

WASHINGTON STATE PARKS & RECREATION COMMISSION

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DIANA DUPUIS, DIRECTOR



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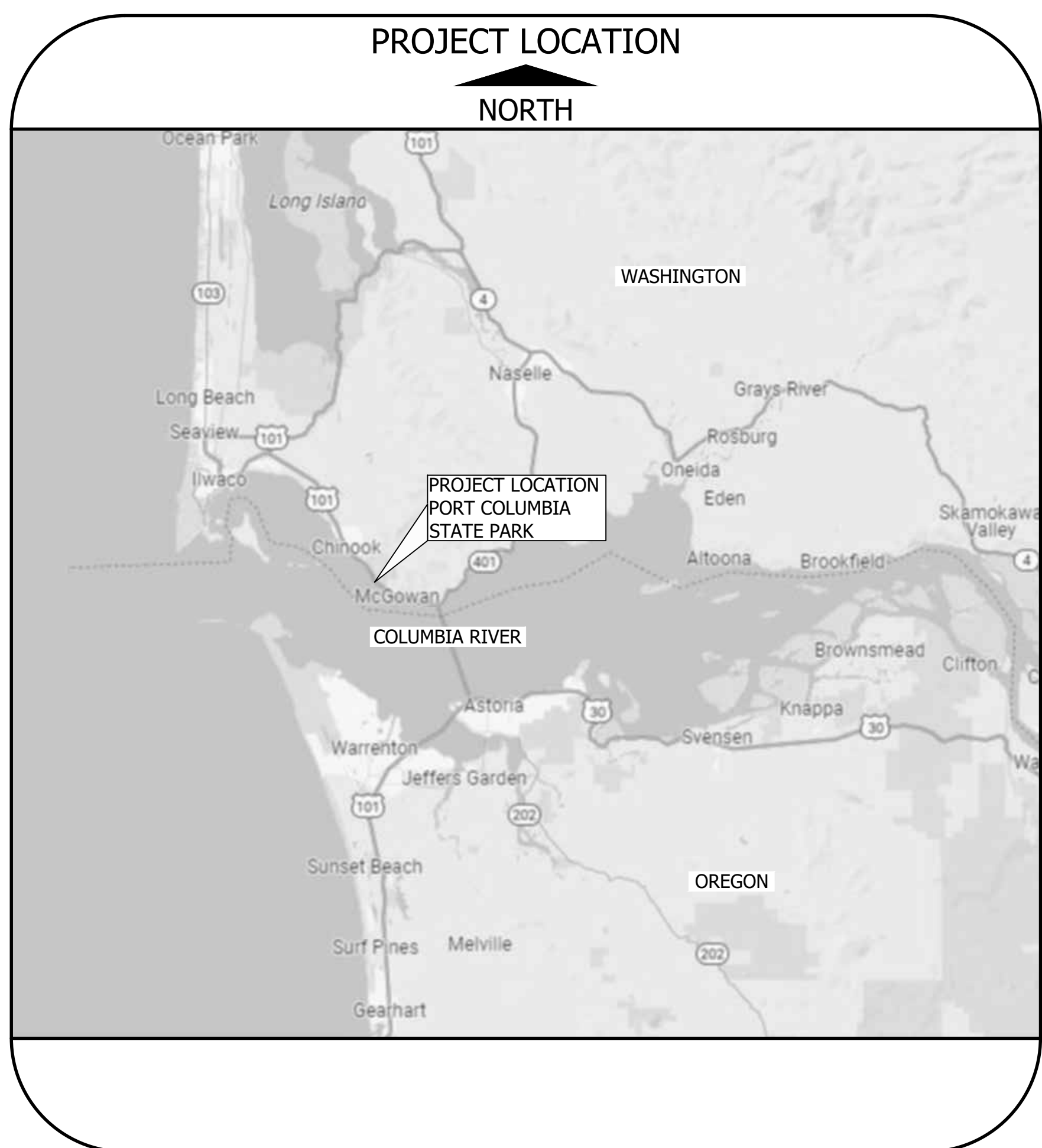
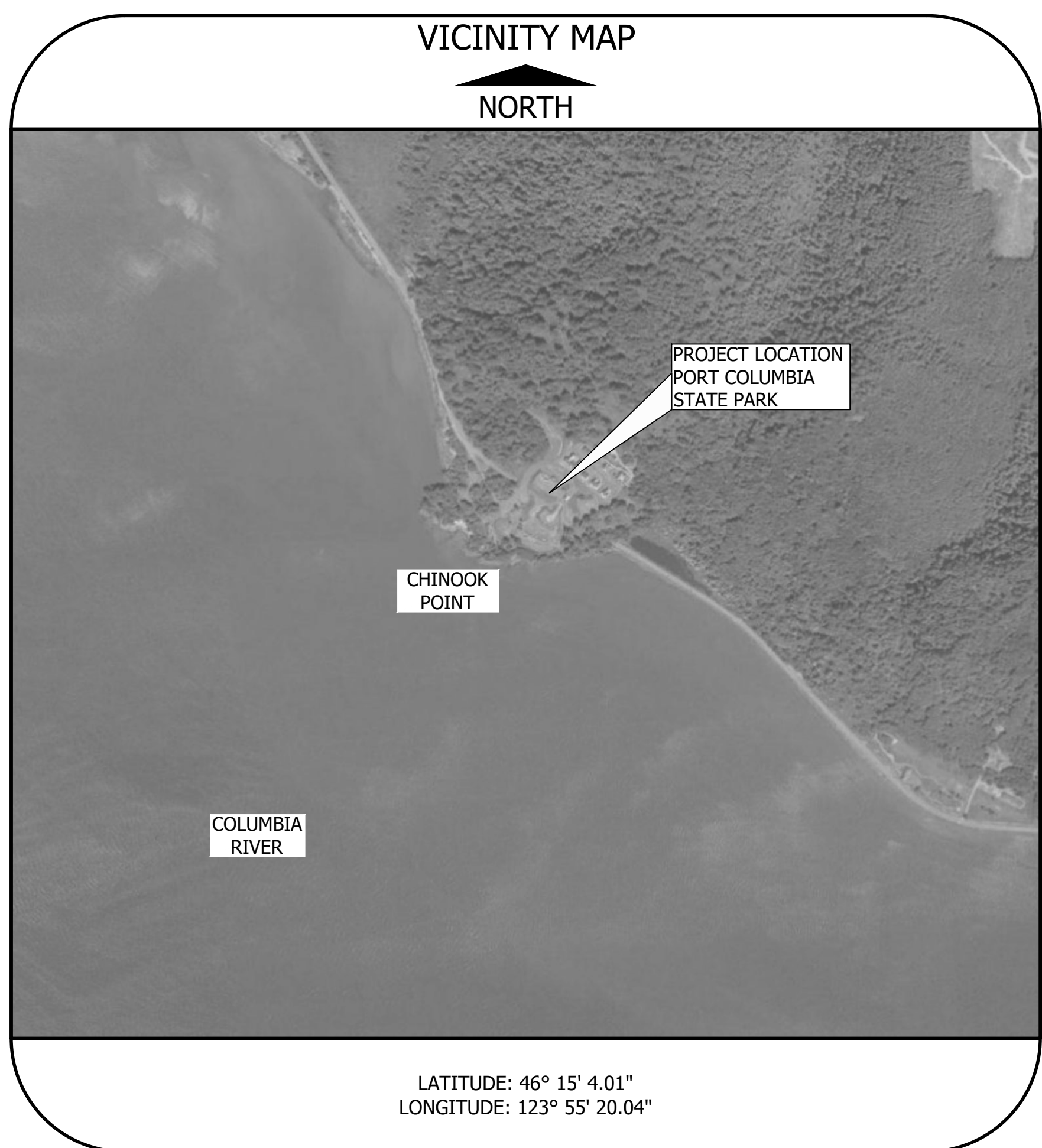
REGION MANAGERdate

