Figure 1

GORE CANYON WHITEWATER FEATURE AT PUMPHOUSE OCTOBER, 2013

DRAWING INDEX

PLATE NO	TITLE
G1	VICINITY MAP, DRAWING INDEX, LEGEND
C1	CARE OF WATER PLAN
C2	GRADE CONTROL STRUCTURES
R3	BOULDER DETAILS 1
C4	VIEW SECTIONS 1
R5	CARE OF WATER DETAILS
R6	NON-POINT SOURCE POLLUTION CNTRL.

LEGEND

- Ordinary High Water Line
- Base Line for X-Sections
- ×98 Spot Elevation
- Limits of Riparian
- X-Section Line
- Placed Boulders
- Habitat Boulders
- Proposed Grade
- Pre-cast Structures
- Scattered Trees

CONTACTS

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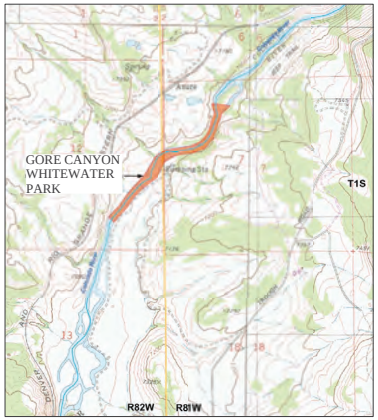
(970) 725-3100

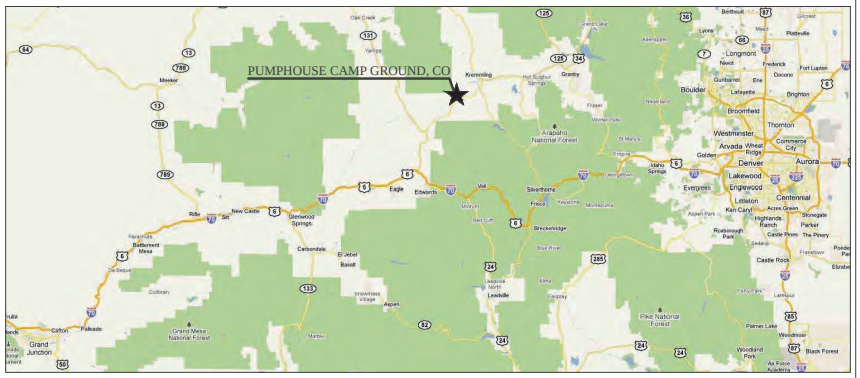
2. Mr. Jason Carey, P.E.
River Engineer
RiverRestoration.org, LLC.
(970) 947-9568

