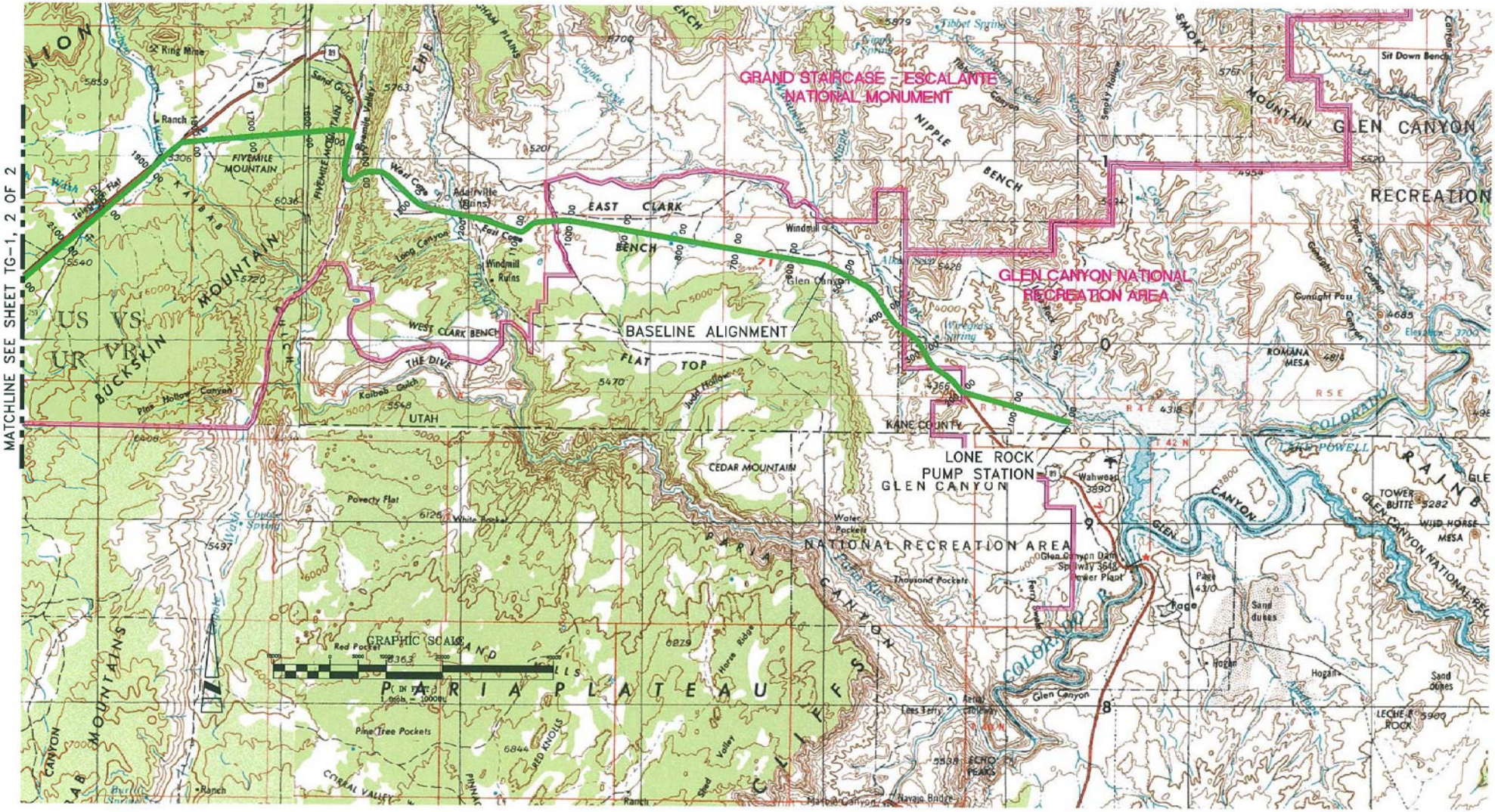
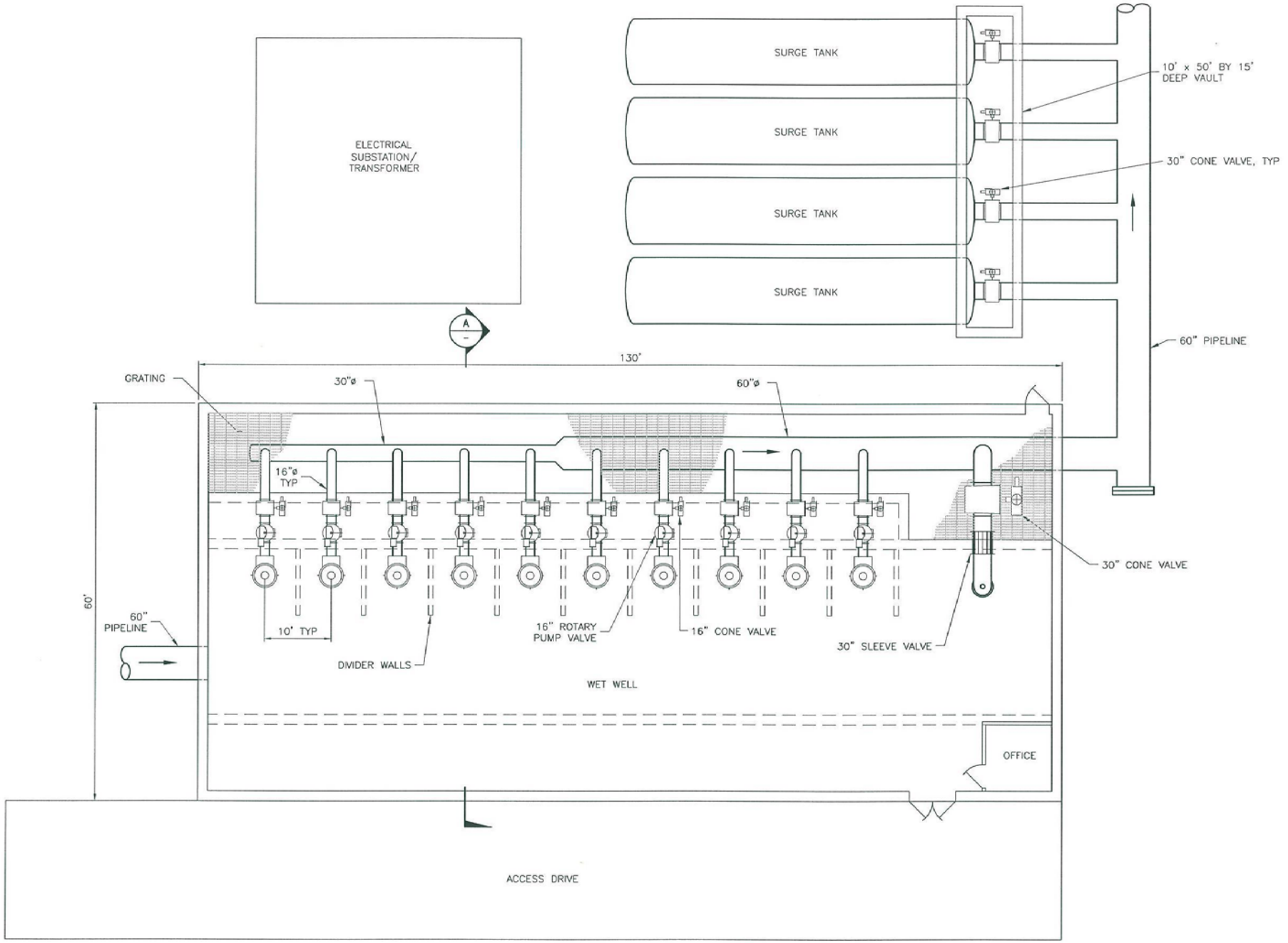


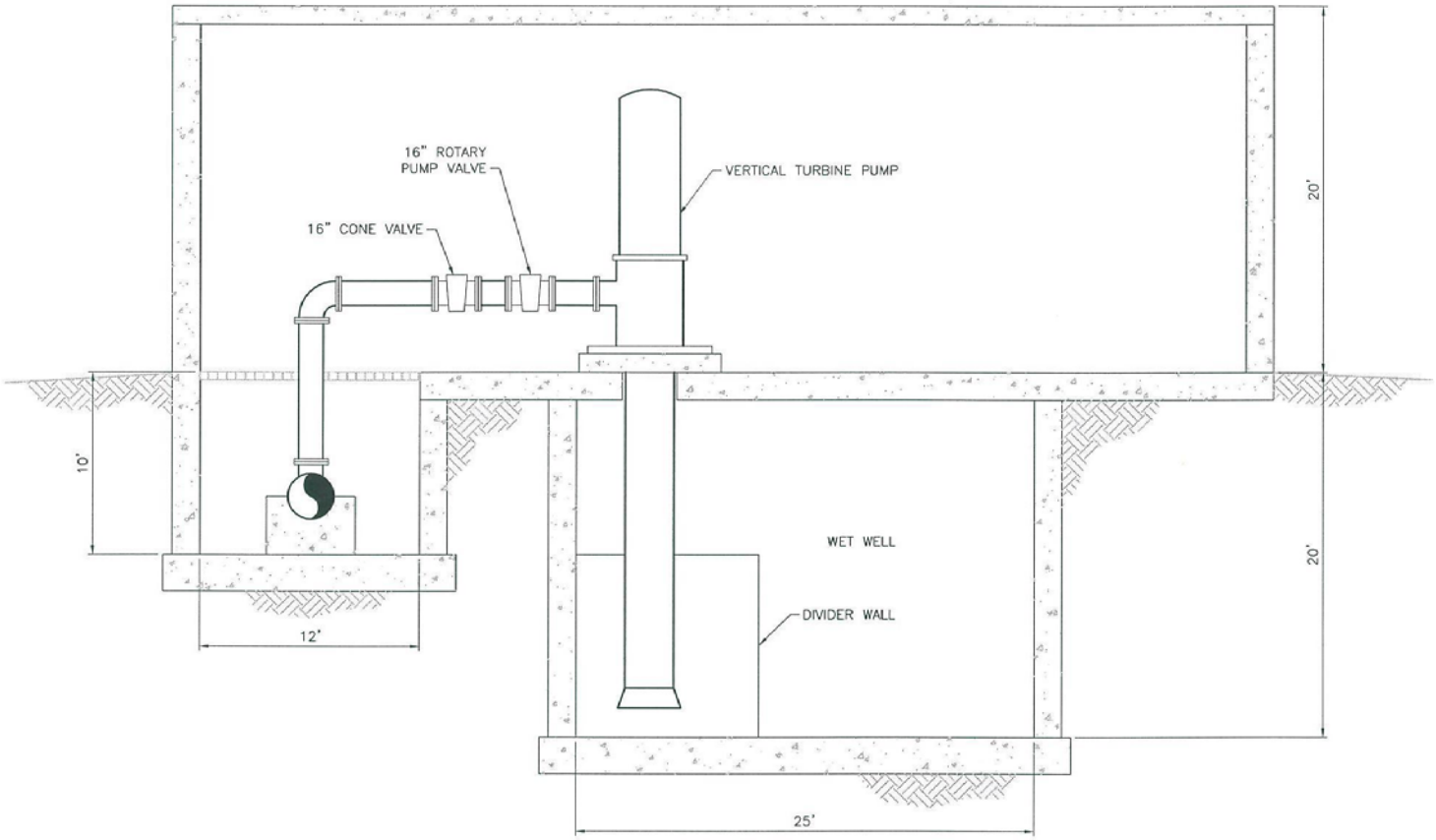
DATE	DESCRIPTION	APP	DESIGN BY: AER DRAWN BY: PSF CHECKED BY: DATED: 6/16/03	PROJECT ENGINEER / RE NO. / DATE PROJECT MANAGER / RE NO. / DATE	BOYLE ENGINEERING CORPORATION 45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY OVERALL ALIGNMENTS TOPOGRAPHIC MAP	DRAWING NO. TG-1 FILE NO.



PUMP STATION PLAN

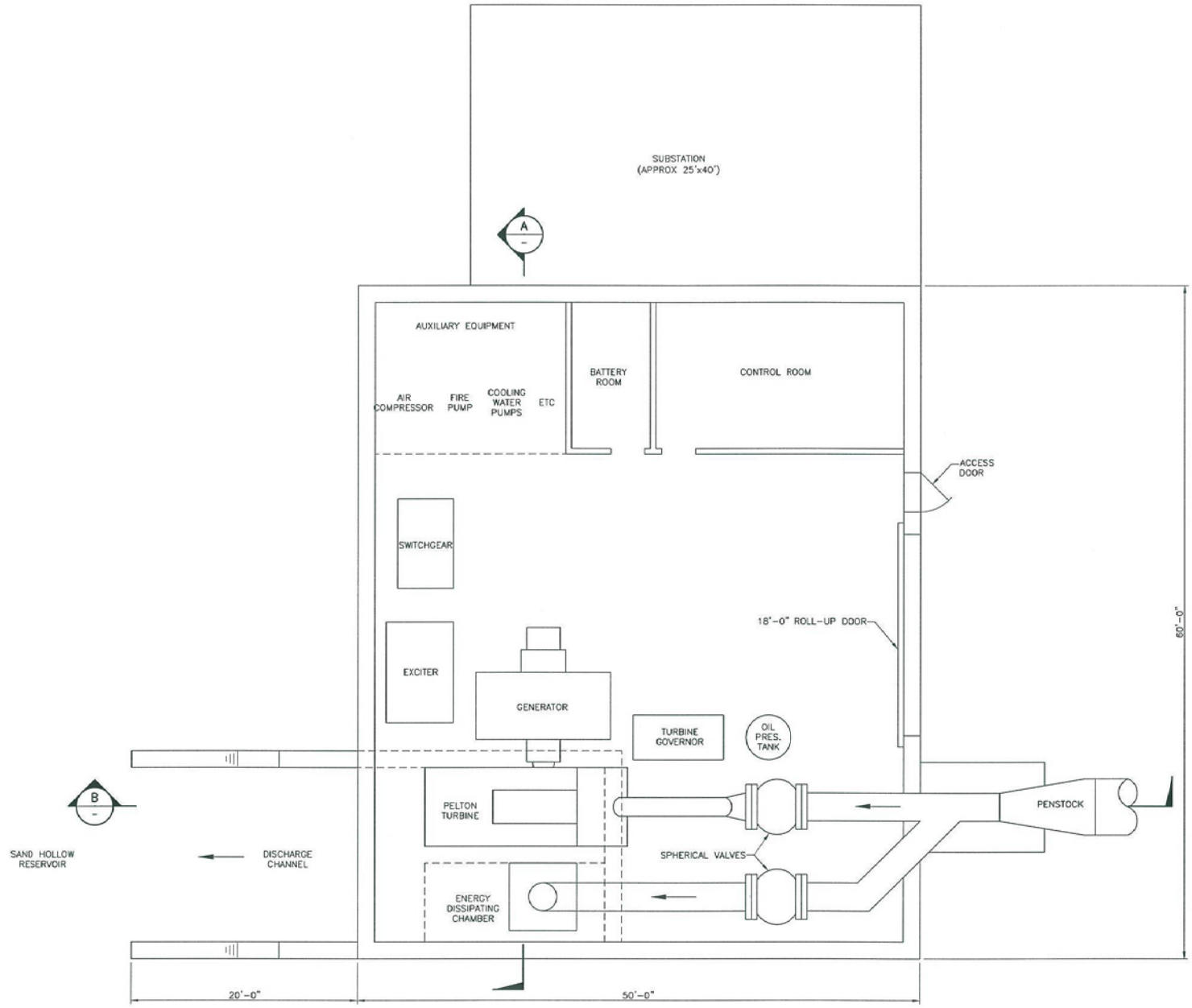
SCALE: 1/8"=1'-0"

				BOYLE ENGINEERING CORPORATION 3028 East Fort Union Blvd Salt Lake City, Utah 84121 801-942-2200	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	DRAWING NO. 6-1
						COCKSCOMB PUMP STATION	FILE NO.



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

		DESIGN BY:		BOYLE engineering corporation 2028 East Fort Union Blvd Salt Lake City, Utah 84121 801-942-2200	*Washington County Water Conservancy District*	LAKE POWELL PIPELINE FEASIBILITY STUDY	DRAWING NO. 6-1
		DRAWN BY:				COCKSCOMB PUMP STATION	
		CHECKED BY:					
DATE	DESCRIPTION	APP	DATE:				FILE NO.



POWERHOUSE PLAN

APPROX SCALE: 3/16" = 1'-0"

REV	DATE	DESCRIPTION	APP

DESIGN BY:
DRAWN BY:
CHECKED BY:
DATE:
PROJECT ENGINEER RE NO. DATE
PROJECT MANAGER RE NO. DATE

BOYLE ENGINEERING CORPORATION
2020 East Fort Union Blvd
Salt Lake City, Utah 84121
801-942-2200

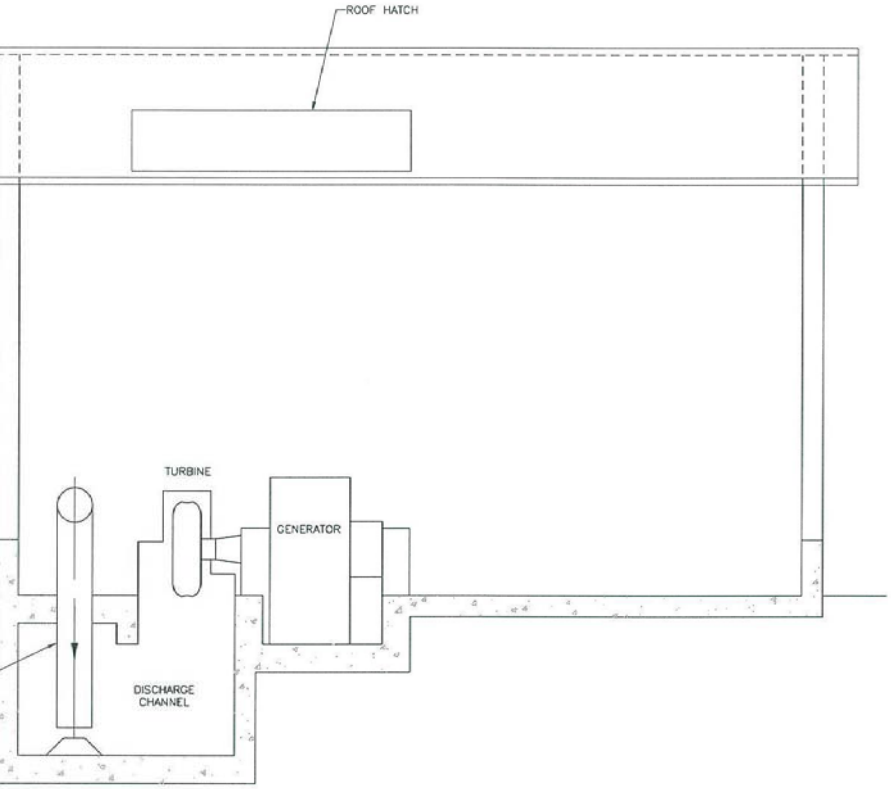
Washington County Water Conservancy District

LAKE POWELL PIPELINE FEASIBILITY STUDY

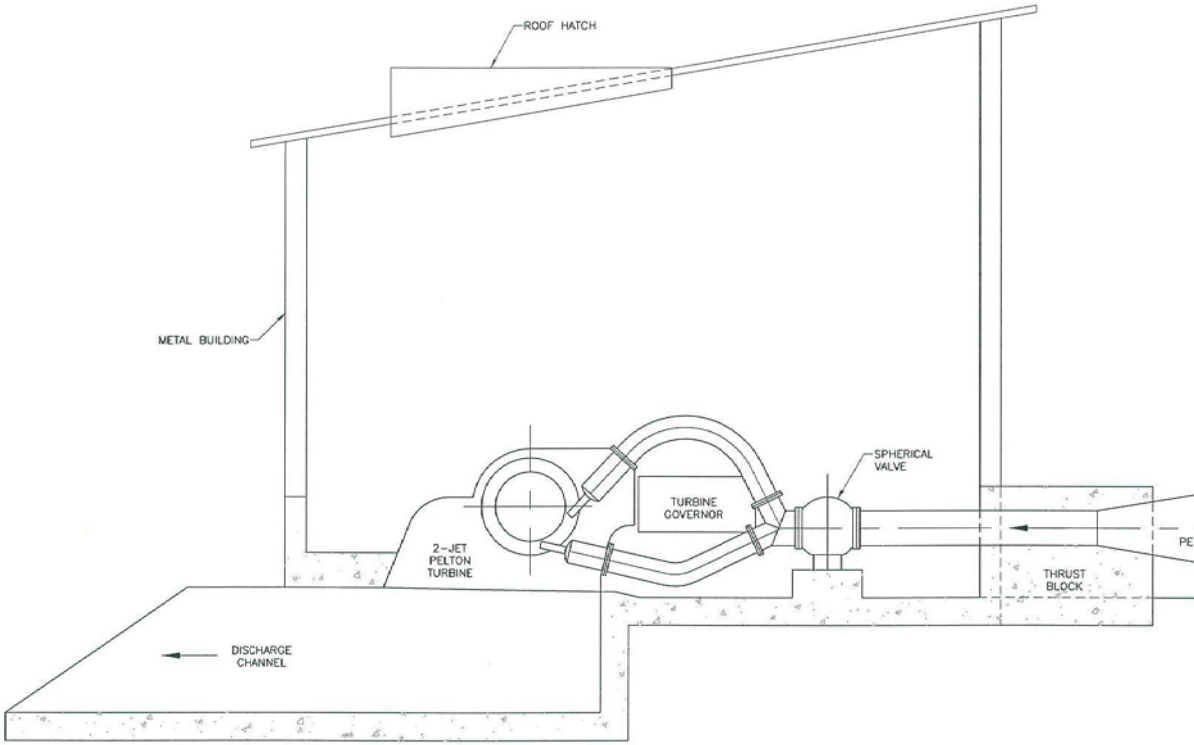
TYPICAL BASE LOAD HYDROPOWER FACILITY

DRAWING NO. 7-

FILE NO.

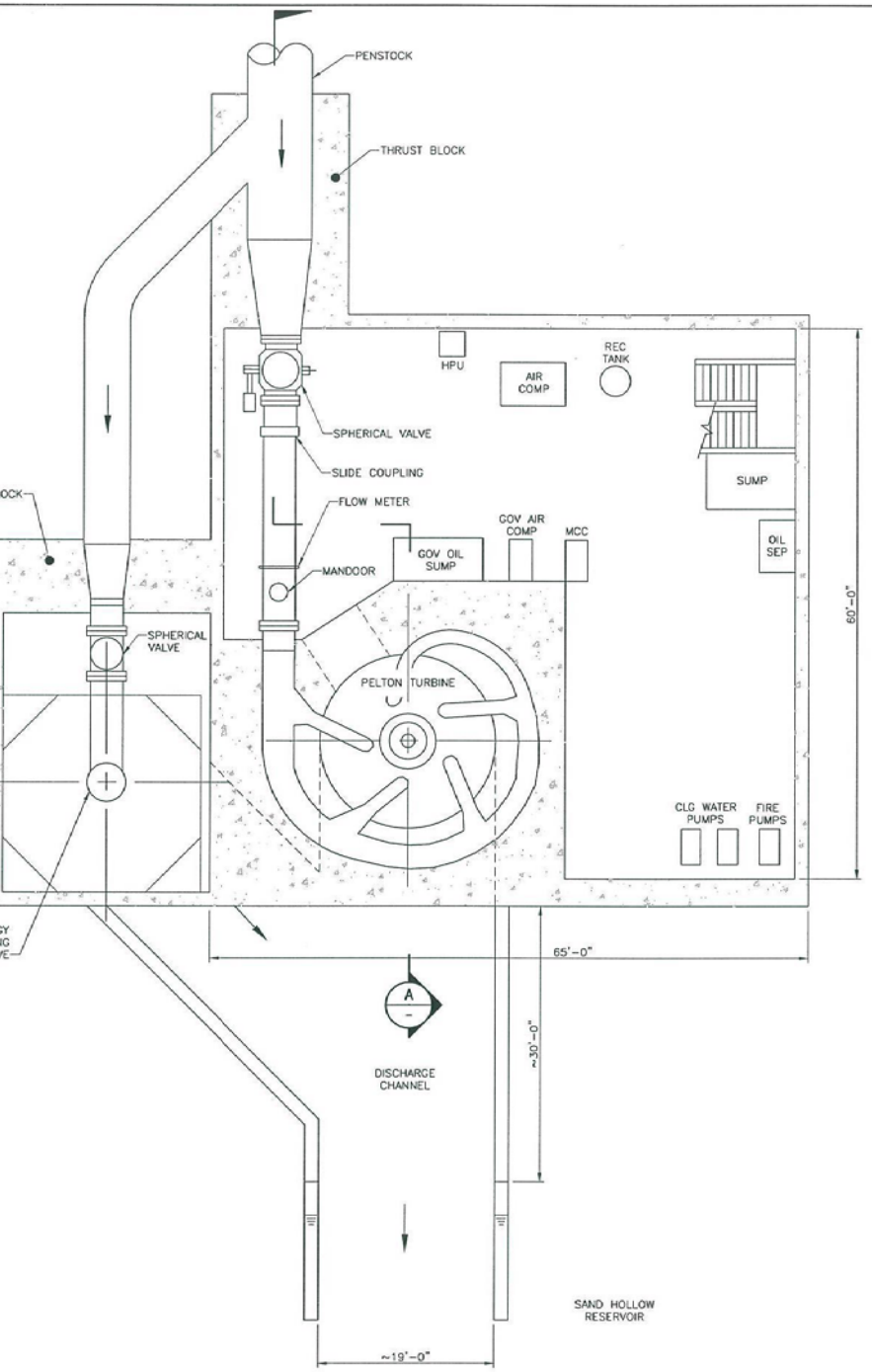


SECTION A
APPROX SCALE: 3/16" = 1'-0"



SECTION B
APPROX SCALE: 3/16" = 1'-0"

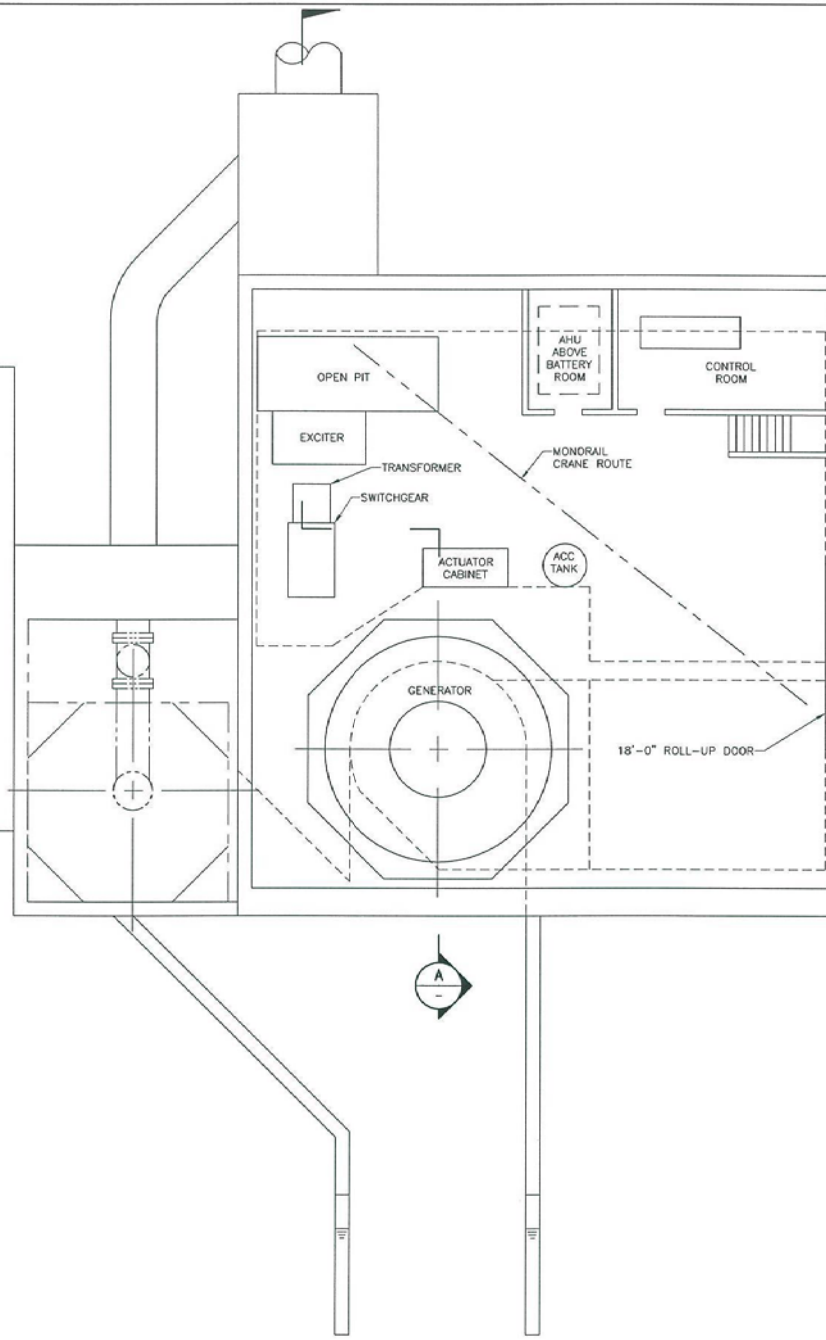
			DESIGN BY:	PROJECT ENGINEER	RE NO.	DATE	BOYLE engineering corporation 2020 East Fort Union Blvd Salt Lake City, Utah 84121 801-942-2220	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY TYPICAL BASE LOAD HYDROPOWER FACILITY	DRAWING NO. 7-
			DRAWN BY:							
			CHECKED BY:							
DATE	DESCRIPTION	APP	DATE:	PROJECT MANAGER	RE NO.	DATE				FILE NO.



TURBINE FLOOR PLAN

APPROX SCALE: 1/8" = 1'-0"

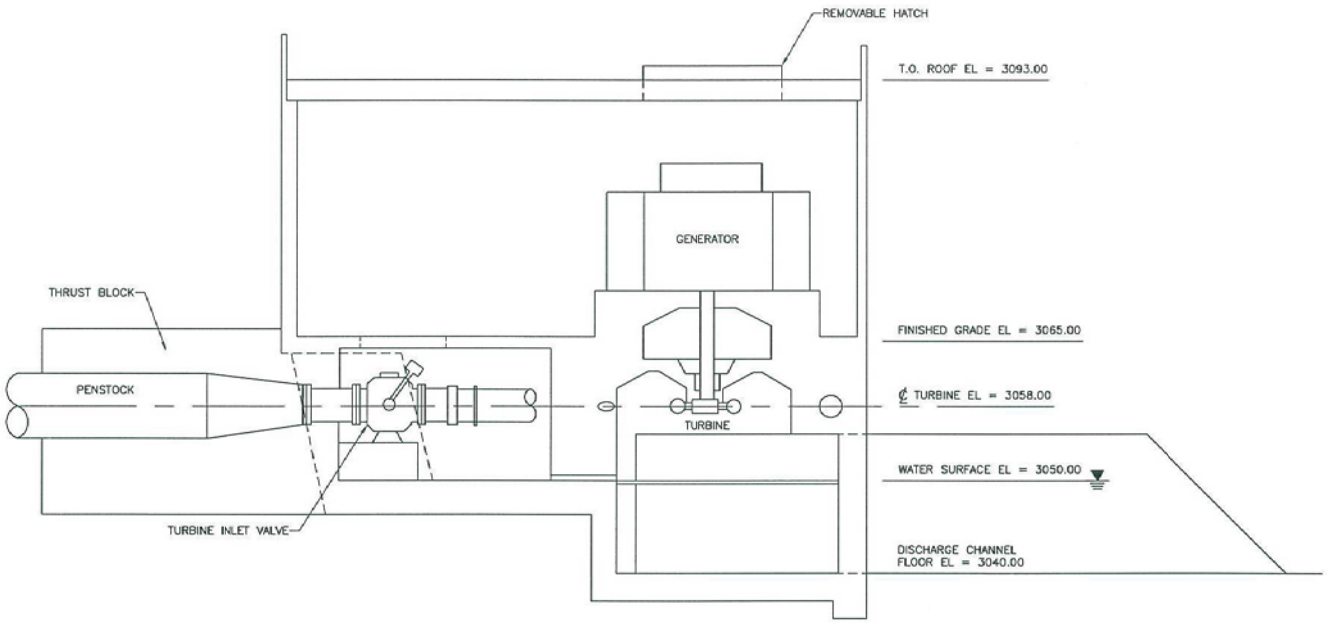
SUBSTATION (40'x50' APPROX)



GENERATOR FLOOR PLAN

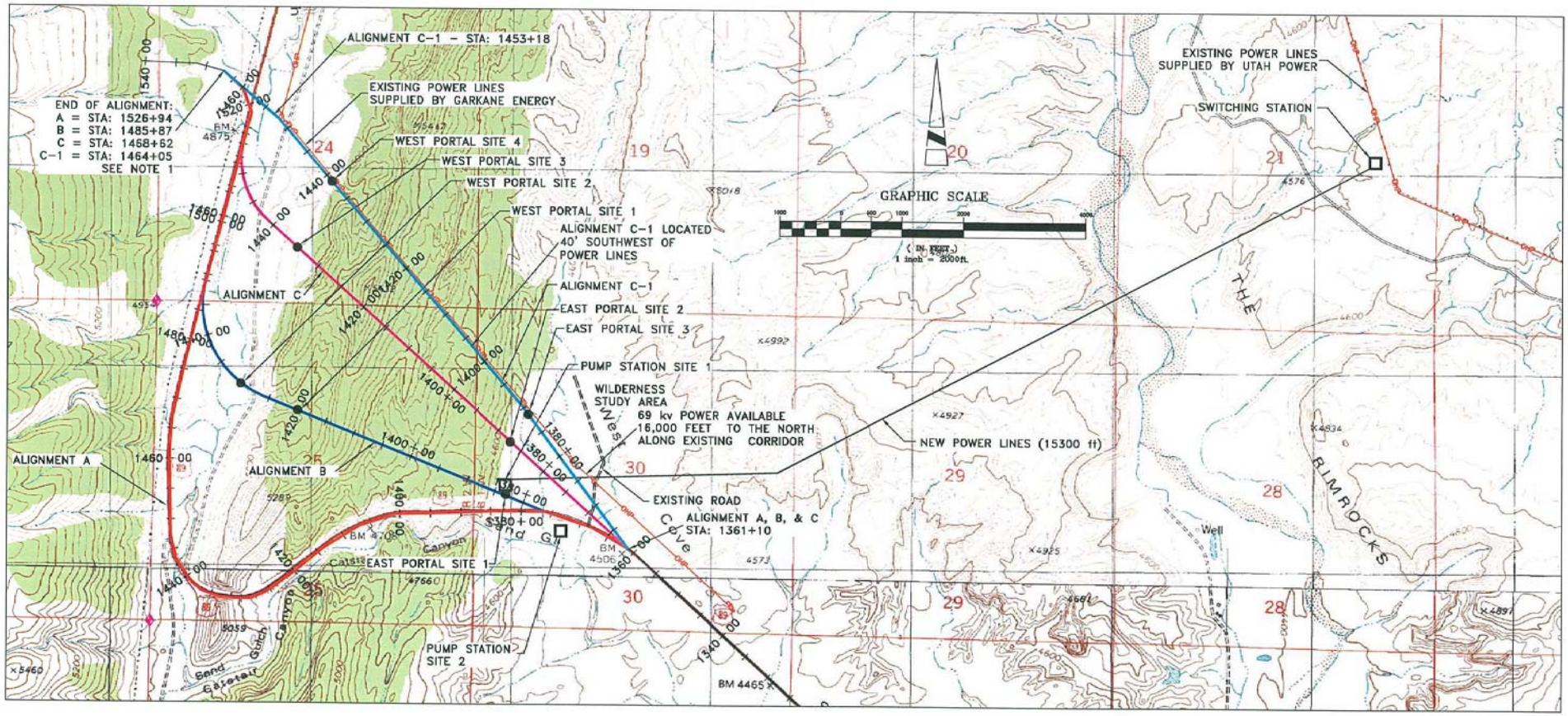
APPROX SCALE: 1/8" = 1'-0"

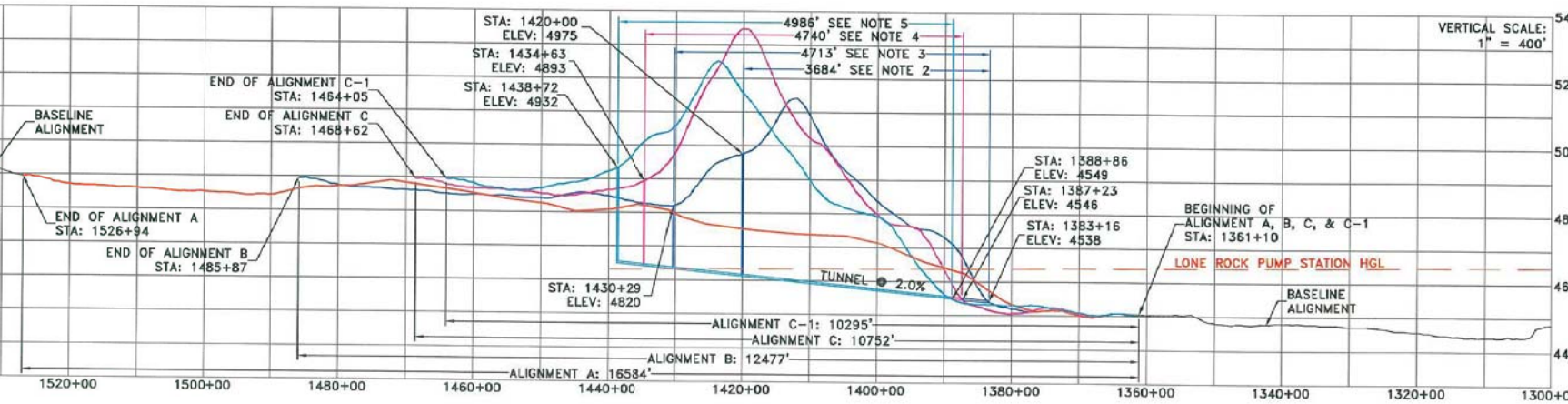
			DESIGN BY:		BOYLE engineering corporation 2028 East Fort Union Blvd Salt Lake City, Utah 84121 801-942-2200	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY TYPICAL PEAKING HYDROPOWER FACILITY
			DRAWN BY:				DRAWING NO. 7-
			CHECKED BY:				
DV	DATE	DESCRIPTION	DATE:	APP	PROJECT MANAGER RE NO. DATE		FILE NO.



