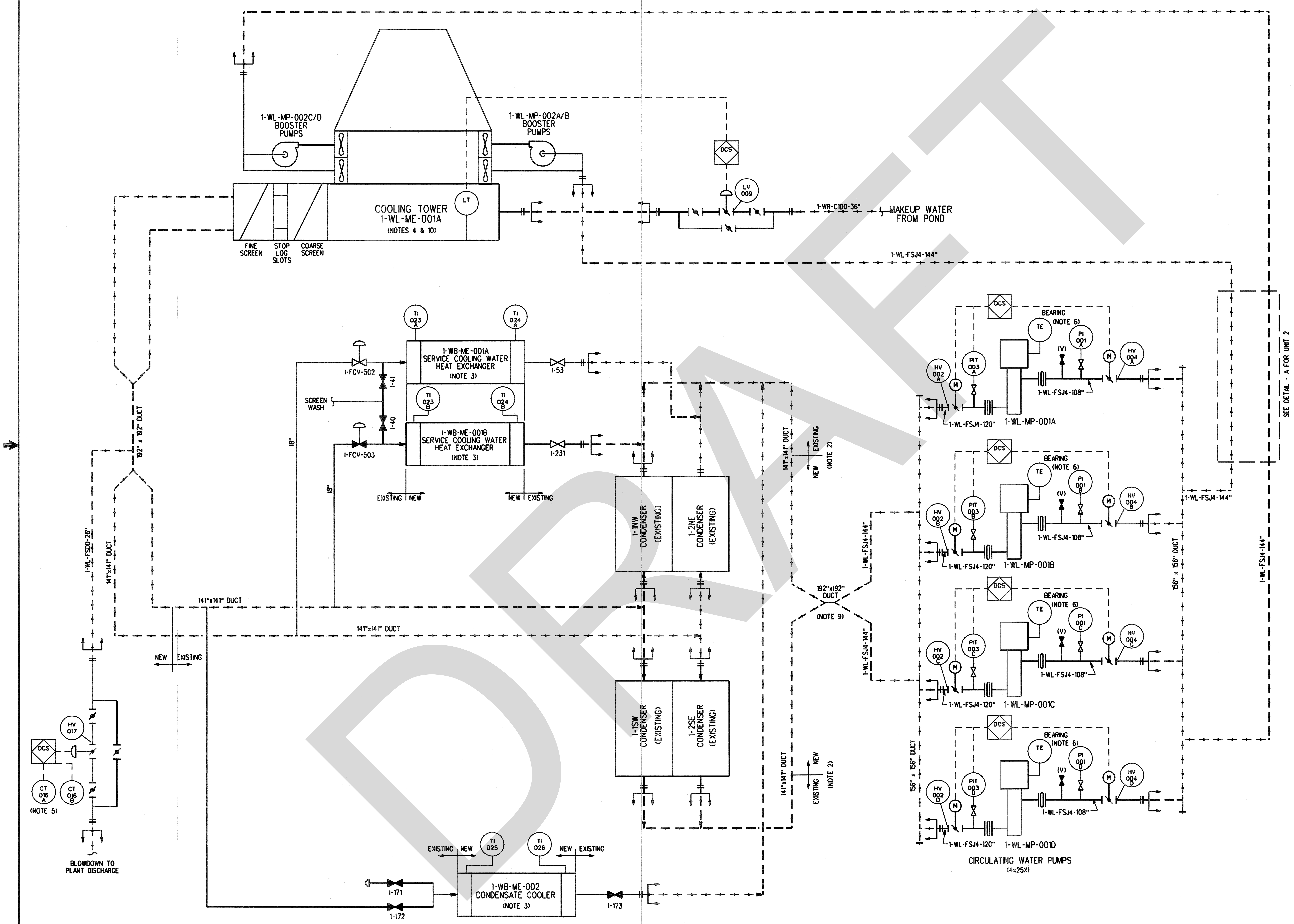

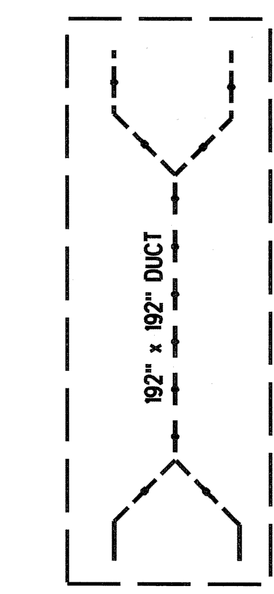

DETAIL - A
(UNIT 2)
ONLY

NOTES:

1. P&ID SHOWS UNIT 1 SYSTEM. UNIT 2 SYSTEM IS IDENTICAL EXCEPT AS NOTED AND EQUIPMENT NUMBERS BEGINNING WITH "2".
2. PLANT DISCHARGE DUCT MODIFIED WHERE THE CONDENSER RETURNS FROM EACH UNIT JOIN THE DUCT. THE COMBINED DUCTS ARE JOINED AND SEALED FROM THE PLANT DISCHARGE TO THE OCEAN.
3. SERVICE COOLING WATER HEAT EXCHANGERS AND CONDENSATE COOLER HAVE BEEN REPLACED.
4. COOLING TOWER INSTRUMENTATION AND CONTROL DEVICES WILL BE PROVIDED BY COOLING TOWER PACKAGE VENDOR.
5. CONDUCTIVITY IS MEASURED AT OUTLET OF COOLING TOWER.
6. BEARING AND MOTOR COOLING WILL BE PROVIDED BY THE PUMP SUPPLIER. TROUBLE COOLING ANNUNCIATED IN THE MAIN CONTROL ROOM.
7. NOT USED
8. EXISTING INSTRUMENTATION, VENTS, DRAINS, ETC. ARE NOT DEPICTED ON P&ID.
9. EACH 141" x 141" CONCRETE DUCT FROM THE UNIT 2 CONDENSER SHELLS ARE ROUTED DIRECTLY TO THE UNIT 2 156" x 156" CONCRETE DUCT CIRCULATING WATER PUMP SUCTION HEADER (THE 192" x 192" CONCRETE DUCT AND WL-FSJ4-144" SUCTION PIPE DO NOT EXIST ON UNIT 2).
10. CIRCULAR HYBRID TOWER WITH 40 DRY SECTION FANS AND 40 WET SECTION FANS.

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C	9/11/13	ADDED NOTE 10, ISSUED FOR FINAL REPORT	RP	WDD	RP	[illegible]	–	[illegible]
B	7/15/13	ISSUED FOR ESTIMATE	RP	PKD	RP	AKK	-	DED
A	3/5/13	ISSUED FOR PRELIMINARY REVIEW	EMH	RKT	RP	AKK	-	DED

SCALE	DESIGNED	DRAWN	CHIEF ENGR

BECHTEL
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FREDERICK, MARYLAND

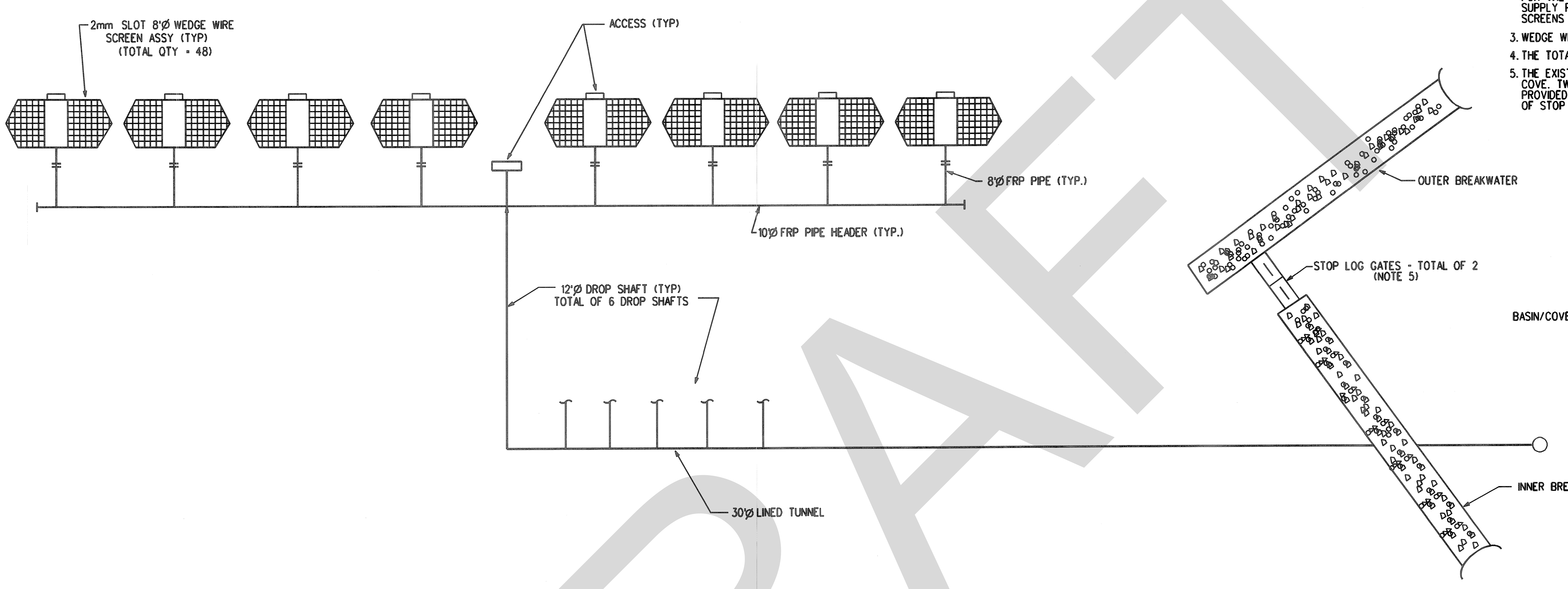
PACIFIC GAS & ELECTRIC
DIABLO CANYON

PIPING & INSTRUMENT SCHEMATIC CIRCULATING WATER SYSTEM HYBRID COOLING OPTION

JOB NO.	DRAWING NO.	REV
25762-110	M6K-WL-00005	C

6 5 4 3 A R I 2

LEVELS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63



NOTE:

1. THE ARRANGEMENT SHOWN IS FOR 2mm SLOT WEDGE WIRE SCREEN OPTION WITH A SINGLE 30-FOOT DIAMETER SUPPLY TUNNEL.

   FOR THE 6mm SLOT WEDGE WIRE SCREEN OPTION, THE NUMBER OF 12-FOOT DIAMETER DROP SHAFTS SHALL BE FIVE, EACH WITH SIX WEDGE WIRE SCREENS. THE TOTAL NUMBER OF 6mm SLOT WEDGE WIRE SCREENS SHALL BE 30.

2. OPTIONAL DESIGN (NOT SHOWN) USES TEN, 108 INCH DIAMETER SUPPLY PIPES IN PLACE OF THE 30-FOOT TUNNEL. FOR THE 2mm SLOT WEDGE WIRE SCREEN OPTION, TWO SUPPLY PIPES EACH HAVE FOUR, 8-FOOT DIAMETER WEDGE WIRE SCREENS AND EIGHT SUPPLY PIPES HAVE FIVE, 8-FOOT DIAMETER WEDGE WIRE SCREENS FOR A TOTAL OF 48 WEDGE WIRE SCREENS.

   FOR THE 6mm SLOT WEDGE WIRE SCREEN OPTION EACH OF THE SUPPLY PIPES HAVE THREE, 8-FOOT DIAMETER WEDGE WIRE SCREENS FOR A TOTAL OF 30 WEDGE WIRE SCREENS.

3. WEDGE WIRE SCREENS ARE OF Z-ALLOY MATERIAL WITH END CONES.
4. THE TOTAL DESIGN FLOW IS 1,753,000 GPM.
5. THE EXISTING BREAKWATER IS MODIFIED TO TOTALLY ENCLOSE THE COVE. TWO EMERGENCY OPENINGS THROUGH THE BREAKWATER ARE PROVIDED EACH WITH STOP LOGS NORMALLY INSTALLED IN ONE SET OF STOP LOG SLOTS PER OPENING.

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION OR CONSTRUCTION.

PRELIMINARY PFDs ARE ISSUED FOR PROPOSAL INFORMATION. BECHTEL RESERVES THE RIGHT TO MAKE REVISIONS DURING FINAL DESIGN.

NO.	DATE	REVISIONS	BY	CHK	MECH SUPV	CS SUPV	PD SUPV	PROJ ENGR
	/ /							
	/ /							
	/ /							
B	7/12/13	ISSUED FOR ESTIMATE	RP	RKD	RP	—	—	DED
A	3/24/13	ISSUED FOR REVIEW	PKD	RKT	RP	-	-	DED

SCALE	DESIGNED	DRAWN	CHIEF ENGR

BECHTEL
DEDICATED TO SAFETY EXCELLENCE - ZERO ACCIDENTS
FREDERICK, MARYLAND

PACIFIC GAS & ELECTRIC
DIABLO CANYON

PROCESS FLOW SCHEMATIC
OFFSHORE WEDGE WIRE SCREEN

JOB NO.	DRAWING NO.	REV
25762-110	M6K-WL-00006	B

LEVELS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

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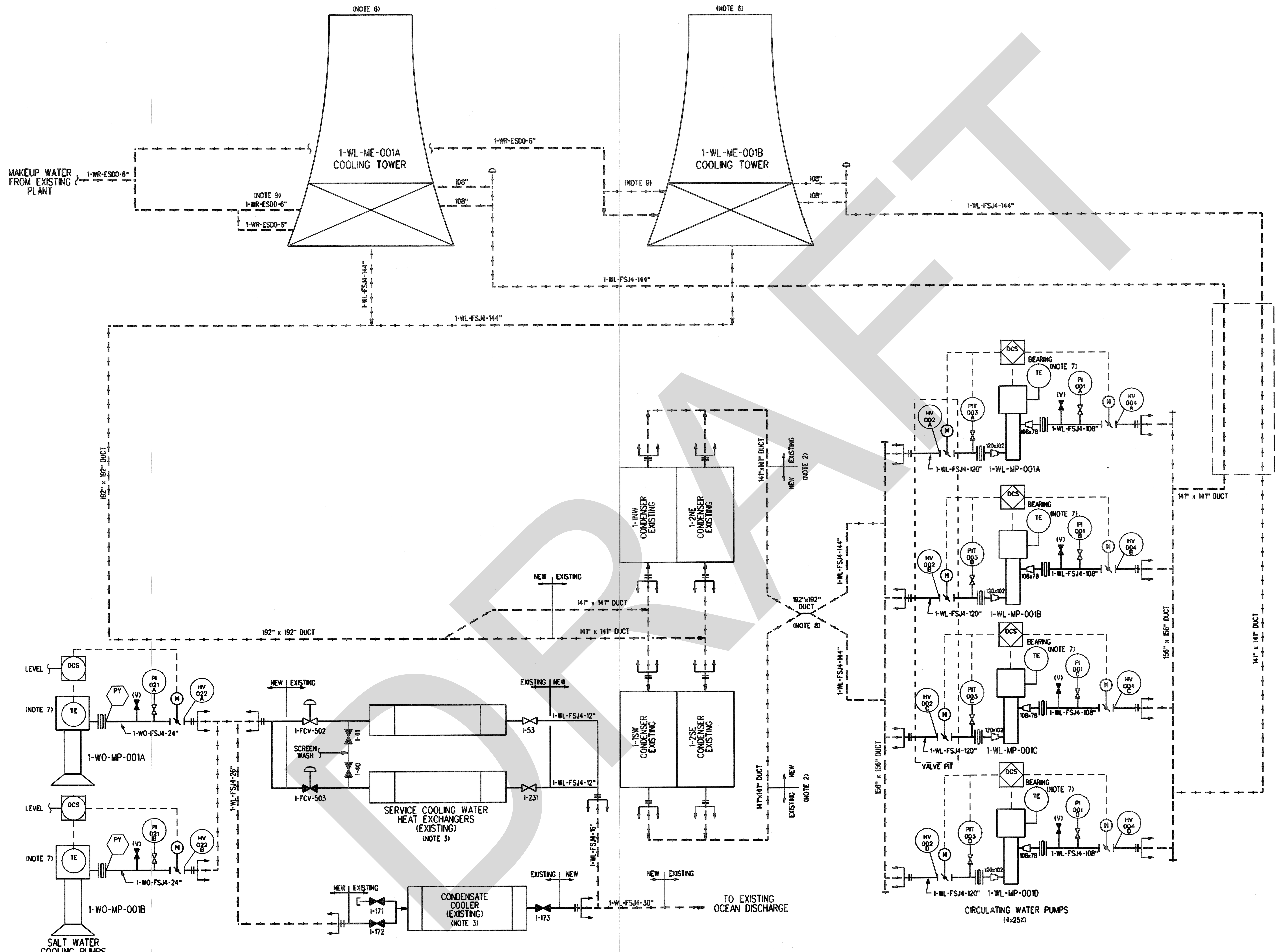

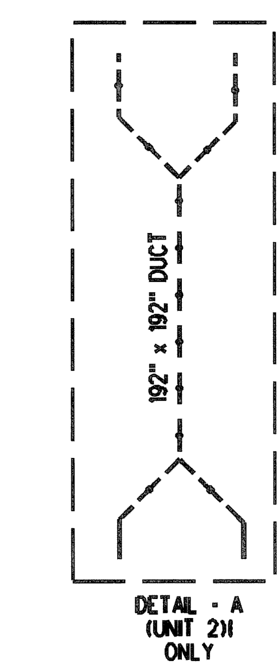

NOTES:

1. P&ID SHOWS UNIT 1 SYSTEM. UNIT 2 SYSTEM IS IDENTICAL EXCEPT AS NOTED AND EQUIPMENT NUMBERS BEGINNING WITH "2".
2. BURIED PIPING CONCRETE DUCTS TO AND FROM THE CONDENSERS ARE MODIFIED/REROUTED OUTSIDE OF THE TURBINE BUILDING. THE EXISTING DUCTS TO/FROM THE INTAKE AND PLANT OUTFALL ARE SEALED AS NEEDED.
3. SERVICE COOLING WATER HEAT EXCHANGER CONDENSATE COOLER WILL REMAIN AS PART OF A ONCE THROUGH SALTWATER COOLING SYSTEM. NEW SALTWATER COOLING PUMPS WILL BE PROVIDED IN THE EXISTING INTAKE AND SUPPLY PIPING WILL BE FURNISHED. ROUTING FOR THE SYSTEM RETURN IS THROUGH THE EXISTING CIRCULATING WATER RETURN PIPING TO THE PLANT OUTFALL.
4. ALL DETAILS (INSTRUMENTATION, VENTS, AND DRAINS) OF EXISTING PORTIONS OF THE SYSTEM ARE NOT SHOWN ON THIS DRAWING.
5. NOT USED
6. COOLING TOWER INSTRUMENTATION AND CONTROL DEVICES WILL BE PROVIDED BY THE COOLING TOWER SUPPLIER AND ARE NOT SHOWN ON THIS DRAWING.
7. BEARING AND MOTOR COOLING WILL BE PROVIDED BY THE PUMP SUPPLIER. PUMP TROUBLE WILL BE ANNUNCIATED IN THE MAIN CONTROL ROOM.
8. EACH 141" x 141" CONCRETE DUCT FROM THE UNIT 2 CONDENSER SHELLS ARE ROUTED DIRECTLY TO THE UNIT 2 - 156" x 156" CONCRETE DUCT CIRCULATING WATER PUMP SUCTION HEADER (THE 192" x 192" CONCRETE DUCT AND THE WL-FSJ4-144" SUCTION PIPE DO NOT EXIST ON UNIT 2).
9. TWO MAKEUP CONNECTIONS ARE PROVIDED AT EACH TOWER (TOWER SPRAY WASH MAKEUP). MAKEUP VALVES AND LEVEL INSTRUMENTS ARE INCLUDED IN TOWER SUPPLIER SCOPE AND ARE NOT SHOWN.

D

C

B

A

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NO.	DATE	REVISIONS	BY	CHK	MECH SUPV	CS SUPV	PD SUPV	PROJ ENGR
△	/ /							
△	/ /							
△	/ /							
B	7/25/13	ISSUED FOR ESTIMATE	RP	RKD	RP	AKK		DED
A	3/5/13	ISSUED FOR REVIEW	EMH	RKT	RP	AKK	-	DED

SCALE	DESIGNED	DRAWN	CHIEF ENGR

BECHTEL
DEDICATED TO SAFETY EXCELLENCE - ZERO ACCIDENTS
FREDERICK, MARYLAND

PACIFIC GAS & ELECTRIC
DIABLO CANYON

PIPING & INSTRUMENT SCHEMATIC
CIRCULATING WATER SYSTEM
NATURAL DRAFT COOLING (DRY)

JOB NO.	DRAWING NO.	REV
25762-110	M6K-WL-00001	B

6 5 4 3 A R I 2

LEVELS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

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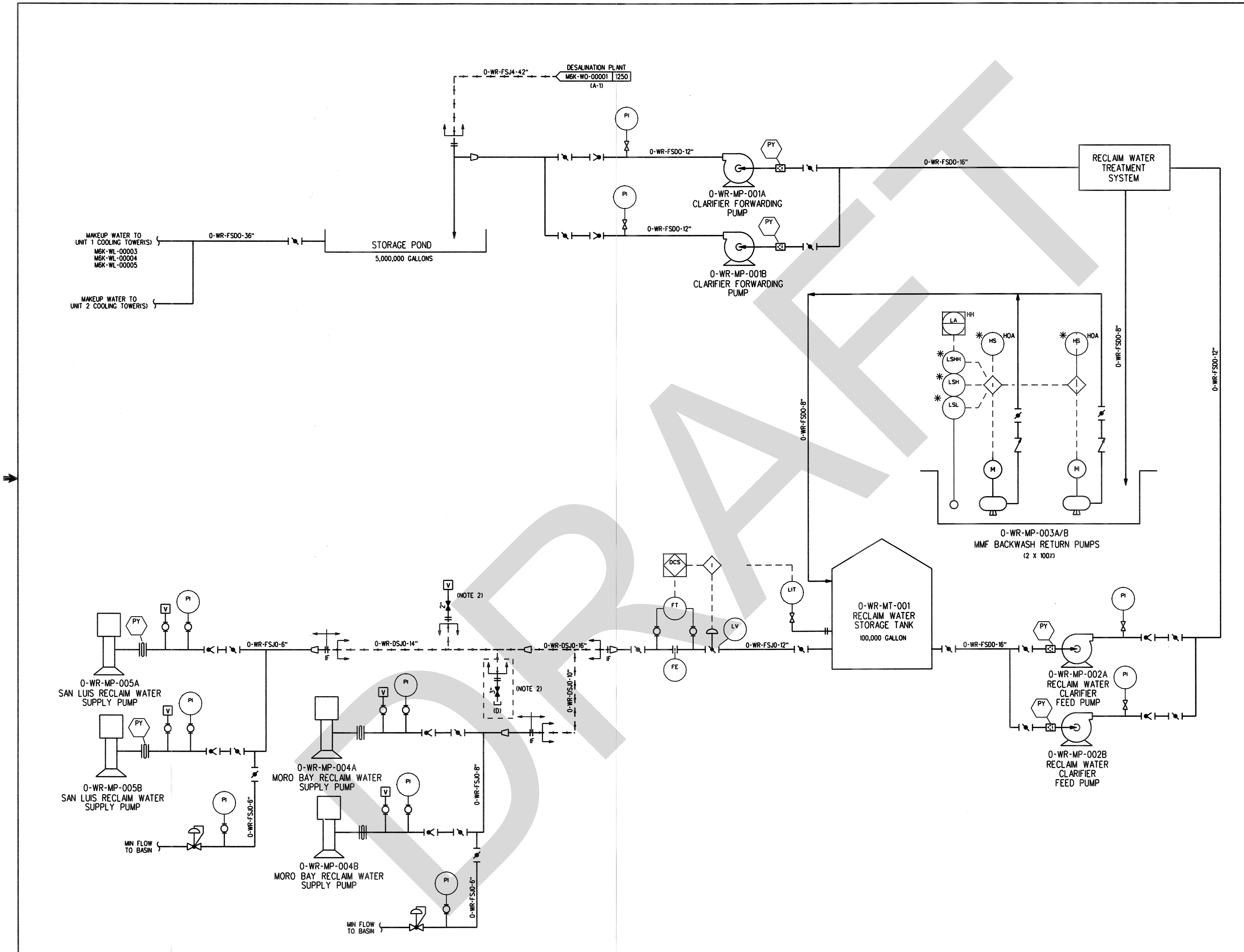

NOTES:

1. RECLAIM WATER TREATMENT SYSTEM INCLUDES A DAF (DISSOLVED AIR FLOATATION SYSTEM), CLARIFIER, FILTERS AND CONTACT BASIN.
2. AUTOMATIC VENT/VACUUM BREAKER AND DRAINS ARE TO BE PROVIDED AS NECESSARY ALONG THE RECLAIM WATER SUPPLY ROUTE TO THE SITE. THE PRELIMINARY DESIGN ASSUMES APPROXIMATELY ONE EACH PER MILE OF PIPING FOR A TOTAL OF 20 EACH.
3. RECLAIM WATER SUPPLY PUMPS ARE POWERED FROM THE ELECTRICAL DISTRIBUTION COMPANY.
4. HARDWIRED CONTROL PANELS WILL BE FURNISHED FOR CONTROLLING THE RECLAIM WATER SUPPLY PUMPS. COMMUNICATIONS BETWEEN THE PANELS AND THE SITE WILL BE THROUGH EXISTING PHONE LINES.

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION, OR CONSTRUCTION.

PRELIMINARY P&IDs ARE ISSUED FOR PROPOSAL INFORMATION. BECHTEL RESERVES THE RIGHT TO MAKE REVISIONS DURING FINAL DESIGN.

NO.	DATE	REVISIONS	BY	CHK	MECH SUPV	CS SUPV	PD SUPV	PROJ ENGR
	/ /							
	/ /							
C	9/11/13	ISSUED FOR FINAL REPORT	RP	WDD	RP	[illegible]	–	DED
B	7/15/13	ISSUED FOR ESTIMATE	RP	PKD	RP	AKK	-	DED
A	3/5/13	ISSUED FOR REVIEW & COMMENT	ZMH	RKT	RP	AKK	-	DED

SCALE | DESIGNED | DRAWN | CHIEF ENGR

BECHTEL
DEDICATED TO SAFETY EXCELLENCE - ZERO ACCIDENTS
FREDERICK, MARYLAND

PACIFIC GAS & ELECTRIC
DIABLO CANYON

PIPING & INSTRUMENT SCHEMATIC
RECLAIM WATER SUPPLY

JOB NO.	DRAWING NO.	REV
25762-110	M6K-WR-00001	C

JUOTC - DIABLO CANYON

Preliminary Mechanical Equipment List
Dry Natural Draft Cooling

25762-110-M0X-YA-00001

00C	9/12/2013	Re-Issued for Estimate Report	RP		RP
00B	7/24/2013	Issued for Estimate Report	RP	-	RP
00A	7/10/2013	Issued for Estimate	RP	-	RP
Rev	**Date**	**Reason for Revision**	**Orignator**	**Checked**	**Approved**

System Codes		Commodity Codes	
PF	Fire Protection	ME	Heat Exchange Component (Cooling Tower, Heat Exchanger)
WL	Circulating Water	MP	Pump
WO	Sea Water	MT	Tank

NOTES:

1. Commodity Codes shown are Bechtel standard codes. Bechtel Commodity codes have beens assigned to exisiting plant equipment numbers to aid in equipment list sorts.

Quantity	Bidder Quote to be Used	Unit	Sys Code	Com. Code [1]	Seq. No.	New/ Existing	Description	Type	Capacity (%) - Per Unit	Drive Motor Size HP (or kW)	Comments	Rev.
1	Xylem Quote	1	WL	MP	001A	New	CIRCULATING WATER PUMP - Unit 1	Fabricated volute, 215,700 gpm, 115 ft TDG	1 X 25%	7250	Pump to be located in new Unit 1 house	00B
1	Xylem Quote	1	WL	MP	001B	New	CIRCULATING WATER PUMP - Unit 1	Fabricated volute, 215,700 gpm, 115 ft TDG	1 X 25%	7250	Pump to be located in new Unit 1 house	00B
1	Xylem Quote	1	WL	MP	001C	New	CIRCULATING WATER PUMP - Unit 1	Fabricated volute, 215,700 gpm, 115 ft TDG	1 X 25%	7250	Pump to be located in new Unit 1 house	00B
1	Xylem Quote	1	WL	MP	001D	New	CIRCULATING WATER PUMP - Unit 1	Fabricated volute, 215,700 gpm, 115 ft TDG	1 X 25%	7250	Pump to be located in new Unit 1 house	00B
1	Xylem Quote	2	WL	MP	001A	New	CIRCULATING WATER PUMP - Unit 2	Fabricated volute, 215,700 gpm, 115 ft TDG	1 X 25%	7250	Pump to be located in new Unit 1 house	00B
1	Xylem Quote	2	WL	MP	001B	New	CIRCULATING WATER PUMP - Unit 2	Fabricated volute, 215,700 gpm, 115 ft TDG	1 X 25%	7250	Pump to be located in new Unit 1 house	00B
1	Xylem Quote	2	WL	MP	001C	New	CIRCULATING WATER PUMP - Unit 2	Fabricated volute, 215,700 gpm, 115 ft TDG	1 X 25%	7250	Pump to be located in new Unit 1 house	00B
1	Xylem Quote	2	WL	MP	001D	New	CIRCULATING WATER PUMP - Unit 2	Fabricated volute, 215,700 gpm, 115 ft TDG	1 X 25%	7250	Pump to be located in new Unit 1 house	00B
1	GEA - CT	1	WL	ME	001A	New	NATURAL DRAFT COOLING TOWER - Unit 1	Hyperbolic, metal tower, 590 ft diameter	1 X 33%		Tower may be located adjacent to each other with minimal spacing	00A
1	GEA - CT	1	WL	ME	001B	New	NATURAL DRAFT COOLING TOWER - Unit 1	Hyperbolic, metal tower, 590 ft diameter	1 X 33%		Tower may be located adjacent to each other with minimal spacing	00A
1	GEA - CT	2	WL	ME	001B	New	NATURAL DRAFT COOLING TOWER - Unit 2	Hyperbolic, metal tower, 590 ft diameter	1 X 33%		Tower may be located adjacent to each other with minimal spacing	00A
1	GEA - CT	2	WL	ME	001C	New	NATURAL DRAFT COOLING TOWER - Unit 2	Hyperbolic, metal tower, 590 ft diameter	1 X 33%		Tower may be located adjacent to each other with minimal spacing	00A
1	GEA - CT	1	WL	MP		New	COOLING TOWER STORATE TANK TRANSFER PUMPS - UNIT 1	TBD	1 X 25%	100 hp	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MP		New	COOLING TOWER STORATE TANK TRANSFER PUMPS - UNIT 1	TBD	1 X 25%	100 hp	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MP		New	COOLING TOWER STORATE TANK TRANSFER PUMPS - UNIT 1	TBD	1 X 25%	100 hp	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MP		New	COOLING TOWER STORATE TANK TRANSFER PUMPS - UNIT 1	TBD	1 X 25%	100 hp	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MP		New	COOLING TOWER STORATE TANK TRANSFER PUMPS - UNIT 2	TBD	1 X 25%	100 hp	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MP		New	COOLING TOWER STORATE TANK TRANSFER PUMPS - UNIT 2	TBD	1 X 25%	100 hp	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MP		New	COOLING TOWER STORATE TANK TRANSFER PUMPS - UNIT 2	TBD	1 X 25%	100 hp	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MP		New	COOLING TOWER STORATE TANK TRANSFER PUMPS - UNIT 2	TBD	1 X 25%	100 hp	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 1	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 1	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 1	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 1	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 1	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 1	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 1	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 1	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 1	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 1	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 1	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 1	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 1	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 1	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A

Quantity	Bidder Quote to be Used	Unit	Sys Code	Com. Code [1]	Seq. No.	New/ Existing	Description	Type	Capacity (%) - Per Unit	Drive Motor Size HP (or kW)	Comments	Rev.
1	GEA - CT	2	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 2	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 2	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 2	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 2	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 2	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 2	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 2	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 2	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 2	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 2	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 2	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 2	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 2	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MT		New	DRAIN TANKS FOR COOLING TOWERS - UNIT 2	Underground, 53,000 gal, 7 per tower, Dimensions TBD	1 x 7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	HEAD TANKS FOR COOLING TOWERS - UNIT 1	Underground, 12,500 gal, 3 per tower, Dimensions TBD	1 x 16.7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	HEAD TANKS FOR COOLING TOWERS - UNIT 1	Underground, 12,500 gal, 3 per tower, Dimensions TBD	1 x 16.7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	HEAD TANKS FOR COOLING TOWERS - UNIT 1	Underground, 12,500 gal, 3 per tower, Dimensions TBD	1 x 16.7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	HEAD TANKS FOR COOLING TOWERS - UNIT 1	Underground, 12,500 gal, 3 per tower, Dimensions TBD	1 x 16.7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	HEAD TANKS FOR COOLING TOWERS - UNIT 1	Underground, 12,500 gal, 3 per tower, Dimensions TBD	1 x 16.7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MT		New	HEAD TANKS FOR COOLING TOWERS - UNIT 1	Underground, 12,500 gal, 3 per tower, Dimensions TBD	1 x 16.7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MT		New	HEAD TANKS FOR COOLING TOWERS - UNIT 2	Underground, 12,500 gal, 3 per tower, Dimensions TBD	1 x 16.7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MT		New	HEAD TANKS FOR COOLING TOWERS - UNIT 2	Underground, 12,500 gal, 3 per tower, Dimensions TBD	1 x 16.7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MT		New	HEAD TANKS FOR COOLING TOWERS - UNIT 2	Underground, 12,500 gal, 3 per tower, Dimensions TBD	1 x 16.7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MT		New	HEAD TANKS FOR COOLING TOWERS - UNIT 2	Underground, 12,500 gal, 3 per tower, Dimensions TBD	1 x 16.7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MT		New	HEAD TANKS FOR COOLING TOWERS - UNIT 2	Underground, 12,500 gal, 3 per tower, Dimensions TBD	1 x 16.7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MT		New	HEAD TANKS FOR COOLING TOWERS - UNIT 2	Underground, 12,500 gal, 3 per tower, Dimensions TBD	1 x 16.7 %	N/A	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MP		New	COOLING TOWER WASH SYSTEM CLEANING PUMP - UNIT 1		1 X 50%	30 hp	Included in Tower vendor's scope	00A
1	GEA - CT	1	WL	MP		New	COOLING TOWER WASH SYSTEM CLEANING PUMP - UNIT 1		1 X 50%	30 hp	Included in Tower vendor's scope	00A
1	GEA - CT	2	WL	MP		New	COOLING TOWER WASH SYSTEM CLEANING PUMP - UNIT 2		1 X 50%	30 hp	Included in Tower vendor's scope	00A

Quantity	Bidder Quote to be Used	Unit	Sys Code	Com. Code [1]	Seq. No.	New/ Existing	Description	Type	Capacity (%) - Per Unit	Drive Motor Size HP (or kW)	Comments	Rev.
1	GEA - CT	2	WL	MP		New	COOLING TOWER WASH SYSTEM CLEANING PUMP - UNIT 2		1 X 50%	30 hp	Included in Tower vendor's scope	00A
1	Estimating	1	WL	MP	002A		COOLING TOWER MAKEUP PUMP - UNIT 1	Horizontal Centrifugal: 500 gpm, 100 TDH	1 x 100%	25	Make up from existing plant water source	00A
1	Estimating	1	WL	MP	002B		COOLING TOWER MAKEUP PUMP - UNIT 1	Horizontal Centrifugal: 500 gpm, 100 TDH	1 x 100%	25	Make up from existing plant water source	00A
1	Estimating	2	WL	MP	002A		COOLING TOWER MAKEUP PUMP - UNIT 2	Horizontal Centrifugal: 500 gpm, 100 TDH	1 x 100%	25	Make up from existing plant water source	00A
1	Estimating	2	WL	MP	002B		COOLING TOWER MAKEUP PUMP - UNIT 2	Horizontal Centrifugal: 500 gpm, 100 TDH	1 x 100%	25	Make up from existing plant water source	00A
1	ITT-Goulds/ Flowserve	1	WO	MP	001A	New	SALT WATER COOLING PUMP - UNIT 1	Vertical Turbine: 10,200 gpm, TDH: 100 feet	1 x 100%	350	New pumps to be located in intake structure to service only the service water heat exhangers and the condensate cooler	00B
1	ITT-Goulds/ Flowserve	1	WO	MP	001B	New	SALT WATER COOLING PUMP - UNIT 1	Vertical Turbine: 10,200 gpm, TDH: 100 feet	1 x 100%	350	New pumps to be located in intake structure to service only the service water heat exhangers and the condensate cooler	00B
1	ITT-Goulds/ Flowserve	2	WO	MP	001A	New	SALT WATER COOLING PUMP - UNIT 2	Vertical Turbine: 10,200 gpm, TDH: 100 feet	1 x 100%	350	New pumps to be located in intake structure to service only the service water heat exhangers and the condensate cooler	00B
1	ITT-Goulds/ Flowserve	2	WO	MP	001B	New	SALT WATER COOLING PUMP - UNIT 2	Vertical Turbine: 10,200 gpm, TDH: 100 feet	1 x 100%	350	New pumps to be located in intake structure to service only the service water heat exhangers and the condensate cooler	00B
1	GEA - CT	1	WL	HV		New	TOWER MOV ISOLATION VALVE - UNIT 1	MOV Butterfly, 4 per tower sector x 11 sectors per tower = 88 per unit	1 x .57%		Isolation valves for each sector of natural draft tower included in tower vendor's scope.	00A
1	GEA - CT	2	WL	HV		New	TOWER MOV ISOLATION VALVE - UNIT 2	MOV Butterfly, 4 per tower sector x 11 sectors per tower = 88 per unit	1 x .57%		Isolation valves for each sector of natural draft tower included in tower vendor's scope.	00A
1	GEA - CT	1	WL	HV		New	MOV MAKE-UP VALVE - UNIT 1	MOV Butterfly, 2 per tower (one to cleaning tank, one to storage tanks)	1 x 25%		Isolation valves for each sector of natural draft tower included in tower vendor's scope.	00A
1	GEA - CT	1	WL	HV		New	MOV MAKE-UP VALVE - UNIT 1	MOV Butterfly, 2 per tower (one to cleaning tank, one to storage tanks)	1 x 25%		Isolation valves for each sector of natural draft tower included in tower vendor's scope.	00A
1	GEA - CT	1	WL	HV		New	MOV MAKE-UP VALVE - UNIT 1	MOV Butterfly, 2 per tower (one to cleaning tank, one to storage tanks)	1 x 25%		Isolation valves for each sector of natural draft tower included in tower vendor's scope.	00A
1	GEA - CT	1	WL	HV		New	MOV MAKE-UP VALVE - UNIT 1	MOV Butterfly, 2 per tower (one to cleaning tank, one to storage tanks)	1 x 25%		Isolation valves for each sector of natural draft tower included in tower vendor's scope.	00A
1	GEA - CT	2	WL	HV		New	MOV MAKE-UP VALVE - UNIT 2	MOV Butterfly, 2 per tower (one to cleaning tank, one to storage tanks)	1 x 25%		Isolation valves for each sector of natural draft tower included in tower vendor's scope.	00A
1	GEA - CT	2	WL	HV		New	MOV MAKE-UP VALVE - UNIT 2	MOV Butterfly, 2 per tower (one to cleaning tank, one to storage tanks)	1 x 25%		Isolation valves for each sector of natural draft tower included in tower vendor's scope.	00A
1	GEA - CT	2	WL	HV		New	MOV MAKE-UP VALVE - UNIT 2	MOV Butterfly, 2 per tower (one to cleaning tank, one to storage tanks)	1 x 25%		Isolation valves for each sector of natural draft tower included in tower vendor's scope.	00A
1	GEA - CT	2	WL	HV		New	MOV MAKE-UP VALVE - UNIT 2	MOV Butterfly, 2 per tower (one to cleaning tank, one to storage tanks)	1 x 25%		Isolation valves for each sector of natural draft tower included in tower vendor's scope.	00A
1	GEA - CT	1	WL	HV		New	MOV TRANSFER PUMP VALVES - UNIT 1	MOV Butterfly, 2 per tower	1 x 25%		Isolation valves for each sector of natural draft tower included in tower vendor's scope.	00A
1	GEA - CT	1	WL	HV		New	MOV TRANSFER PUMP VALVES - UNIT 1	MOV Butterfly, 2 per tower	1 x 25%		Isolation valves for each sector of natural draft tower included in tower vendor's scope.	00A
1	GEA - CT	1	WL	HV		New	MOV TRANSFER PUMP VALVES - UNIT 1	MOV Butterfly, 2 per tower	1 x 25%		Isolation valves for each sector of natural draft tower included in tower vendor's scope.	00A
1	GEA - CT	1	WL	HV		New	MOV TRANSFER PUMP VALVES - UNIT 1	MOV Butterfly, 2 per tower	1 x 25%		Isolation valves for each sector of natural draft tower included in tower vendor's scope.	00A
1	GEA - CT	2	WL	HV		New	MOV TRANSFER PUMP VALVES - UNIT 2	MOV Butterfly, 2 per tower	1 x 25%		Isolation valves for each sector of natural draft tower included in tower vendor's scope.	00A
1	GEA - CT	2	WL	HV		New	MOV TRANSFER PUMP VALVES - UNIT 2	MOV Butterfly, 2 per tower	1 x 25%		Isolation valves for each sector of natural draft tower included in tower vendor's scope.	00A
1	GEA - CT	2	WL	HV		New	MOV TRANSFER PUMP VALVES - UNIT 2	MOV Butterfly, 2 per tower	1 x 25%		Isolation valves for each sector of natural draft tower included in tower vendor's scope.	00A
1	GEA - CT	2	WL	HV		New	MOV TRANSFER PUMP VALVES - UNIT 2	MOV Butterfly, 2 per tower	1 x 25%		Isolation valves for each sector of natural draft tower included in tower vendor's scope.	00A
32	Estimating		PF	PY			Fire Hydrant	Dry Barrel Type			One hydrant every 300 ft. New Fire piping length 9775 ft	00A
1	Estimating	1	AC	MU		New	Low Pressure Steam Turbine				L(0) blades will need to be removed	00B
1	Estimating	2	AC	MU		New	Low Pressure Steam Turbine				L(0) blades will need to be removed	00B
1	Quote - Cond	1	AD	ME		EXIST	CONDENSER				Tube side desgin pressure to be increased to 50 psig Water boxes replaced and condenser rebundled	00C
1	Quote - Cond	2	AD	ME		EXIST	CONDENSER				Tube side desgin pressure to be increased to 50 psig Water boxes replaced and condenser rebundled	00C

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Preliminary Mechanical Equipment List
Dry Mechanical Cooling

25762-110-M0X-YA-00002

00C	9/12/2013	Re-Issued for Estimate Report	RP	–	RP
00B	7/24/2013	Issued for Estimate Report	RP	-	RP
00A	7/10/2013	Issued for Estimate	RP	-	RP
Rev	**Date**	**Reason for Revision**	**Orignator**	**Checked**	**Approved**

System Codes		Commodity Codes	
WL	Circulating Water	ME	Heat Exchange Component (Cooling Tower, Heat Exchanger)
WO	Sea Water	MP	Pump
		MT	Tank

NOTES:

1. Commodity Codes shown are Bechtel standard codes. Bechtel Commodity codes have beens assigned to exisiting plant equipment numbers to aid in equipment list sorts.

