Impact Example Plan Sheets

The intent of the Impact Plan Sheet Toolkit is to provide guidance on how impacts to waters of the U.S. (WOTUS) and state-mandated buffers should be measured, classified, highlighted, and labeled on plan sheets submitted with Georgia Department of Transportation (GDOT) Ecology Resource Survey and Assessment of Effects Reports (ERS AOE), ERS AOE Addenda, U.S. Army Corps of Engineers (USACE) Section 404 Clean Water Act Pre-Construction Notifications (PCNs) and Individual Permit applications, and Georgia Environmental Protection Division (EPD) buffer variance applications to facilitate agency review, as well as GDOT QA/QC review, of such documents. The Impact Plan Sheet Toolkit also shows how orange barrier fencing (OBF) should typically be drawn to avoid or minimize impacts to WOTUS and state-mandated buffers where practicable.

In addition, the Impact Plan Sheet Toolkit demonstrates how roadway drainage structure exemption (RDSE) areas--applicable to state-mandated buffer encroachments--should be drawn for bridges and culverts on GDOT projects. RDSE areas should be buffered 50 feet around the entire culvert (including wing walls) and 100 feet around bridge structures, as shown in the following examples.

Example 1. Box Culvert RDSE Area

Example 2. Pipe Culvert RDSE Area
Example 3. Bridge RDSE Area

Please note that non-exempt disturbances to state-mandated buffers are not to be highlighted on plans submitted with an ERS AOE, Addendum, or USACE permit applications. The highlighted and labeled non-exempt buffer disturbances provide examples of how plan sheets should be submitted with an EPD buffer variance application. Please refer to the Buffer Variance Guidebook for more information regarding determining non-exempt buffer disturbances and buffer variance exemptions (e.g., RDSE).

Please note that these plan sheets are only examples and do not cover all possible scenarios of impacts, OBF usage, and RDSE areas that may occur on GDOT projects. Please contact the GDOT Ecologist or Ecology Team Leader if unsure of how impacts should be measured, classified, highlighted or labeled; or how OBF or RDSE areas should be drawn on plan sheets.

User notes included in blue font on the Impact Example Plan Sheets are intended only to provide guidance and/or clarification, and should not be included in plans submitted with an ecology document, Section 404 PCN or permit application, or buffer variance application. Notes in black font are examples of typical plan notes included on GDOT project plans by Design for use by the construction or maintenance contractor. However, as warranted, the Ecologist shall coordinate with Design to ensure all such plan notes are accurate and sufficient as they pertain to ecological resources of concern, or to activities affecting (or, having a potential to affect) ecological resources of concern. The Ecologist shall also coordinate with the Design Engineer, as needed, to ensure that Environmentally Sensitive Area (ESA) labels and line types are properly depicted on project plans.
EXAMPLE IMPACT SHEET FOR PERMITTING GUIDANCE

1. This Plan Sheet is an example of non-exempt buffer disturbance under buffer variance criteria 2(A) and 2(H). Disturbance to 1,341 SF qualifies for a variance under criterion 2(A) and disturbance to 164 SF qualifies for a variance under criterion 2(H).

INTERMITTENT STREAM 4 NON-EXEMPT BUFFER DISTURBANCE
TOTAL RESOURCE: 1,341 SQUARE FEET (74 LINEAR FEET)
BUFFER VARIANCE CRITERION 2(H)

INTERMITTENT STREAM 4 NON-EXEMPT BUFFER DISTURBANCE
TOTAL RESOURCE: 164 SQUARE FEET (40 LINEAR FEET)
BUFFER VARIANCE CRITERION 2(A)

WETLAND 3 IMPACTS TOTAL RESOURCE
CLEARING AND GRUBBING IMPACTS (PERMANENT/REOCCURRING) - 0.01 ACRE
DISCHARGE OF FILL IMPACTS