CAPITAL PROGRAM MANAGERdate

AREA MANAGER: JASON ARMSTRONG

FORT COLUMBIA STATE PARK

WATERFRONT REPAIRS



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PROJECT TEAM

OWNER: STATE OF WASHINGTON
PARKS AND RECREATION COMMISSION
1111 ISRAEL ROAD SOUTHWEST
POST OFFICE BOX 42650
OLYMPIA, WASHINGTON 98504-2650
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OLYMPIA, WA 98512

TODD FELTON
SW REGION MAINTENANCE MANAGER
TELEPHONE: (360) 956-4809
TODD.FELTON@PARKS.WA.GOV



PROJECT ENGINEERING CONSULTANT

PROJECT LEAD:



moffatt & nichol

MOFFATT & NICHOL
600 UNIVERSITY ST.
SUITE 610
SEATTLE, WA 98101
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CIVIL ENGINEER
TELEPHONE: (206) 622-0222
apatterson@moffattnichol.com

CAD NO. D200-3718-2023

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PROJECT TEAM

SCALE
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PARKS FILE#



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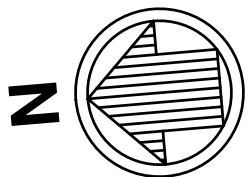
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SITE PLAN

SCALE
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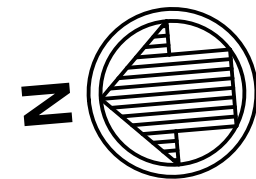
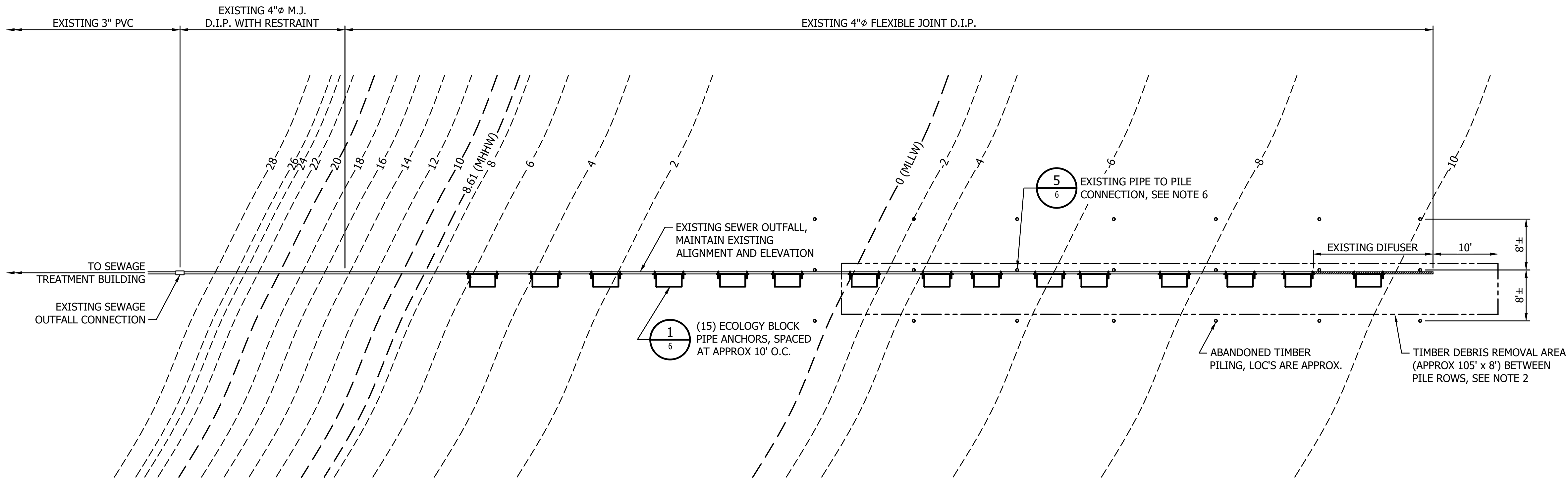
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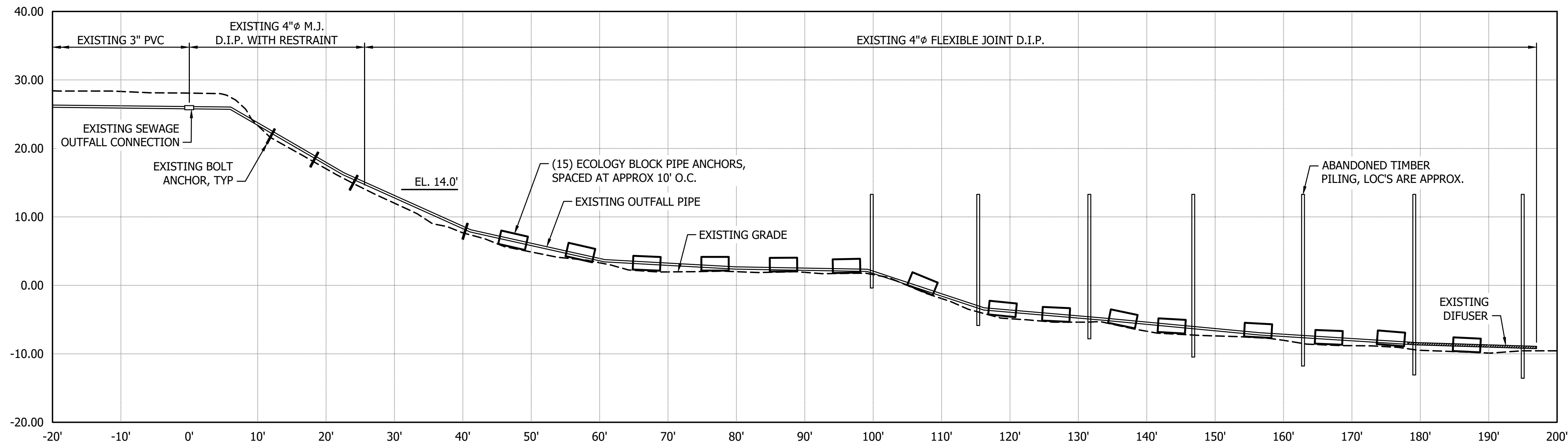
SITE PLAN
SCALE: 1" = 30'