Sys Code	Com. Code [1]	Seq. No.	New/ Existing	Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
WL	MP	001A	New	CIRCULATING WATER PUMP - Unit 1	Fabricated volute, 215700 gpm, 115 ft TDH	1 X 25%	7250	Pump to be located in new Unit 1 pump building	00B
WL	MP	001B	New	CIRCULATING WATER PUMP - Unit 1	Fabricated volute, 215700 gpm, 115 ft TDH	1 X 25%	7250	Pump to be located in new Unit 1 pump building	00B
WL	MP	001C	New	CIRCULATING WATER PUMP - Unit 1	Fabricated volute, 215700 gpm, 115 ft TDH	1 X 25%	7250	Pump to be located in new Unit 1 pump building	00B
WL	MP	001D	New	CIRCULATING WATER PUMP - Unit 1	Fabricated volute, 215700 gpm, 115 ft TDH	1 X 25%	7250	Pump to be located in new Unit 1 pump building	00B
WL	MP	001A	New	CIRCULATING WATER PUMP - Unit 2	Fabricated volute, 215700 gpm, 115 ft TDH	1 X 25%	7250	Pump to be located in new Unit 2 pump building	00B
WL	MP	001B	New	CIRCULATING WATER PUMP - Unit 2	Fabricated volute, 215700 gpm, 115 ft TDH	1 X 25%	7250	Pump to be located in new Unit 2 pump building	00B
WL	MP	001C	New	CIRCULATING WATER PUMP - Unit 2	Fabricated volute, 215700 gpm, 115 ft TDH	1 X 25%	7250	Pump to be located in new Unit 2 pump building	00B
WL	MP	001D	New	CIRCULATING WATER PUMP - Unit 2	Fabricated volute, 215700 gpm, 115 ft TDH	1 X 25%	7250	Pump to be located in new Unit 2 pump building	00B
WL	ME	001A	New	MECHANICAL DRAFT COOLING TOWER - UNIT 1	1200 ft x 100 ft, 60 fans, 250 hp motor each fan	1 X 50%	250 each fan x 60	Rectangular arrangements	00B
WL	ME	001B	New	MECHANICAL DRAFT COOLING TOWER - UNIT 1	1200 ft x 100 ft, 60 fans, 250 hp motor each fan	1 X 50%	250 each fan x 60	Rectangular arrangements	00B
WL	ME	001A	New	MECHANICAL DRAFT COOLING TOWER - UNIT 2	1200 ft x 100 ft, 60 fans, 250 hp motor each fan	1 X 50%	250 each fan x 60	Rectangular arrangements	00B
WL	ME	001B	New	MECHANICAL DRAFT COOLING TOWER - UNIT 2	1200 ft x 100 ft, 60 fans, 250 hp motor each fan	1 X 50%	250 each fan x 60	Rectangular arrangements	00B
WO	MP	001A	New	SALT WATER COOLING PUMP - UNIT 1	Vertical Turbine: 10200 gpm, TDH 100	1 x 100%	350	New pumps to be located in intake structure to service only the service water heat exhangers and the condensate cooler	00A
WO	MP	001B	New	SALT WATER COOLING PUMP - UNIT 1	Vertical Turbine: 10200 gpm, TDH 100	1 x 100%	350	New pumps to be located in intake structure to service only the service water heat exhangers and the condensate cooler	00A
WO	MP	001A	New	SALT WATER COOLING PUMP - UNIT 2	Vertical Turbine: 10200 gpm, TDH 100	1 x 100%	350	New pumps to be located in intake structure to service only the service water heat exhangers and the condensate cooler	00A
WO	MP	001B	New	SALT WATER COOLING PUMP - UNIT 2	Vertical Turbine: 10200 gpm, TDH 100	1 x 100%	350	New pumps to be located in intake structure to service only the service water heat exhangers and the condensate cooler	00A
WL	MP	002A	New	COOLING TOWER MAKEUP PUMP - UNIT 1	Centrifugal Horizontal: 500 gpm, 100 TDH	1 x 100%	25	Make up from existing plant water source	00A
WL	MP	002B	New	COOLING TOWER MAKEUP PUMP - UNIT 1	Centrifugal Horizontal: 500 gpm, 100 TDH	1 x 100%	25	Make up from existing plant water source	00A
WL	MP	002A	New	COOLING TOWER MAKEUP PUMP - UNIT 2	Centrifugal Horizontal: 500 gpm, 100 TDH	1 x 100%	25	Make up from existing plant water source	00A
WL	MP	002B	New	COOLING TOWER MAKEUP PUMP - UNIT 2	Centrifugal Horizontal: 500 gpm, 100 TDH	1 x 100%	25	Make up from existing plant water source	00A
WL			New	COOLING TOWER SYSTEM EXPANSION TANK - UNIT 1	12,500 ft3	1 x 50%		Included in Tower vendor's scope	00A
WL			New	COOLING TOWER SYSTEM EXPANSION TANK - UNIT 1	12,500 ft3	1 x 50%		Included in Tower vendor's scope	00A
WL			New	COOLING TOWER SYSTEM EXPANSION TANK - UNIT 2	12,500 ft3	1 x 50%		Included in Tower vendor's scope	00A
WL			New	COOLING TOWER SYSTEM EXPANSION TANK - UNIT 2	12,500 ft3	1 x 50%		Included in Tower vendor's scope	00A
WL			New	UNDERGROUND WATER STORAGE TANK - UNIT 1	64,000 ft3	1 x 50%		Included in Tower vendor's scope	00A
WL			New	UNDERGROUND WATER STORAGE TANK - UNIT 2	64,000 ft3	1 x 50%		Included in Tower vendor's scope	00A
WL			New	COOLING TOWER DRAIN TANK TRANSFER PUMP - UNIT 1		1 x 50%	100 hp	Included in Tower vendor's scope	00A
WL			New	COOLING TOWER DRAIN TANK TRANSFER PUMP - UNIT 1		1 x 50%	100 hp	Included in Tower vendor's scope	00A

Sys Code	Com. Code [1]	Seq. No.	New/ Existing	Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
WL			New	COOLING TOWER DRAIN TANK TRANSFER PUMP - UNIT 2		1 x 50%	100 hp	Included in Tower vendor's scope	00A
WL			New	COOLING TOWER DRAIN TANK TRANSFER PUMP - UNIT 2		1 x 50%	100 hp	Included in Tower vendor's scope	00A
WL			New	COOLING TOWER WASH SYSTEM CLEANING PUMP - UNIT 1		1 X 100%	30 hp	Included in Tower vendor's scope	00A
WL			New	COOLING TOWER WASH SYSTEM CLEANING PUMP - UNIT 2		1 X 100%	30 hp	Included in Tower vendor's scope	00A
WL			New	MOV MAKE-UP ISOLATION VALVE - UNIT 1	Butterfly 1 per storage tank x 1 tank per tower	1 x 50%		Included in Tower vendor's scope	00A
WL			New	MOV MAKE-UP ISOLATION VALVE - UNIT 1	Butterfly 1 per storage tank x 1 tank per tower	1 x 50%		Included in Tower vendor's scope	00A
WL			New	MOV MAKE-UP ISOLATION VALVE - UNIT 2	Butterfly 1 per storage tank x 1 tank per tower	1 x 50%		Included in Tower vendor's scope	00A
WL			New	MOV MAKE-UP ISOLATION VALVE - UNIT 2	Butterfly 1 per storage tank x 1 tank per tower	1 x 50%		Included in Tower vendor's scope	00A
WL			New	MOV TOWER HALF RING ISOLATION VALVE - UNIT 1	Butterfly 2 per tower	1 x 25%		Included in Tower vendor's scope	00A
WL			New	MOV TOWER HALF RING ISOLATION VALVE - UNIT 1	Butterfly 2 per tower	1 x 25%		Included in Tower vendor's scope	00A
WL			New	MOV TOWER HALF RING ISOLATION VALVE - UNIT 1	Butterfly 2 per tower	1 x 25%		Included in Tower vendor's scope	00A
WL			New	MOV TOWER HALF RING ISOLATION VALVE - UNIT 1	Butterfly 2 per tower	1 x 25%		Included in Tower vendor's scope	00A
WL			New	MOV TOWER HALF RING ISOLATION VALVE - UNIT 2	Butterfly 2 per tower	1 x 25%		Included in Tower vendor's scope	00A
WL			New	MOV TOWER HALF RING ISOLATION VALVE - UNIT 2	Butterfly 2 per tower	1 x 25%		Included in Tower vendor's scope	00A
WL			New	MOV TOWER HALF RING ISOLATION VALVE - UNIT 2	Butterfly 2 per tower	1 x 25%		Included in Tower vendor's scope	00A
WL			New	MOV TOWER HALF RING ISOLATION VALVE - UNIT 2	Butterfly 2 per tower	1 x 25%		Included in Tower vendor's scope	00A
WL			New	MOV STORAGE TANK DRAIN AND EXCESS VALVES - UNIT 1	Butterfly 3 per storage tank x 1 tank per tower	1 x 16.7%		Included in Tower vendor's scope	00A
WL			New	MOV STORAGE TANK DRAIN AND EXCESS VALVES - UNIT 1	Butterfly 3 per storage tank x 1 tank per tower	1 x 16.7%		Included in Tower vendor's scope	00A
WL			New	MOV STORAGE TANK DRAIN AND EXCESS VALVES - UNIT 1	Butterfly 3 per storage tank x 1 tank per tower	1 x 16.7%		Included in Tower vendor's scope	00A
WL			New	MOV STORAGE TANK DRAIN AND EXCESS VALVES - UNIT 1	Butterfly 3 per storage tank x 1 tank per tower	1 x 16.7%		Included in Tower vendor's scope	00A
WL			New	MOV STORAGE TANK DRAIN AND EXCESS VALVES - UNIT 1	Butterfly 3 per storage tank x 1 tank per tower	1 x 16.7%		Included in Tower vendor's scope	00A
WL			New	MOV STORAGE TANK DRAIN AND EXCESS VALVES - UNIT 1	Butterfly 3 per storage tank x 1 tank per tower	1 x 16.7%		Included in Tower vendor's scope	00A
WL			New	2 MOV STORAGE TANK DRAIN AND EXCESS VALVES - UNIT 3	Butterfly 3 per storage tank x 1 tank per tower	1 x 16.7%		Included in Tower vendor's scope	00A
WL			New	MOV STORAGE TANK DRAIN AND EXCESS VALVES - UNIT 2	Butterfly 3 per storage tank x 1 tank per tower	1 x 16.7%		Included in Tower vendor's scope	00A
WL			New	MOV STORAGE TANK DRAIN AND EXCESS VALVES - UNIT 2	Butterfly 3 per storage tank x 1 tank per tower	1 x 16.7%		Included in Tower vendor's scope	00A
WL			New	MOV STORAGE TANK DRAIN AND EXCESS VALVES - UNIT 2	Butterfly 3 per storage tank x 1 tank per tower	1 x 16.7%		Included in Tower vendor's scope	00A
WL			New	MOV STORAGE TANK DRAIN AND EXCESS VALVES - UNIT 2	Butterfly 3 per storage tank x 1 tank per tower	1 x 16.7%		Included in Tower vendor's scope	00A
WL			New	MOV STORAGE TANK DRAIN AND EXCESS VALVES - UNIT 2	Butterfly 3 per storage tank x 1 tank per tower	1 x 16.7%		Included in Tower vendor's scope	00A

Sys Code	Com. Code [1]	Seq. No.	New/ Existing	Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
WL			New	MOV SECTOR ISOLATION VALVE - UNIT 1, Tower A	Butterfly 4 per cooling sector x 30 sectors per tower = 120 per tower	1 x 0.42%		Included in Tower vendor's scope	00A
WL			New	MOV SECTOR ISOLATION VALVE - UNIT 1, Tower B	Butterfly 4 per cooling sector x 30 sectors per tower = 120 per tower	1 x 0.42%		Included in Tower vendor's scope	00A
WL			New	MOV SECTOR ISOLATION VALVE - UNIT 2, Tower A	Butterfly 4 per cooling sector x 30 sectors per tower = 120 per tower	1 x 0.42%		Included in Tower vendor's scope	00A
WL			New	MOV SECTOR ISOLATION VALVE - UNIT 2, Tower B	Butterfly 4 per cooling sector x 30 sectors per tower = 120 per tower	1 x 0.42%		Included in Tower vendor's scope	00A
PF			New	Fire Hydrants	Dry barrel type			Every 300 ft. New fire pipe 9772 ft.	00A
AC	MU		New	Low Pressure Steam Turbine				L(0) blades will need to be removed	00B
AC	MU		New	Low Pressure Steam Turbine				L(0) blades will need to be removed	00B
AD	ME		EXIST	CONDENSER				Tube side desgin pressure to be increased to 50 psig Water boxes replaced and condenser rebundled	00C
AD	ME		EXIST	CONDENSER				Tube side desgin pressure to be increased to 50 psig Water boxes replaced and condenser rebundled	00C

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Preliminary Mechanical Equipment List
Wet Natural Draft Cooling

25762-110-M0X-YA-00003

00C	9/12/2013	Re-Issued for Estimate Report	RP	-	RP
00B	7/24/2013	Issued for Estimate Report	RP	-	RP
00A	7/10/2013	Issued for Estimate	RP	-	RP
Rev	**Date**	**Reason for Revision**	**Orignator**	**Checked**	**Approved**

System Codes

AD	Condensate
PF	Fire Protection
PI	Plant Air
TL	Circ. Wtr Chem Inj
WB	Service water
WL	Circulating Water
WO	Sea Water
WR	Raw Water (Reclaim water)

Commodity Codes

ME	Heat Exchange Component (Cooling Tower, Heat Exchanger)
MP	Pump
MT	Tank
PY	Piping Specialty

NOTES:

1. System codes are Bechtel Standard codes. Bechtel Standard codes have been assigned to existing plant equipment to aid in equipment sorts.
2. Commodity Codes shown are Bechtel standard codes. Bechtel Commodity codes have beens assigned to exisiting plant equipment numbers to aid in equipment list sorts.
3. Valves furnished with cooling tower are included in the equipment to provide a clear understanding of the Cooling Tower Suppliers scope.

Bidder Quote to be Used	Unit	Sys Code	Com. Code [1]	Seq. No.	New / EXISTING	Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
	1	AC	MU		Exist	LP TURBINE				No modification currently required. Monitoring program should be sent up	00A
	2	AC	MU		Exist	LP TURBINE				No modification currently required. Monitoring program should be sent up	00A
Quote - Cond	1	AD	ME		EXIST	CONDENSER				Tube side desgin pressure to be increased to 50 psig Water boxes replaced and condenser rebundled	00A
Quote - Cond	2	AD	ME		EXIST	CONDENSER				Tube side desgin pressure to be increased to 50 psig Water boxes replaced and condenser rebundled	00A
Estimating	0	PF	PY		New	FIRE HYDRANT	Dry Barrel Type			One every 300 ft, New fire piping 16,188 ft	00A
ESTIMATING	0	PI	MC	001A	New	DESAL PLANT AIR COMPRESSOR	Dry, rotary screw 200 scfm 100-125 psig	1 x 100%	125		00A
ESTIMATING	0	PI	MC	001B	New	DESAL PLANT AIR COMPRESSOR	Dry, rotary screw 200 scfm 100-125 psig	1 x 100%	125		00A
ESTIMATING	0	PI	MT	001A	New	DESAL PLANT AIR RECEIVER	5,000 gallon	1 x 100%			00A
ESTIMATING	0	PI	MT	001B	New	DESAL PLANT AIR RECEIVER	5,000 gallon	1 x 100%			00A
ESTIMATING	0	PI	MV	001A	New	DESAL PLANT AIR DRYER	Heatless, dessicant, dual towers with pre and after filters	1 x 100%		Matched to compressor	00A
ESTIMATING	0	PI	MV	001B	New	DESAL PLANT AIR DRYER	Heatless, dessicant, dual towers with pre and after filters	1 x 100%		Matched to compressor	00A
Estimating		PW	PY		New	Emergency Shower and Eyewash					00A
ESTIMATING	1	TL	MP	001A	New	CIRCULATING WATER SULFURIC ACID PUMP - UNIT 1	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
ESTIMATING	2	TL	MP	001A	New	CIRCULATING WATER SULFURIC ACID PUMP - UNIT 2	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
ESTIMATING	1	TL	MP	001B	New	CIRCULATING WATER SULFURIC ACID PUMP - UNIT 1	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
ESTIMATING	2	TL	MP	001B	New	CIRCULATING WATER SULFURIC ACID PUMP - UNIT 2	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
ESTIMATING	1	TL	MP	002A	New	CIRCULATING WATER DISPERSANT PUMP - UNIT 1	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
ESTIMATING	2	TL	MP	002A	New	CIRCULATING WATER DISPERSANT PUMP - UNIT 2	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
ESTIMATING	1	TL	MP	002B	New	CIRCULATING WATER DISPERSANT PUMP - UNIT 1	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
ESTIMATING	2	TL	MP	002B	New	CIRCULATING WATER DISPERSANT PUMP - UNIT 2	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
ESTIMATING	1	TL	MP	003A	New	CIRCULATING WATER SODIUM HYPOCHLORITE PUMP - UNIT 1		1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
ESTIMATING	2	TL	MP	003A	New	CIRCULATING WATER SODIUM HYPOCHLORITE PUMP - UNIT 2		1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
ESTIMATING	1	TL	MP	003B	New	CIRCULATING WATER SODIUM HYPOCHLORITE PUMP - UNIT 1		1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
ESTIMATING	2	TL	MP	003B	New	CIRCULATING WATER SODIUM HYPOCHLORITE PUMP - UNIT 2		1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
ESTIMATING	1	TL	MP	004A	New	CIRCULATING WATER SCALE INHIBITOR PUMP - UNIT 1	Positive displacement diaphragm metering pump	TBD	<1	Assumes common pump house for tower 001A and 001B; QTY to be determined when budgetary bids are received	00A
ESTIMATING	1	TL	MP	004A	New	CIRCULATING WATER SCALE INHIBITOR PUMP - UNIT 1	Positive displacement diaphragm metering pump	TBD	<1	Assumes common pump house for tower 001A and 001B; QTY to be determined when budgetary bids are received	00A
ESTIMATING	2	TL	MP	004B	New	CIRCULATING WATER SCALE INHIBITOR PUMP - UNIT 2	Positive displacement diaphragm metering pump	TBD	<1	Assumes common pump house for tower 001A and 001B; QTY to be determined when budgetary bids are received	00A
ESTIMATING	2	TL	MP	004B	New	CIRCULATING WATER SCALE INHIBITOR PUMP - UNIT 2	Positive displacement diaphragm metering pump	TBD	<1	Assumes common pump house for tower 001A and 001B; QTY to be determined when budgetary bids are received	00A
ESTIMATING	1	TL	MT	001	New	CIRCULATING WATER SULFURIC ACID STORAGE TANK - UNIT 1	Horizontal cylindrical with dessicant breather for vent and oil-filled loop seal for overflow	1 x 100%	N/A	Assumes common pump house for tower 001A and 001B	00A

Bidder Quote to be Used	Unit	Sys Code	Com. Code [1]	Seq. No.	New / EXISTING	Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
ESTIMATING	2	TL	MT	001	New	CIRCULATING WATER SULFURIC ACID STORAGE TANK - UNIT 2	Horizontal cylindrical with dessicant breather for vent and oil-filled loop seal for overflow	1 x 100%	N/A	Assumes common pump house for tower 001A and 001B	00A
ESTIMATING	1	TL	MT	002	New	CIRCULATING WATER DISPERSANT STORAGE TANK - UNIT 1	5,000 gallons, shop fabricated	1 x 100%	N/A		00A
ESTIMATING	2	TL	MT	002	New	CIRCULATING WATER DISPERSANT STORAGE TANK - UNIT 2	5,000 gallons, shop fabricated	1 x 100%	N/A		00A
ESTIMATING	1	TL	MT	003	New	CIRCULATING WATER SODIUM HYPOCHLORITE STORAGE TANK - UNIT 1	15,000 gallons, shop fabricated	1 x 100%	N/A		00A
ESTIMATING	2	TL	MT	003	New	CIRCULATING WATER SODIUM HYPOCHLORITE STORAGE TANK - UNIT 2	15,000 gallons, shop fabricated	1 x 100%	N/A		00A
ESTIMATING	1	TL	MT	004	New	CIRCULATING WATER SCALE INHIBITOR STORAGE TANK - UNIT 1	5,000 gallons, shop fabricated	1 x 100%	N/A		00A
ESTIMATING	2	TL	MT	004	New	CIRCULATING WATER SCALE INHIBITOR STORAGE TANK - UNIT 2	5,000 gallons, shop fabricated	1 x 100%	N/A		00A
Estimating	1	WB	ME	2	NEW	CONDENSATE COOLER	Shell and tube, 9,500,000 btu/hr (assumed) Hot side: Flow-1500 gpm (assumed), temp out 90F Cold Side: Flow - 2150 gpm, temp out 82F			Replaces existing heat exchanger. Design information for original heat exchanger unavailble from site. Base on piping connection sizes it is estimate to have a duty 50% of the service water heat exchanger.	00A
Estimating	2	WB	ME	2	NEW	CONDENSATE COOLER	Shell and tube, 9,500,000 btu/hr (assumed) Hot side: Flow-1500 gpm (assumed), temp out 90F Cold Side: Flow - 2150 gpm, temp out 82F			Replaces existing heat exchanger. Design information for original heat exchanger unavailble from site. Base on piping connection sizes it is estimate to have a duty 50% of the service water heat exchanger.	00A
Quote -HX VHT	1	WB	ME	001A	NEW	SERVICE COOLING WATER HX	Shell and tube, 19,000,000 btu/hr Hot Side: Flow- 3000 gpm, Temp. out- 90F Cold Side: Flow - 4300 gpm, Temp. In - 82F			Replaces existing heat exchanger	00A
Quote -HX VHT	2	WB	ME	001A	NEW	SERVICE COOLING WATER HX	Shell and tube, 19,000,000 btu/hr Hot Side: Flow- 3000 gpm, Temp. out- 90F Cold Side: Flow - 4300 gpm, Temp. in - 82F			Replaces existing heat exchanger	00A
Quote -HX VHT	1	WB	ME	001B	NEW	SERVICE COOLING WATER HX	Shell and tube, 19,000,000 btu/hr Hot Side: Flow- 3000 gpm, Temp. out- 90F Cold Side: Flow - 4300 gpm, Temp. in - 82F			Replaces existing heat exchanger	00A
Quote -HX VHT	2	WB	ME	001B	NEW	SERVICE COOLING WATER HX	Shell and tube, 19,000,000 btu/hr Hot Side: Flow- 3000 gpm, Temp. out- 90F Cold Side: Flow - 4300 gpm, Temp. in - 82F			Replaces existing heat exchanger	00A
N/A	1	WL	CWP	1	EXIST	CIRCULATING WATER PUMP	Concrete volute pump			Decommission	00B
N/A	2	WL	CWP	1	EXIST	CIRCULATING WATER PUMP	Concrete volute pump			Decommission	00B
N/A	1	WL	CWP	2	EXIST	CIRCULATING WATER PUMP	Concrete volute pump			Decommission	00B
N/A	2	WL	CWP	2	EXIST	CIRCULATING WATER PUMP	Concrete volute pump			Decommission	00B
QUOTE - CT	1	WL	HV			TOWER MOV BYPASS VALVE - UNIT 1		1 X 25%	4 hp	Provided by tower vendor.	00A
QUOTE - CT	1	WL	HV			TOWER MOV BYPASS VALVE - UNIT 1		1 X 25%	4 hp	Provided by tower vendor.	00A
QUOTE - CT	1	WL	HV			TOWER MOV BYPASS VALVE - UNIT 1		1 X 25%	4 hp	Provided by tower vendor.	00A
QUOTE - CT	1	WL	HV			TOWER MOV BYPASS VALVE - UNIT 1		1 X 25%	4 hp	Provided by tower vendor.	00A
QUOTE - CT	2	WL	HV			TOWER MOV BYPASS VALVE - UNIT 2		1 X 25%	4 hp	Provided by tower vendor.	00A
QUOTE - CT	2	WL	HV			TOWER MOV BYPASS VALVE - UNIT 2		1 X 25%	4 hp	Provided by tower vendor.	00A
QUOTE - CT	2	WL	HV			TOWER MOV BYPASS VALVE - UNIT 2		1 X 25%	4 hp	Provided by tower vendor.	00A
QUOTE - CT	2	WL	HV			TOWER MOV BYPASS VALVE - UNIT 2		1 X 25%	4 hp	Provided by tower vendor.	00A
QUOTE -CT	1	WL	ME	001A	New	NATURAL DRAFT COOLING TOWER - Unit 1		1 X 50%			00A
QUOTE -CT	2	WL	ME	001A	New	NATURAL DRAFT COOLING TOWER - Unit 2		1 X 50%			00A
QUOTE -CT	1	WL	ME	001B	New	NATURAL DRAFT COOLING TOWER - Unit 1		1 X 50%			00A

Bidder Quote to be Used	Unit	Sys Code	Com. Code [1]	Seq. No.	New / EXISTING	Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
QUOTE -CT	2	WL	ME	001B	New	NATURAL DRAFT COOLING TOWER - Unit 2		1 X 50%			00A
QUOTE - PUMPS Xylem	1	WL	MP	001A	New	CIRCULATING WATER PUMP - Unit 1	Fabricated Volute, 218250 gpm, 110 ft TDH	1 X 25%	7250	Pump to be located in new Unit 1 pump house	00A
QUOTE - PUMPS Xylem	2	WL	MP	001A	New	CIRCULATING WATER PUMP - Unit 2	Fabricated Volute, 218250 gpm, 110 ft TDH	1X 25%	7250	Pump to be located in new Unit 2 pump house	00A
QUOTE - PUMPS Xylem	2	WL	MP	001A	New	CIRCULATING WATER PUMP - Unit 2	Fabricated Volute, 218250 gpm, 110 ft TDH	1X 25%	7250	Pump to be located in new Unit 2 pump house	00A
QUOTE - PUMPS Xylem	1	WL	MP	001B	New	CIRCULATING WATER PUMP - Unit 1	Fabricated Volute, 218250 gpm, 110 ft TDH	1X 25%	7250	Pump to be located in new Unit 1 pump house	00A
QUOTE - PUMPS Xylem	2	WL	MP	001B	New	CIRCULATING WATER PUMP - Unit 2	Fabricated Volute, 218250 gpm, 110 ft TDH	1X 25%	7250	Pump to be located in new Unit 2 pump house	00A
QUOTE - PUMPS Xylem	2	WL	MP	001B	New	CIRCULATING WATER PUMP - Unit 2	Fabricated Volute, 218250 gpm, 110 ft TDH	1X 25%	7250	Pump to be located in new Unit 2 pump house	00A
QUOTE - PUMPS Xylem	1	WL	MP	001C	New	CIRCULATING WATER PUMP - Unit 1	Fabricated Volute, 218250 gpm, 110 ft TDH	1X 25%	7250	Pump to be located in new Unit 1 pump house	00A
QUOTE - PUMPS Xylem	1	WL	MP	001D	New	CIRCULATING WATER PUMP - Unit 1	Fabricated Volute, 218250 gpm, 110 ft TDH	1X 25%	7250	Pump to be located in new Unit 1 pump house	00A
ESTIMATING	0	WL	MT	001	New	COOLING TOWER MAKEUP STORAGE POND	Pond, 5,000,000 gallon useable	1 x 100%		≈2.5 hours (evaporation, drift & blowdown of 33,100 gpm).	00A
QUOTE - CT	1	WL	PV			TOWER SECTION ISOLATION VALVE - UNIT 1	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
N/A	1	WL	SCW HX	1	EXIST	SERVICE COOLING WATER HX	Shell and tube			Remove and replace with new HX 1-WB-ME-001A	00B
N/A	2	WL	SCW HX	1	EXIST	SERVICE COOLING WATER HX	Shell and tube			Remove and replace with new HX 2-WB-ME-001A	00B
N/A	1	WL	SCW HX	2	EXIST	SERVICE COOLING WATER HX	Shell and tube			Remove and replace with new HX 1-WB-ME-001B	00B
N/A	2	WL	SCW HX	2	EXIST	SERVICE COOLING WATER HX	Shell and tube			Remove and replace with new HX 2-WB-ME-001B	00B
N/A	1	WL		1	EXIST	CONDENSATE COOLER	Shell and tube			Remove and replace with new HX 2-WB-ME-002	00B
N/A	2	WL		1	EXIST	CONDENSATE COOLER	Shell and tube			Remove and replace with new HX 2-WB-ME-002	00B
QUOTE - CT	1	WL				TOWER SECTION ISOLATION VALVE - UNIT 1	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	1	WL				TOWER SECTION ISOLATION VALVE - UNIT 1	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	1	WL				TOWER SECTION ISOLATION VALVE - UNIT 1	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	1	WL				TOWER SECTION ISOLATION VALVE - UNIT 1	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	1	WL				TOWER SECTION ISOLATION VALVE - UNIT 1	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	1	WL				TOWER SECTION ISOLATION VALVE - UNIT 1	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	1	WL				TOWER SECTION ISOLATION VALVE - UNIT 1	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	1	WL				TOWER SECTION ISOLATION VALVE - UNIT 1	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	1	WL				TOWER SECTION ISOLATION VALVE - UNIT 1	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	1	WL				TOWER SECTION ISOLATION VALVE - UNIT 1	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A

Bidder Quote to be Used	Unit	Sys Code	Com. Code [1]	Seq. No.	New / EXISTING	Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
QUOTE - CT	1	WL				TOWER SECTION ISOLATION VALVE - UNIT 1	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	2	WL				TOWER SECTION ISOLATION VALVE - UNIT 2	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	2	WL				TOWER SECTION ISOLATION VALVE - UNIT 2	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	2	WL				TOWER SECTION ISOLATION VALVE - UNIT 2	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	2	WL				TOWER SECTION ISOLATION VALVE - UNIT 2	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	2	WL				TOWER SECTION ISOLATION VALVE - UNIT 2	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	2	WL				TOWER SECTION ISOLATION VALVE - UNIT 2	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	2	WL				TOWER SECTION ISOLATION VALVE - UNIT 2	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	2	WL				TOWER SECTION ISOLATION VALVE - UNIT 2	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	2	WL				TOWER SECTION ISOLATION VALVE - UNIT 2	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	2	WL				TOWER SECTION ISOLATION VALVE - UNIT 2	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	2	WL				TOWER SECTION ISOLATION VALVE - UNIT 2	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
QUOTE - CT	2	WL				TOWER SECTION ISOLATION VALVE - UNIT 2	Gate or Butterfly	1 x 8%	1 hp	Provided by tower vendor.	00A
Anderson	0	WO	MA			MMF AIR SCOUR BLOWER		-	-	Not required	00A
Anderson	0	WO	ME		New	CIP TANK HEATER	50 KW heater, 10 KW pump		10 KW	Add 50 KW to operating power for the 50 KW heater	00A
Anderson	0	WO	ML		New	DISSOLVED AIR FLOATATION	TBD Gallons, TBD L x W x H	9 x 12.5%	-		00A
Anderson	0	WO	ML		New	FIRST STAGE DUAL MEDIA FILTERS	2,630 gpm throughput	30 x 3.6%	-		00A
Anderson	0	WO	ML		New	SECOND STAGE DUAL MEDIA FILTERS	3,540 gpm throughput	22 x 5%	-		00A
Anderson	0	WO	ML		New	SWRO CARTRIDGE FILTER	4,370 gpm throughput each	18 x 5.9%			00A
Anderson	0	WO	ML		New	CIP CARTRIDGE FILTER	1,000 gpm throughput	1 x 100%	-		00A
Quote - Pump ITT-Goulds/Flowserve	0	WO	MP	001A	New	DESAL SEA WATER SUPPLY PUMP	Vertical Turbine, 36800 gpm, TDH: 570 feet with variable speed drive	1 x 50%	6800		00A
Quote - Pump ITT-Goulds/Flowserve	0	WO	MP	001B	New	DESAL SEA WATER SUPPLY PUMP	Vertical Turbine, 36800 gpm, TDH: 570 feet with variable speed drive	1 x 50%	6800		00A
Quote - Pump ITT-Goulds/Flowserve	0	WO	MP	001C	New	DESAL SEA WATER SUPPLY PUMP	Vertical Turbine, 36800 gpm, TDH: 570 feet with variable speed drive	1 x 50%	6800		00A
ESTIMATING	0	WO	MP	002A	New	SWRO MMF BACKWASH RETURN PUMP	Vertical Turbine, 2000 gpm, TDH 100 feet	1 x 100%	75		00A
ESTIMATING	0	WO	MP	002B	New	SWRO MMF BACKWASH RETURN PUMP	Vertical Turbine, 2000 gpm, TDH 100 feet	1 x 100%	75		00A
Anderson	0	WO	MP		New	DAF FORWARDING PUMP	9,780 gpm, 100 ft	10 x 11.1%	350		00A
Anderson	0	WO	MP		New	SWRO BOOSTER PUMP	4,240 gpm, 2,000 ft TDH	9 x 12.5%	3000		00A
Anderson	0	WO	MP		New	SWRO ENERGY RECOVERY DEVICE	5,110 gpm	9 x 12.5%	-		00A
Anderson	0	WO	MP		New	SWRO ERD BOOSTER PUMP	5,110 gpm, 200 ft TDH	9 x 12.5%	400		00A
Anderson	0	WO	MP		New	CIP RECIRCULATION PUMP	1200 gpm, 250 ft TDH	2 x 100%	100		00A
Anderson	0	WO	MP		New	SODIUM HYPOCHLORITE DOSING PUMP	25 gph	2 x 100%	1		00A

