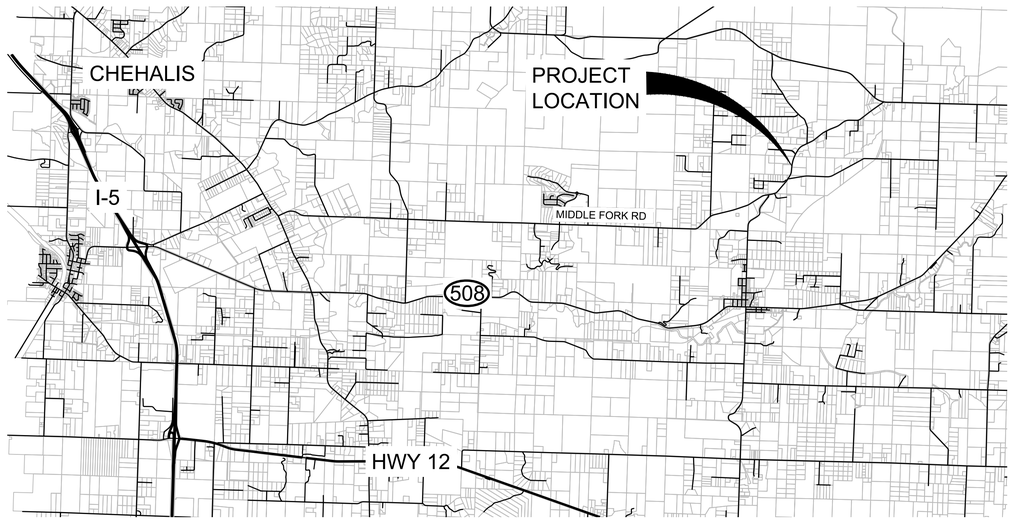
S17, T13N, R1E

MIDDLE FORK NEWAUKUM FISH PASSAGE PROJECT

MP 7.07 OF MIDDLE FORK ROAD
LEWIS COUNTY PUBLIC WORKS



SITE VICINITY MAP
SCALE: 1" = 1 Mile (@ 22X34)

CONTACT INFORMATION:

OWNER:
LEWIS COUNTY PUBLIC WORKS
2025 NE KRESKY AVE
CHEHALIS, WA 98532
PHONE: (360) 740-1123
WWW.LEWISCOUNTYWA.GOV

CIVIL ENGINEER:
PBS ENGINEERING + ENVIRONMENTAL
1180 NW MAPLE STREET, SUITE 160
ISSAQUAH, WA 98027
PHONE: (425) 654-8775
FAX: (866) 727-0140

DAVE SEGAL, PE
PROJECT ENGINEER
E-MAIL: DAVE.SEGAL@PBSUSA.COM

RICH DARLAND, PE
PROJECT MANAGER
E-MAIL: RICH.DARLAND@PBSUSA.COM

COMMISSIONERS:

EDNA FUND, DISTRICT 1
ROVERT C. JACKSON, DISTRICT 2
GARY STAMPER, DISTRICT 3

SURVEY CONTROL:
HORIZONTAL DATUM: WASHINGTON STATE PLANE COORDINATE SYSTEM - SOUTH ZONE, NAD 1983/91, RTK METHOD

VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD-88)

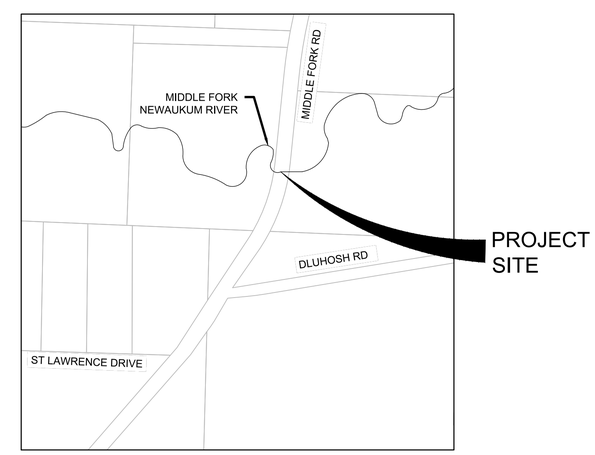
BASIS OF BEARING: WASHINGTON STATE PLANE COORDINATE SYSTEM - SOUTH ZONE, NAD 1983/91

BASIS OF COORDINATES:

POINT DESIGNATION: 20
LC REBAR APPROX 240 FEET SW OF EXIST CULVERT CROSSING ON S SIDE OF PIGEON SPRINGS RD.
NORTHING: 477588.3206 (MEASURED)
EASTING: 1104685.1669 (MEASURED)

Sheet Index

SHT #	Category #	Sheet Title
1	G01	COVER SHEET
2	G02	LEGEND
3	EC01	TESC AND DEWATERING PLAN
4	C01	STREAM AND STRUCTURE PLAN AND PROFILE
5	C02	ROADWAY PLAN AND PROFILE
6	C03	ROADWAY SECTIONS AND DETAILS
7	D01	DETAILS
8	D02	DETAILS
9	L01	LANDSCAPE PLAN



SITE LOCATION MAP
SCALE: 1" = 300' (@ 22X34)

