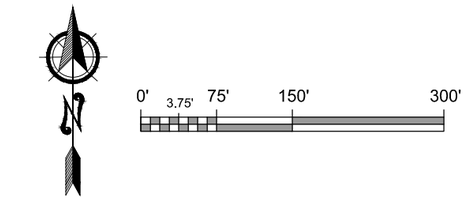
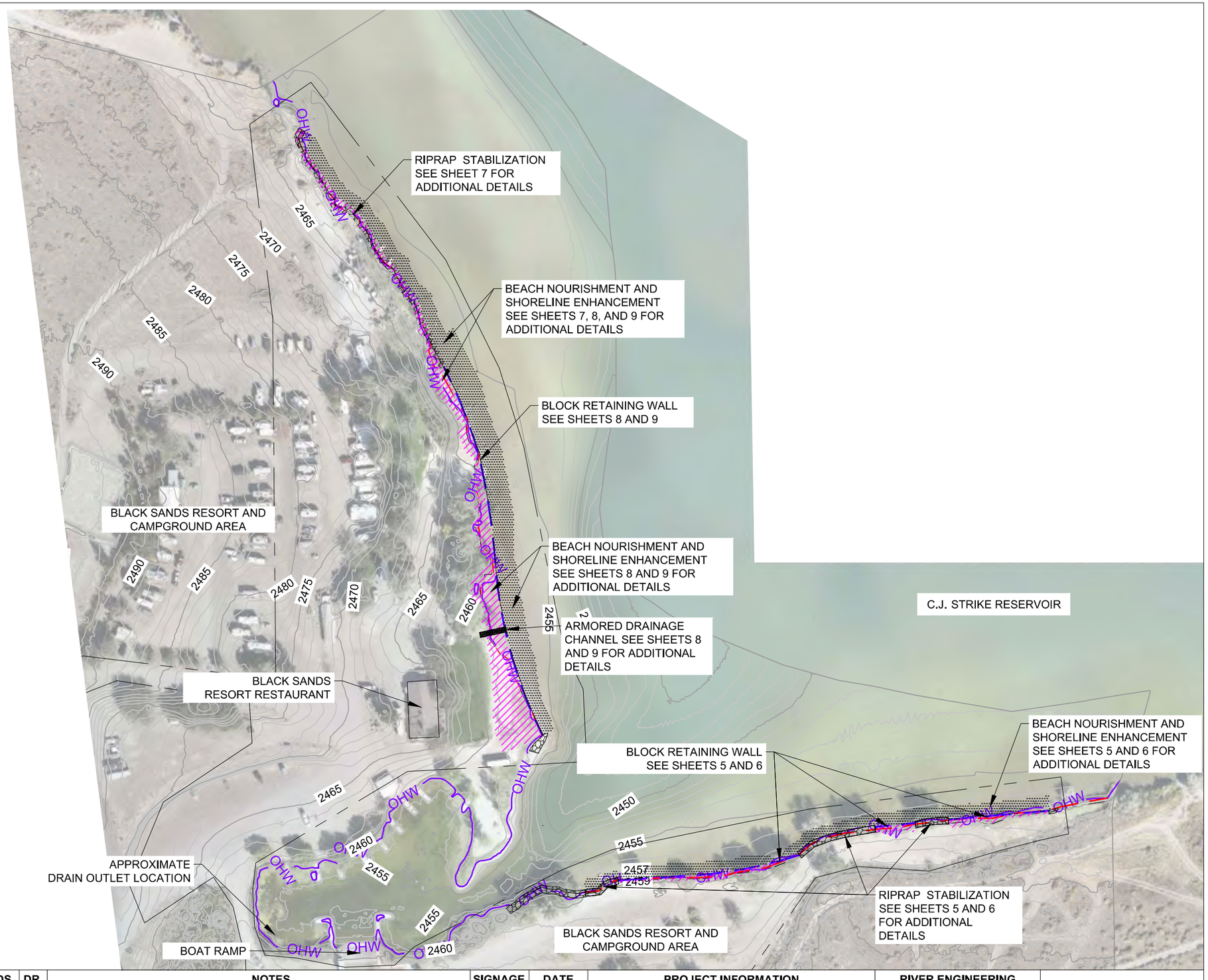


LEGEND

(E) XXXXX	EXISTING
(P) XXXXX	PROPOSED
— — 2450 — —	ELEVATION CONTOURS (FT)
	EXISTING TOE OF BANK
	EXISTING TOP OF BANK
	NEW RETAINING WALL
	LIMITS OF DISTURBANCE
OHW	ORDINARY HIGH WATER MARK
	RIPRAP REVETMENT
	SHORELINE ENHANCEMENT
	BEACH NOURISHMENT



NO.	DESCRIPTION	DATE	DS.	DR.
1	30% PROJECT DESIGN PLANS	6/15/23	GO	ES
2	60% PROJECT DESIGN PLANS	12/1/23	GO	ES
3	90% PROJECT DESIGN PLANS	3/26/24	GO	ES

NOTES

1. HORIZONTAL PROJECTION: IPTM
2. ALL ELEVATIONS ARE BASED ON THE NAVD88 DATUM

SIGNAGE	DATE
DS:GO,ES	3-26-24
DR:GO,ES	3-26-24
CH: JC	3-26-24
SCALE: N/A H	
N/A V	

PROJECT INFORMATION

BLACK SANDS RESORT BANK STABILIZATION PROJECT
CONSTRUCTION PLAN SET
OWYHEE COUNTY, IDAHO

RIVER ENGINEERING

IDAHO POWER COMPANY
WO NO: 27625213-01
OVERVIEW SHEET
SHEET: 2 / 9 --

IDAHO POWER. An IDACORP Company

GENERAL PROJECT INFORMATION

PROJECT LAND OWNER: BUREAU OF LAND MANAGEMENT OPERATING UNDER A LEASE TO BLACK SANDS RESORT AND CAMPGROUND (BSRC) PROPERTY MANAGER

PROJECT LOCATION: PROJECT SITE IS LOCATED ON CJ STRIKE RESERVOIR SHORELINE APPROXIMATELY 1 MILE SOUTHEAST OF THE CJ STRIKE DAM.

ADDRESS
28114 BLACK SANDS RD
GRAND VIEW, IDAHO
83624

GPS COORDINATES
42° 56' 12.462" N
115° 57' 49.338" W

PROJECT CONSTRUCTION SCHEDULE:
PHASE 1 - FALL 2024 TO SPRING 2025
PHASE 2 - FALL 2025 TO SPRING 2026

UTILITIES
IN ACCORDANCE WITH SECTIONS 55-2201 - 55-2210, IDAHO CODE, THE CONTRACTOR MUST CONTACT DIGLINE STATEWIDE PHONE NUMBER 1-800-342-1585 NOT LESS THAN THREE WORKING DAYS PRIOR TO THE START OF ANY EXCAVATION FOR THIS PROJECT.

BSRC UTILITIES ARE KNOWN TO INCLUDE IRRIGATION, ELECTRICAL, WATER, AND WASTE WATER BUT OTHER UTILITIES MAY EXIST. CONTRACTOR SHALL CONTACT BSRC STAFF FOR A DESCRIPTION OF THE APPROXIMATE LOCATIONS. UNKNOWN UTILITIES MAY EXIST ONSITE. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING LOCATION, PROTECTING AND RESTORING RESORT UTILITIES.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY IPC OF ANY CONFLICT WITH EXISTING UTILITIES.

ALL EXISTING FACILITIES, LANDSCAPE IMPROVEMENTS, UTILITIES AND VEGETATION NOT SPECIFICALLY IDENTIFIED FOR REMOVAL SHALL BE PROTECTED THROUGHOUT CONSTRUCTION OR RESTORED AT COMPLETION OF THE WORK.

SOIL
GENERALLY, SHORELINE SEDIMENT EXPOSURES ALONG THE BLACK SANDS RESORT INCLUDE FINE OUTWASH PLAIN AND TERRACE SOIL ALONG WITH LOESS DEPOSITS THAT MAKE UP A SANDY LOAM. USDA WEB SOIL SURVEY (HTTPS://WEBSOILSURVEY.NRCS.USDA.GOV/APP/) MAPPING OF THE PROJECT AREA IS LARGELY MADE UP OF TIMMERMAN SANDY LOAM ON THE WEST SHORE AND A COMBINATION OF HAWSLEY LOAMY SAND AND JACQUITH LOAMY FINE SAND ON THE SOUTH SHORE. THE LISTED TYPE OF SOILS CAN BE CONSTITUTED AS HIGHLY ERODIBLE SOILS SINCE THEY DEMONSTRATE THE CHARACTERISTICS OF SOILS SUSCEPTIBLE TO WATER EROSION. FURTHER FIELD INVESTIGATIONS DEMONSTRATE ACTIVE EROSION AND BANK MIGRATION RATES THAT BACK UP THE MAPPED SOIL CHARACTERISTICS.