SECTION A
APPROX SCALE: 1/8" = 1'-0"

			DESIGN BY:		BOYLE engineering corporation 2025 East Fort Union Blvd Salt Lake City, Utah 84121 801-942-2200	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY TYPICAL PEAKING HYDROPOWER FACILITY	DRAWING NO. 7-2
			DRAWN BY:					FILE NO.
			CHECKED BY:					
DATE	DESCRIPTION	APP	DATE:					
			PROJECT ENGINEER	RE NO.	DATE			
			PROJECT MANAGER	RE NO.	DATE			





NOTES:

1. EACH OF THE ALIGNMENTS SHOWN START A THE SAME POINT EVEN THOUGH EACH ALIGNME DIFFERENT ROUTE AND LENGTH. ALIGNMENT "A OVERALL PROJECT BASELINE ALIGNMENT. THIS FOR ANALYSIS OF THE COCSKCOMB ALTERNATIV

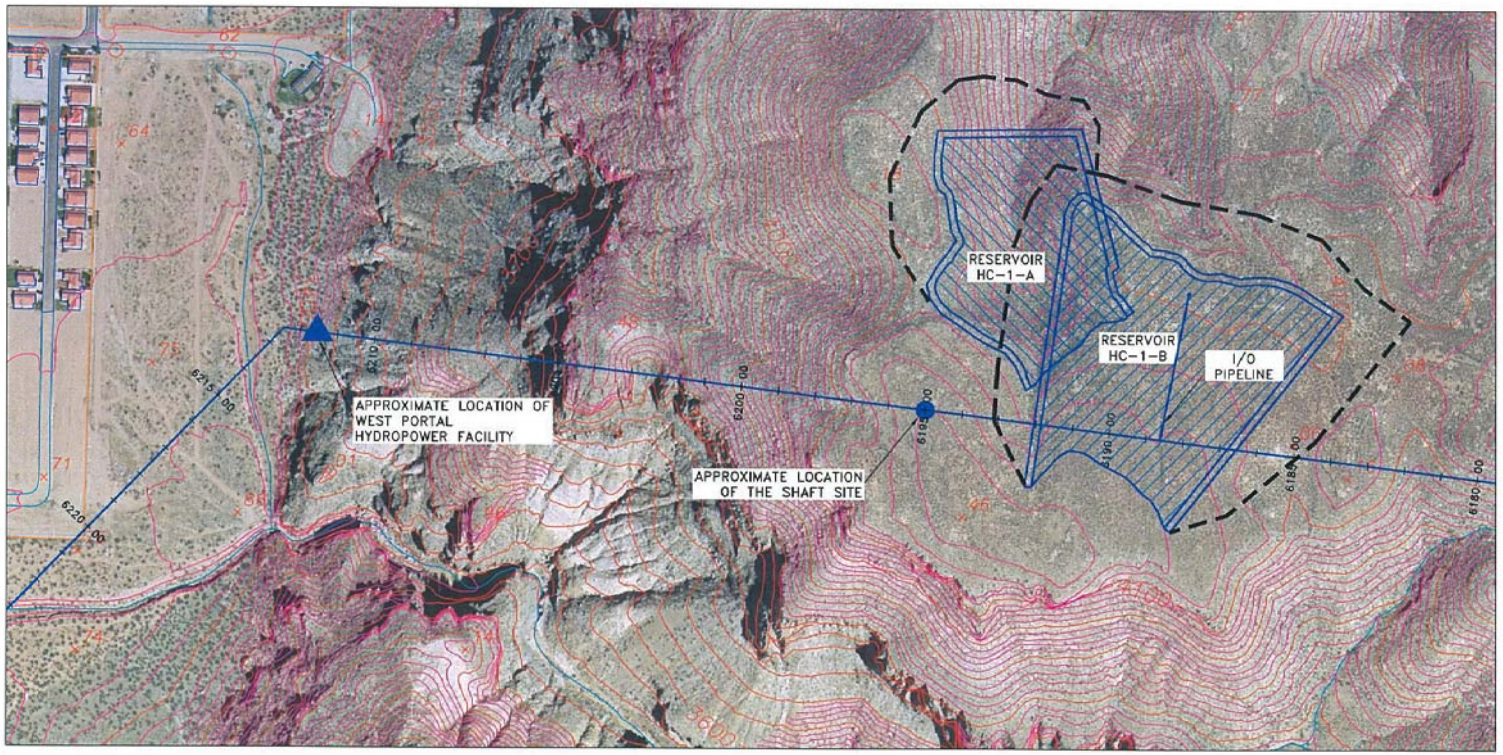
2. TUNNEL PROFILE ON ALIGNMENT B EXTENDS PORTAL SITE 1 TO WEST PORTAL SITE 1. REF SPREADSHEET FOR ALIGNMENT DETAILS.

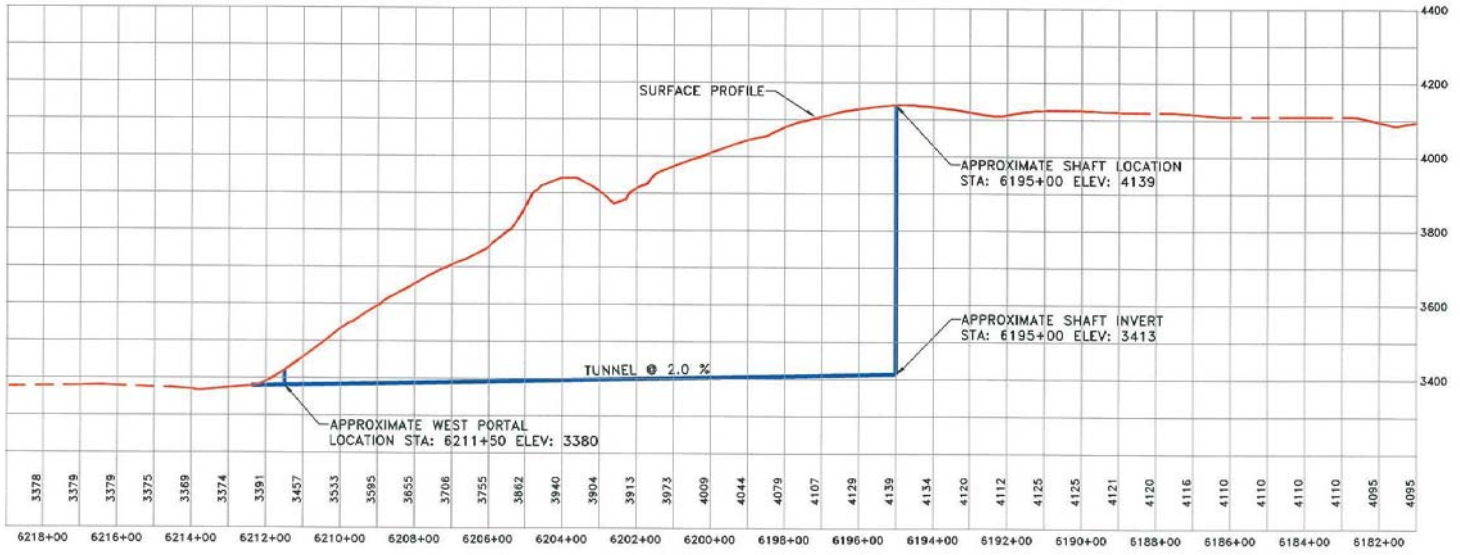
3. TUNNEL PROFILE ON ALIGNMENT B EXTENDS PORTAL SITE 1 TO WEST PORTAL SITE 2. REF SPREADSHEET FOR ALIGNMENT DETAILS.

4. TUNNEL PROFILE ON ALIGNMENT C EXTENDS PORTAL SITE 2 TO WEST PORTAL SITE 3. REF SPREADSHEET FOR ALIGNMENT DETAILS.

5. TUNNEL PROFILE ON ALIGNMENT C-1 EXTE EAST PORTAL SITE 3 TO WEST PORTAL SITE 4. THE SPREADSHEET FOR ALIGNMENT DETAILS.

DESIGN BY: AER	BOYLE ENGINEERING CORPORATION	Central Iron County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	DRAWING NO. CK-
DRAWN BY: PSF	45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		COCKSCOMB ALTERNATE ALIGNMENTS WITH 7.5 MIN. QUAD IMAGES	FILE NO.
CHECKED BY:				
DATE: 1/28/03				





HORIZONTAL & VERTICAL
GRAPHIC SCALE
200 0 200 400
(IN FEET)
1 inch = 400 ft.

NOTES:

1. THE STATIONS ARE BASED ON ALIGNMENT #2 (BASELINE – WILLOW SPRING ALIGNMENT)
2. THIS PLAN AND PROFILE IS SIMIL TO THE HURRICANE CLIFFS PORTION ALIGNMENT #4.
3. THIS PLAN AND PROFILE IS FOR ANALYSIS OF THE HURRICANE CLIFFS TUNNEL AND SHAFT ONLY.
4. THE LOCATIONS OF THE HYDROPOWER FACILITY, WEST PORTAL, AND SHAFT ARE SUBJECT TO CHANGE

REV	DATE	DESCRIPTION	APP

DESIGN BY: AER
DRAWN BY: PSF
CHECKED BY:
DATE: 2/20/03
PROJECT ENGINEER RE NO. DATE
PROJECT MANAGER RE NO. DATE

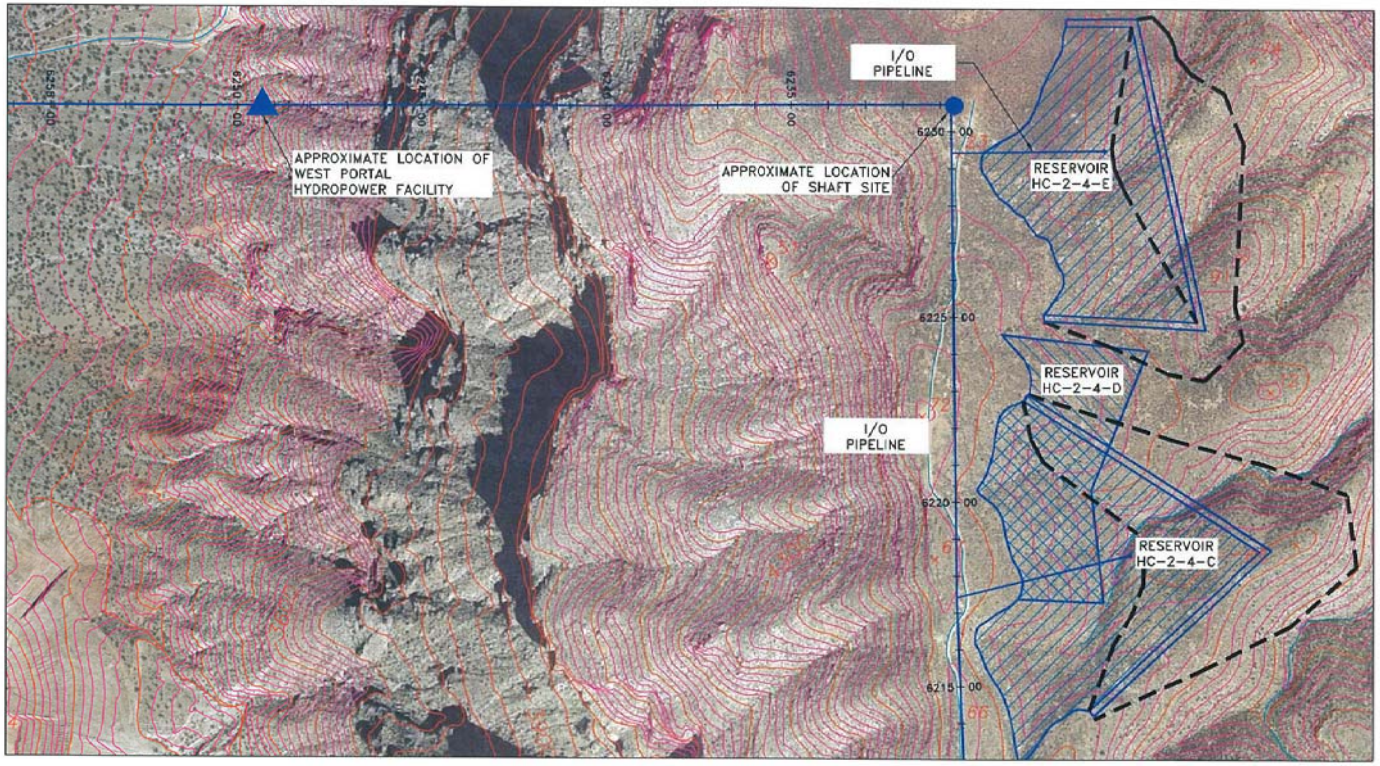
BOYLE ENGINEERING CORPORATION
45 West 10000 South, Suite 101
Sandy, Utah 84070
801-233-1100

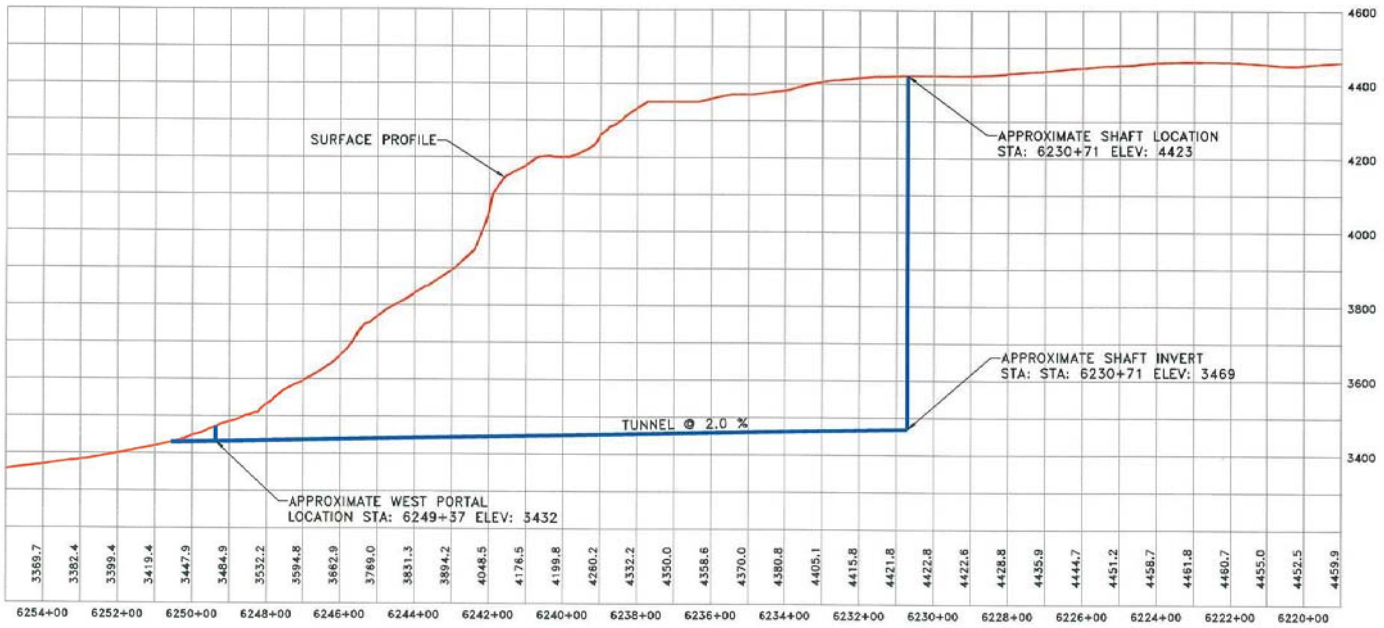
Central Iron County Water Conservancy District

LAKE POWELL PIPELINE FEASIBILITY STUDY

HURRICANE CLIFFS WILLOW SPRING ALIGNMENT PLAN AND PROFILE WITH AERIAL IMAGE

DRAWING NO. HC-
FILE NO.





HORIZONTAL & VERTICAL

GRAPHIC SCALE

200 0 100 200 400

(IN FEET)
1 inch = 400 ft.

NOTES:

1. THE STATIONS ARE BASED ALIGNMENT #5 (BASELINE – SPRING – MOLLIES NIPPLE AL

2. THIS PLAN AND PROFILE ANALYSIS OF THE HURRICANE TUNNEL AND SHAFT ONLY.

3. THE LOCATIONS OF THE HYDROPOWER FACILITY, WEST AND SHAFT ARE SUBJECT TO

REV	DATE	DESCRIPTION	APP

DESIGN BY: AER
DRAWN BY: PSF
CHECKED BY:
DATE: 2/20/03

PROJECT ENGINEER — RE NO. — DATE
PROJECT MANAGER — RE NO. — DATE

BOYLE ENGINEERING CORPORATION
45 West 10000 South, Suite 101
Sandy, Utah 84070
801-233-1100

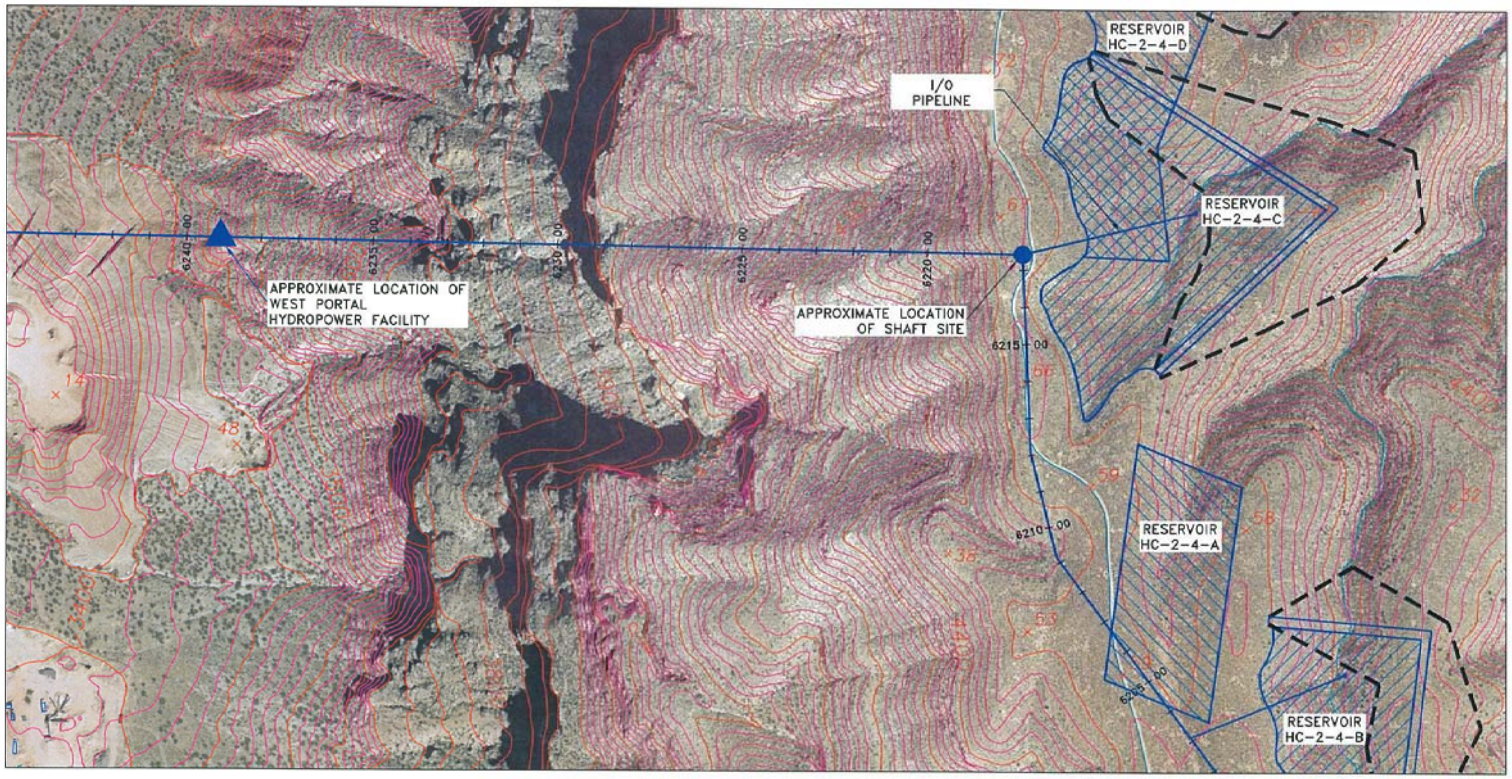
Central Iron County Water Conservancy District

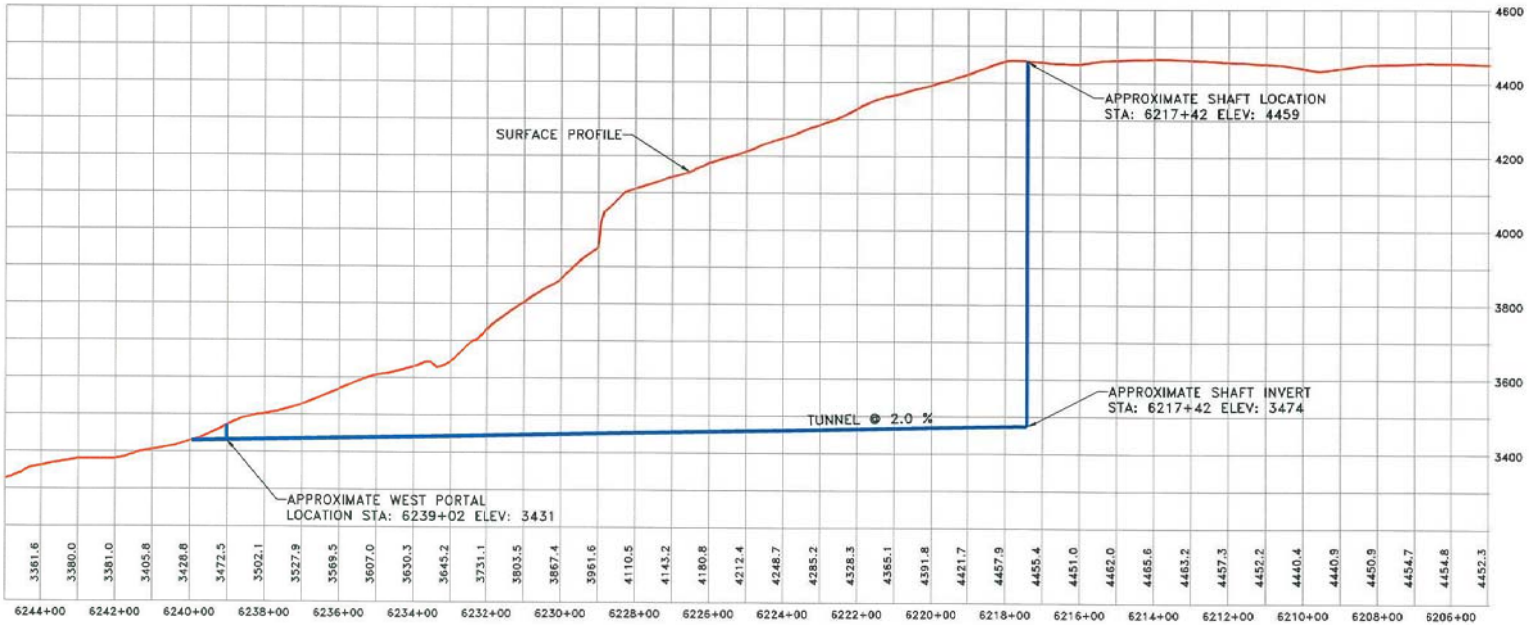
LAKE POWELL PIPELINE FEASIBILITY STUDY

HURRICANE CLIFFS MOLLIES NIPPLE #1 ALIGNMENT
PLAN AND PROFILE WITH AERIAL IMAGE

DRAWING NO. HC-

FILE NO.





HORIZONTAL & VERTICAL
GRAPHIC SCALE
200 0 100 200 400
(IN FEET)
1 inch = 400 ft.

NOTES:

1. THE STATIONS ARE BASED ALIGNMENT #5 (BASELINE – SPRING – MOLLIES NIPPLE AL

2. THIS PLAN AND PROFILE ANALYSIS OF THE HURRICANE TUNNEL AND SHAFT ONLY.

3. THE LOCATIONS OF THE HYDROPOWER FACILITY, WEST AND SHAFT ARE SUBJECT TO

REV	DATE	DESCRIPTION	APP

DESIGN BY: AER
DRAWN BY: PSF
CHECKED BY:
DATE: 2/20/03
PROJECT ENGINEER — PE NO. — DATE
PROJECT MANAGER — PE NO. — DATE

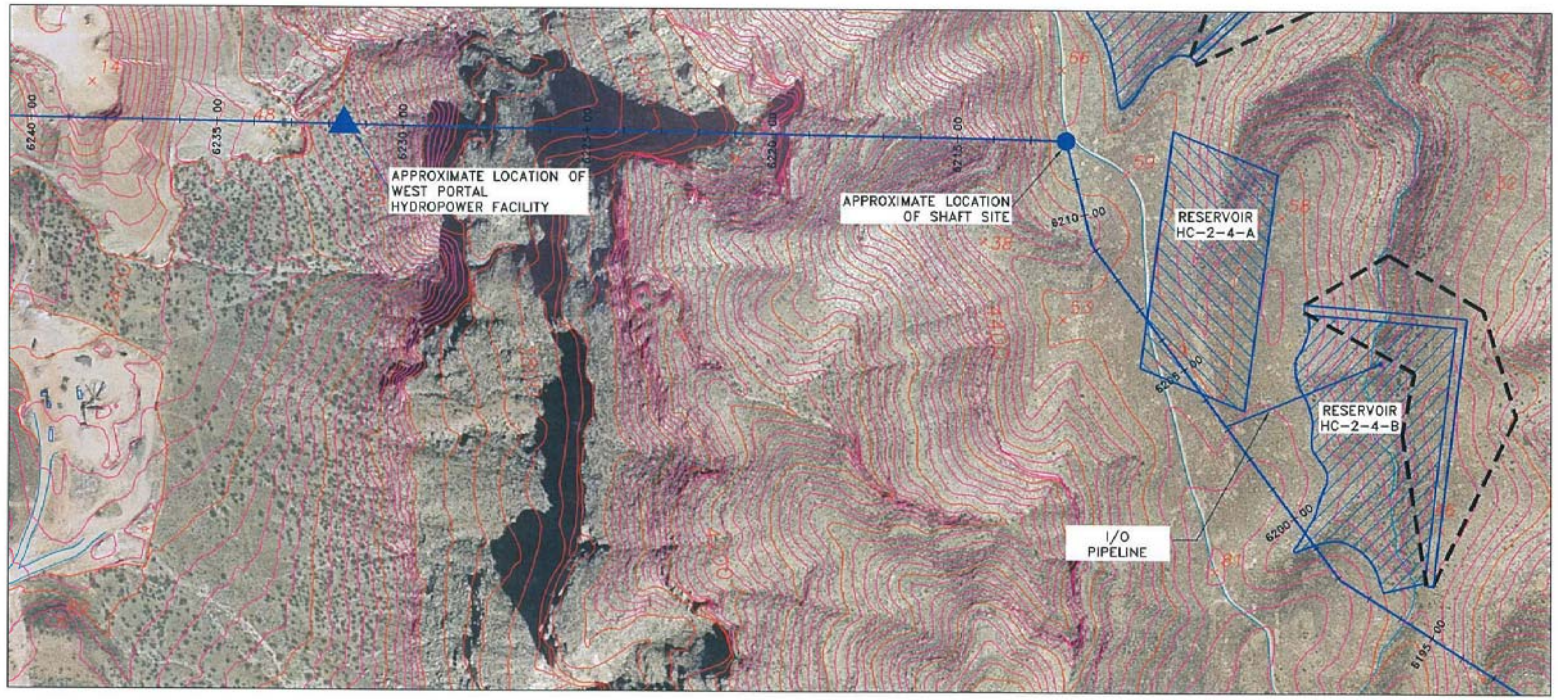
BOYLE ENGINEERING CORPORATION
45 West 10000 South, Suite 101
Sandy, Utah 84070
801-233-1100

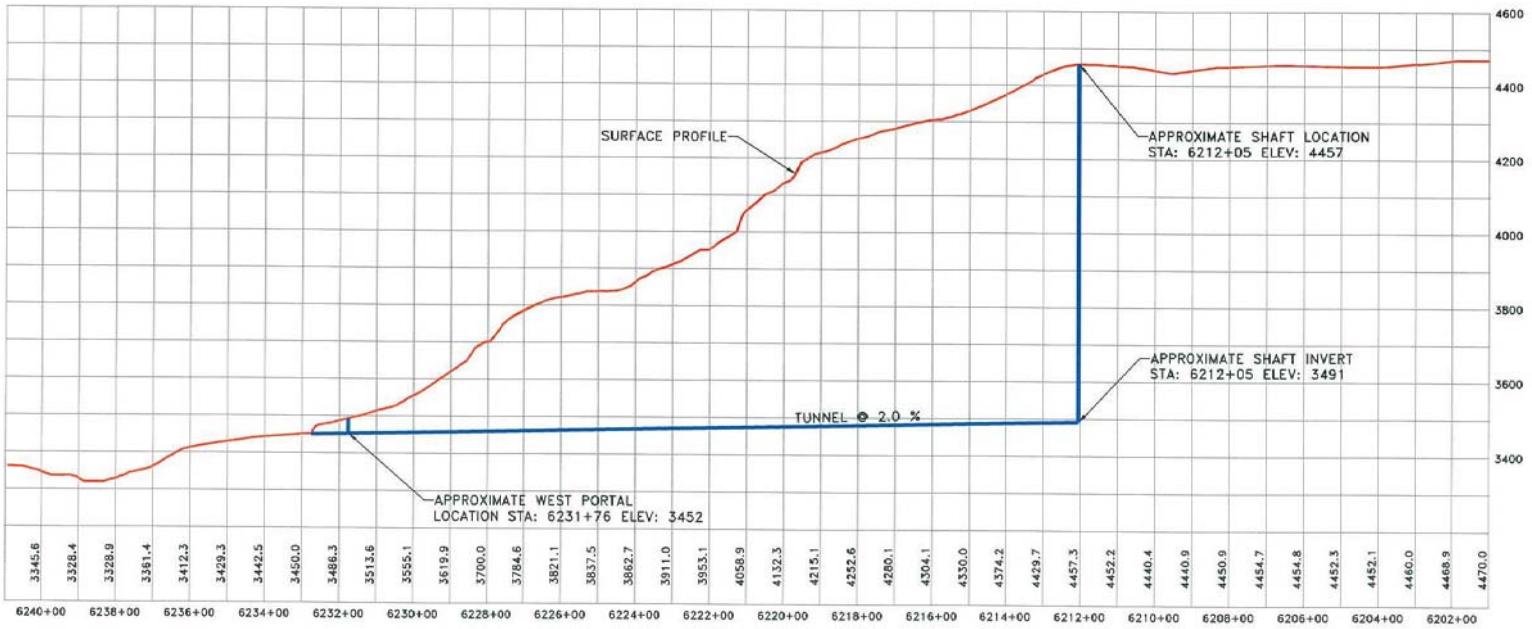
Central Iron County Water Conservancy District

LAKE POWELL PIPELINE FEASIBILITY STUDY

HURRICANE CLIFFS MOLLIES NIPPLE #2 ALIGNMENT
PLAN AND PROFILE WITH AERIAL IMAGE

DRAWING NO. HC-
FILE NO.





HORIZONTAL & VERTICAL
GRAPHIC SCALE

200 0 100 200 400

(IN FEET)
1 inch = 400 ft.

NOTES:

1. THE STATIONS ARE BASED
ALIGNMENT #5 (BASELINE –
SPRING – MOLLIES NIPPLE AL

2. THIS PLAN AND PROFILE
ANALYSIS OF THE HURRICANE
TUNNEL AND SHAFT ONLY.

3. THE LOCATIONS OF THE
HYDROPOWER FACILITY, WEST
AND SHAFT ARE SUBJECT TO

REV	DATE	DESCRIPTION	APP

DESIGN BY: AER
DRAWN BY: PSF
ENGINEER BY:
DATE: 2/20/03
PROJECT ENGINEER RE NO. DATE
PROJECT MANAGER RE NO. DATE

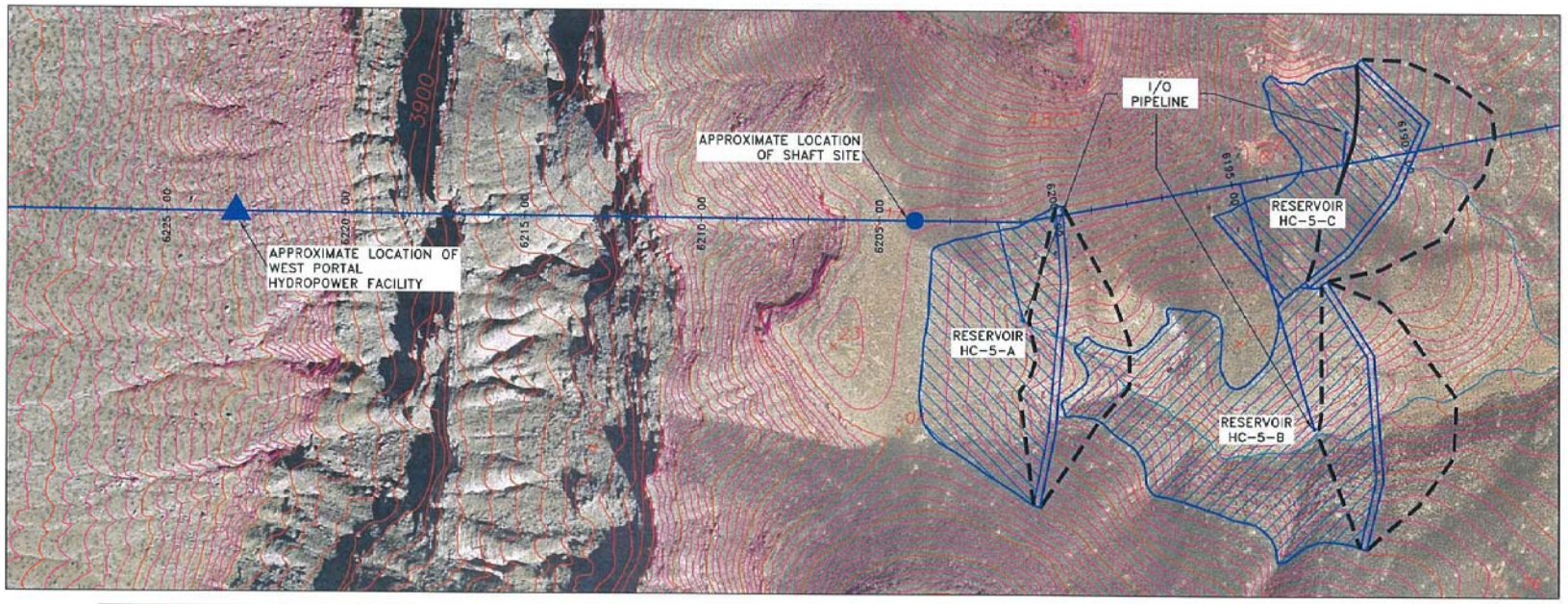
BOYLE ENGINEERING CORPORATION
45 West 10000 South, Suite 101
Sandy, Utah 84070
801-233-1100

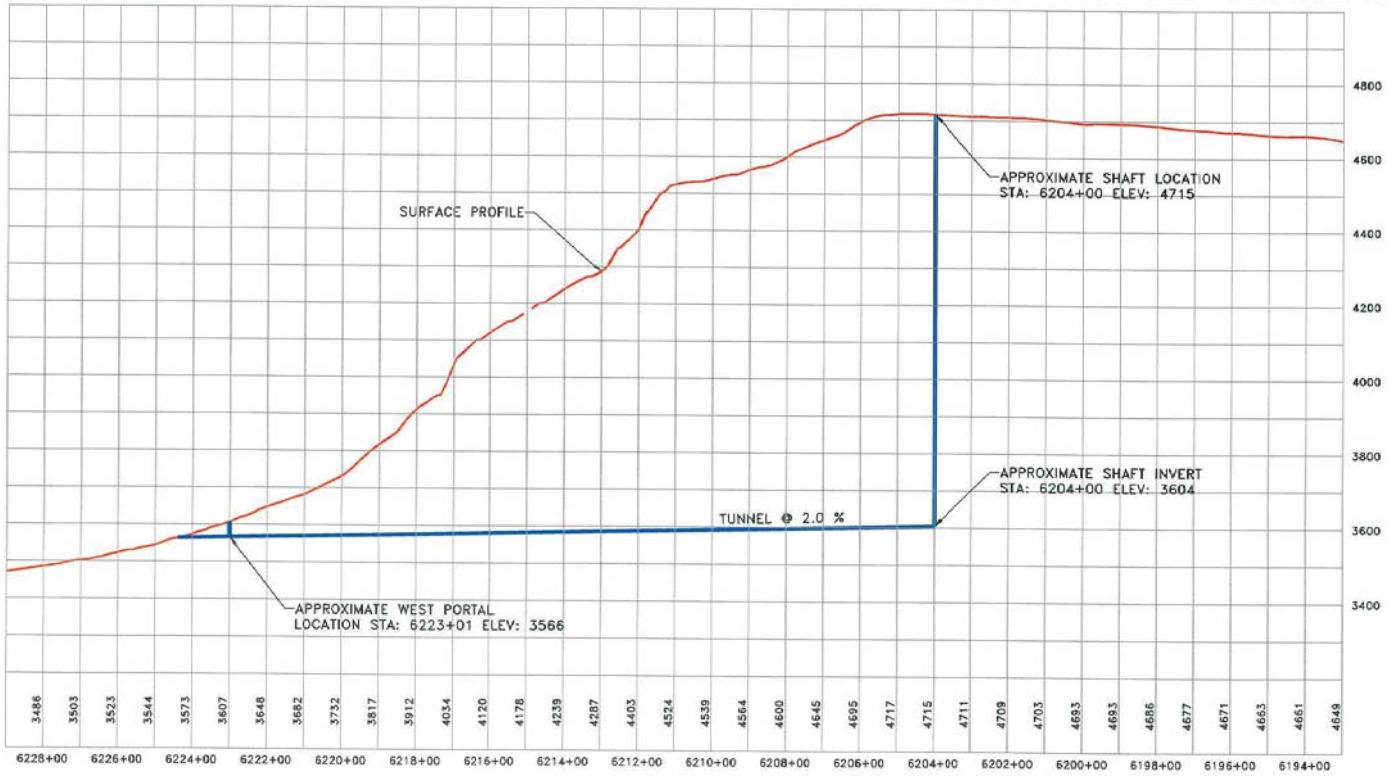
Central Iron County Water Conservancy District

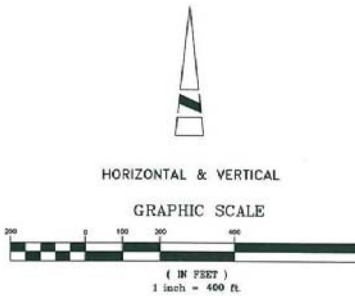
LAKE POWELL PIPELINE FEASIBILITY STUDY

HURRICANE CLIFFS MOLLIES NIPPLE #3 ALIGNMENT PLAN AND PROFILE WITH AERIAL IMAGE

DRAWING NO. HC-
FILE NO.







NOTES:

1. THE STATIONS ARE BASED ON ALIGNMENT #3 (BASELINE – GOULD SPRING – GRASS VALLEY ALIGNMENT)
2. THIS PLAN AND PROFILE IS FOR ANALYSIS OF THE HURRICANE CLIFFS TUNNEL AND SHAFT ONLY.
3. THE LOCATIONS OF THE HYDROPOWER FACILITY, WEST PORTAL, AND SHAFT ARE SUBJECT TO CHANGE.