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COVER SHEET
MIDDLE FORK NEWAUKUM FISH PASSAGE PROJECT
MP 7.07 OF MIDDLE FORK ROAD

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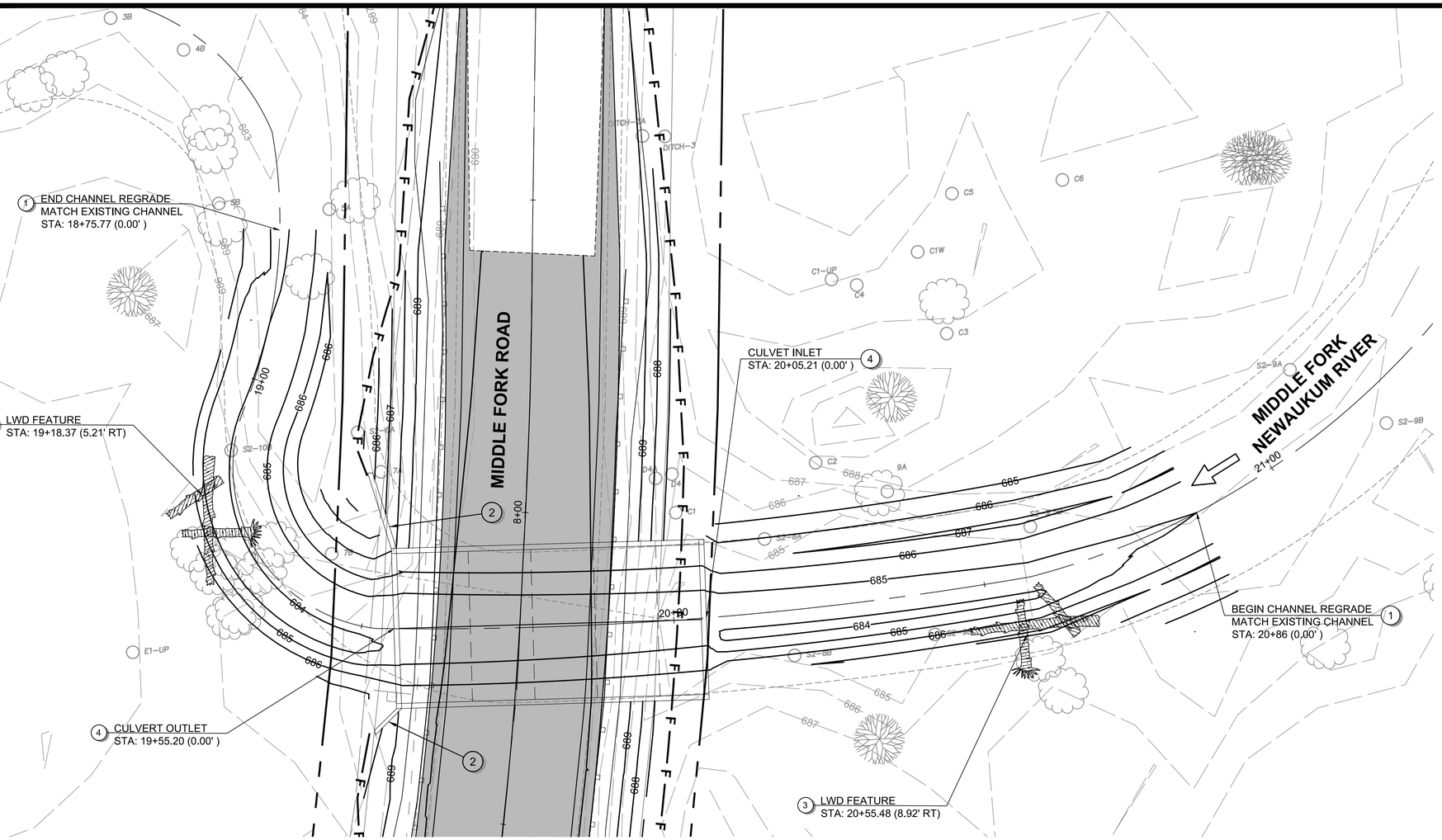


Scale 1" = 10'