EXISTING DATA

IN OCTOBER OF 2022, IPC STAFF COMPLETED A GPS AND DRONE SURVEY OF THE PROJECT SITE TO CAPTURE THE EXISTING SHORELINE EXTENTS, CAMPGROUND AMENITIES, AND ELEVATION INFORMATION. IN JUNE OF 2021, STAFF COMPLETED A BATHYMETRIC SURVEY OF THE SITE. STAFF COMBINED THE GPS SURVEY DATA, PHOTOGRAMMETRY COLLECTED BY THE DRONE, AND PREVIOUSLY COLLECTED BATHYMETRIC SURVEY INFORMATION TO DEVELOP A PROJECT SURFACE.

CONSTRUCTION MATERIALS
MATERIAL VOLUMES ARE APPROXIMATE ESTIMATES BASED ON IN-PLACE CONDITION DEFINED BY THE EXISTING GRADE, SUB-GRADE, AND FINAL GRADE.

ANY EXCESS MATERIALS SHALL BE STOCKPILED NEATLY WITHIN THE LIMITS OF DISTURBANCE. ALL MATERIALS DESIGNATED TO BE REMOVED. SHALL BE DISPOSED OF BY THE CONTRACTOR OFF SITE AT AN APPROVED DISPOSAL SITE PROVIDED BY THE CONTRACTOR.

CONSTRUCTION DEWATERING
CONTRACTOR SHALL PERFORM CONSTRUCTION DEWATERING IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS AND PERMIT REQUIREMENTS.

VEHICLE OPERATIONS AND STAGING
VEHICLES AND WORK AREAS SHALL BE MAINTAINED IN A CLEAN STATE UTILIZING BEST MANAGEMENT PRACTICES INCLUDED IN THE IDAHO TRANSPORTATION DEPARTMENT'S "BEST MANAGEMENT PRACTICES MANUAL." TO COMPLY WITH ALL APPLICABLE RULES, REGULATIONS AND PERMIT REQUIREMENTS AT NO ADDITIONAL COST.

THE CONTRACTOR SHALL COMPLETE VEHICLE STAGING, CLEANING, MAINTENANCE, REFUELING, AND FUEL STORAGE IN VEHICLE STAGING AREA PLACED 100 FT OR MORE FROM THE RESERVOIR SHORELINE.

CONTRACTOR SHALL INSPECT ALL VEHICLES OPERATED WITHIN 100 FT OF ANY WATER BODY DAILY FOR FLUID LEAKS BEFORE LEAVING THE VEHICLE STAGING AREA. REPAIR ANY LEAKS DETECTED IN THE VEHICLE STAGING AREA BEFORE THE VEHICLE RESUMES OPERATION.

CONSTRUCTION ACCESS RESTORATION SHALL BE EQUAL TO OR BETTER THAN THE PRECONSTRUCTION CONDITION.

REGULATORY COMPLIANCE
ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL PERMIT CONDITIONS.

ANTICIPATED PERMITS INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING:

1. SECTION 404 CLEAN WATER ACT (USACE)
2. SECTION 401 WATER QUALITY CERTIFICATION (IDEQ)
3. STREAM CHANNEL ALTERATION

GENERAL NOTES

1. ALL ELEVATIONS ARE BASED ON THE NAVD88 DATUM.
2. CONTRACTOR AND IPC STAFF SHALL COMPLETE A PRECONSTRUCTION MEETING PRIOR TO BEGINNING CONSTRUCTION.
3. CONTRACTOR SHALL HAVE AN APPROVED COPY OF ALL PROJECT PERMITS ONSITE AT ALL TIMES DURING CONSTRUCTION.
4. CONTRACTOR SHALL NOTIFY IPC 14 DAYS PRIOR TO MOBILIZING MATERIALS OR EQUIPMENT ONSITE.
5. CONTRACTOR SHALL FOLLOW ALL PERMIT REQUIREMENTS AND CONDITIONS.
6. CROSS SECTIONS REPRESENT TYPICAL DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
7. ALL CONSTRUCTION MATERIALS AND CONSTRUCTION WORK SHALL STAY WITHIN THE DEFINED AREA OF DISTURBANCE.
8. MINIMIZE DISTURBANCE TO ADJACENT BSRC FACILITIES.
9. TREES MAY BE TRIMMED AS NECESSARY TO COMPLETE THE WORK. ANY RESULTING WOODY DEBRIS SHALL BE PROPERLY DISPOSE OF OFFSITE.
10. EROSION AND SEDIMENT CONTROL MEASURES DESIGN INFORMATION FOUND ON SHEET 4.
11. IMPLEMENT AND MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE ALL APPLICABLE REGULATORY REQUIREMENTS AND INDUSTRY BEST MANAGEMENT PRACTICES. EROSION/SEDIMENT CONTROL MEASURES SHALL BE INSTALLED BETWEEN ANY AREA OF EARTH DISTURBANCE AND THE WATER. EROSION AND SEDIMENT CONTROL MEASURES MUST BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETED AND THE DISTURBED GROUND IS STABLE.
12. ALL FUEL, OIL, AND OTHER HAZARDOUS MATERIALS SHALL BE STORED AND EQUIPMENT REFUELED AWAY FROM THE RESERVOIR TO ENSURE THAT A SPILL WILL NOT ENTER THE WATERWAY. EQUIPMENT MUST BE FREE OF FUEL AND LUBRICANT LEAKS.
13. SHORELINE ENHANCEMENT REFERS TO ANY FILL MATERIAL PLACED ON THE LAND SIDE OF THE RETAINING WALL OR RIPRAP REVETMENT.
14. BEACH NOURISHMENT REFERS TO ANY FILL MATERIAL PLACED ON THE RESERVOIR SIDE OF THE RETAINING WALL OR RIPRAP REVETMENT.

PLANTING GENERAL NOTES

TOTAL SEEDING AREA = 0.5 ACRES

LOCATION: TURG GRASS AREAS
ANY PRE-MIX FESCUE, TOLERANT OF HEAVY USE AND SUNNY AREAS--EXAMPLE: *TALL FESCUE TURF BLEND* FROM GREAT BASIN SEED (AT 8 LBS/1,000 FT^2).

INSTRUCTIONS:
1. SEED IN THE FALL (AFTER OCTOBER 15TH BUT PRIOR TO DEEP FREEZE) OR IN THE EARLY SPRING (MARCH TO EARLY APRIL).
2. RAKE OR HARROW AREA PRIOR TO SEEDING. SOIL SHOULD NOT BE COMPACTED.
3. BROADCAST SEED WITH A HAND-SEEDER OR INCORPORATE IN HYDRO-MULCH/SEED AS APPROPRIATE FOR SWPP REQUIREMENTS.
4. UNLESS HYDROSEEDED, RAKE OR HARROW AFTER SEEDING TO INCORPORATE SEEDS. DO NOT RAKE/HARROW IF AREA WAS HYDROSEEDED.

LOCATION: FOR NON-IRRIGATED AREAS NEAR SHORELINE (NOT TURF GRASS AREAS)
SEE TABLE BELOW FOR SEED MIX

SEED MIX

GRASS NAME	CULTIVAR*	LBS. PLS/ACRE
TALL WHEATGRASS (*THINOPYRUM PONTICUM*)	ALKAR	5
CRESTED WHEATGRASS (*AGROPYRON CRISTATUM*)	KIRK	5
RUSSIAN WILDRYE (PSATHYROSTACHYS JUNCEA)	BOZOISKY	5
WESTERN WHEATGRASS (*PASCOPYRUM SMITHII*)	ARRIBA	5

CONSTRUCTION MATERIAL QUANTITIES

ITEM	QUANTITY	UNIT	NOTES
RIPRAP	545	CY	
BLOCK WALL BASE ROCK	60	CY	1"- 2" MINUS WELL GRADED MATERIAL
FILTER ROCK	260	CY	
EXCAVATED MATERIAL	3,211	CY	
IMPORT FILL MATERIAL	3,725	CY	
FULL ULTRABLOCK (UB)	252	EA	
FULL FLAT CAP UB	168	EA	
RIGHT CORNER BENCH UB	2	EA	
LEFT CORNER BENCH UB	2	EA	
FULL CAP UB	42	EA	
FULL BENCH UB	38	EA	

ABBREVIATIONS

APPROX.	APPROXIMATELY	MIN	MINIMUM
BORR	BOTTOM OF RIPRAP	NTS	NOT TO SCALE
BORW	BOTTOM OF RETAINING WALL	OHW	ORDINARY HIGH WATERLINE
BSRC	BLACK SANDS RESORT AND CAMPGROUND	SF	SQUARE FEET
CFS	CUBIC FEET PER SECOND	SS	SOUTH SHORELINE
CP	CONTROL POINT	SWPPP	STORMWATER POLLUTION PREVENTION PLAN
CY	CUBIC YARDS	SY	SQUARE YARDS
EA	EROSIONAL AREA	TORR	TOP OF RIPRAP ELEVATION
ESC	EROSION AND SEDIMENT CONTROL	TORW	TOP OF RETAINING WALL ELEVATION
ELEV	ELEVATION	TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
FT	FEET	UB	ULTRABLOCK
GPS	GLOBAL POSITIONING SYSTEM	USDA	UNITED STATES DEPARTMENT OF AGRICULTURE
IDEQ	IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY	USACE	UNITED STATES ARMY CORPS OF ENGINEERS
IN	INCHES	WET	EXISTING WETLAND
IPC	IDAHO POWER COMPANY	WS	WATER SURFACE
LBS	POUNDS	WSRR	WEST SHORELINE RIP RAP
LF	LINEAL FEET	WSRW	WEST SHORELINE RETAINING WALL
MAX	MAXIMUM	XS	CROSS SECTION