NON-EXEMPT BUFFER DISTURBANCE
EXAMPLE IMPACT SHEET FOR PERMITTING GUIDANCE

NOT FOR CONSTRUCTION
EXAMPLE IMPACT SHEET FOR PERMITTING GUIDANCE

NOT FOR CONSTRUCTION

PROPERTY AND EXISTING R/W LINE
REHAB R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR
EASEMENT FOR DRIVES
REHAB R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR
EASEMENT FOR DRIVES

WETLAND IMPACTS TOTAL RESOURCE:
- DISCHARGE OF FILL (PERMANENT/REOCcurring) = 0.00 ACRE
- CLEARING AND GRUBBING (PERMANENT/REOCcurring) = 0.00 ACRE

EX-003 REPLACEMENT WITH WETLAND IMPACTS

PERENNIAL STREAM CULVERT

DISCHARGE OF FILL IMPACTS
CLEARING AND GRUBBING IMPACTS
PRIMARY MORPHOLOGICAL ALTERATION

SCALE IN FEET

10'W X 7'H CULVERT

90-DEGREE, QUINTUPLE 8'W X 9'H

BEGIN CONCRETE BRIDGE CULVERT

STA 112+27.43

90-DEGREE, QUINTUPLE 8'W X 9'H

END CONCRETE BRIDGE CULVERT

STA 112+73.43

BEGIN CONSTRUCTION

STA 109+75.00

END CONSTRUCTION

STA 115+25.00

END PROJECT

CONCRETE APRON

847 SQ FT

TYPE 3, 24" RIPRAP

ORANGE BARRIER FENCE

EASEMENT FOR CONSTRUCTION

EXIST R/W

LIMIT OF ECOLOGY SURVEY

LIMIT OF ECOLOGY SURVEY

LIMIT OF ECOLOGY SURVEY

PROPERTY AND EXISTING R/W LINE

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES

PROPERTY AND EXISTING R/W LINE

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES

PROPERTY AND EXISTING R/W LINE

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES

PROPERTY AND EXISTING R/W LINE

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES

PROPERTY AND EXISTING R/W LINE

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES

PROPERTY AND EXISTING R/W LINE

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES

PROPERTY AND EXISTING R/W LINE

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES

PROPERTY AND EXISTING R/W LINE

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES

PROPERTY AND EXISTING R/W LINE

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES

PROPERTY AND EXISTING R/W LINE

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES

REHAB R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

EASEMENT FOR DRIVES
STAGING NOTES (REFER TO EROSION CONTROL PLANS)

STAGE 1:
1. REMOVE RIP-RAP/ROCK JETTIES FROM THE RIVER AND PUT BACK INTO EXISTING CONDITIONS/ELEVATIONS.
2. SHIFT TRAFFIC TO NEWLY CONSTRUCTED BRIDGE AS SHOWN IN SHEETS 19-0081 TO 19-0083.
3. CONSTRUCT PORTION OF PROPOSED BRIDGE AS SHOWN IN THE FINAL BRIDGE PLANS.
4. CONSTRUCT PORTION OF PROPOSED BRIDGE AS SHOWN IN THE FINAL BRIDGE PLANS.
5. CONSTRUCT PAVEMENT, APPROACH SLABS, DRAINAGE STRUCTURES AND MEDIAN BARRIER AS REQUIRED.

STAGE 2:
1. INSTALL TEMPORARY EROSION CONTROL ITEMS AS SHOWN IN PLANS.
2. COMPLETE INSTALLATION OF PERMANENT EROSION CONTROL ITEMS.
3. SHIFT TRAFFIC TO FINAL ROADWAY CONFIGURATION.
4. COMPLETE INSTALLATION OF PAVEMENT, APPROACH SLABS, DRAINAGE STRUCTURES AND GUARDRAIL.
5. CONSTRUCT PAVEMENT, APPROACH SLABS, DRAINAGE STRUCTURES AND GUARDRAIL.