NOTES:
1. PROJECT AREA IS NOT ACCESSIBLE FROM UPLAND AREAS.
ACCESS PROJECT AREA WITH WATER BASED EQUIPMENT.

30' 0' 30' 60'
SCALE: 1"=30'



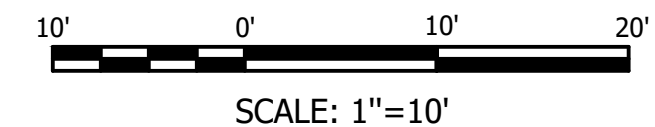
OUTFALL PLAN
SCALE: 1" = 10'



OUTFALL PROFILE
SCALE: 1" = 10'

NOTES:

1. PROTECT EXISTING OUTFALL PIPE IN PLACE DURING DEBRIS REMOVAL AND ANCHOR BLOCK INSTALLATION.
2. REMOVE TIMBER DEBRIS WITHIN THE LIMITS SHOWN TO FACILITATE INSTALLATION OF ECOLOGY BLOCK PIPE ANCHORS. REMOVE DEBRIS TO ALLOW ECOLOGY BLOCK ANCHORS TO BEAR ON EXISTING SUBSTRATE.
3. PROJECT AREA IS NOT ACCESSIBLE FROM UPLAND AREAS. ACCESS PROJECT AREA WITH WATER BASED EQUIPMENT
4. MAINTAIN OUTFALL PIPE ALIGNMENT BY PLACING ANCHOR BLOCKS AS CLOSE TO THE EXISTING OUTFALL PIPE AS POSSIBLE PRIOR TO ATTACHING U-BOLTS.
5. CONTRACTOR MAY ADJUST ANCHOR BLOCK LOCATIONS AS REQUIRED TO AVOID CONFLICTS WITH EXISTING PILES.
6. EXISTING SEWER OUTFALL SECURED TO EXISTING TIMBER PILING. ADJUST LOCATION OF ECOLOGY BLOCK PIPE ANCHORS TO MAINTAIN EXISTING CONNECTIONS TO PILES.