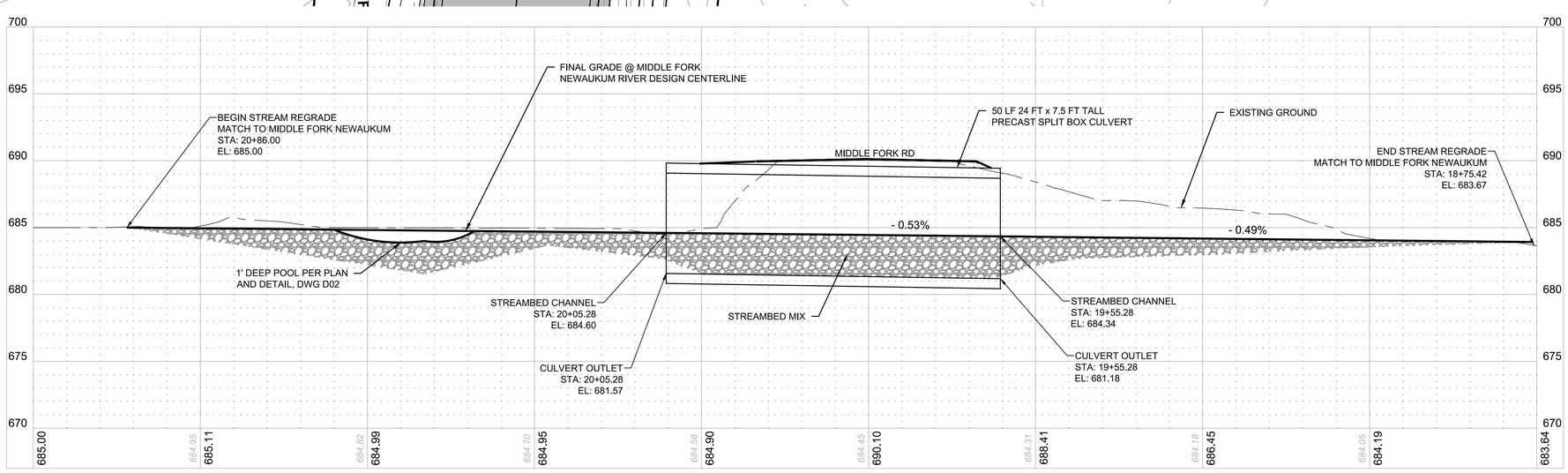
0 5 10 20

CONSTRUCTION PLAN NOTES:

1. RECONSTRUCT CREEK CHANNEL PER DETAIL, SEE DWG D02
2. INSTALL PRECAST CONCRETE WINGWALL PER DETAIL, SEE DWG D01
3. INSTALL LARGE WOODY DEBRIS FEATURES PER DETAIL, SEE DWG D02
4. INSTALL 50 LF 24-FT x 7.5-FT BOX CULVERT. PER DETAIL, SEE DWG D01

GENERAL NOTES:

1. THALWEG AND WOODY DEBRIS ARE TO BE PLACED AS SHOWN ON PLANS. MINOR CHANGES TO THE LOG FEATURES CAN BE MADE IN THE FIELD BY THE CONTRACTOR IF APPROVED BY THE ON-SITE REPRESENTATIVE.



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STREAM AND STRUCTURE PLAN AND PROFILE
MIDDLE FORK NEWAUKUM FISH PASSAGE PROJECT
MP 7.07 OF MIDDLE FORK ROAD

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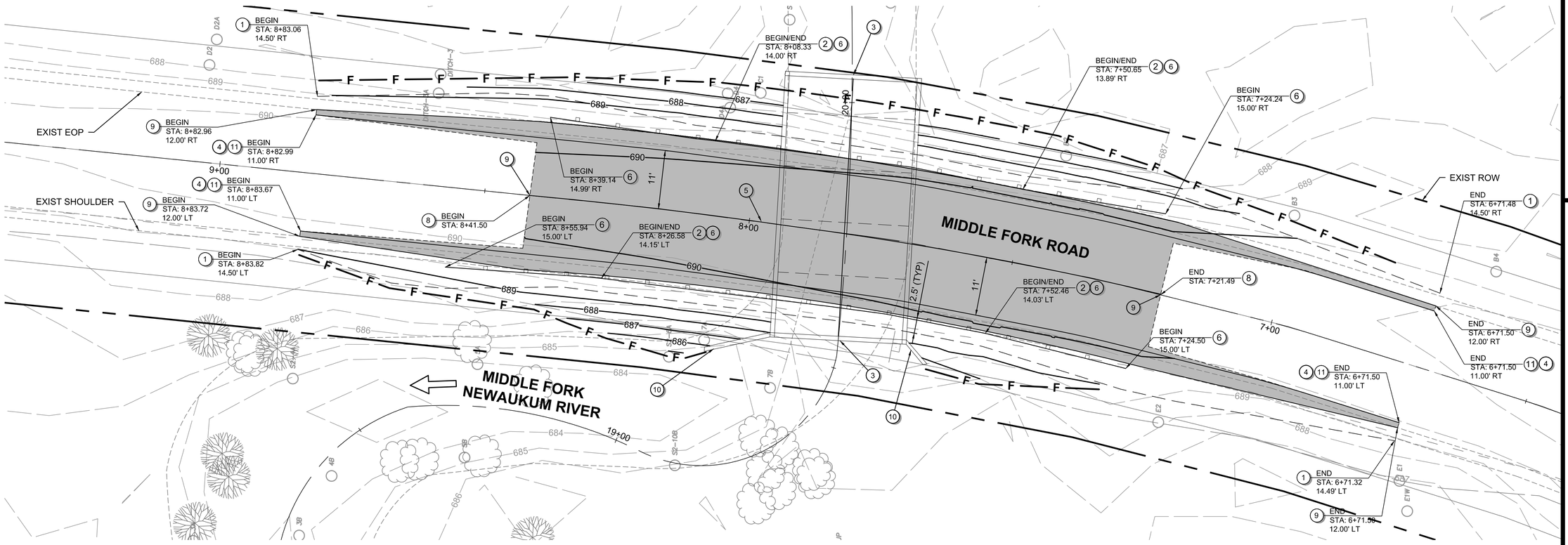