STAGE 3:
1. INSTALL TEMPORARY BARRIER AND COMPLETE ALL PAVEMENT MARKING ON ROADWAY AND BRIDGE.
2. COMPLETE INSTALLATION OF PAVEMENT, APPROACH SLABS, DRAINAGE STRUCTURES AND GUARDRAIL.
3. CONSTRUCT PORTION OF PROPOSED BRIDGE AS SHOWN IN THE FINAL BRIDGE PLANS.
4. CONSTRUCT PORTION OF PROPOSED BRIDGE AS SHOWN IN THE FINAL BRIDGE PLANS.
5. CONSTRUCT PAVEMENT, APPROACH SLABS, DRAINAGE STRUCTURES AND MEDIAN BARRIER AS REQUIRED.

STAGE 4:
1. PER U.S. ARMY CORPS OF ENGINEERS, SAVANNAH DISTRICT REGIONAL PERMITS 30-35 SPECIAL CONDITIONS V.17, FOR PROJECTS THAT INVOLVE THE INSTALLATION OF JETTIES, BULKHEADS, COFFERDAMS, AND OTHER TEMPORARY STRUCTURES THAT CONSTRICT STREAM/FLAKE FLOW, CHANNEL CONSTRUCTION MUST NOT EXCEED 33 PERCENT OF TOTAL STREAM/WATER WIDTH AT ANY TIME. PLEASE NOTE THAT AN RP COULD NOT BE USED FOR THIS EXAMPLE DUE TO PROPOSED JETTIES EXCEEDING 33 PERCENT OF CHANNEL WIDTH.

USER NOTE:
1. PER U.S. ARMY CORPS OF ENGINEERS, SAVANNAH DISTRICT REGIONAL PERMITS 30-35 SPECIAL CONDITIONS V.17, FOR PROJECTS THAT INVOLVE THE INSTALLATION OF JETTIES, BULKHEADS, COFFERDAMS, AND OTHER TEMPORARY STRUCTURES THAT CONSTRICT STREAM/FLAKE FLOW, CHANNEL CONSTRUCTION MUST NOT EXCEED 33 PERCENT OF TOTAL STREAM/WATER WIDTH AT ANY TIME. PLEASE NOTE THAT AN RP COULD NOT BE USED FOR THIS EXAMPLE DUE TO PROPOSED JETTIES EXCEEDING 33 PERCENT OF CHANNEL WIDTH.

STAGING DETAILS

DISCHARGE OF FILL IMPACTS

DISCHARGE OF FILL IMPACTS

DISCHARGE OF FILL IMPACTS
USER NOTES:

1. THIS IS AN EXAMPLE OF AN OVERSIZED COFFERDAM THAT MAY BE NEEDED TO CREATE A LARGER DRY WORK AREA. COFFERDAM PLACEMENT WOULD BE CONSIDERED A TEMPORARY IMPACT WITH DURATION BASED ON TIME IN PLACE. CONSULT WITH OES ECOLOGIST WHEN AN OVERSIZED COFFERDAM MAY BE NEEDED FOR PROJECT CONSTRUCTION REQUIREMENTS.

2. SHORT-TERM FILL IMPACTS FROM COFFERDAM CONSTRUCTION WITHIN WETLANDS SHALL BE DOCUMENTED IN THE SECTION 404 PERMIT APPLICATION OR PRE-CONSTRUCTION NOTIFICATION (PCN), BUT MAY NOT REQUIRE MITIGATION AS THE PERMANENT/REOCCURRING CLEARING AND GRUBBING IS CONSIDERED MORE ADVERSE.

3. TOTAL EXTENT OF SHORT-TERM DISCHARGE OF FILL FOR COFFERDAM CONSTRUCTION IN PERENNIAL STREAM 2 IS 223 LF (10.14 ACRES), PERMANENT DISCHARGE OF FILL FOR BRIDGE EXCAVATION 14'-0". 30'-0" WIDTH OVERLAPS THE COFFERDAM EXTENT AND IS CONSIDERED MORE ADVERSE. THEREFORE, REPORTED AND MITIGATED IMPACTS FOR SHORT-TERM DISCHARGE OF FILL FOR COFFERDAM CONSTRUCTION TOTAL 223 LF (10.13 ACRES).

