Weatherby West Subdivision Clear and Grub Only SWPPP

Drainage Area = 61.82 Acres

Min. Volume of Basin @ 3600 cf/acre

61.82 acres X 3600 cf/acre = 222,552

Basin Area = 45,000 sq. ft @ 5' depth

Pond Volume = 246,000 cf

225,000 cf > 222,552 cf $\sqrt{\text{ok}}$

Hydrology Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc.

Friday, Oct 29 2021

Weatherby West Sediment Basin

Hydrograph type = SCS Peak discharge (cfs) = 27.04 Storm frequency (yrs) = 2 Time interval (min) = 1 Drainage area (ac) = 61.820 Curve number (CN) = 84

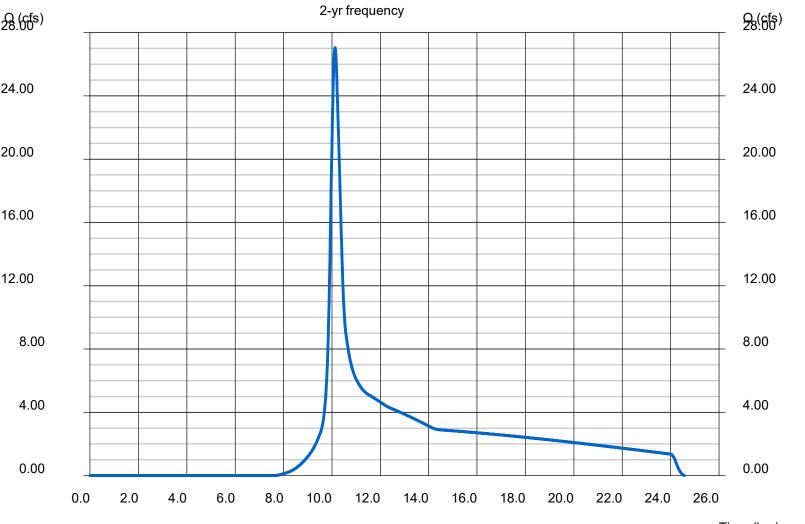
Basin Slope (%) = 61.820 Curve number (CN) = 84

Hydraulic length (ft) = See Worksheet

Tc method = TR55 Time of conc. (min) = 22
Total precip. (in) = 2.20 Storm Distribution = Type I
Storm duration (hrs) = 24 Shape factor = 484

Hydrograph Volume = 197,625 (cuft); 4.537 (acft)

Runoff Hydrograph



Time (hrs)

WEATHERBY WEST SUBDIVISION DESOTO COUNTY, MISSISSIPPI STORM WATER POLLUTION PREVENTION PLAN

August 3, 2021

SITE INFORMATION

The project consists of grading, clearing, grubbing, and earthwork of an undeveloped area of land which will disturb approximately 140 acres. The site has slopes ranging from 1% to 33% slopes that are moderately erodible. The site has 2 stream crossings or off-site water flowing through the disturbed area. Its location is off HWY 304 approx. 1 mile East of the intersection of Tulane Rd. and HWY 304. The site ultimately runs off into Hurricane Creek.

This project is in the drainage basin of Hurricane Creek. The receiving stream is listed on the MDEQ's 303(d) list of impaired waters. Short Fork Creek has impairment due to Sedimentation/Siltation. Sediment basins installed per the plans and located in areas of concentrated flow along with silt fence located in areas of sheet flow will ensure this project does not contribute to the impairment of water quality. A combination of wattles and Rip-Rap filter damns will also be utilized to further ensure there is no contribution made to the impaired stream. No construction, remediation or restoration will be made of a stream without consulting the division first

CONTROLS

<u>Vegetative Controls</u>: A 20-foot vegetative buffer will remain around the entire perimeter of the disturbed area except where the site meets the asphalt road. A 50' vegetative buffer will be utilized between the jurisdictional streams and the double line of silt fence. Along the asphalt road, structural controls shall be used. Any disturbed areas that will be left undisturbed for fourteen or more days will be seeded immediately. Immediately is defined as no later than the next workday. All disturbed areas will be permanently seeded after final grading within seven days of completion. All salvageable topsoil will be stockpiled and lined with silt fence until its use in spreading for final vegetative growth.

Structural Controls: A limestone construction entrance will be constructed off Byhalia Road. Wattles will be placed along the downstream end of all culverts to lower the velocity and help filter the sediment. Silt Fence will be placed around the entire disturbed perimeter with a double line being utilized along the limits of the jurisdictional stream. Combinations of MDOT Type D and Type B silt basins will be required at the downstream sides of the drainage areas once more than 10 acres is cleared. For sediment basins, accumulated sediment shall be removed when the capacity has been reduced by 50%. Accumulated sediment shall be removed from structural controls when sediment deposits reach 1/3 to ½ the height of the controls. Non-functioning controls shall be repaired, replaced, or supplemented with functional controls within 24 hours of discovery or as soon as field conditions allow.

<u>Housekeeping Practices</u>: All equipment maintenance and repair will be done off-site. Debris from the project will either be hauled off-site or to designated areas, and material washouts will either occur off-site or in the designated wash out areas. Accumulated sediment that has been trapped by sediment control measures at the site, in accordance with the applicable maintenance requirements covered under the permit, will be disposed throughout the site. Waste materials such as wood, masonry, metals, and packaging materials will be disposed of on-site in designated construction dumpsters as required to ensure the site is free from excess debris. All Chemicals and Paints shall be stored in designated areas and sheltered from rainfall. It is not anticipated that any fuels will be stored on-site, but if single wall fuel tanks are stored on the project, they will

be protected with a perimeter berm providing 110% of the tanks capacity and a layer of plastic to prevent any infiltration. All sanitary facilities will be monitored regularly and well maintained.