WETLAND PERMANENT IMPACT DISTURBANCE QUANTITIES

ITEM	AREA	UNIT	NOTES
WETLAND BELOW OHWM IMPACT AREA	0.06	AC	
WETLAND ABOVE OHWM IMPACT AREA	0.30	AC	
TOTAL IMPACTED WETLAND AREA	0.36	AC	
TOTAL WETLAND AREA	0.48	AC	

CONSTRUCTION LENGTHS

ITEM	LENGTH (LF)	NOTES
SOUTH SHORELINE RETAINING WALL	485	
SOUTH SHORELINE RIPRAP REVETMENT	375	
WEST SHORELINE RETAINING WALL	565	
WEST SHORELINE RIPRAP REVETMENT	470	

BANK GRADATION - PERCENT FINER

PERCENT FINER	RIPRAP DIAMETER (IN.)	FILTER ROCK DIAMETER (IN.)
D100	20	4.00
D85	18	2.50
D50	14	1.50
D15	6	0.10
D5	4	0.08

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NOTES
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BLACK SANDS RESORT BANK STABILIZATION PROJECT
CONSTRUCTION PLAN SET
OWYHEE COUNTY, IDAHO

RIVER ENGINEERING
IDAHO POWER COMPANY
WO NO: 27625213-01
NOTES SHEET
SHEET: 3 / 9 --

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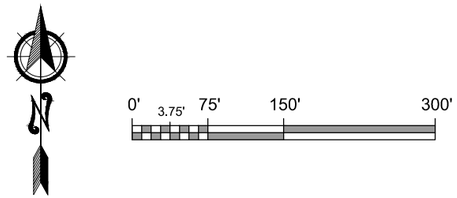


EROSION AND SEDIMENT CONTROL NOTES:

BEST MANAGEMENT PRACTICES
SOURCE: THE IDAHO CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL FIELD GUIDE 2014

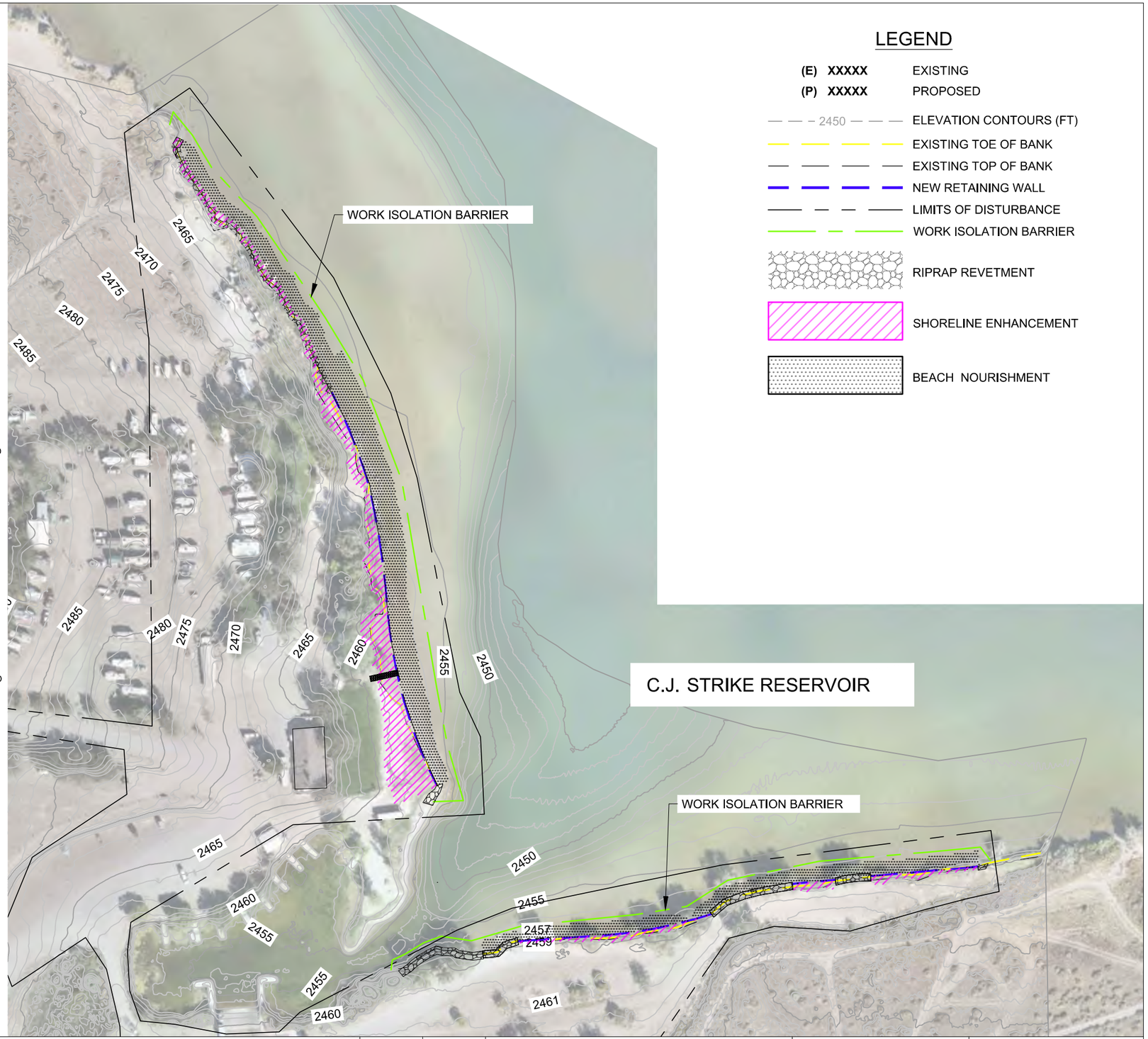
STAGING AREAS
1. STORE CONSTRUCTION MATERIALS DELIVERED IN BAGS OR BOXES ON PALLETS. COVER BAGGED/BOXED MATERIALS ON NON-WORKING DAYS AND PRIOR TO RAIN EVENTS TO PROTECT MATERIALS FROM WIND AND PRECIPITATION.
2. HAZARDOUS MATERIALS/WASTE - STORE OIL, GASOLINE, AND ANY OTHER HAZARDOUS SUBSTANCES IN DRUMS AND BAGS ON PALLETS UNDERCOVER AND IN SECONDARY CONTAINMENT. STORAGE OF LARGER FUEL CONTAINERS REQUIRES SECONDARY CONTAINMENT WITH THEIR ORIGINAL PRODUCT LABELS. RESTRICT ACCESS TO STORAGE AREAS TO PREVENT VANDALISM.
3. SOLID WASTES - PROPERLY DISPOSE OF SOLID WASTE (COLLECTED SEDIMENT, CONSTRUCTION AND DEMOLITION DEBRIS, AND OTHER WASTES).
4. PORTABLE TOILETS - DO NOT LOCATE PORTABLE TOILETS NEAR DRAINAGE FACILITIES, WATER BODIES, OR IN AREAS THAT WILL COLLECT WATER. CHECK TOILET WASTE STORAGE AND DISPOSAL PROCEDURES WEEKLY. ENSURE THAT THE TOILETS ARE MAINTAINED IN GOOD WORKING ORDER AND WASTES ARE TRANSPORTED OFFSITE BY A LICENSED SERVICE. STAKE TOILETS OR OTHERWISE SECURE TO GROUND.
5. STOCKPILE MANAGEMENT - INSTALL TEMPORARY BARRIERS AROUND STOCKPILE PERIMETERS TO PREVENT CONTACT WITH STORM WATER RUNOFF WHEN NECESSARY. TEMPORARY BARRIERS CAN BE BERMS, DIKES, SILT FENCES, OR SANDBAG BARRIERS. PROTECT ALL ACTIVE STOCKPILES WITH SEDIMENT BARRIERS PRIOR TO RAIN EVENTS.

MINIMIZE LAND DISTURBANCE
1. MAINTAIN NATIVE VEGETATION TO THE MAXIMUM EXTENT PRACTICAL. MINIMIZE SITE GRADING AND DISTURBANCE OF STEEP SLOPES TO ENSURE PRECONSTRUCTION CONDITIONS ARE MAINTAINED. PRESERVE NATURAL FORMATIONS, EXISTING TREES, AND GRADES TO MAXIMUM EXTENT PRACTICAL.