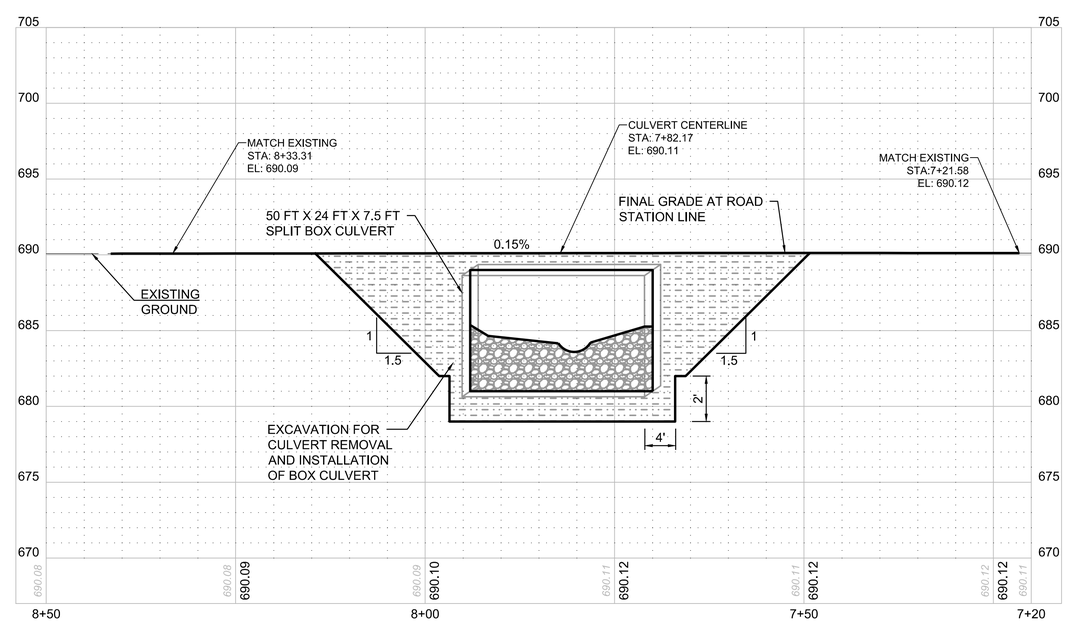

CONSTRUCTION PLAN NOTES:

1. SHOULDER WIDENING
2. BEAM GUARDRAIL TYPE 31, PER WSDOT STD PLAN C-20.10-04 WITH 6' POSTS, OUTSIDE OF CULVERT, STD PLAN C20.41-01 OVER CULVERT
3. 45-LF PRECAST SPLIT BOX CULVERT PER DETAIL, SEE DWG D01
4. PAINT LINE (WHITE)
5. PAINT LINE (DOUBLE CENTER YELLOW)
6. BEAM GUARDRAIL TYPE 31 SKT-SP-MGS (TL-2) NON-FLARED TERMINAL PER WSDOT STD PLAN C-22.45-03
8. HMA PAVEMENT (SEE SECTION DETAIL, DWG DO1)
9. SAWCUT
10. CONCRETE WINGWALL
11. HMA WIDENING

Scale 1" = 10'

0 5 10 20

GENERAL NOTES:

1. GUARDRAIL STATION OFFSET LOCATIONS ARE TO FACE OF GUARDRAIL W-BEAM.
2. GUARDRAIL POSTS ARE STEEL UNLESS OTHERWISE NOTED OR REQUIRED IN THE STANDARD PLANS.
3. SEE DWG C03 FOR TYPICAL ROAD SECTION.
4. FOR GUARDRAIL POST ABOVE CULVERT, USE TYPE 31 STEEL POST PER WSDOT STD PLAN C-20.41-01. DO NOT AFFECT STEEL REINFORCING WHEN DRILLING FOR ANCHORS.