IMPLEMENTATION SEQUENCE

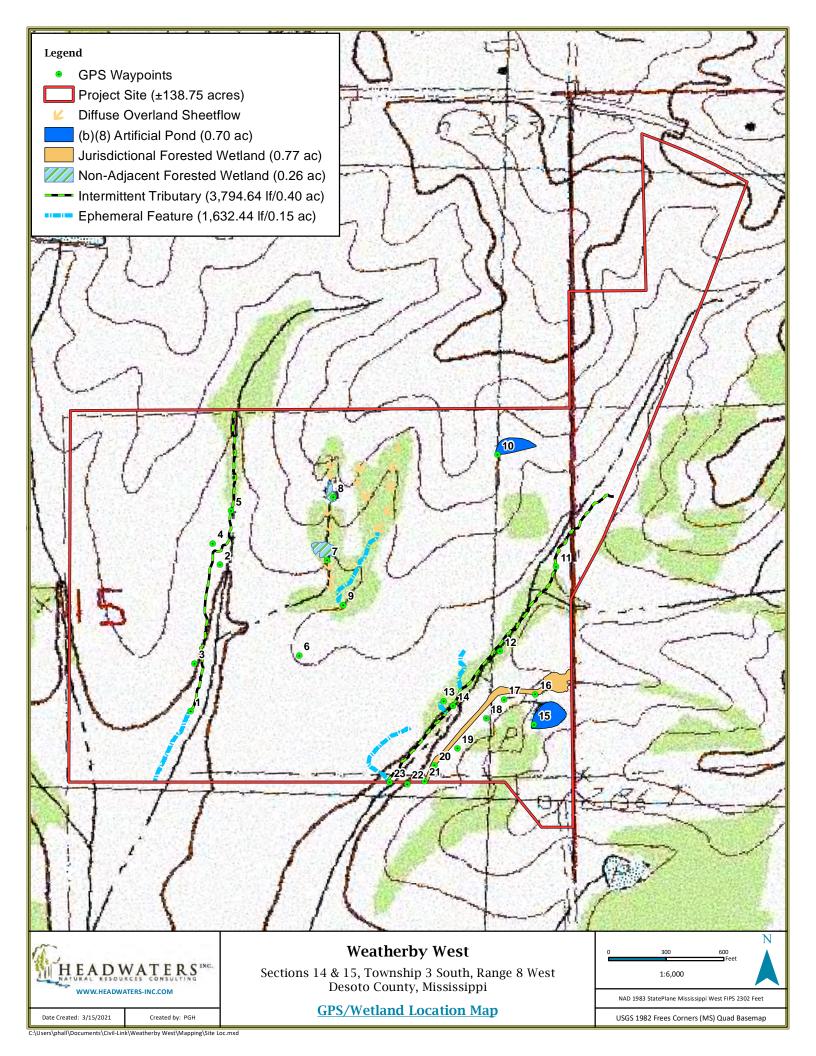
- 1.) Construction entrances shall be completed prior to any clearing and grubbing.
- 2.) All silt fences shall be installed prior to any clearing and grubbing.
- 3.) Type D and Type B Silt Basins must be installed prior to any clearing and grubbing.
- 4.) Wattles and rock check dams shall be installed along existing ditches and swales.
- 5.) Clearing and grubbing may commence once these BMPs are in place.
- 6.) The site will then be stripped of all topsoil to be later placed at locations requiring vegetation.
- 7.) Earthwork may commence when these BMPs have been installed.
- 8.) Once finished grade is within tolerance, the topsoil shall be disturbed to these areas to establish vegetation. It should be disturbed to a minimum depth of 2 inches on 3:1 slopes and 4 inches on any flatter slopes.