NOTES:

1. PERMANENT CASING'S MAXIMUM OF 7'-0" DIAMETER TO BE USED IN CONSTRUCTION OF CAISSONS AT BENTS 5-7.

2. EXISTING BRIDGE TO BE DEMOLISHED FROM WORK BRIDGE LOCATED TO THE SOUTH AND FLOATING PLATFORMS TO CATCH DEBRIS CAN BE USED WITHIN FOOTPRINT OF STRUCTURE, LOCATED IN RIVER.

TOTAL LENGTH OF WORK BRIDGE = 480'-0"

TOTAL LENGTH OF WORK BRIDGE = 520'-0"

DISCHARGE OF FILL IMPACTS:
- PERENNIAL STREAM 2 IMPACTS:
  - DISCHARGE OF FILL (PERMANENT/REOCCURRING) = 223 LF (10.13 ACRES)
  - 12'-0" TALL COFFERDAM, TYP.
  - 25'-0" TYP.

PERENNIAL STREAM 2 IMPACTS PLAN SHEET:
- DISCHARGE OF FILL (PERMANENT/REOCCURRING) = 14 LF (0.01 ACRE)

WETLAND 1 IMPACTS TOTAL RESOURCE:
- CLEARING AND GRUBBING (PERMANENT/REOCCURRING) = 0.80 ACRE
- DISCHARGE OF FILL (PERMANENT/REOCCURRING) = 0.64 ACRE

WETLAND 1 IMPACTS PLAN SHEET:
- CLEARING AND GRUBBING (PERMANENT/REOCCURRING) = 0.28 ACRE
- DISCHARGE OF FILL (PERMANENT/REOCCURRING) = 0.55 ACRE

WETLAND 3 IMPACTS TOTAL RESOURCE:
- CLEARING AND GRUBBING (PERMANENT/REOCCURRING) = 0.23 ACRE
- DISCHARGE OF FILL (PERMANENT/REOCCURRING) = 0.42 ACRE

WETLAND 3 IMPACTS PLAN SHEET:
- CLEARING AND GRUBBING (PERMANENT/REOCCURRING) = 0.23 ACRE
- DISCHARGE OF FILL (PERMANENT/REOCCURRING) = 0.42 ACRE

WETLAND 5 IMPACTS TOTAL RESOURCE:
- CLEARING AND GRUBBING (PERMANENT/REOCCURRING) = 223 LF (0.13 ACRE)
- DISCHARGE OF FILL (SHORT-TERM) = 223 LF (0.13 ACRE)

IN GENERAL NOTES FOR CONSTRUCTION RESTRICTIONS:
- COFFERDAM WITH MAXIMUM CROWN HEIGHT OF 10'-0" REQUIRED WITHIN 20'-0" MIN. CLEARANCE, TYP.
- COFFERDAM, TYP.
- 25'-0" TYP.
- 12'-0" TALL COFFERDAM, TYP.

IN GENERAL NOTES FOR CONSTRUCTION LIMITS:
- ORANGE BARRIER FENCE (SEE ERIT TABLE)
- ESA - ENVIRONMENTAL RESOURCES IMPACT TABLE

CONSTRUCTION STAGING DETAILS:
- TOTAL LENGTH OF WORK BRIDGE = 500'-0"
EX-007

CONSTRUCTION STAGING DETAILS

BRIDGE REPLACEMENT - PERENNIAL STREAM

DEBRIS CONTAINMENT STRUCTURE

DISCHARGE OF FILL IMPACTS

1. THE 10 LF FOOTING AND ADDITIONAL 5 LF COFFERDAM IS CONSIDERED PERMANENT/REOCCURRING DISCHARGE OF FILL AND REPORTED AS THE PRIMARY IMPACT.

2. THE REMAINING 70 LF OF IMPACT FROM THE DEBRIS CONTAINMENT STRUCTURE IS CONSIDERED TEMPORARY (LESS THAN OR EQUAL TO 90 DAYS) DISCHARGE OF FILL AND MITIGATION IS NOT REQUIRED.

3. THE DURATION OF TEMPORARY IMPACT RECORDED IN THE SAVANNAH DISTRICT STANDARD OPERATING PROCEDURE (SOP) FOR COMPENSATORY MITIGATION FORM DEPENDS UPON THE LENGTH OF TIME THE DEBRIS CONTAINMENT STRUCTURE IS IN PLACE.