Bidder Quote to be Used	Unit	Sys Code	Com. Code [1]	Seq. No.	New / EXISTING	Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
Anderson	0	WO	MP		New	DAF COAGULANT DOSING PUMP	TBD gph	2 x 100%	1		00A
Anderson	0	WO	MP		New	MMF COAGULANT DOSING PUMP	TBD gph	2 x 100%	1		00A
Anderson	0	WO	MP		New	ACID DOSING PUMP	25 gph	2 x 100%	1		00A
Anderson	0	WO	MP		New	ANTISCALANT DOSING PUMP	TBD gph	2 x 100%	1		00A
Anderson	0	WO	MP		New	DECHLORINATION DOSING PUMP	TBD gph	2 x 100%	1		00A
Anderson	0	WO	MT		New	AIR SATURATION TANK	TBD Gallons	9 x 12.5%	-		00A
Anderson	0	WO	MT		New	CIP SOLUTION TANK	6,000 gallons	1 x 100%	-		00A
Anderson	0	WO	MT		New	SODIUM HYPOCHLORITE STORAGE TANK	21,000 gallons	1 x 100%	-		00A
Anderson	0	WO	MT		New	DAF COAGULANT STORAGE TANK	21,000 gallons	1 x 100%	-		00A
Anderson	0	WO	MT		New	MMF COAGULANT STORAGE TANK	21,000 gallons	1 x 100%	-		00A
Anderson	0	WO	MT		New	ACID STORAGE TANK	21,000 gallons	1 x 100%	-		00A
Anderson	0	WO	MT		New	ANTISCALANT STORAGE TANK	21,000 gallons	1 x 100%	-		00A
Anderson	0	WO	MT		New	DECHLORINATION STORAGE TANK	21,000 gallons	1 x 100%	-		00A
QUOTE - DESAL	0	WO	MW	001	New	**DESALINATION PLANT**	Multiple Train System consisting of multimedia filters (MMF), seawater reverse osmosis (SWRO) trains, clean-in-place (CIP) systems and chemical dosing systems, product flowrate - 33100 gpm.	100%		Estimated Plant area: 422,000 sq feet	00A
Anderson	0	WO	MW		New	SWRO MEMBRANE UNIT	3,670 gpm throughput	9 x 12.5%	-		00A
IDI	0	WR	MC		New	FILTER "A" VACUUM PUMP	TBD	2 x 100%	5.5		00A
IDI	0	WR	ML		New	FILTER (GREENLEAF FILTER)	2,800 gpm	1 x 100%			00A
IDI	0	WR	ML		New	FILTER PRESS	20 Cft	2 x 100%	5.0		00A
Estimating	0	WR	MP	001A	New	CLARIFIER FORWARDING PUMP	Horizontal centrifugal, 3000 gpm, 100 feet TDH	1 x 100%	125		00A
Estimating	0	WR	MP	001B	New	CLARIFIER FORWARDING PUMP	Horizontal centrifugal, 3000 gpm, 100 feet TDH	1 x 100%	125		00A
Estimating	0	WR	MP	002A	New	CLARIFIER FEED PUMP	Horizontal centrifugal, 3000 gpm, 100 feet TDH	1 x 100%	125		00A
Estimating	0	WR	MP	002B	New	CLARIFIER FEED PUMP	Horizontal centrifugal, 3000 gpm, 100 feet TDH	1 x 100%	125		00A
Estimating	0	WR	MP	003A	New	CLARIFIER MMF BACKWASH PUMP	Vertical sump pump, 1000 gpm, 100 feet TDH	1 x 100%	40		00A
Estimating	0	WR	MP	003B	New	CLARIFIER MMF BACKWASH PUMP	Vertical sump pump, 1000 gpm, 100 feet TDH	1 x 100%	40		00A
Estimating	0	WR	MP	004B	New	MORO BAY RECLAIM WATER SUPPLY PUMP	Vertical Turbine, 800 gpm, 500 feet TDH, 15 feet baseplate to suction bell inlet	1 x 100%	150	Pump station is located approximately 20 miles off site.	00C
Estimating	0	WR	MP	005A	New	SAN LUIS OBISPO RECLAIM WATER SUPPLY PUMP	Vertical Turbine, 2000 gpm, 580 feet TDH, 15 feet baseplate to suction bell inlet	1 x 100%	400	Pump station is located approximately 20 miles off site.	00C
Estimating	0	WR	MP	005B	New	SAN LUIS OBISPO RECLAIM WATER SUPPLY PUMP	Vertical Turbine, 2000 gpm, 580 feet TDH, 15 feet baseplate to suction bell inlet	1 x 100%	400	Pump station is located approximately 20 miles off site.	00C
IDI	0	WR	MP		New	CLARIFIER "A" SLUDGE RECIRCULATION / BLOWDOWN PUMP SET	140 gpm, 46 ft TDH with VFD	3 x 50%	7.5		00A
IDI	0	WR	MP		New	FILTER PRESS FEED PUMP	30 gpm, 100 psig	3 x 50%	N/A	Air operated diaphragm	00A
IDI	0	WR	MP		New	FILTRATE SUMP TRANSFER PUMP	100 gpm, 46 ft TDH	2 x 100%	2.0		00A
IDI	0	WR	MP		New	SODIUM HYPOCHLORITE DOSING PUMPS	10 gph	4 x 25%	0.3		00A
IDI	0	WR	MP		New	FERRIC CHLORIDE DOSING PUMP	20 gph	4 x 25%	0.5		00A
IDI	0	WR	MP		New	POLYELECTROLYTE DOSING PUMP	2 gph	3 x 50%	0.25		00A
Estimating	0	WR	MP	004A	New	MORO BAY RECAIM WATER SUPPLY PUMP	Vertical Turbine, 800 gpm, 500 feet TDH, 15 feet baseplate to suction bell inlet	1 x 100%	150	Pump station is located approximately 20 miles off site.	00C
ESTIMATING	0	WR	MT	001	New	RECLAIM WATER STORAGE TANK	Field Fabricated Epoxy Coated Carbon Steel, 100,000 gallon	1 x 100%		Sized for 30 min storage, 40 ft Diameter and 40 ft High	00C
IDI	0	WR	MT		New	MIX TANK (RAPID)	9,300 gallons, 9'D x 20.25'H	1 x 100.3%			00A
IDI	0	WR	MT		New	REACTION TANK (DENSADEG REACTOR)	37,000 gallons 19'D x 18.5'H	1 x 100.3%	-		00A
IDI	0	WR	MT		New	FILTER BACKWASH SUPPLY TANK	21,000 gallons	1 x 100%	-		00A
IDI	0	WR	MT		New	SLUDGE STORAGE TANK	6,000 gallons, 10'D x 12'H	1 x 100%	-		00A
IDI	0	WR	MT		New	SLUDGE STORAGE TANK MIXER	With VFD	1 x 100%	5.0		00A
IDI	0	WR	MT		New	SODIUM HYPOCHLORITE BULK STORAGE TANK	5000 gallons	1 x 100%	-		00A
IDI	0	WR	MT		New	FERRIC CHLORIDE STORAGE TANK	5,000 gallons	1 x 100%	-		00A

Bidder Quote to be Used	Unit	Sys Code	Com. Code [1]	Seq. No.	New / EXISTING	Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
IDI	0	WR			New	MIX TANK MIXER	With VFD	1 x 100%	5.0		00A
IDI	0	WR			New	REACTION TANK MIXER	With VFD	3 x 33.3%	7.5		00A
IDI	0	WR			New	CLARIFIER (DENSADEG CLARIFIER / THICKENER)	2,800 gpm 26'D x 18.5'H	1 x 100%	-		00A
IDI	0	WR			New	CLARIFIER SLUDGE SCRAPER	Two arms	1 x 100%	0.5		00A
Estimating		XN				DESAL AREA SANITARY LIFT STATION	48" diameter concrete sump, vented cover, duplex submersible pumps (50 gpm, TH: 100 ft), control panel, external valve box,				00A

JUOTC - DIABLO CANYON

Preliminary Mechanical Equipment List
Wet Mechanical Draft Cooling

25762-110-M0X-YA-00004

00C	9/12/2013	Re-Issued for Estimate Report	RP	–	RP
00B	7/24/2013	Issued for Estimate Report	RP	-	RP
00A	7/10/2013	Issued for Esitmate	RP	-	RP
Rev	**Date**	**Reason for Revision**	**Orignator**	**Checked**	**Approved**

<u>System Codes</u>

AC	Steam Turbine
AD	Condensate
PF	Fire Protection
PI	Plant Air
PW	Potable Water
TL	Circ Water Chem, Inj,
WB	Turbine Bldg Cooling
WL	Circulating Water
WO	Sea Wate/Desal
WR	Reclaim Water

Commodity Codes

MC	Compressors/vacuum Pump
ME	Heat Exchange Component (Cooling Tower, Heat Exchanger)
ML	Liquid -Solid Separation (Clarifer, Automatic filters)
MP	Pump
MT	Tank
MU	Driver
MW	Liquid Separation & Purification (Desal)
PV	Manual Valve

NOTES:

1. Commodity Codes shown are Bechtel standard codes. Bechtel Commodity codes have beens assigned to exisiting plant equipment numbers to aid in equipment list sorts.

Unit	Sys Code	Com. Code	Seq. No.		Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
1	AC	MU		Exist	LP TURBINE				No modification currently required. Monitoring program should be sent up	00A
2	AC	MU		Exist	LP TURBINE				No modification currently required. Monitoring program should be sent up	00A
1	AD	ME		EXIST	CONDENSER				Tube side desgin pressure to be increased to 50 psig Water boxes replaced and condenser rebundled	00A
2	AD	ME		EXIST	CONDENSER				Tube side desgin pressure to be increased to 50 psig Water boxes replaced and condenser rebundled	00A
0	PF	PY		New	FIRE HYDRANT	Dry Barrel Type			One every 300 ft, New fire piping 16,188 ft	00A
0	PI	MC	001A	New	DESAL PLANT AIR COMPRESSOR	Dry, rotary screw 200 scfm 100-125 psig	1 x 100%	125		00A
0	PI	MC	001B	New	DESAL PLANT AIR COMPRESSOR	Dry, rotary screw 200 scfm 100-125 psig	1 x 100%	125		00A
0	PI	MT	001A	New	DESAL PLANT AIR RECEIVER	5,000 gallon	1 x 100%			00A
0	PI	MT	001B	New	DESAL PLANT AIR RECEIVER	5,000 gallon	1 x 100%			00A
0	PI	MV	001A	New	DESAL PLANT AIR DRYER	Heatless, dessicant, dual towers with pre and after filters	1 x 100%		Matched to compressor	00A
0	PI	MV	001B	New	DESAL PLANT AIR DRYER	Heatless, dessicant, dual towers with pre and after filters	1 x 100%		Matched to compressor	00A
	PW	PY		New	Emergency Shower and Eyewash					00A
1	TL	MP	001A	New	CIRCULATING WATER SULFURIC ACID PUMP - UNIT 1	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
2	TL	MP	001A	New	CIRCULATING WATER SULFURIC ACID PUMP - UNIT 2	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
1	TL	MP	001B	New	CIRCULATING WATER SULFURIC ACID PUMP - UNIT 1	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
2	TL	MP	001B	New	CIRCULATING WATER SULFURIC ACID PUMP - UNIT 2	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
1	TL	MP	002A	New	CIRCULATING WATER DISPERSANT PUMP - UNIT 1	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
2	TL	MP	002A	New	CIRCULATING WATER DISPERSANT PUMP - UNIT 2	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
1	TL	MP	002B	New	CIRCULATING WATER DISPERSANT PUMP - UNIT 1	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
2	TL	MP	002B	New	CIRCULATING WATER DISPERSANT PUMP - UNIT 2	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
1	TL	MP	003A	New	CIRCULATING WATER SODIUM HYPOCHLORITE PUMP - UNIT 1	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
2	TL	MP	003A	New	CIRCULATING WATER SODIUM HYPOCHLORITE PUMP - UNIT 2	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
1	TL	MP	003B	New	CIRCULATING WATER SODIUM HYPOCHLORITE PUMP - UNIT 1	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
2	TL	MP	003B	New	CIRCULATING WATER SODIUM HYPOCHLORITE PUMP - UNIT 2	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
1	TL	MP	004A	New	CIRCULATING WATER SCALE INHIBITOR PUMP - UNIT 1	Positive displacement diaphragm metering pump	TBD	<1	Assumes common pump house for tower 001A and 001B; QTY to be determined when budgetary bids are received	00A
1	TL	MP	004A	New	CIRCULATING WATER SCALE INHIBITOR PUMP - UNIT 1	Positive displacement diaphragm metering pump	TBD	<1	Assumes common pump house for tower 001A and 001B; QTY to be determined when budgetary bids are received	00A

Unit	Sys Code	Com. Code	Seq. No.		Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
2	TL	MP	004B	New	CIRCULATING WATER SCALE INHIBITOR PUMP - UNIT 2	Positive displacement diaphragm metering pump	TBD	<1	Assumes common pump house for tower 001A and 001B; QTY to be determined when budgetary bids are received	00A
2	TL	MP	004B	New	CIRCULATING WATER SCALE INHIBITOR PUMP - UNIT 2	Positive displacement diaphragm metering pump	TBD	<1	Assumes common pump house for tower 001A and 001B; QTY to be determined when budgetary bids are received	00A
1	TL	MT	001	New	CIRCULATING WATER SULFURIC ACID STORAGE TANK - UNIT 1	Horizontal cylindrical with dessicant breather for vent and oil-filled loop seal for overflow	1 x 100%	N/A	Assumes common pump house for tower 001A and 001B	00A
2	TL	MT	001	New	CIRCULATING WATER SULFURIC ACID STORAGE TANK - UNIT 2	Horizontal cylindrical with dessicant breather for vent and oil-filled loop seal for overflow	1 x 100%	N/A	Assumes common pump house for tower 001A and 001B	00A
1	TL	MT	004	New	CIRCULATING WATER SCALE INHIBITOR STORAGE TANK - UNIT 1	5,000 gallons, shop fabricated	1 x 100%	N/A		00A
2	TL	MT	004	New	CIRCULATING WATER SCALE INHIBITOR STORAGE TANK - UNIT 2	5,000 gallons, shop fabricated	1 x 100%	N/A		00A
1	WB	ME	002	NEW	CONDENSATE COOLER	Shell and tube, 9,500,000 btu/hr (assumed) Hot side: Flow-1500 gpm (assumed), temp out 90F Cold Side: Flow - 2150 gpm, temp out 82F			Replaces existing heat exchanger. Design information for original heat exchanger unavailble from site. Base on piping connection sizes it is estimate to have a duty 50% of the service water heat exchanger.	00A
2	WB	ME	002	NEW	CONDENSATE COOLER	Shell and tube, 9,500,000 btu/hr (assumed) Hot side: Flow-1500 gpm (assumed), temp out 90F Cold Side: Flow - 2150 gpm, temp out 82F			Replaces existing heat exchanger. Design information for original heat exchanger unavailble from site. Base on piping connection sizes it is estimate to have a duty 50% of the service water heat exchanger.	00A
1	WB	ME	001A	New	Service Cooling Exchanger - UNIT 1	Duty: 19,000,000 btu/hr Hot Side: Out: 90F, Flow 3000 gpm Cold Side In: 78F, flow 4300	100%			00A
2	WB	ME	001A	New	Service Cooling Exchanger - UNIT 2	Duty: 19,000,000 btu/hr Hot Side: Out: 90F, Flow 3000 gpm Cold Side In: 78F, flow 4300	100%			00A
1	WB	ME	001B	New	Service Cooling Exchanger - UNIT 1	Duty: 19,000,000 btu/hr Hot Side: Out: 90F, Flow 3000 gpm Cold Side In: 78F, flow 4300	100%			00A
2	WB	ME	001B	New	Service Cooling Exchanger - UNIT 2	Duty: 19,000,000 btu/hr Hot Side: Out: 90F, Flow 3000 gpm Cold Side In: 78F, flow 4300	100%			00A
1	WB	SCW HX	1	EXIST	SERVICE COOLING WATER HX	Shell and tube			Remove and replace with new HX 1-WB-ME-001A	00B
2	WB	SCW HX	1	EXIST	SERVICE COOLING WATER HX	Shell and tube			Remove and replace with new HX 2-WB-ME-001A	00B
1	WB	SCW HX	2	EXIST	SERVICE COOLING WATER HX	Shell and tube			Remove and replace with new HX 1-WB-ME-001B	00B
2	WB	SCW HX	2	EXIST	SERVICE COOLING WATER HX	Shell and tube			Remove and replace with new HX 2-WB-ME-001B	00B
1	WB		1	EXIST	CONDENSATE COOLER	Shell and tube			Remove and replace with new HX 1-WB-ME-002	00B
2	WB		1	EXIST	CONDENSATE COOLER	Shell and tube			Remove and replace with new HX 1-WB-ME-002	00B
1	WL	CWP	1	EXIST	CIRCULATING WATER PUMP	Concrete volute pump			Decommission	00A

Unit	Sys Code	Com. Code	Seq. No.		Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
2	WL	CWP	1	EXIST	CIRCULATING WATER PUMP	Concrete volute pump			Decommission	00A
1	WL	CWP	2	EXIST	CIRCULATING WATER PUMP	Concrete volute pump			Decommission	00A
2	WL	CWP	2	EXIST	CIRCULATING WATER PUMP	Concrete volute pump			Decommission	00A
1	WL	ME	001	New	MECHANICAL DRAFT COOLING TOWER - UNIT 1	Circular design, 459 ft. dia, 40 fans, 300 hp motors	1 X 100%	11,400 (285 input hp required for each fan x 40)	Minimum spacing between tower is one (1 diameter)	00A
2	WL	ME	001	New	MECHANICAL DRAFT COOLING TOWER - UNIT 2	Circular design, 459 ft. dia, 40 fans, 300 hp motors	1 X 100%	11,400 (285 input hp required for each fan x 40)	Minimum spacing between tower is one (1 diameter)	00A
1	WL	MP	001A	New	CIRCULATING WATER PUMP- Unit 1	Vertical Turbine, 218250 gpm, 110 ft TDH	1 X 25%	7250	Pump to be located in common pump house for tower 001A & 001B	00A
2	WL	MP	001A	New	CIRCULATING WATER PUMP- Unit 2	Vertical Turbine, 218250 gpm, 110 ft TDH	1 X 25%	7250	Pump to be located in common pump house for tower 001A & 001B	00A
1	WL	MP	001B	New	CIRCULATING WATER PUMP- Unit 1	Fabricated Volute, 218250 gpm, 110 ft TDH	1 X 25%	7250	Pump to be located in common pump house for tower 001A & 001B	00B
2	WL	MP	001B	New	CIRCULATING WATER PUMP- Unit 2	Fabricated Volute, 218250 gpm, 110 ft TDH	1 X 25%	7250	Pump to be located in common pump house for tower 001A & 001B	00B
1	WL	MP	001C	New	CIRCULATING WATER PUMP- Unit 1	Fabricated Volute, 218250 gpm, 110 ft TDH	1 X 25%	7250	Pump to be located in common pump house for tower 001A & 001B	00B
2	WL	MP	001C	New	CIRCULATING WATER PUMP- Unit 2	Fabricated Volute, 218250 gpm, 110 ft TDH	1 X 25%	7250	Pump to be located in common pump house for tower 001A & 001B	00B
1	WL	MP	001D	New	CIRCULATING WATER PUMP- Unit 1	Fabricated Volute, 218250 gpm, 110 ft TDH	1 X 25%	7250	Pump to be located in common pump house for tower 001A & 001B	00B
2	WL	MP	001D	New	CIRCULATING WATER PUMP- Unit 2	Fabricated Volute, 218250 gpm, 110 ft TDH	1 X 25%	7250	Pump to be located in common pump house for tower 001A & 001B	00B
0	WL	MT	001	New	COOLING TOWER MAKEUP POND - Common	5,000,000 gallons	1 x 100%		≈2.5 hours (evaporation, drift & blowdown of 33,100 gpm). Pond to be located at a higher elevation than cooling tower basins.	00A
1	WL	PV		New	TOWER RISER ISOLATION VALVES - UNIT 1	Slide Gate	1 X 12.5%		Supplied by tower vendor.	00A
1	WL	PV		New	TOWER RISER ISOLATION VALVES - UNIT 1	Slide Gate	1 X 12.5%		Supplied by tower vendor.	00A
1	WL	PV		New	TOWER RISER ISOLATION VALVES - UNIT 1	Slide Gate	1 X 12.5%		Supplied by tower vendor.	00B
1	WL	PV		New	TOWER RISER ISOLATION VALVES - UNIT 1	Slide Gate	1 X 12.5%		Supplied by tower vendor.	00B
1	WL	PV		New	TOWER RISER ISOLATION VALVES - UNIT 1	Slide Gate	1 X 12.5%		Supplied by tower vendor.	00B
1	WL	PV		New	TOWER RISER ISOLATION VALVES - UNIT 1	Slide Gate	1 X 12.5%		Supplied by tower vendor.	00B
1	WL	PV		New	TOWER RISER ISOLATION VALVES - UNIT 1	Slide Gate	1 X 12.5%		Supplied by tower vendor.	00B

Unit	Sys Code	Com. Code	Seq. No.		Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
1	WL	PV		New	TOWER RISER ISOLATION VALVES - UNIT 1	Slide Gate	1 X 12.5%		Supplied by tower vendor.	00B
2	WL	PV		New	TOWER RISER ISOLATION VALVES - UNIT 2	Slide Gate	1 X 12.5%		Supplied by tower vendor.	00A
2	WL	PV		New	TOWER RISER ISOLATION VALVES - UNIT 2	Slide Gate	1 X 12.5%		Supplied by tower vendor.	00B
2	WL	PV		New	TOWER RISER ISOLATION VALVES - UNIT 2	Slide Gate	1 X 12.5%		Supplied by tower vendor.	00B
2	WL	PV		New	TOWER RISER ISOLATION VALVES - UNIT 2	Slide Gate	1 X 12.5%		Supplied by tower vendor.	00B
2	WL	PV		New	TOWER RISER ISOLATION VALVES - UNIT 2	Slide Gate	1 X 12.5%		Supplied by tower vendor.	00B
2	WL	PV		New	TOWER RISER ISOLATION VALVES - UNIT 2	Slide Gate	1 X 12.5%		Supplied by tower vendor.	00B
2	WL	PV		New	TOWER RISER ISOLATION VALVES - UNIT 2	Slide Gate	1 X 12.5%		Supplied by tower vendor.	00B
2	WL	PV		New	TOWER RISER ISOLATION VALVES - UNIT 2	Slide Gate	1 X 12.5%		Supplied by tower vendor.	00B
0	WO	ME		New	CIP TANK HEATER	50 KW heater, 10 KW pump		10 KW	Add 50 KW to operating power for the 50 KW heater	00A
0	WO	ML		New	DISSOLVED AIR FLOATATION	TBD Gallons, TBD L x W x H	9 x 12.5%	-		00A
0	WO	ML		New	FIRST STAGE DUAL MEDIA FILTERS	2,630 gpm throughput	30 x 3.6%	-		00A
0	WO	ML		New	SECOND STAGE DUAL MEDIA FILTERS	3,540 gpm throughput	22 x 5%	-		00A
0	WO	ML		New	SWRO CARTRIDGE FILTER	4,370 gpm throughput each	18 x 5.9%			00A
0	WO	ML		New	CIP CARTRIDGE FILTER	1,000 gpm throughput	1 x 100%	-		00A
0	WO	MP	001A	New	DESAL SEA WATER SUPPLY PUMP	Vertical Turbine, 368,800 gpm, TDH: 570 feet	1 x 50%	6800		00C
0	WO	MP	001B	New	DESAL SEA WATER SUPPLY PUMP	Vertical Turbine, 368,800 gpm, TDH: 570 feet	1 x 50%	6800		00C
0	WO	MP	001C	New	DESAL SEA WATER SUPPLY PUMP	Vertical Turbine, 368,800 gpm, TDH: 570 feet	1 x 50%	6800		00C
0	WO	MP	002A	New	SWRO MMF BACKWASH RETURN PUMP	Vertical Turbine, 2000 gpm, TDH 100 feet	1 x 100%	75		00B
0	WO	MP	002B	New	SWRO MMF BACKWASH RETURN PUMP	Vertical Turbine, 2000 gpm, TDH 100 feet	1 x 100%	75		00B
0	WO	MP		New	DAF FORWARDING PUMP	9,780 gpm, 100 ft	10 x 11.1%	350		00A
0	WO	MP		New	SWRO BOOSTER PUMP	4,240 gpm, 2,000 ft TDH	9 x 12.5%	3000		00A
0	WO	MP		New	SWRO ENERGY RECOVERY DEVICE	5,110 gpm	9 x 12.5%	-		00A
0	WO	MP		New	SWRO ERD BOOSTER PUMP	5,110 gpm, 200 ft TDH	9 x 12.5%	400		00A
0	WO	MP		New	CIP RECIRCULATION PUMP	1200 gpm, 250 ft TDH	2 x 100%	100		00A
0	WO	MP		New	SODIUM HYPOCHLORITE DOSING PUMP	25 gph	2 x 100%	1		00A
0	WO	MP		New	DAF COAGULANT DOSING PUMP	TBD gph	2 x 100%	1		00A
0	WO	MP		New	MMF COAGULANT DOSING PUMP	TBD gph	2 x 100%	1		00A
0	WO	MP		New	ACID DOSING PUMP	25 gph	2 x 100%	1		00A
0	WO	MP		New	ANTISCALANT DOSING PUMP	TBD gph	2 x 100%	1		00A
0	WO	MP		New	DECHLORINATION DOSING PUMP	TBD gph	2 x 100%	1		00A
0	WO	MT		New	AIR SATURATION TANK	TBD Gallons	9 x 12.5%	-		00A
0	WO	MT		New	CIP SOLUTION TANK	6,000 gallons	1 x 100%	-		00A
0	WO	MT		New	SODIUM HYPOCHLORITE STORAGE TANK	21,000 gallons	1 x 100%	-		00A
0	WO	MT		New	DAF COAGULANT STORAGE TANK	21,000 gallons	1 x 100%	-		00A
0	WO	MT		New	MMF COAGULANT STORAGE TANK	21,000 gallons	1 x 100%	-		00A
0	WO	MT		New	ACID STORAGE TANK	21,000 gallons	1 x 100%	-		00A

Unit	Sys Code	Com. Code	Seq. No.		Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
0	WO	MT		New	ANTISCALANT STORAGE TANK	21,000 gallons	1 x 100%	-		00A
0	WO	MT		New	DECHLORINATION STORAGE TANK	21,000 gallons	1 x 100%	-		00A
0	WO	MW	001	New	**DESALINATION PLANT**	Multiple Train System consisting of multimedia filters (MMF), seawater reverse osmosis (SWRO) trains, clean-in-place (CIP) systems and chemical dosing systems, product flowrate - 33100 gpm.	100%		Estimated Plant area: 422,000 sq feet	00A
0	WO	MW		New	SWRO MEMBRANE UNIT	3,670 gpm throughput	9 x 12.5%	-		00A
0	WR	MC		New	FILTER "A" VACUUM PUMP	TBD	2 x 100%	5.5		00A
0	WR	ML		New	FILTER (GREENLEAF FILTER)	2,800 gpm	1 x 100%			00A
0	WR	ML		New	FILTER PRESS	20 Cft	2 x 100%	5.0		00A
0	WR	MP	001A		CLARIFIER FORWARDING PUMP	Horizontal centrifugal, 3000 gpm, 100 feet TDH	1 x 100%			00A
0	WR	MP	001B		CLARIFIER FORWARDING PUMP	Horizontal centrifugal, 3000 gpm, 100 feet TDH	1 x 100%			00A
0	WR	MP	002A	New	RECLAIM WATER CLARIFIER FEED PUMP	Horizontal centrifugal, 3000 gpm, 100 feet TDH	1 x 100%	125		00C
0	WR	MP	002B	New	RECLAIM WATER CLARIFIER FEED PUMP	Horizontal centrifugal, 3000 gpm, 100 feet TDH	1 x 100%	125		00C
0	WR	MP	003A		CLARIFIER MMF BACKWASH PUMP	Vertical Centrifugal, 1000 gpm, 100 feet TDH	1 x 100%			00A
0	WR	MP	003B		CLARIFIER MMF BACKWASH PUMP	Vertical Centrifugal, 1000 gpm, 100 feet TDH	1 x 100%			00A
0	WR	MP	004B	New	MORO BAY RECLAIM WATER SUPPLY PUMP	Vertical Turbine, 800 gpm, 500 feet TDH, 15 feet baseplate to suction bell inlet	1 x 100%	150	Pump station is located approximately 20 miles off site.	00C
0	WR	MP	005A	New	SAN LUIS OBISPO RECLAIM WATER SUPPLY PUMP	Vertical Turbine, 2000 gpm, 580 feet TDH, 15 feet baseplate to suction bell inlet	1 x 100%	400	Pump station is located approximately 20 miles off site.	00C
0	WR	MP	005B	New	SAN LUIS OBISPO RECLAIM WATER SUPPLY PUMP	Vertical Turbine, 2000 gpm, 580 feet TDH, 15 feet baseplate to suction bell inlet	1 x 100%	400	Pump station is located approximately 20 miles off site.	00C
0	WR	MP		New	CLARIFIER "A" SLUDGE RECIRCULATION / BLOWDOWN PUMP SET	140 gpm, 46 ft TDH with VFD	3 x 50%	7.5		00A
0	WR	MP		New	FILTER PRESS FEED PUMP	30 gpm, 100 psig	3 x 50%	N/A	Air operated diaphragm	00A
0	WR	MP		New	FILTRATE SUMP TRANSFER PUMP	100 gpm, 46 ft TDH	2 x 100%	2.0		00A
0	WR	MP		New	SODIUM HYPOCHLORITE DOSING PUMPS	10 gph	4 x 25%	0.3		00A
0	WR	MP		New	FERRIC CHLORIDE DOSING PUMP	20 gph	4 x 25%	0.5		00A
0	WR	MP		New	POLYELECTROLYTE DOSING PUMP	2 gph	3 x 50%	0.25		00A
0	WR	MP	004A	New	MORO BAY RECLAIM WATER SUPPLY PUMP	Vertical Turbine, 800 gpm, 500 feet TDH, 15 feet baseplate to suction bell inlet	1 x 100%	150	Pump station is located approximately 20 miles off site.	00C
0	WR	MT	001	New	RECLAIM WATER STORAGE TANK	Field Fabricated Epoxy Coated Carbon Steel, 100,000 gallon	1 x 100%		Sized for 30 min storage, 40 ft Diameter and 40 ft High	00C
0	WR	MT		New	MIX TANK (RAPID)	9,300 gallons, 9'D x 20.25'H	1 x 100.3%			00A
0	WR	MT		New	REACTION TANK (DENSADEG REACTOR)	37,000 gallons 19'D x 18.5'H	1 x 100.3%	-		00A
0	WR	MT		New	FILTER BACKWASH SUPPLY TANK	21,000 gallons	1 x 100%	-		00A
0	WR	MT		New	SLUDGE STORAGE TANK	6,000 gallons, 10'D x 12'H	1 x 100%	-		00A
0	WR	MT		New	SLUDGE STORAGE TANK MIXER	With VFD	1 x 100%	5.0		00A
0	WR	MT		New	SODIUM HYPOCHLORITE BULK STORAGE TANK	5000 gallons	1 x 100%	-		00A
0	WR	MT		New	FERRIC CHLORIDE STORAGE TANK	5,000 gallons	1 x 100%	-		00A
0	WR			New	MIX TANK MIXER	With VFD	1 x 100%	5.0		00A
0	WR			New	REACTION TANK MIXER	With VFD	3 x 33.3%	7.5		00A
0	WR			New	CLARIFIER (DENSADEG CLARIFIER / THICKENER)	2,800 gpm 26'D x 18.5'H	1 x 100%	-		00A
0	WR			New	CLARIFIER SLUDGE SCRAPER	Two arms	1 x 100%	0.5		00A

Unit	Sys Code	Com. Code	Seq. No.		Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
	XN				DESAL AREA SANITARY LIFT STATION	48" diameter concrete sump, vented cover, duplex submersible pumps (50 gpm, TH: 100 ft), control panel, external valve box,				00A

JUOTC - DIABLO CANYON

Preliminary Mechanical Equipment List
Hybrid Cooling

25762-110-M0X-YA-00005

00C	9/12/2013	Re-Issued for Estimate Report	RP	–	RP
00B	7/24/2013	Issued for Estimate Report	RP	-	RP
00A	7/10/2013	Issued for Estimating	RP	-	RP
Rev	**Date**	**Reason for Revision**	**Orignator**	**Checked**	**Approved**

System Codes		Commodity Codes	
AC	Steam Turbine	MC	Compressors/vacuum Pump
AD	Condensate	ME	Heat Exchange Component (Cooling Tower, Heat Exchanger)
PF	Fire Protection	ML	Liquid -Solid Separation (Clarifer, Automatic filters)
PI	Plant Air	MP	Pump
PW	Potable Water	MT	Tank
TL	Circ Water Chem, Inj,	MU	Driver
WB	Turbine Bldg Cooling	MW	Liquid Separation & Purification (Desal)
WL	Circulating Water	PV	Manual Valve
WO	Sea Wate/Desal		
WR	Reclaim Water		

NOTES:

1. Commodity Codes shown are Bechtel standard codes. Bechtel Commodity codes have beens assigned to exisiting plant equipment numbers to aid in equipment list sorts.