				DESIGN BY: AER			
				DRAWN BY: PSF			
				CHECKED BY:			
				DATE: 2/20/03			

PROJECT ENGINEER — PE NO. — DATE
PROJECT MANAGER — PE NO. — DATE

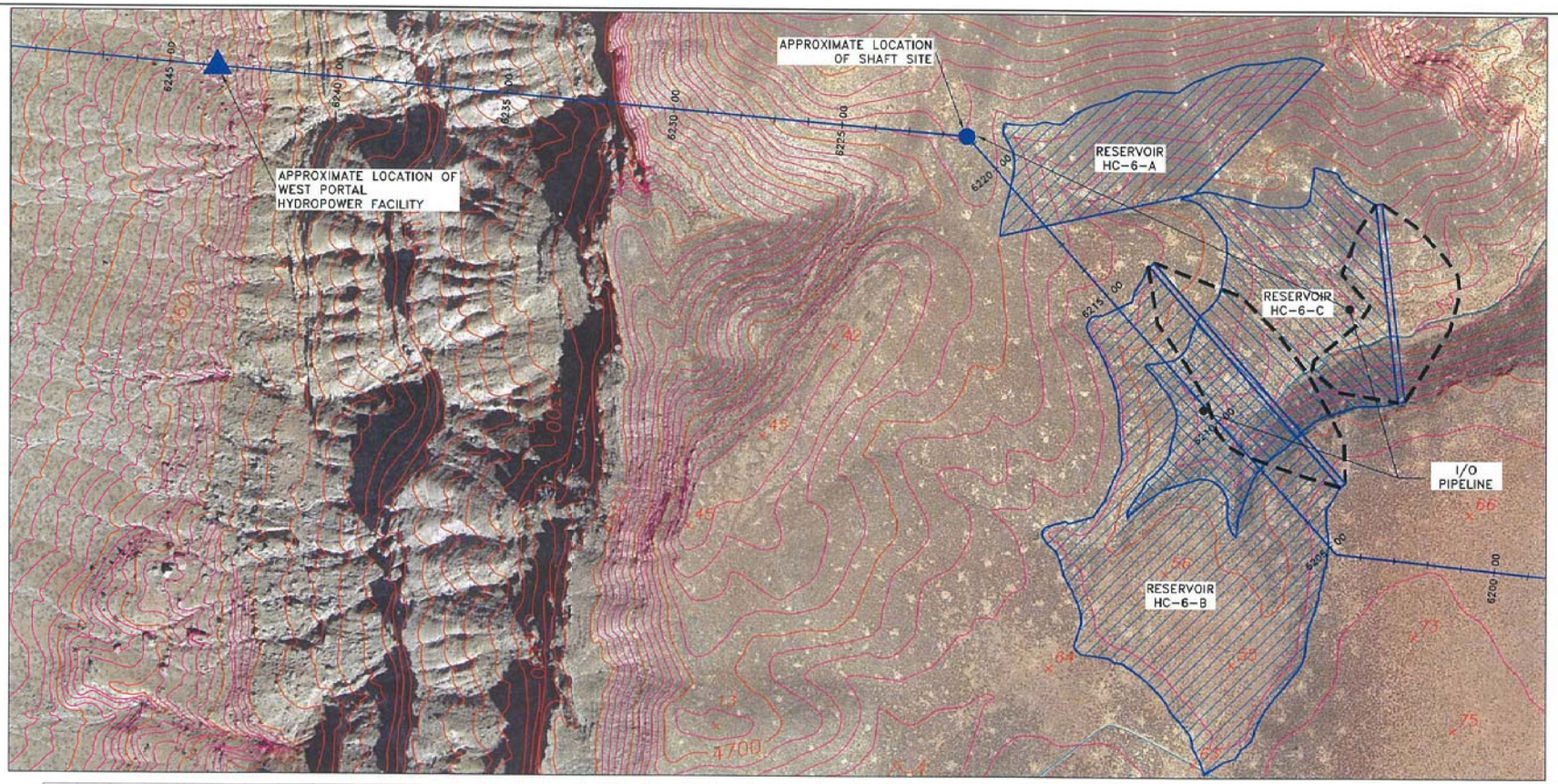
BOYLE ENGINEERING CORPORATION
45 West 10000 South, Suite 101
Sandy, Utah 84070
801-233-1100

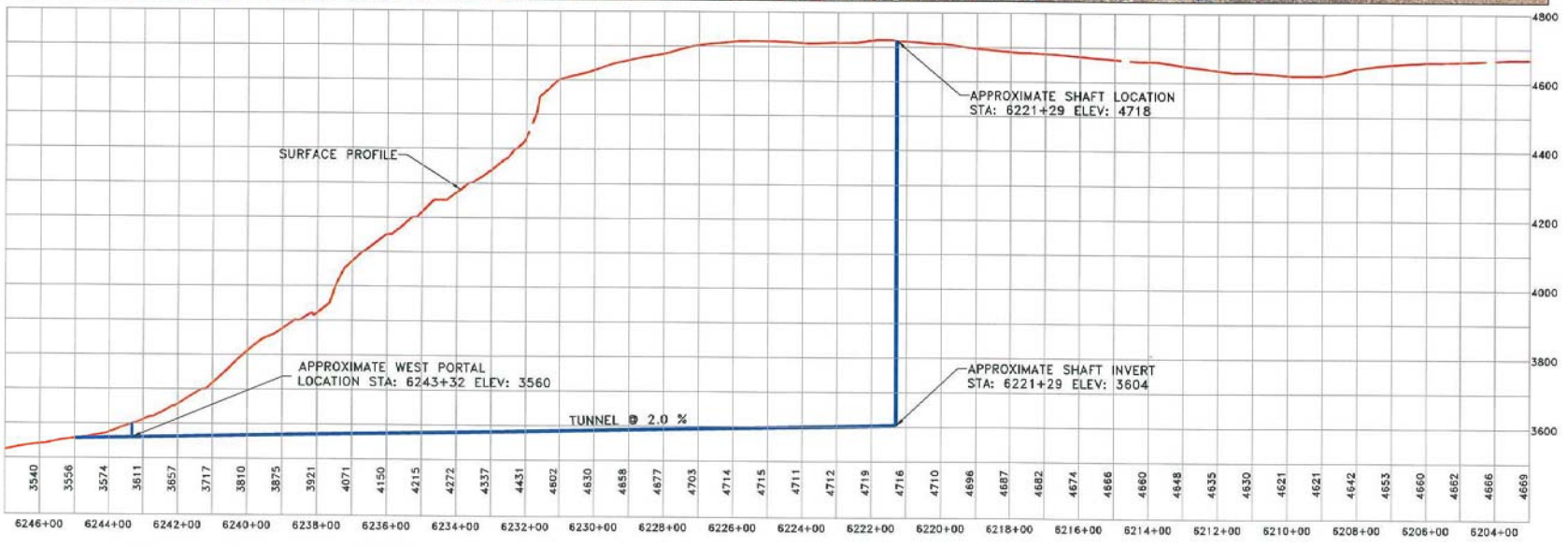
Central Iron County Water Conservancy District

LAKE POWELL PIPELINE FEASIBILITY STUDY

HURRICANE CLIFFS GOULD SPRING ALIGNMENT
PLAN AND PROFILE WITH AERIAL IMAGE

DRAWING NO. HC-
FILE NO.





NOTES:

1. THE STATIONS ARE BASED ALIGNMENT #1 (BASELINE – G RESERVOIR ALIGNMENT)

2. THIS PLAN AND PROFILE IS TO THE HURRICANE CLIFFS POR ALIGNMENT # 6, 8, 11, and 1

3. THIS PLAN AND PROFILE IS ANALYSIS OF THE HURRICANE TUNNEL AND SHAFT ONLY.

4. THE LOCATIONS OF THE HYDROPOWER FACILITY, WEST P AND SHAFT ARE SUBJECT TO C

NO.	DATE	DESCRIPTION	APP.
1			
2			
3			
4			
5			

DESIGN BY: AER
DRAWN BY: PSF
CHECKED BY:
DATE: 2/20/03
PROJECT ENGINEER — RE NO. — DATE
PROJECT MANAGER — RE NO. — DATE

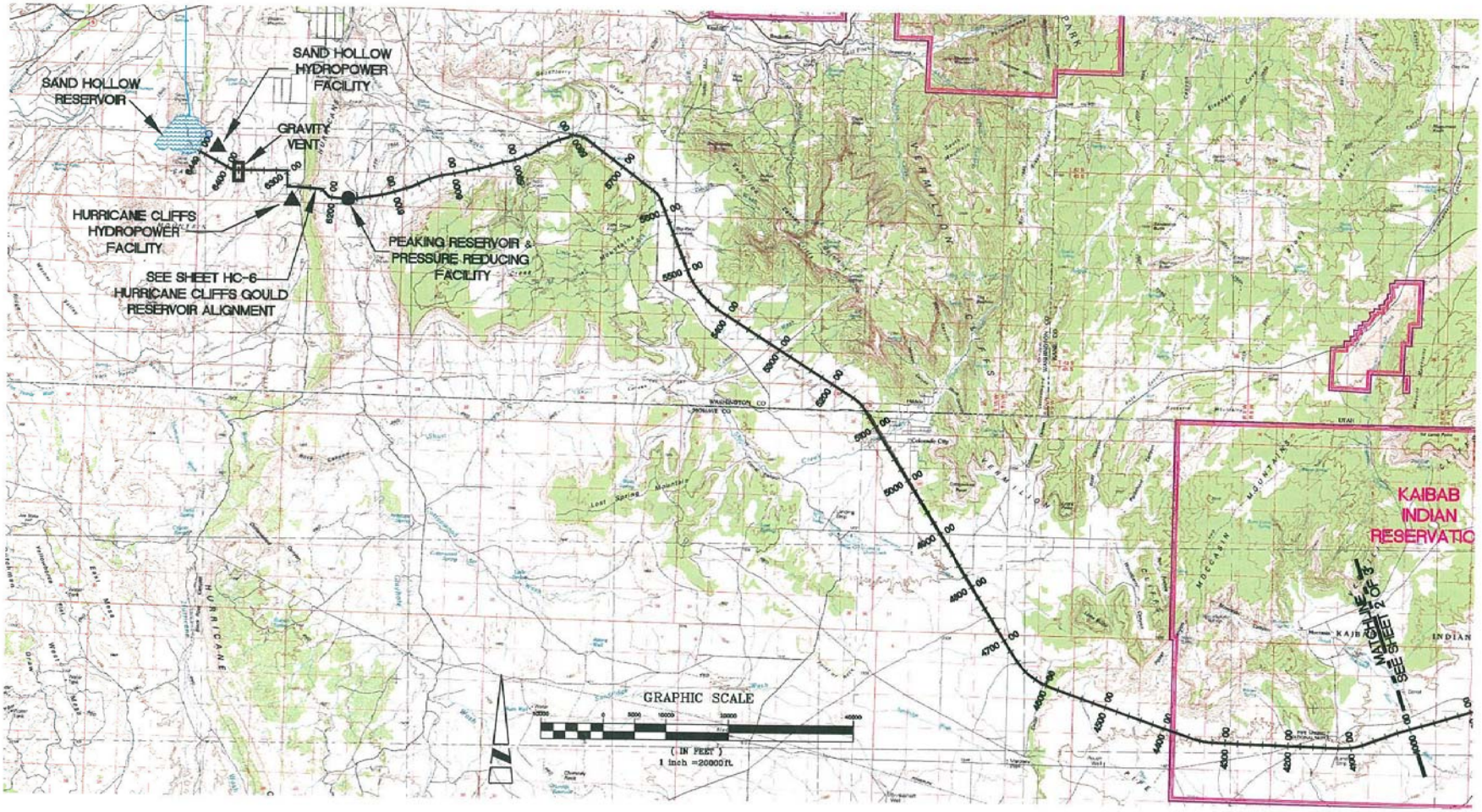
BOYLE ENGINEERING CORPORATION
45 West 10000 South, Suite 101
Sandy, Utah 84070
801-233-1100

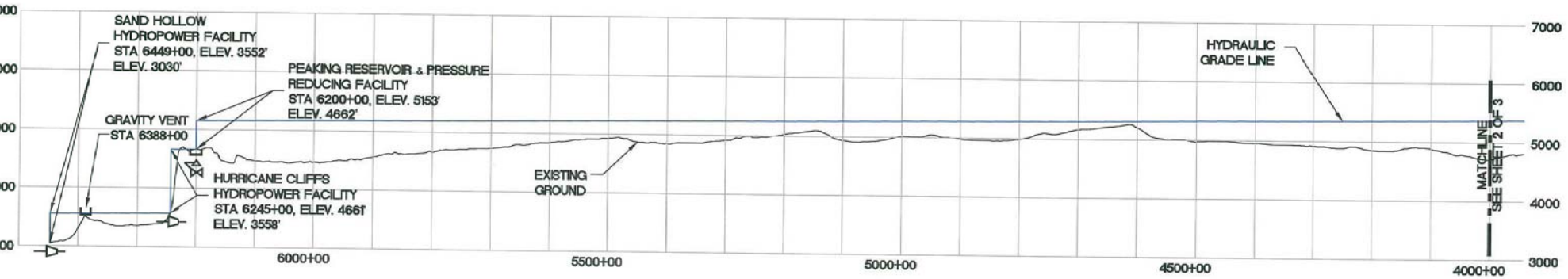
Central Iron County Water Conservancy District

LAKE POWELL PIPELINE FEASIBILITY STUDY

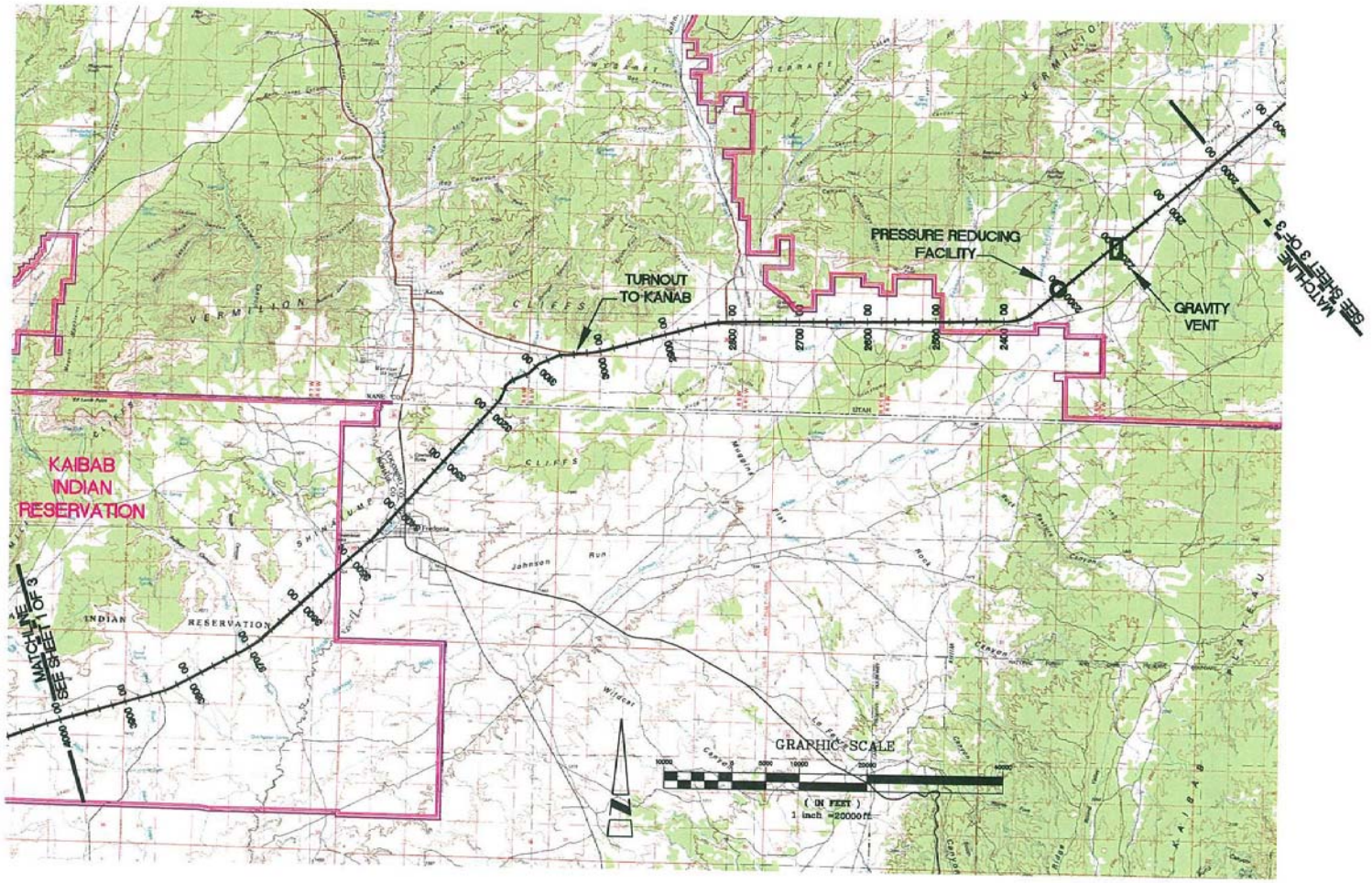
HURRICANE CLIFFS GOULD RESERVOIR ALIGNMENT PLAN AND PROFILE WITH AERIAL IMAGE

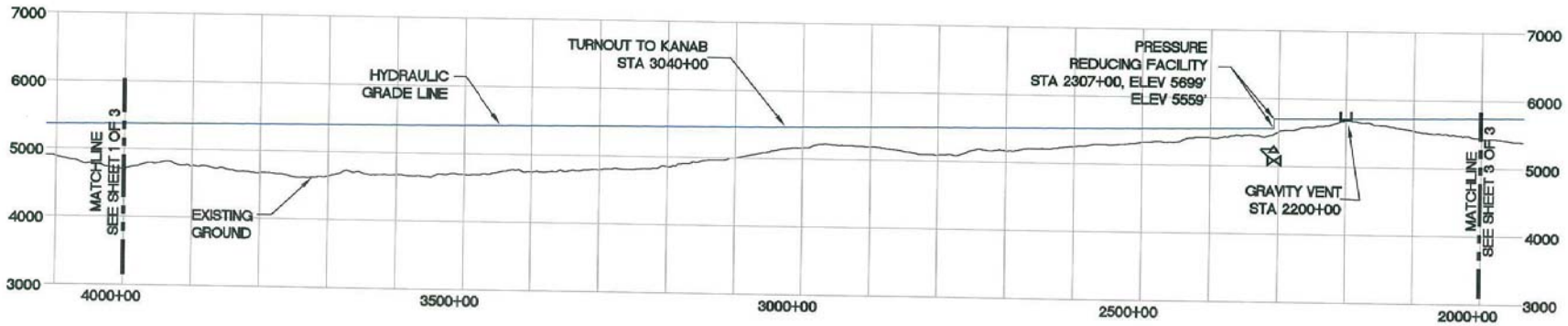
DRAWING NO. HC-6
FILE NO.



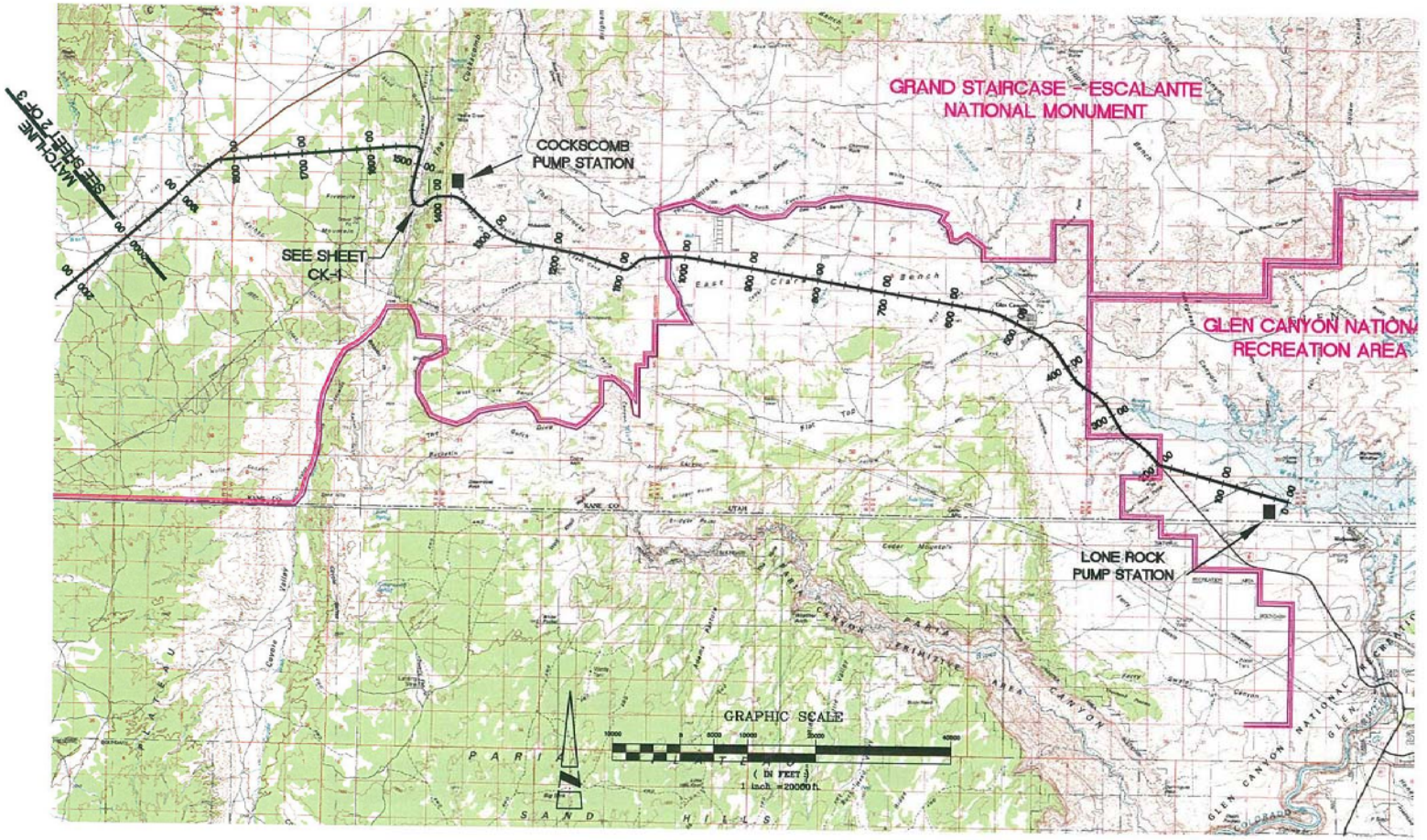


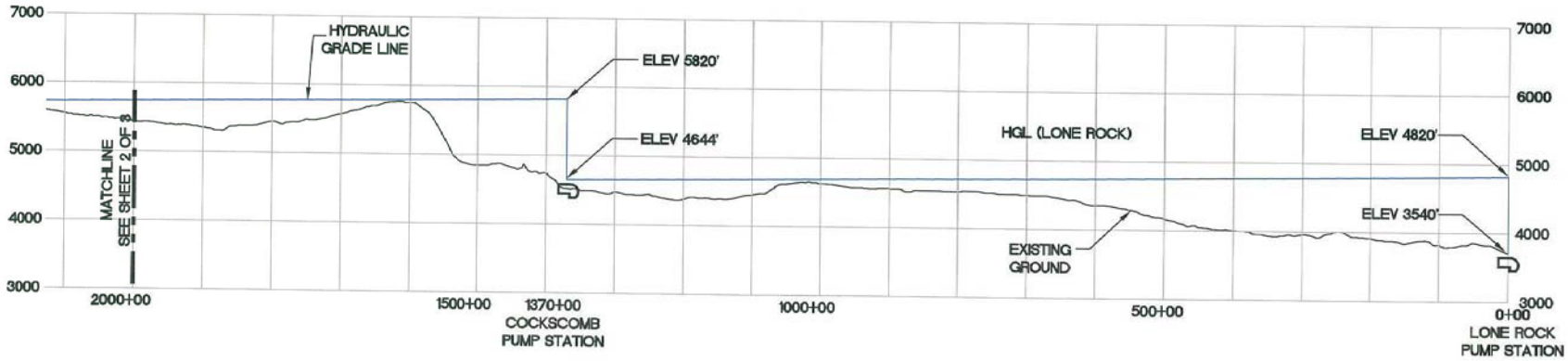
DESIGN BY: AER	BOYLE ENGINEERING CORPORATION 45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100	Central Iron County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	HGL-
DRAWN BY: PSF			BASELINE GOULD RESERVOIR HYDRAULIC GRADE LINE	
CHECKED BY:				
DATE: 1/27/03				



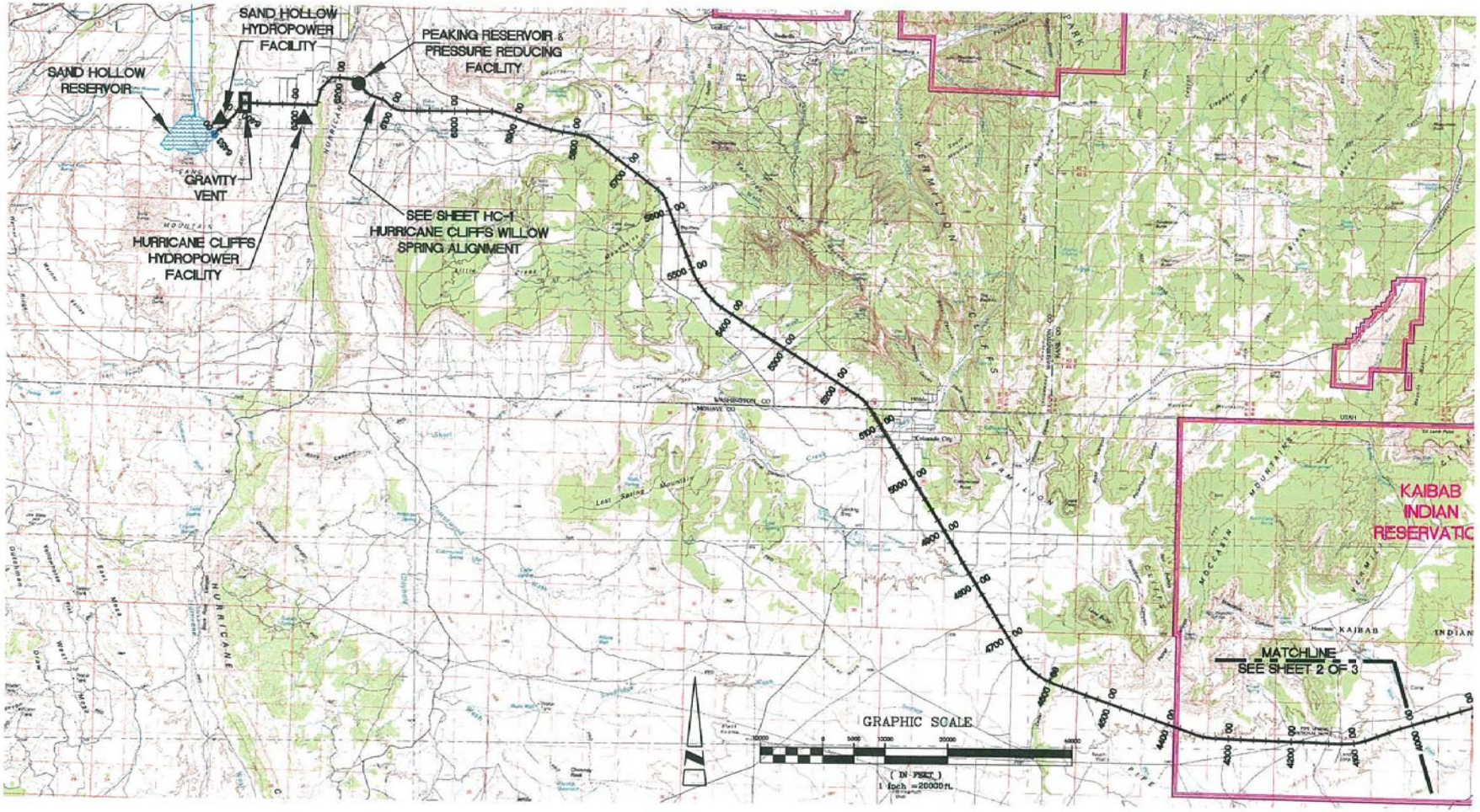


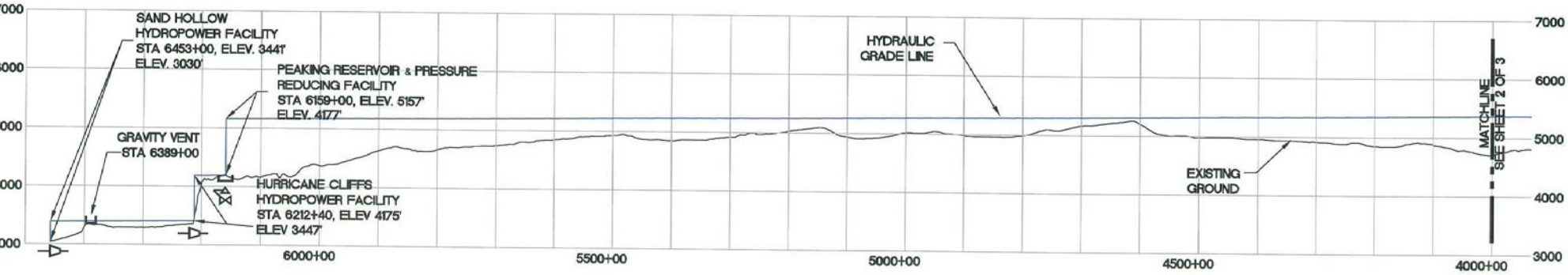
DESIGN BY: AER		BOYLE ENGINEERING CORPORATION	Central Iron County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	DRAWING NO. HGL-
DRAWN BY: PSF		45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		BASELINE GOULD RESERVOIR HYDRAULIC GRADE LINE	FILE NO.
CHECKED BY:					
DATE: 1/27/03					





DESIGN BY: AER	BOYLE ENGINEERING CORPORATION 45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100	Central Iron County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY BASELINE GOULD RESERVOIR HYDRAULIC GRADE LINE	DRAWING NO. HGL-
DRAWN BY: PSF				
CHECKED BY:				
DATE: 1/27/03				
PROJECT ENGINEER / DATE				
PROJECT MANAGER / DATE				





			DESIGN BY: AER				
			DRAWN BY: PSF				
			CHECKED BY:				
			DATE: 1/27/03				
DATE	DESCRIPTION	APP		PROJECT ENGINEER	RE NO.	DATE	
				PROJECT MANAGER	RE NO.	DATE	

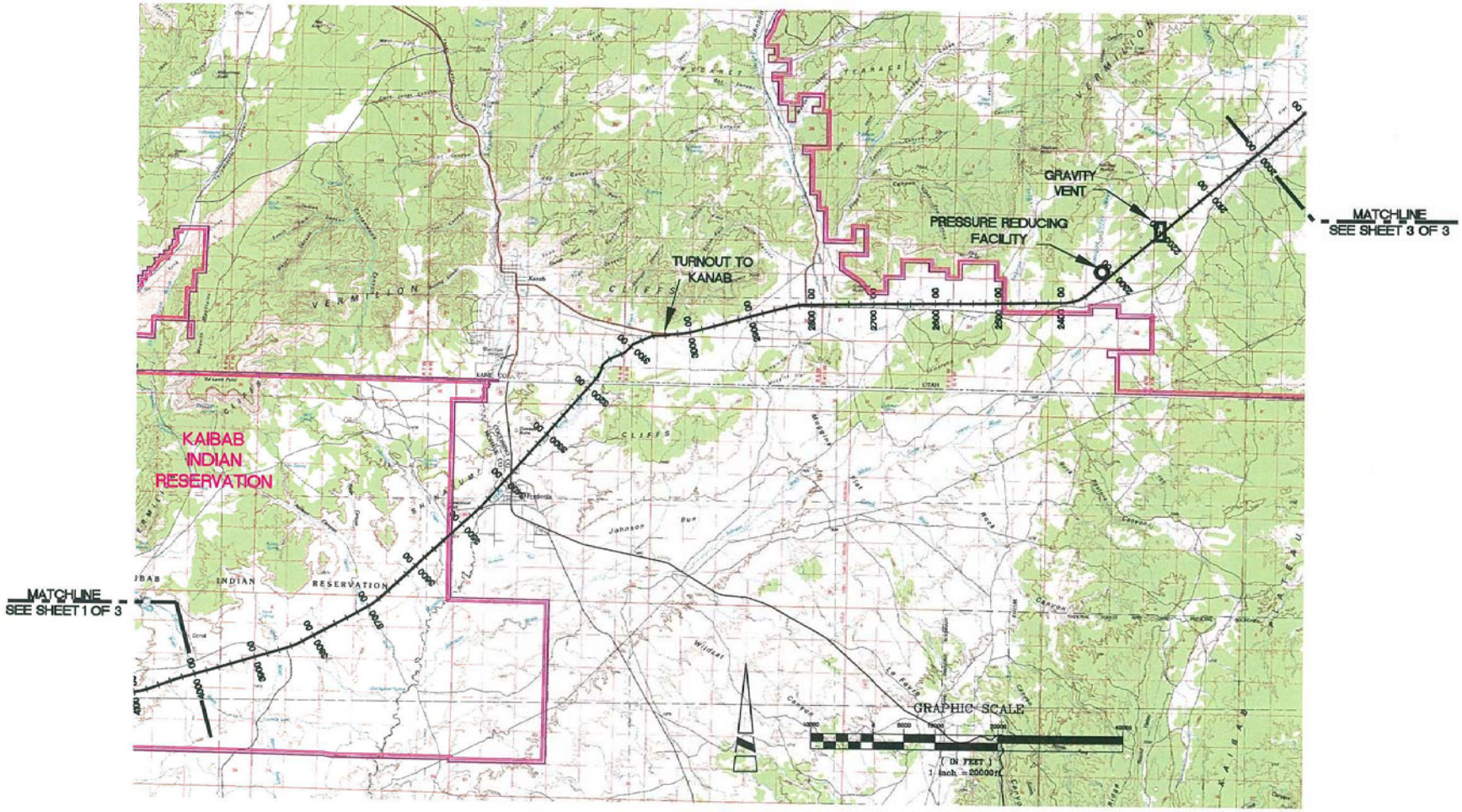
BOYLE ENGINEERING CORPORATION
45 West 10000 South, Suite 101
Sandy, Utah 84070 801-233-1100

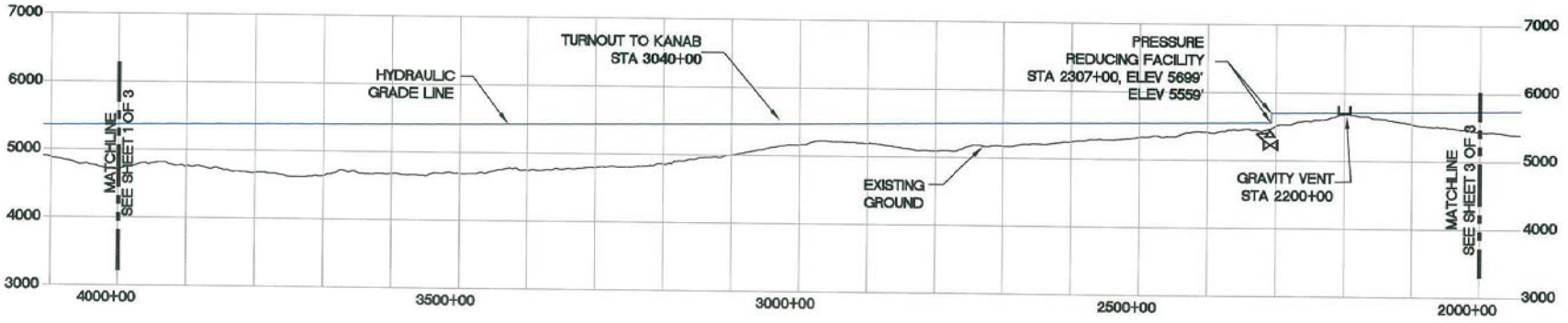
Central Iron County Water Conservancy District

LAKE POWELL PIPELINE FEASIBILITY STUDY

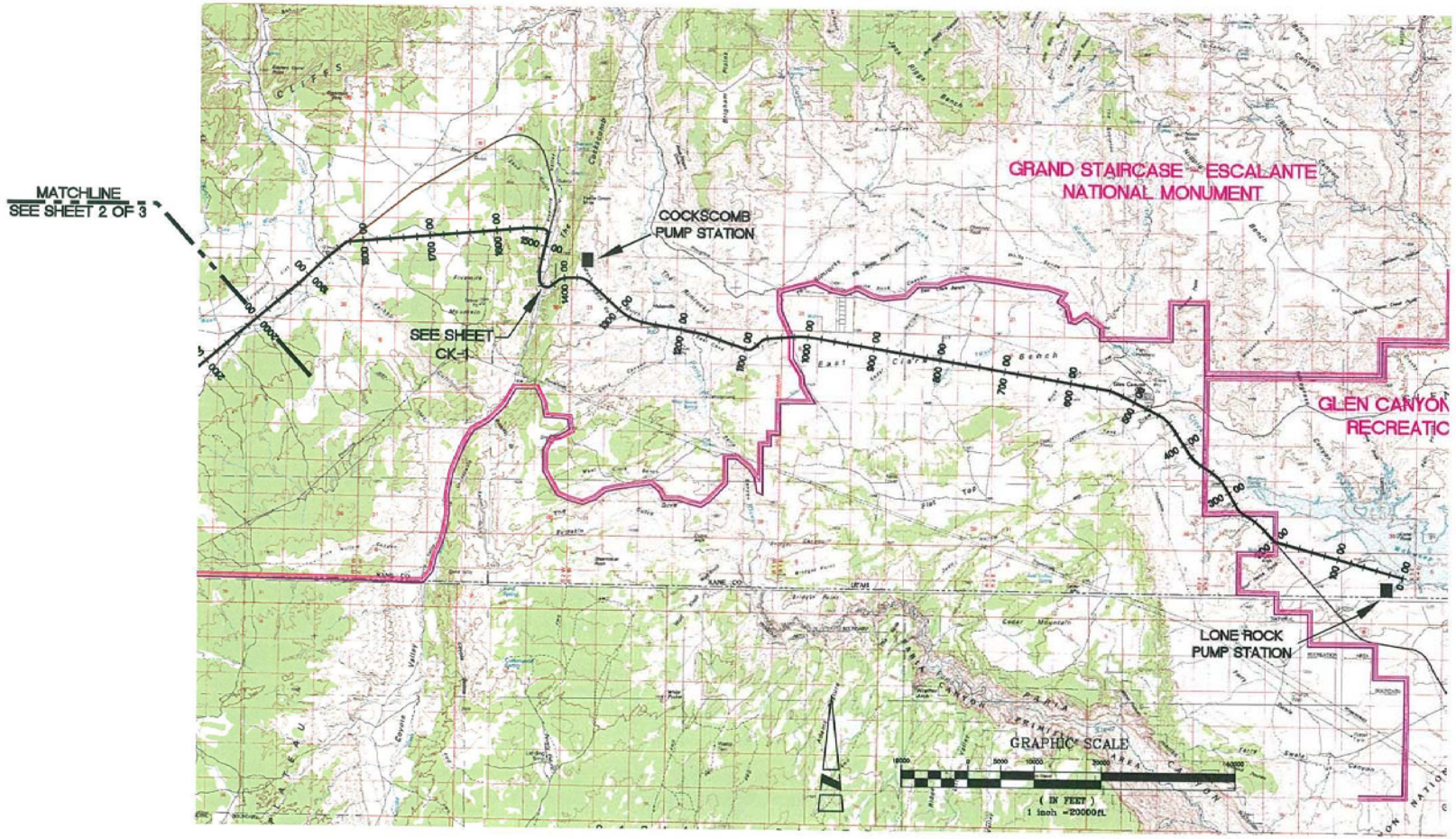
BASELINE WILLOW SPRING HYDRAULIC GRADE LINE

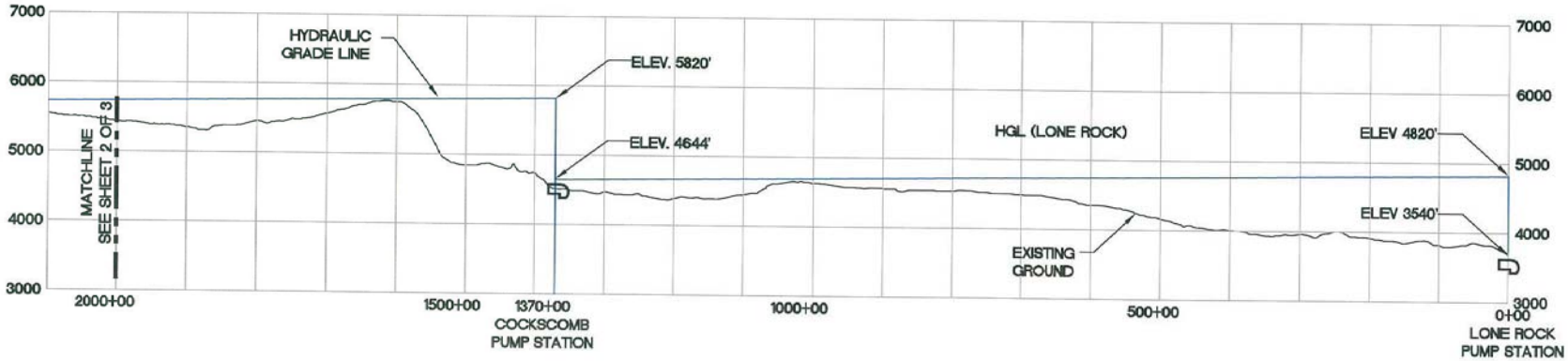
DRAWING NO. HGL-
FILE NO.