MAINTENANCE
1. MAINTAIN ALL TEMPORARY EROSION CONTROL BMPS AS NEEDED TO ASSURE CONTINUED PERFORMANCE.
2. REMOVE BRUSH AND OTHER DEBRIS THAT MAY NEGATIVELY IMPACT THE EFFECTIVENESS OF TEMPORARY EROSION CONTROL BMPS WHEN NECESSARY.
3. REMOVE ROCK OR SEDIMENT ACCUMULATING BEHIND BMPS REGULARLY.
4. REPAIR ALL STRUCTURES THAT HAVE BECOME DISLODGED OR DAMAGED AS SOON AS POSSIBLE AND PRIOR TO THE NEXT STORM EVENT.
5. TAKE CORRECTIVE ACTION BY CLOSE OF NEXT FULL WORKING DAY IF A CONTROL IS NOT FUNCTIONING PROPERLY OR IMMEDIATELY IF THERE IS A MUDDY OR PROHIBITED DISCHARGE FROM THE CONSTRUCTION SITE.
6. KEEP STORMWATER PERMIT DOCUMENTATION ON-SITE OR WITHIN REASONABLE ACCESS TO THE SITE.
7. KEEP RECORDS OF INSPECTION OBSERVATIONS, MAINTENANCE ACTIVITIES AND CORRECTIVE ACTIONS TAKEN.
8. STABILIZE ALL PORTIONS OF THE SITE.

INSPECTIONS
1. INSPECT ALL EROSION AND SEDIMENT CONTROLS AT A MINIMUM TWICE A DAY AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.25 INCHES OR GREATER.
2. VISUALLY EXAMINE ANY WATER WITHIN THE LIMITS OF DISTURBANCE FOR THE PRESENCE OF SUSPENDED SEDIMENT, TURBIDITY, DISCOLORATION, AND OIL SHEEN.
3. IPC STAFF WILL BE RESPONSIBLE FOR WATER QUALITY MONITORING AND FOLLOWING ALL APPLICABLE WATER QUALITY LAWS AND STANDARDS.

AFTER CONSTRUCTION
1. REMOVE TEMPORARY CONTROLS AND PERMANENTLY STABILIZE SITE WHEN THE PROJECT IS COMPLETE.
2. REMOVE ALL SEDIMENT CONTROL STRUCTURES PRIOR TO FILING A NOTICE OF TERMINATION.
3. FILE A NOTICE OF TERMINATION WHEN FINAL STABILIZATION HAS BEEN ACHIEVED.



LEGEND

(E) XXXXX	EXISTING
(P) XXXXX	PROPOSED
2450	ELEVATION CONTOURS (FT)
	EXISTING TOE OF BANK
	EXISTING TOP OF BANK
	NEW RETAINING WALL
	LIMITS OF DISTURBANCE
	WORK ISOLATION BARRIER
	RIPRAP REVETMENT
	SHORELINE ENHANCEMENT
	BEACH NOURISHMENT

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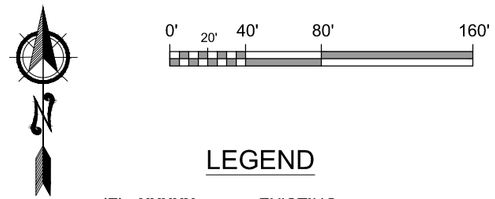
OWYHEE COUNTY, IDAHO

RIVER ENGINEERING
IDAHO POWER COMPANY
WO NO: 27625213-01
E&S CONTROL SHEET
SHEET: 4 / 9 --

IDAHO POWER. An IDACORP Company

By: EKS1748 Date: 3/25/2024 1:39 PM Path: S:\Bankline_Erosion\Projects\2022_CJ_BlackSands\05_Design\CAD\BlackSands_Design_90%_20240320



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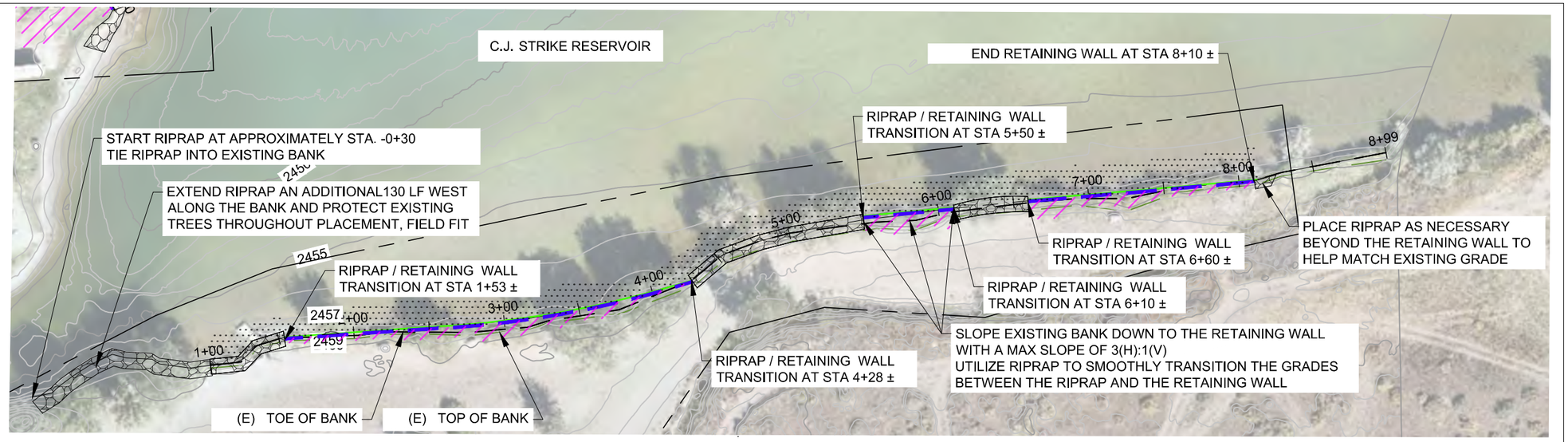
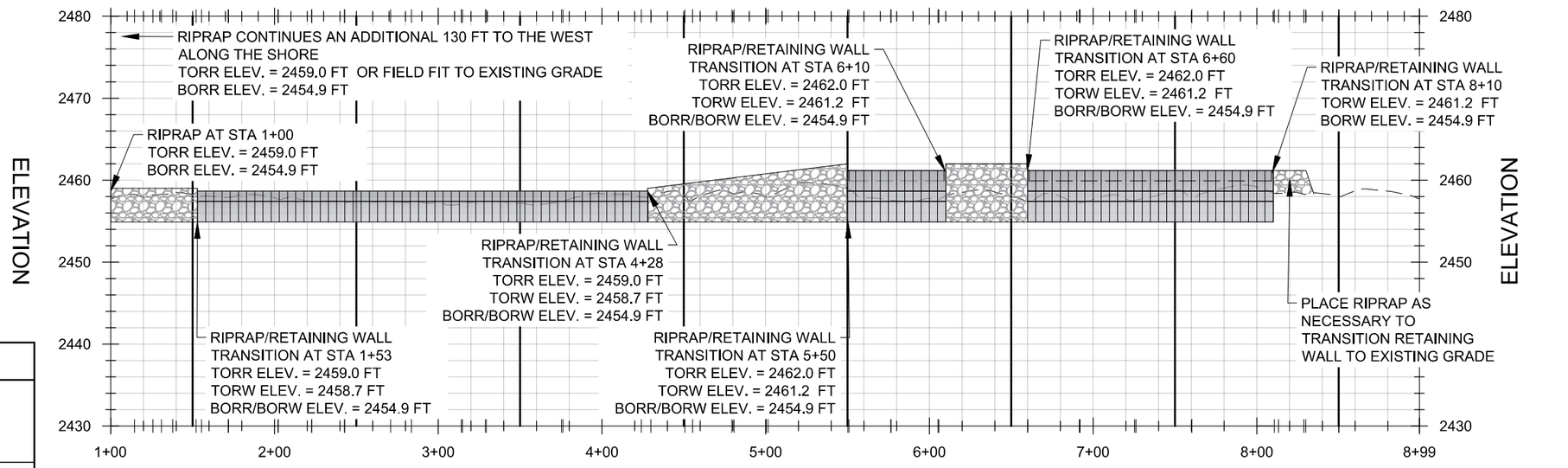
	EXISTING TOP OF BANK
	NEW RETAINING WALL
	LIMITS OF DISTURBANCE
	RIPRAP REVETMENT
	SHORELINE ENHANCEMENT
	BEACH NOURISHMENT

NOTES:

1. ORDINARY HIGH WATER = 2457.9 FT
2. RIPRAP REVETMENT FINISHED GRADE OF SLOPE SHALL BE NO STEEPER THAN 3(H) : 1(V) SLOPE OTHER THAN BLENDING INTO EXISTING RESERVOIR BANKS AT EAST AND WEST TIE-IN LOCATIONS.
3. ANY LARGE BOULDERS OR VIABLE RIPRAP ENCOUNTERED DURING EXCAVATION SHALL BE SALVAGED FOR REUSE IN THE RIPRAP REVETMENT.
4. (E) = EXISTING, (P) = PROPOSED
5. SEED SHORELINE ENHANCEMENT AREA PER PLANTING NOTES ON NOTES SHEET
6. USE RIPRAP TO HELP TRANSITION GRADE AT THE RETAINING WALL AND RIPRAP REVETMENT TRANSITION LOCATIONS.
7. DESIGN PLAN RETAINING WALL HEIGHTS ARE APPROXIMATE.