SHEET 5 OF 6

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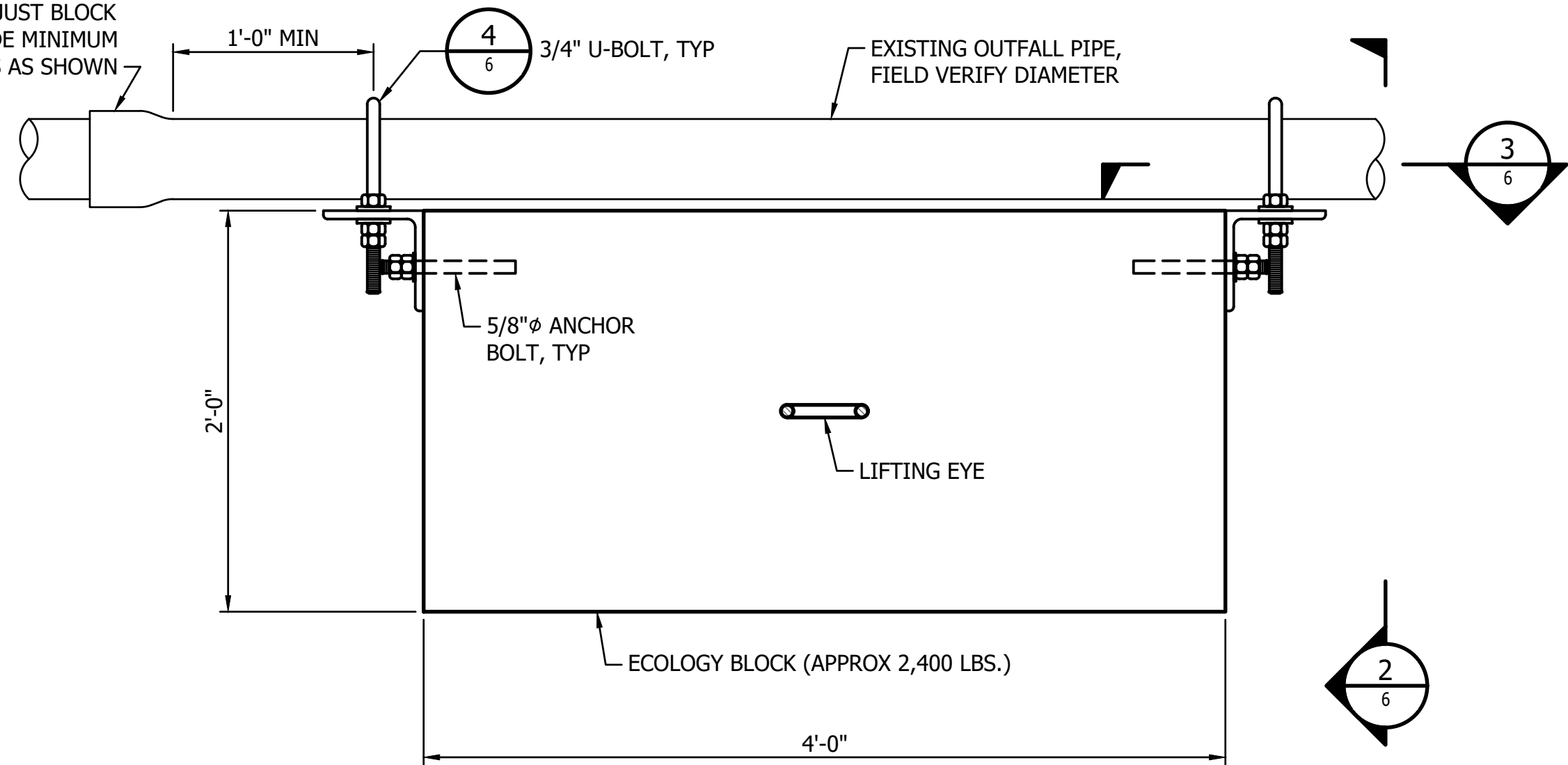
OUTFALL PLAN AND
PROFILE