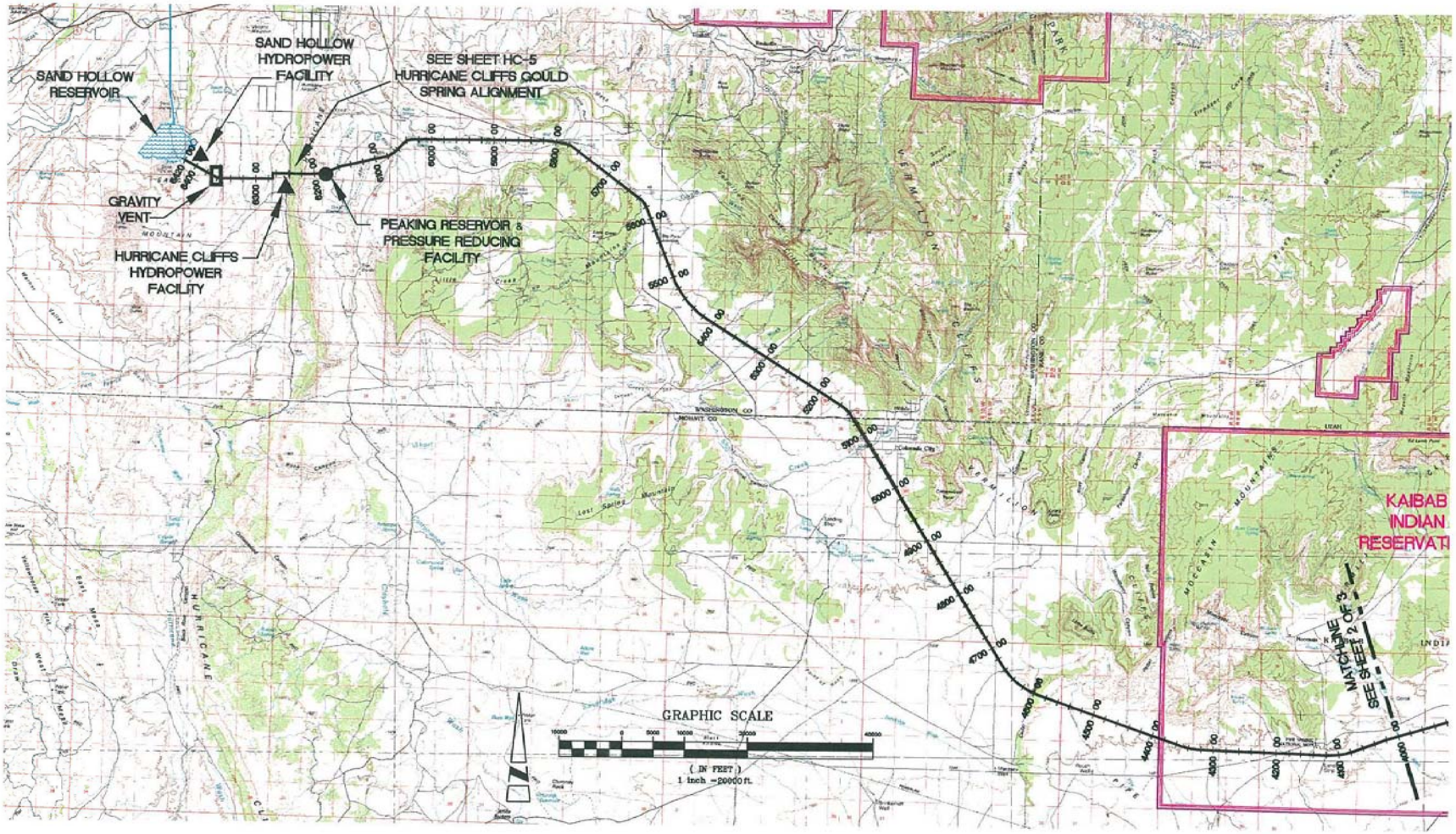


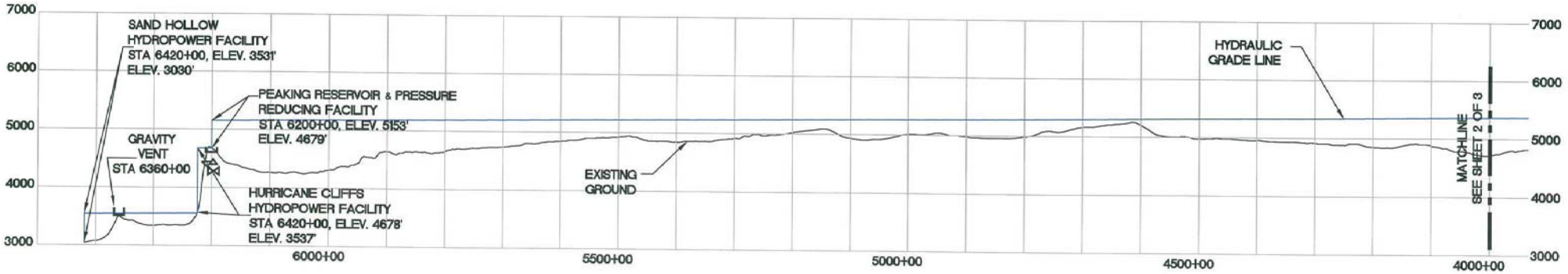
REV	DATE	DESCRIPTION	APP	DESIGN BY: AER	BOYLE ENGINEERING CORPORATION 45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100	Central Iron County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY BASELINE WILLOW SPRING HYDRAULIC GRADE LINE
				DRAWN BY: PSF			DRAWING NO. HGL-
				CHECKED BY:			FILE NO.
				DATE: 1/27/03			
				PROJECT ENGINEER / RE NO. / DATE			
				PROJECT MANAGER / RE NO. / DATE			



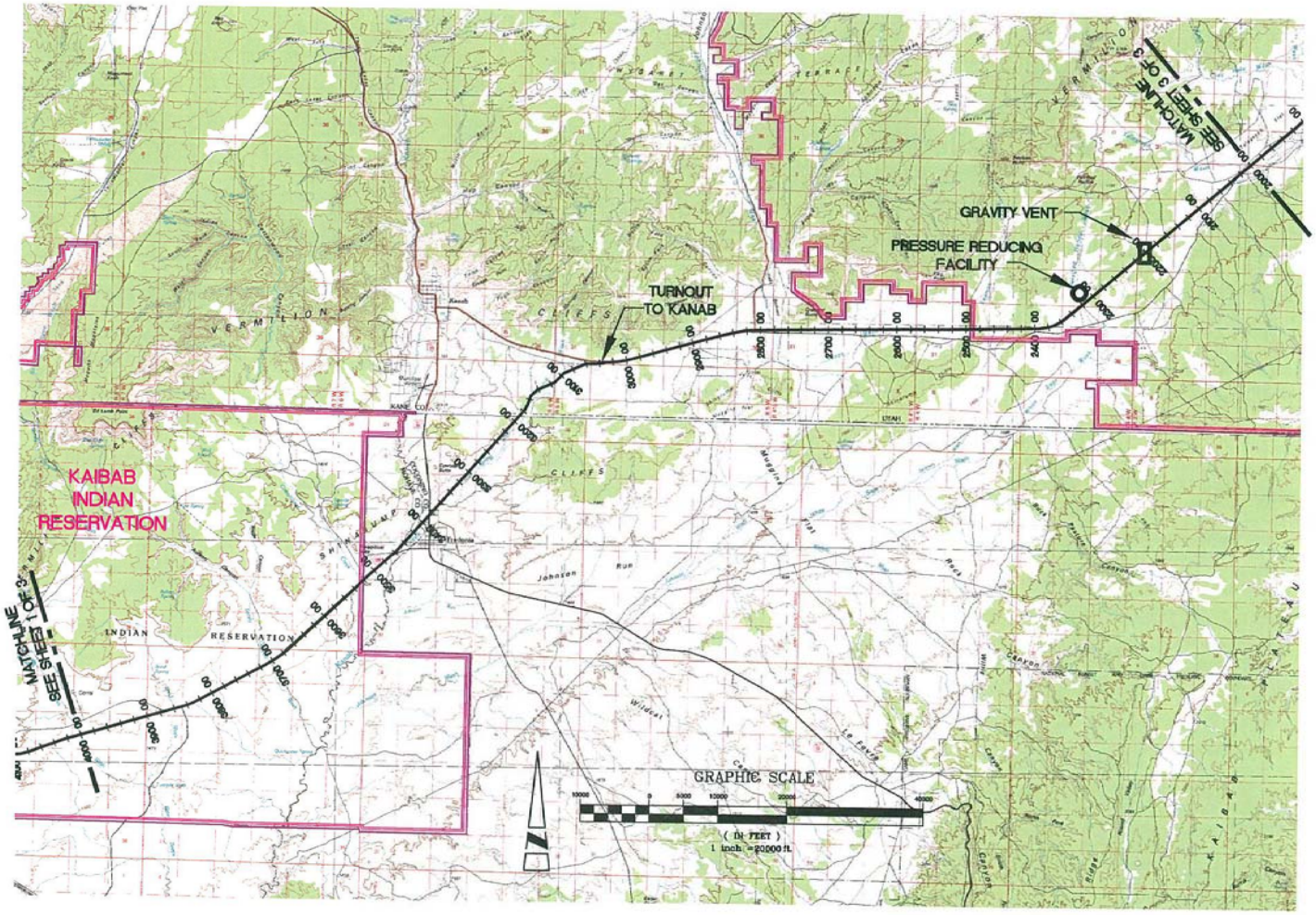


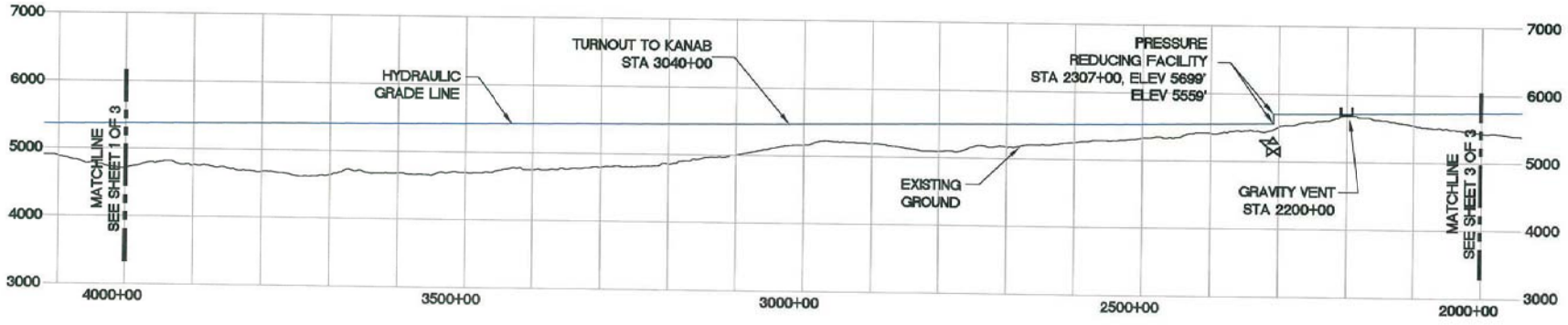
DESIGN BY: AER	BOYLE ENGINEERING CORPORATION	Central Iron County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	DRAWING NO. HGL-
DRAWN BY: PSF	45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		BASELINE WILLOW SPRING HYDRAULIC GRADE LINE	FILE NO.
CHECKED BY:				
DATE: 1/27/03				
PROJECT ENGINEER / RE NO. / DATE				
PROJECT MANAGER / RE NO. / DATE				





DESIGN BY: AER		BOYLE ENGINEERING CORPORATION	*Central Iron County Water Conservancy District*	LAKE POWELL PIPELINE FEASIBILITY STUDY	HGL-
DRAWN BY: PSF		45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		BASELINE – GOULD SPRING – GRASS VALLEY HYDRAULIC GRADE LINE	
CHECKED BY:					
DATE: 1/27/03					





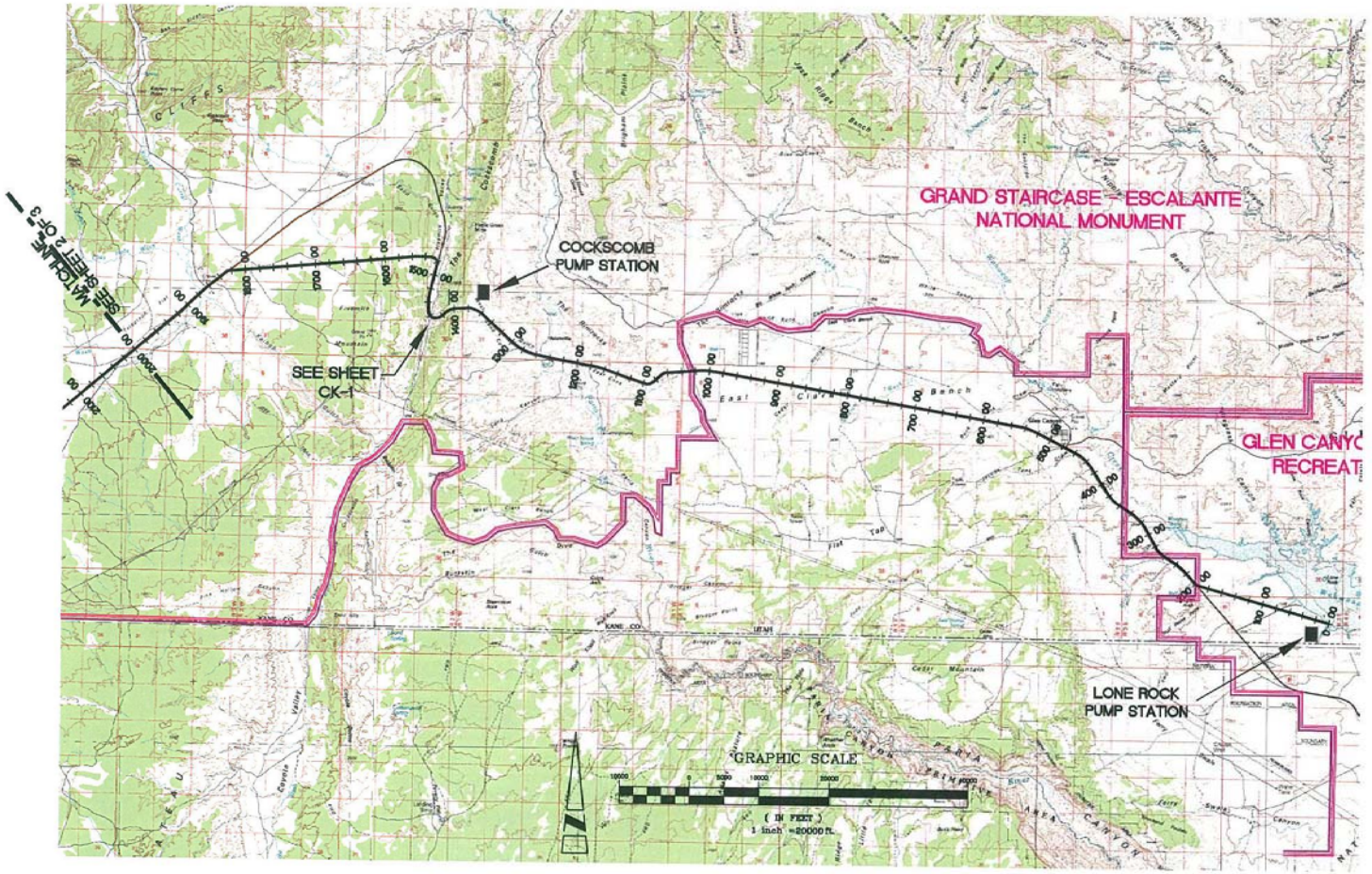
REV	DATE	DESCRIPTION	APP	DESIGN BY: AER DRAWN BY: PSF CHECKED BY: DATE: 1/27/03	PROJECT ENGINEER / RE NO. / DATE PROJECT MANAGER / RE NO. / DATE	BOYLE ENGINEERING CORPORATION 45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100	Washington County Water Conservancy District

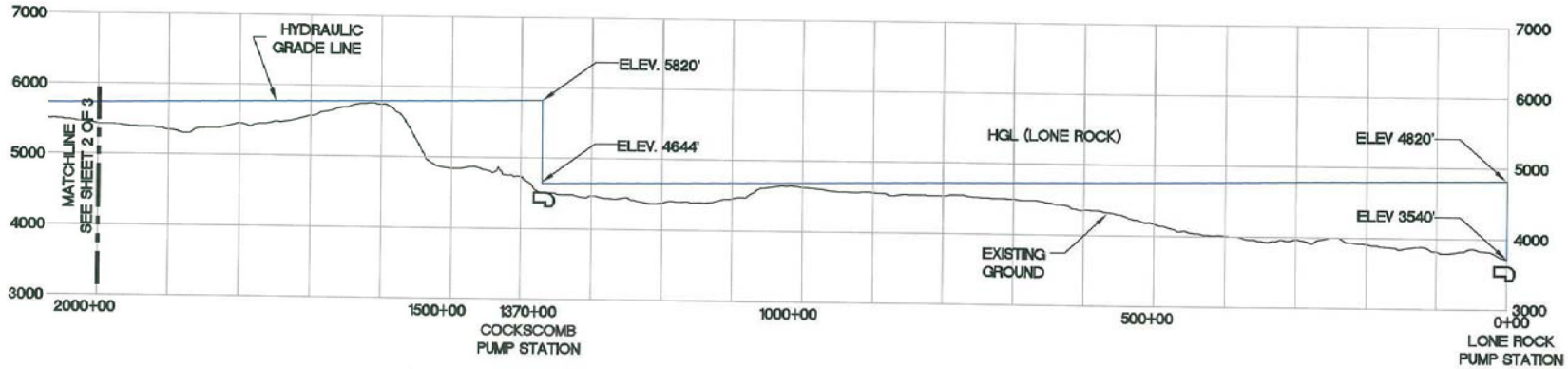
LAKE POWELL PIPELINE FEASIBILITY STUDY

BASELINE - GOULD SPRING - GRASS VALLEY HYDRAULIC GRADE LINE

DRAWING NO. HGL-

FILE NO.





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		DRAWN BY: PSF	45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		BASELINE - GOULD SPRING - GRASS VALLEY HYDRAULIC GRADE LINE	FILE NO.
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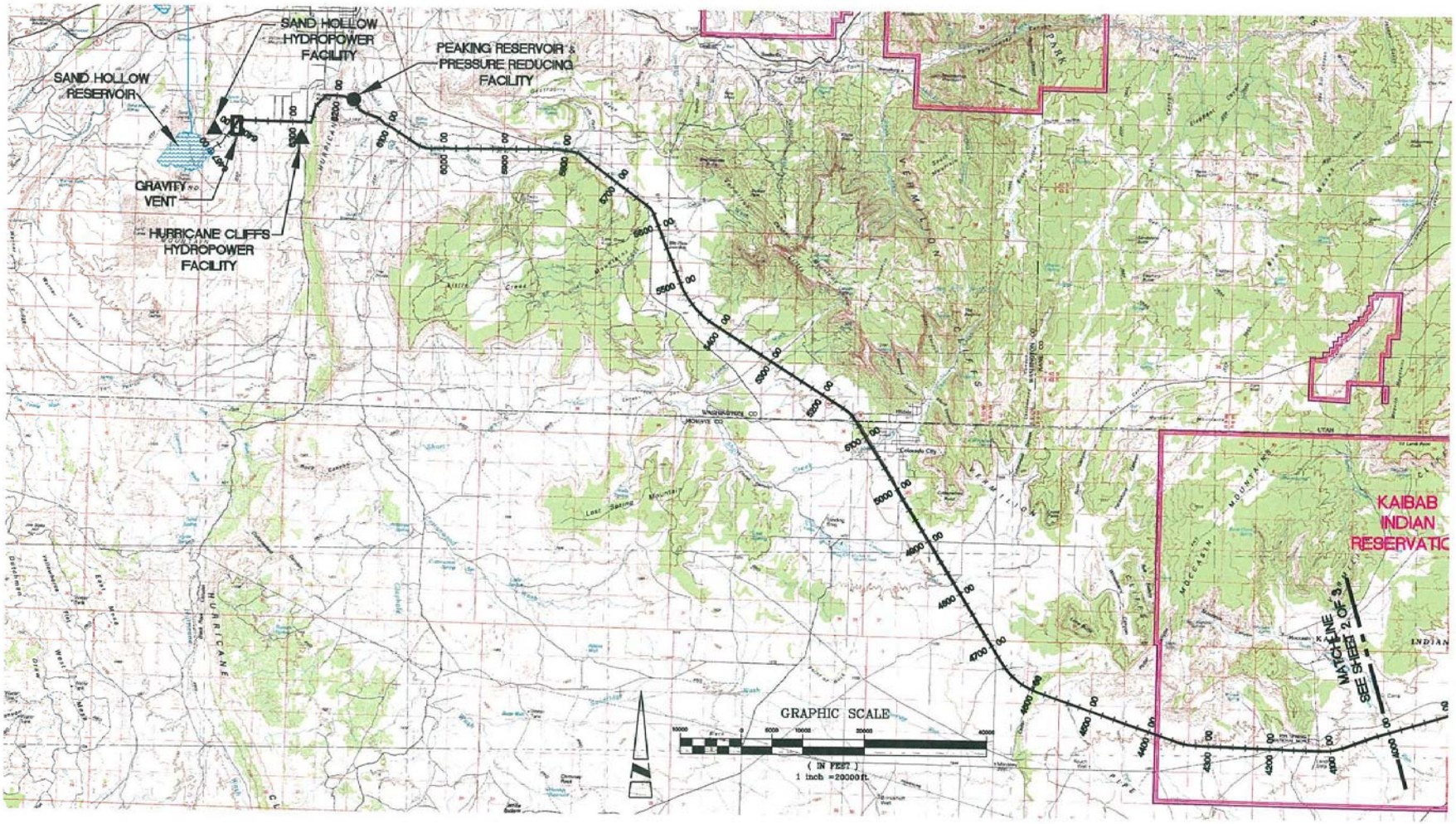
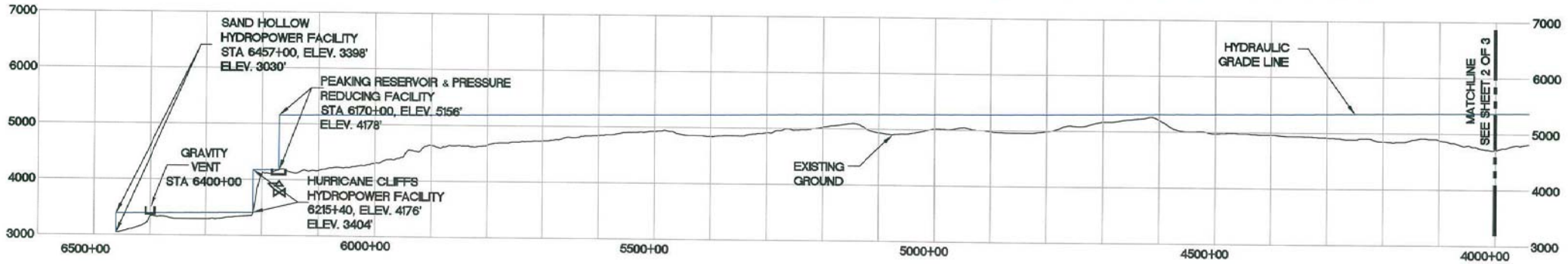
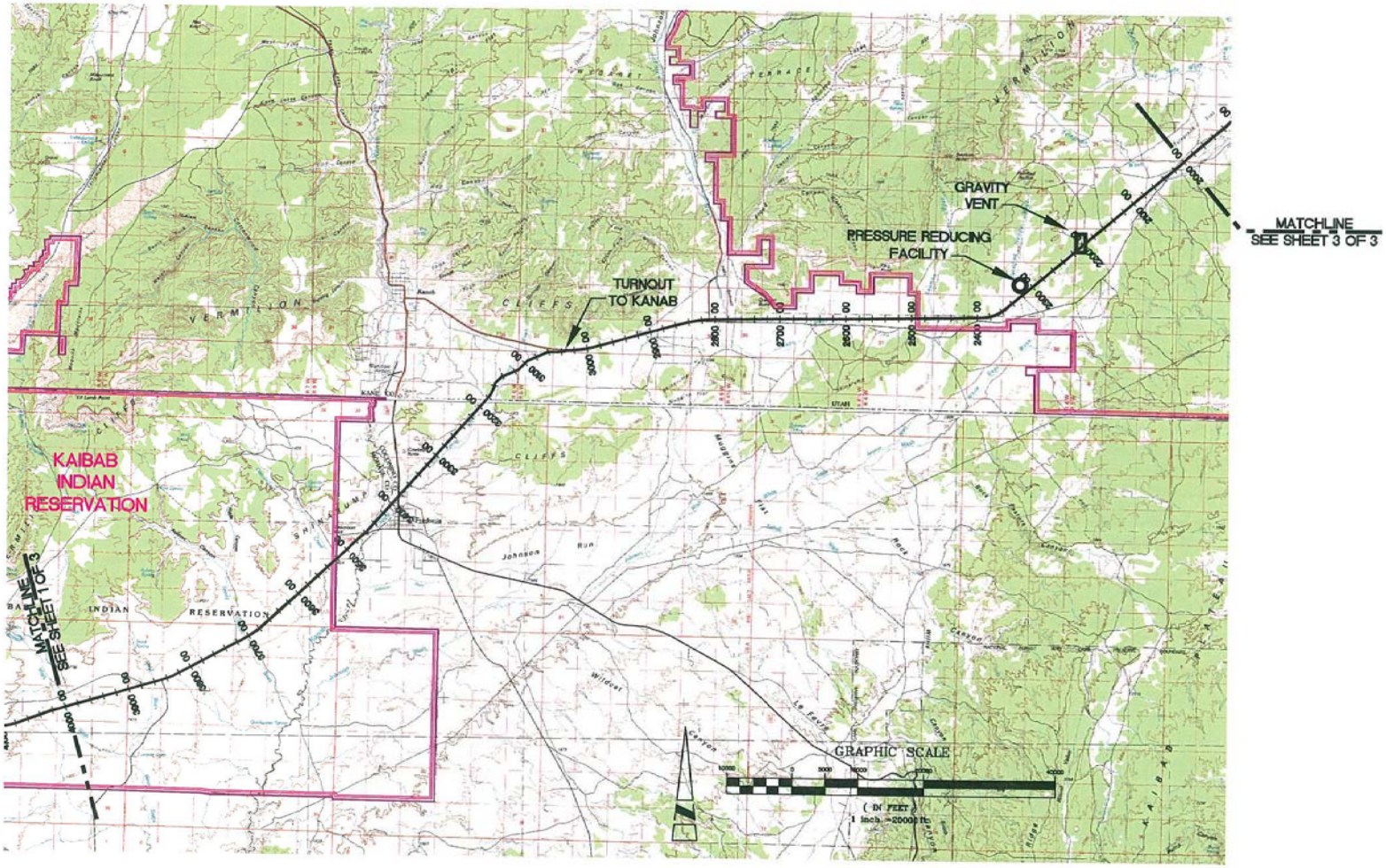
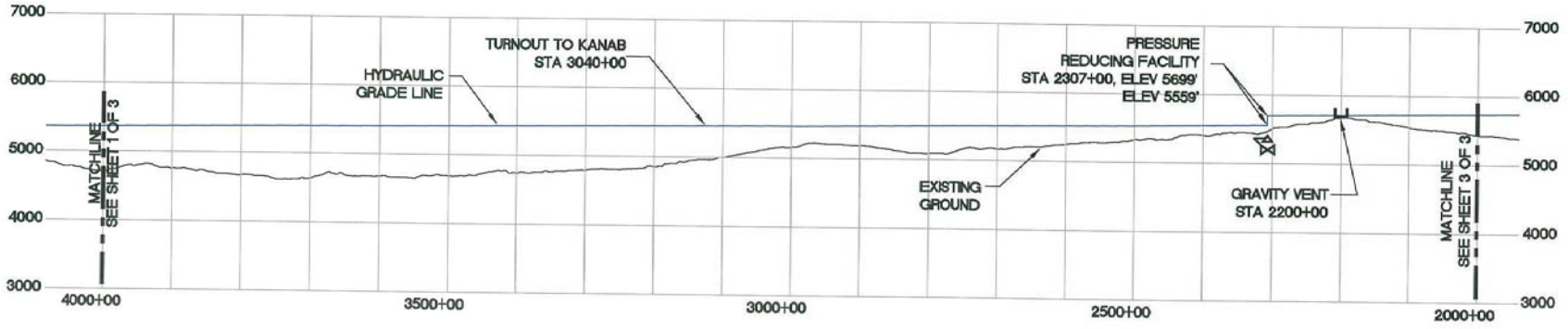
		DATE: 1/27/03				
DATE	DESCRIPTION	APP	PROJECT ENGINEER RE NO. DATE / PROJECT MANAGER RE NO. DATE			



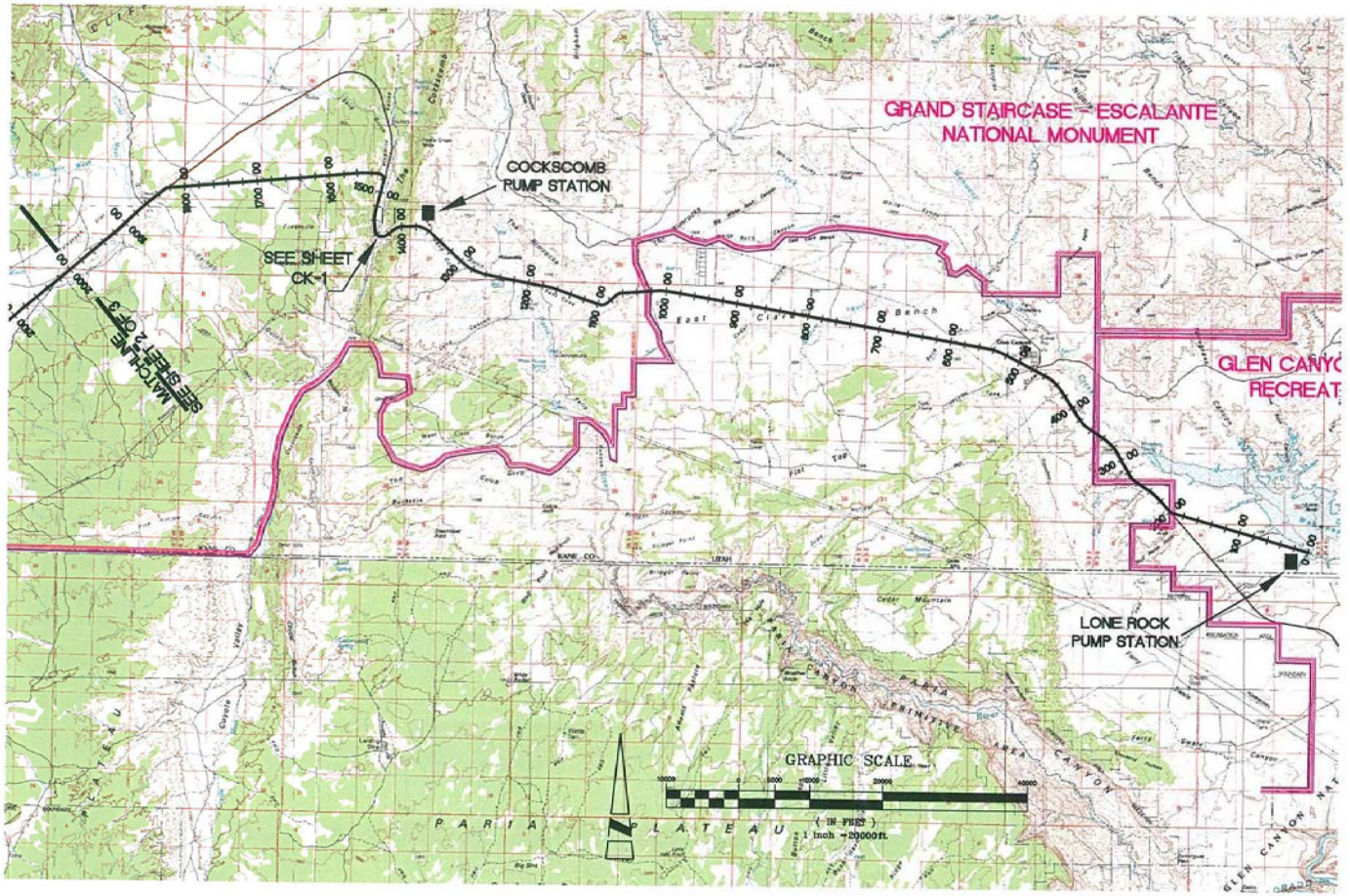


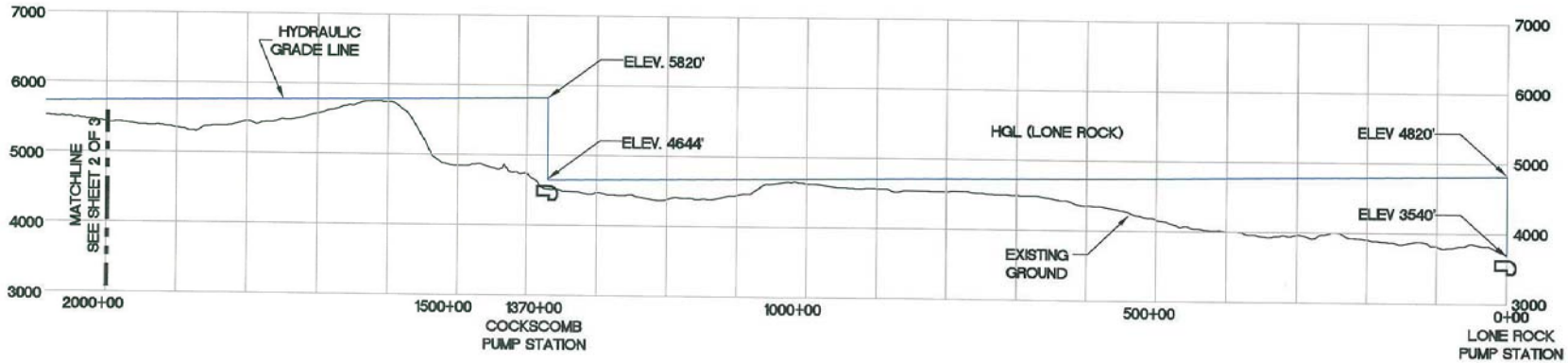
DESIGN BY: AER	BOYLE ENGINEERING CORPORATION	*Washington County Water Conservancy District*	LAKE POWELL PIPELINE FEASIBILITY STUDY	
DRAWN BY: PSF	45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		**BASELINE - GOULD SPRING - WILLOW SPRING HYDRAULIC GRADE LINE**	HGL-
CHECKED BY:				
DATE: 1/27/03				



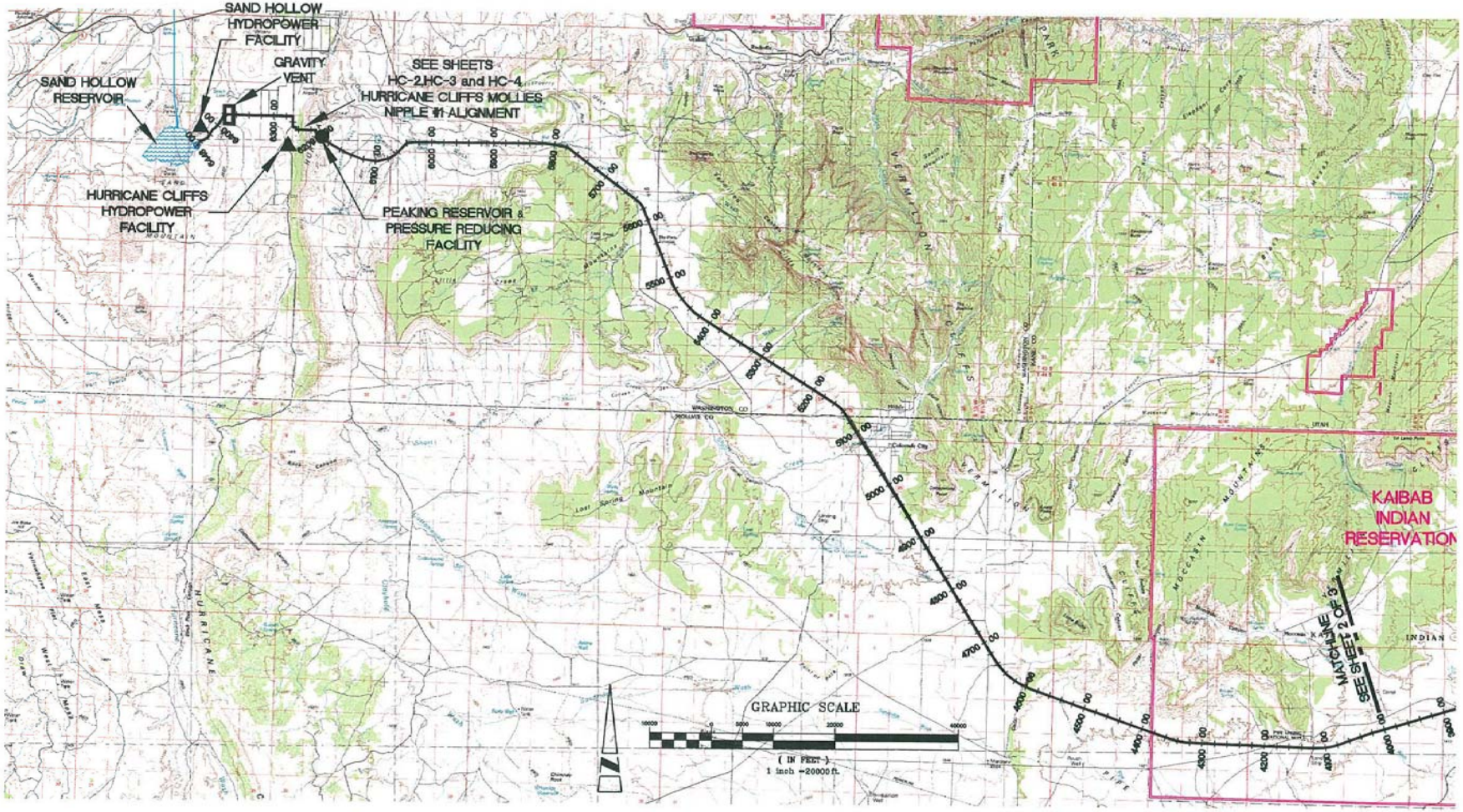


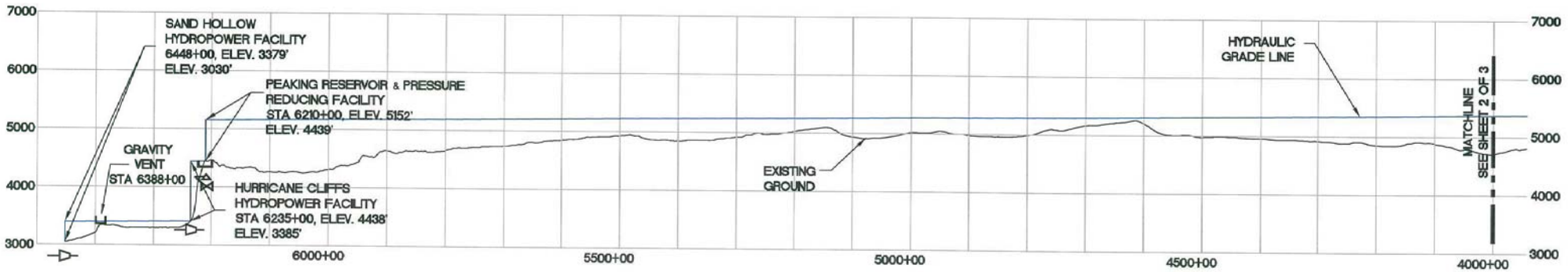
DESIGN BY: AER	BOYLE ENGINEERING CORPORATION	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	DRAWING NO. HGL-
DRAWN BY: PSF	45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		BASELINE - GOULD SPRING - WILLOW SPRING HYDRAULIC GRADE LINE	FILE NO.
CHECKED BY:				
DATE: 1/27/03				