RIPRAP CONSTRUCTION LENGTHS

BEGINNING STATION	ENDING STATION	LENGTH (LF)	APPROXIMATE RIPRAP REVETMENT HEIGHT (LF)	NOTES
-0+30	1+53	183	4.1	
4+28	5+50	122	4.1 AND 7.1	RIPRAP HEIGHT TRANSITIONS FROM 4.1 FT AT STA. 4+27 TO 7.1 FT AT STA. 5+50.
6+10	6+60	50	7.1	
8+10	8+30	20	6.0	PLACE RIPRAP ON EXISTING SURFACE TO HELP TRANSITION BACK TO EXISTING GRADE

RETAINING WALL CONSTRUCTION LENGTHS

BEGINNING STATION	ENDING STATION	LENGTH (LF)	APPROXIMATE WALL HEIGHT (LF)
1+53	4+28	275	3.8
5+50	6+10	60	6.3
6+60	8+10	150	6.3

CONSTRUCTION LENGTHS AND QUANTITIES

ITEM	TOTAL LENGTH (LF)	VOLUME QUANTITY (CY)	# OF FULL UB	# OF FULL FLAT CAP UB	# OF RIGHT CORNER BENCH UB	# OF LEFT CORNER BENCH UB	# FULL CAP UB	# OF FULL BENCH UB
RETAINING WALL	485		139	55	2	2	42	38
BLOCK WALL BASE ROCK	485	33						
RIPRAP	375	230						
FILTER ROCK	375	107						

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PROJECT INFORMATION

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RIVER ENGINEERING

IDAHO POWER COMPANY
WO NO: 27625213-01
SS PLAN & PROFILE
SHEET: 5 / 9 --

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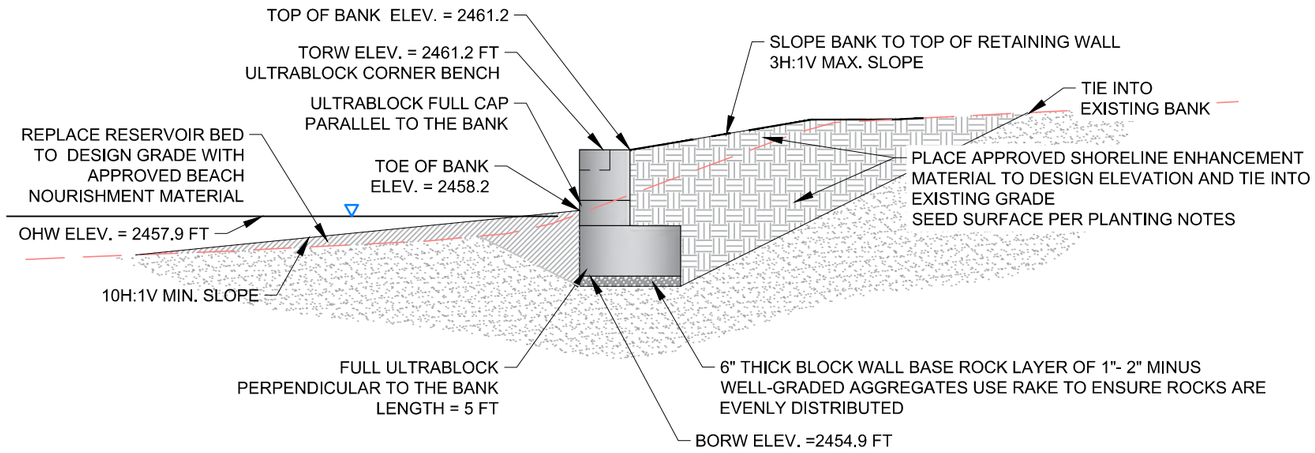
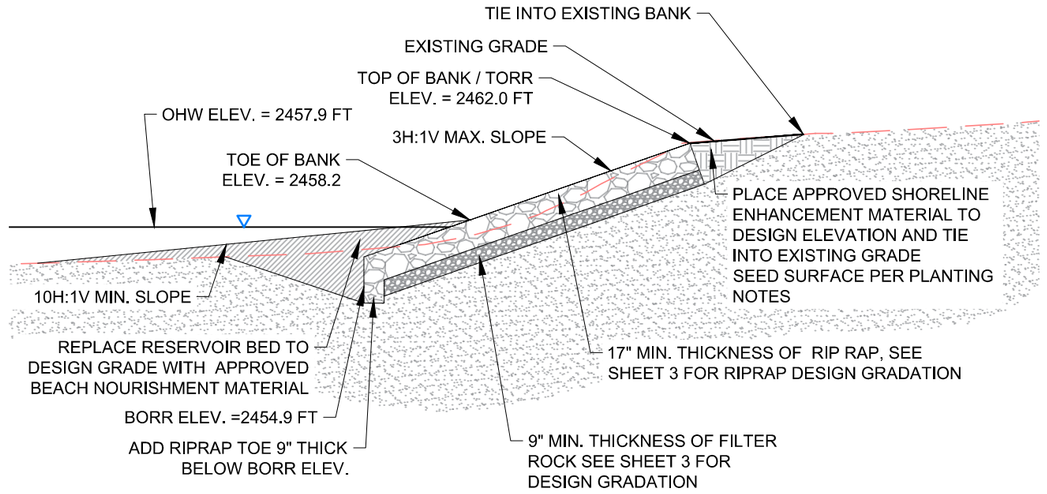
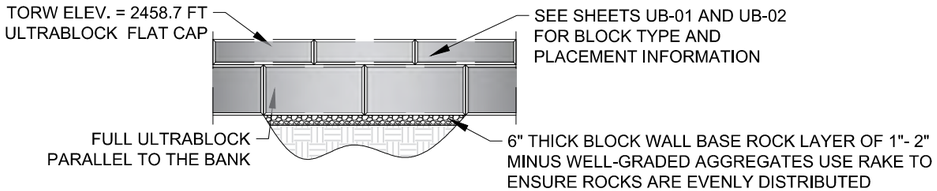


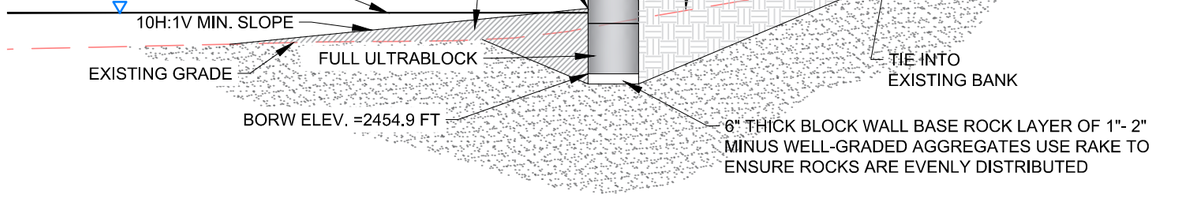
TYPICAL RETAINING WALL DETAIL FROM STATION 5+50 - 6+10
(NTS)



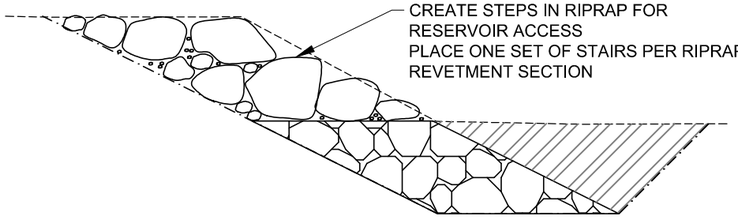
TYPICAL RIPRAP REVETMENT DETAIL FROM STATION 6+10 - 6+60
(NTS)



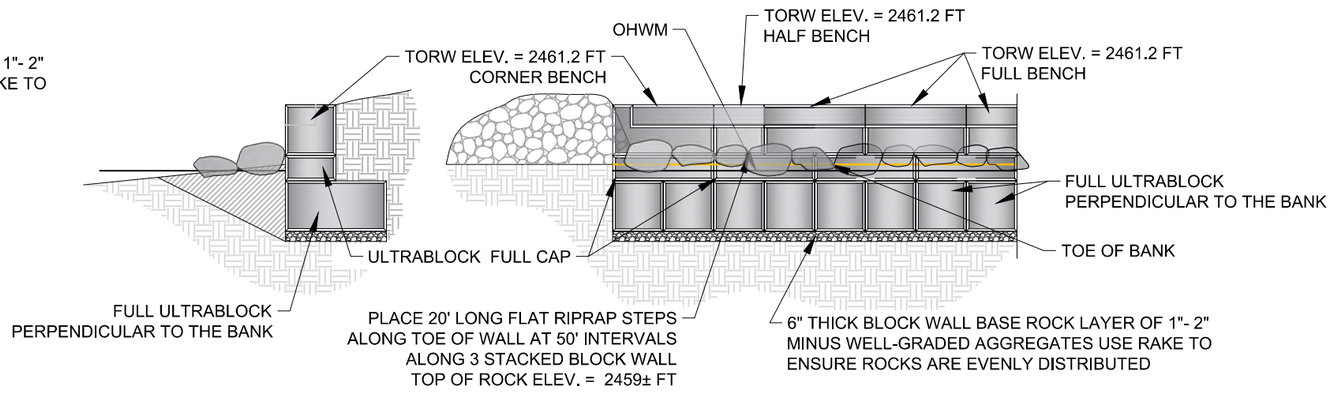
TYPICAL RETAINING WALL FACE WITH 2 STACKED BLOCKS DETAIL
(NTS)