SCALE

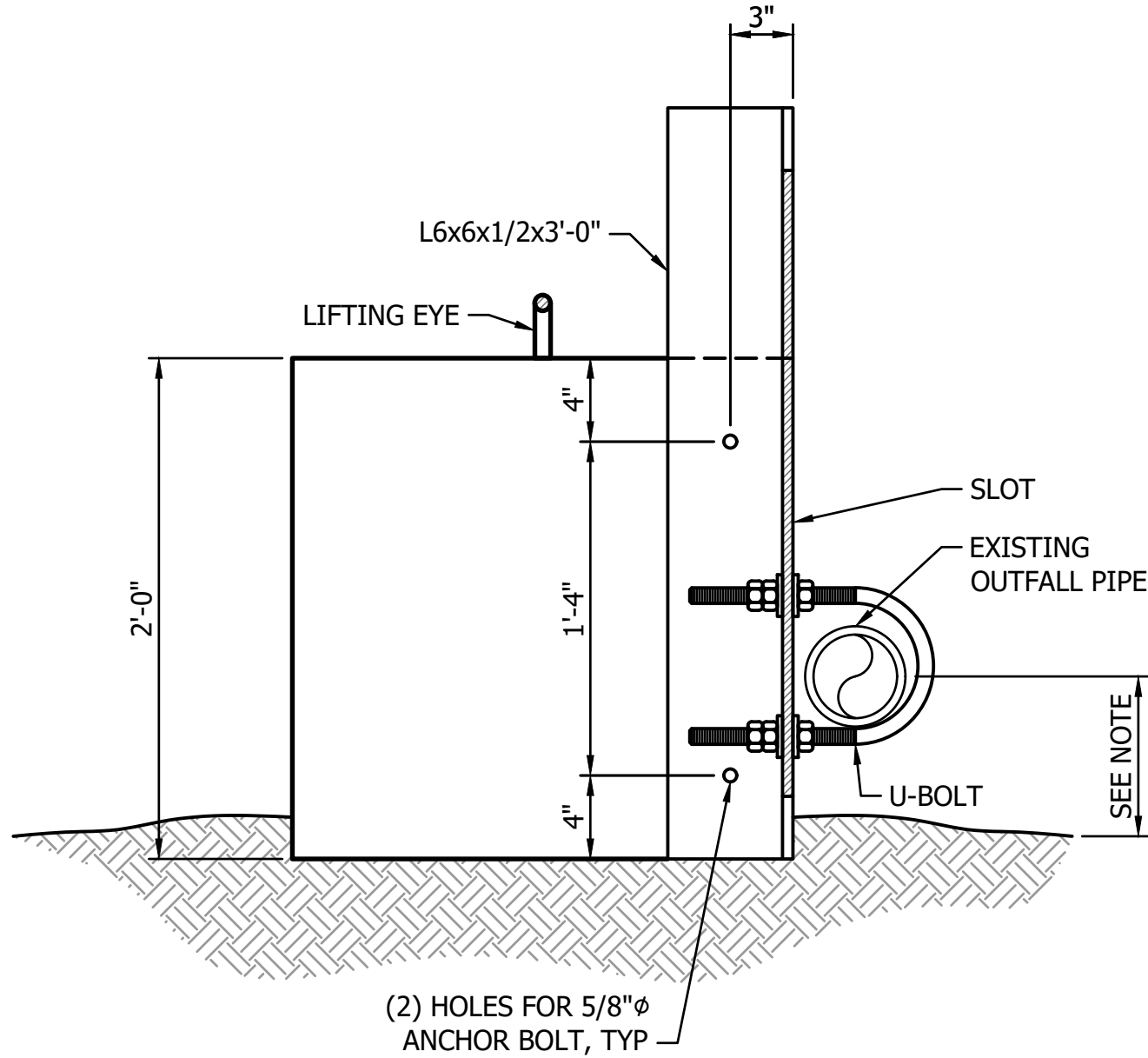
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PIPE JOINT LOCATIONS VARY. FIELD LOCATE PRIOR TO INSTALLATION OF ANCHOR BLOCKS. ADJUST BLOCK LOCATIONS TO PROVIDE MINIMUM OFFSET FROM JOINTS AS SHOWN