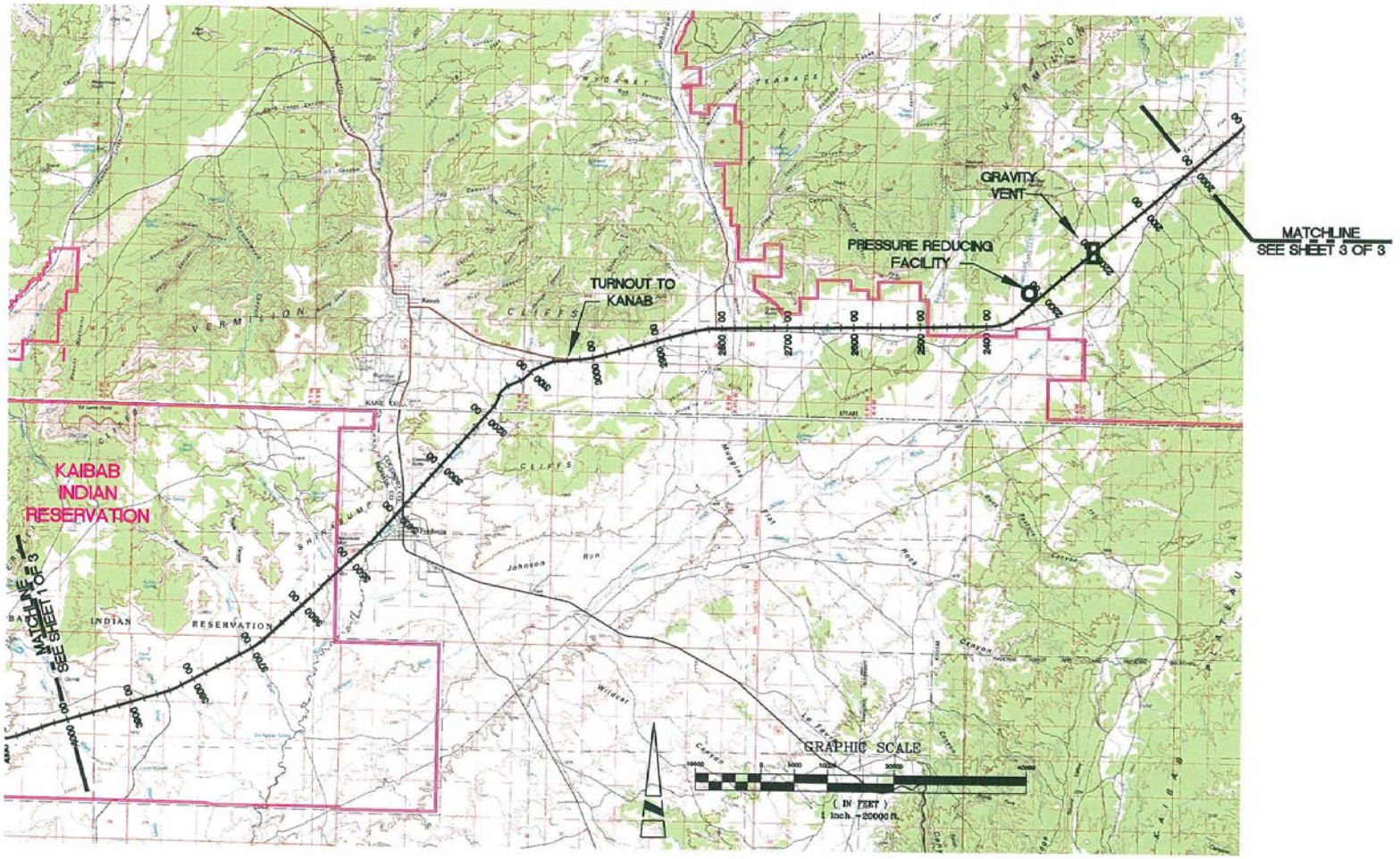


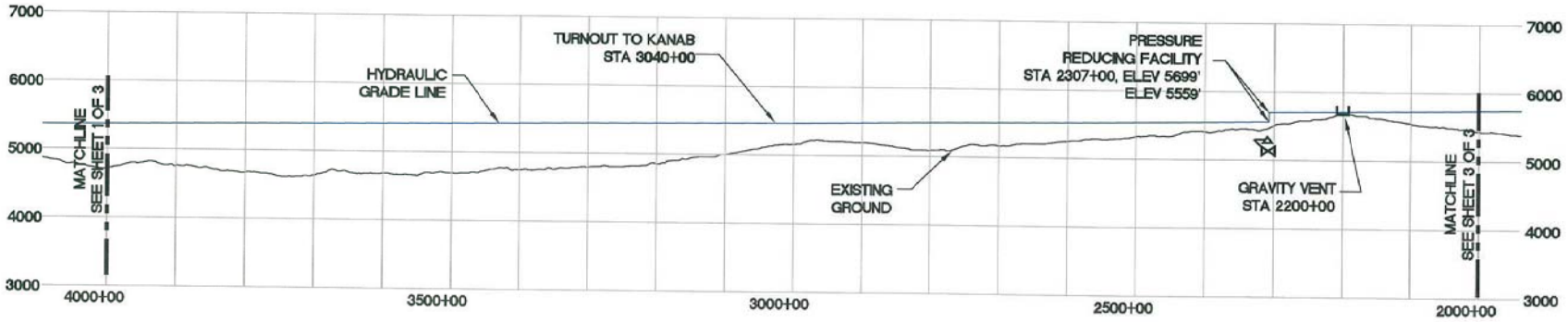
DESIGN BY: AER	BOYLE engineering corporation	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	DRAWING NO. HGL-
DRAWN BY: PSF	45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		BASELINE - GOULD SPRING - WILLOW SPRING HYDRAULIC GRADE LINE	FILE NO.
CHECKED BY:				
DATE: 1/27/03				



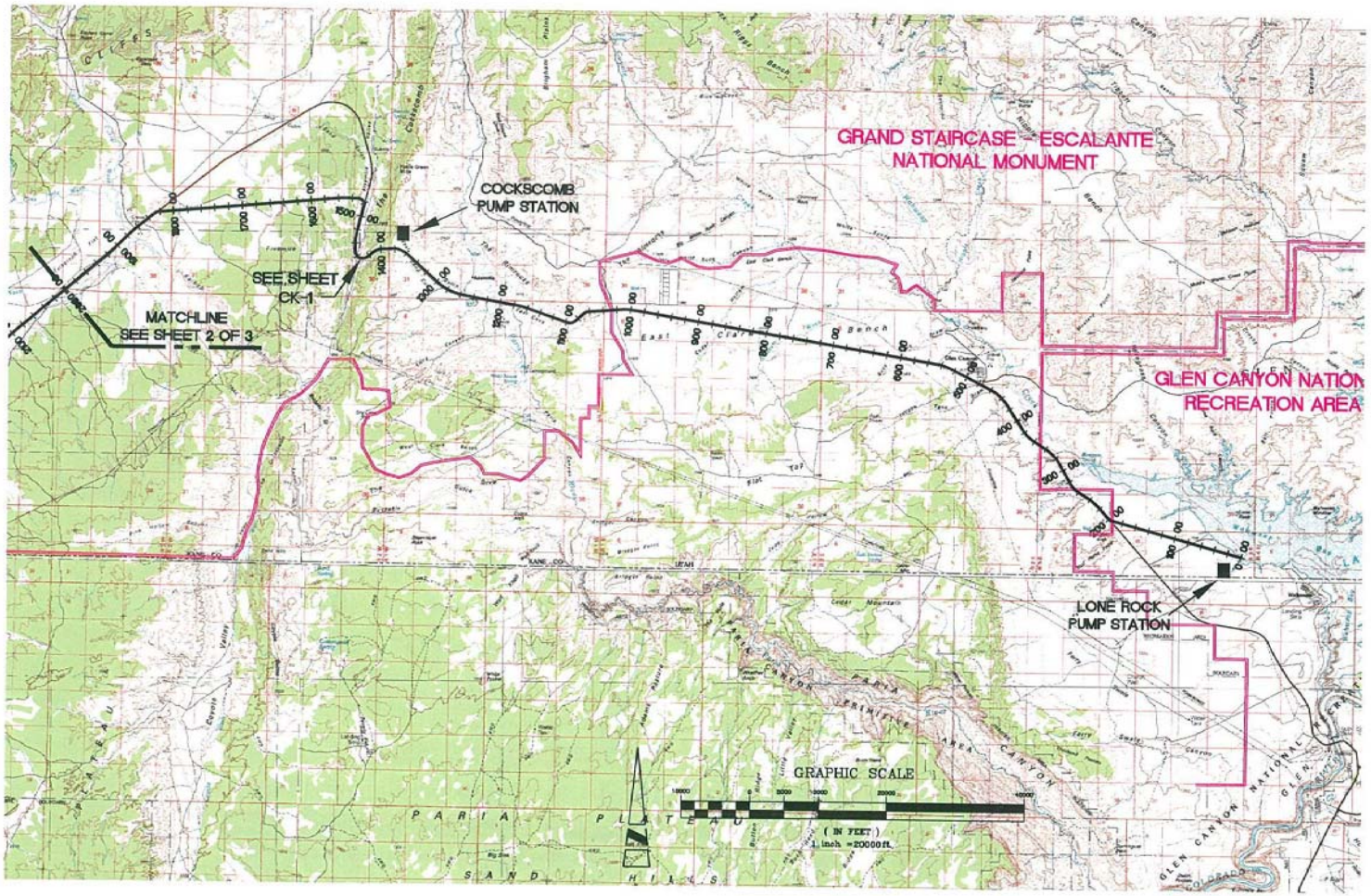


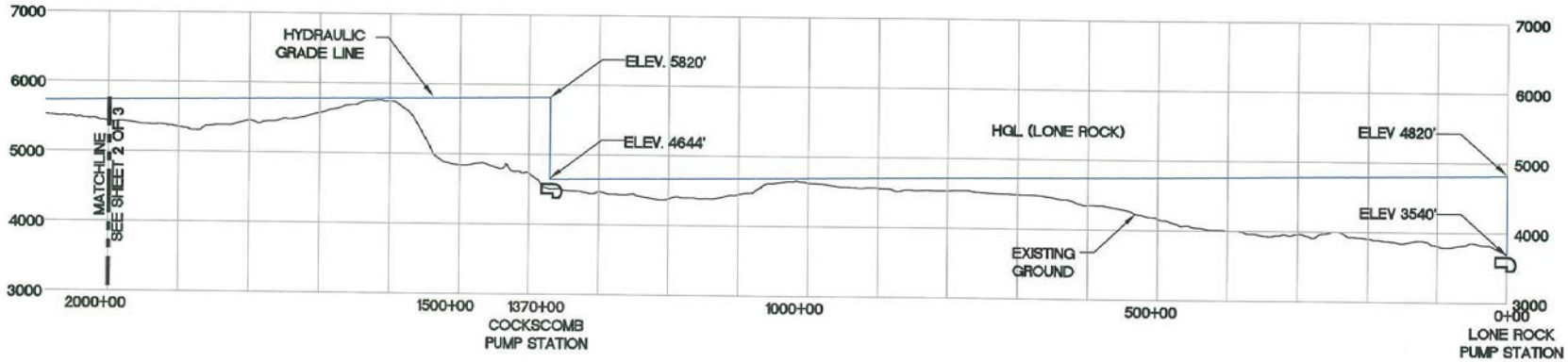
DESIGN BY: AER	BOYLE ENGINEERING CORPORATION	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	DRAWING NO. HGL-5
DRAWN BY: PSF	45 West 10000 South, Suite 501 Sandy, Utah 84070 801-233-1100		BASELINE - GOULD SPRING - MOLLIES NIPPLE HYDRAULIC GRADE LINE	FILE NO.
CHECKED BY:				
DATE: 1/27/03				



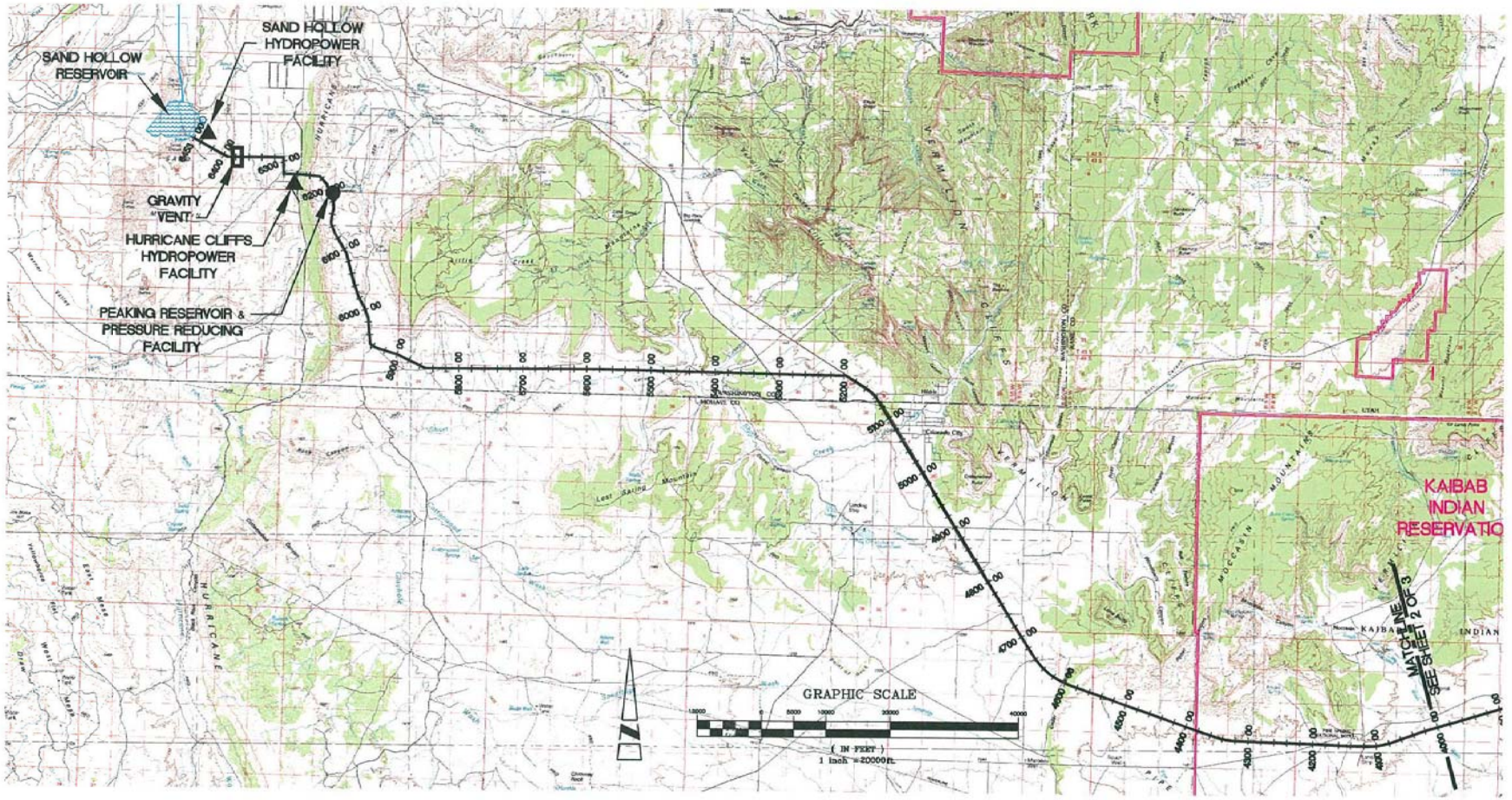


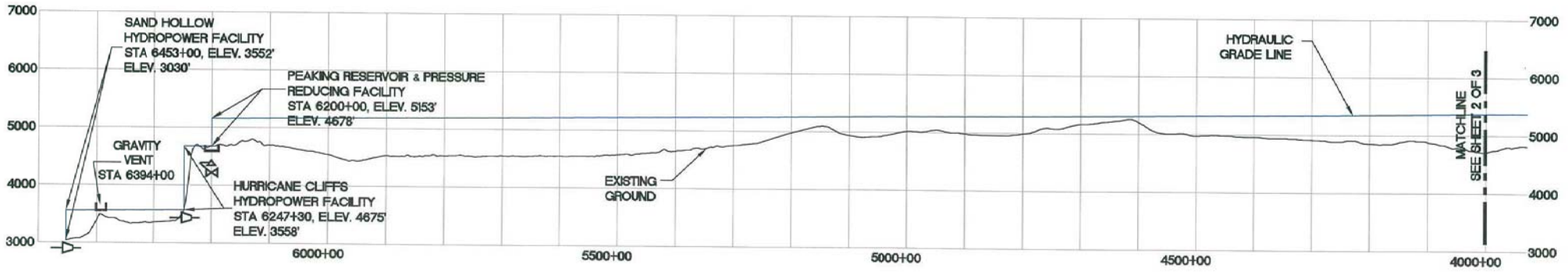
DESIGN BY: AER	BOYLE ENGINEERING CORPORATION 45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	DRAWING NO. HGL-
DRAWN BY: PSF			BASELINE - GOULD SPRING - MOLLIES NIPPLE HYDRAULIC GRADE LINE	
CHECKED BY:				
DATE: 1/27/03				



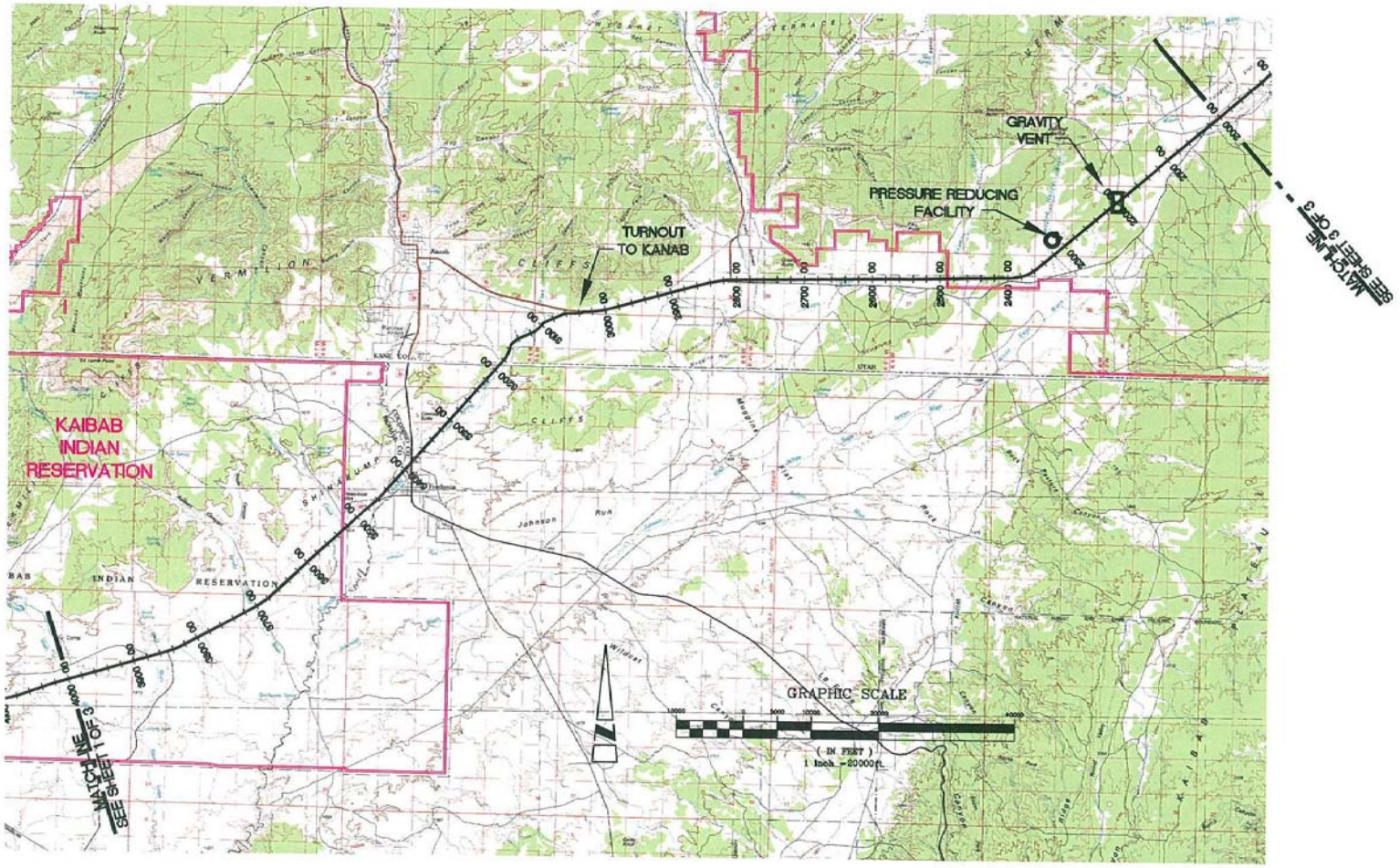


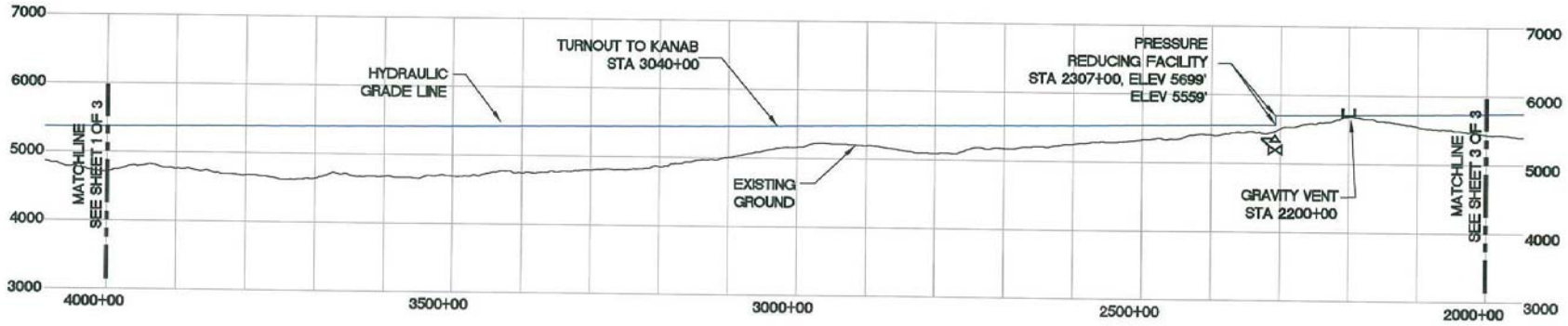
		DESIGN BY: AER DRAWN BY: PSF CHECKED BY: DATE: 1/27/03	PROJECT ENGINEER / RE NO. / DATE PROJECT MANAGER / RE NO. / DATE	BOYLE ENGINEERING CORPORATION 45 West 10000 South, Suite 191 Sandy, Utah 84070 801-233-1100	*Washington County Water Conservancy District*	LAKE POWELL PIPELINE FEASIBILITY STUDY **BASELINE - GOULD SPRING - MOLLIES NIPPLE HYDRAULIC GRADE LINE**	DRAWING NO. HGL-5 FILE NO.



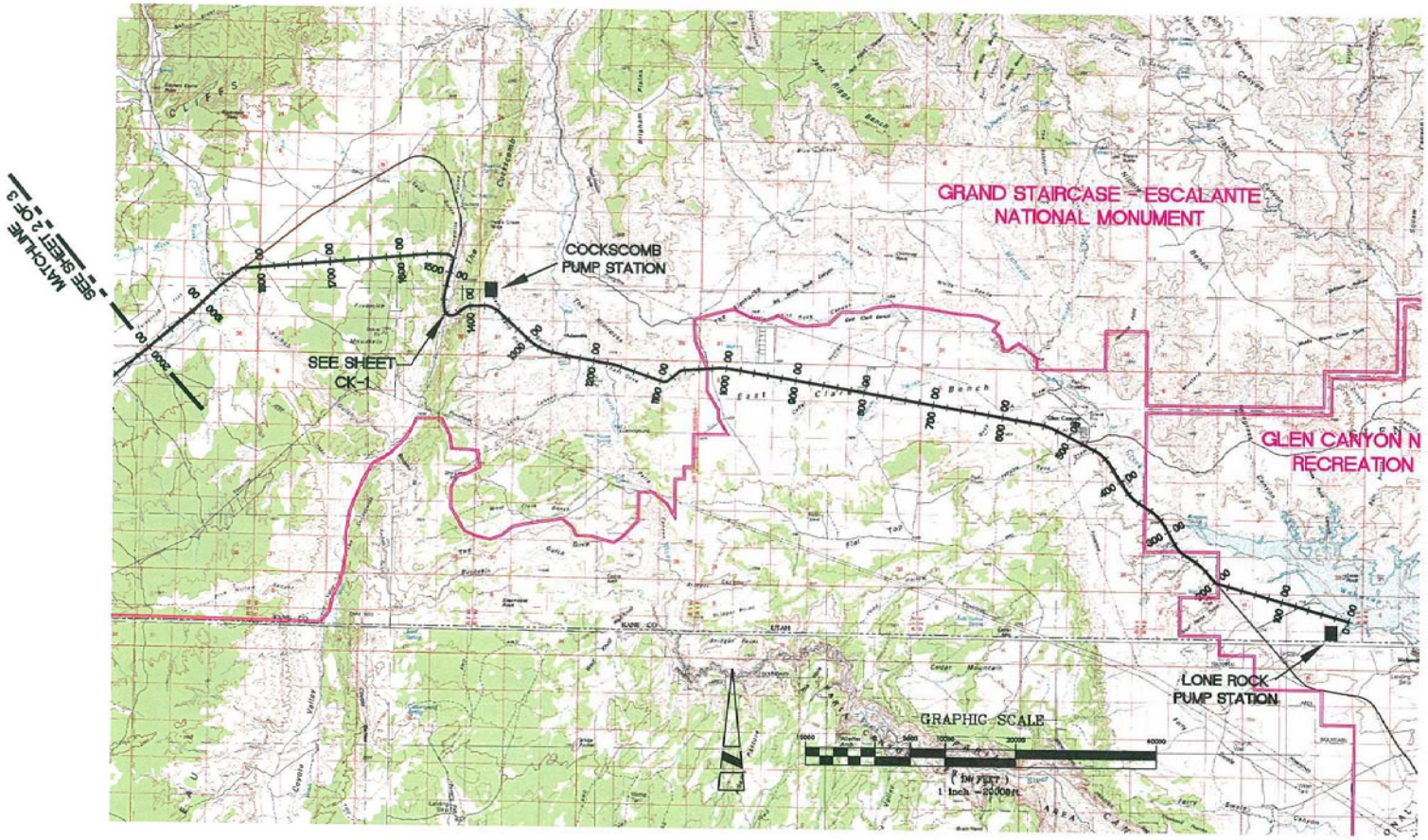


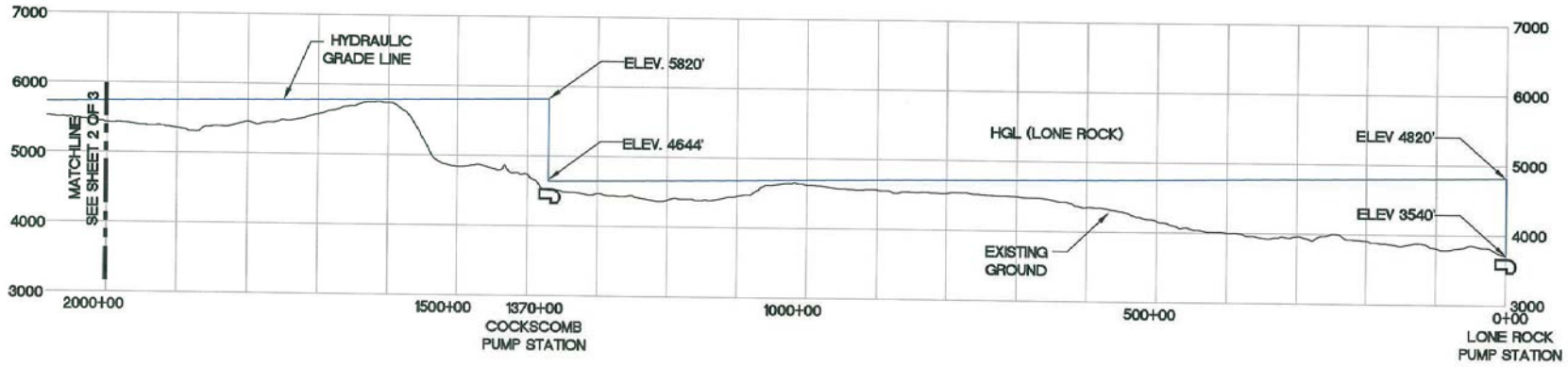
DESIGN BY: AER	BOYLE ENGINEERING CORPORATION	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	
DRAWN BY: PSF	45 West 10000 South, Suite 161 Sandy, Utah 84070 801-233-1100		BASELINE - COLORADO CITY - WEST LITTLE CREEK HYDRAULIC GRADE LINE	HGL-
CHECKED BY:				
DATE: 1/27/03				



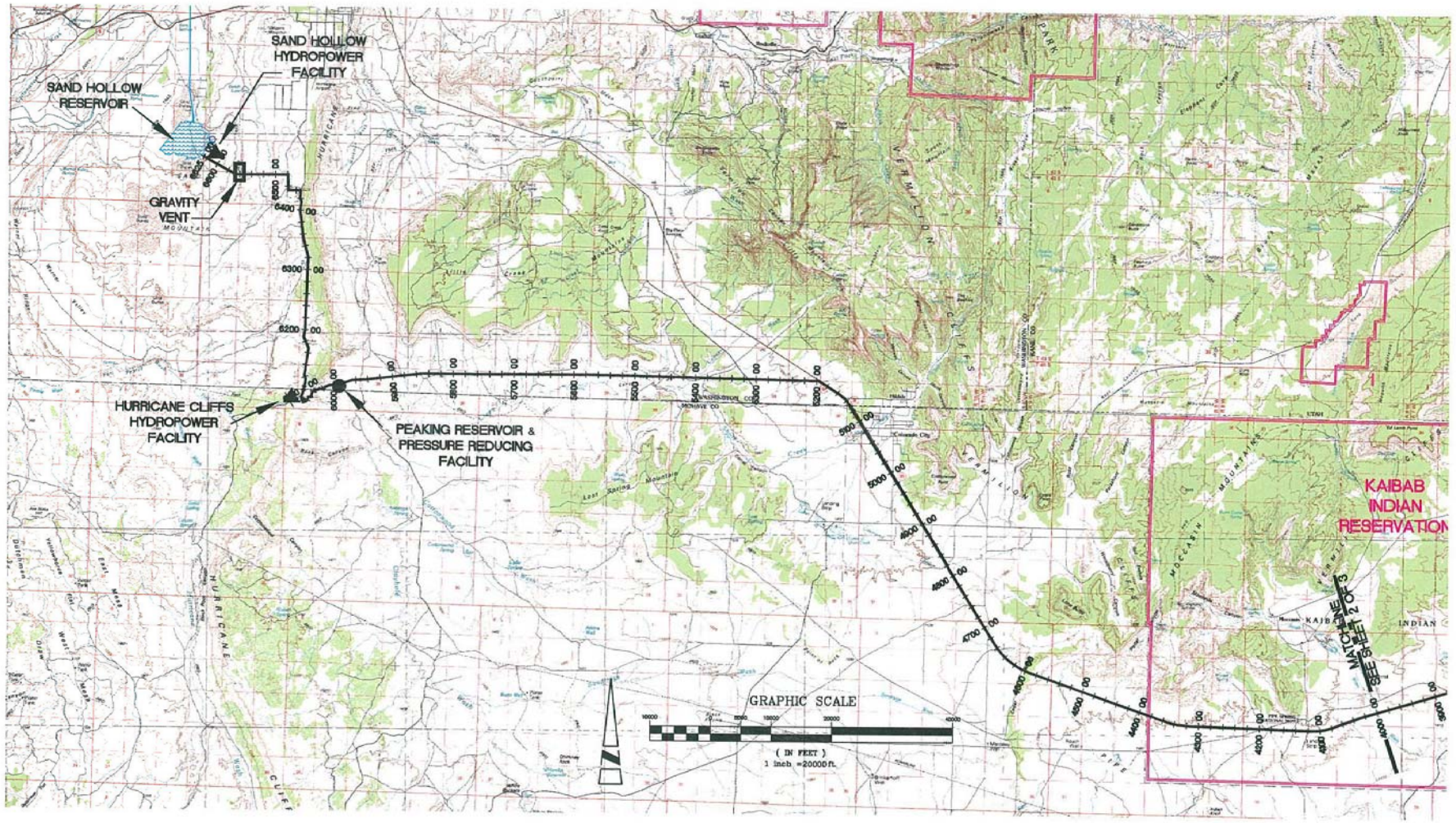


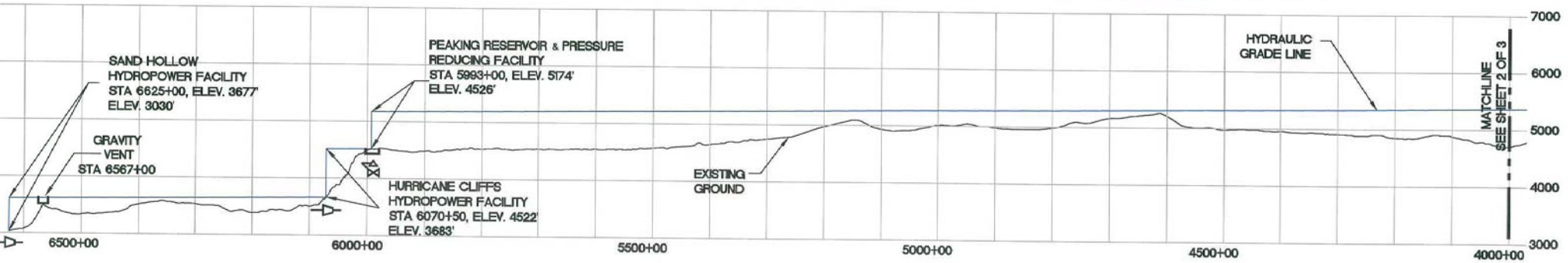
DESIGN BY: AER	BOYLE ENGINEERING CORPORATION	*Washington County Water Conservancy District*	LAKE POWELL PIPELINE FEASIBILITY STUDY	DRAWING NO. HGL-
DRAWN BY: PSF	45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		**BASELINE - COLORADO CITY - WEST LITTLE CREEK HYDRAULIC GRADE LINE**	FILE NO.
CHECKED BY:				
DATE: 1/27/03				
PROJECT ENGINEER / RE NO. / DATE				
PROJECT MANAGER / RE NO. / DATE				



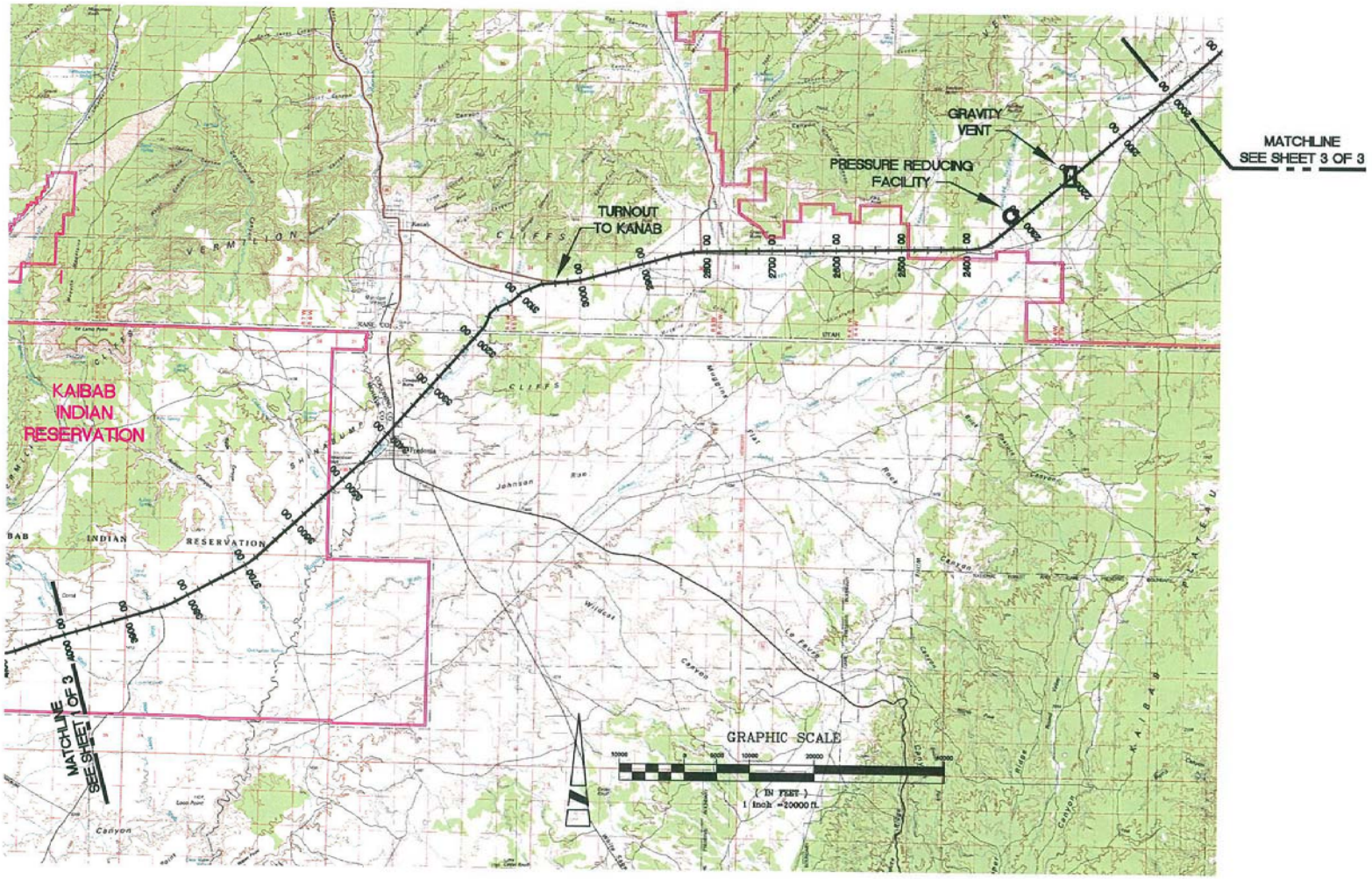


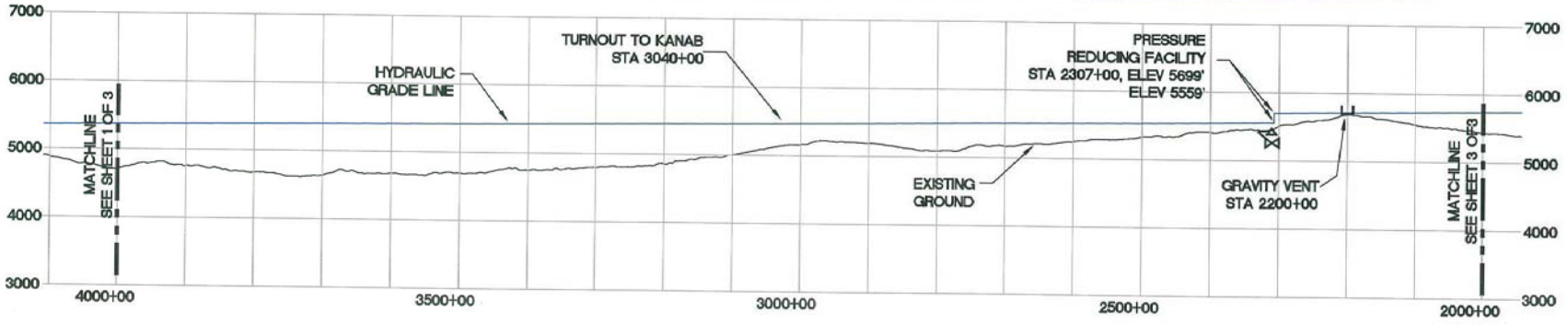
DESIGN BY: AER DRAWN BY: PSF CHECKED BY: DATE: 1/27/03	PROJECT ENGINEER / PROJECT MANAGER	BOYLE ENGINEERING CORPORATION 45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100	*Washington County Water Conservancy District*	LAKE POWELL PIPELINE FEASIBILITY STUDY **BASELINE - COLORADO CITY - WEST LITTLE CREEK HYDRAULIC GRADE LINE**	DRAWING NO. HGL-