Sys Code	Com. Code	Seq. No.	New/ Existing	Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
AC	MU		Exist	LP TURBINE				No modification currently required. Monitoring program should be sent up	00A
AC	MU		Exist	LP TURBINE				No modification currently required. Monitoring program should be sent up	00A
AD	ME		EXIST	CONDENSER				Tube side desgin pressure to be increased to 50 psig Water boxes replaced and condenser rebundled	00A
AD	ME		EXIST	CONDENSER				Tube side desgin pressure to be increased to 50 psig Water boxes replaced and condenser rebundled	00A
PF	PY		New	FIRE HYDRANT	Dry Barrel Type			One every 300 ft, New fire piping 16,188 ft	00A
PI	MC	001A	New	DESAL PLANT AIR COMPRESSOR	Dry, rotary screw 200 scfm 100-125 psig	1 x 100%	125		00A
PI	MC	001B	New	DESAL PLANT AIR COMPRESSOR	Dry, rotary screw 200 scfm 100-125 psig	1 x 100%	125		00A
PI	MT	001A	New	DESAL PLANT AIR RECEIVER	5,000 gallon	1 x 100%			00A
PI	MT	001B	New	DESAL PLANT AIR RECEIVER	5,000 gallon	1 x 100%			00A
PI	MV	001A	New	DESAL PLANT AIR DRYER	Heatless, dessicant, dual towers with pre and after filters	1 x 100%		Matched to compressor	00A
PI	MV	001B	New	DESAL PLANT AIR DRYER	Heatless, dessicant, dual towers with pre and after filters	1 x 100%		Matched to compressor	00A
PW	PY		New	Emergency Shower and Eyewash					00A
TL	MP	001A	New	CIRCULATING WATER SULFURIC ACID PUMP - UNIT 1	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
TL	MP	001A	New	CIRCULATING WATER SULFURIC ACID PUMP - UNIT 2	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
TL	MP	001B	New	CIRCULATING WATER SULFURIC ACID PUMP - UNIT 1	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
TL	MP	001B	New	CIRCULATING WATER SULFURIC ACID PUMP - UNIT 2	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
TL	MP	002A	New	CIRCULATING WATER DISPERSANT PUMP - UNIT 1	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
TL	MP	002A	New	CIRCULATING WATER DISPERSANT PUMP - UNIT 2	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
TL	MP	002B	New	CIRCULATING WATER DISPERSANT PUMP - UNIT 1	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
TL	MP	002B	New	CIRCULATING WATER DISPERSANT PUMP - UNIT 2	Positive displacement diaphragm metering pump	1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
TL	MP	003A	New	CIRCULATING WATER SODIUM HYPOCHLORITE PUMP - UNIT 1		1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
TL	MP	003A	New	CIRCULATING WATER SODIUM HYPOCHLORITE PUMP - UNIT 2		1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
TL	MP	003B	New	CIRCULATING WATER SODIUM HYPOCHLORITE PUMP - UNIT 1		1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
TL	MP	003B	New	CIRCULATING WATER SODIUM HYPOCHLORITE PUMP - UNIT 2		1 x 100%	<1	Assumes common pump house for tower 001A and 001B	00A
TL	MP	004A	New	CIRCULATING WATER SCALE INHIBITOR PUMP - UNIT 1	Positive displacement diaphragm metering pump	TBD	<1	Assumes common pump house for tower 001A and 001B; QTY to be determined when budgetary bids are received	00A
TL	MP	004A	New	CIRCULATING WATER SCALE INHIBITOR PUMP - UNIT 1	Positive displacement diaphragm metering pump	TBD	<1	Assumes common pump house for tower 001A and 001B; QTY to be determined when budgetary bids are received	00A
TL	MP	004B	New	CIRCULATING WATER SCALE INHIBITOR PUMP - UNIT 2	Positive displacement diaphragm metering pump	TBD	<1	Assumes common pump house for tower 001A and 001B; QTY to be determined when budgetary bids are received	00A
TL	MP	004B	New	CIRCULATING WATER SCALE INHIBITOR PUMP - UNIT 2	Positive displacement diaphragm metering pump	TBD	<1	Assumes common pump house for tower 001A and 001B; QTY to be determined when budgetary bids are received	00A
TL	MT	001	New	CIRCULATING WATER SULFURIC ACID STORAGE TANK - UNIT 1	Horizontal cylindrical with dessicant breather for vent and oil-filled loop seal for overflow	1 x 100%		Assumes common pump house for tower 001A and 001B	00A
TL	MT	001	New	CIRCULATING WATER SULFURIC ACID STORAGE TANK - UNIT 2	Horizontal cylindrical with dessicant breather for vent and oil-filled loop seal for overflow	1 x 100%		Assumes common pump house for tower 001A and 001B	00A

Sys Code	Com. Code	Seq. No.	New/ Existing	Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
TL	MT	002	New	CIRCULATING WATER DISPERSANT STORAGE TANK - UNIT 1		1 x 100%			00A
TL	MT	002	New	CIRCULATING WATER DISPERSANT STORAGE TANK - UNIT 2		1 x 100%			00A
TL	MT	003	New	CIRCULATING WATER SODIUM HYPOCHLORITE STORAGE TANK - UNIT 1	Vertical cylindrical	1 x 100%			00A
TL	MT	003	New	CIRCULATING WATER SODIUM HYPOCHLORITE STORAGE TANK - UNIT 2	Vertical cylindrical	1 x 100%			00A
TL	MT	004	New	CIRCULATING WATER SCALE INHIBITOR STORAGE TANK - UNIT 1		1 x 100%			00A
TL	MT	004	New	CIRCULATING WATER SCALE INHIBITOR STORAGE TANK - UNIT 2		1 x 100%			00A
WB	ME	002	New	CONDENSATE COOLER	Shell and tube, 9,500,000 btu/hr (assumed) Hot side: Flow-1500 gpm (assumed), temp out 90F			Replaces existing heat exchanger. Design information for original heat exchanger unavailble from site. Base on piping connection	00B
WB	ME	002	New	CONDENSATE COOLER	Shell and tube, 9,500,000 btu/hr (assumed) Hot side: Flow-1500 gpm (assumed), temp out 90F			Replaces existing heat exchanger. Design information for original heat exchanger unavailble from site. Base on piping connection	00B
WB	ME	001A	New	Service Cooling Exchanger - UNIT 1	Duty: 19,000,000 btu/hr Hot Side: Out: 90F, Flow 3000 gpm	100%			00A
WB	ME	001A	New	Service Cooling Exchanger - UNIT 2	Duty: 19,000,000 btu/hr Hot Side: Out: 90F, Flow 3000 gpm	100%			00A
WB	ME	001B	New	Service Cooling Exchanger - UNIT 1	Duty: 19,000,000 btu/hr Hot Side: Out: 90F, Flow 3000 gpm	100%			00A
WB	ME	001B	New	Service Cooling Exchanger - UNIT 2	Duty: 19,000,000 btu/hr Hot Side: Out: 90F, Flow 3000 gpm	100%			00A
WL	ME	001A	New	MECHANICAL DRAFT HYBRID (WET/DRY) COOLING TOWER - UNIT 1	Circular design, 459 ft. dia, Wet section - 40 fans, 300 hp motors and Dry section - 40 fans, 200 hp motors	1 X 100%	19,000 (285 input power required each	Minimum spacing between tower is one (1 diameter)	00A
WL	ME	001A	New	MECHANICAL DRAFT HYBRID (WET/DRY) COOLING TOWER - UNIT 2	Circular design, 459 ft. dia, Wet section - 40 fans, 300 hp motors and Dry section - 40 fans, 200 hp motors	1 X 100%	19,000 (285 input power required each	Minimum spacing between tower is one (1 diameter)	00A
WL	MP	001A	New	CIRCULATING WATER PUMP - Unit 1	Fabricated Volute, 218,250 gpm, 110 ft TDH	1 X 25%	7250	Pump to be located in common pump house for tower 001A & 001B	00B
WL	MP	001A	New	CIRCULATING WATER PUMP - Unit 2	Fabricated Volute, 218,250 gpm, 110 ft TDH	1 X 25%	7250	Pump to be located in common pump house for tower 001A & 001B	00B
WL	MP	001B	New	CIRCULATING WATER PUMP - Unit 1	Fabricated Volute, 218,250 gpm, 110 ft TDH	1 X 25%	7250	Pump to be located in common pump house for tower 001A & 001B	00B
WL	MP	001B	New	CIRCULATING WATER PUMP - Unit 2	Fabricated Volute, 218,250 gpm, 110 ft TDH	1 X 25%	7250	Pump to be located in common pump house for tower 001A & 001B	00B
WL	MP	001C	New	CIRCULATING WATER PUMP - Unit 1	Fabricated Volute, 218,250 gpm, 110 ft TDH	1 X 25%	7250	Pump to be located in common pump house for tower 001A & 001B	00B
WL	MP	001C	New	CIRCULATING WATER PUMP - Unit 2	Fabricated Volute, 218,250 gpm, 110 ft TDH	1 X 25%	7250	Pump to be located in common pump house for tower 001A & 001B	00B
WL	MP	001D	New	CIRCULATING WATER PUMP - Unit 1	Fabricated Volute, 218,250 gpm, 110 ft TDH	1 X 25%	7250	Pump to be located in common pump house for tower 001A & 001B	00B
WL	MP	001D	New	CIRCULATING WATER PUMP - Unit 2	Fabricated Volute, 218,250 gpm, 110 ft TDH	1 X 25%	7250	Pump to be located in common pump house for tower 001A & 001B	00B
WL	MP	002A	New	HYBRID COOLING TOWER BOOSTER PUMP - UNIT 1	4 Pumps per Tower, 25 ft Static Head	1 X 25%	1140	Supplied by tower vendor.	00B
WL	MP	002A	New	HYBRID COOLING TOWER BOOSTER PUMP - UNIT 2	4 Pumps per Tower, 25 ft Static Head	1 X 25%	1140	Supplied by tower vendor.	00B
WL	MP	002B	New	HYBRID COOLING TOWER BOOSTER PUMP - UNIT 1	4 Pumps per Tower, 25 ft Static Head	1 X 25%	1140	Supplied by tower vendor.	00B
WL	MP	002B	New	HYBRID COOLING TOWER BOOSTER PUMP - UNIT 2	4 Pumps per Tower, 25 ft Static Head	1 X 25%	1140	Supplied by tower vendor.	00B
WL	MP	002C	New	HYBRID COOLING TOWER BOOSTER PUMP - UNIT 1	4 Pumps per Tower, 25 ft Static Head	1 X 25%	1140	Supplied by tower vendor.	00B
WL	MP	002C	New	HYBRID COOLING TOWER BOOSTER PUMP - UNIT 2	4 Pumps per Tower, 25 ft Static Head	1 X 25%	1140	Supplied by tower vendor.	00B

Sys Code	Com. Code	Seq. No.	New/ Existing	Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
WL	MP	002D	New	HYBRID COOLING TOWER BOOSTER PUMP - UNIT 1	4 Pumps per Tower, 25 ft Static Head	1 X 25%	1140	Supplied by tower vendor.	00B
WL	MP	002D	New	HYBRID COOLING TOWER BOOSTER PUMP - UNIT 2	4 Pumps per Tower, 25 ft Static Head	1 X 25%	1140	Supplied by tower vendor.	00B
WL	MP	003A	New	HYBRID COOLING TOWER VACUUM PUMP - UNIT 1	8 Pumps per Tower	1 X 12.5%		Supplied by tower vendor.	00B
WL	MP	003A	New	HYBRID COOLING TOWER VACUUM PUMP - UNIT 2	8 Pumps per Tower	1 X 12.5%		Supplied by tower vendor.	00B
WL	MP	003B	New	HYBRID COOLING TOWER VACUUM PUMP - UNIT 1	8 Pumps per Tower	1 X 12.5%		Supplied by tower vendor.	00B
WL	MP	003B	New	HYBRID COOLING TOWER VACUUM PUMP - UNIT 2	8 Pumps per Tower	1 X 12.5%		Supplied by tower vendor.	00B
WL	MP	003C	New	HYBRID COOLING TOWER VACUUM PUMP - UNIT 1	8 Pumps per Tower	1 X 12.5%		Supplied by tower vendor.	00B
WL	MP	003C	New	HYBRID COOLING TOWER VACUUM PUMP - UNIT 2	8 Pumps per Tower	1 X 12.5%		Supplied by tower vendor.	00B
WL	MP	003D	New	HYBRID COOLING TOWER VACUUM PUMP - UNIT 1	8 Pumps per Tower	1 X 12.5%		Supplied by tower vendor.	00B
WL	MP	003D	New	HYBRID COOLING TOWER VACUUM PUMP - UNIT 2	8 Pumps per Tower	1 X 12.5%		Supplied by tower vendor.	00B
WL	MP	003E	New	HYBRID COOLING TOWER VACUUM PUMP - UNIT 1	8 Pumps per Tower	1 X 12.5%		Supplied by tower vendor.	00B
WL	MP	003E	New	HYBRID COOLING TOWER VACUUM PUMP - UNIT 2	8 Pumps per Tower	1 X 12.5%		Supplied by tower vendor.	00B
WL	MP	003F	New	HYBRID COOLING TOWER VACUUM PUMP - UNIT 1	8 Pumps per Tower	1 X 12.5%		Supplied by tower vendor.	00B
WL	MP	003F	New	HYBRID COOLING TOWER VACUUM PUMP - UNIT 2	8 Pumps per Tower	1 X 12.5%		Supplied by tower vendor.	00B
WL	MP	003G	New	HYBRID COOLING TOWER VACUUM PUMP - UNIT 1	8 Pumps per Tower	1 X 12.5%		Supplied by tower vendor.	00B
WL	MP	003G	New	HYBRID COOLING TOWER VACUUM PUMP - UNIT 2	8 Pumps per Tower	1 X 12.5%		Supplied by tower vendor.	00B
WL	MP	003H	New	HYBRID COOLING TOWER VACUUM PUMP - UNIT 1	8 Pumps per Tower	1 X 12.5%		Supplied by tower vendor.	00B
WL	MP	003H	New	HYBRID COOLING TOWER VACUUM PUMP - UNIT 2	8 Pumps per Tower	1 X 12.5%		Supplied by tower vendor.	00B
WL	MT	001	New	COOLING TOWER MAKEUP STORAGE POND	Pond, 5,000,000 gallons useable	100%		≈2.8 hours (evaporation, drift & blowdown of 33,100 gpm). May use coomon 5,000,000 gallon pond in lieu of two tanks.	00A
WL	HV		New	HYBRID TOWER MOV ISOLATION VALVES - UNIT 1	Butterfly	1 X 12.5%		Supplied by tower vendor.	00A
WL	HV		New	HYBRID TOWER MOV ISOLATION VALVES - UNIT 1	Butterfly	1 X 12.5%		Supplied by tower vendor.	00A
WL	HV		New	HYBRID TOWER MOV ISOLATION VALVES - UNIT 1	Butterfly	1 X 12.5%		Supplied by tower vendor.	00A
WL	HV		New	HYBRID TOWER MOV ISOLATION VALVES - UNIT 1	Butterfly	1 X 12.5%		Supplied by tower vendor.	00A
WL	HV		New	HYBRID TOWER MOV ISOLATION VALVES - UNIT 1	Butterfly	1 X 12.5%		Supplied by tower vendor.	00A
WL	HV		New	HYBRID TOWER MOV ISOLATION VALVES - UNIT 1	Butterfly	1 X 12.5%		Supplied by tower vendor.	00A
WL	HV		New	HYBRID TOWER MOV ISOLATION VALVES - UNIT 1	Butterfly	1 X 12.5%		Supplied by tower vendor.	00A
WL	HV		New	HYBRID TOWER MOV ISOLATION VALVES - UNIT 1	Butterfly	1 X 12.5%		Supplied by tower vendor.	00A
WL	HV		New	HYBRID TOWER MOV ISOLATION VALVES - UNIT 2	Butterfly	1 X 12.5%		Supplied by tower vendor.	00A

Sys Code	Com. Code	Seq. No.	New/ Existing	Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
WL	HV		New	HYBRID TOWER MOV ISOLATION VALVES - UNIT 2	Butterfly	1 X 12.5%		Supplied by tower vendor.	00A
WL	HV		New	HYBRID TOWER MOV ISOLATION VALVES - UNIT 2	Butterfly	1 X 12.5%		Supplied by tower vendor.	00A
WL	HV		New	HYBRID TOWER MOV ISOLATION VALVES - UNIT 2	Butterfly	1 X 12.5%		Supplied by tower vendor.	00A
WL	HV		New	HYBRID TOWER MOV ISOLATION VALVES - UNIT 2	Butterfly	1 X 12.5%		Supplied by tower vendor.	00A
WL	HV		New	HYBRID TOWER MOV ISOLATION VALVES - UNIT 2	Butterfly	1 X 12.5%		Supplied by tower vendor.	00A
WL	HV		New	HYBRID TOWER MOV ISOLATION VALVES - UNIT 2	Butterfly	1 X 12.5%		Supplied by tower vendor.	00A
WL	HV		New	HYBRID TOWER MOV ISOLATION VALVES - UNIT 2	Butterfly	1 X 12.5%		Supplied by tower vendor.	00A
WL			New	HYBRID COOLING TOWER PLUME ABATEMENT DAMPER ACTUATORS - UNIT 1		1 X 25%		Supplied by tower vendor.	00A
WL			New	HYBRID COOLING TOWER PLUME ABATEMENT DAMPER ACTUATORS - UNIT 1		1 X 25%		Supplied by tower vendor.	00A
WL			New	HYBRID COOLING TOWER PLUME ABATEMENT DAMPER ACTUATORS - UNIT 1		1 X 25%		Supplied by tower vendor.	00A
WL			New	HYBRID COOLING TOWER PLUME ABATEMENT DAMPER ACTUATORS - UNIT 1		1 X 25%		Supplied by tower vendor.	00A
WL			New	HYBRID COOLING TOWER PLUME ABATEMENT DAMPER ACTUATORS - UNIT 2		1 X 25%		Supplied by tower vendor.	00A
WL			New	HYBRID COOLING TOWER PLUME ABATEMENT DAMPER ACTUATORS - UNIT 2		1 X 25%		Supplied by tower vendor.	00A
WL			New	HYBRID COOLING TOWER PLUME ABATEMENT DAMPER ACTUATORS - UNIT 2		1 X 25%		Supplied by tower vendor.	00A
WL			New	HYBRID COOLING TOWER PLUME ABATEMENT DAMPER ACTUATORS - UNIT 2		1 X 25%		Supplied by tower vendor.	00A
WO	ME		New	CIP TANK HEATER	50 KW heater, 10 KW pump		10 KW	Add 50 KW to operating power for the 50 KW heater	00A
WO	ML		New	DISSOLVED AIR FLOATATION	TBD Gallons, TBD L x W x H	9 x 12.5%	-		00A
WO	ML		New	FIRST STAGE DUAL MEDIA FILTERS	2,630 gpm throughput	30 x 3.6%	-		00A
WO	ML		New	SECOND STAGE DUAL MEDIA FILTERS	3,540 gpm throughput	22 x 5%	-		00A
WO	ML		New	SWRO CARTRIDGE FILTER	4,370 gpm throughput each	18 x 5.9%			00A
WO	ML		New	CIP CARTRIDGE FILTER	1,000 gpm throughput	1 x 100%	-		00A
WO	MP	001A	New	DESAL SEA WATER SUPPLY PUMP	Vertical Turbine, 38650 gpm, TDH: 570 feet with variable speed drive	1 x 50%	6800	Assumed TDH & Pump Eff to be refined later. Calculation Spreadsheet 12-19-12	00C
WO	MP	001B	New	DESAL SEA WATER SUPPLY PUMP	Vertical Turbine, 38650 gpm, TDH: 570 feet with variable speed drive	1 x 50%	6800	Assumed TDH & Pump Eff to be refined later. Calculation Spreadsheet 12-19-12	00C
WO	MP	001C	New	DESAL SEA WATER SUPPLY PUMP	Vertical Turbine, 38650 gpm, TDH: 570 feet with variable speed drive	1 x 50%	6800	Assumed TDH & Pump Eff to be refined later. Calculation Spreadsheet 12-19-12	00C
WO	MP	002A	New	SWRO MMF BACKWASH RETURN PUMP	Vertical Turbine, 2000 gpm, TDH 100 feet	1 x 100%	75	Assumed TDH & Pump Eff to be refined later. Calculation Spreadsheet 12-19-12	00A
WO	MP	002B	New	SWRO MMF BACKWASH RETURN PUMP	Vertical Turbine, 2000 gpm, TDH 100 feet	1 x 100%	75	Assumed TDH & Pump Eff to be refined later. Calculation Spreadsheet 12-19-12	00A
WO	MP		New	DAF FORWARDING PUMP	9,780 gpm, 100 ft	10 x 11.1%	350		00A
WO	MP		New	SWRO BOOSTER PUMP	4,240 gpm, 2,000 ft TDH	9 x 12.5%	3000		00A
WO	MP		New	SWRO ENERGY RECOVERY DEVICE	5,110 gpm	9 x 12.5%	-		00A
WO	MP		New	SWRO ERD BOOSTER PUMP	5,110 gpm, 200 ft TDH	9 x 12.5%	400		00A
WO	MP		New	CIP RECIRCULATION PUMP	1200 gpm, 250 ft TDH	2 x 100%	100		00A
WO	MP		New	SODIUM HYPOCHLORITE DOSING PUMP	25 gph	2 x 100%	1		00A
WO	MP		New	DAF COAGULANT DOSING PUMP	TBD gph	2 x 100%	1		00A
WO	MP		New	MMF COAGULANT DOSING PUMP	TBD gph	2 x 100%	1		00A
WO	MP		New	ACID DOSING PUMP	25 gph	2 x 100%	1		00A
WO	MP		New	ANTISCALANT DOSING PUMP	TBD gph	2 x 100%	1		00A
WO	MP		New	DECHLORINATION DOSING PUMP	TBD gph	2 x 100%	1		00A

Sys Code	Com. Code	Seq. No.	New/ Existing	Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
WO	MT		New	AIR SATURATION TANK	TBD Gallons	9 x 12.5%	-		00A
WO	MT		New	CIP SOLUTION TANK	6,000 gallons	1 x 100%	-		00A
WO	MT		New	SODIUM HYPOCHLORITE STORAGE TANK	21,000 gallons	1 x 100%	-		00A
WO	MT		New	DAF COAGULANT STORAGE TANK	21,000 gallons	1 x 100%	-		00A
WO	MT		New	MMF COAGULANT STORAGE TANK	21,000 gallons	1 x 100%	-		00A
WO	MT		New	ACID STORAGE TANK	21,000 gallons	1 x 100%	-		00A
WO	MT		New	ANTISCALANT STORAGE TANK	21,000 gallons	1 x 100%	-		00A
WO	MT		New	DECHLORINATION STORAGE TANK	21,000 gallons	1 x 100%	-		00A
WO	MW	001	New	**DESALINATION PLANT**	Multiple Train System consisting of multimedia filters (MMF), seawater reverse osmosis (SWRO) trains, clean-in-place (CIP) systems and chemical dosing systems, product flowrate - 33100 gpm.	100%		Estimated Plant area: 422,000 sq feet	00A
WO	MW		New	SWRO MEMBRANE UNIT	3,670 gpm throughput	9 x 12.5%	-		00A
WR	MC		New	FILTER "A" VACUUM PUMP	TBD	2 x 100%	5.5		00A
WR	ML		New	FILTER (GREENLEAF FILTER)	2,800 gpm	1 x 100%			00A
WR	ML		New	FILTER PRESS	20 Cft	2 x 100%	5.0		00A
WR	MP	001A	New	CLARIFIER FORWARDING PUMP	Horizontal centrifugal, 3000 gpm, 100 feet TDH	1 x 100%			00A
WR	MP	001B	New	CLARIFIER FORWARDING PUMP	Horizontal centrifugal, 3000 gpm, 100 feet TDH	1 x 100%			00B
WR	MP	002A	New	RECLAIM WATER CLARIFIER FEED PUMP	Horizontal centrifugal, 3000 gpm, 100 feet TDH	1 x 100%			00C
WR	MP	002B	New	RECLAIM WATER CLARIFIER FEED PUMP	Horizontal centrifugal, 3000 gpm, 100 feet TDH	1 x 100%			00C
WR	MP	003A	New	CLARIFIER MMF BACKWASH PUMP	Vertical Centrifugal, 1000 gpm, 100 feet TDH	1 x 100%			00A
WR	MP	003B	New	CLARIFIER MMF BACKWASH PUMP	Vertical Centrifugal, 1000 gpm, 100 feet TDH	1 x 100%			00A
WR	MP	004A	New	MORO BAY RECLAIM WATER SUPPLY PUMP	Vertical Turbine, 800 gpm, 500 feet TDH, 15 feet baseplate to suction bell inlet	1 x 100%	150	Pump station is located approximately 20 miles off site.	00C
WR	MP	004B	New	MORO BAY RECLAIM WATER SUPPLY PUMP	Vertical Turbine, 800 gpm, 500 feet TDH, 15 feet baseplate to suction bell inlet	1 x 100%	150	Pump station is located approximately 20 miles off site.	00C
WR	MP	005A	New	SAN LUIS OBISPO RECLAIM WATER SUPPLY PUMP	Vertical Turbine, 2000 gpm, 580 feet TDH, 15 feet baseplate to suction bell inlet	1 x 100%	400	Pump station is located approximately 20 miles off site.	00C
WR	MP	005B	New	SAN LUIS OBISPO RECLAIM WATER SUPPLY PUMP	Vertical Turbine, 2000 gpm, 580 feet TDH, 15 feet baseplate to suction bell inlet	1 x 100%	400	Pump station is located approximately 20 miles off site.	00C
WR	MP		New	CLARIFIER "A" SLUDGE RECIRCULATION / BLOWDOWN PUMP SET	140 gpm, 46 ft TDH with VFD	3 x 50%	7.5		00A
WR	MP		New	FILTER PRESS FEED PUMP	30 gpm, 100 psig	3 x 50%	N/A	Air operated diaphragm	00A
WR	MP		New	FILTRATE SUMP TRANSFER PUMP	100 gpm, 46 ft TDH	2 x 100%	2.0		00A
WR	MP		New	SODIUM HYPOCHLORITE DOSING PUMPS	10 gph	4 x 25%	0.3		00A
WR	MP		New	FERRIC CHLORIDE DOSING PUMP	20 gph	4 x 25%	0.5		00A
WR	MP		New	POLYELECTROLYTE DOSING PUMP	2 gph	3 x 50%	0.25		00A
WR	MT	001	New	RECLAIM WATER STORAGE TANK	Field Fabricated Epoxy Coated Carbon Steel, 100,000 gallon	1 x 100%		Sized for 30 min storage, 40 ft Diameter and 40 ft High	00C
WR	MT		New	MIX TANK (RAPID)	9,300 gallons, 9'D x 20.25'H	1 x 100.3%			00A
WR	MT		New	REACTION TANK (DENSADEG REACTOR)	37,000 gallons 19'D x 18.5'H	1 x 100.3%	-		00A
WR	MT		New	FILTER BACKWASH SUPPLY TANK	21,000 gallons	1 x 100%	-		00A
WR	MT		New	SLUDGE STORAGE TANK	6,000 gallons, 10'D x 12'H	1 x 100%	-		00A
WR	MT		New	SLUDGE STORAGE TANK MIXER	With VFD	1 x 100%	5.0		00A
WR	MT		New	SODIUM HYPOCHLORITE BULK STORAGE TANK	5000 gallons	1 x 100%	-		00A
WR	MT		New	FERRIC CHLORIDE STORAGE TANK	5,000 gallons	1 x 100%	-		00A
WR			New	MIX TANK MIXER	With VFD	1 x 100%	5.0		00A
WR			New	REACTION TANK MIXER	With VFD	3 x 33.3%	7.5		00A
WR			New	CLARIFIER (DENSADEG CLARIFIER / THICKENER)	2,800 gpm 26'D x 18.5'H	1 x 100%	-		00A
WR			New	CLARIFIER SLUDGE SCRAPER	Two arms	1 x 100%	0.5		00B
XN			New	DESAL AREA SANITARY LIFT STATION	48" diameter concrete sump, vented cover, duplex submersible pumps (50 gpm, TH: 100 ft), control panel, external valve box,				00A
WL	CWP	1	EXIST	CIRCULATING WATER PUMP	Concrete volute pump			Decommission	00B

Sys Code	Com. Code	Seq. No.	New/ Existing	Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
WL	CWP	1	EXIST	CIRCULATING WATER PUMP	Concrete volute pump			Decommission	00B
WL	CWP	2	EXIST	CIRCULATING WATER PUMP	Concrete volute pump			Decommission	00B
WL	CWP	2	EXIST	CIRCULATING WATER PUMP	Concrete volute pump			Decommission	00B
WB	SCW HX	1	EXIST	SERVICE COOLING WATER HX	Shell and tube			Remove and replace with new HX 1-WB-ME-001A	00B
WB	SCW HX	1	EXIST	SERVICE COOLING WATER HX	Shell and tube			Remove and replace with new HX 2-WB-ME-001A	00B
WB	SCW HX	2	EXIST	SERVICE COOLING WATER HX	Shell and tube			Remove and replace with new HX 1-WB-ME-001B	00B
WB	SCW HX	2	EXIST	SERVICE COOLING WATER HX	Shell and tube			Remove and replace with new HX 2-WB-ME-001B	00B
WB		1	EXIST	CONDENSATE COOLER	Shell and tube			Remove and replace with new HX 1-WB-ME-002	00B
WB		1	EXIST	CONDENSATE COOLER	Shell and tube			Remove and replace with new HX 2-WB-ME-002	00B

JUOTC - DIABLO CANYON

Preliminary Mechanical Equipment List
Fine Mesh Screening

25762-110-M0X-YA-00006

00B	6/24/2013	Issued for Estimate Report	RP		RP
00A	5/8/2013	Issued for Estimating	RP	-	RP
Rev	**Date**	**Reason for Revision**	**Orignator**	**Checked**	**Approved**

System Codes		Commodity Codes	
WL	Circulating Water	ME	Heat Exchange Component (Cooling Tower, Heat Exchanger)
WO	Sea Water	ML	Liquid-Solid Separation (Traveling Screens, Trash Racks, Automatic Strainser/Filters)
		MP	Pump
		MT	Tank
		PP	Pump - exist plant
		PY	In line piping specialty

NOTES:

1. Commodity Codes shown are Bechtel standard codes. Bechtel Commodity codes have beens assigned to exisiting plant equipment numbers to aid in equipment list sorts.
2. System Codes shown are Bechtel standard codes. Bechtel System Codes have been assigned to existing plant equipment numbers to aid in list sorts.

Quantity	Bidder Quote to be Used	Unit	Sys Code	Com. Code [1]	Seq. No.	New / Existing	Description	Type	Capacity (%) - Per Unit	Drive Motor Size BHP (or kW)	Comments	Rev.
1	Ovivo Proposal BP12-189R1	1	WT	ML	001	New	DUAL FLOW TRAVELING SCREEN WITH FISH CATCHER	Fine mesh (1 mm x 6 mm), 13 foot, variable speed drives (5/10/20/40 fpm)	16.67	15.0	1 ft/s thru mesh velocity, fish and debris transition troughs included. Discharge troughs priced by linear foot.	00A
1	Ovivo Proposal BP12-189R1	1	WT	ML	002	New	DUAL FLOW TRAVELING SCREEN WITH FISH CATCHER	Fine mesh (1 mm x 6 mm), 13 foot, variable speed drives (5/10/20/40 fpm)	16.67	15.0	1 ft/s thru mesh velocity, fish and debris transition troughs included. Discharge troughs priced by linear foot.	00A
1	Ovivo Proposal BP12-189R1	1	WT	ML	003	New	DUAL FLOW TRAVELING SCREEN WITH FISH CATCHER	Fine mesh (1 mm x 6 mm), 13 foot, variable speed drives (5/10/20/40 fpm)	16.67	15.0	1 ft/s thru mesh velocity, fish and debris transition troughs included. Discharge troughs priced by linear foot.	00A
1	Ovivo Proposal BP12-189R1	1	WT	ML	004	New	DUAL FLOW TRAVELING SCREEN WITH FISH CATCHER	Fine mesh (1 mm x 6 mm), 13 foot, variable speed drives (5/10/20/40 fpm)	16.67	15.0	1 ft/s thru mesh velocity, fish and debris transition troughs included. Discharge troughs priced by linear foot.	00A
1	Ovivo Proposal BP12-189R1	1	WT	ML	005	New	DUAL FLOW TRAVELING SCREEN WITH FISH CATCHER	Fine mesh (1 mm x 6 mm), 13 foot, variable speed drives (5/10/20/40 fpm)	16.67	15.0	1 ft/s thru mesh velocity, fish and debris transition troughs included. Discharge troughs priced by linear foot.	00A
1	Ovivo Proposal BP12-189R1	1	WT	ML	006	New	DUAL FLOW TRAVELING SCREEN WITH FISH CATCHER	Fine mesh (1 mm x 6 mm), 13 foot, variable speed drives (5/10/20/40 fpm)	16.67	15.0	1 ft/s thru mesh velocity, fish and debris transition troughs included. Discharge troughs priced by linear foot.	00A
1	N/A	1	WT		7	Existng	ONCE THROUGH SCREEN				Existing to remain as is- Ovivo to supply new control panel (1/17/13 email) ro replace existing control panel.	00A
1	N/A	1	WT	PP	1-1	Existing	SCREEN WASH PUMP	vertical 3900 gpm, TDH: 260 feet, variable speed	1 X 100%	350	Continue to use	00A
1	N/A	1	WT	PP	1-2	Existing	SCREEN WASH PUMP	vertical 3900 gpm, TDH: 260 feet, variable speed	1 X 100%	350	Continue to use	00A
1	Estimating	1	WT	MP	003	New	SCREEN WASH PUMP	vertical 2100 gpm, TDH: 260 feet, variable speed	1 X 100%	200	2100 gpm @ ~260 feet using pump eff 85%	00A
	Estimating	1	WT	PY		New	Pump MP 003 discharge expansion joint	10" rubber with tie rods				
1	Estimating	1	WT	ML	009	New	SCREEN WASH STRAINER	AUTOMATIC BACKWASH	1 X 100%	0.5	0.5mm mesh SP Kinney Model AF strainer or equivalent	00A
1	Estimating	1	WT	PSV	001	New	SCREEN WASH STRAINER SAFETY VALVE	¾" x 1"				00A
1	Ovivo Proposal BP12-189R1	2	WT	ML	001	New	DUAL FLOW TRAVELING SCREEN WITH FISH CATCHER	Fine mesh (1 mm x 6 mm), 13 foot, variable speed drives (5/10/20/40 fpm)	16.67	15.0	1 ft/s thru mesh velocity, fish and debris transition troughs included. Discharge troughs priced by linear foot.	00A
1	Ovivo Proposal BP12-189R1	2	WT	ML	002	New	DUAL FLOW TRAVELING SCREEN WITH FISH CATCHER	Fine mesh (1 mm x 6 mm), 13 foot, variable speed drives (5/10/20/40 fpm)	16.67	15.0	1 ft/s thru mesh velocity, fish and debris transition troughs included. Discharge troughs priced by linear foot.	00A
1	Ovivo Proposal BP12-189R1	2	WT	ML	003	New	DUAL FLOW TRAVELING SCREEN WITH FISH CATCHER	Fine mesh (1 mm x 6 mm), 13 foot, variable speed drives (5/10/20/40 fpm)	16.67	15.0	1 ft/s thru mesh velocity, fish and debris transition troughs included. Discharge troughs priced by linear foot.	00A
1	Ovivo Proposal BP12-189R1	2	WT	ML	004	New	DUAL FLOW TRAVELING SCREEN WITH FISH CATCHER	Fine mesh (1 mm x 6 mm), 13 foot, variable speed drives (5/10/20/40 fpm)	16.67	15.0	1 ft/s thru mesh velocity, fish and debris transition troughs included. Discharge troughs priced by linear foot.	00A
1	Ovivo Proposal BP12-189R1	2	WT	ML	005	New	DUAL FLOW TRAVELING SCREEN WITH FISH CATCHER	Fine mesh (1 mm x 6 mm), 13 foot, variable speed drives (5/10/20/40 fpm)	16.67	15.0	1 ft/s thru mesh velocity, fish and debris transition troughs included. Discharge troughs priced by linear foot.	00A
1	Ovivo Proposal BP12-189R1	2	WT	ML	006	New	DUAL FLOW TRAVELING SCREEN WITH FISH CATCHER	Fine mesh (1 mm x 6 mm), 13 foot, variable speed drives (5/10/20/40 fpm)	16.67	15.0	1 ft/s thru mesh velocity, fish and debris transition troughs included. Discharge troughs priced by linear foot.	00A
1	N/A	2	WT		7	Existng	ONCE THROUGH SCREEN				Existing to remain as is- Ovivo to supply new control panel (1/17/13 email)	00A
1	Estimating	2	WT	PP	2-1	Existing	SCREEN WASH PUMP	vertical 3900 gpm, TDH: 260 feet, variable speed	1 X 100%	350	Continue to use	00A
1	Estimating	2	WT	MP	003	New	SCREEN WASH PUMP	vertical 2100 gpm, TDH: 260 feet, variable speed	1 X 100%	200	2100 gpm @ ~260 feet using pump eff 85%	00A
	Estimating	1	WT	PY		New	Pump MP 003 discharge expansion joint	10" rubber with tie rods				
1	Estimating	2	WT	ML	009	New	SCREEN WASH STRAINER	AUTOMATIC BACKWASH	1 X 100%	0.5	0.5mm mesh SP Kinney Model AF strainer or equivalent	00A
1	Estimating	2	WT	PSV	001	New	SCREEN WASH STRAINER SAFETY VALVE	¾" x 1"				00A
1	Estimating	1	WT	PY		New	Y-strainer - Spray line to Traveling Screen ML001	6 inch			Duplex stainless steel materials (compatible with sea water0	00B
1	Estimating	1	WT	PY		New	Y-strainer - Spray line to Traveling Screen ML002	6 inch			Duplex stainless steel materials (compatible with sea water0	00B
1	Estimating	1	WT	PY		New	Y-strainer - Spray line to Traveling Screen ML003	6 inch			Duplex stainless steel materials (compatible with sea water0	00B
1	Estimating	1	WT	PY		New	Y-strainer - Spray line to Traveling Screen ML004	6 inch			Duplex stainless steel materials (compatible with sea water0	00B
1	Estimating	1	WT	PY		New	Y-strainer - Spray line to Traveling Screen ML005	6 inch			Duplex stainless steel materials (compatible with sea water0	00B
1	Estimating	1	WT	PY		New	Y-strainer - Spray line to Traveling Screen ML006	6 inch			Duplex stainless steel materials (compatible with sea water0	00B
1	Estimating	2	WT	PY		New	Y-strainer - Spray line to Traveling Screen ML001	6 inch			Duplex stainless steel materials (compatible with sea water0	00B
1	Estimating	2	WT	PY		New	Y-strainer - Spray line to Traveling Screen ML002	6 inch			Duplex stainless steel materials (compatible with sea water0	00B
1	Estimating	2	WT	PY		New	Y-strainer - Spray line to Traveling Screen ML003	6 inch			Duplex stainless steel materials (compatible with sea water0	00B
1	Estimating	2	WT	PY		New	Y-strainer - Spray line to Traveling Screen ML004	6 inch			Duplex stainless steel materials (compatible with sea water0	00B
1	Estimating	2	WT	PY		New	Y-strainer - Spray line to Traveling Screen ML005	6 inch			Duplex stainless steel materials (compatible with sea water0	00B
1	Estimating	2	WT	PY		New	Y-strainer - Spray line to Traveling Screen ML006	6 inch			Duplex stainless steel materials (compatible with sea water0	00B

JUOTC DRY NATURAL DRAFT CT OPTION

DCPP

Valve List

00B	7/24/2013	Issued for Estimate Report	RP	—	RP
00A	7/11/2013	Issue for Estimate	RP	-	RP
Rev	**Date**	**Reason for Revision**	**Orignator**	**Checked**	**Approved**

System Codes		Commodity Code	
PF	Fire System	PV	Valve
WL	Circulating Water	HV	valve with motor or pneumatic operator used for on /off operation
WO	Salt Water Cooling	PIV	Post Indicating Valve

Note:

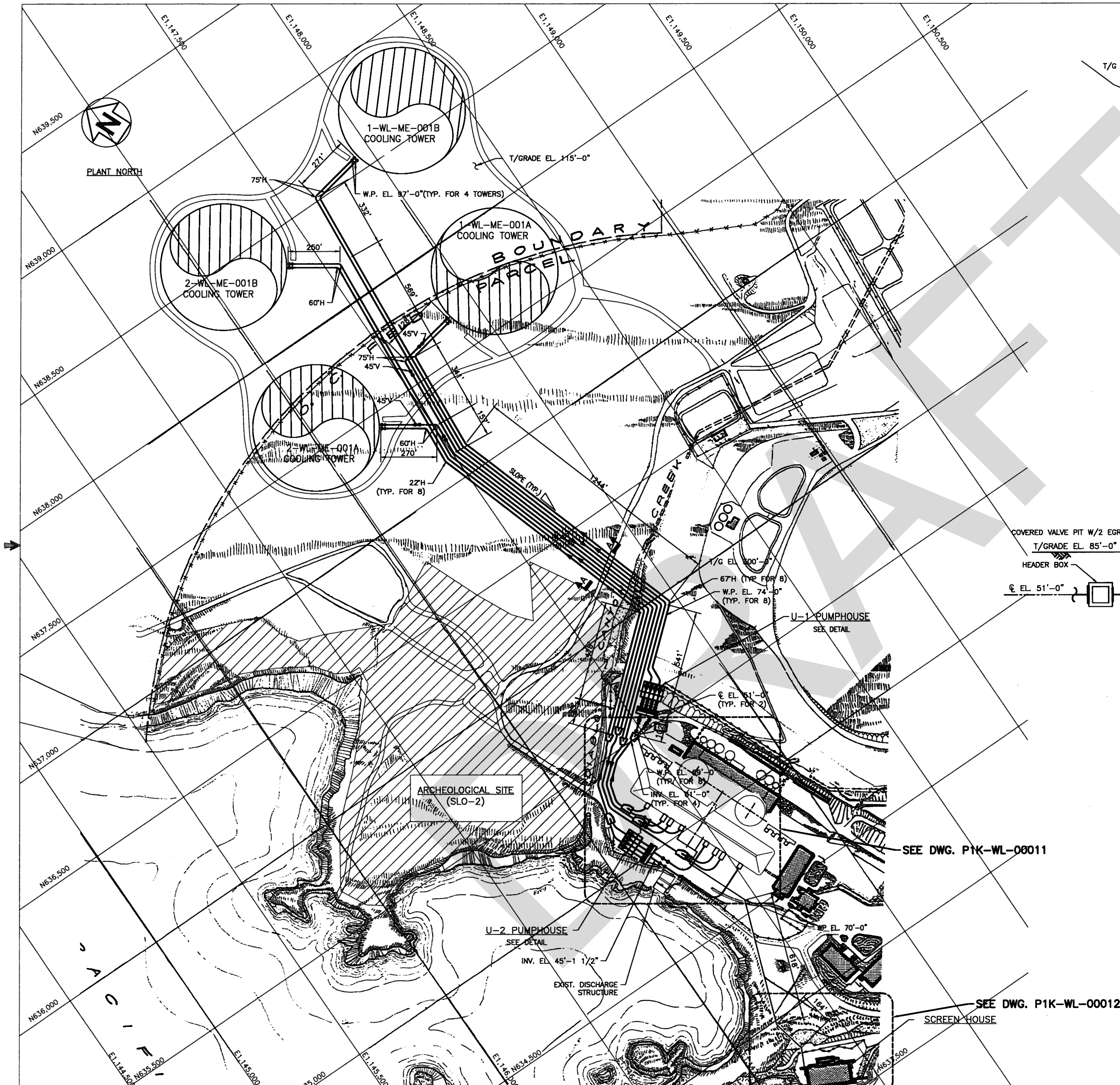
1 Valves furnished with vendor packages are not included in this list. Some valves supplier by the cooling tower supplier have been included in the equipment list to help define the scope of supply by