LOCATION MAP



NTS

VICINITY MAP



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General Notes

GORE CANYON WHITEWATER FEATURE
AT PUMPHOUSE
COVER PAGE

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COLORADO RIVER

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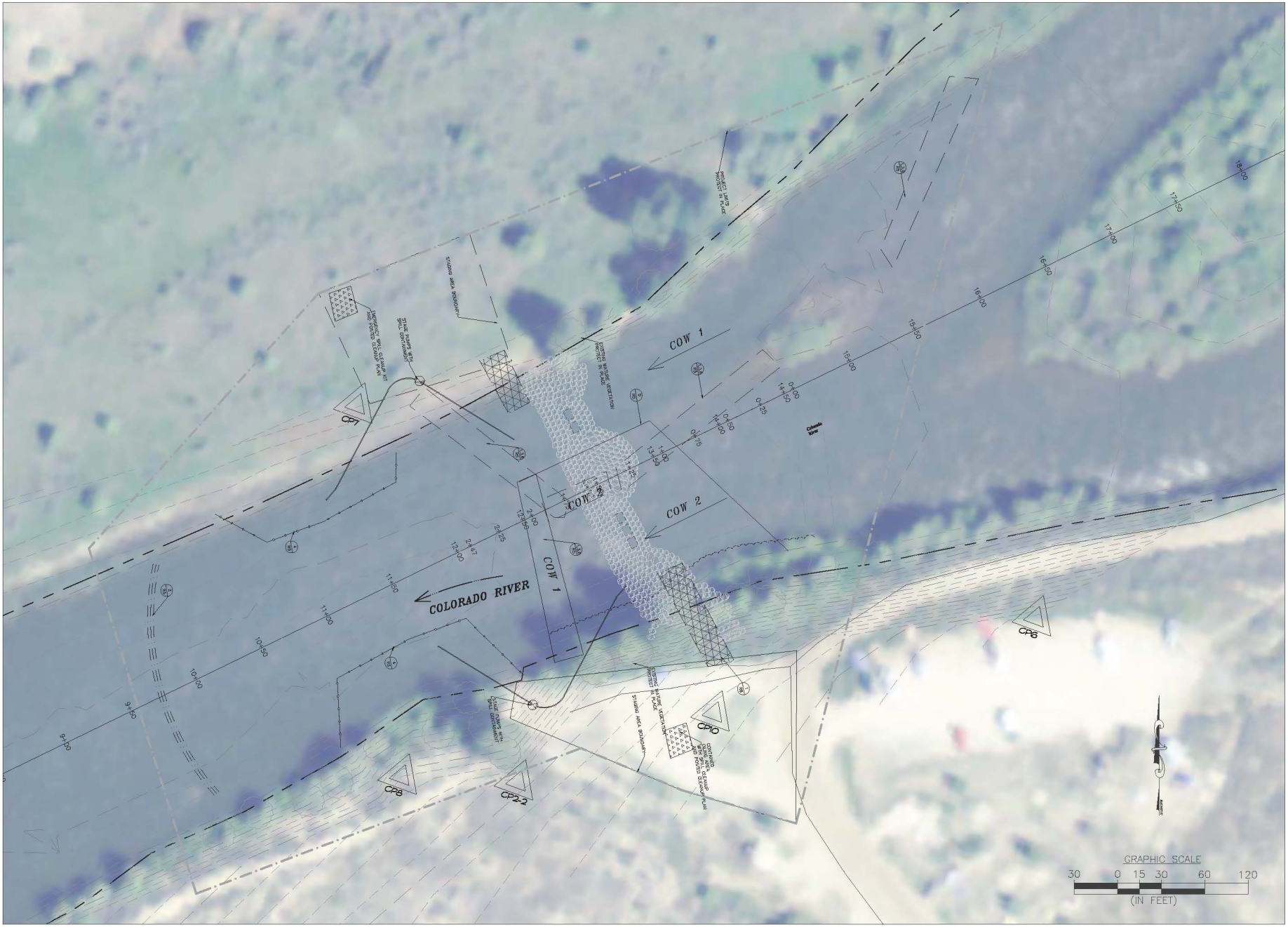
Date: 08-12-2013
Scale: NTS
Sheet: G-1