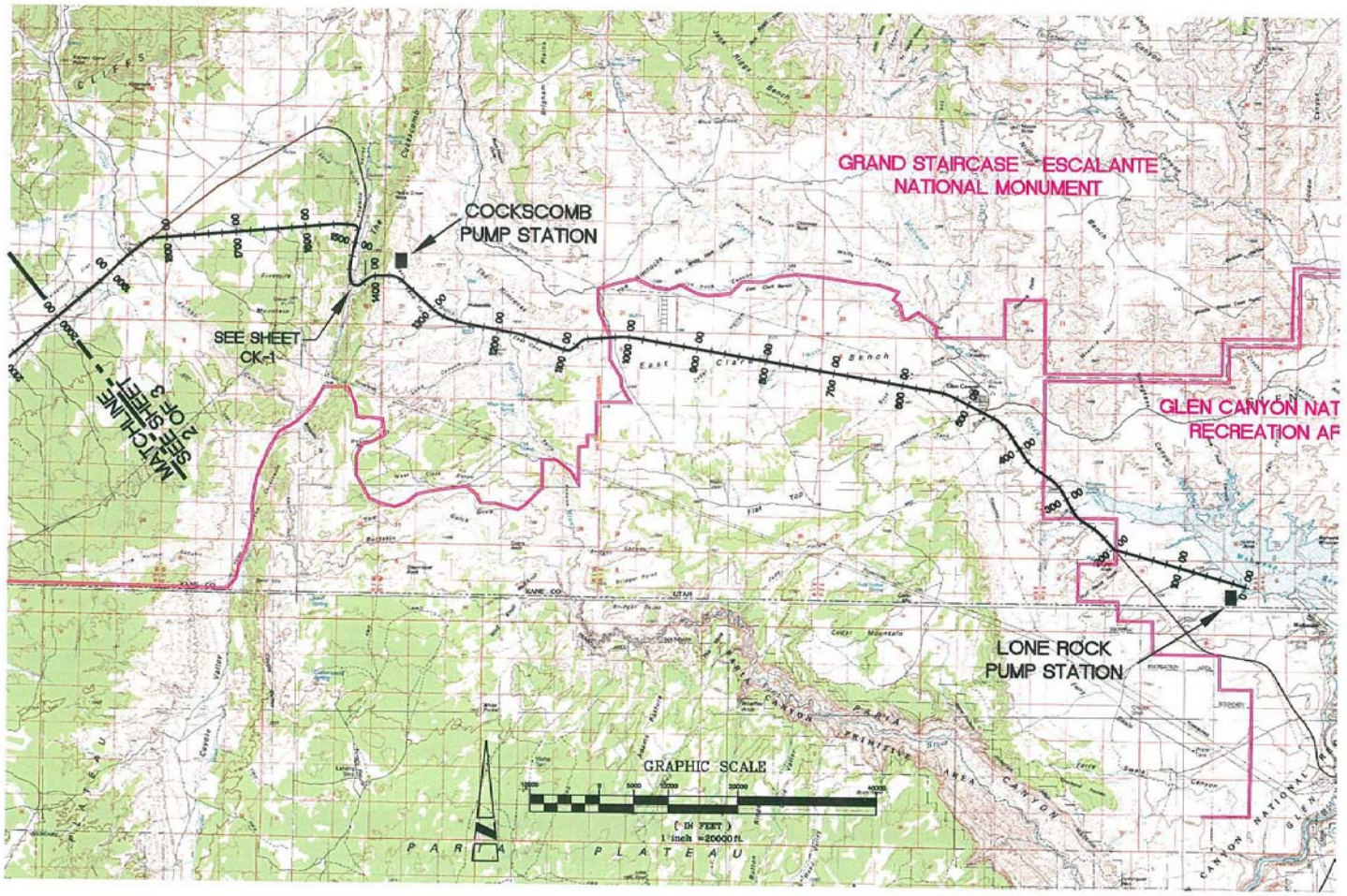


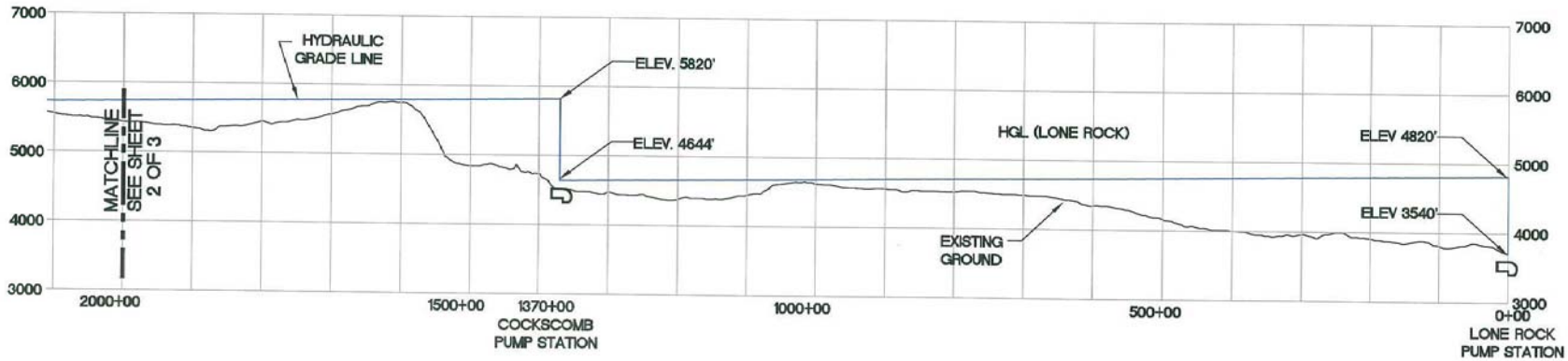
DESIGN BY: AER	BOYLE ENGINEERING CORPORATION	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	HGL-
DRAWN BY: PSF	45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		BASELINE - COLORADO CITY - HONEYMOON TRAIL HYDRAULIC GRADE LINE	
CHECKED BY:				
DATE: 1/27/03				



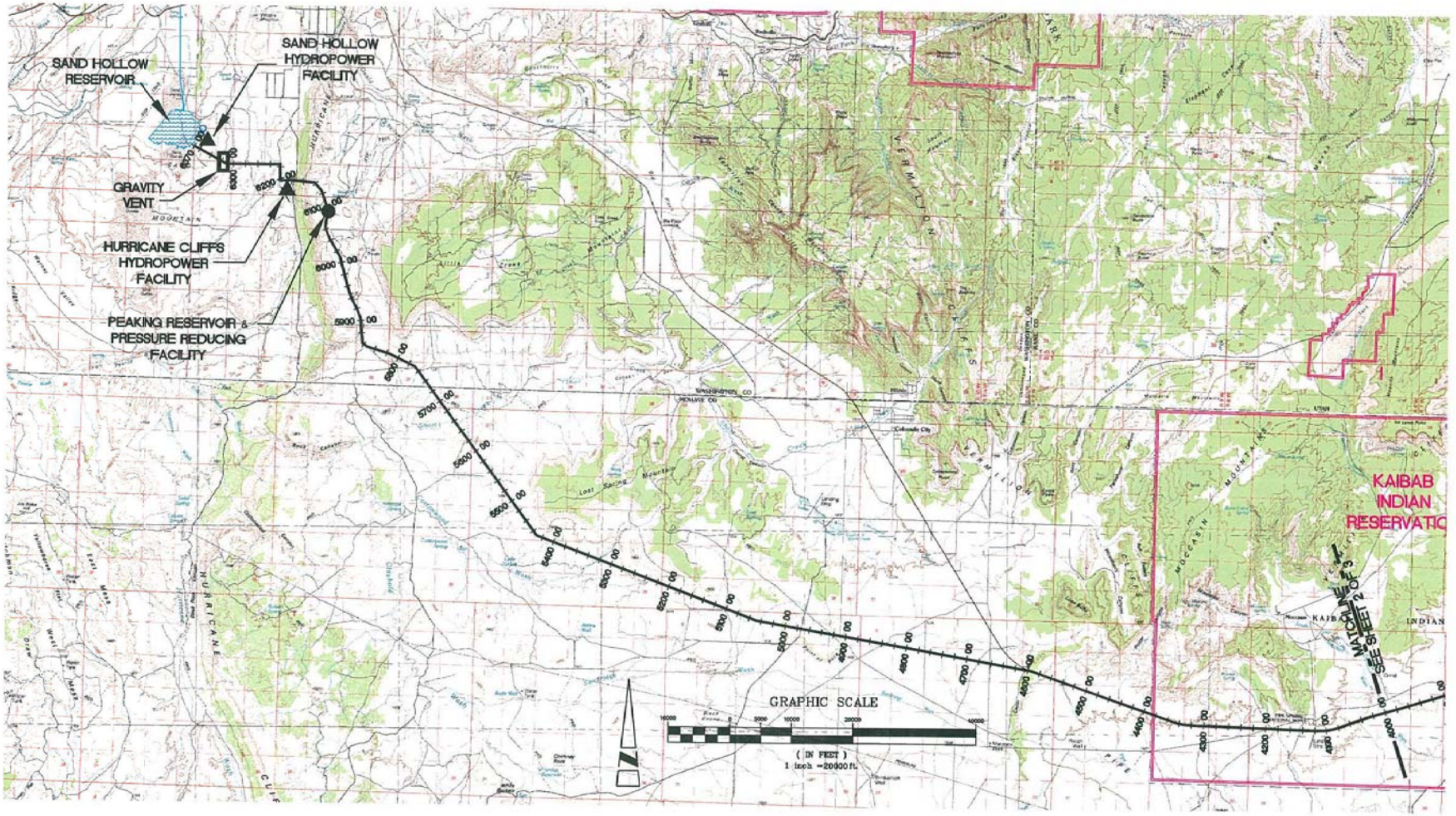


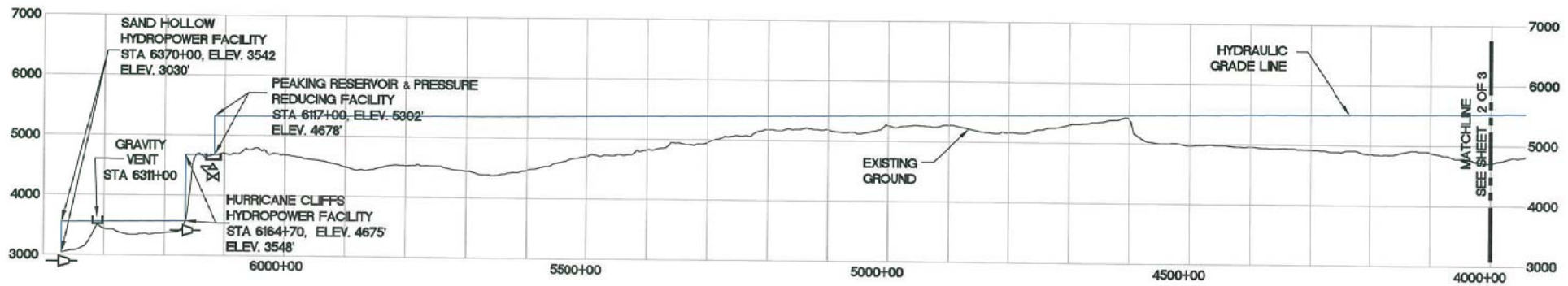
DESIGN BY: AER	BOYLE ENGINEERING CORPORATION	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	
DRAWN BY: PSF	45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		BASELINE - COLORADO CITY - HONEYMOON TRAIL HYDRAULIC GRADE LINE	HGL-
CHECKED BY:				
DATE: 1/27/03				



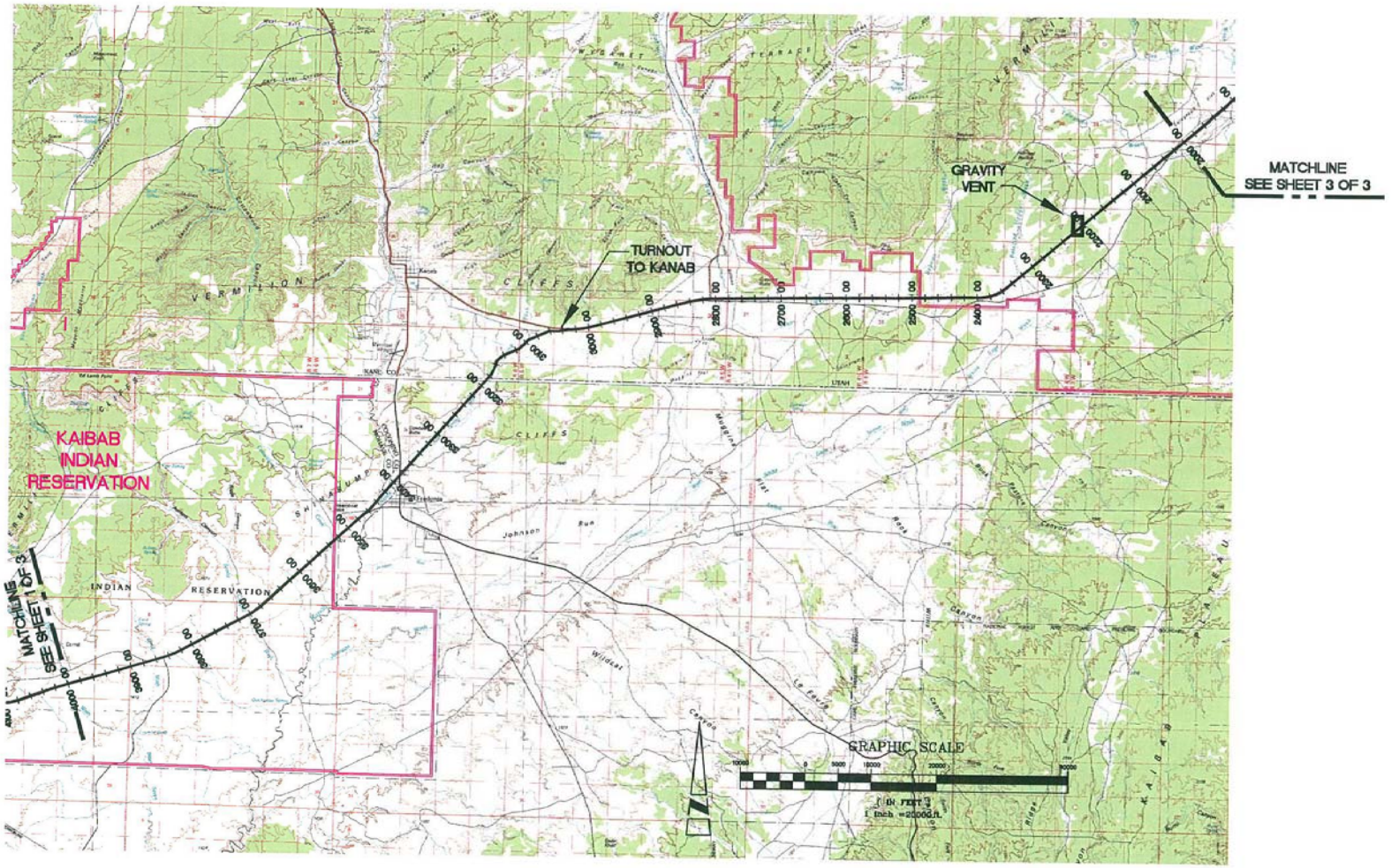


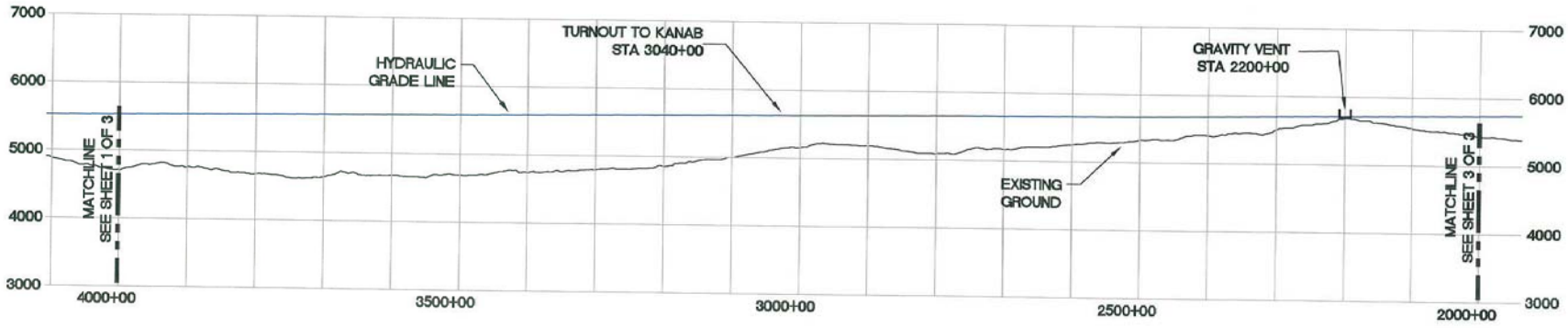
DESIGN BY: AER DRAWN BY: PSF CHECKED BY: DATE: 1/27/03	PROJECT ENGINEER / PROJECT MANAGER	BOYLE ENGINEERING CORPORATION 45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY **BASELINE - COLORADO CITY - HONEYMOON TRAIL HYDRAULIC GRADE LINE**	DRAWING NO. HGL-1



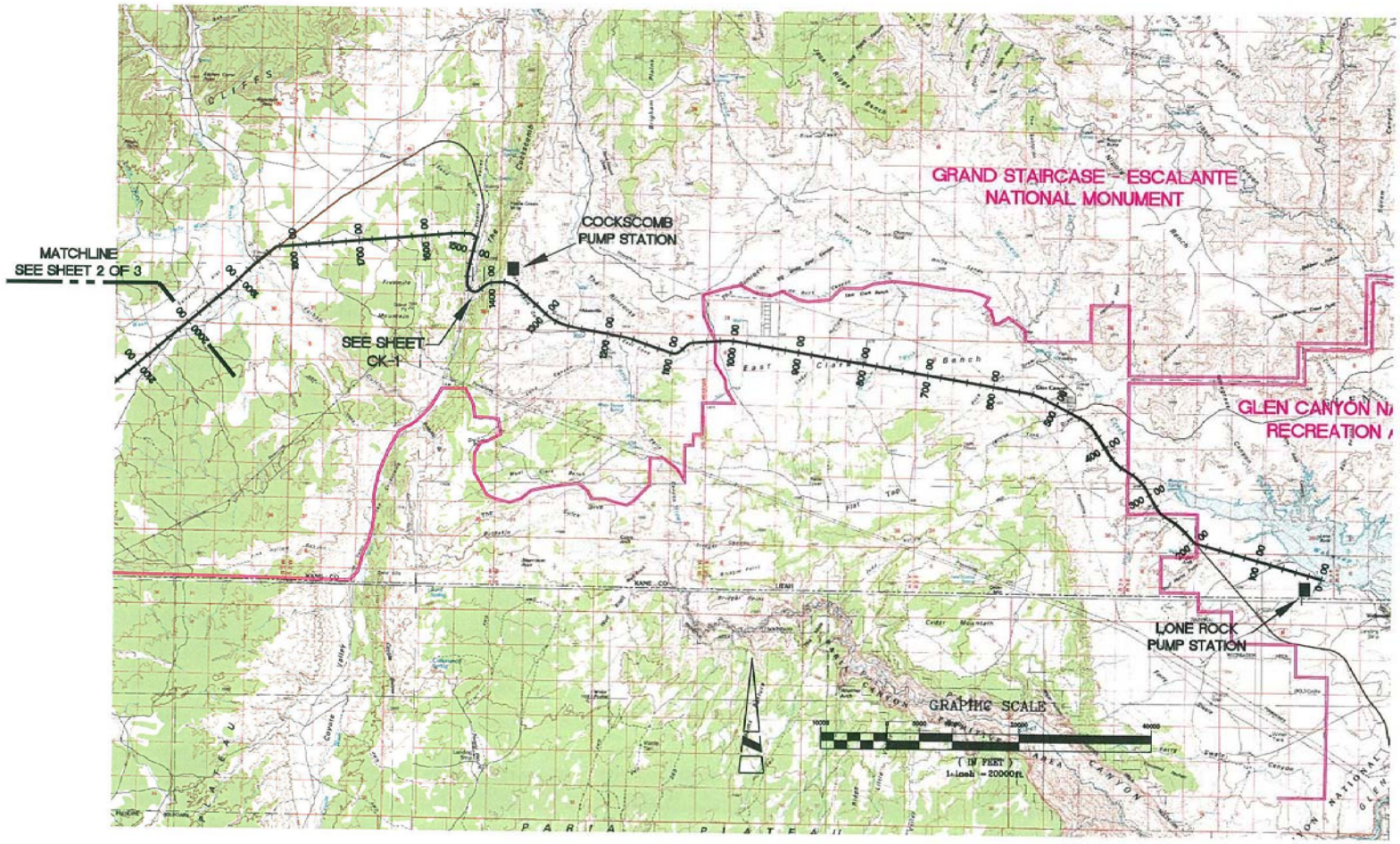


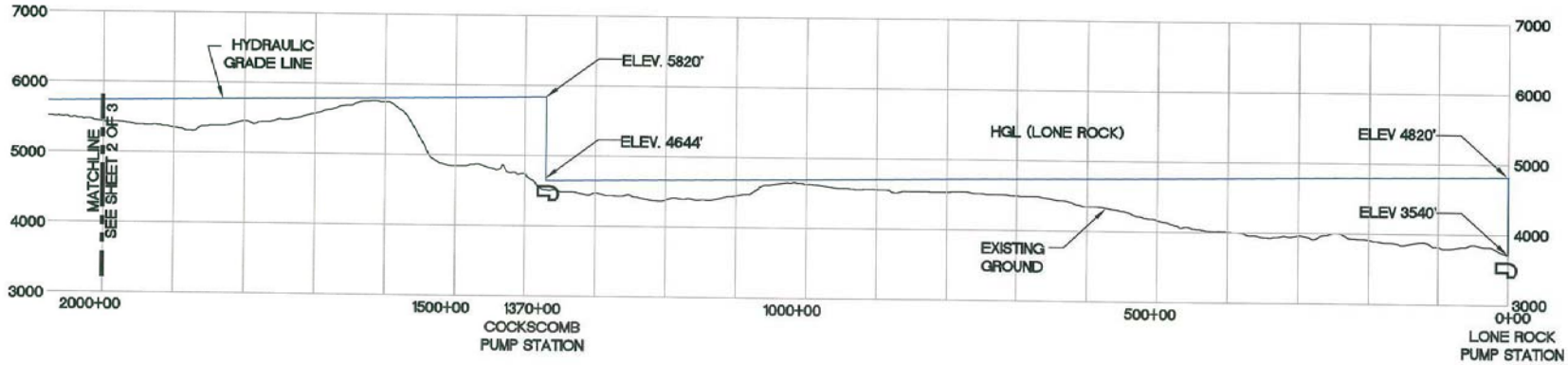
		DESIGN BY: AER	BOYLE Engineering Corporation	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	DRAWING NO. HGL-
		DRAWN BY: PSF	45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		BASELINE - PIPE SPRINGS - WEST LITTLE CREEK HYDRAULIC GRADE LINE	FILE NO.
		CHECKED BY:				
		DATE: 1/27/03				



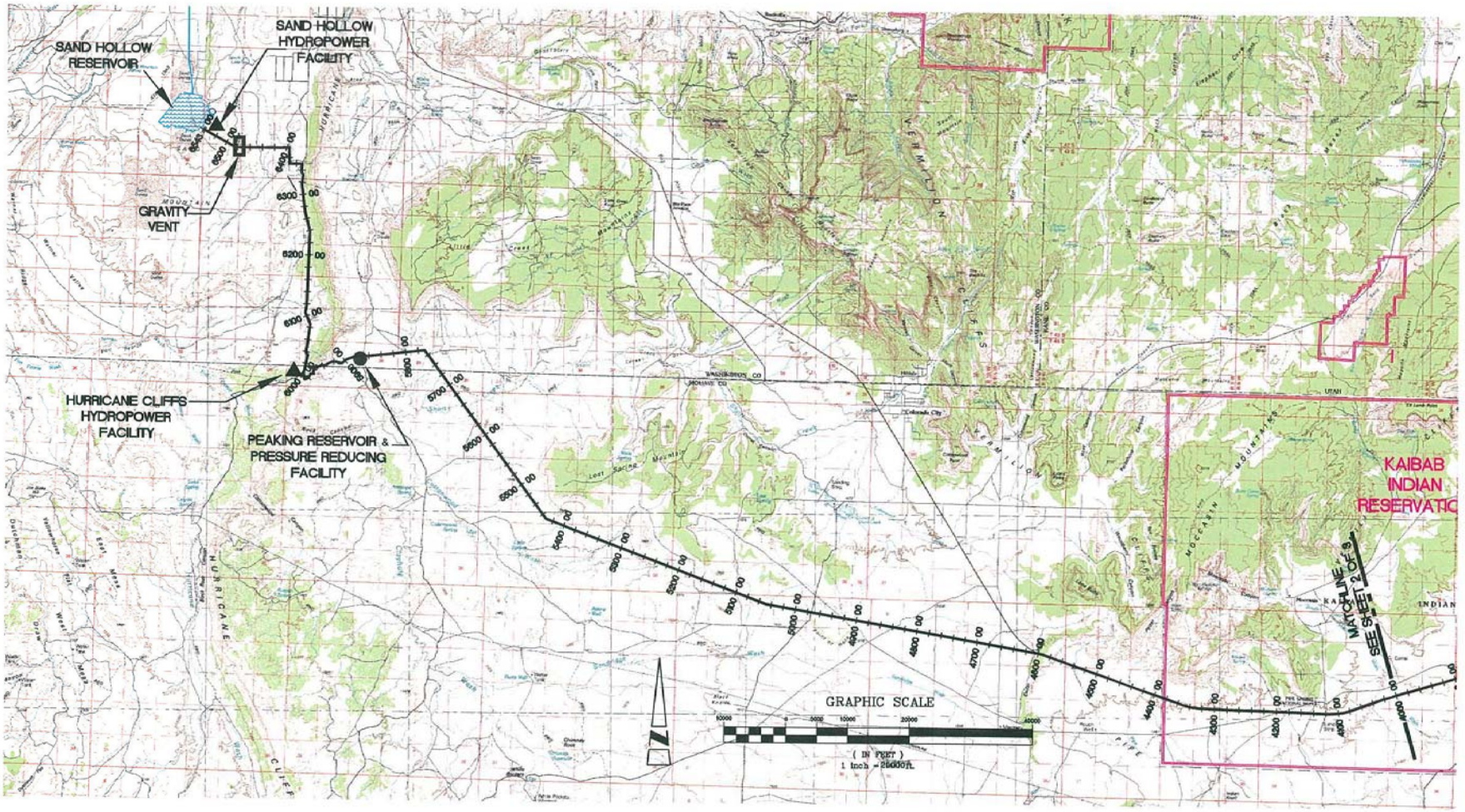


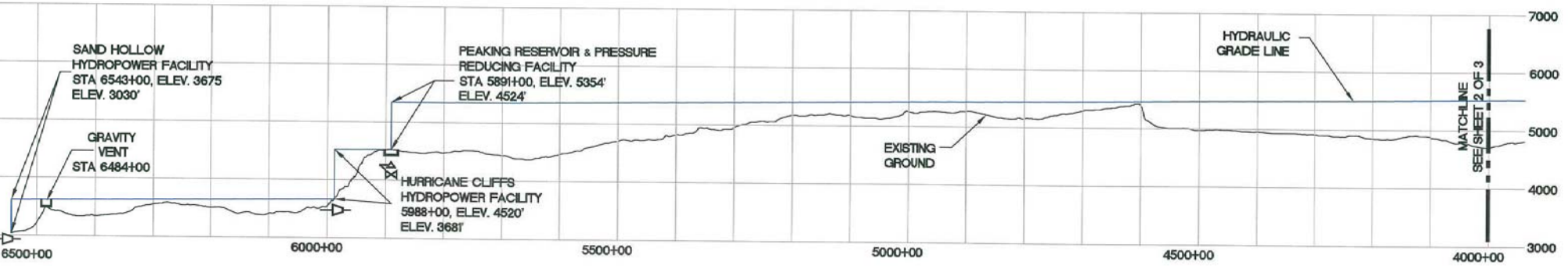
DESIGN BY: AER	BOYLE ENGINEERING CORPORATION	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	DRAWING NO. HGL-
DRAWN BY: PSF	45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		BASELINE - PIPE SPRINGS - WEST LITTLE CREEK HYDRAULIC GRADE LINE	FILE NO.
CHECKED BY:				
DATE: 1/27/03				



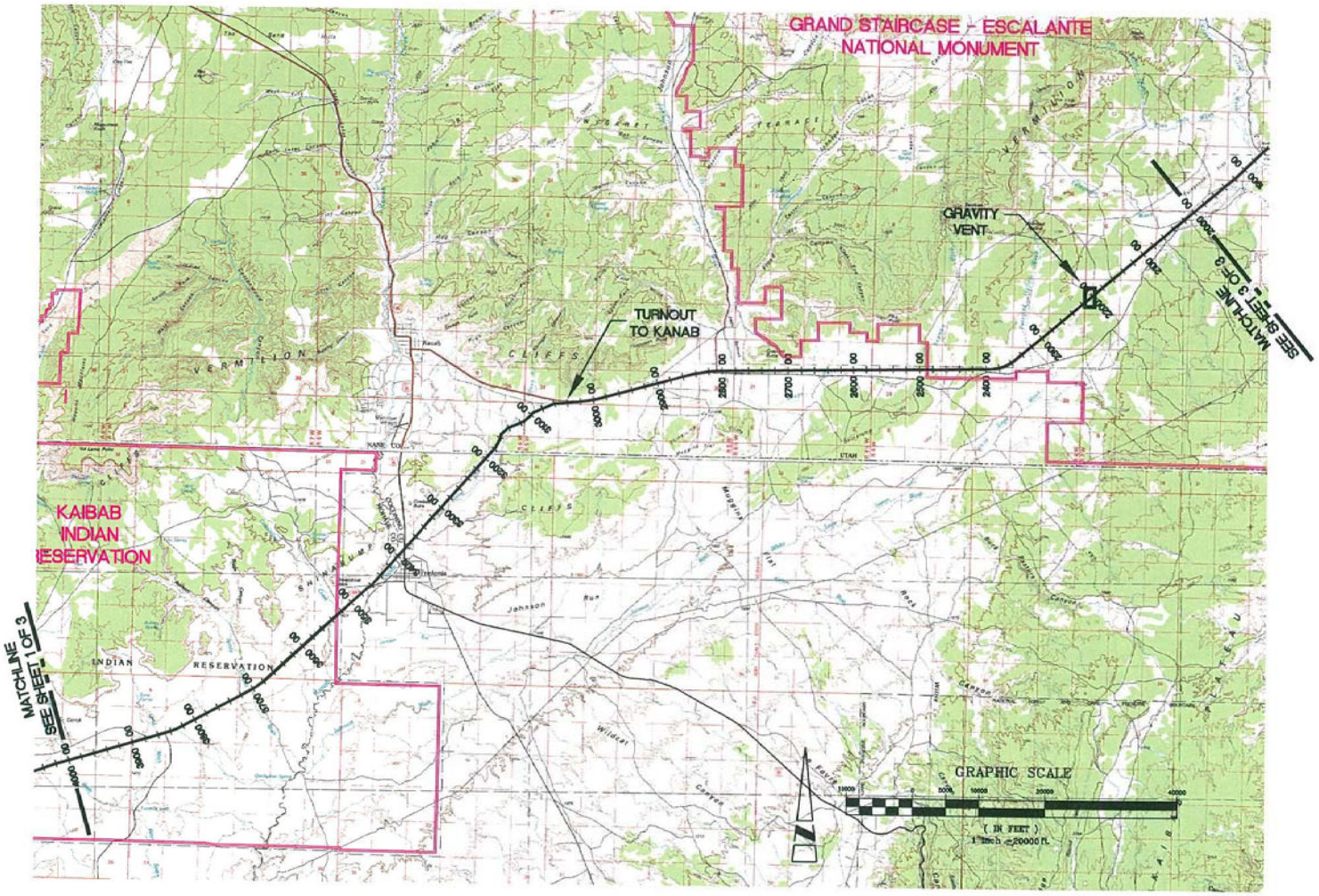


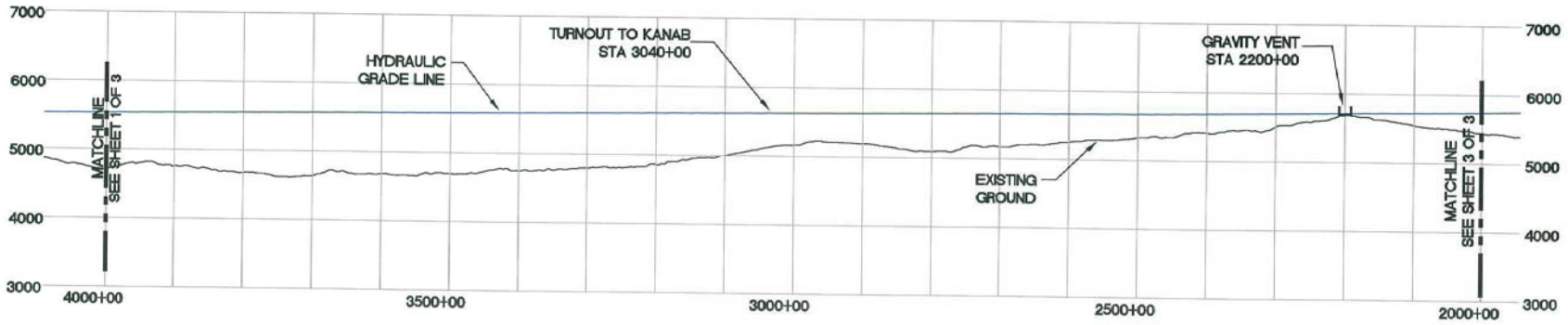
DESIGN BY: AER	BOYLE ENGINEERING CORPORATION	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	DRAWING NO. HGL-1
DRAWN BY: PSF	45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		BASELINE - PIPE SPRINGS - WEST LITTLE CREEK HYDRAULIC GRADE LINE	FILE NO.
CHECKED BY:				
DATE: 1/27/03				
PROJECT ENGINEER / RE NO. / DATE				
PROJECT MANAGER / RE NO. / DATE				



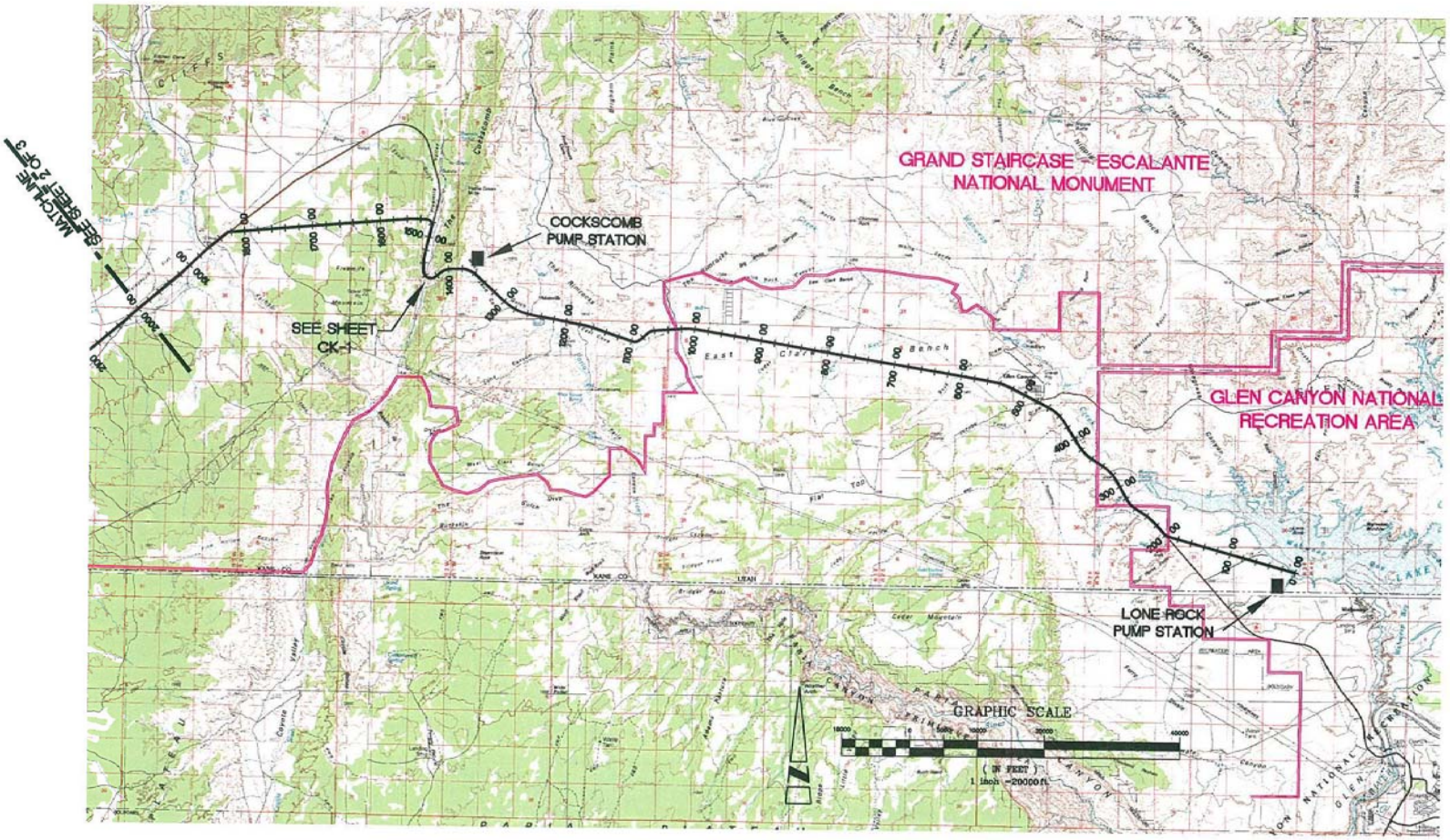


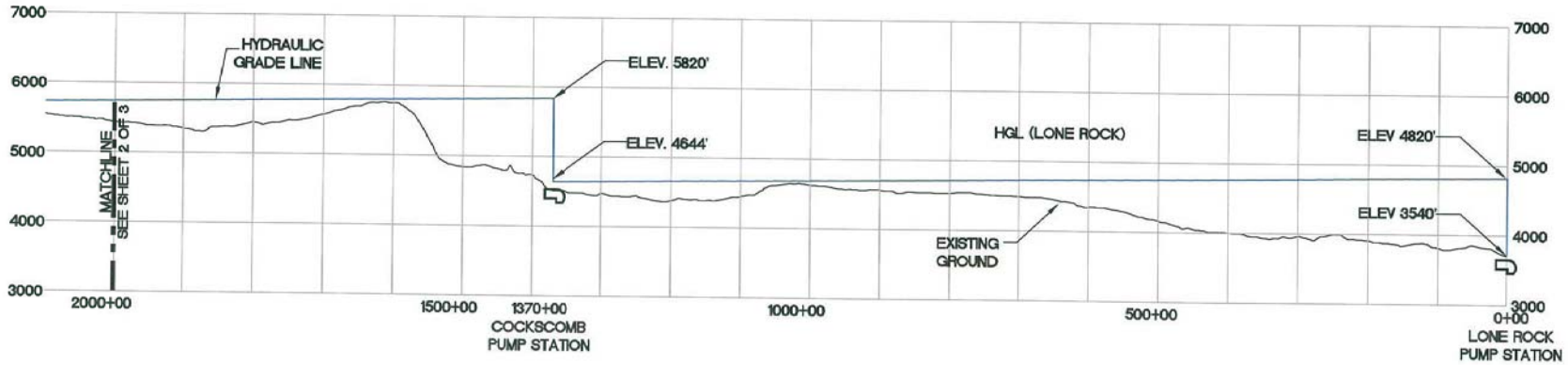
DESIGN BY: AER	BOYLE ENGINEERING CORPORATION	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	HGL-
DRAWN BY: PSF	45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		BASELINE - PIPE SPRINGS - HONEYMOON TRAIL HYDRAULIC GRADE LINE	
CHECKED BY:				
DATE: 1/27/03				