4. PARALLEL FOOTINGS ARE NOT CALCULATED AS ADDITIONAL IMPACT IF THEY OCCUPY THE SAME STREAM SEGMENT AS MEASURED ALONG THE CENTERLINE.

5. ALL OVERLAPPING IMPACTS, SUCH AS THE PERMANENT/REOCCURRING DISCHARGE OF FILL FOR COFFERDAM CONSTRUCTION AND TEMPORARY (LESS THAN OR EQUAL TO 90 DAYS) DISCHARGE OF FILL FOR THE DEBRIS CONTAINMENT STRUCTURE, IN THIS EXAMPLE, SHALL BE ADDRESSED. HOWEVER, ONLY THE MORE ADVERSE IMPACT (PERMANENT/REOCCURRING DISCHARGE OF FILL) SHALL BE INCLUDED IN PERMITTED IMPACTS AND MITIGATION CALCULATIONS.

6. ONLY ONE DEBRIS CONTAINMENT STRUCTURE MAY BE INSTALLED/IN PLACE AT A TIME FOR A MAXIMUM OF 90 DAYS. PER U.S. ARMY CORPS OF ENGINEERS, SAVANNAH DISTRICT REGIONAL PERMITS 30-35 TO AUTHORIZE LOCAL, STATE, AND FEDERAL GOVERNMENT FUNDED PUBLIC TRANSPORTATION PROJECTS WITHIN THE STATE OF GEORGIA SPECIAL CONDITIONS, FOR PROJECTS THAT INVOLVE THE INSTALLATION OF JETTIES, BULKHEADS, COFFERDAMS, AND OTHER TEMPORARY STRUCTURES THROUGH CHANNEL CONSTRUCTION MUST NOT EXCEED 50 PERCENT OF TOTAL STREAM/RIVER WIDTH AT ANY TIME. ADD A STATEMENT TO THIS EFFECT AS A PLAN NOTE, AS APPROPRIATE.

EXAMPLE IMPACT SHEET FOR PERMITTING GUIDANCE

NOT FOR CONSTRUCTION

PROPERTY AND EXISTING R/W LINE

REQUIRED R/W LINE

CONSTRUCTION LIMITS

A WALKWAY OF SLOPES

EASEMENT FOR CONSTRUCTION LIMITS

EASEMENT FOR CONSTRUCTION OF DRIVES

EASEMENT FOR CONSTRUCTION OF SLOPES

DISCHARGE OF FILL IMPACTS

CONSTRUCTION NOTES FOR CONSTRUCTION RESTRICTIONS

PERENNIAL STREAM 1 IMPACTS TOTAL RESOURCE

DISCHARGE OF FILL (PERMANENT/REOCCURRING) = 15 LINEAR FEET

DISCHARGE OF FILL (TEMPORARY (LESS THAN OR EQUAL TO 90 DAYS)) = 70 LINEAR FEET

DISCHARGE OF FILL (PERMANENT/REOCCURRING) = 5 LF COFFERDAM PERMANENT IMPACT

10 FT PERMANENT FOOTINGS, TYP.

15 LF DEBRIS CONTAINMENT STRUCTURE

SCALE IN FEET

REVISION DATES

DRAWING No.

P.I. No.

CHECKED:

BACKCHECKED:

CORRECTED:

VERIFIED:

DATE:

DATE:

DATE:

DATE:

GENERAL No.

EX-007
USER NOTES:

1. PERMANENT JURISDICTIONAL IMPACTS TO PERENNIAL STREAM 1 WOULD BE AVOIDED IF UTILIZING DRIVER PRE-STRESSED CONCRETE PIPES WITH ONE CONCRETE PILE PROVIDED IN THE STREAM.