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ROADWAY PLAN AND PROFILE

MIDDLE FORK NEWAUKUM FISH PASSAGE PROJECT

MP 7.07 OF MIDDLE FORK ROAD

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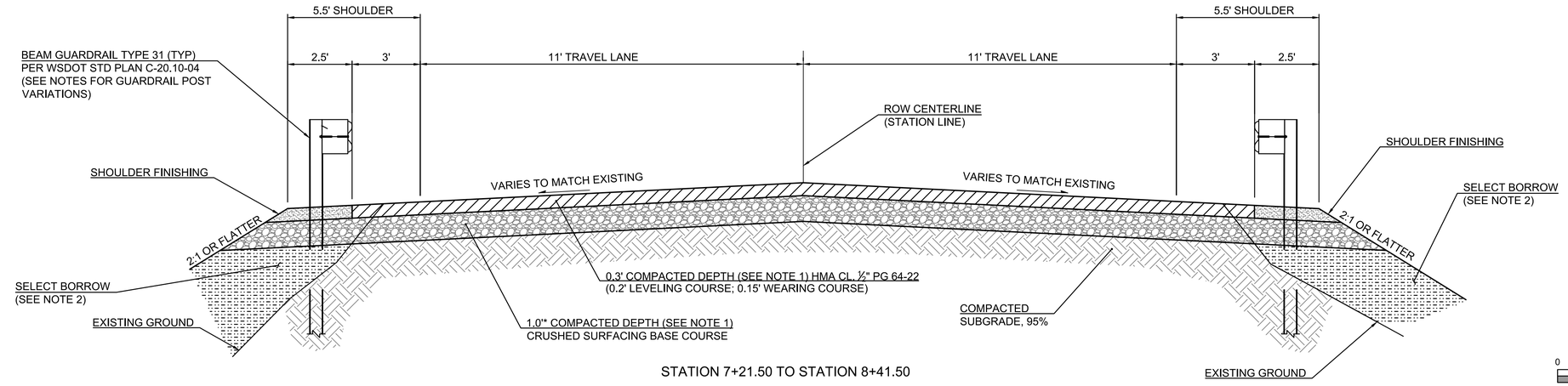
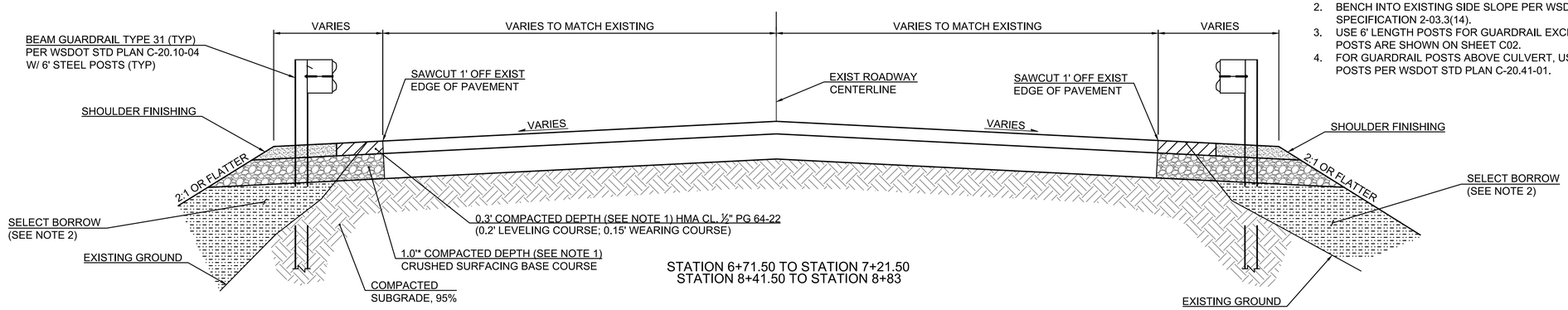


STATION 7+21.50 TO STATION 8+41.50



STATION 6+71.50 TO STATION 7+21.50
STATION 8+41.50 TO STATION 8+83

1 TYPICAL ROAD RESTORATION SECTION

NOT TO SCALE

Scale 1" = 10'

0 5 10 20

NOTES:

1. APPROXIMATE COMPACTED DEPTH. MATCHING EXISTING, TWO EQUAL LIFTS
2. BENCH INTO EXISTING SIDE SLOPE PER WSDOT STANDARD SPECIFICATION 2-03.3(14).
3. USE 6' LENGTH POSTS FOR GUARDRAIL EXCEPT WHERE 8' LENGTH POSTS ARE SHOWN ON SHEET C02.
4. FOR GUARDRAIL POSTS ABOVE CULVERT, USE TYPE 31 STEEL POSTS PER WSDOT STD PLAN C-20.41-01.

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ROADWAY SECTIONS AND DETAILS

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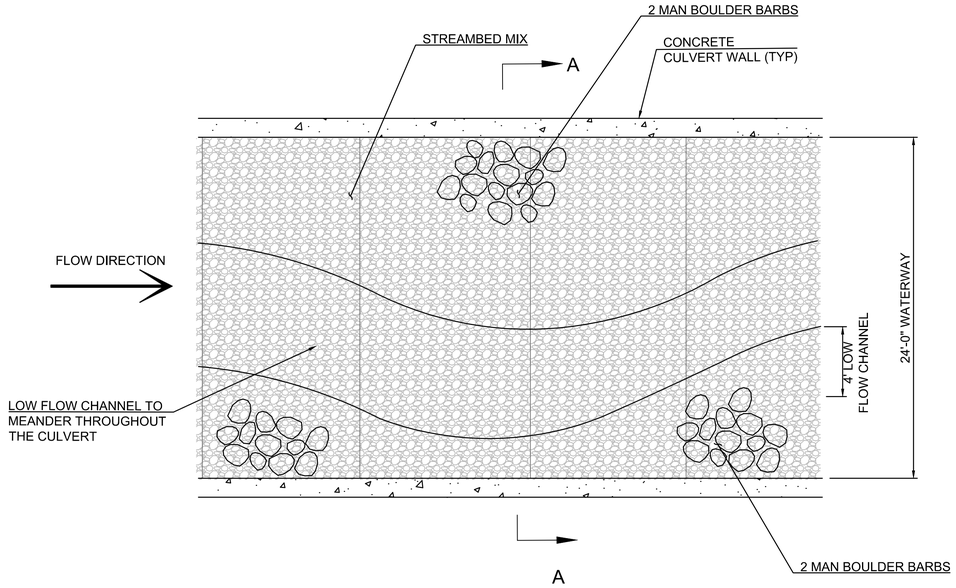