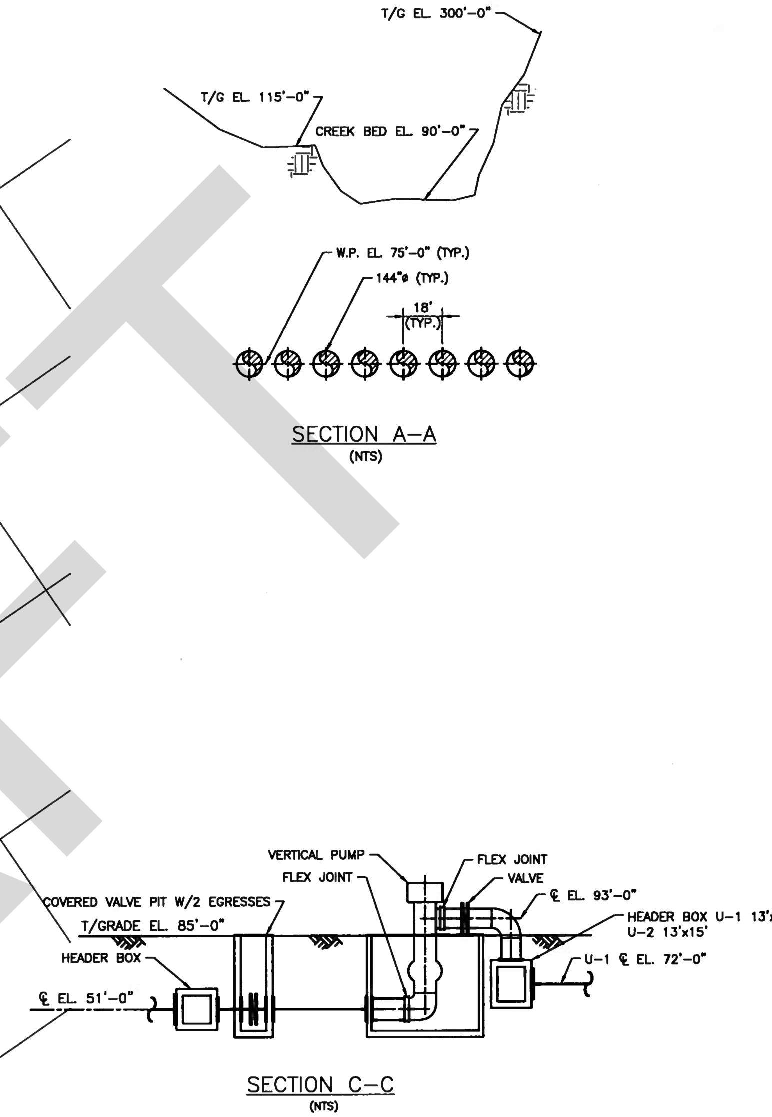
Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Design Press (pisg)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
Salt Water Cooling Pump WO-MP-001A discharge, HV 022A	1	HV	WO	022	A	24	Butterfly	Motor	flange	100	70	75	56	25762-110-M6K-WL-00001	No	Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
Salt Water Cooling Pump WO-MP-001B discharge, HV 022B	1	PV	WO	022	B	24	Butterfly	Motor	flange	100	70	75	56	25762-110-M6K-WL-00001	No	Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
Inlet to PI021A	1	PV	WO			1	gate		flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
Outlet to WO-MP-001A auto vent isolation	1	PV	WO			2	ball		flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
Outlet to WO-MP-001A auto vent	1	PV	WO			2	AR		flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
Inlet to PI021B	1	PV	WO			1	gate		flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
Outlet to WO-MP-001B auto vent isolation	1	PV	WO			2	ball		flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
Outlet to WO-MP-001B auto vent	1	PV	WO			2	AR		flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
Upstream of HV009A to Makeup Water Line	1	PV	WL			6	gate		flange	100	70	50	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On Makeup Water Line, HV009A	1	HV	WL	009	A	6	globe	Air	flange	100	70	50	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Downstream of HV009A isolation	1	PV	WL			6	gate		flange	100	70	50	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Upstream of HV009B to Makeup Water Line	1	PV	WL			6	gate		flange	100	70	50	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On Makeup Water Line, HV009B	1	PV	WL	009	B	6	globe	Air	flange	100	70	50	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Downstream of HV009B islolation	1	PV	WL			6	gate		flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On PIT003A	1	PV	WL			1	gate			50	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A

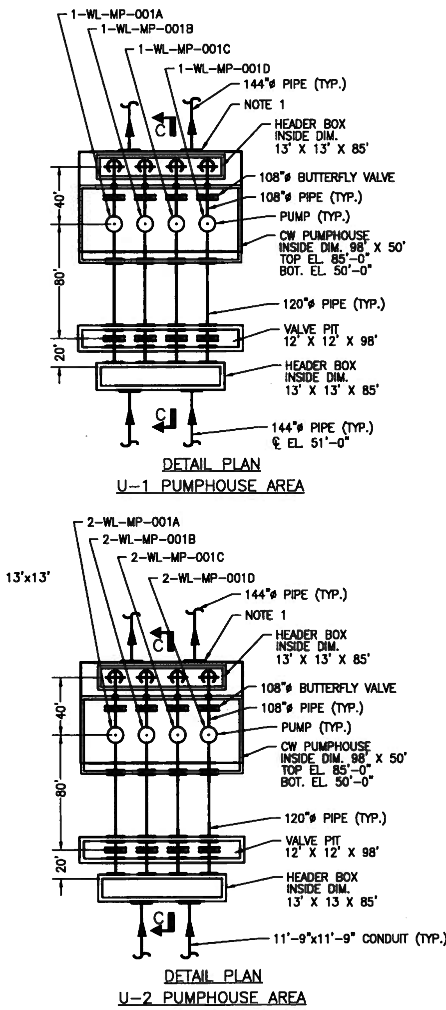
Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Design Press (pisg)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
On PIT003B	1	PV	WL			1	gate		flange	50	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
On PIT003C	1	PV	WL			1	gate		flange	50	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On PIT003D	1	PV	WL			1	Gate		flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Outlet from WL-MP-001A vent	1	PV	WL			2	globe		flange	50	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Outlet from WL-MP-001B vent	1	PV	WL			2	globe		flange	85	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Outlet from WL-MP-001C vent	1	PV	WL			2	globe		flange	85	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Outlet from WL-MP-001D vent	1	PV	WL			2	globe		flange	85	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Root connection to PI 001A	1	PV	WL			1	gate		flange	85	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Root connection to PI 001B	1	PV	WL			1	gate		flange	85		75	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Root connection to PI 001C	1	PV	WL			1	gate		flange	85	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Root connection to PI 001D	1	PV	WL			1	gate		flange	85	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Salt Water Cooling Pump WO-MP-001A discharge, HV 022A	2	HV	WO	022	A	24	Butterfly	Motor	flange	100	70	75	56	25762-110-M6K-WL-00001	No	Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
Salt Water Cooling Pump WO-MP-001B discharge, HV 022B	2	HV	WO	022	B	24	Butterfly	Motor	flange	100	70	75	56	25762-110-M6K-WL-00001	No	Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
Inlet to PI021A	2	PV	WO			1	gate		flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
Outlet to WL-MP-001A auto vent isolation	2	PV	WO			2	ball		flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A

Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Design Press (pisg)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
Outlet to WO-MP-001A auto vent	2	PV	WO			2	AR		flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
Inlet to PI021B	2	PV	WO			1	gate		flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
Outlet to WO-MP-001B auto vent isolation	2	PV	WO			2	ball		flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
Outlet to WO-MP-001B auto vent	2	PV	WO			2	AR		flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
Upstream of HV009A on Makeup Water Line	2	PV	WL			6	gate		flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On Makeup Water Line, HV009A	2	HV	WL	009	A	6	globe	Air	flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Downstream of HV009A on the Makeup Water Pump	2	HV	WL	009	B	6	gate		flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Upstream of HV009B on Makeup Water Line	2	PV	WL			6	gate		flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On Makeup Water Line, HV009B	2	PV	WL			6	globe	Motor	flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Downstream of HV009B on the Makeup Water Pump	2	PV	WL			6	gate		flange	100	70	75	56	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On PIT003A	2	PV	WL			1	Gate		flange	50	130	30	125	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On PIT003B	2	PV	WL			1	Gate		flange	50	130	30	125	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On PIT003C	2	PV	WL			1	Gate		flange	50	130	30	125	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On PIT003D	2	PV	WL			1	Gate		flange	50	130	30	125	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Outlet from WL-MP-001A vent	2	PV	WL			2	globe		flange	85	130	75	125	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Outlet from WL-MP-001B vent	2	PV	WL			2	globe		flange	85	130	75	125	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A

Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Design Press (pisg)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
Outlet from WL-MP-001C vent	2	PV	WL			2	globe		flange	85	130	75	125	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Outlet from WL-MP-001D auto vent	2	PV	WL			2	globe		flange	85	130	75	125	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Root connection to PI 001A	2	PV	WL			1	gate		flange	85	130	75	125	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Root connection to PI 001B	2	PV	WL			1	gate		flange	85	130	75	125	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Root connection to PI 001C	2	PV	WL			1	gate		flange	85	130	75	125	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Root connection to PI 001D	2	PV	WL			1	gate		flange	85	130	75	125	25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Inlet isolation WL-MP-001A	1	HV	WL	002	A	120	Butterfly	Motor	flange	50	130	30	125	25762-110-M6K-WL-00001	No	Valve Quote	Ductile Iron , epoxy coated or rubber lined	00B
Inlet isolation WL-MP-001B	1	HV	WL	002	B	120	Butterfly	Motor	flange	50	130	30	130	25762-110-M6K-WL-00001	No	Valve Quote	Ductile Iron , epoxy coated or rubber lined	00B
Inlet isolation WL-MP-001C	1	HV	WL	002	C	120	Butterfly	Motor	flange	50	130	30	125	25762-110-M6K-WL-00001	No	Valve Quote	Ductile Iron , epoxy coated or rubber lined	00B
Inlet isolation WL-MP-001D	1	HV	WL	002	D	120	Butterfly	Motor	flange	50	130	30	125	25762-110-M6K-WL-00001	No	Valve Quote	Ductile Iron , epoxy coated or rubber lined	00B
Inlet isolation WL-MP-001A	2	HV	WL	002	A	120	Butterfly	Motor	flange	50	130	30	125	25762-110-M6K-WL-00001	No	Valve Quote	Ductile Iron , epoxy coated or rubber lined	00B
Inlet isolation WL-MP-001B	2	HV	WL	002	B	120	Butterfly	Motor	flange	50	130	30	125	25762-110-M6K-WL-00001	No	Valve Quote	Ductile Iron , epoxy coated or rubber lined	00B
Inlet isolation WL-MP-001C	2	HV	WL	002	C	120	Butterfly	Motor	flange	50	130	30	125	25762-110-M6K-WL-00001	No	Valve Quote	Ductile Iron , epoxy coated or rubber lined	00B







REFERENCE DRAWING(S):

25762-110-M5K-WL-0001	BECHTEL	PFD COOLING TOWER
25762-110-M6K-WL-0001	BECHTEL	P&ID COOLING TOWER
25762-110-P1K-WL-00011	BECHTEL	GA
25762-110-P1K-WL-00012	BECHTEL	GA
25762-110-P1K-WL-00013	BECHTEL	REMOVAL
25762-110-ERK-WL-00010	BECHTEL	ELEC. RACEWAY
438093	PG&E	CIVIL CONDUIT
438099	PG&E	CIVIL CONDUIT
438118	PG&E	CIVIL DISCHARGE STRUCTURE
438120	PG&E	CIVIL DISCHARGE STRUCTURE
438172	PG&E	CIVIL GA YARD UTIL.
438300	PG&E	CIVIL CONDUIT TURB. BLDG.
491210TOW	GEA	COOLING TOWER

CONSTRUCTION NOTE(S):
1. LABELING IS TYPICAL FOR BOTH UNITS.
2. PIPE TO CONCRETE CONNECTIONS AS APPLICABLE.
3. PROVIDE TWO EGRESS LOCATIONS IN VALVE PIT.

0 50 100 200 300 400 500FT

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION, OR CONSTRUCTION.

NO.	DATE	REVISIONS	BY	CHK	DESIGN SUPV	ENGR	PROJ ENGR	
	/ /							
	/ /							
C	06/28/13	ISSUE FOR INTERNAL ESTIMATE	MJB for DMH	-	MJB	-	[illegible]	-
B	04/04/13	ISSUE FOR BUDGETARY PRICING	DMH		MJB		PK FOR	DED
A	03/05/13	ISSUE FOR PRELIMINARY REVIEW	DMH		MJB		DED	

SCALE	DESIGNED	DRAWN	CHIEF ENGR

BECHTEL
FREDERICK, MARYLAND

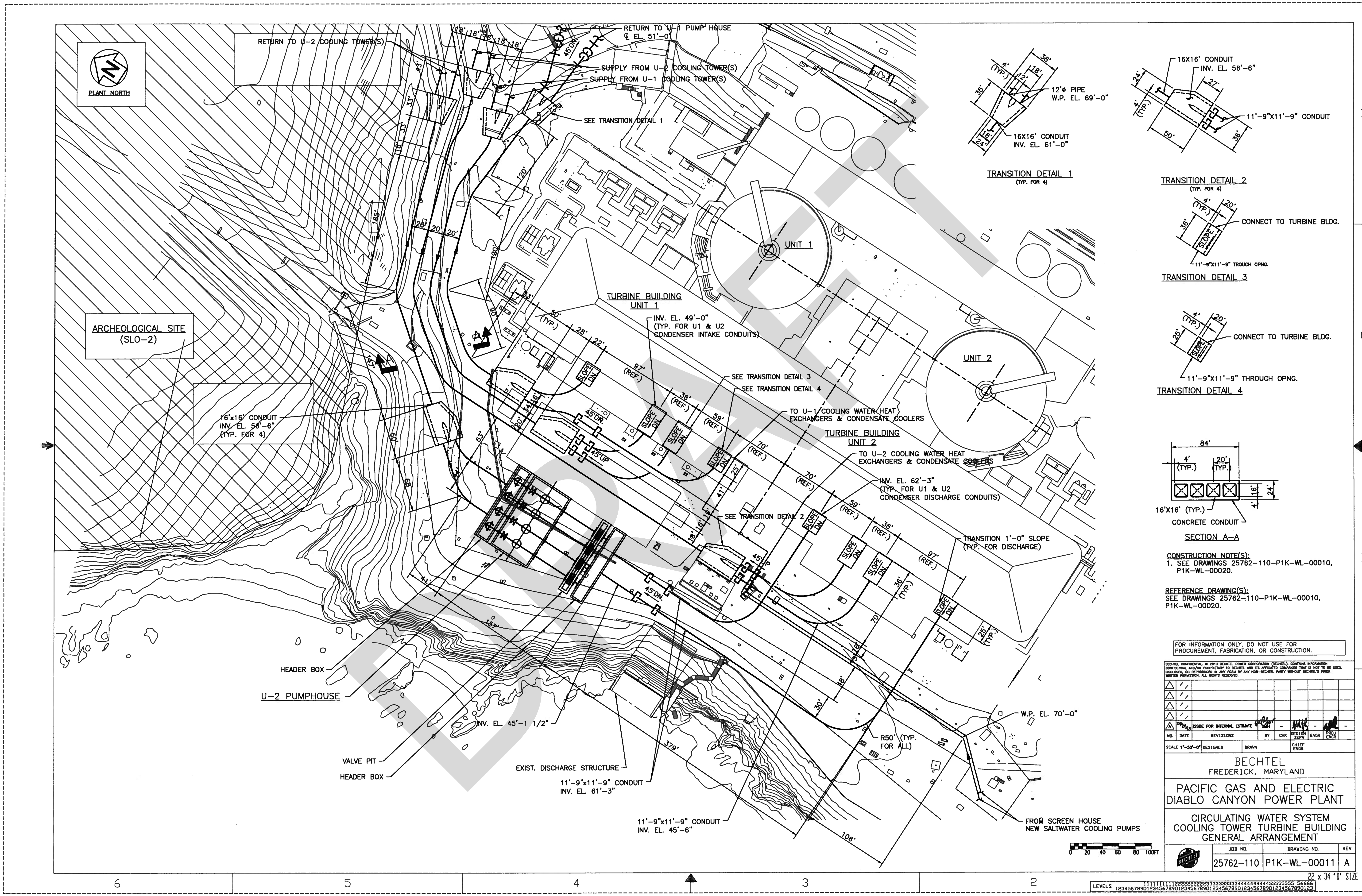
PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

CIRCULATING WATER SYSTEM
DRY NATURAL DRAFT COOLING TOWER
GENERAL ARRANGEMENT

JOB NO.	DRAWING NO.	REV
25762-110	P1K-WL-00010	C

22 x 34 'D' SIZE

DRAFT



CONSTRUCTION NOTE(S):
1. SEE DRAWINGS 25762-110-P1K-WL-00010, P1K-WL-00020.

REFERENCE DRAWING(S):
SEE DRAWINGS 25762-110-P1K-WL-00010, P1K-WL-00020.

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION, OR CONSTRUCTION.

NO.	DATE	REVISIONS	BY	CHK	DESIGN SUPV	ENGR	PROJ ENGR
A		ISSUE FOR INTERNAL ESTIMATE		-		-	

SCALE 1"=50'-0" DESIGNED DRAWN CHIEF ENGR

BECHTEL
FREDERICK, MARYLAND

PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

CIRCULATING WATER SYSTEM
COOLING TOWER TURBINE BUILDING
GENERAL ARRANGEMENT

JOB NO.	DRAWING NO.	REV
25762-110	P1K-WL-00011	A

22 x 34 'D' SIZE

0 20 40 60 80 100FT

REFERENCE(S):

25762-110-P1K-WL-00010	BECHTEL GA	
25762-110-P1K-WL-00020	BECHTEL GA	
USE THIS DRAWING	BECHTEL CIVIL	
501028	PG&E	PIPING
501030	PG&E	PIPING
501031	PG&E	PIPING
59461	PG&E	CIVIL
59463	PG&E	CIVIL

NOTE(S):

1. SEE DRAWING(S) P1K-WL-00010 OR P1K-WL-00020, FOR ADDITIONAL NOTES.
2. FOUR SALT WATER COOLING PUMPS; TWO PER UNIT. MOUNT BELOW DECK AT FLOOR EL. -2'-1 1/4". PUMP SUCTION NOZZLE WILL EXTEND 12'-0" BELOW FLOOR ELEVATION (APPROXIMATELY 12" BELOW MEAN LOWER LOW WATER (MLLW), 0'-0"). PUMP AND MOTOR ASSEMBLY IS APPROXIMATELY 24"ø x 18'-0" TALL. 26"ø FLOOR OPENING REQUIRED TO INSERT PUMP SHAFT. NEW PUMPS WILL BE PIPED IN PARALLEL AND ROUTED TO EXISTING TURBINE PLANT SERVICE COOLING WATER HEAT EXCHANGERS AND CONDENSATE COOLER. PUMP AND MOTOR MAY REQUIRE DISASSEMBLE TO INSTALL.
3. NEW PUMPS WILL LIMIT IMPACT TO WORK LAY-DOWN AREA.
4. USE FLANGE CONNECTIONS BETWEEN DISSIMILAR MATERIAL CONNECTIONS.
5. SUPPORT AS REQUIRED.

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION, OR CONSTRUCTION.

NO.	DATE	REVISIONS	BY	CHK	DESIGN SUPV	ENGR	PROJ ENGR	
	/ /							
	/ /							
	/ /							
B	9/17/13	REVISED NOTE 2	RP		MJB		DED	
A	06/28/13	ISSUE FOR INTERNAL ESTIMATE	MJB for DNH		MJB		DED	

SCALE 1"=30'-0"	DESIGNED	DRAWN	CHIEF ENGR

BECHTEL
FREDERICK, MARYLAND

PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

CIRCULATING WATER SYSTEM
COOLING TOWER SALT WATER PUMPS
GENERAL ARRANGEMENT

JOB NO.	DRAWING NO.	REV
25762-110	P1K-WL-00012	B

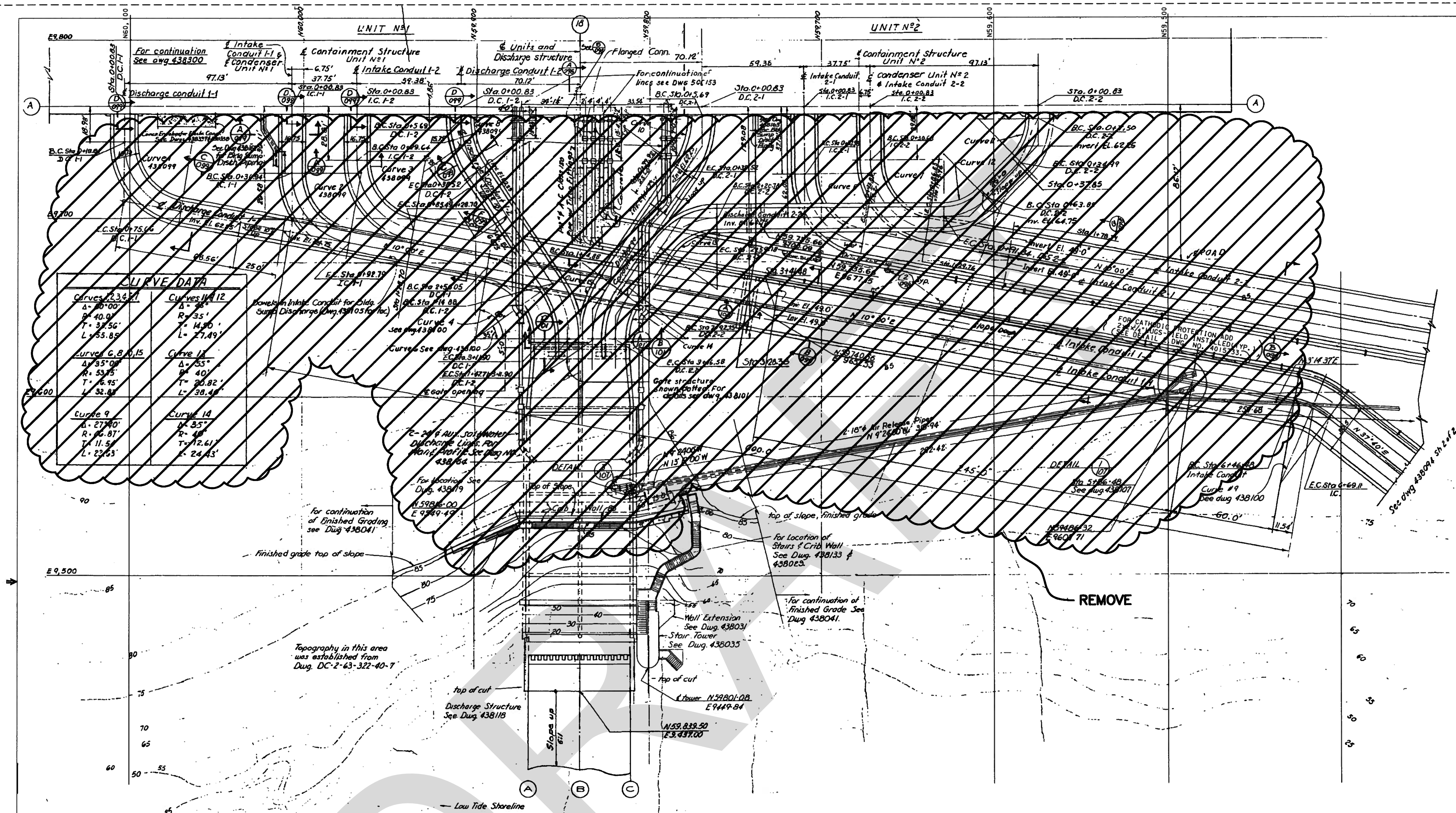
22 x 34 "D" SIZE

LEVELS 11111111112222222222333333333344444444445555555555 56666
1234567890123456789012345678901234567890123456789012345678901234567890123

6 5 4 3 2

D C B A

DRAFT



REFERENCE(S):
SEE DRAWING 2576-110-P1K-WL-00020, P1K-WL-00020, P1K-WL-00030, P1K-WL-00040 OR P1K-WL-00050.
438093 PG&E CIVIL

NOTE(S):
SEE DRAWING 2576-110-P1K-WL-00010, P1K-WL-00020, P1K-WL-00030, P1K-WL-00040 OR P1K-WL-00050

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION, OR CONSTRUCTION.

NO.	DATE	REVISIONS	BY	CHK	DES SUPV.	ENGR.	PROJ ENGR	APPR
	/ /							
	/ /							
	/ /							
	/ /							
	/ /							
A	06/28/13	ISSUE FOR INTERNAL ESTIMATE	DMH	–		–		–

SCALE	DATE	DESIGNED	DRAWN	CHIEF ENGR.

BECHTEL
FREDERICK, MARYLAND

PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

CIRCULATING WATER SYSTEM
COOLING TOWER CONDUIT REMOVAL
GENERAL ARRANGEMENT

JOB NO.	DRAWING NO.	REV.
25762-110	P1K-WL-00013	A

34"X44"E SIZE

JUOTC DRY MECHANICAL DRAFT CT OPTION

DCPP

Valve List

00B	7/24/2013	Issuded for Estimate Report	RP	—	RP
00A	7/11/2013	Issue for Estimate	RP	-	RP
Rev	**Date**	**Reason for Revision**	**Orignator**	**Checked**	**Approved**

System Codes

PF	Fire Protection
WL	Circulating Water
WO	Salt Water Cooling

Commodity Code

PV	Valve
HV	valve with motor or pneumatic operator used for on /off operation

Note:

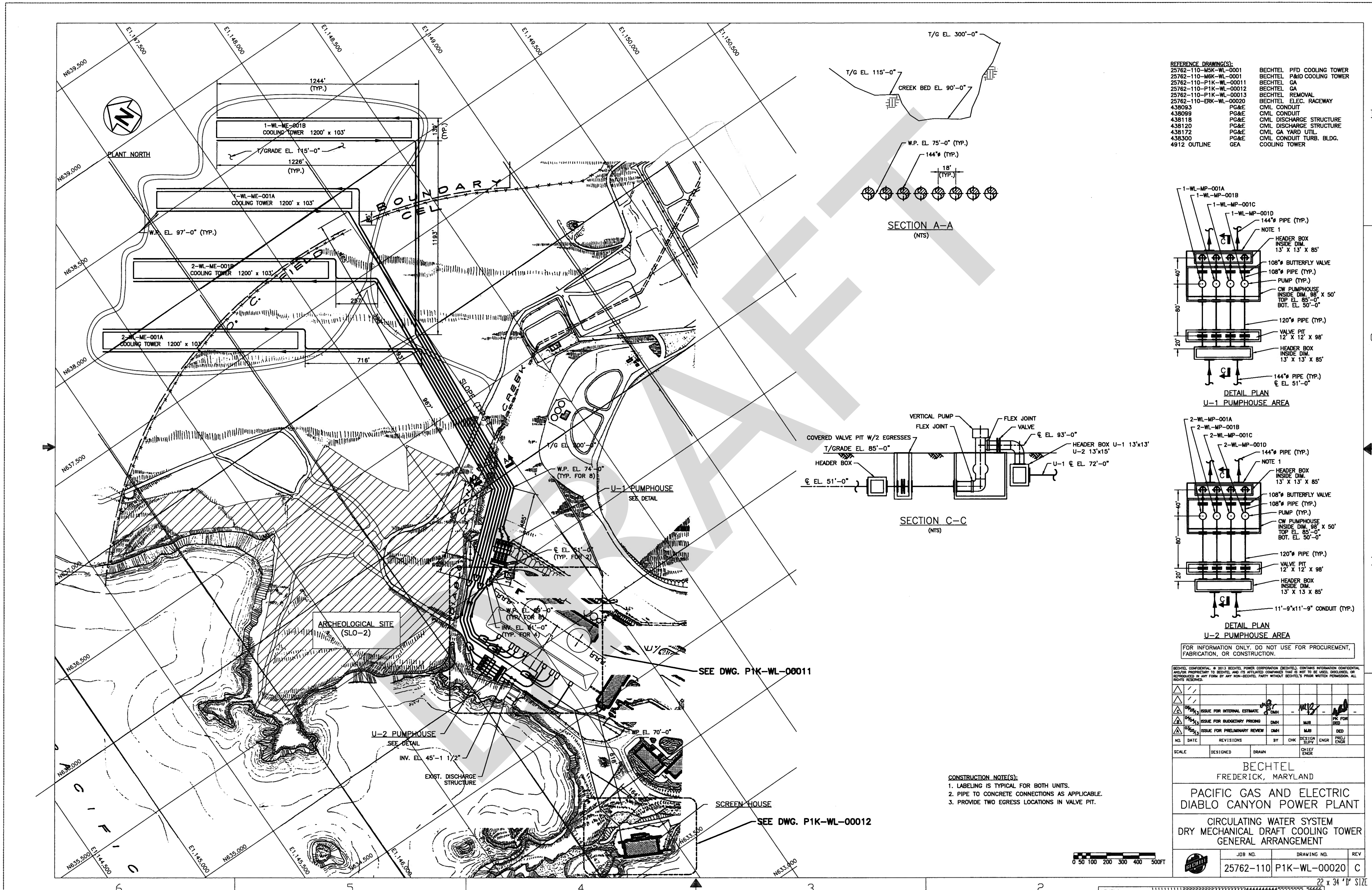
1 Valves furnished with vendor packages are not included in this list. Some valves supplier by the cooling tower supplier have been included in the equipment list to help define the scope of supply by the cooling Tower Supplier

Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Design Press (pisg)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
Salt Water Cooling Pump WO-MP-001A discharge, HV 022A	1	HV	WO	022	A	24	Butterfly	Motor	flange	100	70	75	56		25762-110-M6K-WL-00001	No	Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
Salt Water Cooling Pump WO-MP-001B discharge, HV 022B	1	PV	WO	022	B	24	Butterfly	Motor	flange	100	70	75	56		25762-110-M6K-WL-00001	No	Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
Inlet to PI021A	1	PV	WO			1	gate		flange	100	70	75	56		25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
Outlet to WO-MP-001A auto vent isolation	1	PV	WO			2	ball		flange	100	70	75	56		25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
Outlet to WO-MP-001A auto vent	1	PV	WO			2	AR		flange	100	70	75	56		25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
Inlet to PI021B	1	PV	WO			1	gate		flange	100	70	75	56		25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
Outlet to WO-MP-001B auto vent isolation	1	PV	WO			2	ball		flange	100	70	75	56		25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
Outlet to WO-MP-001B auto vent	1	PV	WO			2	AR		flange	100	70	75	56		25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
Upstream of HV009A to Makeup Water Line	1	PV	WL			6	gate		flange	100	70	50	56		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On Makeup Water Line, HV009A	1	HV	WL	009	A	6	globe	Air	flange	100	70	50	56		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Downstream of HV009A isolation	1	PV	WL			6	gate		flange	100	70	50	56		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Upstream of HV009B to Makeup Water Line	1	PV	WL			6	gate		flange	100	70	50	56		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On Makeup Water Line, HV009B	1	PV	WL	009	B	6	globe	Air	flange	100	70	50	56		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Downstream of HV009B islolation	1	PV	WL			6	gate		flange	100	70	75	56		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On PIT003A	1	PV	WL			1	gate			50	70	75	56		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On PIT003B	1	PV	WL			1	gate		flange	50	70	75	56		25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A

Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Design Press (pisg)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
On PIT003C	1	PV	WL			1	gate		flange	50	70	75	56		25762-110-M6K WL-00001	No	Estimating	Duplex SS material	00A
On PIT003D	1	PV	WL			1	Gate		flange	100	70	75	56		25762-110-M6K WL-00001	No	Estimating	Duplex SS material	00A
Outlet from WL-MP-001A vent	1	PV	WL			2	globe		flange	50	70	75	56		25762-110-M6K WL-00001	No	Estimating	Duplex SS material	00A
Outlet from WL-MP-001B vent	1	PV	WL			2	globe		flange	85	70	75	56		25762-110-M6K WL-00001	No	Estimating	Duplex SS material	00A
Outlet from WL-MP-001C vent	1	PV	WL			2	globe		flange	85	70	75	56		25762-110-M6K WL-00001	No	Estimating	Duplex SS material	00A
Outlet from WL-MP-001D vent	1	PV	WL			2	globe		flange	85	70	75	56		25762-110-M6K WL-00001	No	Estimating	Duplex SS material	00A
Root connection to PI 001A	1	PV	WL			1	gate		flange	85	70	75	56		25762-110-M6K WL-00001	No	Estimating	Duplex SS material	00A
Root connection to PI 001B	1	PV	WL			1	gate		flange	85		75	56		25762-110-M6K WL-00001	No	Estimating	Duplex SS material	00A
Root connection to PI 001C	1	PV	WL			1	gate		flange	85	70	75	56		25762-110-M6K WL-00001	No	Estimating	Duplex SS material	00A
Root connection to PI 001D	1	PV	WL			1	gate		flange	85	70	75	56		25762-110-M6K WL-00001	No	Estimating	Duplex SS material	00A
Salt Water Cooling Pump WO-MP-001A discharge, HV 022A	2	HV	WO	022	A	24	Butterfly	Motor	flange	100	70	75	56		25762-110-M6K WL-00001	No	Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
Salt Water Cooling Pump WO-MP-001B discharge, HV 022B	2	HV	WO	022	B	24	Butterfly	Motor	flange	100	70	75	56		25762-110-M6K WL-00001	No	Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
Inlet to PI021A	2	PV	WO			1	gate		flange	100	70	75	56		25762-110-M6K WL-00001	No	Estimating	Super duplex material	00A
Outlet to WL-MP-001A auto vent isolation	2	PV	WO			2	ball		flange	100	70	75	56		25762-110-M6K WL-00001	No	Estimating	Super duplex material	00A
Outlet to WO-MP-001A auto vent	2	PV	WO			2	AR		flange	100	70	75	56		25762-110-M6K WL-00001	No	Estimating	Super duplex material	00A
Inlet to PI021B	2	PV	WO			1	gate		flange	100	70	75	56		25762-110-M6K WL-00001	No	Estimating	Super duplex material	00A

Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
Outlet to WO-MP-001B auto vent isolation	2	PV	WO			2	ball		flange	100	70	75	56		25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
Outlet to WO-MP-001B auto vent	2	PV	WO			2	AR		flange	100	70	75	56		25762-110-M6K-WL-00001	No	Estimating	Super duplex material	00A
Upstream of HV009A on Makeup Water Line	2	PV	WL			6	gate		flange	100	70	75	56		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On Makeup Water Line, HV009A	2	HV	WL	009	A	6	globe	Air	flange	100	70	75	56		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Downstream of HV009A on the Makeup Water Pump	2	HV	WL	009	B	6	gate		flange	100	70	75	56		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Upstream of HV009B on Makeup Water Line	2	PV	WL			6	gate		flange	100	70	75	56		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On Makeup Water Line, HV009B	2	PV	WL			6	globe	Motor	flange	100	70	75	56		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Downstream of HV009B on the Makeup Water Pump	2	PV	WL			6	gate		flange	100	70	75	56		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On PIT003A	2	PV	WL			1	Gate		flange	50	130	30	125		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On PIT003B	2	PV	WL			1	Gate		flange	50	130	30	125		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On PIT003C	2	PV	WL			1	Gate		flange	50	130	30	125		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
On PIT003D	2	PV	WL			1	Gate		flange	50	130	30	125		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Outlet from WL-MP-001A vent	2	PV	WL			2	globe		flange	85	130	75	125		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Outlet from WL-MP-001B vent	2	PV	WL			2	globe		flange	85	130	75	125		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Outlet from WL-MP-001C vent	2	PV	WL			2	globe		flange	85	130	75	125		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Outlet from WL-MP-001D auto vent	2	PV	WL			2	globe		flange	85	130	75	125		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Root connection to PI 001A	2	PV	WL			1	gate		flange	85	130	75	125		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A

Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
Root connection to PI 001B	2	PV	WL			1	gate		flange	85	130	75	125		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Root connection to PI 001C	2	PV	WL			1	gate		flange	85	130	75	125		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Root connection to PI 001D	2	PV	WL			1	gate		flange	85	130	75	125		25762-110-M6K-WL-00001	No	Estimating	Duplex SS material	00A
Inlet isolation WL-MP-001A	1	HV	WL	002	A	120	Butterfly	Motor	flange	50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	
Inlet isolation WL-MP-001B	1	HV	WL	002	B	120	Butterfly	Motor	flange	50	130	30	130		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	
Inlet isolation WL-MP-001C	1	HV	WL	002	C	120	Butterfly	Motor	flange	50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	
Inlet isolation WL-MP-001D	1	HV	WL	002	D	120	Butterfly	Motor	flange	50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	
Inlet isolation WL-MP-001A	2	HV	WL	002	A	120	Butterfly	Motor	flange	50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	
Inlet isolation WL-MP-001B	2	HV	WL	002	B	120	Butterfly	Motor	flange	50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	
Inlet Isolation WL-MP-001C	2	HV	WL	002	C	120	Butterfly	Motor	flange	50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	