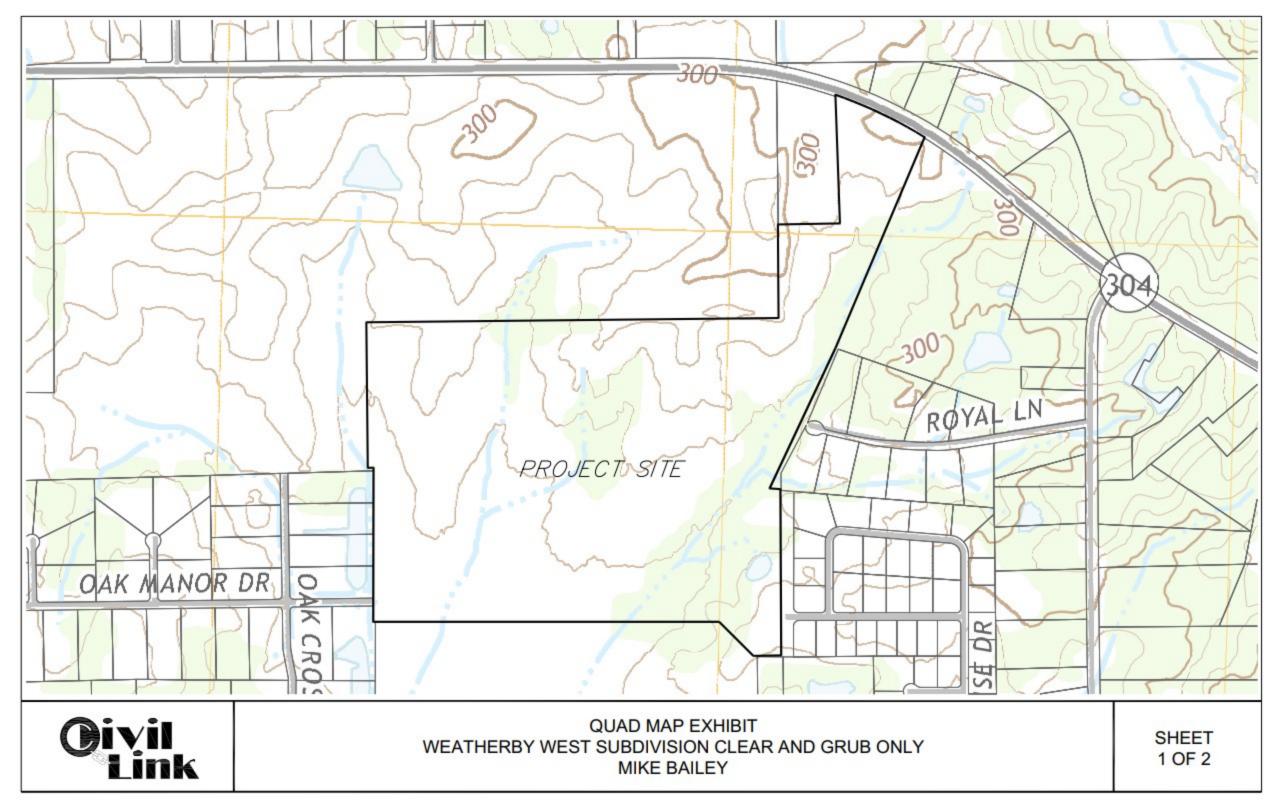
MAINTENANCE PLAN

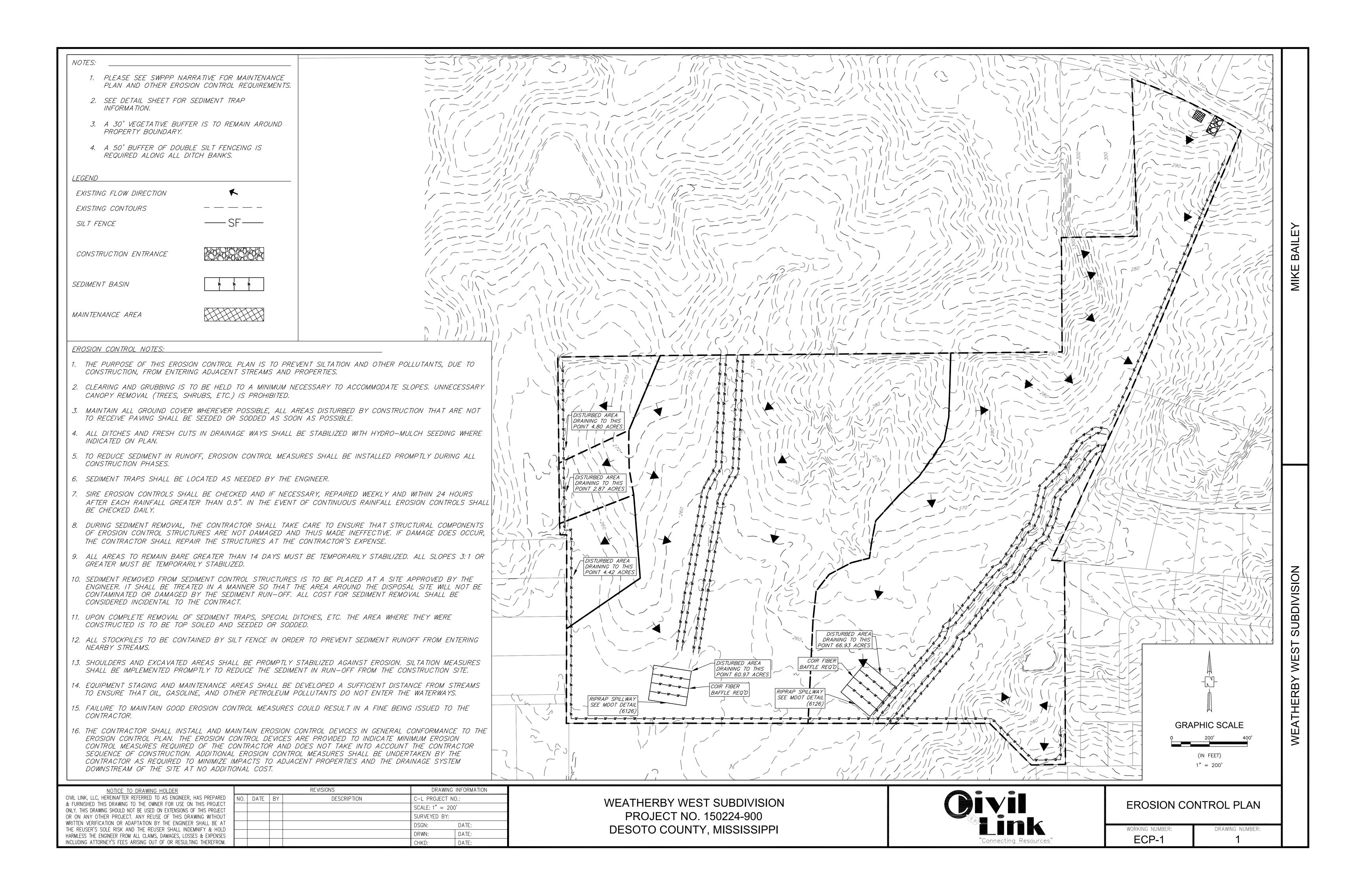
The SWWWP, ECP, MDEQ forms and Inspection reports will be kept on site and made readily available at all times.

All disturbed areas and erosion and sediment controls will be checked after each significant rainfall but not less than once per week. Any necessary repairs will be made to these controls within 24 hours of discovery. Any changes to the plan shall be approved by the engineer.









PROJECT NO. STATE MISS.

GENERAL NOTES:

- 1. "J-HOOK" CONFIGURATION SILT FENCE APPLICATIONS SHOULD BE USED IN CONJUNCTION WITH PERIMETER SILT FENCE WHEN STORMWATER RUNOFF IS IN TWO DIRECTIONS (DOWN A FILL SLOPE AND DOWN GRADIENT ALONG THE RIGHT-OF-WAY).
- 2. "SMILE CONFIGURATION" APPLICATIONS SHOULD BE USED AS PERIMETER SILT FENCE WHEN THERE IS ONE-DIRECTIONAL FLOW DOWN A SLOPE.
- 3. SAND BAGS CAN BE USED AS DIVERSION BERMS TO PREVENT SEDIMENT FROM BEING WASHED ONTO OR ACROSS HARD SURFACES, OR TO HELP SLOW SHEET FLOW VELOCITY WHEN DRAINING AWAY FROM HARD SURFACES.
- 4. FOR SHORTER SLOPES AND/OR SLOPES THAT ARE LESS STEEP, DIVERSION BERMS CAN BE USED TO SAFELY CONVEY STORMWATER AWAY FROM OR AROUND A DENUDED AREA. THEY CAN BE CONSTRUCTED USING MANUFACTURED SILT DIKE OR BY CONSTRUCTING A TEMPORARY EARTH BERM AND TRENCH WITH GEOTEXTILE OR POLYETHYLENE SHEETING PROTECTION.
- 5. TEMPORARY DEWATERING STRUCTURES CAN BE USED DURING CULVERT CONSTRUCTION, STREAM DIVERSIONS, OR OTHER CONSTRUCITON ACTIVITIES WHERE TURBID WATERS NEED TO BE CLARIFIED BEFORE RELEASE.
- 6. THE ABUTMENT SLOPE TOE BERM SHALL BE 3 FT. TALL. THE BERM MAY BE CONSTRUCTED WITH ROCK IN ACCORDANCE WITH REQUIREMENTS FOR ROCK DITCH CHECKS ON WK. NO. ECD-8 OR WITH SOIL IN ACCORDANCE WITH WK. NO. BAS-A. IF BERM IS USED, IT MUST BE GRASSED.

TEMPORARY BRUSH -BARRIER SEE WK. NO. ECD-2.