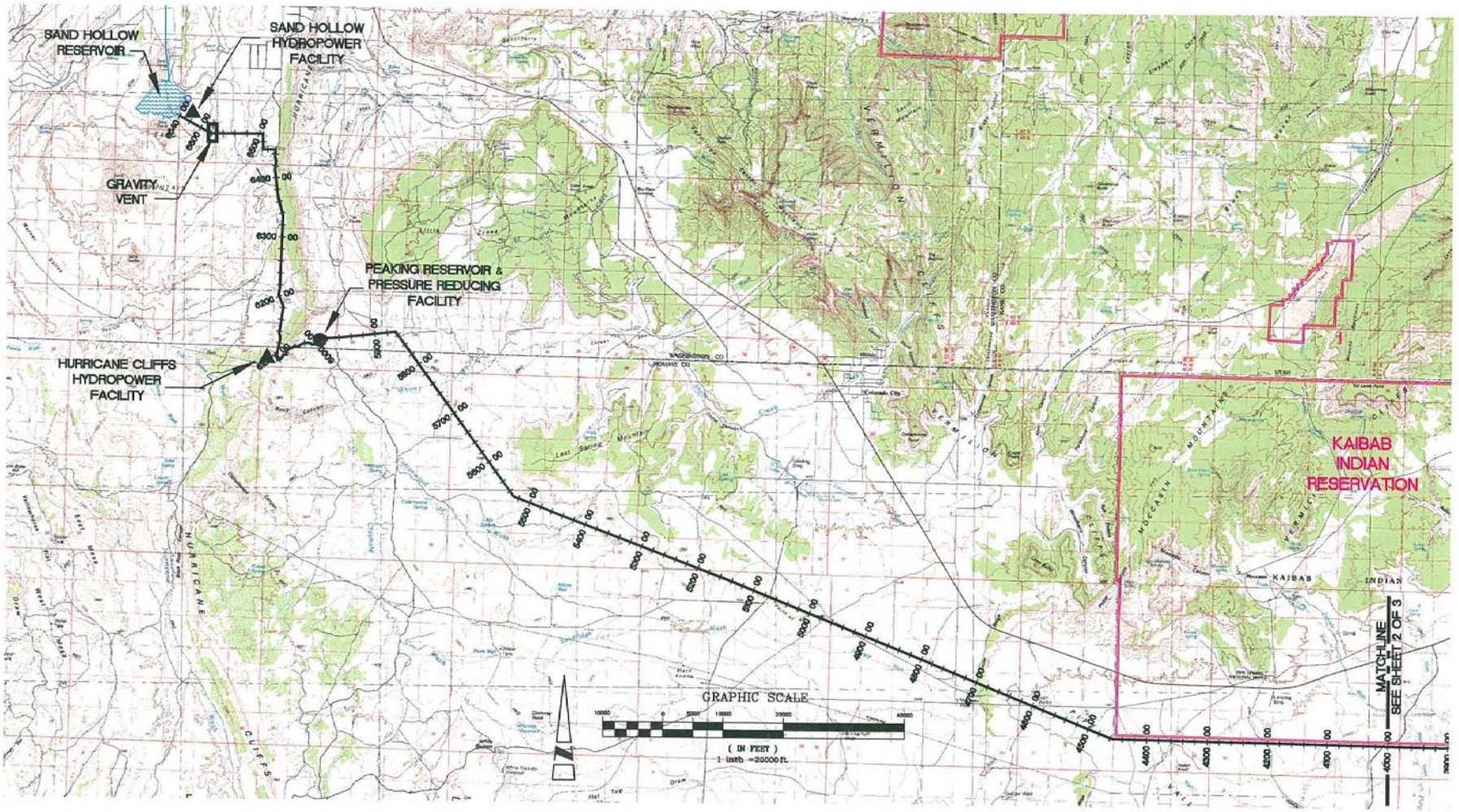


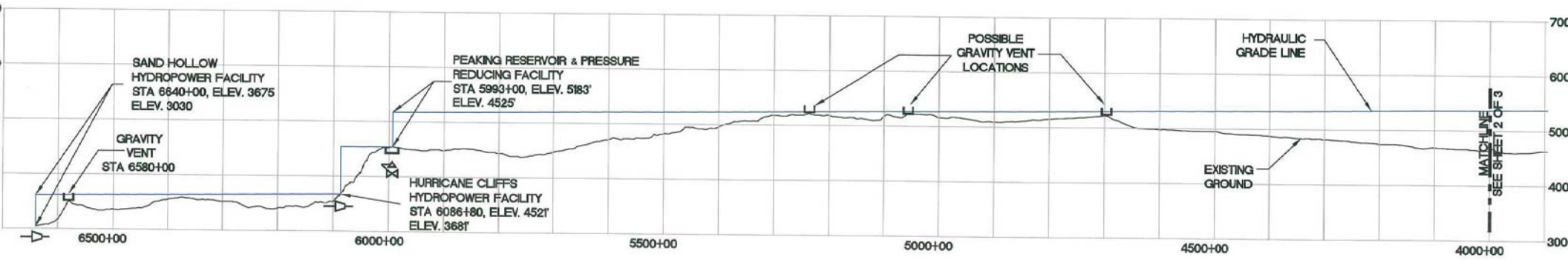
DESIGN BY: AER DRAWN BY: PSF CHECKED BY: DATE: 1/27/03	PROJECT ENGINEER / RE NO. / DATE PROJECT MANAGER / RE NO. / DATE	BOYLE ENGINEERING CORPORATION 45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY BASELINE - PIPE SPRINGS - HONEYMOON TRAIL HYDRAULIC GRADE LINE	HGL-



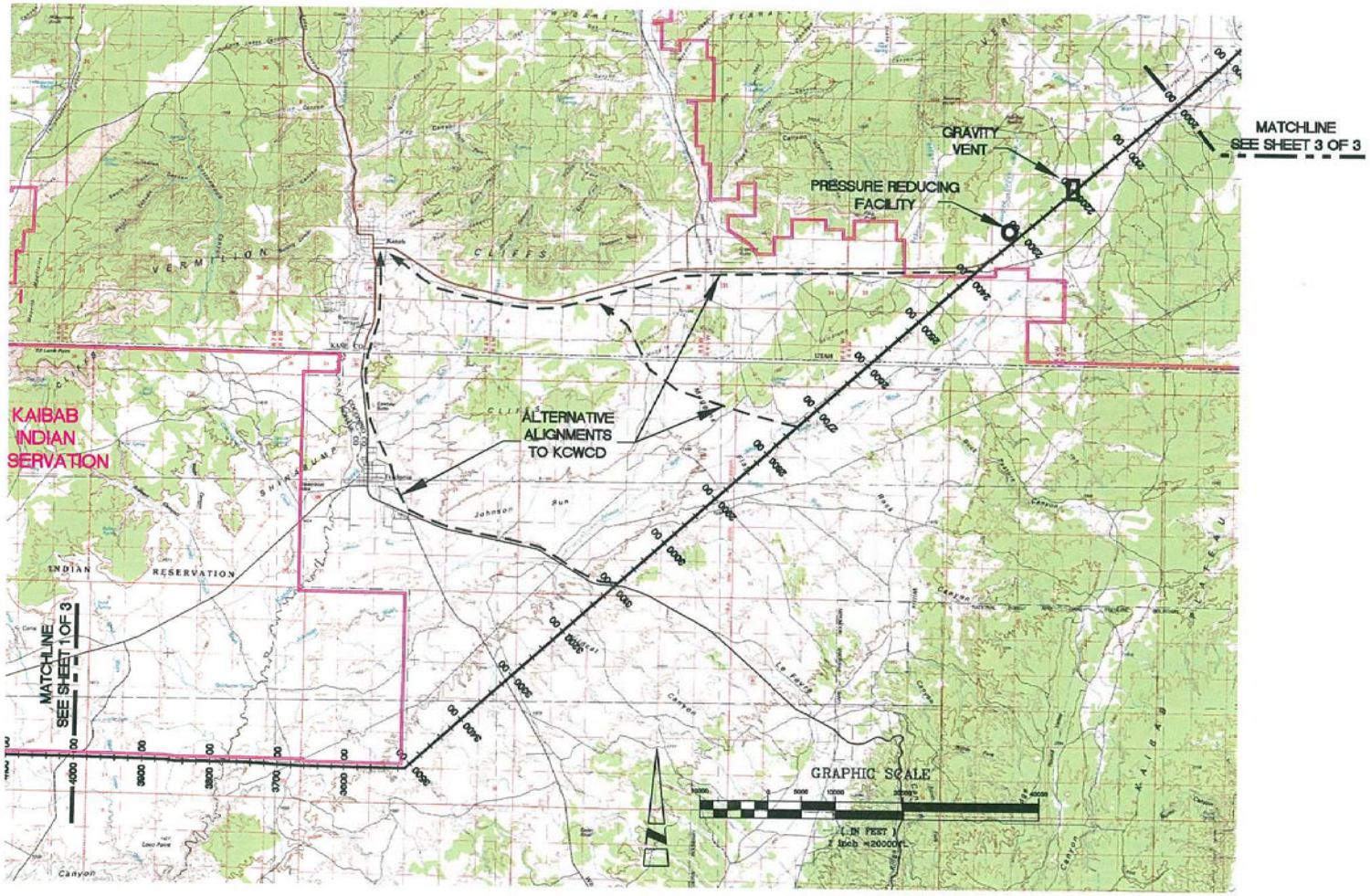


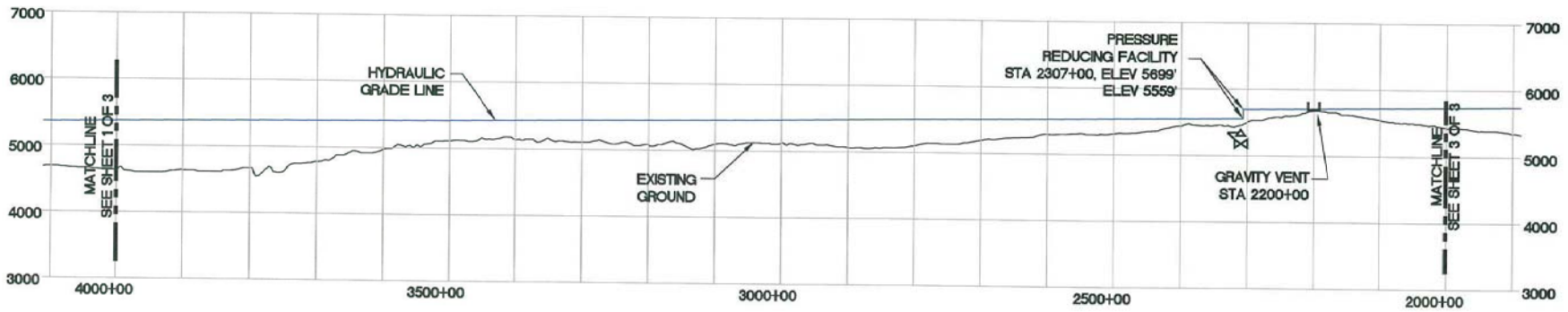
DESIGN BY: AER DRAWN BY: PSF CHECKED BY: DATE: 1/27/03	PROJECT ENGINEER / RE NO. / DATE PROJECT MANAGER / RE NO. / DATE	BOYLE ENGINEERING CORPORATION 45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100	*Washington County Water Conservancy District*	LAKE POWELL PIPELINE FEASIBILITY STUDY **BASELINE - PIPE SPRINGS - HONEYMOON TRAIL HYDRAULIC GRADE LINE**	DRAWING NO. HGL-5 FILE NO.



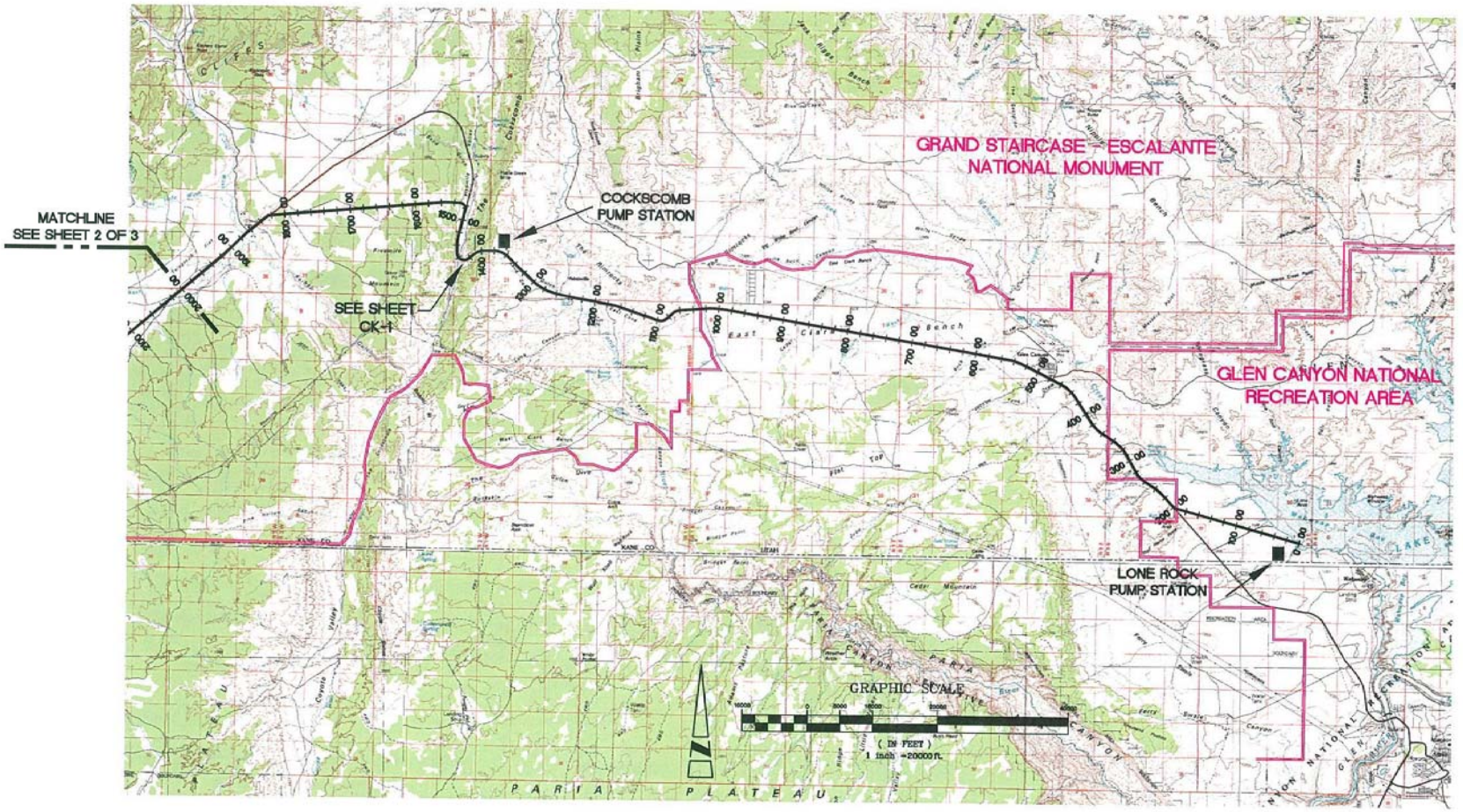


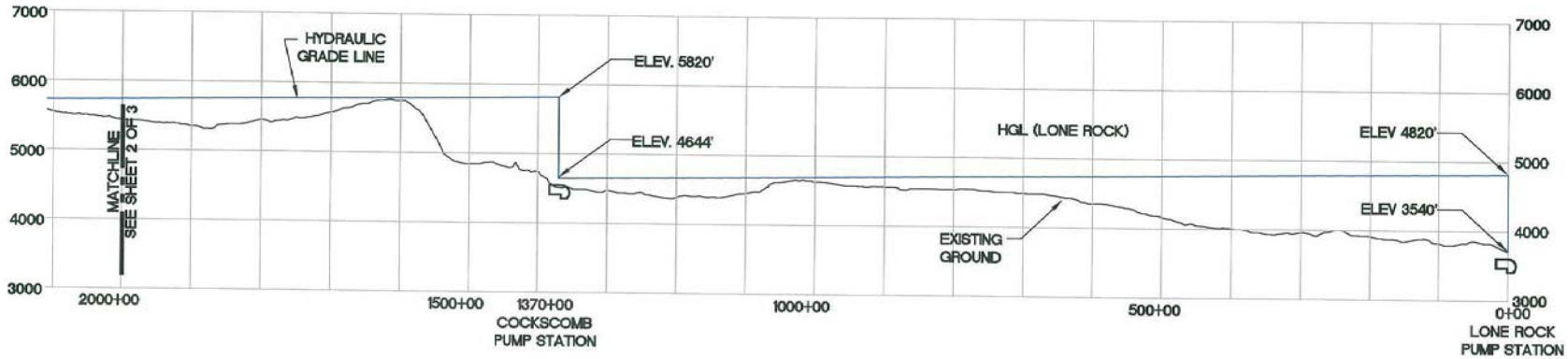
DESIGN BY: AER	BOYLE ENGINEERING CORPORATION	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	
DRAWN BY: PSF	45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		SOUTH KAIBAB - HONEYMOON TRAIL HYDRAULIC GRADE LINE	HGL-1
CHECKED BY:				
DATE: 1/27/03				





DESIGN BY: AER	BOYLE ENGINEERING CORPORATION	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	HGL-1
DRAWN BY: PSF	45 West 10000 South, Suite 101, Sandy, Utah 84070, 801-233-1100		SOUTH KAIBAB - HONEYMOON TRAIL HYDRAULIC GRADE LINE	
CHECKED BY:				
DATE: 1/27/03				





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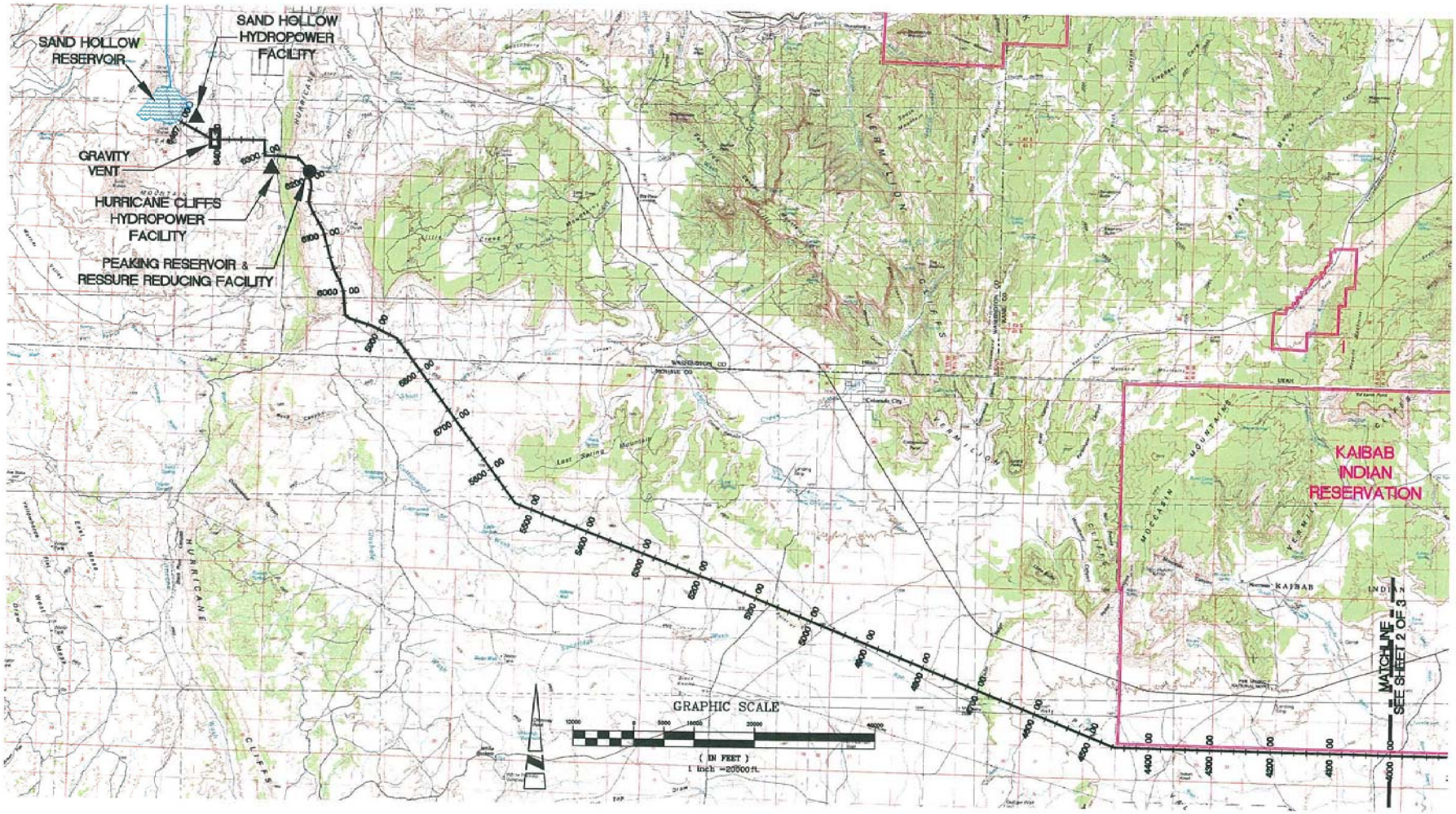
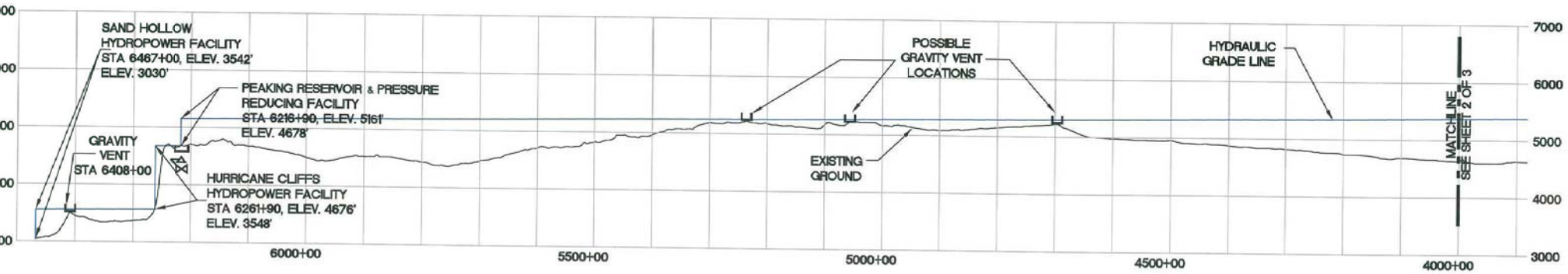
		DRAWN BY: PSF	45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		SOUTH KAIBAB - HONEYMOON TRAIL HYDRAULIC GRADE LINE	FILE NO.
REV	DATE	DESCRIPTION	CHECKED BY:	PROJECT ENGINEER	RE NO.	DATE
			DATE: 1/27/03	PROJECT MANAGER	RE NO.	DATE





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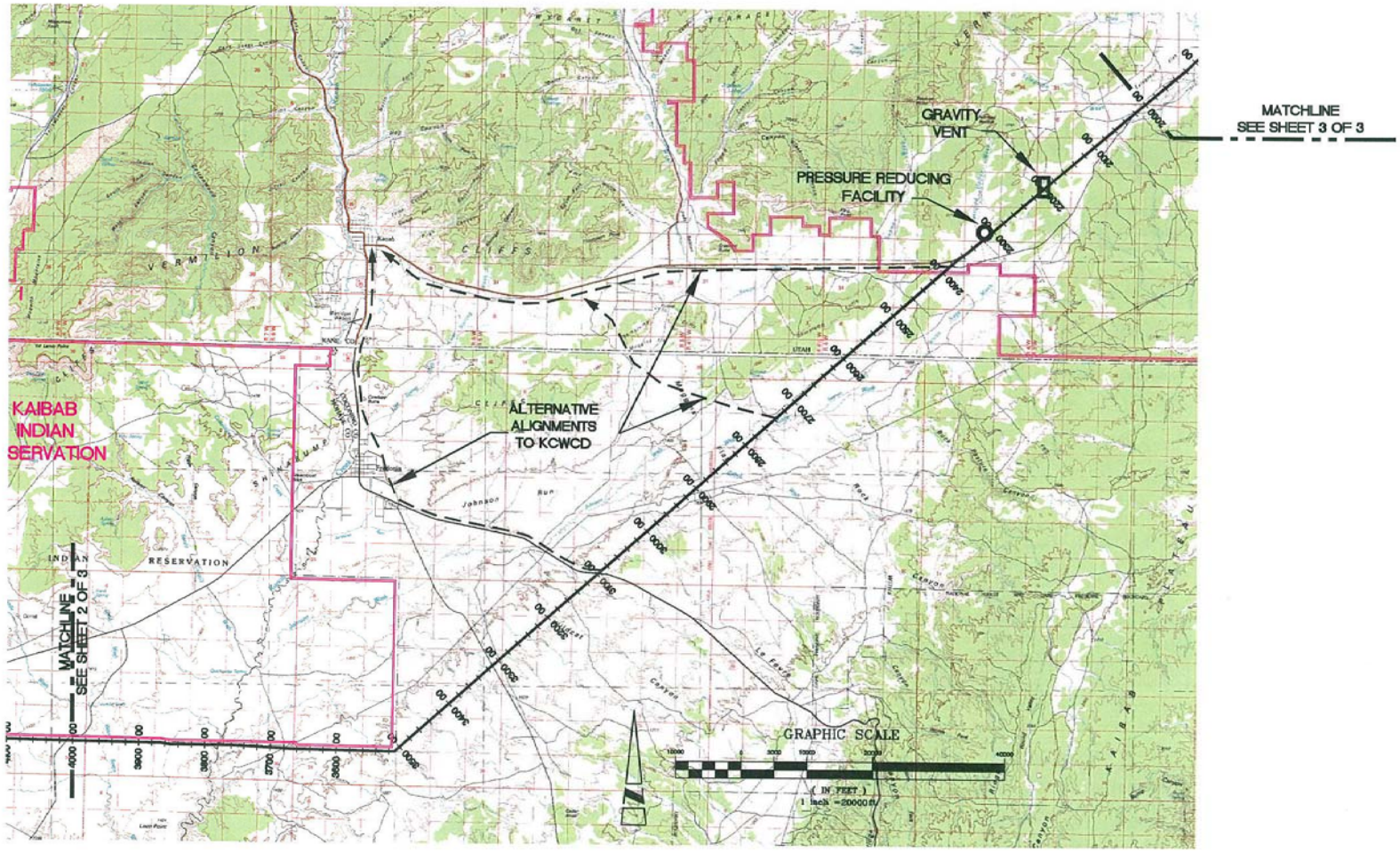
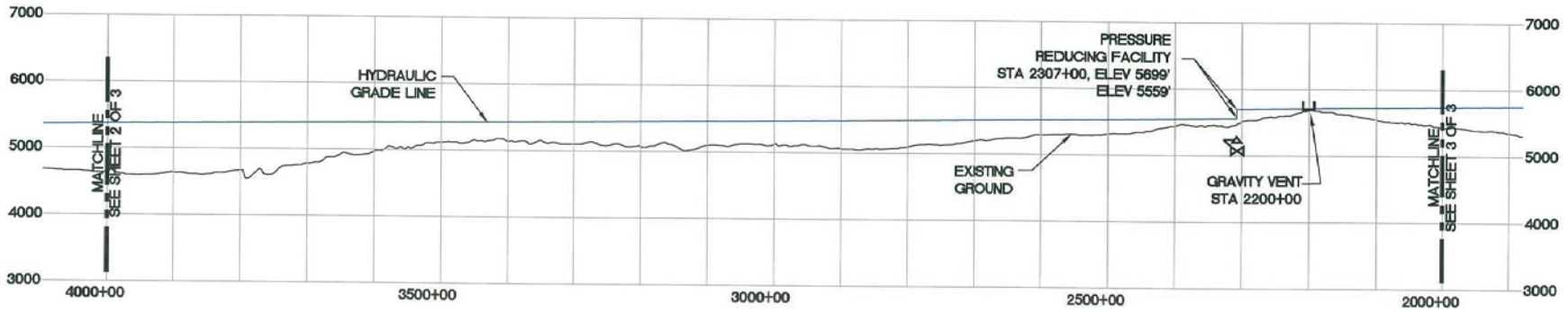
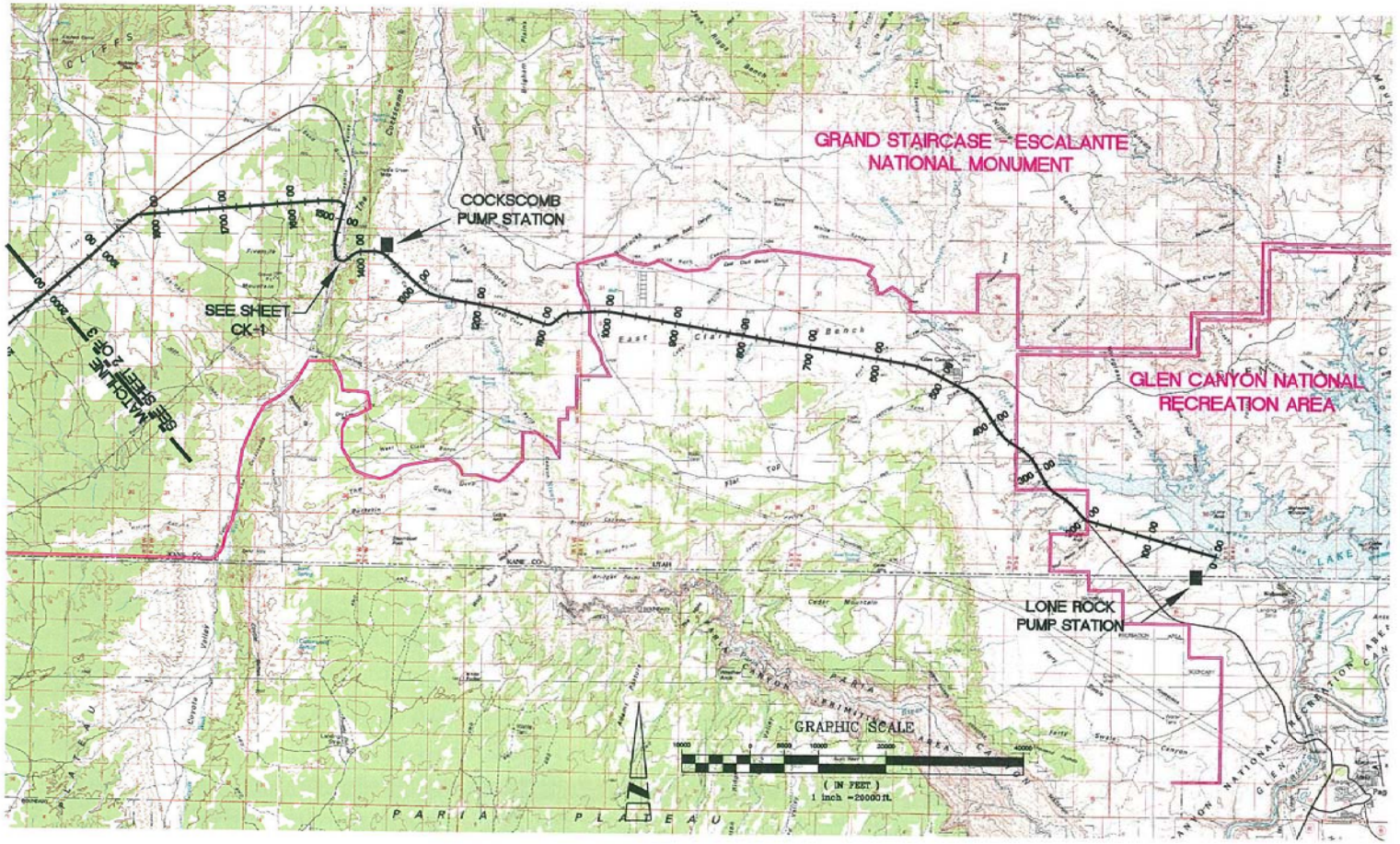
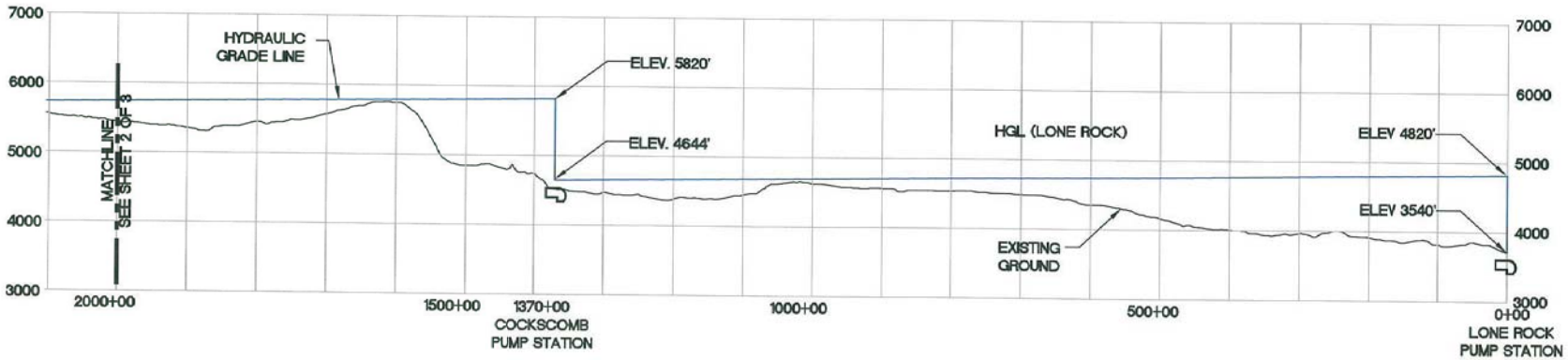
REV	DATE	DESCRIPTION	APP	DRAWN BY: PSF	45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100	SOUTH KAIBAB - WEST LITTLE CREEK ALIGNMENT HYDRAULIC GRADE LINE	FILE NO.
				CHECKED BY:			
				DATE: 1/27/03			
				PROJECT ENGINEER RE NO. DATE			
				PROJECT MANAGER RE NO. DATE			





DESIGN BY AER DRAWN BY PSF CHECKED BY DATE 1/27/03	BOYLE engineering corporation 45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100	*Washington County Water Conservancy District*	LAKE POWELL PIPELINE FEASIBILITY STUDY **SOUTH KAIBAB - WEST LITTLE CREEK ALIGNMENT HYDRAULIC GRADE LINE**	DRAWING NO. HGL-1





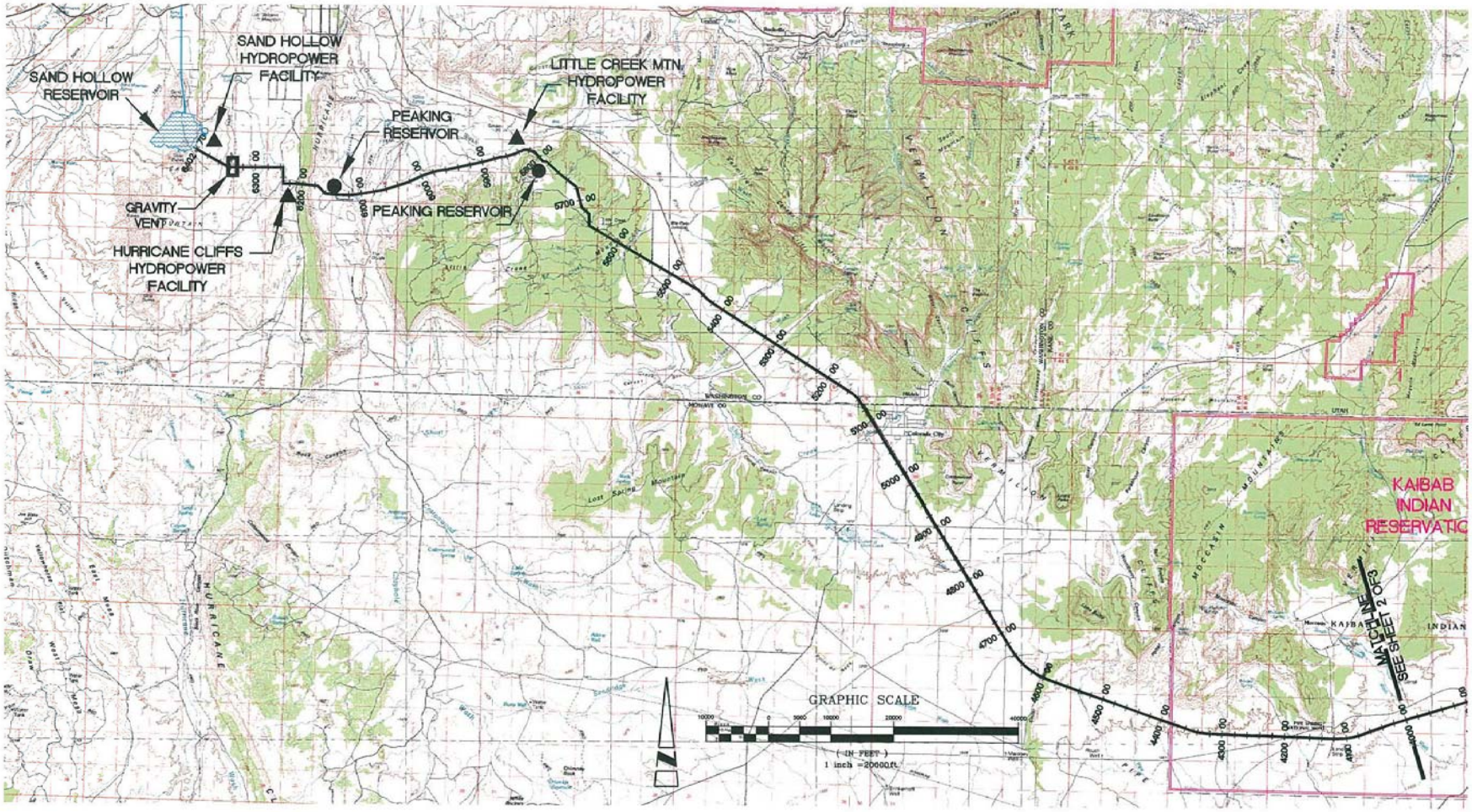
REV	DATE	DESCRIPTION	APP	DESIGN BY: AER DRAWN BY: PSF CHECKED BY: DATE: 1/27/03	PROJECT ENGINEER / PROJECT MANAGER	BOYLE ENGINEERING CORPORATION 45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100

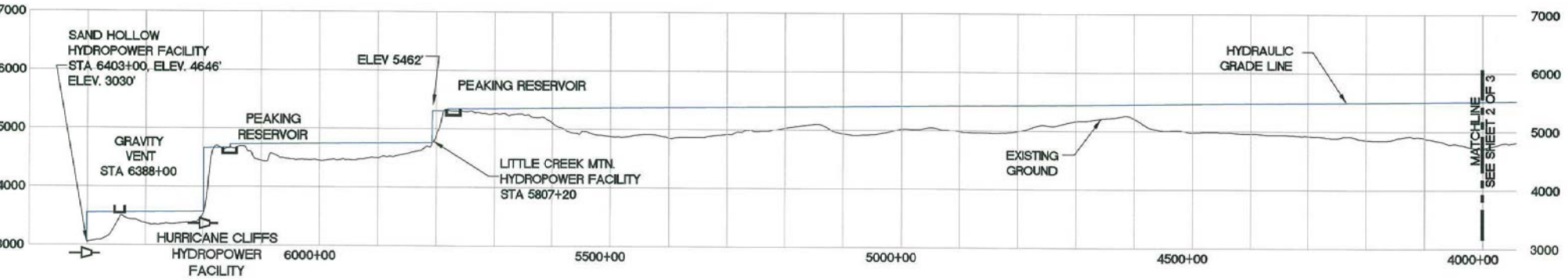
Washington County Water Conservancy District