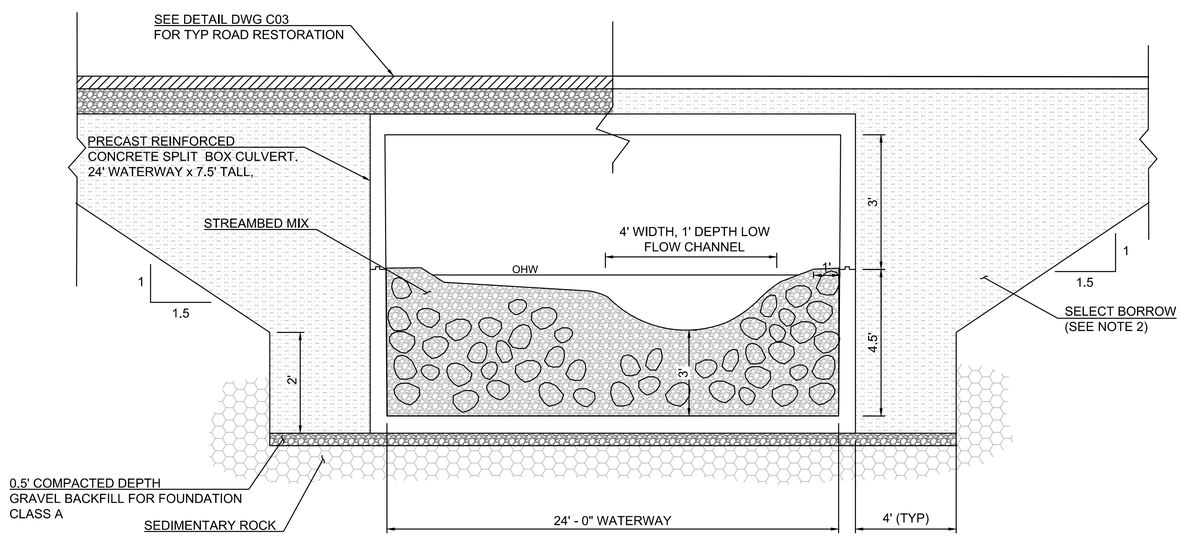
PLAN VIEW

GENERAL NOTES:

1. LARGE WOODY DEBRIS FEATURES AND THALWEG LOCATIONS ARE TO BE PLACED AS SHOWN ON PLANS. MINOR CHANGES TO THE WOOD FEATURES CAN BE MADE IN THE FIELD BY THE CONTRACTOR IF APPROVED BY THE ON-SITE REPRESENTATIVE.

2. STREAMBED MIX: TWO PARTS 3" STREAMBED COBBLES SHALL BE MIXED THOROUGHLY WITH TWO PART STREAMBED SEDIMENT. TWO-MAN STREAMBED BOULDERS SHALL BE ADDED TO THE STREAMBED MIX AND PLACED AS DIRECTED BY THE ENGINEER.

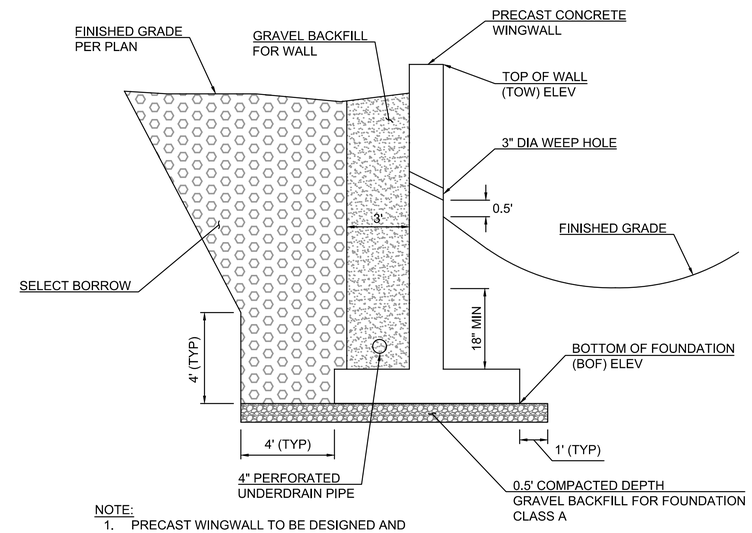
3. STREAMBED SEDIMENT IS TO PROVIDE STABILITY TO THE COBBLE MIX AND BE PLACED IN AREA OF VOIDS TO CREATE A UNIFORM, NON-POROUS BED.



NOTE:
1. NO BACKFILL GREATER THAN 3" SHALL BE AGAINST THE BOX CULVERT.

SECTION A-A

1 **PRECAST SPLIT BOX CULVERT**
NOT TO SCALE



NOTE:
1. PRECAST WINGWALL TO BE DESIGNED AND PROVIDED BY CULVERT SUPPLIER. ENGINEER TO APPROVE DESIGN PRIOR TO CONSTRUCTION.