FOR INLET PROTECTION SEE WK. NO. ECD-11

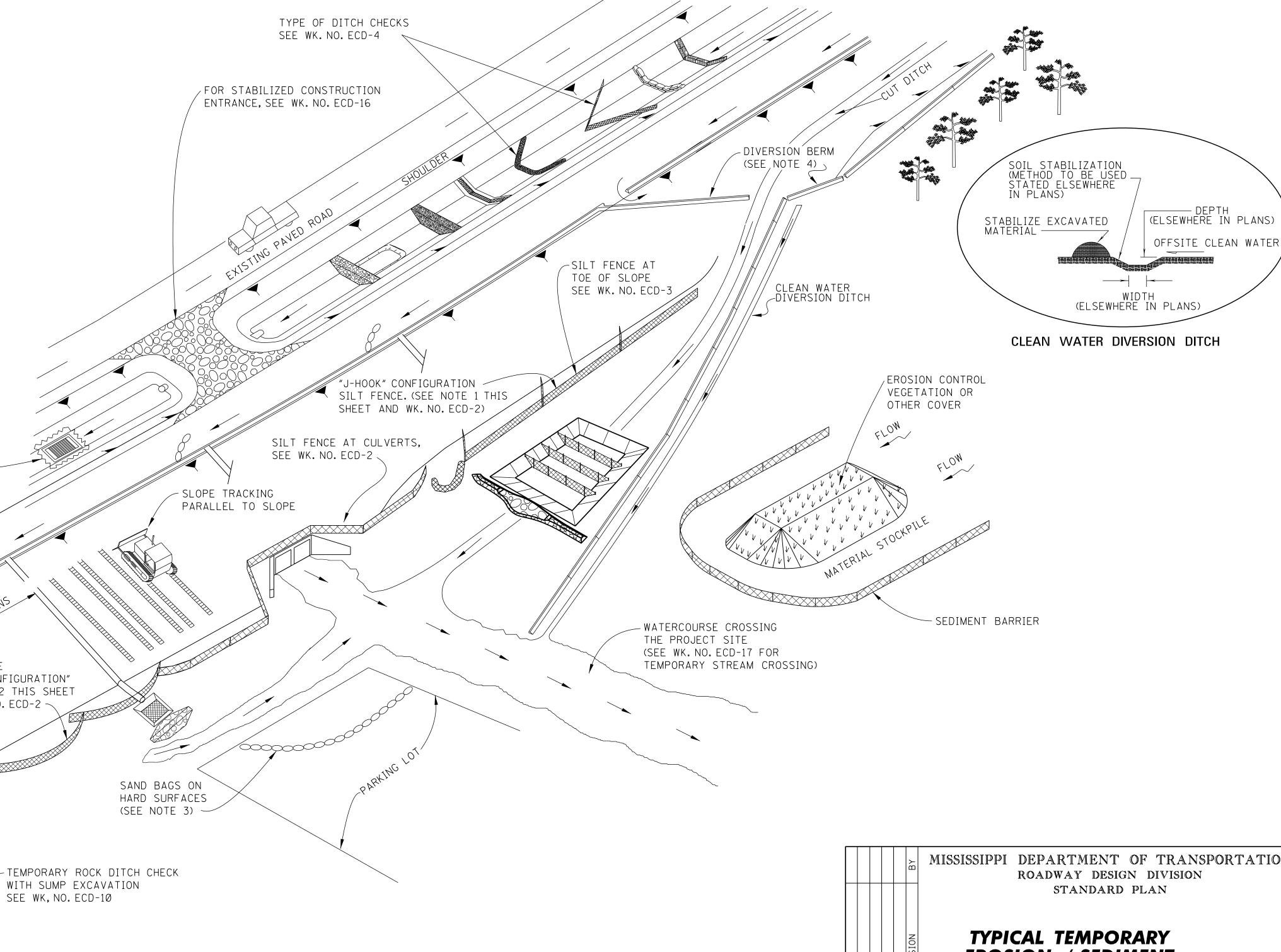
TEMPORARY EARTH BERM

SILT FENCE

"SMILE CONFIGURATION"

SEE NOTE 2 THIS SHEET AND WK. NO. ECD-2

AND SLOPE DRAINS SEE WK. NO. BAS-A. -



ABUTMENT SLOPE TOE BERM SEE NOTE 6.—

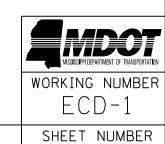
FOR TURBIDITY CURTAIN

SEE WK. NO. ECD-20

FOR TEMPORARY STREAM CROSSING SEE WK. NO. ECD-17.

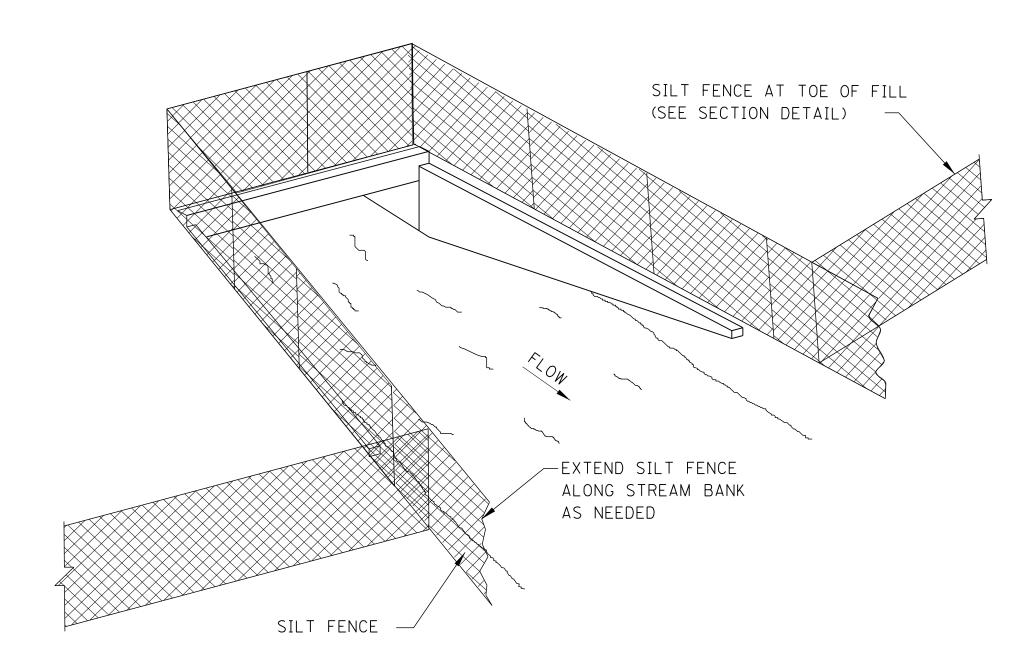
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

EROSION / SEDIMENT CONTROL APPLICATIONS

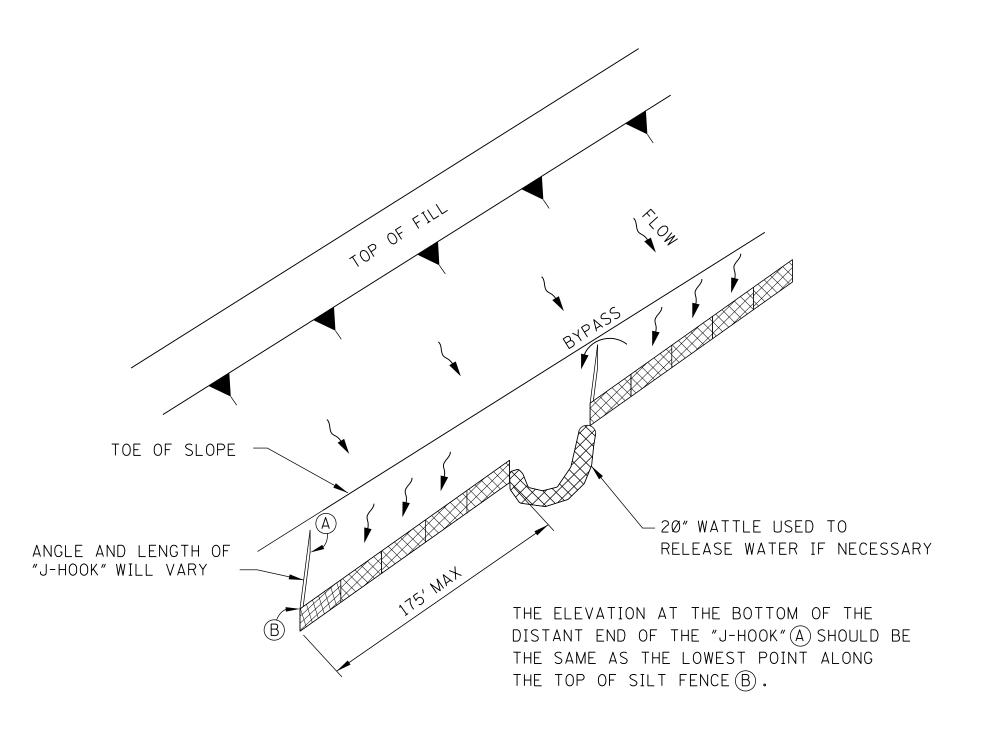


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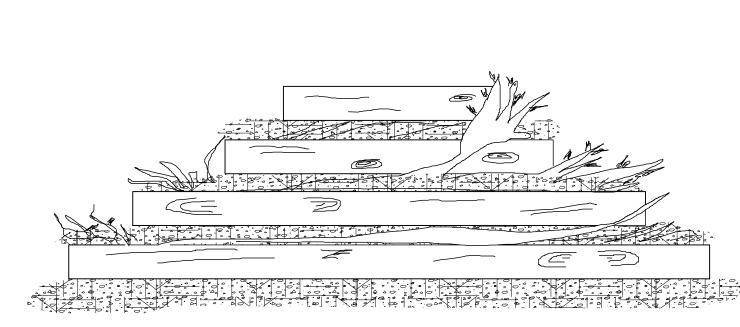
AUGUST Ø1,2017 SSUE DATE:___