LAKE POWELL PIPELINE FEASIBILITY STUDY

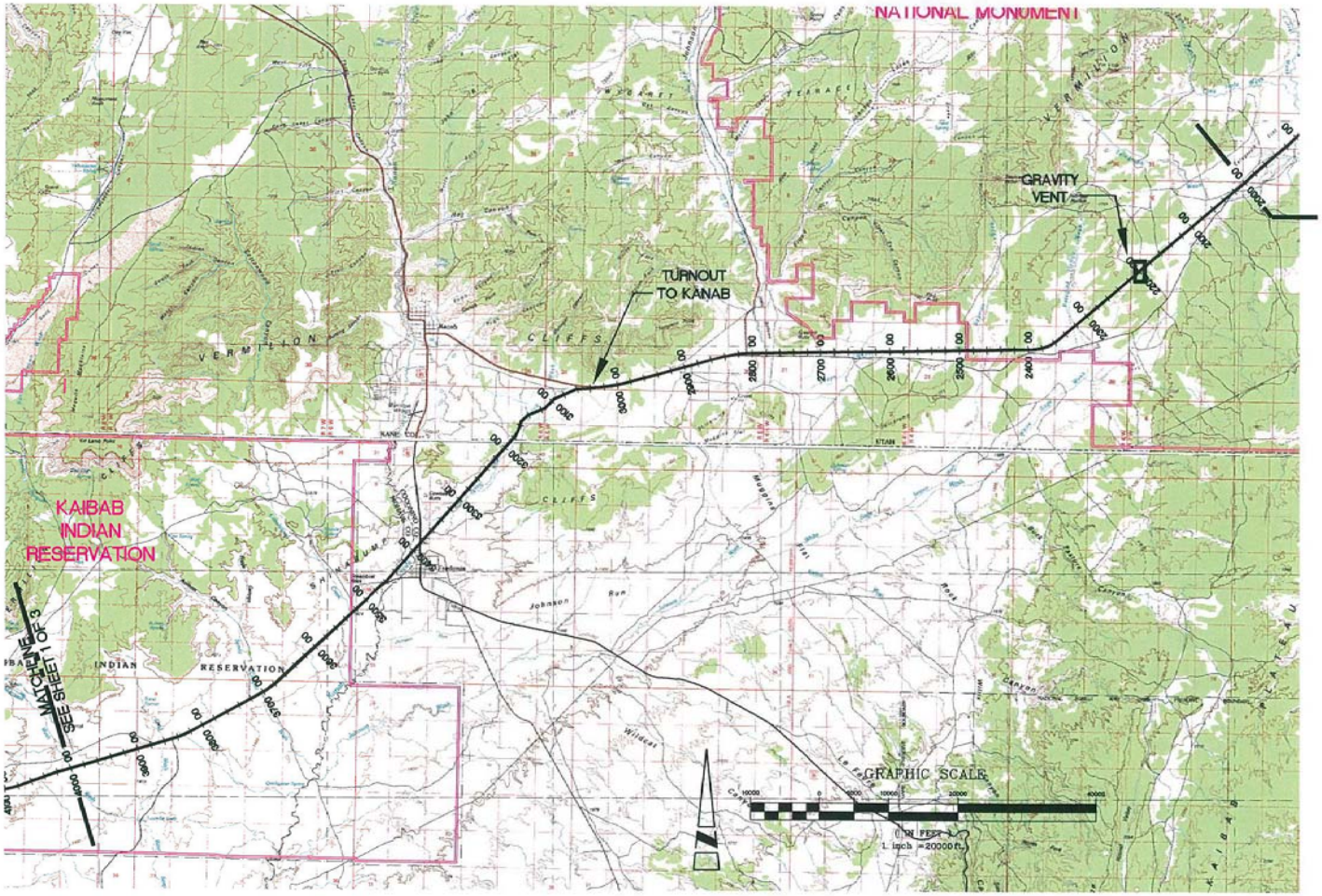
SOUTH KAIBAB - WEST LITTLE CREEK ALIGNMENT HYDRAULIC GRADE LINE

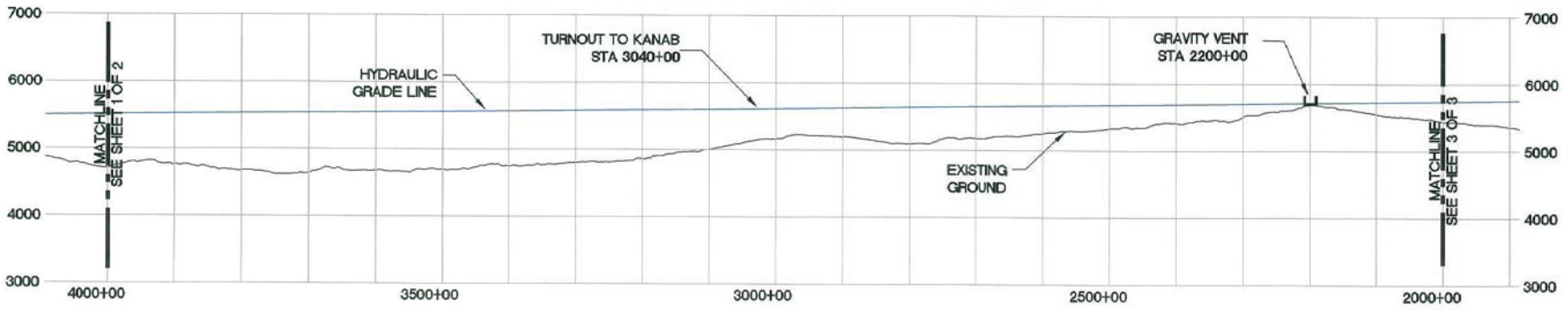
DRAWING NO. HGL-



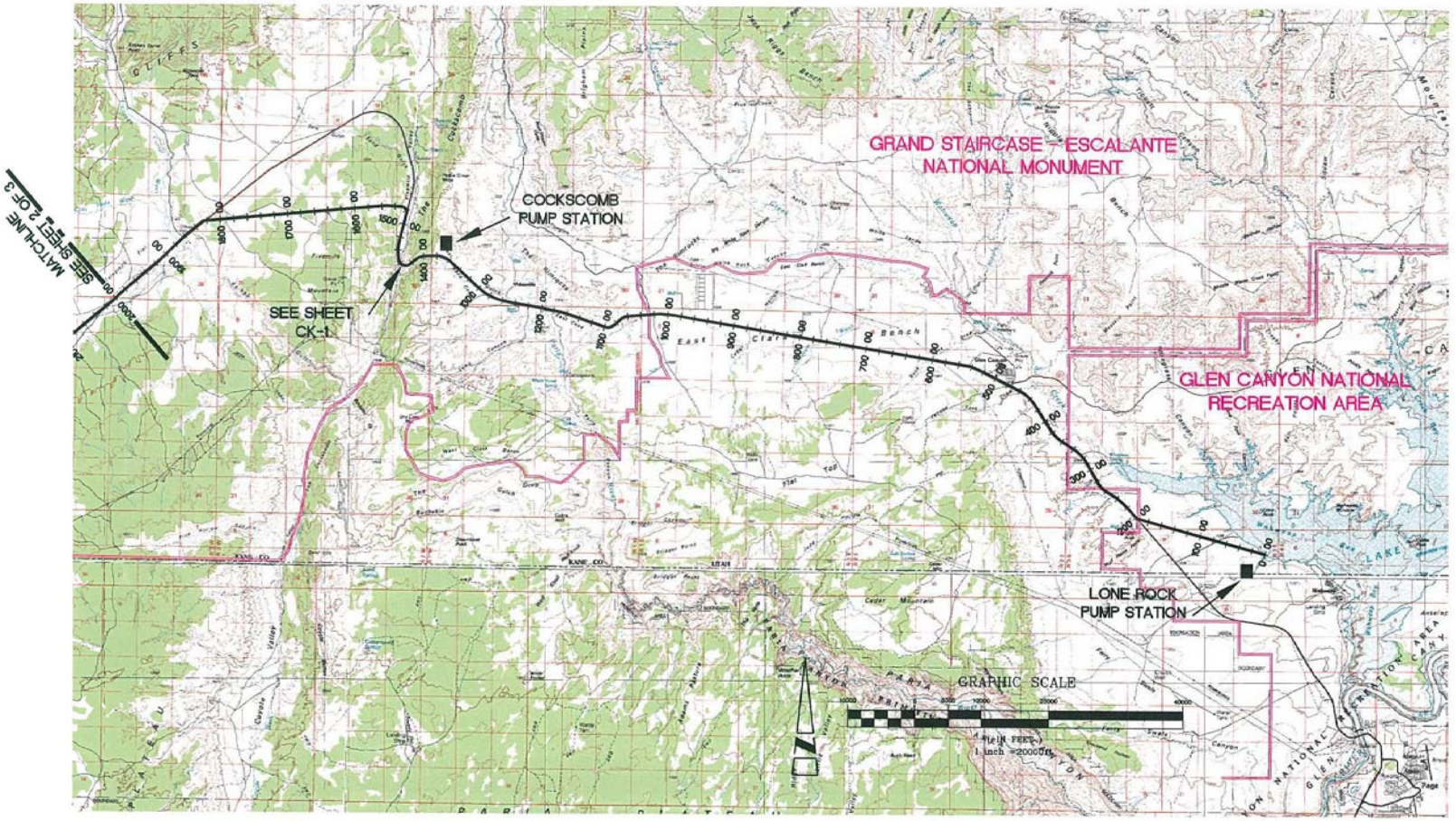


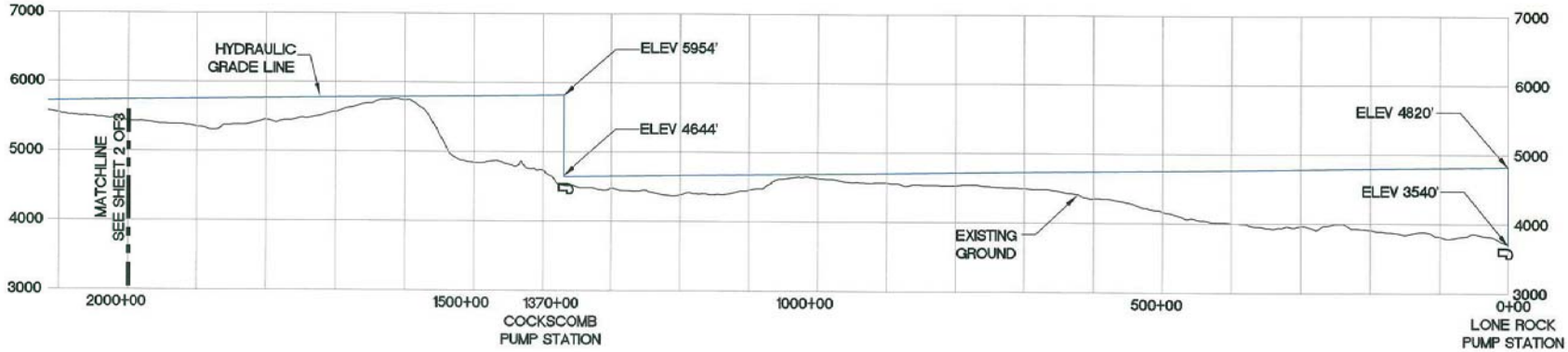
DESIGN BY: AER DRAWN BY: PSF CHECKED BY: DATE: 1/27/03	PROJECT ENGINEER RE NO. DATE PROJECT MANAGER RE NO. DATE	BOYLE ENGINEERING CORPORATION 45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100	*Washington County Water Conservancy District*	LAKE POWELL PIPELINE FEASIBILITY STUDY **BASELINE LITTLE CREEK MTN. GOULD RESERVOIR HYDRAULIC GRADE LINE**	DRAWING NO. HGL-1 FILE NO.



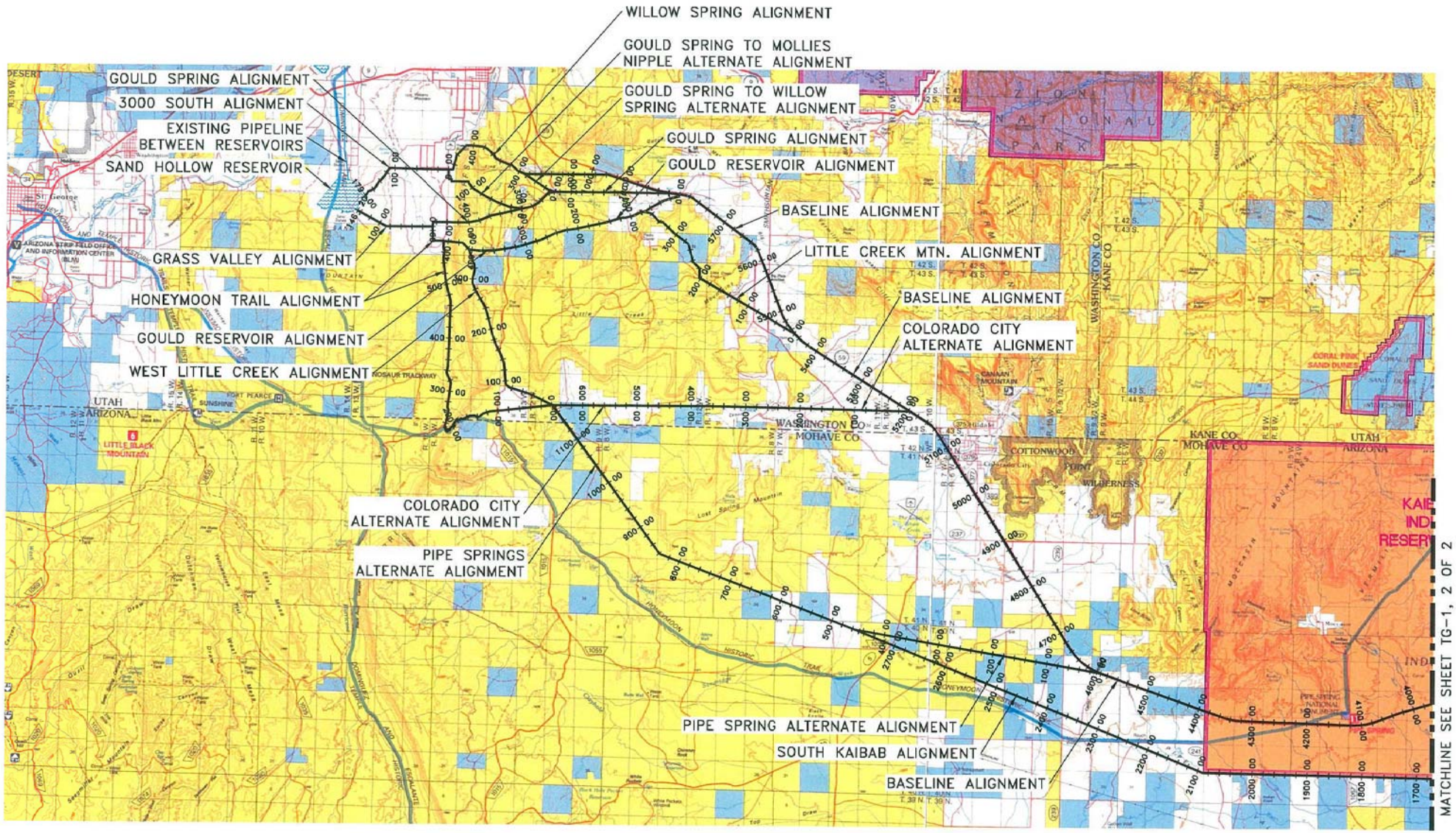


DESIGN BY: AER DRAWN BY: PSF CHECKED BY: DATE: 1/27/03	BOYLE ENGINEERING CORPORATION 45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY **BASELINE LITTLE CREEK MTN. GOULD RESERVOIR HYDRAULIC GRADE LINE**	DRAWING NO. HGL-1





DESIGN BY: AER DRAWN BY: PSF CHECKED BY: DATE: 1/27/03	PROJECT ENGINEER / RE NO. / DATE PROJECT MANAGER / RE NO. / DATE	BOYLE ENGINEERING CORPORATION 45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100	*Washington County Water Conservancy District*	LAKE POWELL PIPELINE FEASIBILITY STUDY **BASELINE LITTLE CREEK MTN. GOULD RESERVOIR HYDRAULIC GRADE LINE**	DRAWING NO. HGL-1 FILE NO.

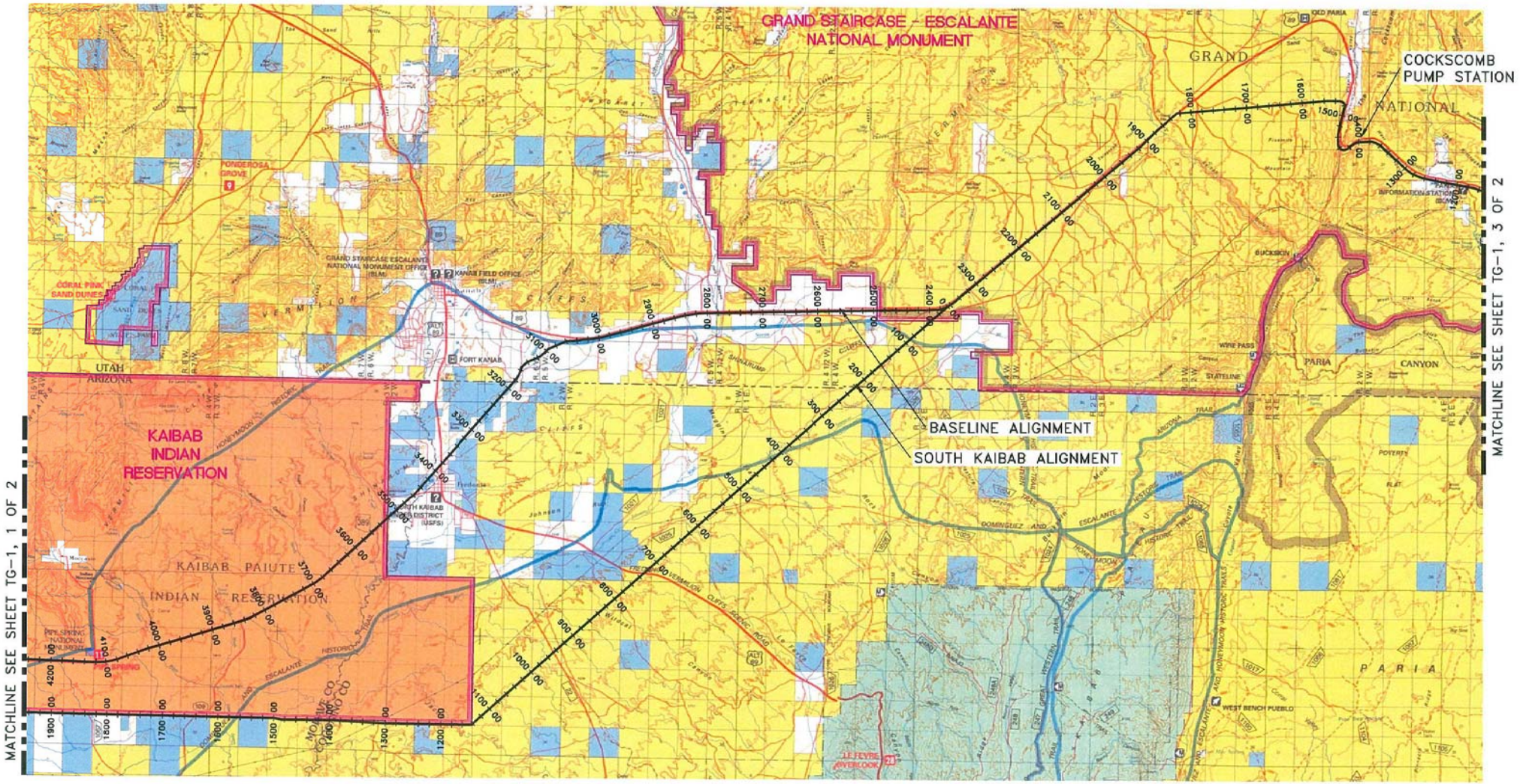


GRAPHIC SCALE

10000 0 5000 10000 20000 40000

(IN FEET)
1 inch = 10000 ft.

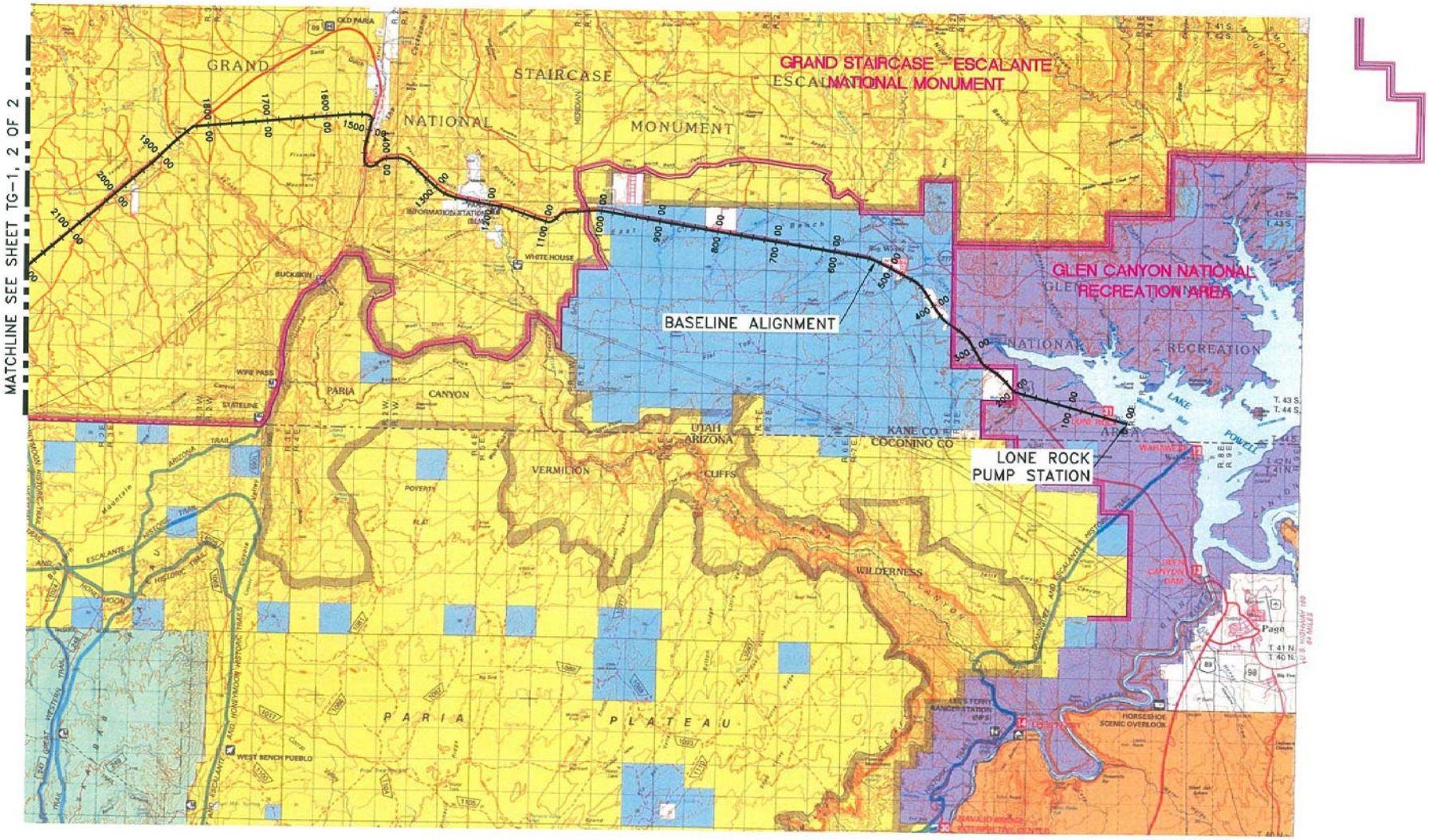
			DESIGN BY: AER			LAKE POWELL PIPELINE FEASIBILITY STUDY	
			DRAWN BY: PSF	PROJECT ENGINEER / RE NO. / DATE	BOYLE ENGINEERING CORPORATION	Washington County Water Conservancy District	OVERALL ALIGNMENTS LAND USE MAP
			CHECKED BY:		45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		
REV	DATE	DESCRIPTION	APP	DATE: 6/16/03	PROJECT MANAGER / RE NO. / DATE		DRAWING NO. LU- FILE NO.



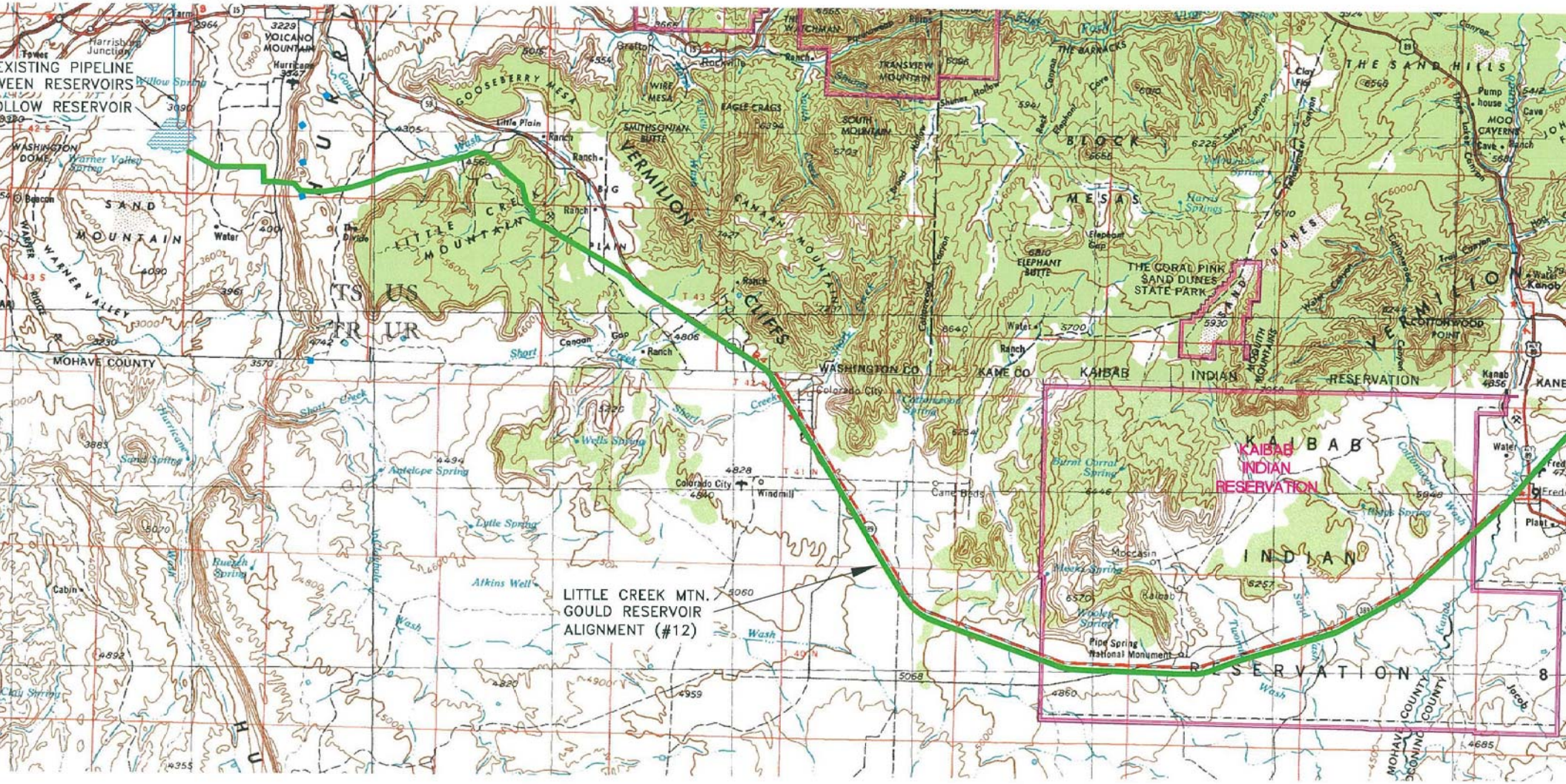
GRAPHIC SCALE

(IN FEET)
1 inch = 10000 ft.

			DESIGN BY: AER		BOYLE ENGINEERING CORPORATION	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY
			DRAWN BY: PSF		45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		OVERALL ALIGNMENTS LAND USE MAP
			CHECKED BY:				DRAWING NO. LU-
REV	DATE	DESCRIPTION	APP	DATE: 6/16/03	PROJECT ENGINEER RE NO. DATE / PROJECT MANAGER RE NO. DATE		FILE NO.



DESIGN BY: AER	BOYLE ENGINEERING CORPORATION	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	DRAWING NO. LU-
DRAWN BY: PSF	45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		OVERALL ALIGNMENTS LAND USE MAP	FILE NO.
CHECKED BY:				
DATE: 6/16/03				
PROJECT ENGINEER				
PROJECT MANAGER				



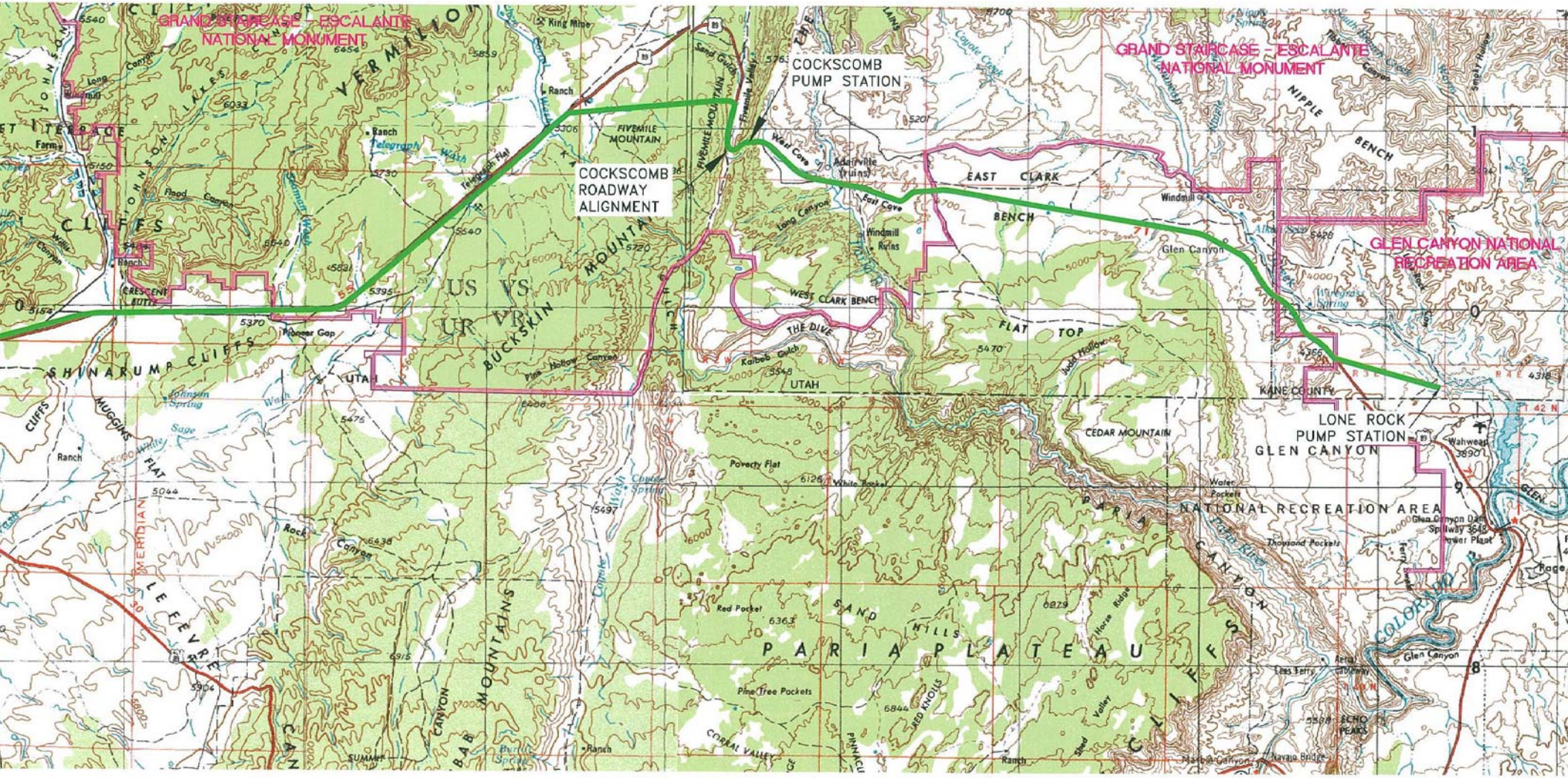
LEGEND:

RECOMMENDED ALIGNMENT

GRAPHIC SCALE

(IN FEET)
1 inch = 10000L

		DESIGN BY: AER		BOYLE ENGINEERING CORPORATION	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY
		DRAWN BY: PSF		45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		RECOMMENDED ALIGNMENT TOPOGRAPHIC MAP
DATE	DESCRIPTION	APP	DATE: 3/17/03	PROJECT ENGINEER / PROJECT MANAGER		DRAWING NO. REC-1



LEGEND:

RECOMMENDED ALIGNMENT

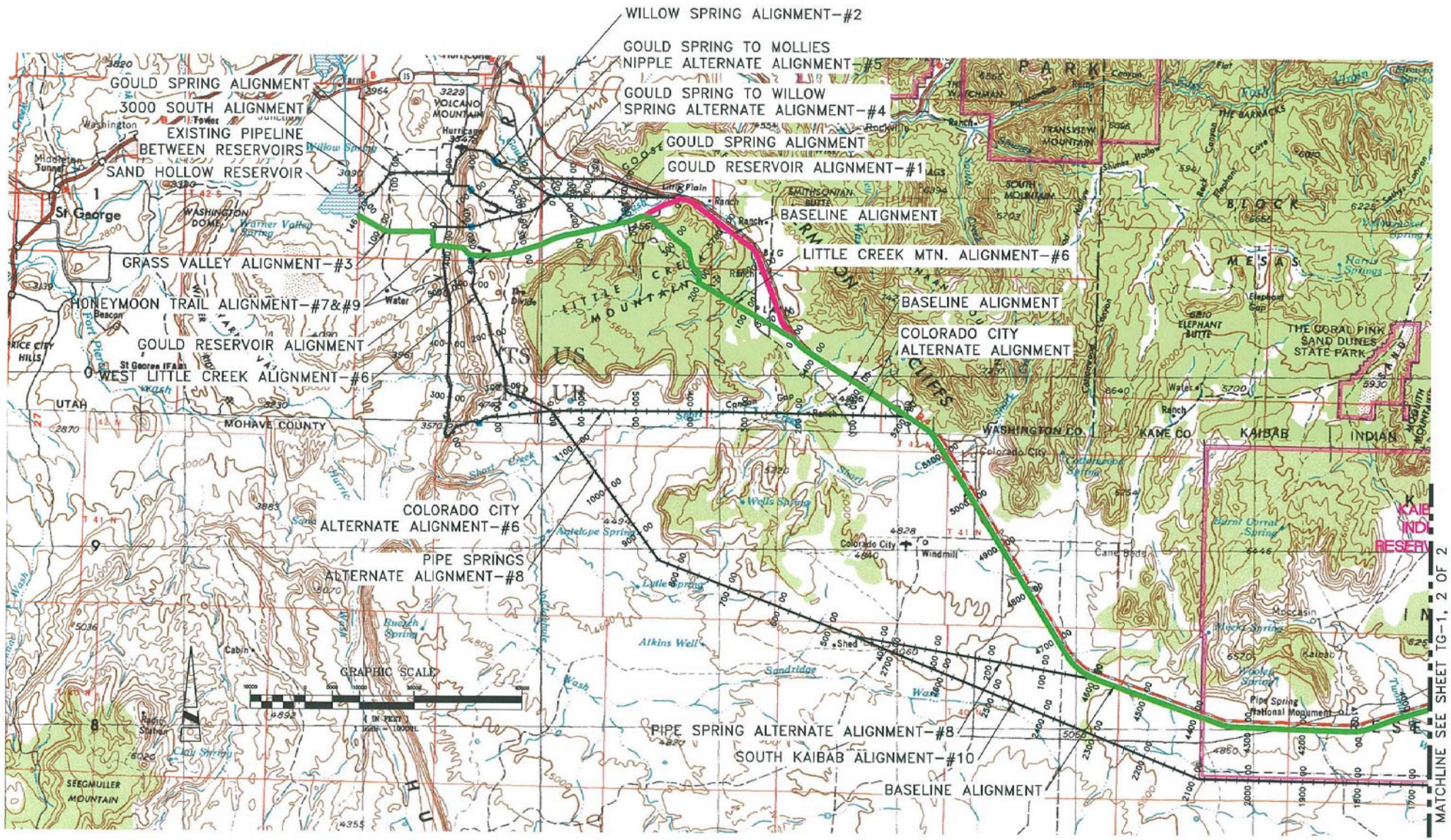
GRAPHIC SCALE

10000 5000 10000 20000 40000

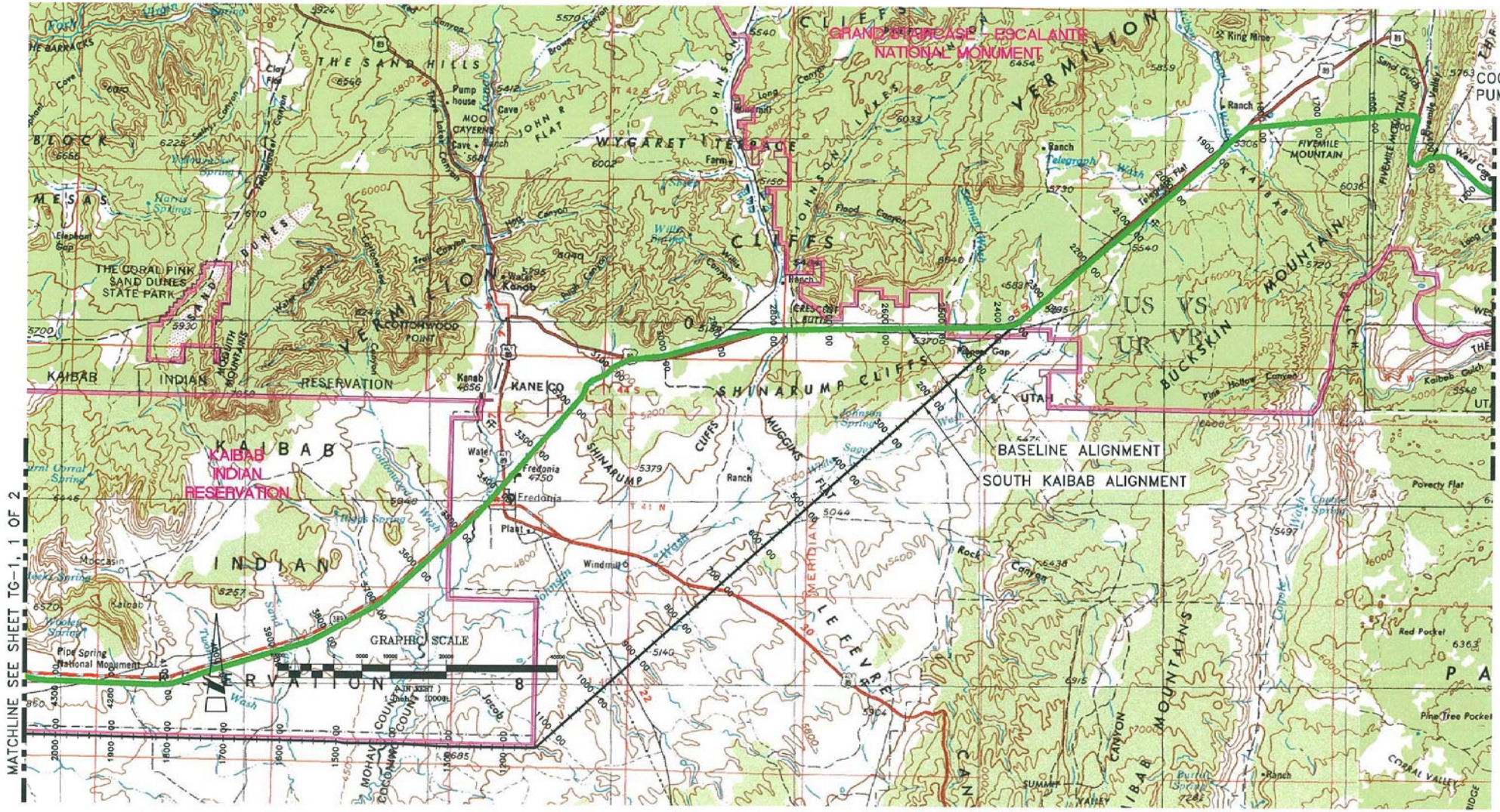
(IN FEET)

1 inch = 10000ft

DESIGN BY: AER	BOYLE ENGINEERING CORPORATION	*Washington County Water Conservancy District*	LAKE POWELL PIPELINE FEASIBILITY STUDY	DRAWING NO. REC-2
DRAWN BY: PSF	45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		**RECOMMENDED ALIGNMENT TOPOGRAPHIC MAP**	FILE NO.
CHECKED BY:				
DATE: 3/17/03				



DESIGN BY: AER	BOYLE ENGINEERING CORPORATION	Washington County Water Conservancy District	LAKE POWELL PIPELINE FEASIBILITY STUDY	DRAWING NO. TG-1
DRAWN BY: PSF	45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100		OVERALL ALIGNMENTS TOPOGRAPHIC MAP	FILE NO.
CHECKED BY:				
DATE: 6/16/03				



DESIGN BY: AER					LAKE POWELL PIPELINE FEASIBILITY STUDY	DRAWING NO. TG-1
DRAWN BY: PSF	PROJECT ENGINEER	RE NO.	DATE	BOYLE ENGINEERING CORPORATION 45 West 10000 South, Suite 101 Sandy, Utah 84070 801-233-1100	Washington County Water Conservancy District	OVERALL ALIGNMENTS TOPOGRAPHIC MAP	
CHECKED BY:							FILE NO.
DATE: 6/16/03	PROJECT MANAGER	RE NO.	DATE				
DATE DESCRIPTION APP							