PLANT NORTH
1-WL-ME-001B COOLING TOWER 1200' x 103'
1-WL-ME-001A COOLING TOWER 1200' x 103'
2-WL-ME-001B COOLING TOWER 1200' x 103'
2-WL-ME-001A COOLING TOWER 1200' x 103'
1244' (TYP.)
1226' (TYP.)
T/GRADE EL. 115'-0"
W.P. EL. 97'-0" (TYP.)
BOUNDARY
716'
ARCHEOLOGICAL SITE (SLO-2)
U-1 PUMPHOUSE SEE DETAIL
U-2 PUMPHOUSE SEE DETAIL
W.P. EL. 74'-0" (TYP. FOR 8)
℄ EL. 51'-0" (TYP. FOR 2)
INV. EL. 45'-1 1/2"
EXIST. DISCHARGE STRUCTURE
SCREEN HOUSE
SEE DWG. P1K-WL-00011
SEE DWG. P1K-WL-00012
T/G EL. 300'-0"
T/G EL. 115'-0"
CREEK BED EL. 90'-0"
W.P. EL. 75'-0" (TYP.)
144"ø (TYP.)
18' (TYP.)
SECTION A-A
(NTS)
VERTICAL PUMP
FLEX JOINT
COVERED VALVE PIT W/2 EGRESSES
T/GRADE EL. 85'-0"
HEADER BOX
℄ EL. 51'-0"
VALVE
℄ EL. 93'-0"
HEADER BOX U-1 13'x13' U-2 13'x15'
U-1 ℄ EL. 72'-0"
SECTION C-C
(NTS)
REFERENCE DRAWING(S):
25762-110-M5K-WL-0001 BECHTEL PFD COOLING TOWER
25762-110-M6K-WL-0001 BECHTEL P&ID COOLING TOWER
25762-110-P1K-WL-00011 BECHTEL GA
25762-110-P1K-WL-00012 BECHTEL GA
25762-110-P1K-WL-00013 BECHTEL REMOVAL
25762-110-ERK-WL-00020 BECHTEL ELEC. RACEWAY
438093 PG&E CIVIL CONDUIT
438099 PG&E CIVIL CONDUIT
438118 PG&E CIVIL DISCHARGE STRUCTURE
438120 PG&E CIVIL DISCHARGE STRUCTURE
438172 PG&E CIVIL GA YARD UTIL.
438300 PG&E CIVIL CONDUIT TURB. BLDG.
4912 OUTLINE GEA COOLING TOWER
1-WL-MP-001A
1-WL-MP-001B
1-WL-MP-001C
1-WL-MP-001D
144"ø PIPE (TYP.)
NOTE 1
HEADER BOX INSIDE DIM. 13' X 13' X 85'
108"ø BUTTERFLY VALVE
108"ø PIPE (TYP.)
PUMP (TYP.)
CW PUMPHOUSE INSIDE DIM. 98' X 50' TOP EL. 85'-0" BOT. EL. 50'-0"
120"ø PIPE (TYP.)
VALVE PIT 12' X 12' X 98'
HEADER BOX INSIDE DIM. 13' X 13' X 85'
144"ø PIPE (TYP.) ℄ EL. 51'-0"
DETAIL PLAN
U-1 PUMPHOUSE AREA
2-WL-MP-001A
2-WL-MP-001B
2-WL-MP-001C
2-WL-MP-001D
144"ø PIPE (TYP.)
NOTE 1
HEADER BOX INSIDE DIM. 13' X 13' X 85'
108"ø BUTTERFLY VALVE
108"ø PIPE (TYP.)
PUMP (TYP.)
CW PUMPHOUSE INSIDE DIM. 98' X 50' TOP EL. 85'-0" BOT. EL. 50'-0"
120"ø PIPE (TYP.)
VALVE PIT 12' X 12' X 98'
HEADER BOX INSIDE DIM. 13' X 13 X 85'
11'-9"x11'-9" CONDUIT (TYP.)
DETAIL PLAN
U-2 PUMPHOUSE AREA
CONSTRUCTION NOTE(S):
1. LABELING IS TYPICAL FOR BOTH UNITS.
2. PIPE TO CONCRETE CONNECTIONS AS APPLICABLE.
3. PROVIDE TWO EGRESS LOCATIONS IN VALVE PIT.
FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION, OR CONSTRUCTION.
ISSUE FOR INTERNAL ESTIMATE
ISSUE FOR BUDGETARY PRICING
ISSUE FOR PRELIMINARY REVIEW
NO. DATE REVISIONS BY CHK DESIGN SUPV ENGR PROJ ENGR
SCALE DESIGNED DRAWN CHIEF ENGR
BECHTEL
FREDERICK, MARYLAND
PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT
CIRCULATING WATER SYSTEM
DRY MECHANICAL DRAFT COOLING TOWER
GENERAL ARRANGEMENT
JOB NO. 25762-110
DRAWING NO. P1K-WL-00020
REV C
0 50 100 200 300 400 500FT
22 x 34 "D" SIZE
DRAFT

JUOTC WET NATURAL DRAFT CT OPTION

DCPP

Valve List

00B	7/24/2013	Issued for Estimate Report	RP	-	RP
00A	7/11/2013	Issue for Estimate	RP	-	RP
Rev	**Date**	**Reason for Revision**	**Orignator**	**Checked**	**Approved**

<u>System Codes</u>

AD	Condensate
PF	Fire Protection
PI	Plant Air
TL	Circ. Wtr Chem Inj
WB	Service water
WL	Circulating Water
WO	Sea Water
WR	Raw Water (Grey water)

Commodity Code

PV	Valve
HV	valve with motor or pneumatic operator used for on /off operation

Note:

1 Valves furnished with vendor packages are not included in this list. Some valves supplier by the cooling tower supplier have been included in the equipment list to help define the scope of supply by

Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
18	Post indicating valve	0	PIV	PF			12	gate		flange		175	90				-		estimating	Ductile Iron	00A
54	Curb Valve	0	PV	PF			6	gate		flange		175	90				-		estimating	Ductile Iron	00A
1	Inlet Isolation WL-MP-001A	1	HV	WL	002	A	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet Isolation WL-MP-001B	1	HV	WL	002	B	120	Butterfly	Motor	flange		50	130	30	130		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet Isolation WL-MP-001C	1	HV	WL	002	C	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet Isolation WL-MP-001D	1	HV	WL	002	D	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet Isolation WL-MP-001A	2	HV	WL	002	A	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet Isolation WL-MP-001B	2	HV	WL	002	B	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet Isolation WL-MP-001C	2	HV	WL	002	C	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet Isolation WL-MP-001D	2	HV	WL	002	D	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001A	1	HV	WL	004	A	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001B	1	HV	WL	004	B	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001C	1	HV	WL	004	C	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001D	1	HV	WL	004	D	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001A	2	HV	WL	004	A	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001B	2	HV	WL	004	B	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001C	2	HV	WL	004	C	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001D	2	HV	WL	004	D	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Isolation Valve for the Blowdown from CT WL-ME-001A	1	PV	WL			12	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile Iron, seats EPDM amd 316 SS, 316 SS trim	00A

Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
1	Isolation Valve for the Blowdown from CT WL-ME-001B	1	PV	WI			12	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Upstream of HV017 on Blowdown Line	1	PV	WI			16	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	HV017 on the Blowdown Line	1	PV	WL			16	Butterfly	Motor	flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Downstream of HV017 on the Blowdown Line	1	PV	WL			16	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	By-pass fro HV017 on the Blowdown Line	1	PV	WL			16	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Upstream of LV009 on Makeup Water Line	1	PV	WL			24	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	On Makeup Water Line, LV009	1	PV	WL			24	Butterfly	Motor	flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Downstream of LV009 on the Makeup Water Pump	1	PV	WL			24	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	By-pass to LV009 on Makeup Water Line	1	PV	WL			24	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	On PIT003A	1	PV	WL			1	Gate				100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	On PIT003B	1	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	On PIT003C	1	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	On PIT003D	1	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Outlet from WL-MP-001A auto vent	1	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Outlet from WL-MP-001A auto vent	1	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Outlet from WL-MP-001B auto vent	1	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Outlet from WL-MP-001B auto vent	1	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Outlet from WL-MP-001C auto vent	1	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Outlet from WL-MP-001C auto vent	1	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A

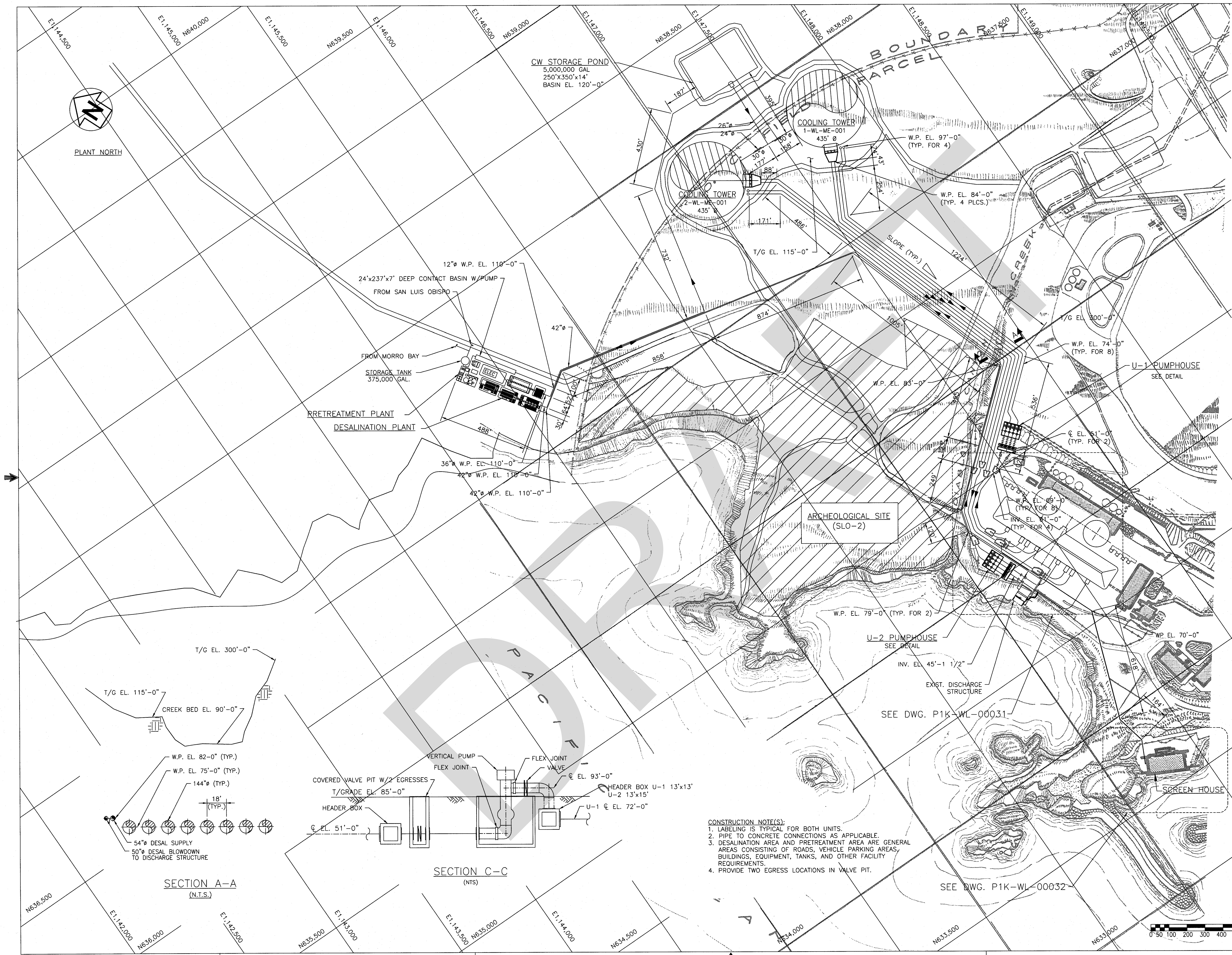
Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (In)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
1	Outlet from WL-MP-001D auto vent	1	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Outlet from WL-MP-001D auto vent	1	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Root connection to PI 001A	1	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Root connection to PI 001B	1	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Root connection to PI 001C	1	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Root connection to PI 001D	1	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Isolation Valve for the Blowdown from CT WL-ME-001A	2	PV	WL			12	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Isolation Valve for the Blowdown from CT WL-ME-001B	2	PV	Wl			12	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Upstream of HV017 on Blowdown Line	2	PV	Wl			16	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	HV017 on the Blowdown Line	2	PV	WL			16	Butterfly	Motor	flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Downstream of HV017 on the Blowdown Line	2	PV	WL			16	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	By-pass fro HV017 on the Blowdown Line	2	PV	WL			16	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Upstream of LV009 on Makeup Water Line	2	PV	WL			24	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	On Makeup Water Line, LV009	2	PV	WL			24	Butterfly	Motor	flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Downstream of LV009 on the Makeup Water Pump	2	PV	WL			24	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	By-pass to LV009 on Makeup Water Line	2	PV	WL			24	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	On PIT003A	2	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	On PIT003B	2	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A

Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
1	On PIT003C	2	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	On PIT003D	2	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Outlet from WL-MP-001A auto vent	2	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Outlet from WL-MP-001A auto vent	2	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Outlet from WL-MP-001B auto vent	2	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Outlet from WL-MP-001B auto vent	2	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Outlet from WL-MP-001C auto vent	2	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Outlet from WL-MP-001C auto vent	2	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Outlet from WL-MP-001D auto vent	2	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Outlet from WL-MP-001D auto vent	2	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Root connection to PI 001A	2	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Root connection to PI 001B	2	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Root connection to PI 001C	2	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
1	Root connection to PI 001D	2	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00003	No	estimating	Duplex stainless steel	00A
3	Pump MP001A, B, & C isolation valves	0	HV	WO	032		42	Butterfly	Motor	flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
1	FE043 outlet isolation valve	0	HV	WO			42	butterfly	Motor	flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
1	Desal brine outlet control valve	0	HV	WO			42	butterfly	Motor	flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
2	Pump MP002A&B outlet valve	0	HV	WO			6	butterfly	motor	flange		320	70				25762-110-M6K-W0-00001		estimating	Ductile iron, rubber lined, general service, lug type,	00A
2	Pump MP002A&B outlet valve	0	HV	WO			8	butterfly	motor	flange		320	70				25762-110-M6K-W0-00001		estimating	Ductile iron, rubber lined, general service, lug type,	00B
3	Pump MP001A, B, & C air release valve	0	PY	WO			2	AR		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
3	Pump MP001A, B, & C air release valve isolation valves	0	PY	WO			2	ball		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
3	PI 031 isolation valve	0	PY	WO			1	ball		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A

Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
1	Pump MP001A, B, & C recirc isolation valve	0	PY	WO			30	butterfly		flange		320	70				25762-110-M6K-W0-00001		estimating	Ductile iron, rubber lined, general service, lug type,	00A
2	FT034 root valves	0	PY	WO			1	ball		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
1	PT033 isolation valve	0	PY	WO			1	ball		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
1	Desal outlet isolation valve	0	PY	WO			42	butterfly		flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
1	FT043 inlet isolation valve	0	PY	WO			42	butterfly		flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
2	FT043 root valves	0	PY	WO			1	ball		flange		320	70				25762-110-M6K-W0-00001		estimating		00A
1	FE043 outlet isolation valve	0	HV	WO			42	butterfly	Motor	flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile iron, rubber lined, general service, lug type,	00B
1	Desal brine outlet isolation valve	0	PY	WO			42	butterfly		flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
1	Brine outlet PI root valve	0	PY	WO			1	gate		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
2	Pump MP002A&B outlet valve	0	HV	WO			8	butterfly	motor	flange		320	70				25762-110-M6K-W0-00001		estimating	Ductile iron, rubber lined, general service, lug type,	00B
2	Pump MP002A&B outlet check valve	0	PY	WO			8	wafer check		flange		320	70				25762-110-M6K-W0-00001		estimating	Ductile iron, rubber lined, general service, lug type,	00A
2	Pump MP002A&B outlet air release valve	0	PY	WO			1	AR		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
2	Pump MP002A&B outlet air release isolation valve	0	PY	WO			1	ball		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
2	Pump MP002A&B PI isolation valve	0	PY	WO			1	ball		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
2	SL Grey Water Supply pump 4A & 4B check valves	0	PV	WR			6	wafer check		flanged		325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	SL Grey Water Supply pump 5A & 5B check valves	0	PV	WR			6	wafer check		flanged		325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	SL Grey Water Supply pump 4A & 4B discharge valves	0	PV	WR			6	butterfly				325	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
2	SL Grey Water Supply pump 4A & 4B air release valve	0	PV	WR			2	AR				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A

Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (In)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
2	SL Grey Water Supply pump 5A & 5B air release valve	0	PV	WR			2	AR				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	SL Grey Water Supply pump 4A & 4B air release isolation valve	0	PV	WR			2	ball				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	SL Grey Water Supply pump 5A & 5B air release isolation valve	0	PV	WR			2	ball				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	SL Grey Water Supply pump 4A & 4B PI isolation valve	0	PV	WR			1	ball				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	SL Grey Water Supply pump 5A & 5B PI isolation valve	0	PV	WR			1	ball				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
1	SL Grey Water Supply pump 4A & 4B recirc valve isolation valve	0	PV	WR			6	butterfly				325	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	SL Grey Water Supply pump 5A & 5B recirc valve isolation valve	0	PV	WR			6	butterfly				325	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
26	Supply line auto vent valves	0	PV	WR			2	gate				325	90				25762-110-M6K-WR-00003		estimating	duplex ss Assumes approximately 1 per mile	00A
26	supply line auto vent valve isolation valves	0	PV	WR			2	AR				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
26	supply line drain valves	0	PV	WR			3	gate				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
1	flow element isolation valve	0	PV	WR			12	butterfly				325	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	tank isolation valve	0	PV	WR			12	butterfly				325	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	tank outlet valve	0	PV	WR			16	butterfly				325	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
2	Pump MP 002A & B inlet valves	0	PV	WR			16	butterfly				65	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
2	Pump MP002A & 2B check valve	0	PV	WR			12	wafer check				65	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
2	Pump MP002A & 2B isolation valve	0	PV	WR			12	butterfly				65	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A

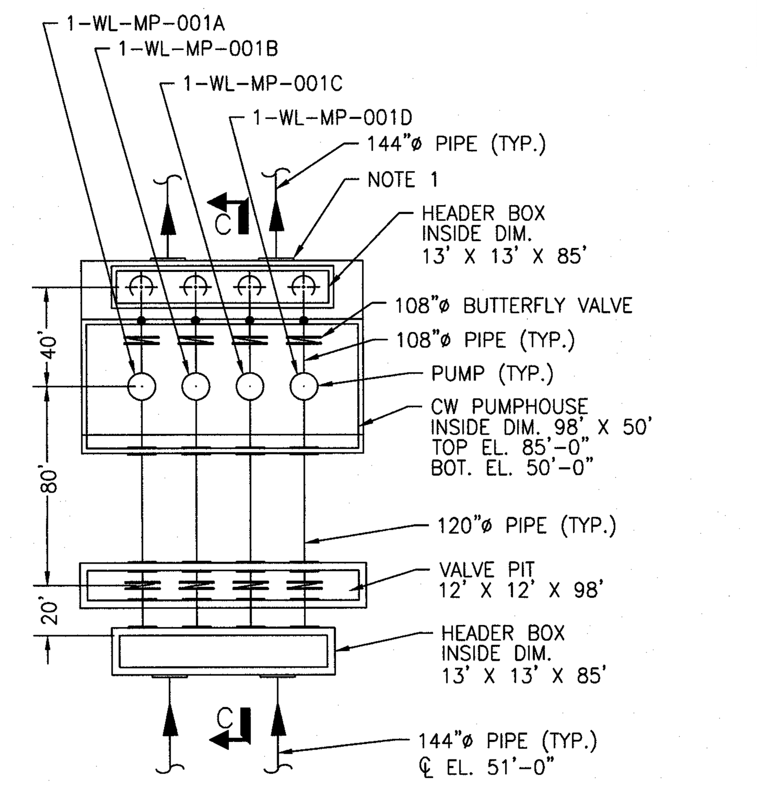
Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
2	Pump MP002A & 2B PI isolation valve	0	PV	WR			1	gate				65	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	Pump MP003A & B check valves	0	PV	WR			8	wafer check				65	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	Pump MP003A & B islolation valves	0	PV	WR			8	butterfly				65	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
2	Pump MP 001 & B inlet valves	0	PV	WR				butterfly				65	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
2	Pump MP001A & 1B check valve	0	PV	WR				wafer check				65	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	Pump MP001A & 1B isolation valve	0	PV	WR				butterfly				65	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	Pump MP001A & 1B PI isolation valve	0	PV	WR			1	gate				30	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
1	storage pond outlet valve	0	PV	WR			36	butterfly				30	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00B



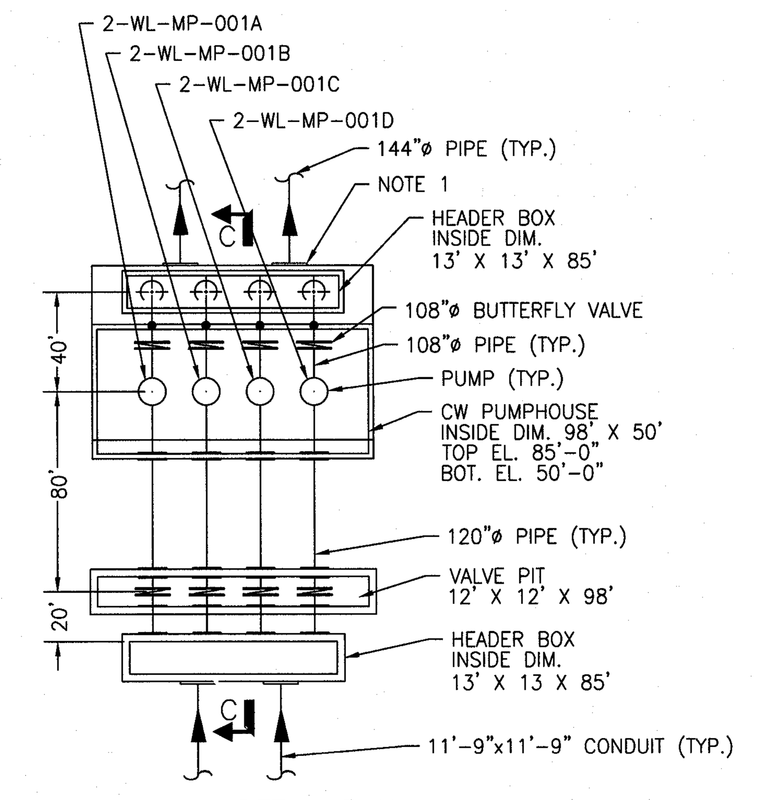
CONSTRUCTION NOTE(S):
1. LABELING IS TYPICAL FOR BOTH UNITS.
2. PIPE TO CONCRETE CONNECTIONS AS APPLICABLE.
3. DESALINATION AREA AND PRETREATMENT AREA ARE GENERAL AREAS CONSISTING OF ROADS, VEHICLE PARKING AREAS, BUILDINGS, EQUIPMENT, TANKS, AND OTHER FACILITY REQUIREMENTS.
4. PROVIDE TWO EGRESS LOCATIONS IN VALVE PIT.

REFERENCE DRAWING(S):

25762-110-M5K-WL-0005	BECHTEL	PFD COOLING TOWER
25762-110-M6K-WL-0005	BECHTEL	P&ID COOLING TOWER
25762-110-M6K-WO-00001	BECHTEL	P&ID DESAL & BRINE
25762-110-M6K-WR-00001	BECHTEL	P&ID RECLAIM WATER
25762-110-P1K-WL-00013	BECHTEL	REMOVAL
25762-110-P1K-WL-00031	BECHTEL	GA
25762-110-P1K-WL-00032	BECHTEL	GA
25762-110-ERK-WL-00030	BECHTEL	ELEC. RACEWAY
438093	PG&E	CIVIL CONDUIT
438099	PG&E	CIVIL CONDUIT
438118	PG&E	CIVIL DISCHARGE STRUCTURE
438120	PG&E	CIVIL DISCHARGE STRUCTURE
438172	PG&E	CIVIL GA YARD UTIL.
438300	PG&E	CIVIL CONDUIT TURB. BLDG.
FR-04-13-00002-P	SPX	COOLING TOWER
A01-GA-001	SUEZ	GA DESALINATION PLANT
50136768-001	INFILCO	P&ID RECLAIM WATER
50136768-100	SUEZ	GA RECLAIM WATER PLANT



DETAIL PLAN
U-1 PUMPHOUSE AREA



DETAIL PLAN
U-2 PUMPHOUSE AREA

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION, OR CONSTRUCTION.

NO.	DATE	REVISIONS	BY	CHK	DESIGN SUPV	ENGR	PROJ ENGR
	/ /						
D	9/17/13	REVISED TITLE FOR REF DWG 25762-110-M6K-WR-00001	RP		MJB		[illegible]
C	06/28/13	ISSUE FOR INTERNAL ESTIMATE	MJB for DMH		MJB		DED
B	04/04/13	ISSUE FOR BUDGETARY PRICING	DMH		MJB		PK
A	03/05/13	ISSUE FOR PRELIMINARY REVIEW	DMH		MJB		DED

SCALE | DESIGNED | DRAWN | CHIEF ENGR

BECHTEL
FREDERICK, MARYLAND

PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

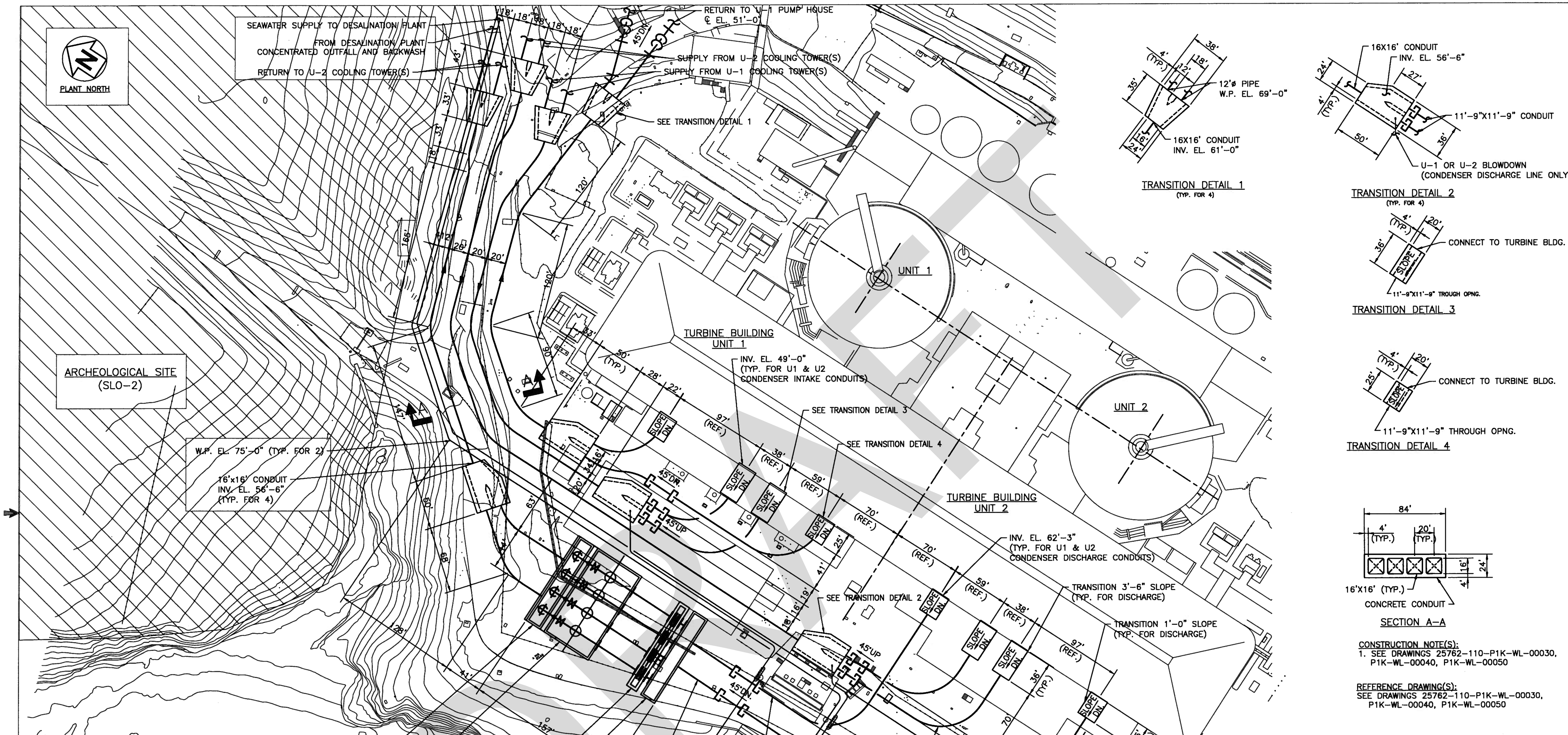
CIRCULATING WATER SYSTEM
HYBRID DRAFT COOLING TOWER
GENERAL ARRANGEMENT

JOB NO.	DRAWING NO.	REV
25762-110	P1K-WL-00030	D

22 x 34 "D" SIZE

6 5 4 3 2

D C B A



CONSTRUCTION NOTE(S):
1. SEE DRAWINGS 25762-110-P1K-WL-00030, P1K-WL-00040, P1K-WL-00050

REFERENCE DRAWING(S):
SEE DRAWINGS 25762-110-P1K-WL-00030, P1K-WL-00040, P1K-WL-00050

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION, OR CONSTRUCTION.

NO.	DATE	REVISIONS	BY	CHK	DESIGN SUPV	ENGR	PROJ ENGR
A	09/25/13	ISSUE FOR INTERNAL ESTIMATE					

SCALE 1"=50'-0" DESIGNED DRAWN CHIEF ENGR

BECHTEL
FREDERICK, MARYLAND

PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

CIRCULATING WATER SYSTEM
COOLING TOWER TURBINE BUILDING
GENERAL ARRANGEMENT

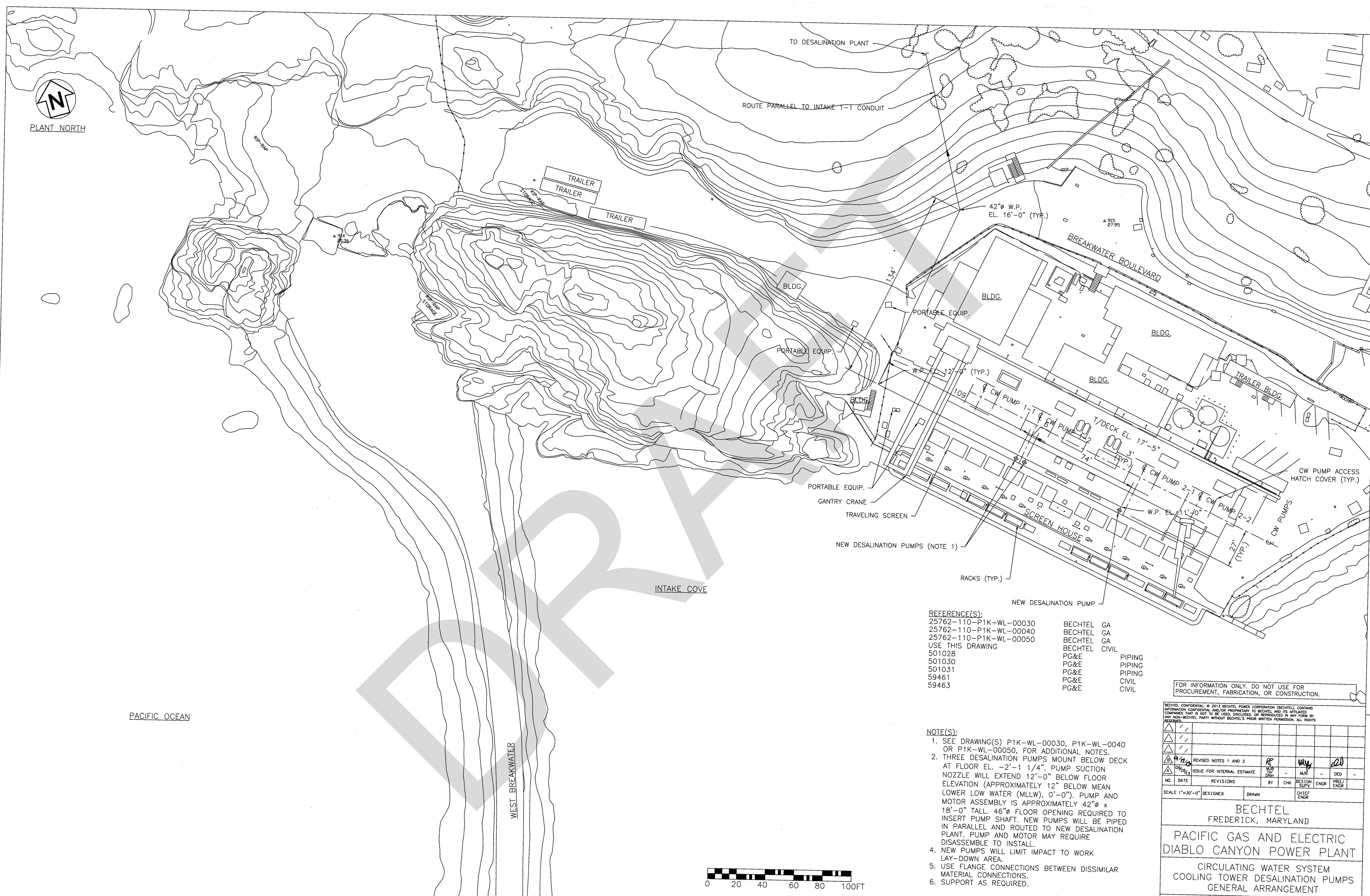
JOB NO.	DRAWING NO.	REV
25762-110	P1K-WL-00031	B

22 x 34 'D' SIZE

LEVELS

6 5 4 3 2

D C B A



REFERENCE(S):

25762-110-P1K-WL-00030	BECHTEL	GA
25762-110-P1K-WL-00040	BECHTEL	GA
25762-110-P1K-WL-00050	BECHTEL	GA
USE THIS DRAWING	BECHTEL	CIVIL
501028	PG&E	PIPING
501030	PG&E	PIPING
501031	PG&E	PIPING
59461	PG&E	CIVIL
59463	PG&E	CIVIL

NOTE(S):

1. SEE DRAWING(S) P1K-WL-00030, P1K-WL-0040 OR P1K-WL-00050, FOR ADDITIONAL NOTES.
2. THREE DESALINATION PUMPS MOUNT BELOW DECK AT FLOOR EL. -2'-1 1/4". PUMP SUCTION NOZZLE WILL EXTEND 12'-0" BELOW FLOOR ELEVATION (APPROXIMATELY 12" BELOW MEAN LOWER LOW WATER (MLLW), 0'-0"). PUMP AND MOTOR ASSEMBLY IS APPROXIMATELY 42"ø x 18'-0" TALL. 46"ø FLOOR OPENING REQUIRED TO INSERT PUMP SHAFT. NEW PUMPS WILL BE PIPED IN PARALLEL AND ROUTED TO NEW DESALINATION PLANT. PUMP AND MOTOR MAY REQUIRE DISASSEMBLE TO INSTALL.
4. NEW PUMPS WILL LIMIT IMPACT TO WORK LAY-DOWN AREA.
5. USE FLANGE CONNECTIONS BETWEEN DISSIMILAR MATERIAL CONNECTIONS.
6. SUPPORT AS REQUIRED.

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION, OR CONSTRUCTION.