Figure 2



General Notes

GORE CANYON WHITEWATER FEATURE AT PUMPHOUSE CARE OF WATER

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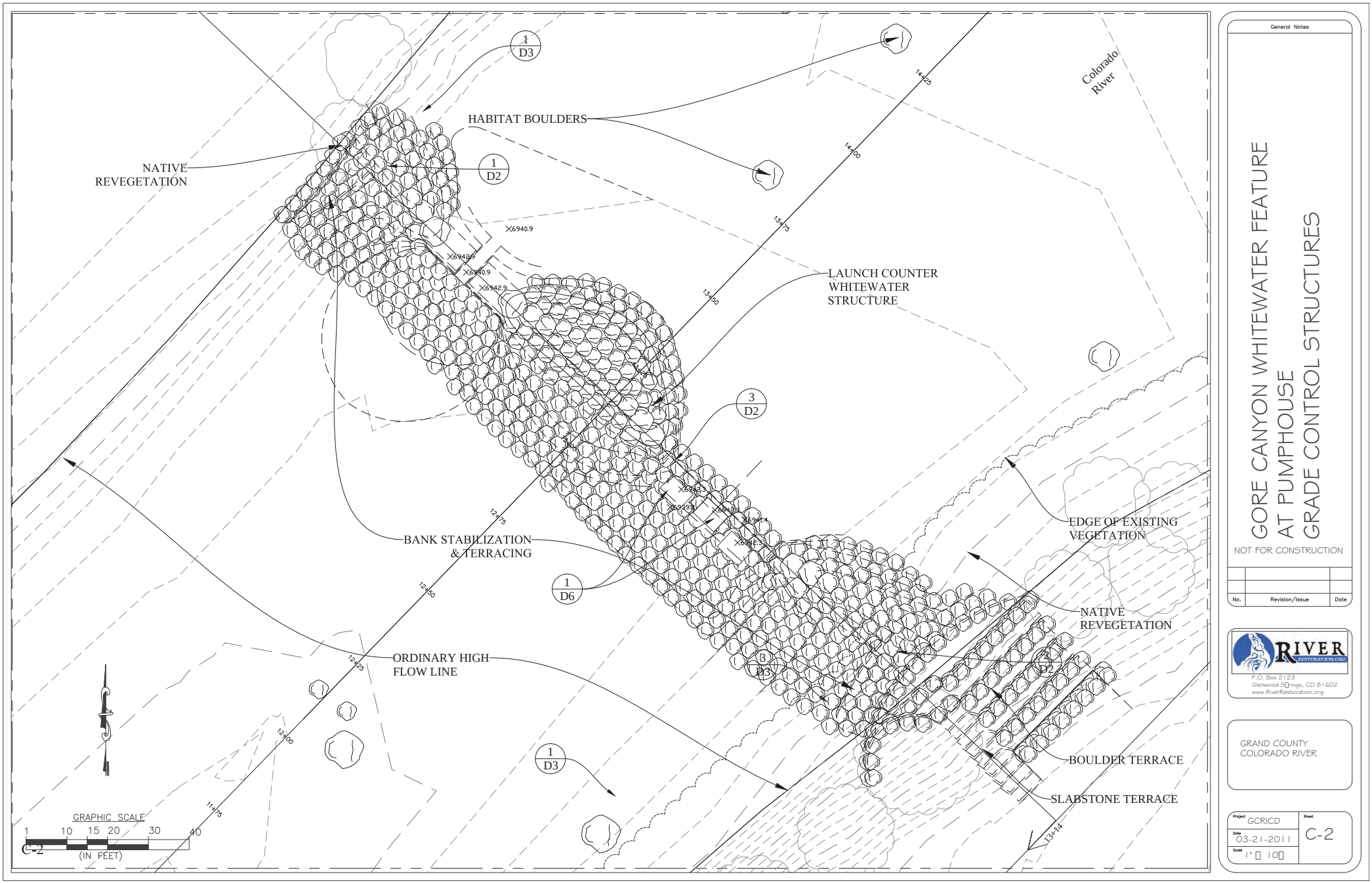
Figure 3


HABITAT BOULDERS
NATIVE REVEGETATION
LAUNCH COUNTER WHITEWATER STRUCTURE
BANK STABILIZATION & TERRACING
ORDINARY HIGH FLOW LINE
EDGE OF EXISTING VEGETATION
NATIVE REVEGETATION
BOULDER TERRACE
SLABSTONE TERRACE
Colorado River
1 D3
1 D2
3 D2
1 D6
3 D3
1 D3
14+25
14+00
13+75
13+50
12+75
12+50
12+25
12+00
11+75
13+14
X6940.9
X6942.9
GRAPHIC SCALE
1 10 15 20 30 40
(IN FEET)
C-2
General Notes
GORE CANYON WHITEWATER FEATURE
AT PUMPHOUSE
GRADE CONTROL STRUCTURES
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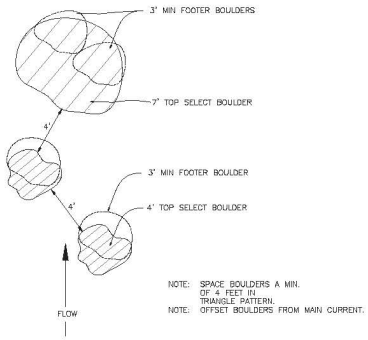
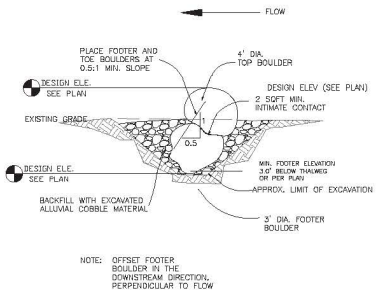
Sheet C-2