SEDIMENT BARRIER AT CROSS DRAIN



"J-HOOK" SILT FENCE APPLICATION



GROUND LINE

GROUND LINE

GROUND LINE

SIDE ELEVATION

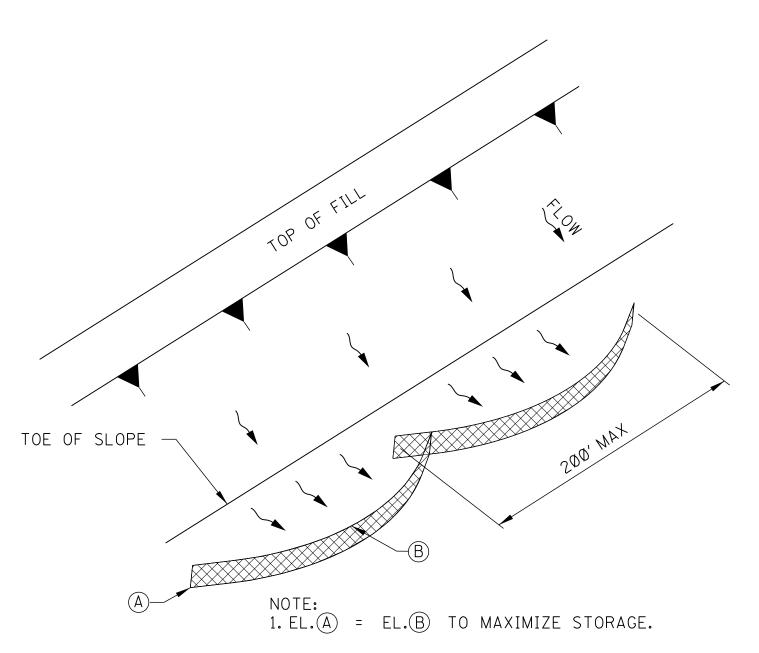
FRONT ELEVATION

TEMPORARY BRUSH BARRIER

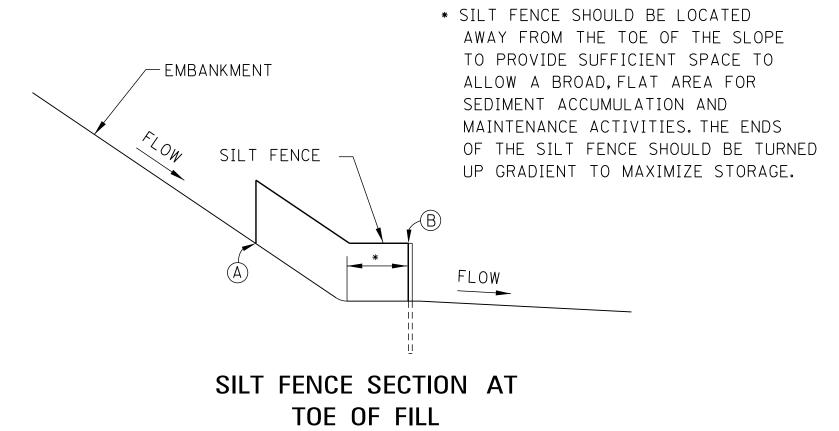
NOTES:

- . BRUSH BARRIER MAY BE USED WHERE NATURAL GROUND IS LEVEL OR SLOPING AWAY FROM PROJECT.
- 2. PLACE BRUSH, LOG AND TREE LAPS APPROXIMATELY PARALLEL TO TOE OF FILL SLOPE WITH SOME OF THE HEAVIER MATERIALS BEING PLACED ON TO TO PROPERLY SECURE THE BARRIER AS DETAILED AT LOCATIONS SHOWN ON PLANS OR AS DIRECTED OR PERMITTED BY THE ENGINEER.
- 3. TO ALLOW WATER TO SEEP THROUGH BRUSH BARRIER, INTERMINGLE THE BRUSH, LOG AND TREE LAPS SO AS NOT TO FORM A SOLID DAM.
- 4. THE BRUSH BARRIER MAY BE CHOKED WITH FILTER FABRIC. THE COST OF FABRIC TO BE INCLUDED IN OTHER ITEMS BID.
- 5. TEMPORARY BRUSH BARRIER WILL NOT BE MEASURED FOR SEPARATE PAYMENT.