NO.	DATE	REVISIONS	BY	CHK	DESIGN SUPV	ENGR	PROJ ENGR	
	/ /							
	/ /							
	/ /							
B	9/17/13	REVISED NOTES 1 AND 2	RP		MJB		DED	
A	06/28/13	ISSUE FOR INTERNAL ESTIMATE	MJB for DNH	-	MJB	-	DED	-

SCALE 1"=30'-0"	DESIGNED	DRAWN	CHIEF ENGR

BECHTEL
FREDERICK, MARYLAND

PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

CIRCULATING WATER SYSTEM
COOLING TOWER DESALINATION PUMPS
GENERAL ARRANGEMENT

JOB NO.	DRAWING NO.	REV
25762-110	P1K-WL-00032	B

22 x 34 'D' SIZE

LEVELS 11111111112222222222333333333344444444445555555555 56666 1234567890123456789012345678901234567890123456789012 3456789012345678901234567890123

6 5 4 3 2
D C B A

JUOTC WET MECHANICAL DRAFT CT OPTION

DCPP

Valve List

00B	7/24/2013	Issued for Estimate Report	RP	—	RP
00A	7/11/2013	Issue for Estimate	RP	-	RP
Rev	**Date**	**Reason for Revision**	**Orignator**	**Checked**	**Approved**

System Codes

AD	Condensate
PF	Fire Protection
PI	Plant Air
TL	Circ. Wtr Chem Inj
WB	Service water
WL	Circulating Water
WO	Sea Water
WR	Raw Water (Grey water)

Commodity Code

PV	Valve
HV	valve with motor or pneumatic operator used for on /off operation

Note:

1 Valves furnished with vendor packages are not included in this list. Some valves supplier by the cooling tower supplier have been included in the equipment list to help define the scope of supply by

Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
18	Post indicating valve	0	PIV	PF			12	gate		flange		175	90				-		estimating	Ductile Iron	00A
54	Curb Valve	0	PV	PF			6	gate		flange		175	90				-		estimating	Ductile Iron	00A
1	Inlet isolation WL-MP-001A	1	HV	WL	002	A	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet isolation WL-MP-001B	1	HV	WL	002	B	120	Butterfly	Motor	flange		50	130	30	130		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet isolation WL-MP-001C	1	HV	WL	002	C	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet isolation WL-MP-001D	1	HV	WL	002	D	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet isolation WL-MP-001A	2	HV	WL	002	A	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet isolation WL-MP-001B	2	HV	WL	002	B	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet isolation WL-MP-001C	2	HV	WL	002	C	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet isolation WL-MP-001D	2	HV	WL	002	D	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001A	1	HV	WL	004	A	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001B	1	HV	WL	004	B	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001C	1	HV	WL	004	C	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001D	1	HV	WL	004	D	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001A	2	HV	WL	004	A	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001B	2	HV	WL	004	B	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001C	2	HV	WL	004	C	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001D	2	HV	WL	004	D	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Isolation Valve for the Blowdown from CT WL-ME-001A	1	PV	WL			12	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A

Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
1	Isolation Valve for the Blowdown from CT WL-ME-001B	1	PV	WI			12	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Upstream of HV017 on Blowdown Line	1	PV	WI			16	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	HV017 on the Blowdown Line	1	PV	WL			16	Butterfly	Motor	flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Downstream of HV017 on the Blowdown Line	1	PV	WL			16	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	By-pass fro HV017 on the Blowdown Line	1	PV	WL			16	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Upstream of LV009 on Makeup Water Line	1	PV	WL			24	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	On Makeup Water Line, LV009	1	PV	WL			24	Butterfly	Motor	flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Downstream of LV009 on the Makeup Water Pump	1	PV	WL			24	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile Iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	By-pass to LV009 on Makeup Water Line	1	PV	WL			24	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	On PIT003A	1	PV	WL			1	Gate				100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	On PIT003B	1	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	On PIT003C	1	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	On PIT003D	1	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Outlet from WL-MP-001A auto vent	1	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Outlet from WL-MP-001A auto vent	1	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A

Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
1	Outlet from WL-MP-001B auto vent	1	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Outlet from WL-MP-001B auto vent	1	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Outlet from WL-MP-001C auto vent	1	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Outlet from WL-MP-001C auto vent	1	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Outlet from WL-MP-001D auto vent	1	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Outlet from WL-MP-001D auto vent	1	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Root connection to PI 001A	1	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Root connection to PI 001B	1	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Root connection to PI 001C	1	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Root connection to PI 001D	1	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Isolation Valve for the Blowdown from CT WL-ME-001A	2	PV	WL			12	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Isolation Valve for the Blowdown from CT WL-ME-001B	2	PV	Wl			12	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Upstream of HV017 on Blowdown Line	2	PV	Wl			16	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	HV017 on the Blowdown Line	2	PV	WL			16	Butterfly	Motor	flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Downstream of HV017 on the Blowdown Line	2	PV	WL			16	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	By-pass fro HV017 on the Blowdown Line	2	PV	WL			16	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A

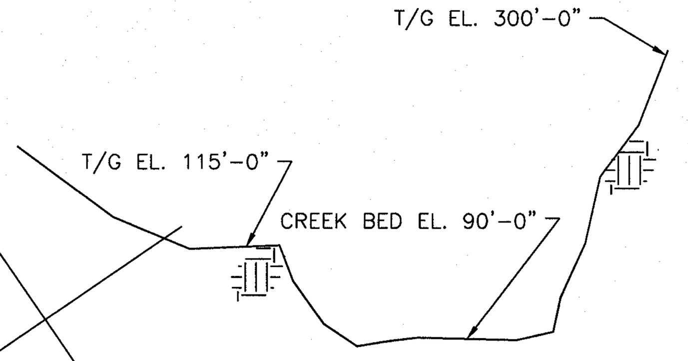
Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bld	Remarks	Rev
1	Upstream of LV009 on Makeup Water Line	2	PV	WL			24	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	On Makeup Water Line, LV009	2	PV	WL			24	Butterfly	Motor	flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Downstream of LV009 on the Makeup Water Pump	2	PV	WL			24	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	By-pass to LV009 on Makeup Water Line	2	PV	WL			24	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	On PIT003A	2	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00004	No		**Super duplex material**	00A
1	On PIT003B	2	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00004	No		**Super duplex material**	00A
1	On PIT003C	2	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	On PIT003D	2	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Outlet from WL-MP-001A auto vent	2	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Outlet from WL-MP-001A auto vent	2	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Outlet from WL-MP-001B auto vent	2	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Outlet from WL-MP-001B auto vent	2	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Outlet from WL-MP-001C auto vent	2	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Outlet from WL-MP-001C auto vent	2	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Outlet from WL-MP-001D auto vent	2	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Outlet from WL-MP-001D auto vent	2	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Root connection to PI 001A	2	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A

Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (In)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
1	Root connection to PI 001B	2	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Root connection to PI 001C	2	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
1	Root connection to PI 001D	2	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00004	No		Duplex Stainless Steel	00A
3	Pump MP001A, B, & C isolation valves	0	HV	WO	032		42	Butterfly	Motor	flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile iron, rubber lined, general service, lug type,	00B
1	FE043 outlet isolation valve	0	HV	WO			42	butterfly	Motor	flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile iron, rubber lined, general service, lug type,	00B
1	Desal brine outlet control valve	0	HV	WO			42	butterfly	Motor	flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile iron, rubber lined, general service, lug type,	00B
2	Pump MP002A&B outlet valve	0	HV	WO			8	butterfly	motor	flange		320	70				25762-110-M6K-W0-00001		estimating	Ductile iron, rubber lined, general service, lug type,	00B
3	Pump MP001A, B, & C air release valve	0	PY	WO			2	AR		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00B
3	Pump MP001A, B, & C air release valve isolation valves	0	PY	WO			2	ball		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00B
3	PI 031 isolation valve	0	PY	WO			1	ball		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00B
1	Pump MP001A, B, & C recirc isolation valve	0	PY	WO			30	butterfly		flange		320	70				25762-110-M6K-W0-00001		estimating	Ductile iron, rubber lined, general service, lug type,	00B
2	FT034 root valves	0	PY	WO			1	ball		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
1	PT033 isolation valve	0	PY	WO			1	ball		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
1	Desal outlet isolation valve	0	PY	WO			42	butterfly		flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
1	FT043 inlet isolation valve	0	PY	WO			42	butterfly		flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
2	FT043 root valves	0	PY	WO			1	ball		flange		320	70				25762-110-M6K-W0-00001		estimating		00A

Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bld	Remarks	Rev
1	FE043 outlet isolation valve	0	HV	WO			42	butterfly	Motor	flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
1	Desal brine outlet isolation valve	0	PY	WO			42	butterfly		flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
1	Desal brine outlet control valve	0	HV	WO			42	butterfly	Motor	flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
1	Brine outlet PI root valve	0	PY	WO			1	gate		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
2	Pump MP002A&B outlet valve	0	HV	WO			8	butterfly	motor	flange		320	70				25762-110-M6K-W0-00001		estimating	Ductile iron, rubber lined, general service, lug type,	00A
2	Pump MP002A&B outlet check valve	0	PY	WO			8	wafer check		flange		320	70				25762-110-M6K-W0-00001		estimating	Ductile iron, rubber lined, general service, lug type,	00A
2	Pump MP002A&B outlet air release valve	0	PY	WO			1	AR		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
2	Pump MP002A&B outlet air release isolation valve	0	PY	WO			1	ball		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
2	Pump MP002A&B PI isolation valve	0	PY	WO			1	ball		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
2	SL Grey Water Supply pump 4A & 4B check valves	0	PV	WR			6	wafer check		flanged		325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	SL Grey Water Supply pump 5A & 5B check valves	0	PV	WR			6	wafer check		flanged		325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	SL Grey Water Supply pump 4A & 4B discharge valves	0	PV	WR			6	butterfly				325	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
2	SL Grey Water Supply pump 4A & 4B air release valve	0	PV	WR			2	AR				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	SL Grey Water Supply pump 5A & 5B air release valve	0	PV	WR			2	AR				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	SL Grey Water Supply pump 4A & 4B air release isolation valve	0	PV	WR			2	ball				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	SL Grey Water Supply pump 5A & 5B air release isolation valve	0	PV	WR			2	ball				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	SL Grey Water Supply pump 4A & 4B PI isolation valve	0	PV	WR			1	ball				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A

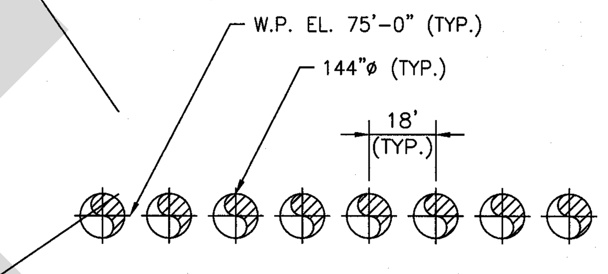
Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bld	Remarks	Rev
2	SL Grey Water Supply pump 5A & 5B PI isolation valve	0	PV	WR			1	ball				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
1	SL Grey Water Supply pump 4A & 4B recirc valve isolation valve	0	PV	WR			6	butterfly				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	SL Grey Water Supply pump 5A & 5B recirc valve isolation valve	0	PV	WR			6	butterfly				325	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
26	Supply line auto vent valves	0	PV	WR			2	gate				325	90				25762-110-M6K-WR-00003		estimating	duplex ss Assumes approximately 1 per mile	00A
26	supply line auto vent valve isolation valves	0	PV	WR			2	AR				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
26	supply line drain valves	0	PV	WR			3	gate				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
1	flow element isolation valve	0	PV	WR			12	butterfly				325	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	tank isolation valve	0	PV	WR			12	butterfly				325	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	tank outlet valve	0	PV	WR			16	butterfly				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron, seats EPDM amd 316 SS, 316 SS trim	00A
2	Pump MP 002A & B inlet valves	0	PV	WR			16	butterfly				65	90				25762-110-M6K-WR-00003		estimating	Ductile Iron, seats EPDM amd 316 SS, 316 SS trim	00A
2	Pump MP002A & 2B check valve	0	PV	WR			12	wafer check				65	90				25762-110-M6K-WR-00003		estimating	Ductile Iron, seats EPDM amd 316 SS, 316 SS trim	00A
2	Pump MP002A & 2B isolation valve	0	PV	WR			12	butterfly				65	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
2	Pump MP002A & 2B PI isolation valve	0	PV	WR			1	gate				65	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	Pump MP003A & B check valves	0	PV	WR			8	wafer check				65	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	Pump MP003A & B islolation valves	0	PV	WR			8	butterfly				65	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A

Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
2	Pump MP 001 & B Inlet valves	0	PV	WR				butterfly				65	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
2	Pump MP001A & 1B check valve	0	PV	WR				wafer check				65	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	Pump MP001A & 1B isolation valve	0	PV	WR				butterfly				65	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	Pump MP001A & 1B PI isolation valve	0	PV	WR			1	gate				30	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
1	storage pond outlet valve	0	PV	WR			36	butterfly				30	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	

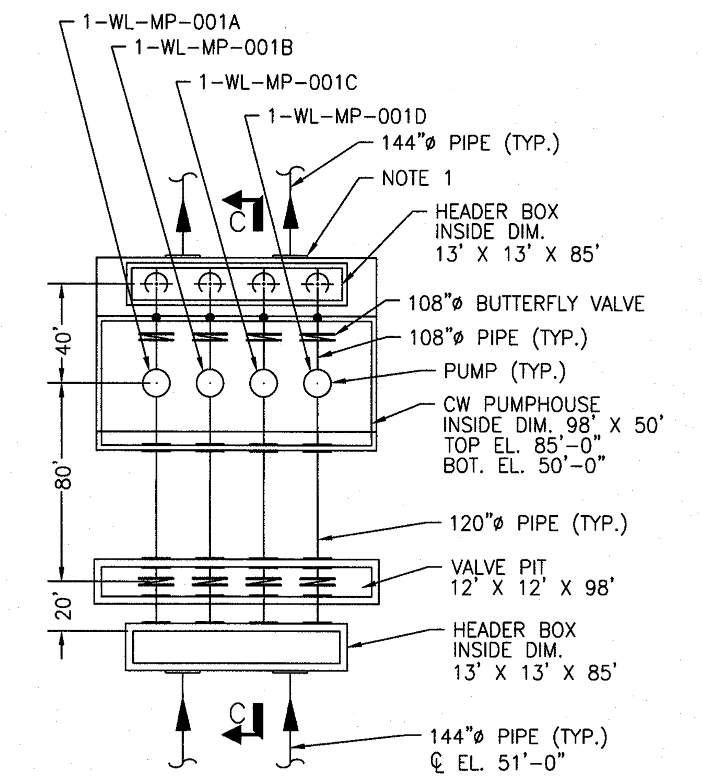


REFERENCE DRAWING(S):

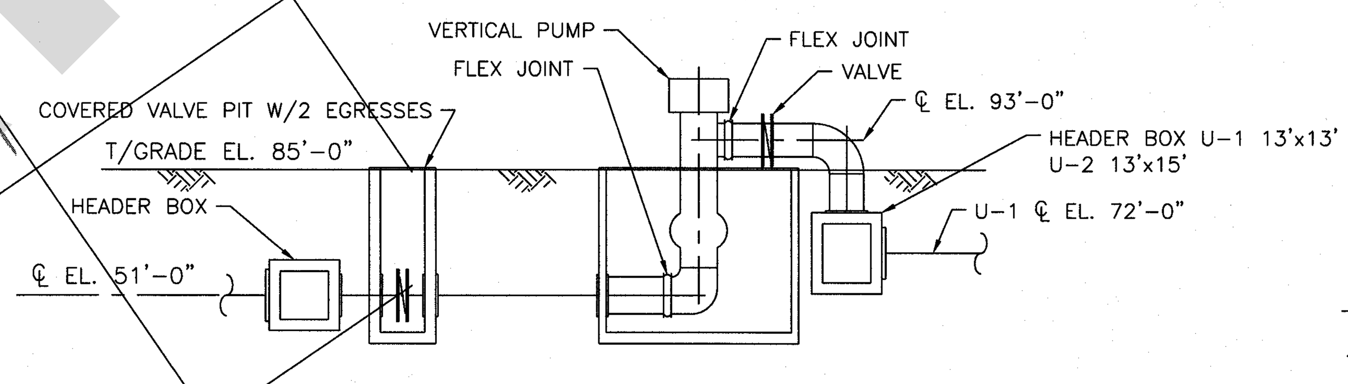
25762-110-M5K-WL-0003	BECHTEL	PFD COOLING TOWER
25762-110-M6K-WL-0003	BECHTEL	P&ID COOLING TOWER
25762-110-M6K-20-00001	BECHTEL	P&ID DESAL & BRINE
25762-110-M6K-WR-00001	BECHTEL	P&ID RECLAIM WATER
25762-110-P1K-WL-00013	BECHTEL	REMOVAL
25762-110-P1K-WL-00031	BECHTEL	GA
25762-110-P1K-WL-00032	BECHTEL	GA
25762-110-ERK-WL-00040	BECHTEL	ELEC. RACEWAY
438093	PG&E	CIVIL CONDUIT
438099	PG&E	CIVIL CONDUIT
438118	PG&E	CIVIL DISCHARGE STRUCTURE
438120	PG&E	CIVIL DISCHARGE STRUCTURE
438172	PG&E	CIVIL GA YARD UTIL.
438300	PG&E	CIVIL CONDUIT TURB. BLDG.
FR-04-13-00002-P	SPX	COOLING TOWER
A01-GA-001	SUEZ	GA DESALINATION PLANT
50136768-001	INFILCO	P&ID RECLAIM WATER
50136768-100	SUEZ	GA RECLAIM WATER PLANT



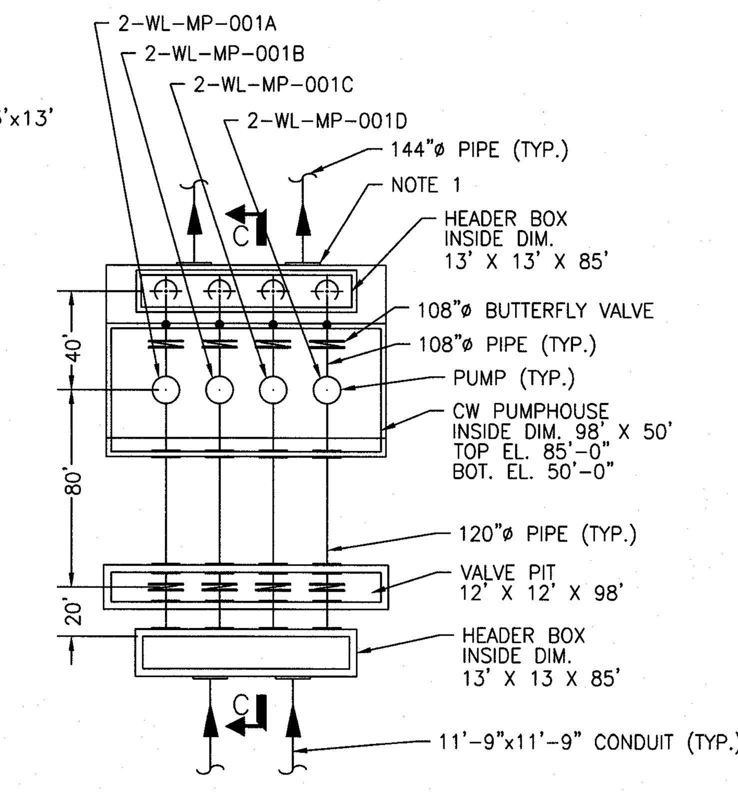
SECTION A-A
(NTS)



DETAIL PLAN
U-1 PUMPHOUSE AREA



SECTION C-C
(NTS)



DETAIL PLAN
U-2 PUMPHOUSE AREA

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION, OR CONSTRUCTION.

CONSTRUCTION NOTE(S):
1. LABELING IS TYPICAL FOR BOTH UNITS.
2. PIPE TO CONCRETE CONNECTIONS AS APPLICABLE.
3. DESALINATION AREA AND PRETREATMENT AREA ARE GENERAL AREAS CONSISTING OF ROADS, VEHICLE PARKING AREAS, BUILDINGS, EQUIPMENT, TANKS, AND OTHER FACILITY REQUIREMENTS.
4. PROVIDE TWO EGRESS LOCATIONS IN VALVE PIT.

0 50 100 200 300 400 500FT

NO.	DATE	REVISIONS	BY	CHK	DESIGN SUPV	ENGR	PROJ ENGR
D	11/13	REVISED TITLE FOR REF DWG 25762-110-M6K-WR-00001			MJB		
C	09/25/13	ISSUE FOR INTERNAL ESTIMATE	MJB DMH		MJB		DED
B	04/05/13	ISSUE FOR BUDGETARY PRICING	DMH		MJB		PK FOR DED
A	03/05/13	ISSUE FOR PRELIMINARY REVIEW	DMH		MJB		DED

SCALE | DESIGNED | DRAWN | CHIEF ENGR

BECHTEL
FREDERICK, MARYLAND

PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

CIRCULATING WATER SYSTEM
WET NATURAL DRAFT COOLING TOWER
GENERAL ARRANGEMENT

JOB NO.	DRAWING NO.	REV
25762-110	P1K-WL-00040	D

22 x 34 'D' SIZE

LEVELS

JUOTC HYBRID CT OPTION

DCPP

Valve List

00B	7/24/2013	Issued for Estimate Report	RP	—	RP
00A	7/11/2013	Issue for Estimate	RP	-	RP
Rev	**Date**	**Reason for Revision**	**Orignator**	**Checked**	**Approved**

<u>System Codes</u>

AD	Condensate
PF	Fire Protection
PI	Plant Air
TL	Circ. Wtr Chem Inj
WB	Service water
WL	Circulating Water
WO	Sea Water
WR	Raw Water (Grey water)

Commodity Code

PV	Valve
HV	valve with motor or pneumatic operator used for on /off operation

Note:

1 Valves furnished with vendor packages are not included in this list. Some valves supplier by the cooling tower supplier have been included in the equipment list to help define the scope of supply by

Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
18	Post indicating valve	0	PIV	PF			12	gate		flange		175	90				-		estimating	Ductile Iron	00A
54	Curb Valve	0	PV	PF			6	gate		flange		175	90				-		estimating	Ductile Iron	00A
1	Inlet isolation WL-MP-001A	1	HV	WL	002	A	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet isolation WL-MP-001B	1	HV	WL	002	B	120	Butterfly	Motor	flange		50	130	30	130		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet isolation WL-MP-001C	1	HV	WL	002	C	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet isolation WL-MP-001D	1	HV	WL	002	D	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet isolation WL-MP-001A	2	HV	WL	002	A	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet isolation WL-MP-001B	2	HV	WL	002	B	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet isolation WL-MP-001C	2	HV	WL	002	C	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Inlet isolation WL-MP-001D	2	HV	WL	002	D	120	Butterfly	Motor	flange		50	130	30	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001A	1	HV	WL	004	A	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001B	1	HV	WL	004	B	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001C	1	HV	WL	004	C	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001D	1	HV	WL	004	D	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001A	2	HV	WL	004	A	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001B	2	HV	WL	004	B	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001C	2	HV	WL	004	C	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Outlet isolation WL-MP-001D	2	HV	WL	004	D	108	Butterfly	Motor	flange		85	130	75	125		25762-110-M6K-WL-00001		Valve Quote	Ductile Iron , epoxy coated or rubber lined	00A
1	Isolation Valve for the Blowdown from CT WL-ME-001A	1	PV	WL			12	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A

Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
1	Isolation Valve for the Blowdown from CT WL-ME-001B	1	PV	WL			12	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Upstream of HV017 on Blowdown Line	1	PV	WL			16	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	HV017 on the Blowdown Line	1	PV	WL			16	Butterfly	Motor	flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Downstream of HV017 on the Blowdown Line	1	PV	WL			16	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	By-pass fro HV017 on the Blowdown Line	1	PV	WL			16	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Upstream of LV009 on Makeup Water Line	1	PV	WL			24	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	On Makeup Water Line, LV009	1	PV	WL			24	Butterfly	Motor	flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Downstream of LV009 on the Makeup Water Pump	1	PV	WL			24	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	By-pass to LV009 on Makeup Water Line	1	PV	WL			24	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	On PIT003A	1	PV	WL			1	Gate				100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	On PIT003B	1	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	On PIT003C	1	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	On PIT003D	1	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Outlet from WL-MP-001A auto vent	1	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Outlet from WL-MP-001A auto vent	1	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A

Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (In)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
1	Outlet from WL-MP-001B auto vent	1	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Outlet from WL-MP-001B auto vent	1	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Outlet from WL-MP-001C auto vent	1	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Outlet from WL-MP-001C auto vent	1	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Outlet from WL-MP-001D auto vent	1	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Outlet from WL-MP-001D auto vent	1	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Root connection to PI 001A	1	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Root connection to PI 001B	1	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Root connection to PI 001C	1	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Root connection to PI 001D	1	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Isolation Valve for the Blowdown from CT WL-ME-001A	2	PV	WL			12	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Isolation Valve for the Blowdown from CT WL-ME-001B	2	PV	WI			12	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Upstream of HV017 on Blowdown Line	2	PV	WI			16	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	HV017 on the Blowdown Line	2	PV	WL			16	Butterfly	Motor	flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Downstream of HV017 on the Blowdown Line	2	PV	WL			16	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	By-pass fro HV017 on the Blowdown Line	2	PV	WL			16	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A

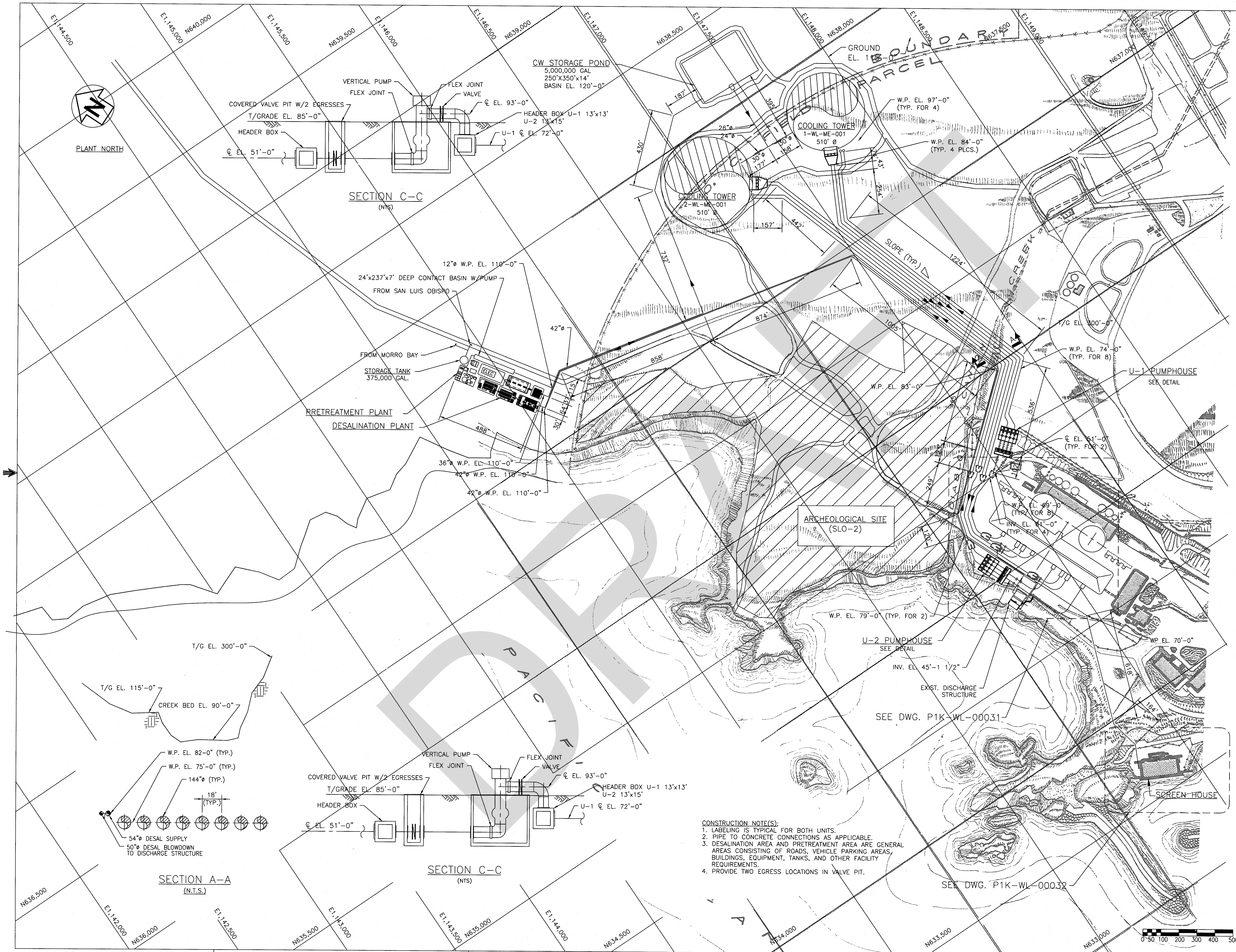
Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
1	Upstream of LV009 on Makeup Water Line	2	PV	WL			24	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductlie iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	On Makeup Water Line, LV009	2	PV	WL			24	Butterfly	Motor	flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductlie iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	Downstream of LV009 on the Makeup Water Pump	2	PV	WL			24	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductlie iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	By-pass to LV009 on Makeup Water Line	2	PV	WL			24	Butterfly		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Ductlie iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	On PIT003A	2	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	On PIT003B	2	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	On PIT003C	2	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	On PIT003D	2	PV	WL			1	Gate		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Outlet from WL-MP-001A auto vent	2	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Outlet from WL-MP-001A auto vent	2	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Outlet from WL-MP-001B auto vent	2	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Outlet from WL-MP-001B auto vent	2	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Outlet from WL-MP-001C auto vent	2	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Outlet from WL-MP-001C auto vent	2	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Outlet from WL-MP-001D auto vent	2	PV	WL			2	ball	Motor	flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Outlet from WL-MP-001D auto vent	2	PV	WL			2	AR		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Root connection to PI 001A	2	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A

Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
1	Root connection to PI 001B	2	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Root connection to PI 001C	2	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
1	Root connection to PI 001D	2	PV	WL			1	gate		flange		100	150	75	100		25762-110-M6K-WL-00005	No		Duplex Stailess Steel	00A
3	Pump MP001A, B, & C isolation valves	0	HV	WO	032		42	Butterfly	Motor	flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile Iron, rubber lined, general service, lug type,	00A
1	FE043 outlet isolation valve	0	HV	WO			42	butterfly	Motor	flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile Iron, rubber lined, general service, lug type,	00A
1	Desal brine outlet control valve	0	HV	WO			42	butterfly	Motor	flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile Iron, rubber lined, general service, lug type,	00A
2	Pump MP002A&B outlet valve	0	HV	WO			8	butterfly	motor	flange		320	70				25762-110-M6K-W0-00001		estimating	Ductile Iron, rubber lined, general service, lug type,	00A
1	Desal brine outlet control valve	0	HV	WO			42	butterfly	Motor	flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
2	Pump MP002A&B outlet valve	0	HV	WO			8	butterfly	motor	flange		320	70				25762-110-M6K-W0-00001		estimating	Ductile Iron, rubber lined, general service, lug type,	00A
3	Pump MP001A, B, & C air release valve	0	PY	WO			2	AR		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
3	Pump MP001A, B, & C air release valve isolation valves	0	PY	WO			2	ball		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
3	PI 031 isolation valve	0	PY	WO			1	ball		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
1	Pump MP001A, B, & C recirc isolation valve	0	PY	WO			30	butterfly		flange		320	70				25762-110-M6K-W0-00001		estimating	Ductile Iron, rubber lined, general service, lug type,	00A
2	FT034 root valves	0	PY	WO			1	ball		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
1	PT033 isolation valve	0	PY	WO			1	ball		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
1	Desal outlet isolation valve	0	PY	WO			42	butterfly		flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile Iron, rubber lined, general service, lug type,	00A

Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (In)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
1	FT043 inlet isolation valve	0	PY	WO			42	butterfly		flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
2	FT043 root valves	0	PY	WO			1	ball		flange		320	70				25762-110-M6K-W0-00001		estimating		00A
1	Desal brine outlet control valve	0	HV	WO			42	butterfly	Motor	flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
1	Desal brine outlet isolation valve	0	PY	WO			42	butterfly		flange		320	70				25762-110-M6K-W0-00001		Valve Quote	Ductile iron, rubber lined, general service, lug type,	00A
1	Brine outlet PI root valve	0	PY	WO			1	gate		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
2	Pump MP002A&B outlet check valve	0	PY	WO			8	wafer check		flange		320	70				25762-110-M6K-W0-00001		estimating	Ductile iron, rubber lined, general service, lug type,	00A
2	Pump MP002A&B outlet air release valve	0	PY	WO			1	AR		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
2	Pump MP002A&B outlet air release isolation valve	0	PY	WO			1	ball		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
2	Pump MP002A&B PI isolation valve	0	PY	WO			1	ball		flange		320	70				25762-110-M6K-W0-00001		estimating	Super duplex ss	00A
2	SL Grey Water Supply pump 4A & 4B check valves	0	PV	WR			6	wafer check		flanged		325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	SL Grey Water Supply pump 5A & 5B check valves	0	PV	WR			6	wafer check		flanged		325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	SL Grey Water Supply pump 4A & 4B discharge valves	0	PV	WR			6	butterfly				325	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
2	SL Grey Water Supply pump 4A & 4B air release valve	0	PV	WR			2	AR				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	SL Grey Water Supply pump 5A & 5B air release valve	0	PV	WR			2	AR				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	SL Grey Water Supply pump 4A & 4B air release isolation valve	0	PV	WR			2	ball				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	SL Grey Water Supply pump 5A & 5B air release isolation valve	0	PV	WR			2	ball				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	SL Grey Water Supply pump 4A & 4B PI isolation valve	0	PV	WR			1	ball				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	SL Grey Water Supply pump 5A & 5B PI isolation valve	0	PV	WR			1	ball				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A

Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
1	SL Grey Water Supply pump 4A & 4B recirc valve isolation valve	0	PV	WR			6	butterfly				325	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	SL Grey Water Supply pump 5A & 5B recirc valve isolation valve	0	PV	WR			6	butterfly				325	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
26	Supply line auto vent valves	0	PV	WR			2	gate				325	90				25762-110-M6K-WR-00003		estimating	duplex ss Assumes approximately 1 per mile	00B
26	supply line auto vent valve isolation valves	0	PV	WR			2	AR				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
26	supply line drain valves	0	PV	WR			3	gate				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
1	flow element isolation valve	0	PV	WR			12	butterfly				325	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	tank isolation valve	0	PV	WR			12	butterfly				325	90				25762-110-M6K-WR-00003		estimating	Ductile Iron, seats EPDM amd 316 SS, 316 SS trim	00A
1	tank outlet valve	0	PV	WR			16	butterfly				325	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
2	Pump MP 002A & B inlet valves	0	PV	WR			16	butterfly				65	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
2	Pump MP002A & 2B check valve	0	PV	WR			12	wafer check				65	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
2	Pump MP002A & 2B isolation valve	0	PV	WR			12	butterfly				65	90				25762-110-M6K-WR-00003		estimating	Ductile Iron, seats EPDM amd 316 SS, 316 SS trim	00A
2	Pump MP002A & 2B PI isolation valve	0	PV	WR			1	gate				65	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	Pump MP003A & B check valves	0	PV	WR			8	wafer check				65	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	Pump MP003A & B islolation valves	0	PV	WR			8	butterfly				65	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A
2	Pump MP 001 & B inlet valves	0	PV	WR			12	butterfly				65	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A

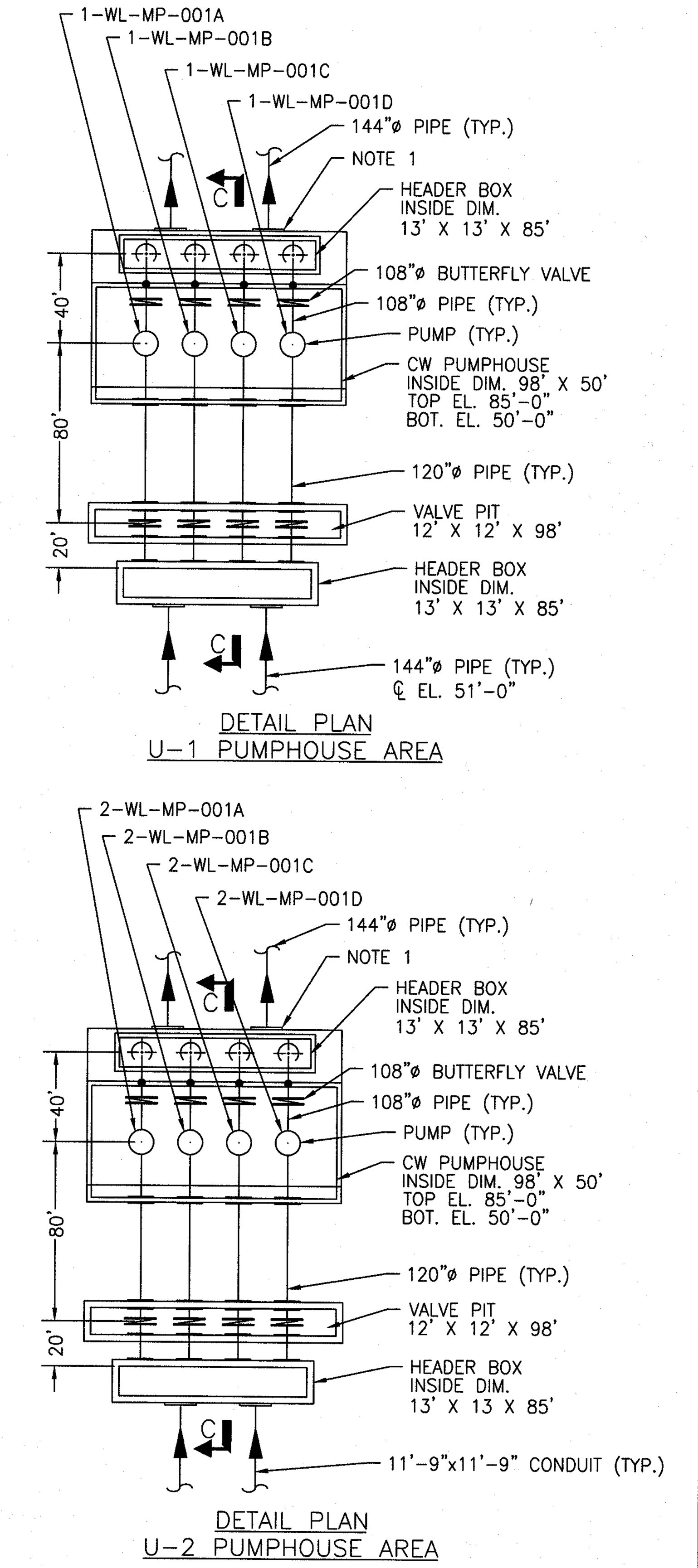
Qty	Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (pisg)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Bid	Remarks	Rev
2	Pump MP001A & 1B check valve	0	PV	WR			12	wafer check				65	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	Pump MP001A & 1B isolation valve	0	PV	WR			12	butterfly				65	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
2	Pump MP001A & 1B PI isolation valve	0	PV	WR			1	gate				30	90				25762-110-M6K-WR-00003		estimating	Ductile Iron	00A
1	storage pond outlet valve	0	PV	WR			36	butterfly				30	90				25762-110-M6K-WR-00003		estimating	Ductile iron, seats EPDM amd 316 SS, 316 SS trim	00A



CONSTRUCTION NOTE(S):
1. LABELING IS TYPICAL FOR BOTH UNITS.
2. PIPE TO CONCRETE CONNECTIONS AS APPLICABLE.
3. DESALINATION AREA AND PRETREATMENT AREA ARE GENERAL AREAS CONSISTING OF ROADS, VEHICLE PARKING AREAS, BUILDINGS, EQUIPMENT, TANKS, AND OTHER FACILITY REQUIREMENTS.
4. PROVIDE TWO EGRESS LOCATIONS IN VALVE PIT.

REFERENCE DRAWING(S):

25762-110-M5K-WL-0004	BECHTEL	PFD COOLING TOWER
25762-110-M6K-WL-0004	BECHTEL	P&ID COOLING TOWER
25762-110-M6K-WO-00001	BECHTEL	P&ID DESAL & BRINE
25762-110-M6K-WR-00001	BECHTEL	P&ID RECLAIM WATER
25762-110-P1K-WL-00013	BECHTEL	REMOVAL
25762-110-P1K-WL-00031	BECHTEL	GA
25762-110-P1K-WL-00032	BECHTEL	GA
25762-110-ERK-WL-00050	BECHTEL	ELEC. RACEWAY
438093	PG&E	CIVIL CONDUIT
438099	PG&E	CIVIL CONDUIT
438118	PG&E	CIVIL DISCHARGE STRUCTURE
438120	PG&E	CIVIL DISCHARGE STRUCTURE
438172	PG&E	CIVIL GA YARD UTIL.
438300	PG&E	CIVIL CONDUIT TURB. BLDG.
FR-04-13-00002-P	SPX	COOLING TOWER
A01-GA-001	SUEZ	GA DESALINATION PLANT
50136768-001	INFILCO	P&ID RECLAIM WATER
50136768-100	SUEZ	GA RECLAIM WATER PLANT



FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION, OR CONSTRUCTION.