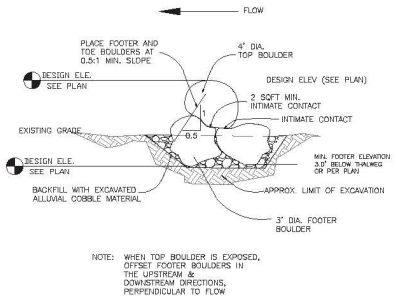
Figure 4



BOULDER CLUSTER PLAN VIEW DETAIL

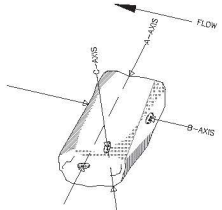
NTS





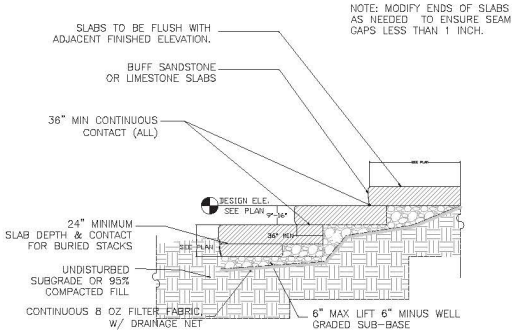
HABITAT BOULDER DETAIL (1 / R3)

NTS



BOULDER AXIAL PLACEMENT (3 / R3)

NTS

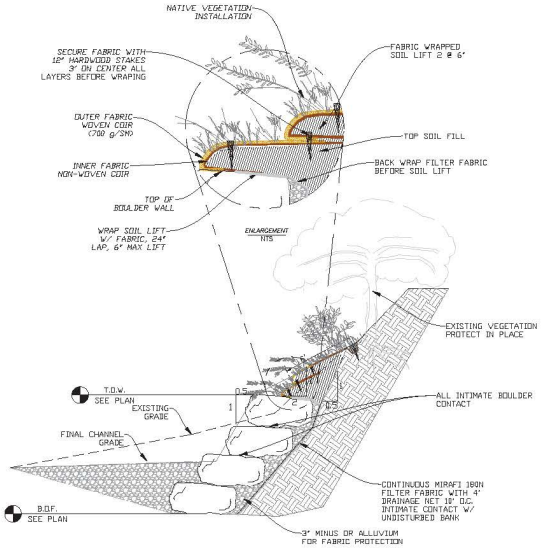


SLABSTONE TERRACE TYP. (4 / R3)

NTS

DETAIL NOTES; UNLESS OTHERWISE SHOWN ON PLANS:

1)STACK EXPOSED BOULDERS 0.5 HORIZONTAL TO 1.0 VERTICAL C–AXIS
2)ACHIEVE INTIMATE CONTACT BETWEEN ALL BOULDERS
3)OVER CUTS IN CLAY ASSUMED TO BE 0.5 HORIZONTAL TO 1.0 VERTICAL
4)OVER CUTS IN ALLUVIUM ASSUMED TO BE 1.0 HORIZONTAL TO 1.0 VERTICAL
5)PLACE ALL BOULDERS C–AXIS VERTICAL
6)SELECT BOULDER TO BE APPROVED BY ENGINEER
7)CONSTRUCTION OF BOULDER STRUCTURES SHALL INCLUDE SELECTION, ROTATION, PLACEMENT AND ADJUSTMENT OF EACH INDIVIDUAL ROCK TO MINIMIZE VOID SPACES AND MAXIMIZE INTERLOCKING OF BOULDERS.
8)EXTEND WALL FOOTER ROCK BELOW FINAL GRADE 0.5X EXPOSED FACE HEIGHT
9)CONFORM TO ATTACHED TECHNICAL SPECIFICATIONS DATED MAY 20, 2013



BOULDER WALL SLOPE TRANSITION (5 / R3)