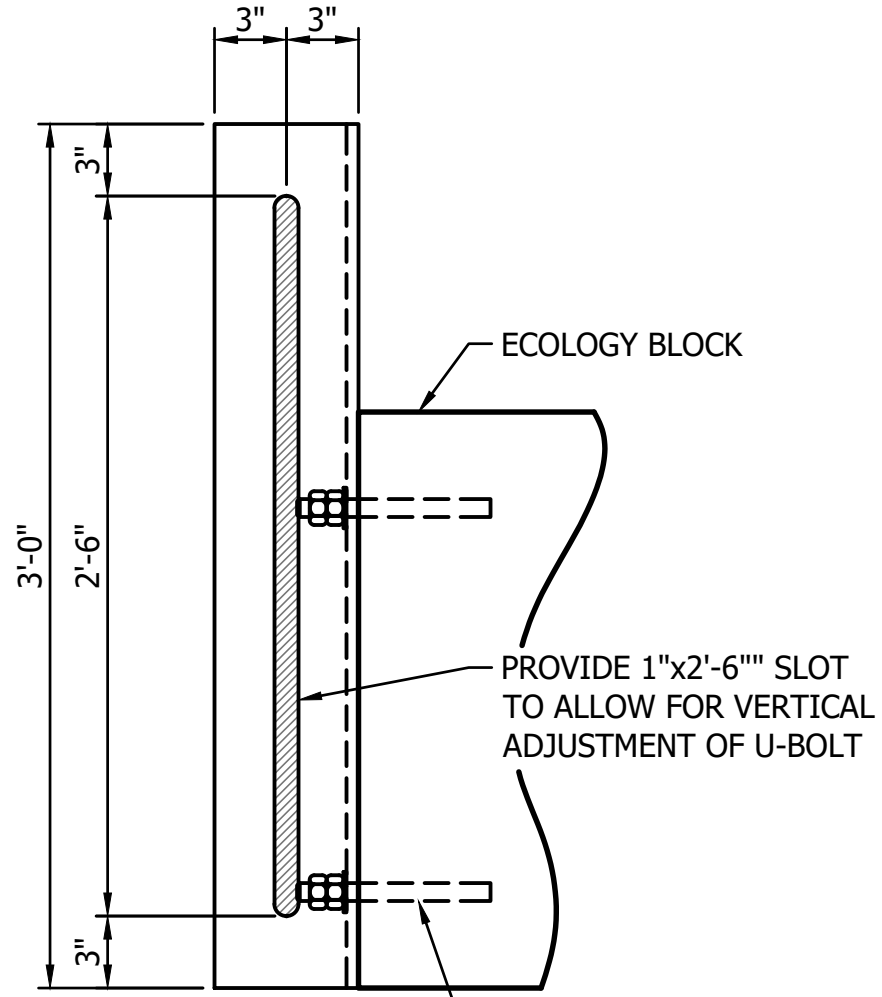


1 ECOLOGY BLOCK PIPE ANCHOR PLAN
SCALE: 1-1/2" = 1'-0"



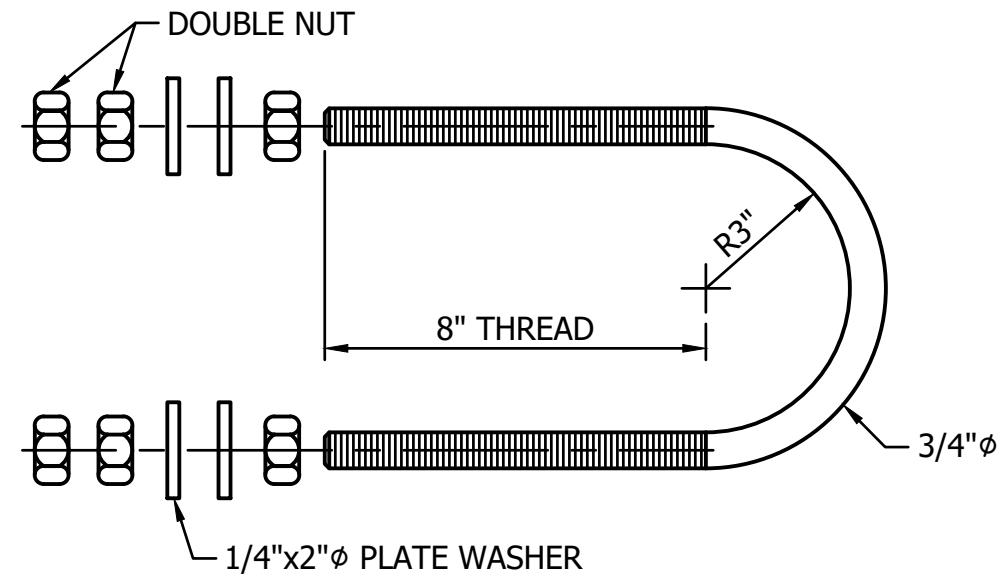
NOTE:
OUTFALL ELEVATION ABOVE MUDLINE VARIES. ADJUST U-BOLT ELEVATION TO MAINTAIN EXISTING PIPE ELEVATION.