NO.	DATE	REVISIONS	BY	CHK	DESIGN SUPV	ENGR	PROJ ENGR	
	/ /							
D	9/17/13	REVISED TITLE FOR REF DWG 25762-110-M6K-WR-00001	RP		MJB		LDe	
C	06/28/13	ISSUE FOR INTERNAL ESTIMATE	MJB for DMH		MJB		DED	
B	04/04/13	ISSUE FOR BUDGETARY PRICING	DMH		MJB		PK	
A	03/05/13	ISSUE FOR PRELIMINARY REVIEW	DMH		MJB		DED	

SCALE	DESIGNED	DRAWN	CHIEF ENGR

BECHTEL
FREDERICK, MARYLAND

PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

CIRCULATING WATER SYSTEM
WET MECHANICAL DRAFT COOLING TOWER
GENERAL ARRANGEMENT

JOB NO.	DRAWING NO.	REV
25762-110	P1K-WL-00050	D

22 x 34 "D" SIZE

LEVELS 1111111111222222222233333333334444444444555555555 56666
1234567890123456789012345678901234567890123456789012345678901234567890123

JUOTC STUDY FINE MESH OPTION

Diablo Canyon Power Plant

Valve List

25762-110-M6X-YA-00006

00B		Issued for Estimate Report	RP	–	RP
00A	5/8/3013	Issued for estimating	RP	-	RP
Rev	**Date**	**Reason for Revision**	**Orignator**	**Checked**	**Approved**

System Codes

WT	Traveling Screen Wash
PP	Personnel Protection

Note:

1 System Codes are Bechtel standard codes. Bechtel system codes may be assigned to exisiting plant equipment numbers to aid in list sorts.

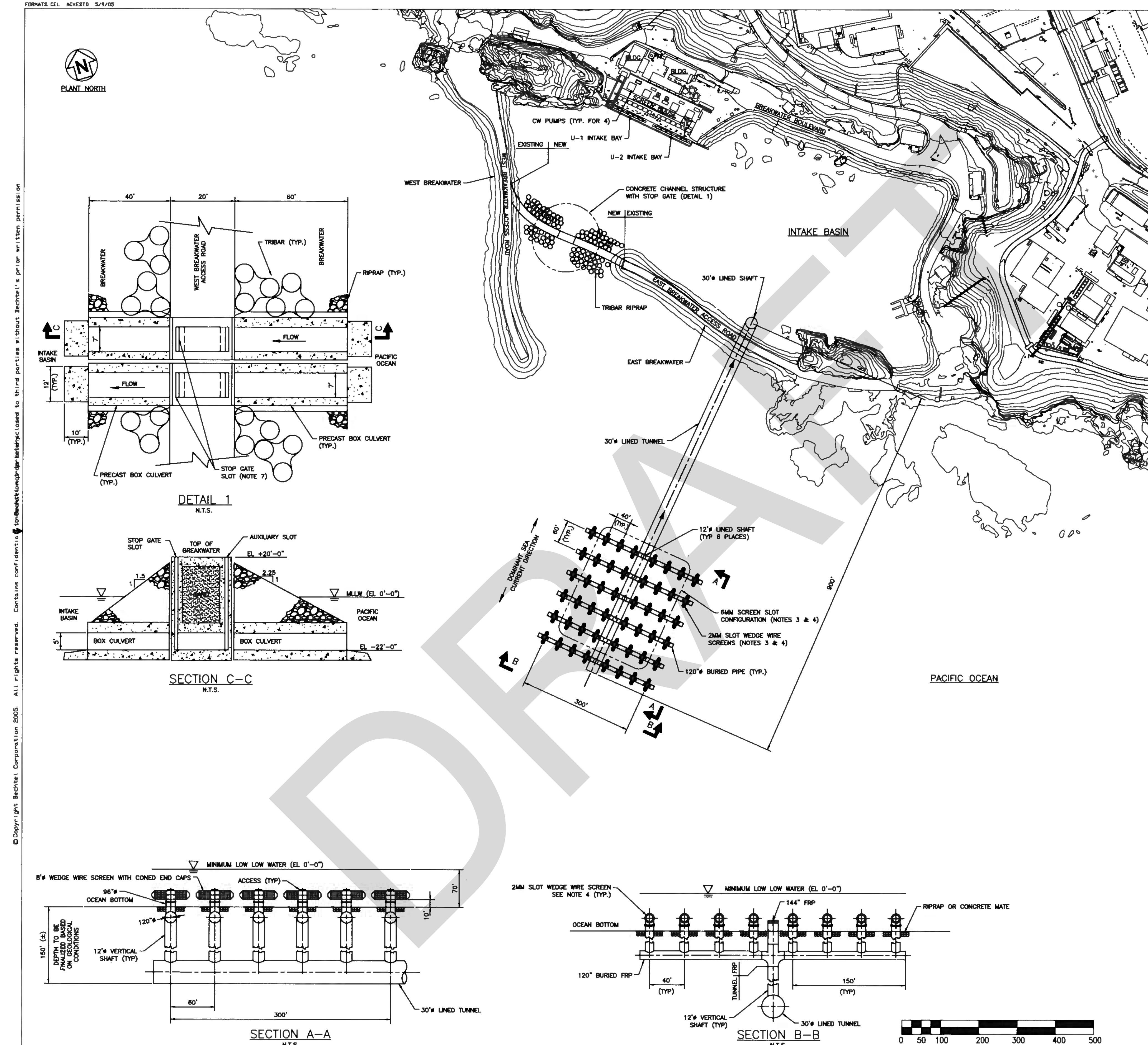
Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (pisg)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Remarks	Rev
Screen Wash Pump MP03 discharge	1	PV	WT			10	Wafer check		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Screen Wash Pump MP03 discharge	1	PV	WT			10	Butterfly		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Ductile iron, rubber lined, general service, lug type,	00A
Inlet to pump discharge PI 03	1	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Inlet to automatic vent	1	PV	WT			2	ball		flange		150	70	90	56.5			No	Super duplex material	00A
Inlet to automatic vent	1	PV	WT			2	AR		flange		150	70	90	56.5			No	Super duplex material	00A
Inlet to Strainer ML09	1	PV	WT			16	Butterfly		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Ductile iron, rubber lined, general service, lug type,	00B
Outlet to Strainer ML09	1	PV	WT			16	Butterfly		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Ductile iron, rubber lined, general service, lug type,	00B
Strainer ML09 bypass	1	PV	WT			16	Butterfly		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Ductile iron, rubber lined, general service, lug type,	00B
To PDIS 006	1	PV	WT			1	globe		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
To PDIS 006	1	PV	WT			1	globe		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Strainer waste discharge	1	PV	WT			8	ball	Mtr	flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Root connection to PS 008	1	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Root connection to PS 009A	1	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Root connection to PS 009B	1	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Root connection to PS 009C	1	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Inlet to PCV 011A	1	PV	WT			6	butterfly		flange		150	70	90	56.5			No	Ductile iron, rubber lined, general service, lug type,	00A

Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Remarks	Rev
Y-strainer Screen ML001 blow off	1	PV	WT			2	ball		flange		150	70	90	56.5			No	Super duplex material	00B
Inlet to PCV 011B	1	PV	WT			6	butterfly		flange		150	70	90	56.5			No	Ductile iron, rubber lined, general service, lug type,	00A
Y-strainer Screen ML002 blow off	1	PV	WT			2	ball		flange		150	70	90	56.5			No	Super duplex material	00B
Inlet to PCV 011C	1	PV	WT			6	butterfly		flange		150	70	90	56.5			No	Ductile iron, rubber lined, general service, lug type,	00A
Y-strainer Screen ML003 blow off	1	PV	WT			2	ball		flange		150	70	90	56.5			No	Super duplex material	00B
Inlet to PCV 011D	1	PV	WT			6	butterfly		flange		150	70	90	56.5			No	Ductile iron, rubber lined, general service, lug type,	00A
Y-strainer Screen ML004 blow off	1	PV	WT			2	ball		flange		150	70	90	56.5			No	Super duplex material	00B
Inlet to PCV 011E	1	PV	WT			6	butterfly		flange		150	70	90	56.5			No	Ductile iron, rubber lined, general service, lug type,	00A
Y-strainer Screen ML005 blow off	1	PV	WT			2	ball		flange		150	70	90	56.5			No	Super duplex material	00B
Inlet to PCV 011F	1	PV	WT			6	butterfly		flange		150	70	90	56.5			No	Ductile iron, rubber lined, general service, lug type,	00A
Y-strainer Screen ML006 blow off	1	PV	WT			2	ball		flange		150	70	90	56.5			No	Super duplex material	00B
Root connection to PI 011A	1	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Root connection to PI 011B	1	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Root connection to PI 011C	1	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Root connection to PI 011D	1	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Root connection to PI 011E	1	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Root connection to PI 011F	1	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A

Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Remarks	Rev
Root connection to PI 012F	1	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Screen Wash Pump MP03 discharge	2	PV	WT			10	Wafer check		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Screen Wash Pump MP03 discharge	2	PV	WT			10	Butterfly		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Ductile iron, rubber lined, general service, lug type,	00A
Inlet to pump discharge PI 03	2	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Inlet to automatic vent	2	PV	WT			2	ball		flange		150	70	90	56.5			No	Super duplex material	00A
Inlet to automatic vent	2	PV	WT			2	AR		flange		150	70	90	56.5			No	Super duplex material	00A
Inlet to Strainer ML09	2	PV	WT			16	Butterfly		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Ductile iron, rubber lined, general service, lug type,	00B
Outlet to Strainer ML09	2	PV	WT			16	Butterfly		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Ductile iron, rubber lined, general service, lug type,	00B
Strainer ML09 bypass	2	PV	WT			16	Butterfly		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Ductile iron, rubber lined, general service, lug type,	00B
To PDIS 006	2	PV	WT			1	globe		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
To PDIS 006	2	PV	WT			1	globe		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Strainer waste discharge	2	PV	WT			8	ball	Mtr	flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Root connection to PS 008	2	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Root connection to PS 009A	2	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Root connection to PS 009B	2	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Root connection to PS 009C	2	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A

Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Remarks	Rev
Inlet to PCV 011A	2	PV	WT			6	butterfly		flange		150	70	90	56.5			No	Ductile iron, rubber lined, general service, lug type,	00A
Y-strainer Screen ML001 blow off	2	PV	WT			2	ball		flange		150	70	90	56.5			No	Super duplex material	00B
Inlet to PCV 011B	2	PV	WT			6	butterfly		flange		150	70	90	56.5			No	Ductile iron, rubber lined, general service, lug type,	00A
Y-strainer Screen ML002 blow off	2	PV	WT			2	ball		flange		150	70	90	56.5			No	Super duplex material	00B
Inlet to PCV 011C	2	PV	WT			6	butterfly		flange		150	70	90	56.5			No	Ductile iron, rubber lined, general service, lug type,	00A
Y-strainer Screen ML003 blow off	2	PV	WT			2	ball		flange		150	70	90	56.5			No	Super duplex material	00B
Inlet to PCV 011D	2	PV	WT			6	butterfly		flange		150	70	90	56.5			No	Ductile iron, rubber lined, general service, lug type,	00A
Y-strainer Screen ML004 blow off	2	PV	WT			2	ball		flange		150	70	90	56.5			No	Super duplex material	00B
Inlet to PCV 011E	2	PV	WT			6	butterfly		flange		150	70	90	56.5			No	Ductile iron, rubber lined, general service, lug type,	00A
Y-strainer Screen ML005 blow off	2	PV	WT			2	ball		flange		150	70	90	56.5			No	Super duplex material	00B
Inlet to PCV 011F	2	PV	WT			6	butterfly		flange		150	70	90	56.5			No	Ductile iron, rubber lined, general service, lug type,	00A
Y-strainer Screen ML006 blow off	2	PV	WT			2	ball		flange		150	70	90	56.5			No	Super duplex material	00B
Root connection to PI 011A	2	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Root connection to PI 011B	2	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Root connection to PI 011C	2	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Root connection to PI 011D	2	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A
Root connection to PI 011E	2	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A

Line Description	Unit	Comm	System	Valve Seq. No.	Suffix	Dia (in)	Valve Type	Act. Type	End Prep.	Valve Material Class	Design Press (psig)	Design Temp (°F)	Service Press (psig)	Service Temp (°F)	Rating	P&ID	Heat Trace (Yes/No)	Remarks	Rev
Root connection to PI 011F	2	PV	WT			1	gate		flange		150	70	90	56.5		25762-11--M6K-WT-00001	No	Super duplex material	00A



REFERENCE DRAWINGS

25762-110-M6K-00006	BECHTEL	P&ID
439851	DCPP	CIVIL
439852	DCPP	CIVIL
512291	DCPP	BREAKWATER
512292	DCPP	TRIBAR
PAT. # 6051,131	JOHNSON SCREEN	ASSEMBLY

NOTES

1. OPERATION OF BREAKWATERS MAY HAVE ALTERED THE OCEAN BED ELEVATIONS.
2. ALL ELEVATIONS ARE MLLW ELEVATIONS.
3. 48 – 2MM SCREEN SLOT CONFIGURATION IS SHOWN. FOR 6MM SCREEN SLOT 30 SCREENS ARE REQUIRED.
4. WEDGE WIRE SCREEN DIMENSIONS FOR 2MM SLOT ARE 96" OD x 416" LONG WITH AN OUTLET SIZE OF 96"⌀. THE 6MM SLOT DIMENSIONS ARE THE SAME AS THE 2MM.
5. FLANGE CONNECTION REQUIRED BETWEEN DISSIMILAR MATERIALS.
6. RIPRAP PLACEMENT ON AREA OVER BURIED PIPES AND UNDER THE SCREENS.
7. STOP GATE ONLY REQUIRED IN ONE SLOT PER FLOW PATH. AUXILIARY SLOT MAY BE USED FOR MAINTENANCE PURPOSES.

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION, OR CONSTRUCTION.

NO.	DATE	REVISIONS	BY	CHK	REV SUPV.	ENGR.	PROJ ENGR	APPR
B	5/28/13	ISSUE FOR INTERNAL ESTIMATE	DMH	–	[signature]	–	[signature]	–
A	3/5/13	ISSUE FOR PRELIMINARY REVIEW	DMH	–	MJB	–	DED	–

SCALE | DATE | DESIGNED | DRAWN | CHECKED ENGR.

BECHTEL
FREDERICK, MARYLAND

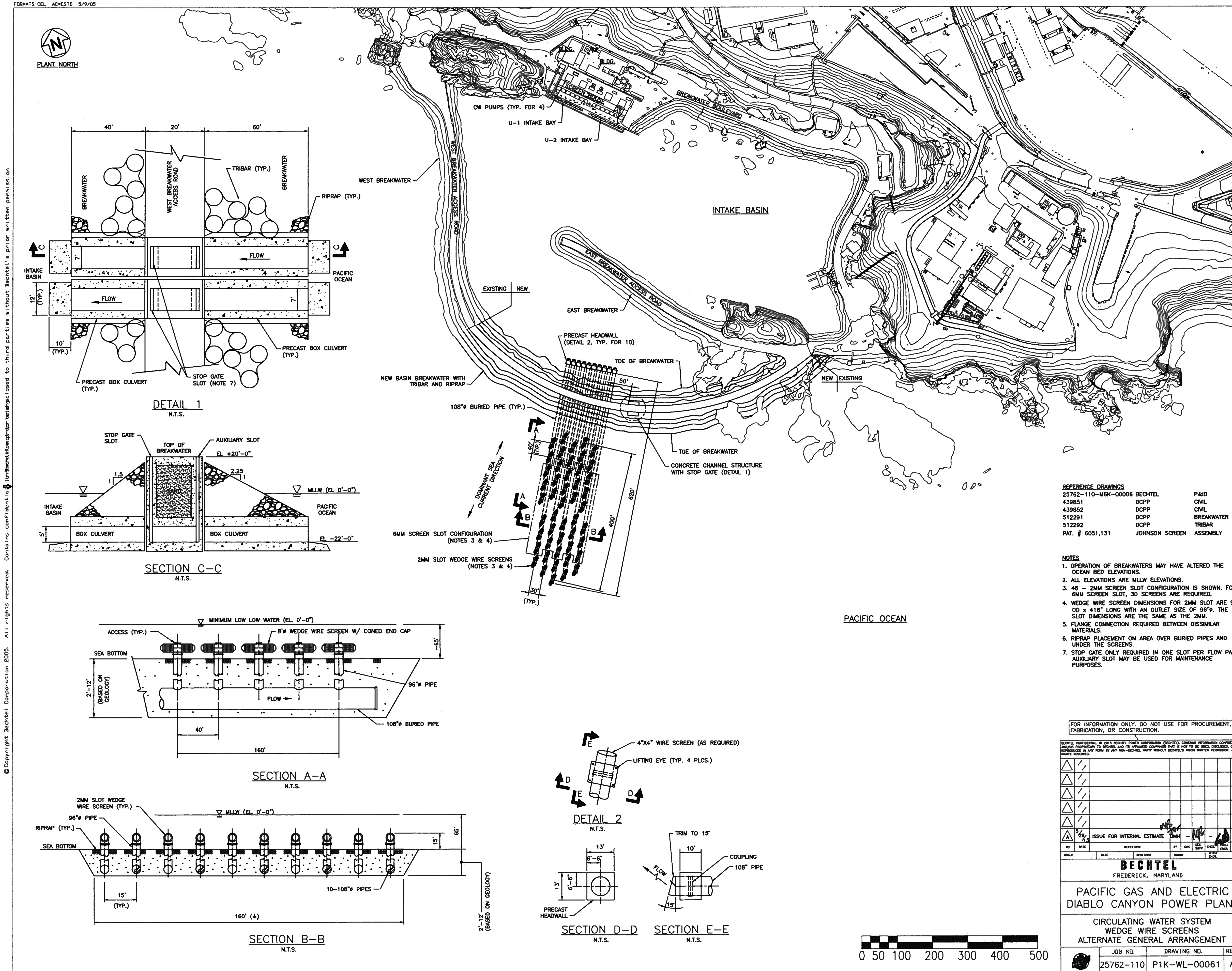
PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

CURCULATING WATER SYSTEM
WEDGE WIRE SCREENS
GENERAL ARRANGEMENT

JOB NO.	DRAWING NO.	REV.
25762-110	P1K-WL-00060	B

34"X44"E SIZE

DRAFT



REFERENCE DRAWINGS

25762-110-M6K-00006	BECHTEL	P&ID
439851	DCPP	CML
439852	DCPP	CML
512291	DCPP	BREAKWATER
512292	DCPP	TRIBAR
PAT. # 6051,131	JOHNSON SCREEN	ASSEMBLY

NOTES

1. OPERATION OF BREAKWATERS MAY HAVE ALTERED THE OCEAN BED ELEVATIONS.
2. ALL ELEVATIONS ARE MLLW ELEVATIONS.
3. 48 – 2MM SCREEN SLOT CONFIGURATION IS SHOWN. FOR 6MM SCREEN SLOT, 30 SCREENS ARE REQUIRED.
4. WEDGE WIRE SCREEN DIMENSIONS FOR 2MM SLOT ARE 96" OD x 416" LONG WITH AN OUTLET SIZE OF 96"ø. THE 6MM SLOT DIMENSIONS ARE THE SAME AS THE 2MM.
5. FLANGE CONNECTION REQUIRED BETWEEN DISSIMILAR MATERIALS.
6. RIPRAP PLACEMENT ON AREA OVER BURIED PIPES AND UNDER THE SCREENS.
7. STOP GATE ONLY REQUIRED IN ONE SLOT PER FLOW PATH. AUXILIARY SLOT MAY BE USED FOR MAINTENANCE PURPOSES.

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION, OR CONSTRUCTION.

NO.	DATE	REVISIONS	BY	CHK	DES SUPV.	ENGR	PROJ ENGR	APPR
A	5/28/13	ISSUE FOR INTERNAL ESTIMATE	DMH	–		–		–

SCALE | DATE | DESIGNED | DRAWN | CHID ENGR

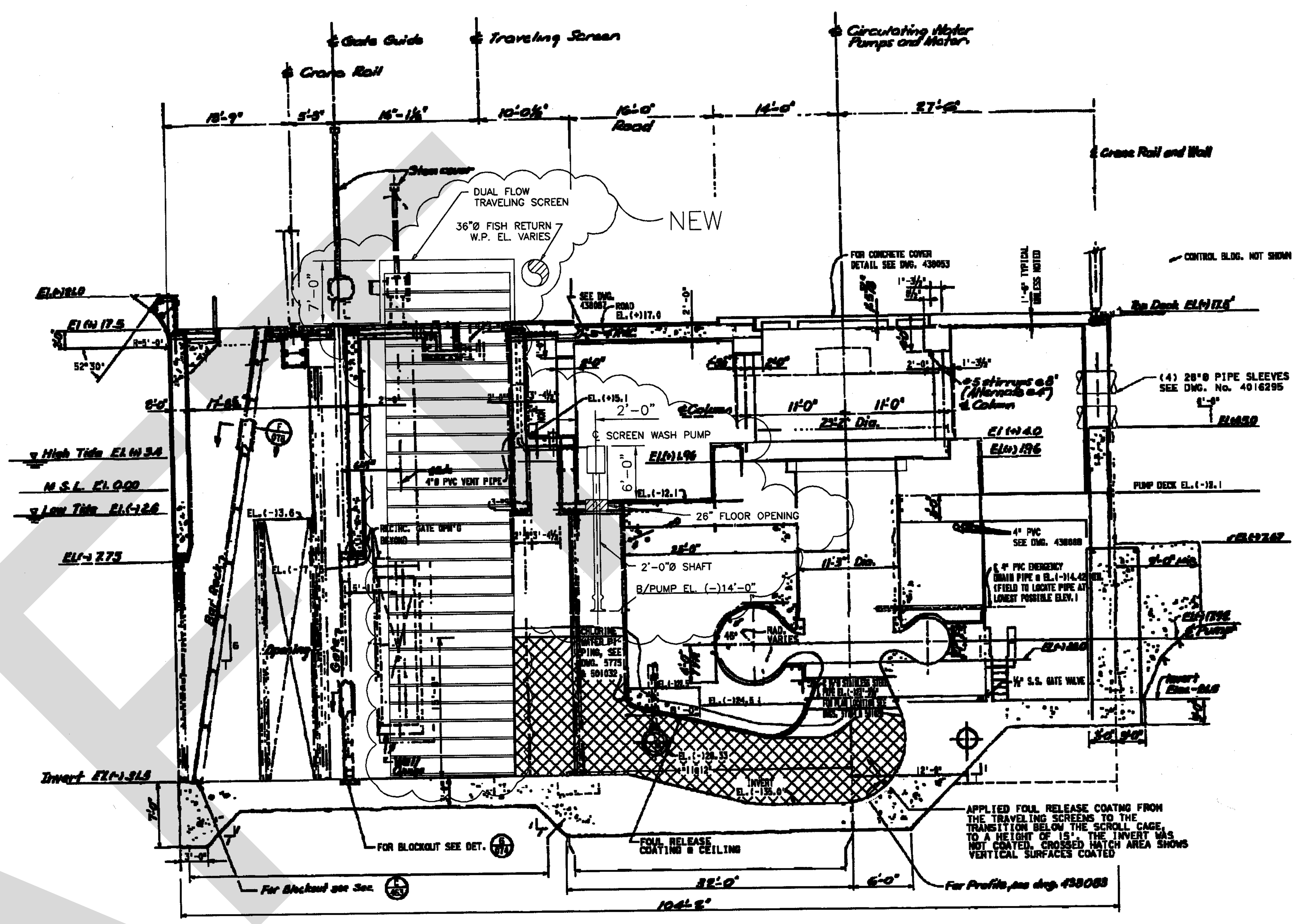
BECHTEL
FREDERICK, MARYLAND

PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

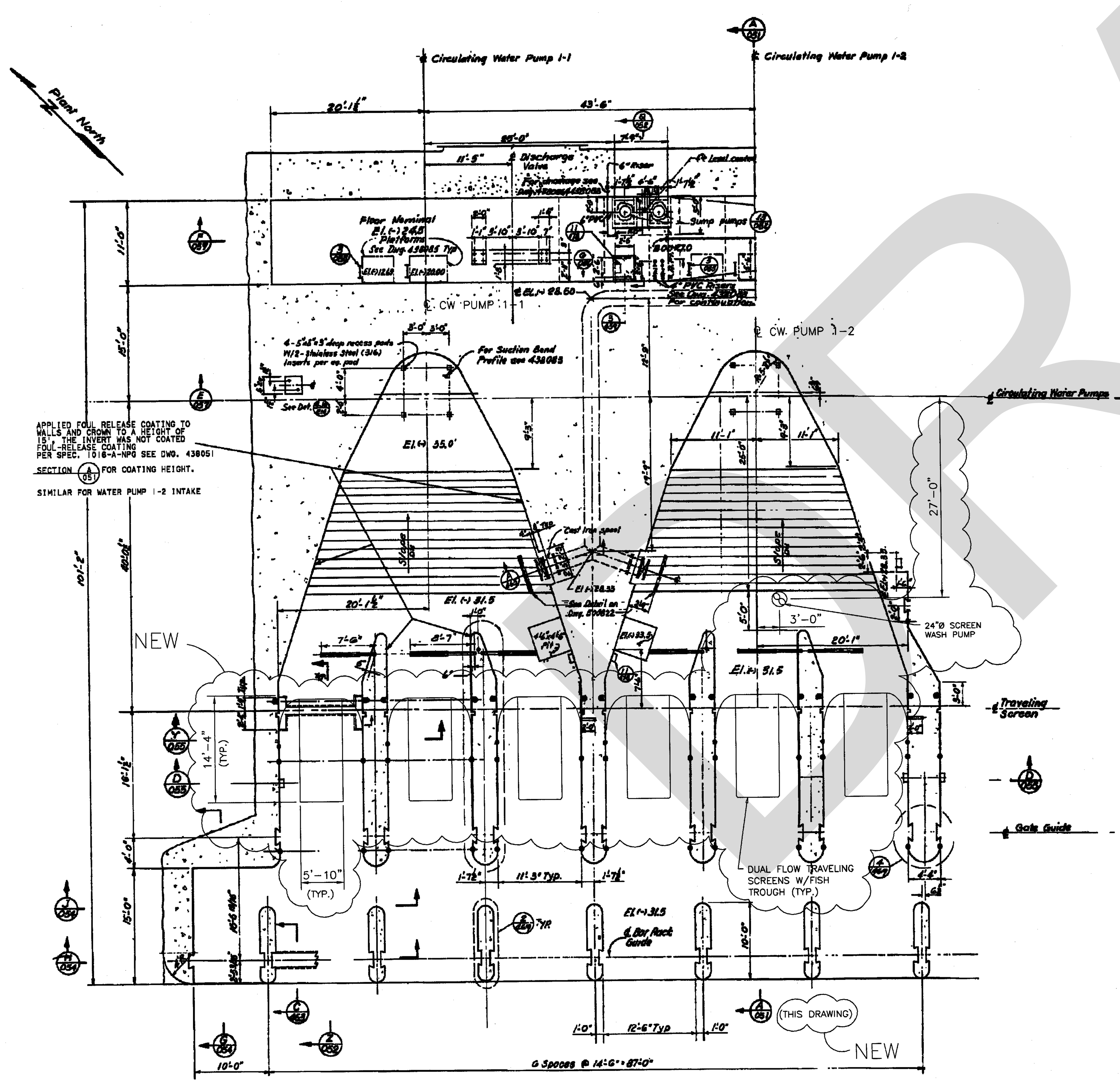
CIRCULATING WATER SYSTEM
WEDGE WIRE SCREENS
ALTERNATE GENERAL ARRANGEMENT

JOB NO.	DRAWING NO.	REV.
25762-110	P1K-WL-00061	A

34"X44"E SIZE



SECTION
Scale 3/16" = 1'-0"



PLAN - INVERT AREA I
UNIT 1 SHOWN, UNIT 2 OPPOSITE HAND

REFERENCE(S):
SEE DRAWING 2576-110-P1K-WL-00071

NOTE(S):
SEE DRAWING 2576-110-P1K-WL-00071

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION, OR CONSTRUCTION.

NO.	DATE	REVISIONS	BY	CHK	DES SUPV.	ENGR.	PROJ ENGR	APPR
	/ /							
	/ /							
D	9/17/13	REMOVED BOSKER RAKE	RP		MJB		DED	
C	06/27/13	ISSUE FOR ESTIMATE	DMH	–	MJB	–	DED	–
B	05/08/13	ISSUE FOR INTERNAL ESTIMATE	DMH	–	–	–	–	–
A	03/05/13	ISSUE FOR PRELIMINARY REVIEW	DMH	–	MJB	–	DED	–

SCALE	DATE	DESIGNED	DRAWN	CHIEF ENGR.

BECHTEL
FREDERICK, MARYLAND

PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

CIRCULATING WATER SYSTEM
FINE MESH TRAVELING SCREEN
GENERAL ARRANGEMENT

JOB NO.	DRAWING NO.	REV.
25762-110	P1K-WL-00070	D

34"X44"E SIZE

DRAFT

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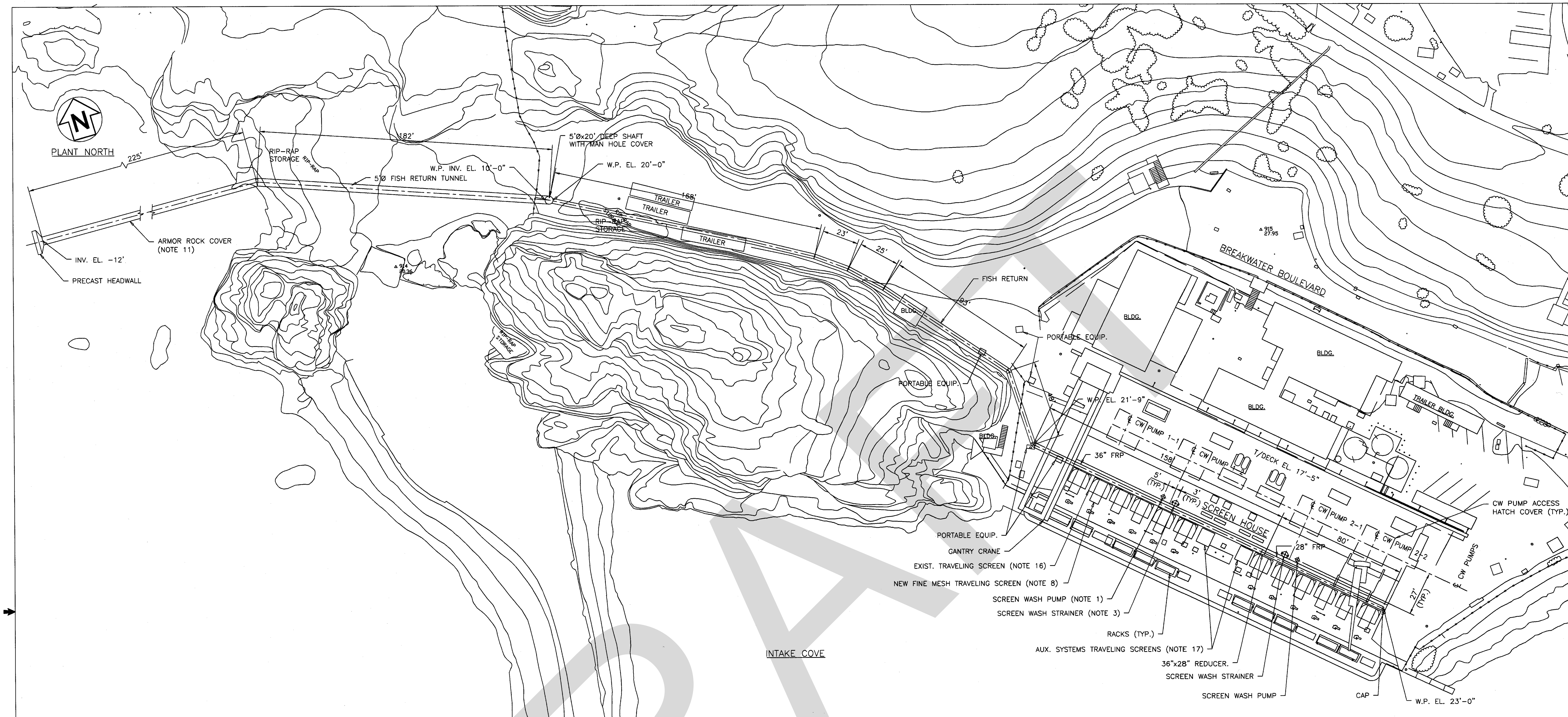

NOTE(S):

1. TWO 2100 GPM SCREEN WASH PUMPS; ONE PER UNIT. MOUNT BELOW DECK AT FLOOR EL. -2'-1 1/4". PUMP SUCTION NOZZLE WILL EXTEND 12'-0" BELOW FLOOR ELEVATION (APPROXIMATELY 12" BELOW MINIMUM WATER LEVEL, -13'-0"). PUMP AND MOTOR ASSEMBLY IS APPROXIMATELY 24"Ø x 18'-0" TALL. 26"Ø FLOOR OPENING REQUIRED TO INSERT PUMP SHAFT. NEW SCREEN WASH PUMPS WILL BE PIPED IN SERIES TO EXISTING SCREEN WASH SYSTEM.
2. SCREEN WASH PUMP AND MOTOR MAY REQUIRE DISASSEMBLE TO INSTALL.
3. SCREEN WASH AUTOMATIC BACKWASH STRAINER IS 44"Ø X 69" TALL WITH 16"Ø NOZZLES. WILL BE INSTALLED ON EL. -2'-1 1/4". NEW 18"Ø PIPING WILL BE ADDED TO EXISTING SCREEN WASH SYSTEM TO ACCOMMODATE STRAINERS.
4. SCREEN WASH AUTOMATIC BACKWASH STRAINER 3"Ø BACKWASH DISCHARGE PIPE WILL BE ROUTED TO NEAREST DISCHARGE LINE OR TO FOREBAY.
5. SCREEN WASH SYSTEM WILL REQUIRE MODIFICATION OF EXISTING SUPPORTS AND INSTALLATION OF NEW SUPPORTS.
6. EXISTING SCREEN WASH PIPING WILL REQUIRE MODIFICATION TO ACCOMMODATE NEW PUMP AND STRAINER.
7. NEW SCREEN WASH PUMP AND STRAINER WILL LIMIT IMPACT TO WORK LAY-DOWN AREA.
8. DUAL FLOW SCREENS ARE APPROXIMATELY 14'-4" WIDE x 49'-0" TALL (PLUS TOPWORKS) x 5'-10" DEEP. CUT OPENING AT DECK ELEVATION 17'-6" AS REQUIRED AND REINFORCE DECK AS REQUIRED.
9. EMBED TRAVELING SCREEN DEBRIS TROUGH WILL BE ABANDON-IN-PLACE AND COVERED AS REQUIRED. NEW TROUGH WILL BE ROUTED TO THE EXISTING DEBRIS GRINDER AND MOUNTED TO DECK SURFACE AS REQUIRED.
10. TRAVELING SCREEN FISH RETURN TROUGH WILL INTERCONNECT WITH NEW FISH RETURN LINE.
11. FISH RETURN CONCRETE PIPE WILL LAY ON OCEAN FLOOR. COVER WITH ARMOR ROCK AS REQUIRED.
12. ALL STRUCTURES IN PATHWAY OF FISH RETURN PIPE WILL BE RELOCATED.
13. USE FLANGE CONNECTIONS BETWEEN DISSIMILAR MATERIAL CONNECTIONS.
14. SLOPE FISH RETURN PIPE NO GREATER THAN 1/8" PER FOOT.
15. SUPPORTS ARE REQUIRED FOR FISH RETURN FRP AT SCREEN HOUSE DECK AND ABOVE GROUND.
16. REMOVE UINT 1 AND 2 ORIGINAL CW SINGLE FLOW TRAVELING SCREENS AND ASSOCIATED EQUIPMENT (TOTAL OF 6 SCREENS PER UNIT).
17. AUXILIARY TRAVELING SCREENS WILL NOT BE MODIFIED.
18. FISH RETURN TUNNEL WILL BE LINED.

REFERENCE(S):

25762-110-P1K-WL-00070	BECHTEL	GA PLAN & SECTION
25762-110-ELK-0000-00006	BECHTEL	ELEC.
25762-110-M5K-WT-00001	BECHTEL	FLOW DIAGRAM
25762-110-M6K-WT-00001	BECHTEL	P&ID
USE THIS DRAWING	BECHTEL	CIVIL
BP12-189SR1-1x6	OVIVO	FINE MESH TRAVELING SCREEN
BP12-189SR1-2x9	OVIVO	FINE MESH TRAVELING SCREEN
501028	PG&E	PIPING
501030	PG&E	PIPING
501031	PG&E	PIPING
59461	PG&E	CIVIL
59463	PG&E	CIVIL

FOR INFORMATION ONLY. DO NOT USE FOR PROCUREMENT, FABRICATION, OR CONSTRUCTION.

NO.	DATE	REVISIONS	BY	CHK	DES SUPV.	ENGR.	PROJ ENGR	APPR
	/ /							
	/ /							
	/ /							
C	9/19/13	REVISED NOTE 8	RP		MJB		aOO	
B	06/27/13	ISSUE FOR ESTIMATE	MJB DMH	–	MJB	–	DED	–
A	05/08/13	ISSUE FOR INTERNAL ESTIMATE	DMH	–	–	–	–	–

SCALE | DATE | DESIGNED | DRAWN | CHIEF ENGR.

BECHTEL
FREDERICK, MARYLAND

PACIFIC GAS AND ELECTRIC
DIABLO CANYON POWER PLANT

CIRCULATING WATER SYSTEM
FINE MESH TRAVELING SCREEN & FISH RETURN
GENERAL ARRANGEMENT

JOB NO.	DRAWING NO.	REV.
25762-110	P1K-WL-00071	C

34"X44"E SIZE

LEVELS 1111111111222222222233333333334444444444555555555 56666 1234567890123456789012345678901234567890123456789 0123

8 7 6 5 4 3 2 1

H G F E D C B A

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