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General Notes

GORE CANYON WHITEWATER FEATURE AT PUMPHOUSE BOULDER DETAILS 1

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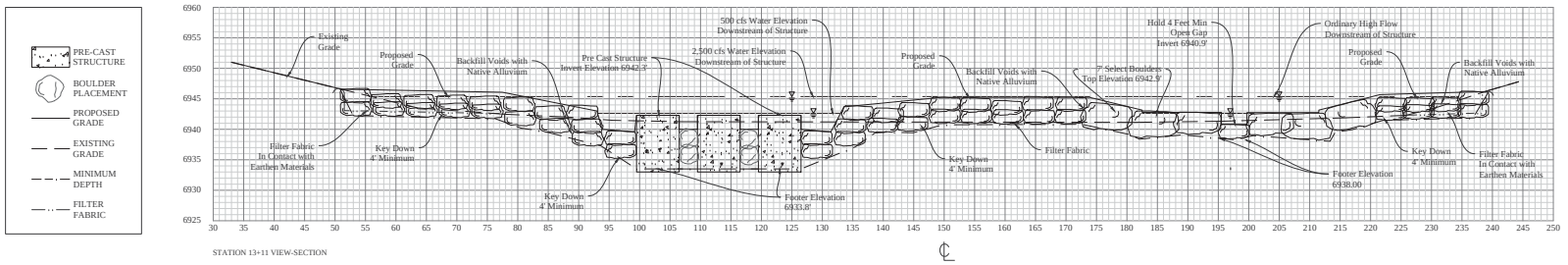
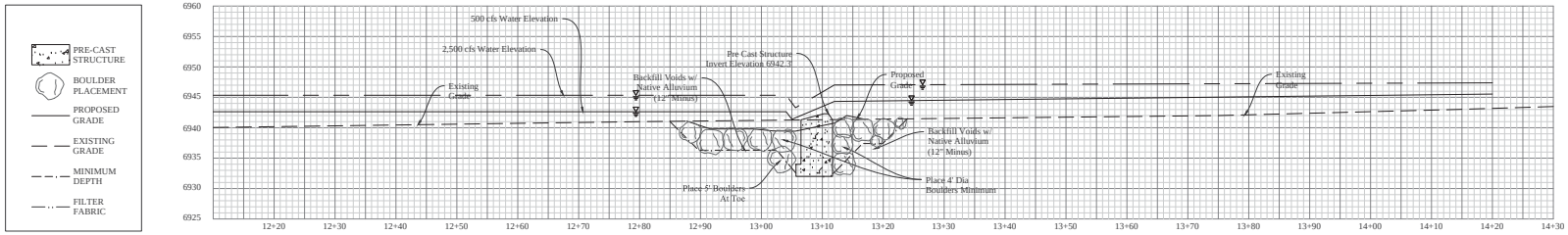
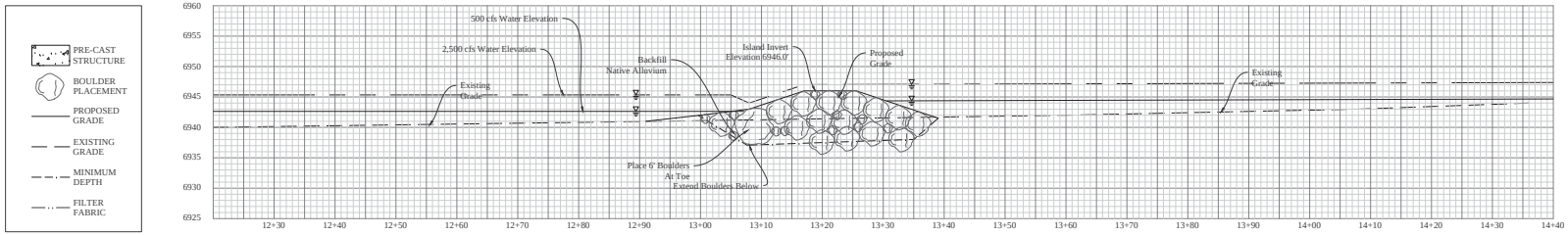
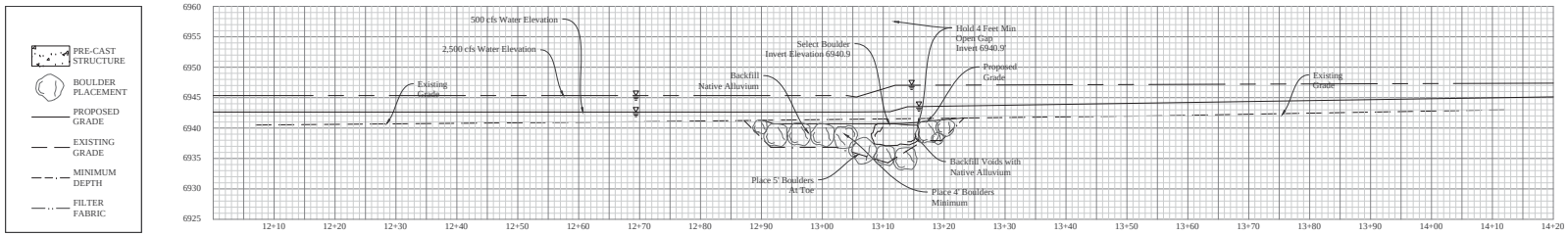
Figure 5