2. ORANGE BARRIER FENCE (OBF) SHALL NOT BE INSTALLED IN OR ACROSS STREAMS. OBF INSTALLATION MAY BE LIMITED IN AREAS WHERE CUT/FILL LIMITS ARE WITHIN 10 FT OF A STREAM. TYPICALLY 10 FT IS REQUIRED BETWEEN CUT/FILL LIMITS TO PROVIDE PROTECTION AND EXIST FOR EQUIPMENT ACCESS. 15 FT IS RECOMMENDED BETWEEN RETAINING WALLS AND OBF.

3. THE ECOLOGIST SHOULD CONSULT DESIGN AND CONSTRUCTION FOR OBF PLACEMENT THAT PROVIDES SUFFICIENT ACCESS DURING CONSTRUCTION WHILE AVOIDING/MINIMIZING RESOURCE IMPACTS.

WETLAND 1 IMPACTS TOTAL RESOURCE:
CLEARING AND GRUBBING (PERMANENT/REOCCURRING) = 0.01 ACRE
DISCHARGE OF FILL (PERMANENT/REOCCURRING) = 0.002 ACRE

WETLAND 3 IMPACTS TOTAL RESOURCE:
CLEARING AND GRUBBING (PERMANENT/REOCCURRING) = 0.01 ACRE
DISCHARGE OF FILL (PERMANENT/REOCCURRING) = 0.002 ACRE

AVOIDING/MINIMIZING RESOURCE IMPACTS.

SUFFICIENT ACCESS DURING CONSTRUCTION WHILE CONSTRUCTION FOR OBF PLACEMENT THAT PROVIDES PROTECTION AND OBF FOR EQUIPMENT ACCESS. 15 FT IS NEEDED BETWEEN RETAINING WALLS AND OBF.

ORANGE BARRIER FENCE (OBF) SHALL NOT BE INSTALLED IN OR ACROSS STREAMS. OBF INSTALLATION MAY BE LIMITED IN AREAS WHERE CUT/FILL LIMITS ARE WITHIN 10 FT OF A STREAM. TYPICALLY 10 FT IS REQUIRED BETWEEN CUT/FILL LIMITS TO PROVIDE PROTECTION AND EXIST FOR EQUIPMENT ACCESS. 15 FT IS RECOMMENDED BETWEEN RETAINING WALLS AND OBF.

THE ECOLOGIST SHOULD CONSULT DESIGN AND CONSTRUCTION FOR OBF PLACEMENT THAT PROVIDES SUFFICIENT ACCESS DURING CONSTRUCTION WHILE AVOIDING/MINIMIZING RESOURCE IMPACTS.
1. **User Notes:**

   - **This Sheet Illustrates the Work Bridge Footprint and Does Not Depict the Full Extent of Impacts to Waters of the U.S. Refer to EX-008 for Additional Impacts.**

   - **Temporary Impacts to Perennial Stream 2 Would Be Mitigated by Performing All Bridge Demolition and Construction from a Temporary Work Bridge Supported by Driven Steel Piles (No Encasements). Existing Structures Would Be Removed from Above With Equipment Placed on the Work Bridge to Avoid Direct Impacts to Perennial Stream 2.**

   - **Orange Barrier Fence (OBF) Shall Not Be Installed in or Across Streams. OBF Installation May Be Limited in Areas Where Cut/fill Limits Are Within 10 FT of a Stream. Typically, 10 FT is Needed Between Retaining Walls and OBF Protection and OBF for Equipment Access. 15 FT is Needed Between Retaining Walls and OBF.**

2. **Temporary Construction from a Temporary Work Bridge Avoided by Performing All Bridge Demolition and Construction from a Temporary Work Bridge Supported by Driven Steel Piles (No Encasements).**

3. **This Sheet Illustrates the Work Bridge Footprint and Does Not Depict the Full Extent of Impacts to Waters of the U.S. Refer to EX-008 for Additional Impacts.**

   - **Temporary Impacts to Perennial Stream 2 Would Be Mitigated by Performing All Bridge Demolition and Construction from a Temporary Work Bridge Supported by Driven Steel Piles (No Encasements). Existing Structures Would Be Removed from Above With Equipment Placed on the Work Bridge to Avoid Direct Impacts to Perennial Stream 2.**

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