2 **PRECAST CONCRETE WINGWALL**
NOT TO SCALE

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DETAILS
MIDDLE FORK NEWAUKUM FISH PASSAGE PROJECT
MP 7.07 OF MIDDLE FORK ROAD

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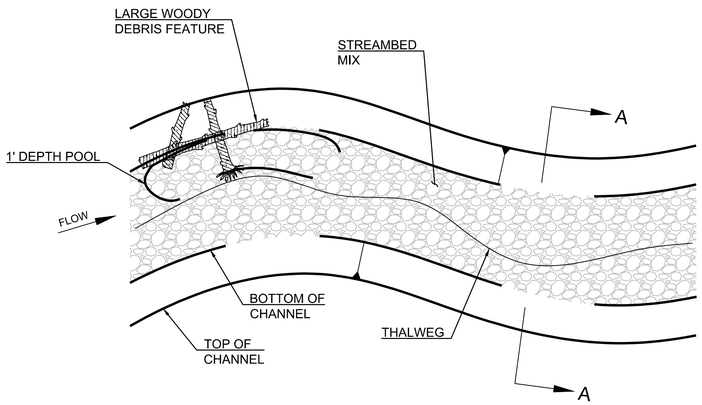


CHANNEL PLAN

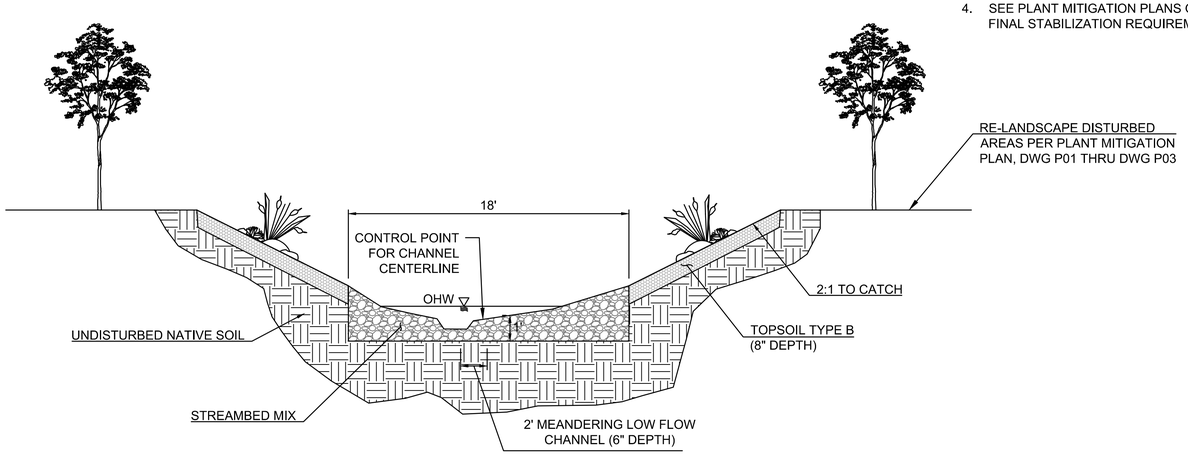
GENERAL NOTES:

1. LARGE WOODY DEBRIS FEATURES AND THALWEG LOCATIONS ARE TO BE PLACED AS SHOWN ON PLANS. MINOR CHANGES TO THE WOOD FEATURES CAN BE MADE IN THE FIELD BY THE CONTRACTOR IF APPROVED BY THE ON-SITE REPRESENTATIVE.

2. STREAMBED MIX: THREE PARTS 6" STREAMBED COBBLES SHALL BE MIXED THOROUGHLY WITH ONE PART STREAMBED SEDIMENT AND ONE PART STREAMBED BOULDERS. TWO-MAN STREAMBED BOULDERS SHALL BE ADDED TO THE STREAMBED MIX AND PLACED AS DIRECTED BY THE ENGINEER.

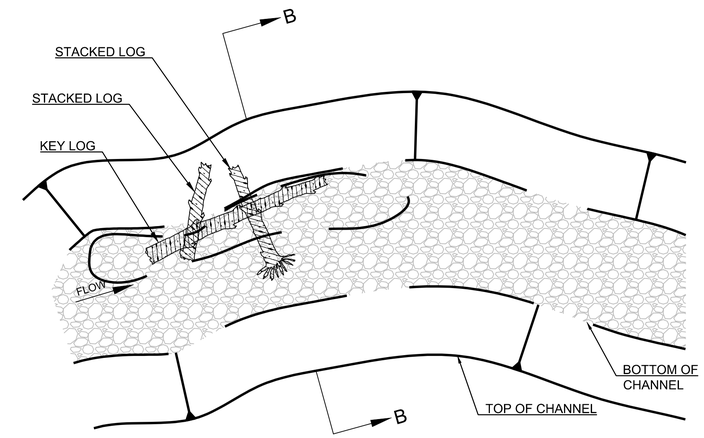
3. STREAMBED SEDIMENT IS TO PROVIDE STABILITY TO THE COBBLE MIX AND BE PLACED IN AREA OF VOIDS TO CREATE A UNIFORM, NON-POROUS BED.