NOTE: ANCHOR AND INSTALL SILT FENCE PER DETAILS SHOWN ON WK. NO. ECD-3



"SMILE-CONFIGURATION" SILT FENCE APPLICATION

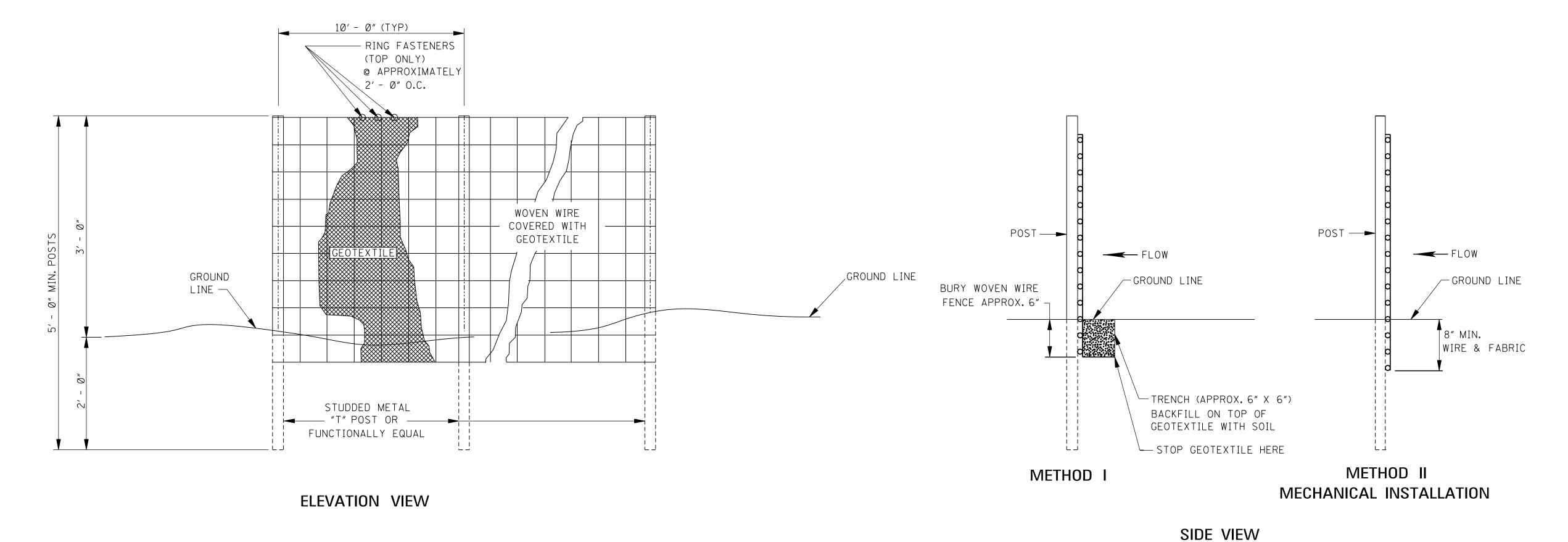


MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN

DETAILS OF SEDIMENT BARRIER APPLICATIONS

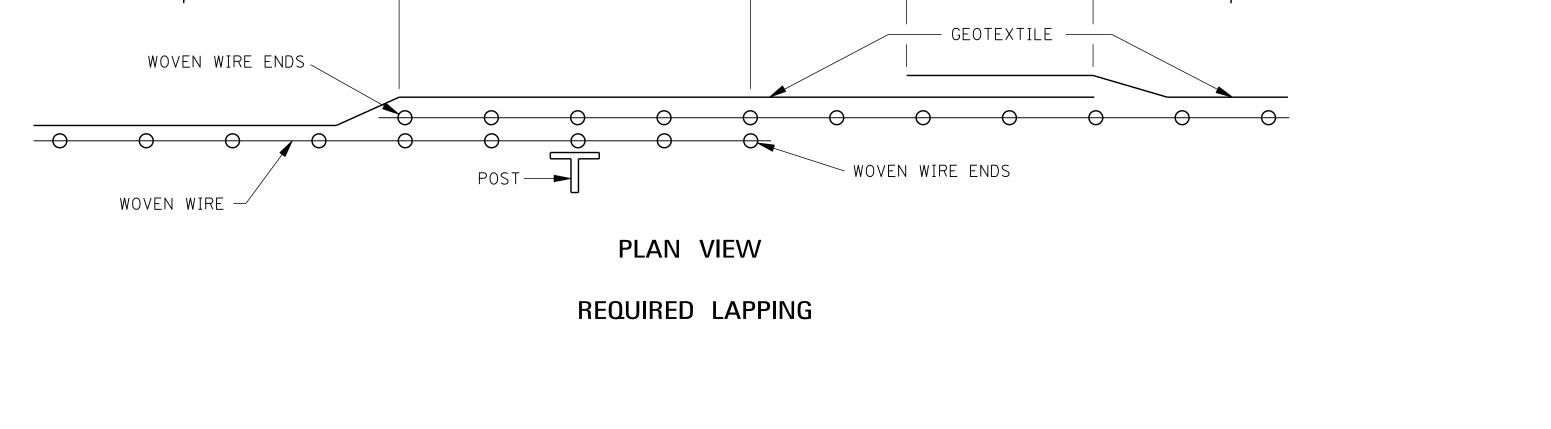


STATE PROJECT NO.
MISS.



GENERAL NOTES:

- 1. SILT FENCES SHOULD BE USED IN AREAS WHERE FLOW IS NOT SEVERE.
- 2. SILT FENCES ARE TEMPORARY SEDIMENT CONTROL ITEMS THAT SHOULD BE ERECTED OPPOSITE ERODIBLE AREAS SUCH AS NEWLY GRADED FILL SLOPES AND ADJACENT TO STEAMS AND CHANNELS.
- 3. SILT FENCE SHOULD BE PLACED WELL INSIDE RIGHT-OF-WAY AND ALONG EDGE OF CLEARING LIMITS.
 THIS WILL ALLOW ROOM FOR BACK-UP FENCE IF FIRST FENCE BECOMES FULL.
- 4. WHENEVER POSSIBLE SILT FENCE SHOULD BE CONSTRUCTED ACROSS A LEVEL AREA IN THE SHAPE OF A SMILE. THIS AIDS IN PONDING OF RUNOFF AN FACILITATES SEDIMENTATION.
- 5. THE CONTRACTOR MAY ELECT TO USE EITHER METHOD I OR METHOD II. COST TO BE LINEAR FEET OF SILT FENCE.
- 6. METHOD II INSTALLATION SHALL BE ACCOMPLISHED USING AN IMPLEMENT THAT IS MANUFACTURED FOR THE APPLICATION AND PROVIDES A CONFIGURATION MEETING THE REQUIREMENTS OF DETAIL.
- 7. WIRE SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
- 8. GEOTEXTILE FABRIC MEETING THE TYPE II MATERIAL REQUIREMENTS AND INSTALLED ACCORDING TO SPECIFICATION MAY BE USED WITHOUT WIRE FENCE.



2'- 0" WIRE OVERLAP AT POST

(USE 3-FASTENERS MIN.)