2 ECOLOGY BLOCK PIPE ANCHOR SECTION
SCALE: 1-1/2" = 1'-0"



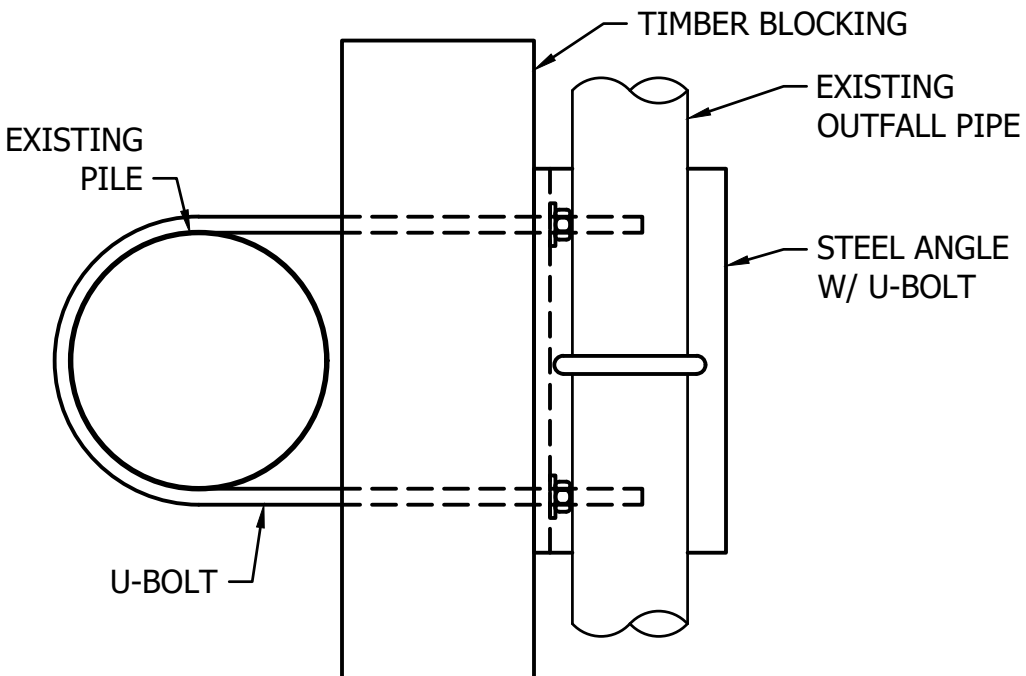
NOTE:
U-BOLT AND OUTFALL PIPE NOT SHOWN FOR CLARITY.

3 ECOLOGY BLOCK PIPE ANCHOR SECTION
SCALE: 1-1/2" = 1'-0"



NOTE:
VERIFY EXISTING PIPE DIAMETER PRIOR TO FABRICATION OF U-BOLTS.

4 U-BOLT DETAIL
SCALE: 3" = 1'-0"



NOTE:
EXISTING PIPE / PILING STRAP LOCATIONS VARY. FIELD LOCATE PRIOR TO INSTALLATION OF ANCHOR BLOCKS. ADJUST ANCHOR BLOCK LOCATIONS TO PROVIDE 1-FT CLEAR DISTANCE FROM PILING.

5 EXISTING PIPE PILING STRAP DETAIL
SCALE: 3" = 1'-0"

NOTES:

- ALL STEEL COMPONENTS AND FASTENERS SHALL BE HOT DIPPED GALVANIZED.
- ALL FASTENERS SHALL BE SECURED WITH DOUBLE NUTS.
- PROVIDE 1/4"x2" PLATE WASHER FOR U-BOLT CONNECTION.
- CONCRETE ANCHORS MAY BE CAST-IN-PLACE OR POST INSTALLED WITH A MINIMUM EMBEDMENT DEPTH OF 6".
- ANCHOR ROD SHALL BE HILTI HAS-V-36-HDG OR APPROVED EQUAL.
- EPOXY FOR POST INSTALLED RODS SHALL BE HILTI HIT-HY-100 OR APPROVED EQUAL.

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