4. SEE PLANT MITIGATION PLANS ON DWG P01-P03 FOR FINAL STABILIZATION REQUIREMENTS.

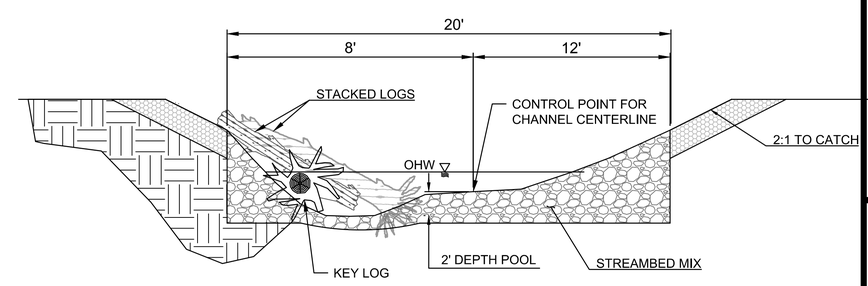


CHANNEL SECTION A-A

1 **MIDDLE FORK NEWAUKUM CHANNEL**
NOT TO SCALE



LARGE WOODY DEBRIS PLAN



LARGE WOODY DEBRIS SECTION B-B

2 **LARGE WOODY DEBRIS FEATURE**
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DETAILS

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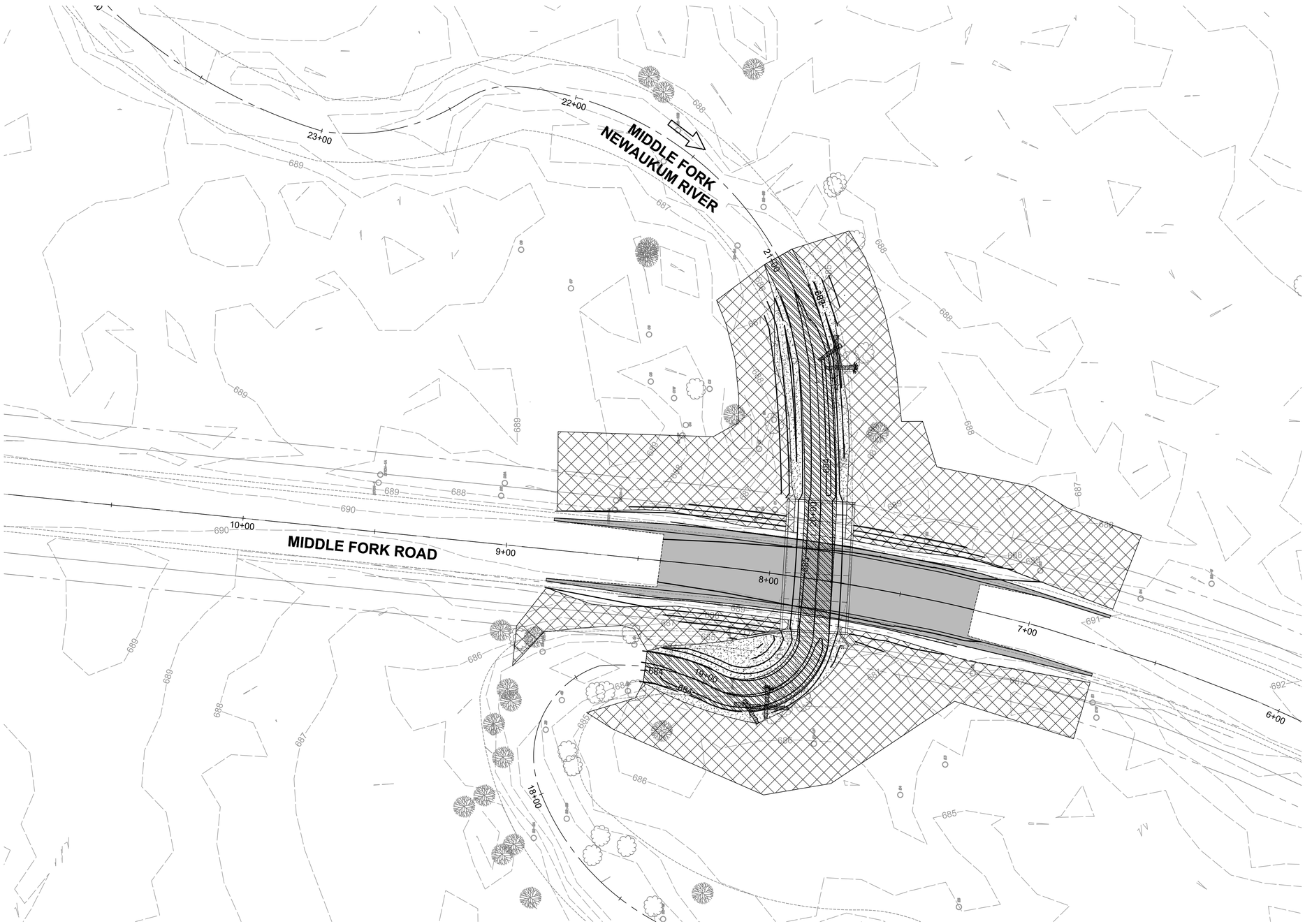

LEGEND:

ZONE A - DISTURBED AREA BELOW THE ORDINARY HIGH WATER MARK

ZONE B - DISTURBED AREA ABOVE THE ORDINARY HIGH WATER MARK

ZONE C - DISTURBED AREA FROM GRADING AND CONSTRUCTION ACTIVITIES

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LANDSCAPE PLAN
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