General Notes

GORE CANYON WHITEWATER FEATURE AT PUMPHOUSE SECTIONS 1

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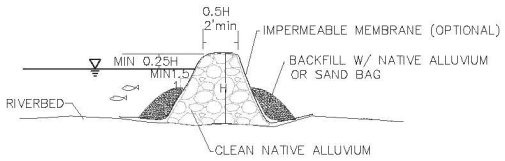
Scale 1" = 10'	

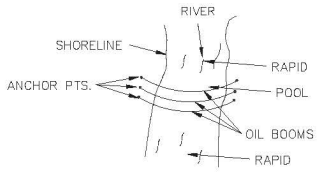
Figure 6



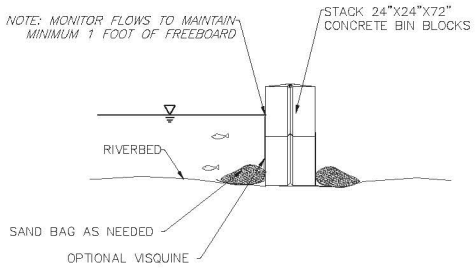
ALLUVIAL COFFER (TYP.)
SECTION VIEW–NTS
1 R5

PLAN VIEW

TYPICAL LAYOUT FOR STREAMS AND RIVERS
TO BE PLACED DOWNSTREAM OF
ANY EQUIPMENT WORKING IN THE WET

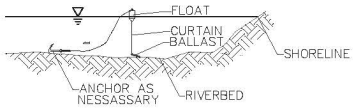


OIL BOOM (TYP.)
PLAN VIEW–NTS
2 R5

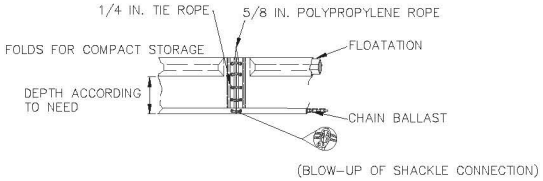


CONCRETE BARRIER COFFER DAM (TYP.)
SECTION VIEW–NTS
3 R5

ORIENTATION WHEN INSTALLED



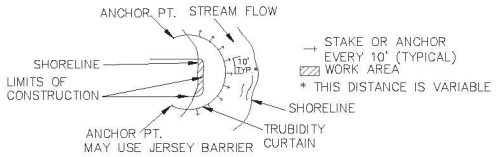
TURBIDITY CURTAIN (TYP.)
SECTION VIEW–NTS



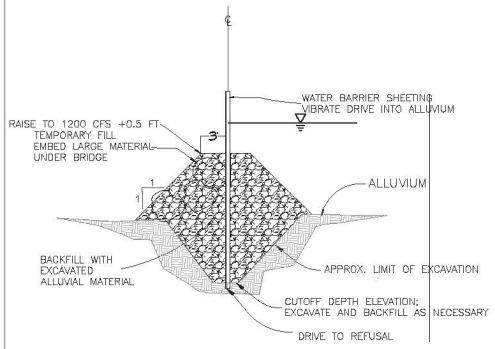
SILTMASTER II PERMEABLE GEOTEXTILE
DREDGE BARRIER NON–WOVEN DBNW
BY PARKERSYSTEMS OR EQUIVALENT

TURBIDITY CURTAIN (TYP.)
PROFILE VIEW–NTS

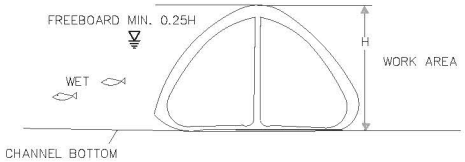
TYPICAL LAYOUTS
STREAMS, PONDS, AND LAKES (PROTECTED AND NON–TIDAL)