TYPICAL RETAINING WALL DETAIL FROM STATION 1+53 - 4+28
(NTS)



TYPICAL RIPRAP REVETMENT STEP DETAIL
(NTS)



TYPICAL RETAINING WALL FACE WITH 3 STACKED BLOCKS AND BENCHED BLOCKS DETAIL
(NTS)

NO.	DESCRIPTION	DATE	DS.	DR.
1	30% PROJECT DESIGN PLANS	6/15/23	GO	ES
2	60% PROJECT DESIGN PLANS	12/1/23	GO	ES
3	90% PROJECT DESIGN PLANS	3/26/24	GO	ES

NOTES

1. HORIZONTAL PROJECTION: IPTM
2. ALL ELEVATIONS ARE BASED ON THE NAVD88 DATUM

SIGNAGE	DATE
DS:GO,ES	3-26-24
DR:GO,ES	3-26-24
CH: JC	3-26-24
SCALE: N/A H	
N/A V	

PROJECT INFORMATION

BLACK SANDS RESORT BANK STABILIZATION
PROJECT
CONSTRUCTION PLAN SET
OWYHEE COUNTY, IDAHO

RIVER ENGINEERING

IDAHO POWER COMPANY
WO NO: 27625213-01
SS DETAILS
SHEET: 6 / 9 --

IDAHO POWER. An IDACORP Company

LEGEND

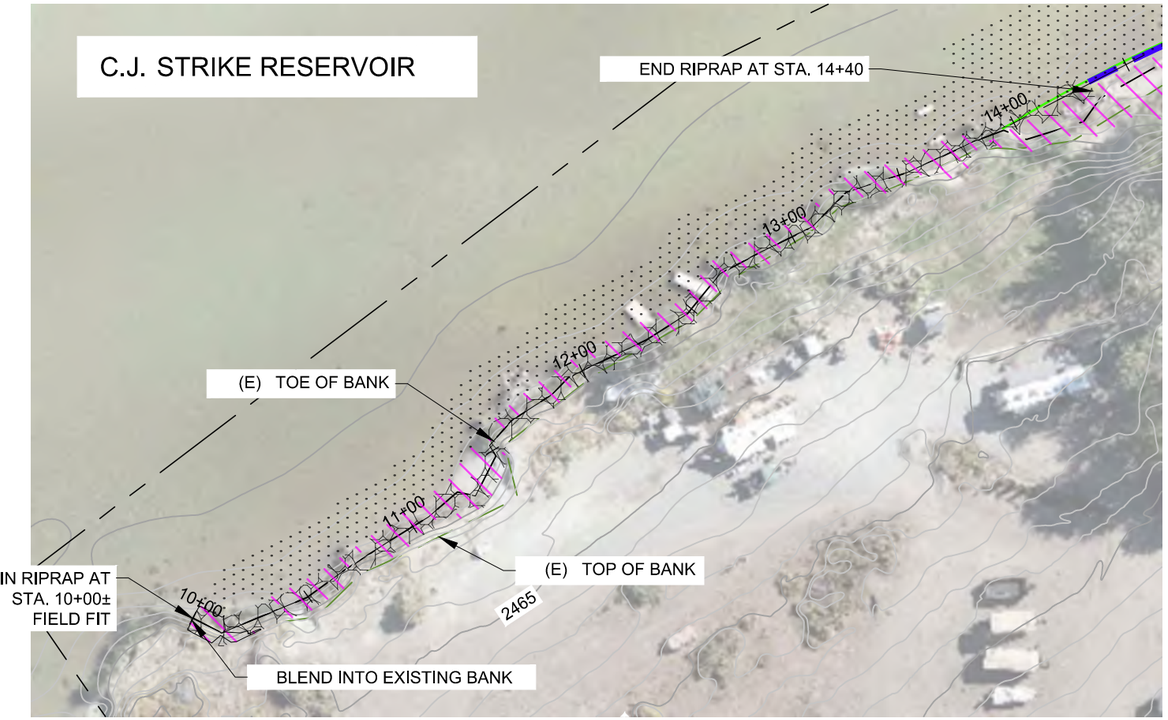
(E) XXXXX	EXISTING
(P) XXXXX	PROPOSED
— — – 2450 — — —	ELEVATION CONTOURS (FT)
	EXISTING TOE OF BANK
	EXISTING TOP OF BANK
	NEW RETAINING WALL
	LIMITS OF DISTURBANCE
	RIPRAP REVETMENT
	SHORELINE ENHANCEMENT
	BEACH NOURISHMENT

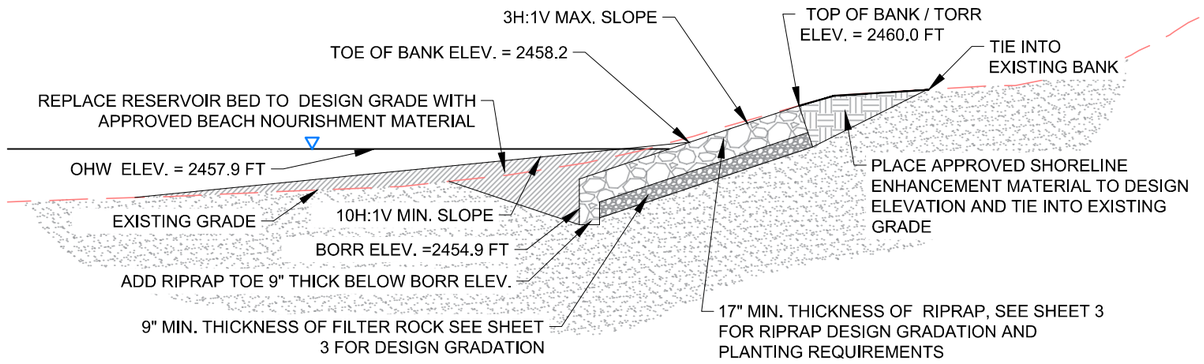
CONSTRUCTION LENGTHS AND QUANTITIES

ITEM	BEGINNING STATION	ENDING STATION	LENGTH (LF)	APPROXIMATE RIPRAP REVETMENT HEIGHT (LF)	VOLUME QUANTITY (CY)
RIPRAP	10+00	14+40	440	5.1	285
FILTER ROCK	10+00	14+40	440		135

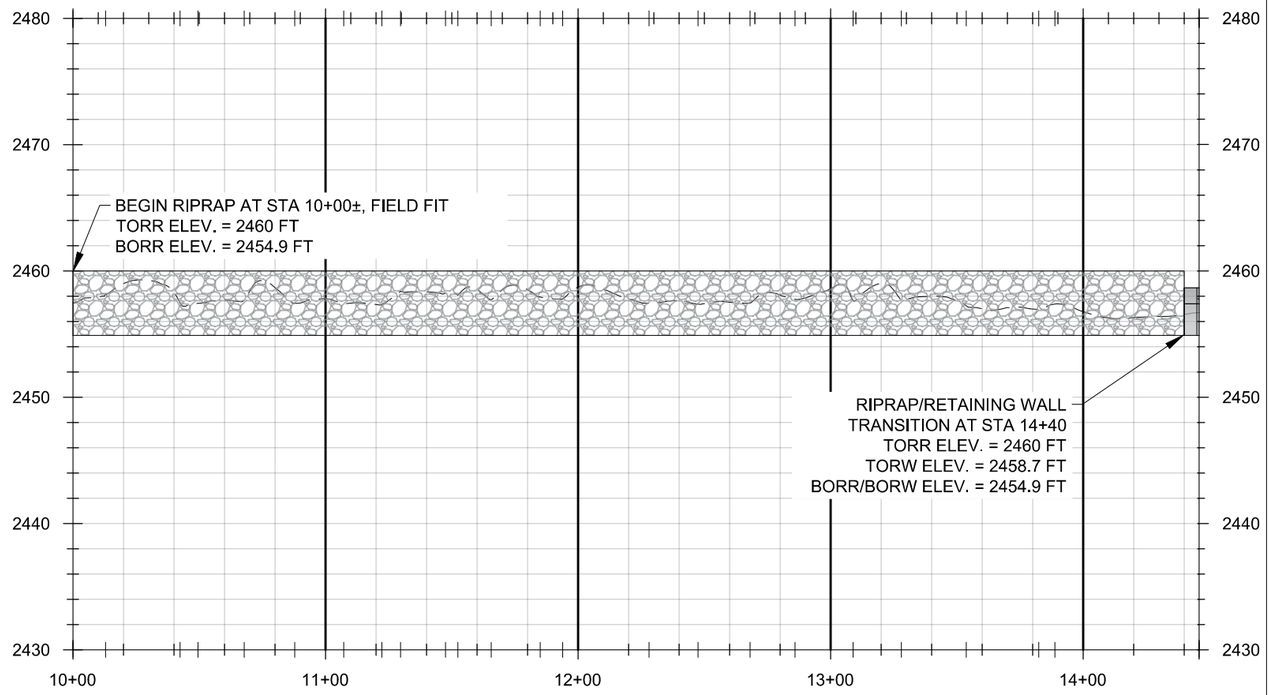
NOTES:

1. ORDINARY HIGH WATER = 2457.9 FT
2. RIPRAP REVETMENT FINISHED GRADE OF SLOPE SHALL BE NO STEEPER THAN 3(H) : 1(V) SLOPE OTHER THAN BLENDING INTO EXISTING RESERVOIR BANKS AT EAST AND WEST TIE-IN LOCATIONS.
3. SUITABLE RESERVOIR BED MATERIAL EXCAVATED FOR RIPRAP PLACEMENT SHALL BE REUSED ONSITE FOR SHORELINE ENHANCEMENT OR BEACH NOURISHMENT.
4. ANY LARGE BOULDERS OR VIABLE RIPRAP ENCOUNTERED DURING EXCAVATION SHALL BE SALVAGED FOR REUSE IN THE RIPRAP REVETMENT.
5. (E) = EXISTING, (P) = PROPOSED
6. SEED SHORELINE ENHANCEMENT AREA PER PLANTING NOTES ON NOTES SHEET.
7. USE RIPRAP TO HELP TRANSITION GRADE AT THE RETAINING WALL AND RIPRAP REVETMENT TRANSITION LOCATIONS.





TYPICAL RIPRAP REVETMENT DETAIL
FROM STATION 10+00 - 14+40
(NTS)



NO.	DESCRIPTION	DATE	DS.	DR.
1	30% PROJECT DESIGN PLANS	6/15/23	GO	ES
2	60% PROJECT DESIGN PLANS	12/1/23	GO	ES
3	90% PROJECT DESIGN PLANS	3/26/24	GO	ES

NOTES
1. HORIZONTAL PROJECTION: IPTM
2. ALL ELEVATIONS ARE BASED ON THE NAVD88 DATUM

SIGNAGE	DATE
DS:GO,ES	3-26-24
DR:GO,ES	3-26-24
CH: JC	3-26-24
SCALE: N/A H	
N/A V	

PROJECT INFORMATION
BLACK SANDS RESORT BANK STABILIZATION PROJECT
CONSTRUCTION PLAN SET
OWYHEE COUNTY, IDAHO

RIVER ENGINEERING
IDAHO POWER COMPANY
WO NO: 27625213-01
WSRR PLAN & PROFILE
SHEET: 7 / 9 --

IDAHO POWER. An IDACORP Company

0' 15' 30' 60' 120'

LEGEND

(E) XXXXX	EXISTING
(P) XXXXX	PROPOSED
— — – 2450 — — —	ELEVATION CONTOURS (FT)
	EXISTING TOE OF BANK
	EXISTING TOP OF BANK
	NEW RETAINING WALL
	LIMITS OF DISTURBANCE
	RIPRAP REVETMENT
	SHORELINE ENHANCEMENT
	BEACH NOURISHMENT

NOTES:

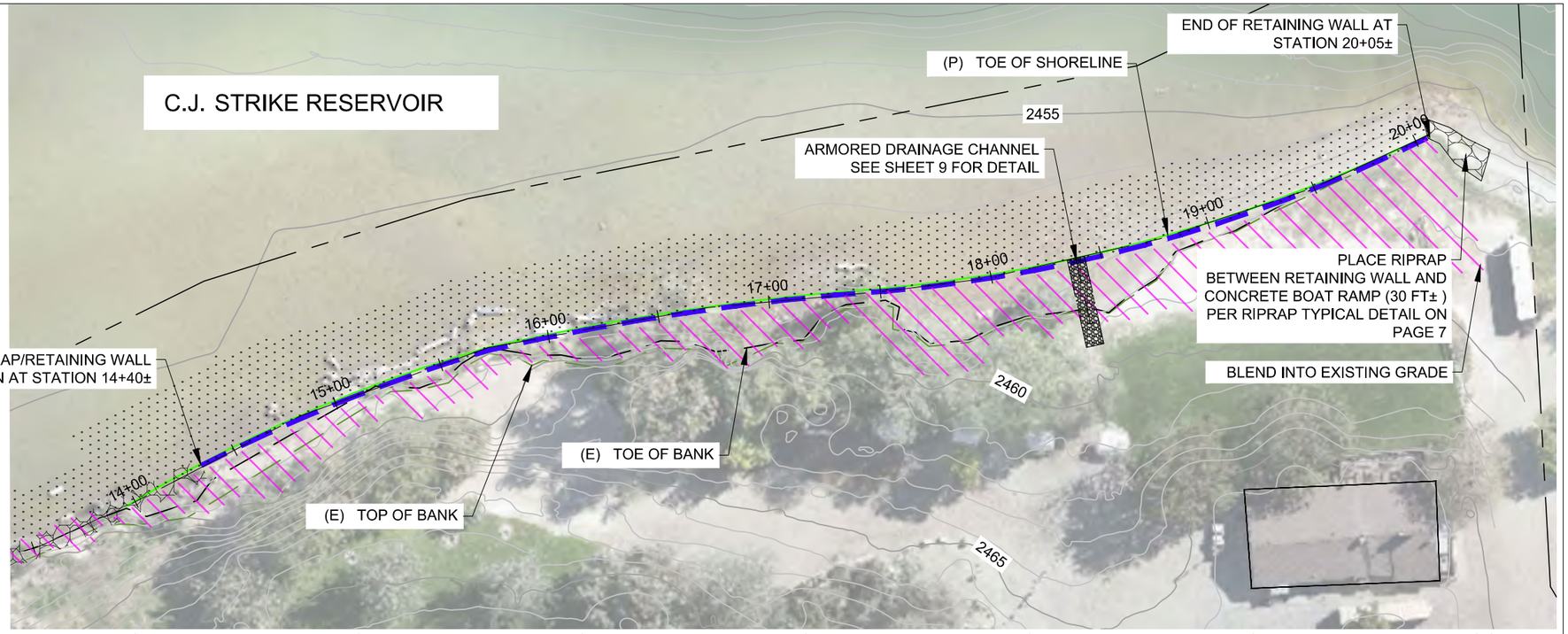
1. ORDINARY HIGH WATER = 2457.9 FT
2. (E) = EXISTING, (P) = PROPOSED
3. SEED SHORELINE ENHANCEMENT AREA PER PLANTING NOTES ON NOTES SHEET
4. USE RIPRAP TO HELP TRANSITION GRADE AT THE RETAINING WALL AND RIPRAP REVETMENT TRANSITION LOCATIONS.
5. DESIGN PLAN RETAINING WALL HEIGHTS ARE APPROXIMATE.

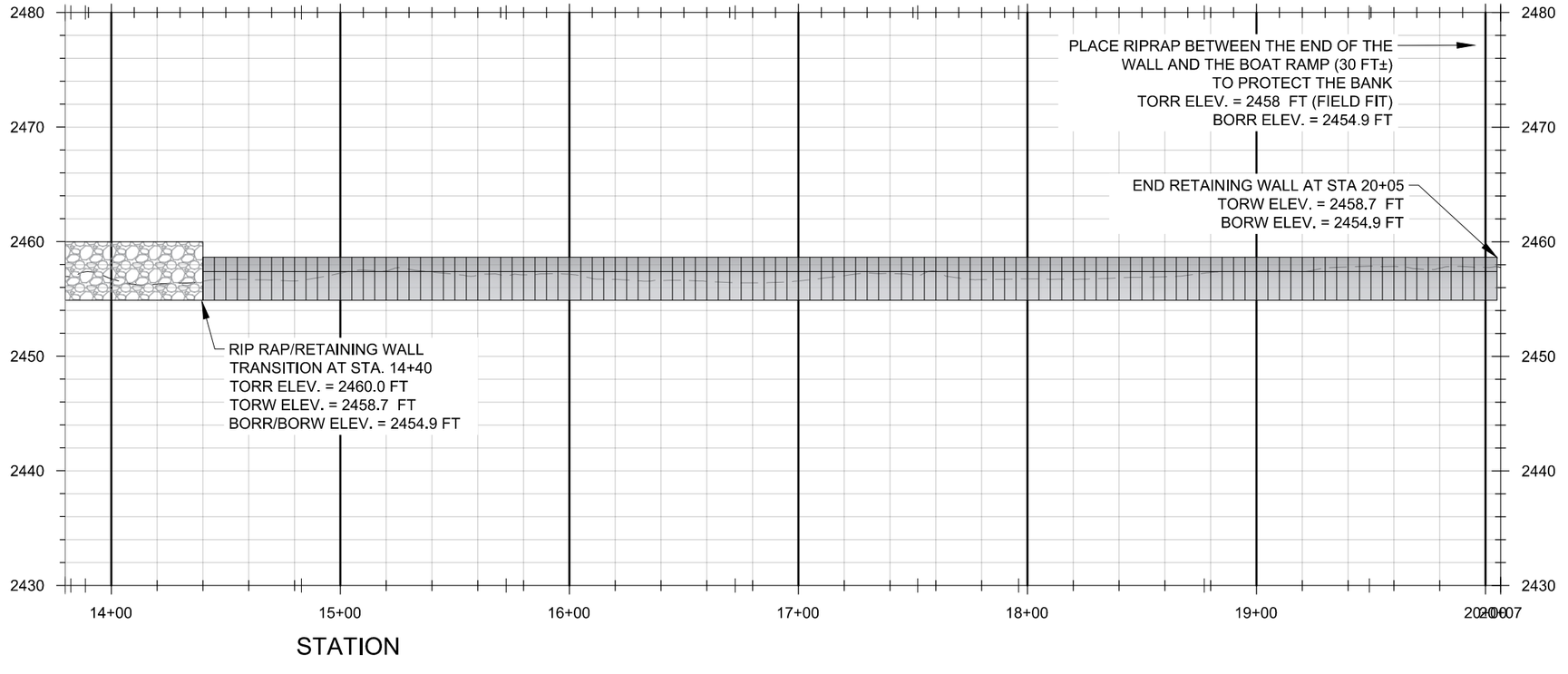
RETAINING WALL CONSTRUCTION LENGTHS

BEGINNING STATION	ENDING STATION	LENGTH (LF)	APPROXIMATE WALL HEIGHT (LF)	# OF FULL ULTRABLOCKS	# OF FULL FLAT CAP ULTRABLOCK
14+40	20+05	565	3.8	113	113

CONSTRUCTION QUANTITY

ITEM	VOLUME (CY)
BLOCK WALL BASE ROCK	27
ARMORED DRAIN RIP RAP	12
ARMORED DRAIN FILTER ROCK	6
RIPRAP BY BOAT RAMP	20
FILTER ROCK BY BOAT RAMP	10





NO.	DESCRIPTION	DATE	DS.	DR.
1	**30% PROJECT DESIGN PLANS**	**6/15/23**	**GO**	**ES**
2	**60% PROJECT DESIGN PLANS**	**12/1/23**	**GO**	**ES**
3	**90% PROJECT DESIGN PLANS**	**3/26/24**	**GO**	**ES**

NOTES

1. HORIZONTAL PROJECTION: IPTM
2. ALL ELEVATIONS ARE BASED ON THE NAVD88 DATUM

SIGNAGE	DATE
DS:GO,ES	3-26-24
DR:GO.ES	3-26-24
CH: JC	3-26-24
SCALE: N/A H	
N/A V	

PROJECT INFORMATION

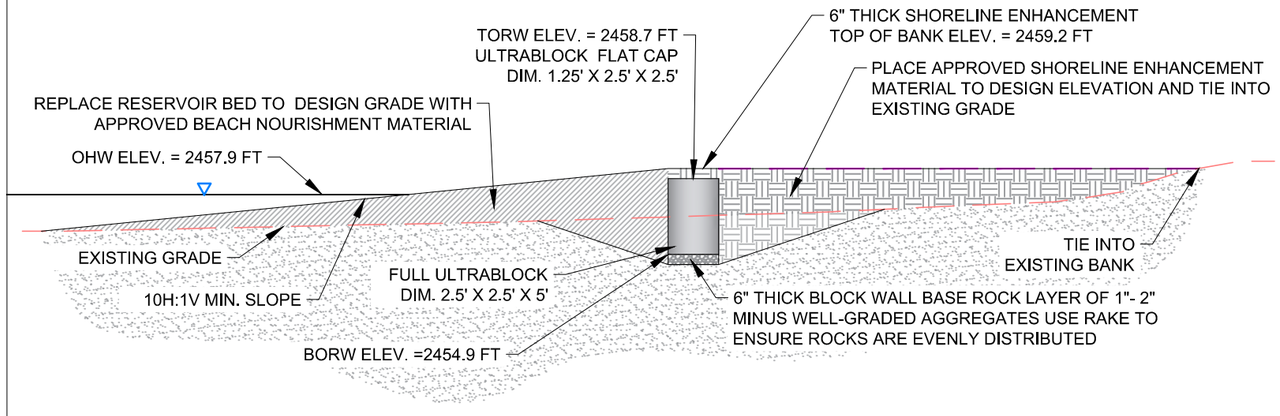
BLACK SANDS RESORT BANK STABILIZATION PROJECT
CONSTRUCTION PLAN SET
OWYHEE COUNTY, IDAHO

RIVER ENGINEERING

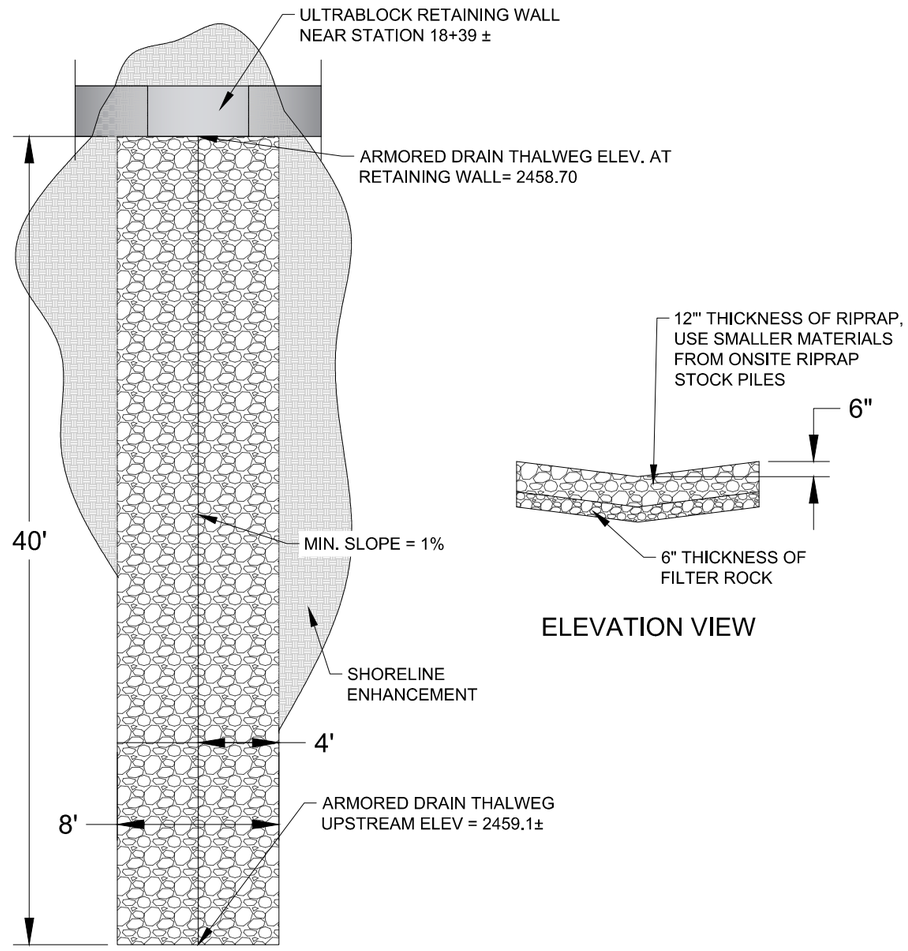
IDAHO POWER COMPANY
WO NO: 27625213-01
WSRW PLAN & PROFILE
SHEET: 8 / 9 --

IDAHO POWER. An IDACORP Company

By: EKS1748 Date: 3/25/2024 1:48 PM Path: S:\Bankline_Erosion\Projects\2022_CJ_BlackSands\05_Design\CAD\BlackSands_Design_90%_20240320



TYPICAL RETAINING WALL DETAIL FROM
STATION 14+40 - 20+05
(NTS)



ELEVATION VIEW

PLAN VIEW

ARMORED DRAINAGE CHANNEL (NTS)

NO.	DESCRIPTION	DATE	DS.	DR.
1	30% PROJECT DESIGN PLANS	6/15/23	GO	ES
2	60% PROJECT DESIGN PLANS	12/1/23	GO	ES
3	90% PROJECT DESIGN PLANS	3/26/24	GO	ES

NOTES

1. HORIZONTAL PROJECTION: IPTM
2. ALL ELEVATIONS ARE BASED ON THE NAVD88 DATUM

SIGNAGE	DATE
DS:GO,ES	3-26-24
DR:GO,ES	3-26-24
CH: JC	3-26-24
SCALE: N/A H	
N/A V	

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BLACK SANDS RESORT BANK STABILIZATION
PROJECT
CONSTRUCTION PLAN SET
OWYHEE COUNTY, IDAHO

RIVER ENGINEERING

IDAHO POWER COMPANY
WO NO: 27625213-01
WEST SHORELINE DETAILS
SHEET: 9 / 9 --

IDAHO POWER
An IDACORP Company