TURBIDITY CURTAIN (TYP.)
PLAN VIEW–NTS
4 R5

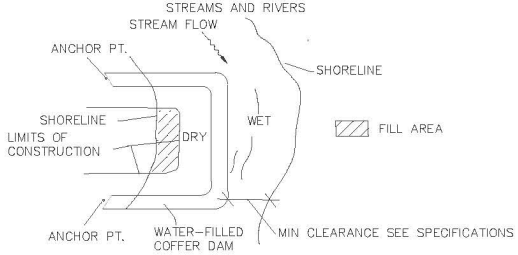


ALLUVIAL CHANNEL TEMPORARY SHEET PILING
5 R5



WATER FILLED COFFER DAM (TYP.)
SECTION VIEW–NTS

TYPICAL LAYOUTS
STREAMS AND RIVERS



WATER FILLED COFFER DAM (TYP.)
PLAN VIEW–NTS
6 R5

General Notes

GORE CANYON WHITEWATER FEATURE
AT PUMPHOUSE
CARE OF WATER DETAILS

APPROVED FOR CONSTRUCTION

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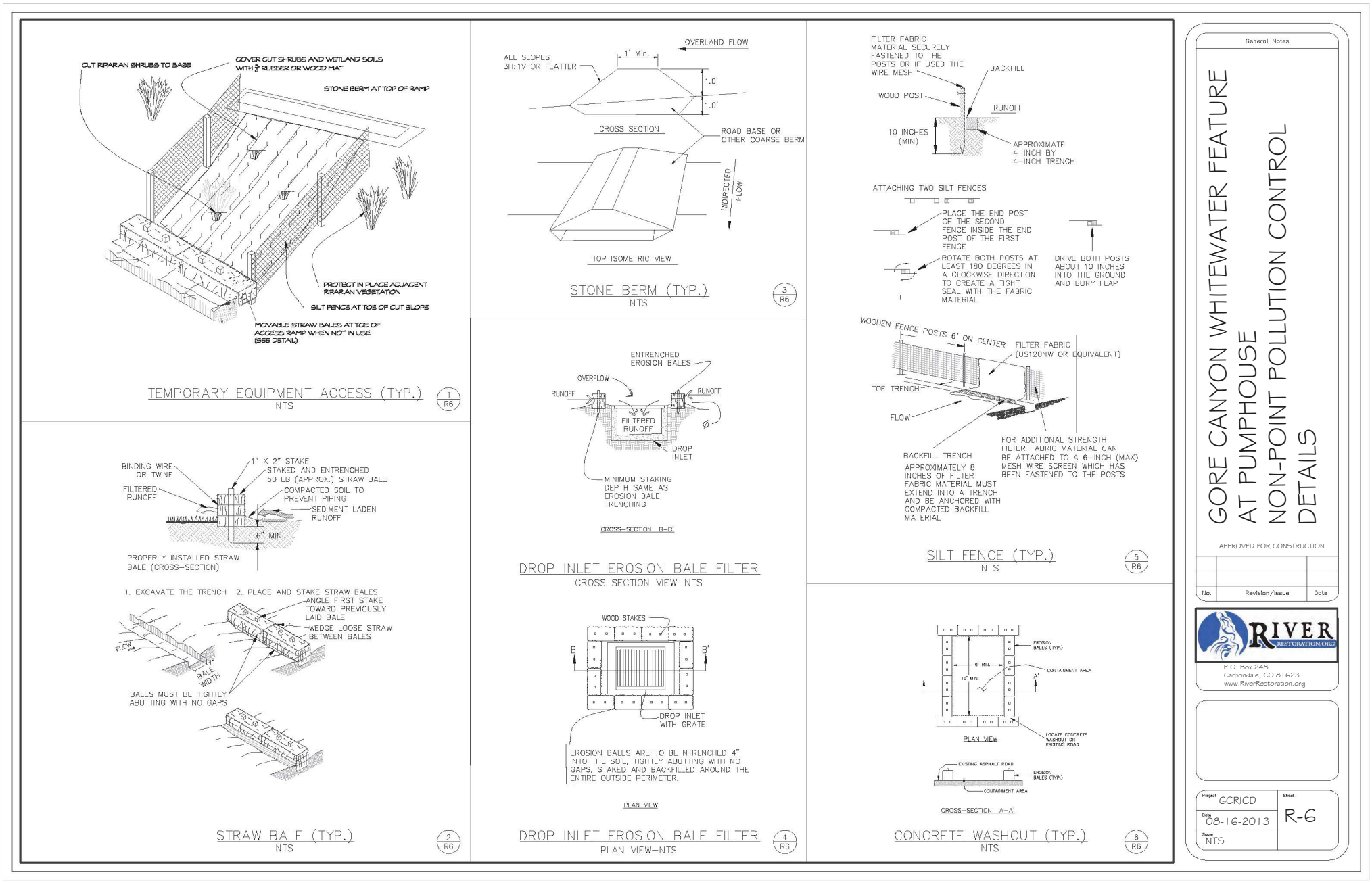
Figure 7


CUT RIPARIAN SHRUBS TO BASE
COVER CUT SHRUBS AND WETLAND SOILS WITH ⅜ RUBBER OR WOOD MAT
STONE BERM AT TOP OF RAMP
PROTECT IN PLACE ADJACENT RIPARIAN VEGETATION
SILT FENCE AT TOE OF CUT SLOPE
MOVABLE STRAW BALES AT TOE OF ACCESS RAMP WHEN NOT IN USE (SEE DETAIL)
TEMPORARY EQUIPMENT ACCESS (TYP.)
NTS
1 R6
OVERLAND FLOW
ALL SLOPES 3H:1V OR FLATTER
1' Min.
1.0'
1.0'
CROSS SECTION
ROAD BASE OR OTHER COARSE BERM
REDIRECTED FLOW
TOP ISOMETRIC VIEW
STONE BERM (TYP.)
NTS
3 R6
FILTER FABRIC MATERIAL SECURELY FASTENED TO THE POSTS OR IF USED THE WIRE MESH
BACKFILL
WOOD POST
RUNOFF
10 INCHES (MIN)
APPROXIMATE 4-INCH BY 4-INCH TRENCH
ATTACHING TWO SILT FENCES
PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE
ROTATE BOTH POSTS AT LEAST 180 DEGREES IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL
DRIVE BOTH POSTS ABOUT 10 INCHES INTO THE GROUND AND BURY FLAP
WOODEN FENCE POSTS 6' ON CENTER
FILTER FABRIC (US120NW OR EQUIVALENT)
TOE TRENCH
FLOW
BACKFILL TRENCH
APPROXIMATELY 8 INCHES OF FILTER FABRIC MATERIAL MUST EXTEND INTO A TRENCH AND BE ANCHORED WITH COMPACTED BACKFILL MATERIAL
FOR ADDITIONAL STRENGTH FILTER FABRIC MATERIAL CAN BE ATTACHED TO A 6-INCH (MAX) MESH WIRE SCREEN WHICH HAS BEEN FASTENED TO THE POSTS
SILT FENCE (TYP.)
NTS
5 R6
General Notes
GORE CANYON WHITEWATER FEATURE
AT PUMPHOUSE
NON-POINT POLLUTION CONTROL
DETAILS
APPROVED FOR CONSTRUCTION
No.
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BINDING WIRE OR TWINE
1" X 2" STAKE STAKED AND ENTRENCHED 50 LB (APPROX.) STRAW BALE
FILTERED RUNOFF
COMPACTED SOIL TO PREVENT PIPING
SEDIMENT LADEN RUNOFF
6" MIN.
PROPERLY INSTALLED STRAW BALE (CROSS-SECTION)
1. EXCAVATE THE TRENCH
2. PLACE AND STAKE STRAW BALES
ANGLE FIRST STAKE TOWARD PREVIOUSLY LAID BALE
WEDGE LOOSE STRAW BETWEEN BALES
FLOW
BALE WIDTH
BALES MUST BE TIGHTLY ABUTTING WITH NO GAPS
STRAW BALE (TYP.)
NTS
2 R6
ENTRENCHED EROSION BALES
OVERFLOW
RUNOFF
RUNOFF
FILTERED RUNOFF
DROP INLET
MINIMUM STAKING DEPTH SAME AS EROSION BALE TRENCHING
CROSS-SECTION B-B'
DROP INLET EROSION BALE FILTER
CROSS SECTION VIEW-NTS
WOOD STAKES
B
B'
DROP INLET WITH GRATE
EROSION BALES ARE TO BE NTRENCHED 4" INTO THE SOIL, TIGHTLY ABUTTING WITH NO GAPS, STAKED AND BACKFILLED AROUND THE ENTIRE OUTSIDE PERIMETER.
PLAN VIEW
DROP INLET EROSION BALE FILTER
PLAN VIEW-NTS
4 R6
EROSION BALES (TYP.)
8' MIN.
CONTAINMENT AREA
15' MIN.
A
A'
LOCATE CONCRETE WASHOUT ON EXISTING ROAD
PLAN VIEW
EXISTING ASPHALT ROAD
EROSION BALES (TYP.)
CONTAINMENT AREA
CROSS-SECTION A-A'
CONCRETE WASHOUT (TYP.)
NTS
6 R6