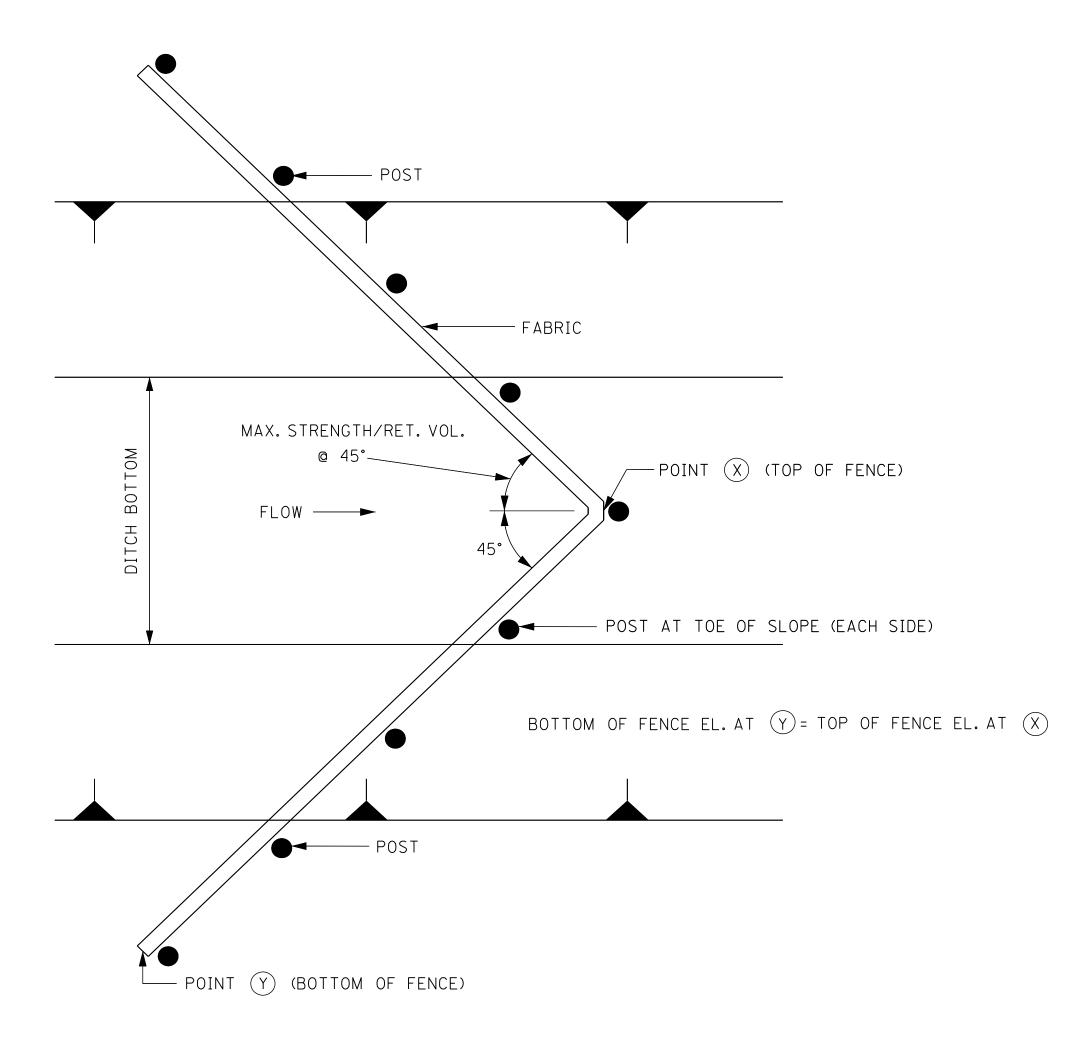
1' - Ø" OVERLAP

(USE TWO

FASTENERS MIN.)



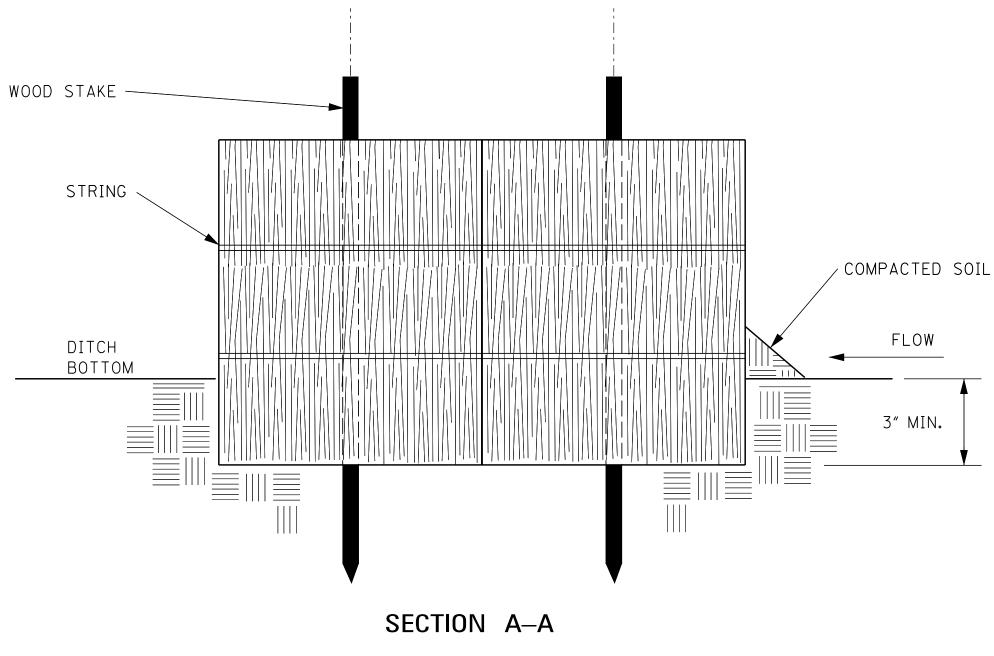
PROJECT NO. MISS.



PLAN VIEW

NOTES:

- ANCHOR AND INSTALL PER DETAILS FOR SILT FENCE SPACING GUIDELINES ON WK. NO. ECD-4.
- 2. A "W" SHAPE MAY BE USED FOR WIDER DITCHES.



BALES SHALL BE TIGHTLY Image: I ABUTTING WITH NO GAPS /FLOW LINE BALE(S) — ONE OR MORE BALES IN CHANNEL BED TIGHTLY ABUTTING EACH OTHER **У/♠**У/**∳**/\ OVERLAP BALES ALTERNATIVE LOCATION OF FLOW LINE BALES ——— PLAN VIEW TRAPEZOIDAL DITCH — ANGLE STAKES TOWARD END POINTS "A" SHALL BE HIGHER DITCH THAN FLOW LINE POINT "B" ADJACENT BALE ВОТТОМ —

PROFILE VIEW

TRAPEZOIDAL DITCH

NOTES:

- 1. SILT FENCE DITCH CHECKS SHOULD BE USED WHERE IT HAS BEEN DETERMINED THAT HAY BALE CHECKS ARE INADEQUATE. SILT FENCE DITCH CHECKS SHOULD BE USED TO INTERCEPT LOW VOLUME FLOWS IN LOW TO MODERATE GRADIENT DITCHES.
- 2. HAY BALES SHOULD BE USED TO INTERCEPT LOW VOLUME FLOWS IN LOW TO MODERATE GRADIENT DITCHES.
- 3. MINIMUM RECOMMENDED CHECK SPACING IS 100 FEET UNLESS SHOWN OTHERWISE ON THE PLANS
- 4. ANCHORING WOOD STAKES SHALL BE SIZED, SPACED, AND BE OF A MATERIAL THAT EFFECTIVELY SECURES THE CHECK. A MINIMUM OF TWO STAKES PER BALE IS REQUIRED. ALL NON-DEGRADABLE MATERIALS SHALL BE REMOVED WHEN NO LONGER NEEDED.
- 5. BALES SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 3 INCHES.
- 6. BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES. THE BALES SHALL BE PLACED WITH BINDINGS PARALLEL TO THE GROUND.
- 7. SOIL IS COMPACTED ALONG THE BASE OF THE UPSTREAM FACE TO PREVENT PIPING.
- 8. MULTIPLE ADJACENT ROWS OF BALES ARE REQUIRED AS SHOWN.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN

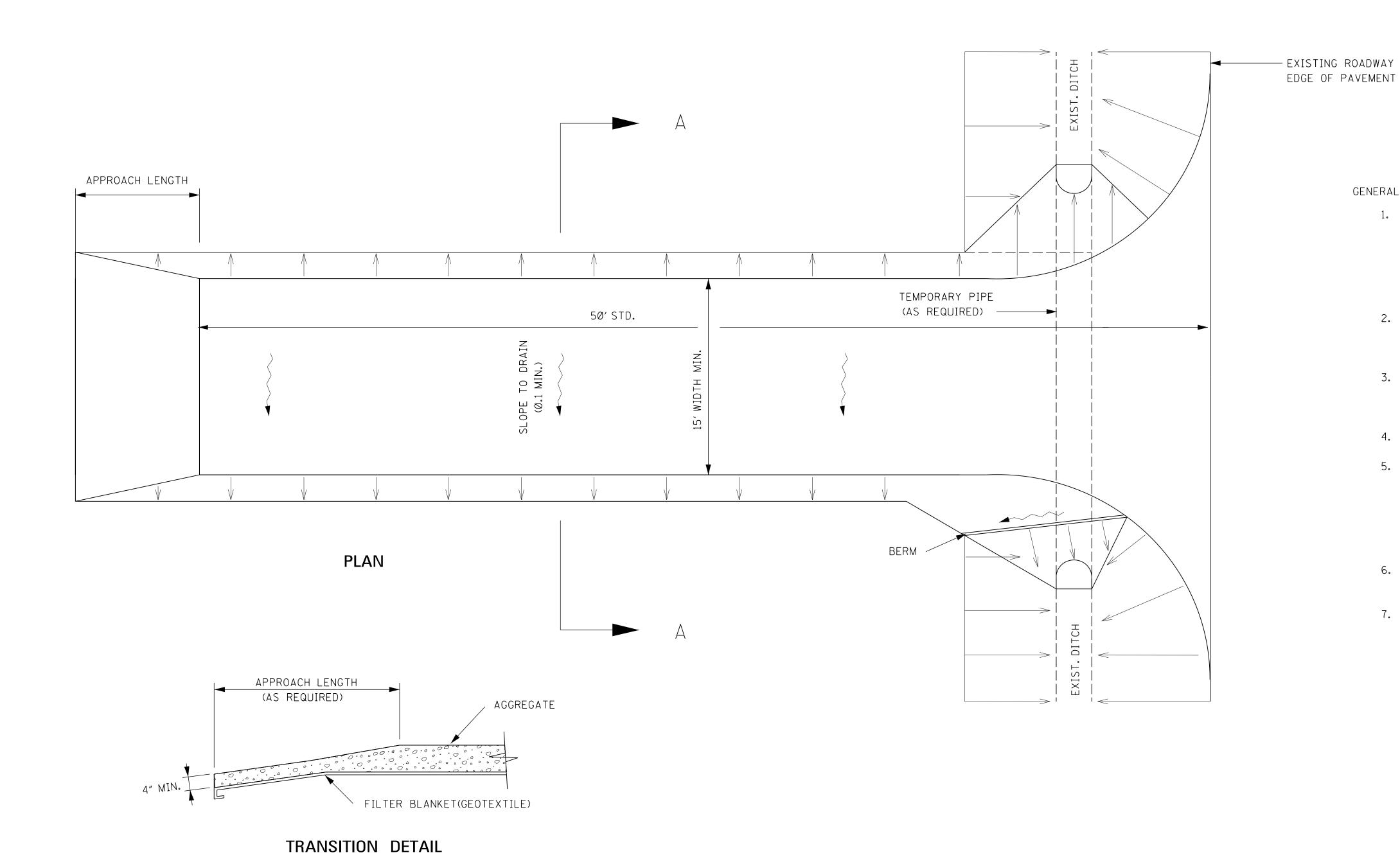
TEMPORARY EROSION, SEDIMENT, AND WATER POLLUTION CONTROL MEASURES MSSISPPI DEPARTMENT OF TRANSPORTATION

(SILT FENCE AND HAY BALE DITCH CHECKS)

| ISSUE DATE: AUGUST 01,2017

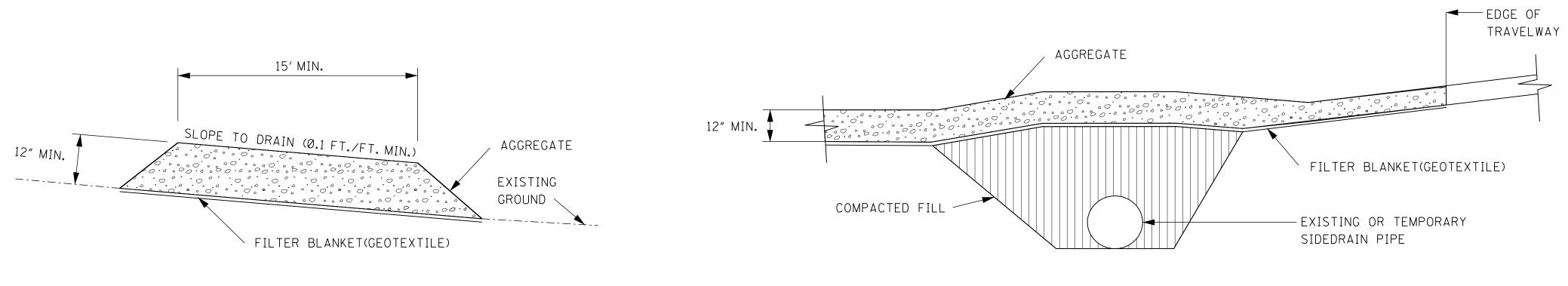
WORKING NUMBER SHEET NUMBER 61Ø5

STATE | PROJECT NO. MISS.



GENERAL NOTES:

- 1. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT POINTS OF EGRESS FROM UNSTABILIZED AREAS OF THE PROJECT TO PUBLIC ROADS WHERE OFFSITE TRACKING OF MUD COULD OCCUR. TRAFFIC FROM UNSTABILIZED AREAS OF THE PROJECT SHALL BE DIRECTED THRU THE STABILIZED ENTRANCE. BARRIERS, FLAGGING, OR OTHER POSITIVE MEANS SHALL BE USED AS REQUIRED TO LIMIT AND DIRECT VEHICULAR EGRESS ACROSS THE STABILIZED ENTRANCE.
- 2. THE CONTRACTOR MAY PROPOSE AN ALTERNATIVE TECHNIQUE TO MINIMIZE OFFSITE TRACKING OF SEDIMENT. THE ALTERNATIVE MUST BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO ITS USE.
- 3. ALL MATERIALS SPILLED, DROPPED, OR TRACKED ONTO PUBLIC ROADS (INCLUDING THE STABILIZED CONSTUCTION ENTRANCE AGGREGATE AND CONSTRUCTION MUD) SHOULD BE REMOVED DAILY, OR MORE FREQUENTLY IF SO DIRECTED BY THE ENGINEER.
- 4. SIZE III STABILIZER AGGREGATE OR LARGER SHALL BE USED.
- 5. THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL ALLOW IT TO PERFORM ITS FUNCTION TO PREVENT OFFSITE TRACKING. THE STABILIZED CONSTRUCTION ENTRANCE SHOULD BE RINSED WHEN NECESSARY TO MOVE ACCUMULATED MUD DOWNWARD THRU THE STONE. ADDITIONAL STABILIZATION OF THE VEHICULAR ROUTE LEADING TO THE STABILIZED ENTRANCE MAY BE REQUIRED TO LIMIT THE MUD TRACKED.
- 6. THE NOMINAL SIZE OF A STANDARD STABILIZED CONSTRUCTION ENTRANCE IS 15' X 50' UNLESS OTHERWISE SHOWN IN THE EROSION CONTROL PLAN.
- 7. COSTS OF ALL ITEMS ON THIS SHEET SHALL BE INCLUDED IN OTHER ITEMS BID.



SECTION A-A RURAL CONNECTION DETAIL MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN

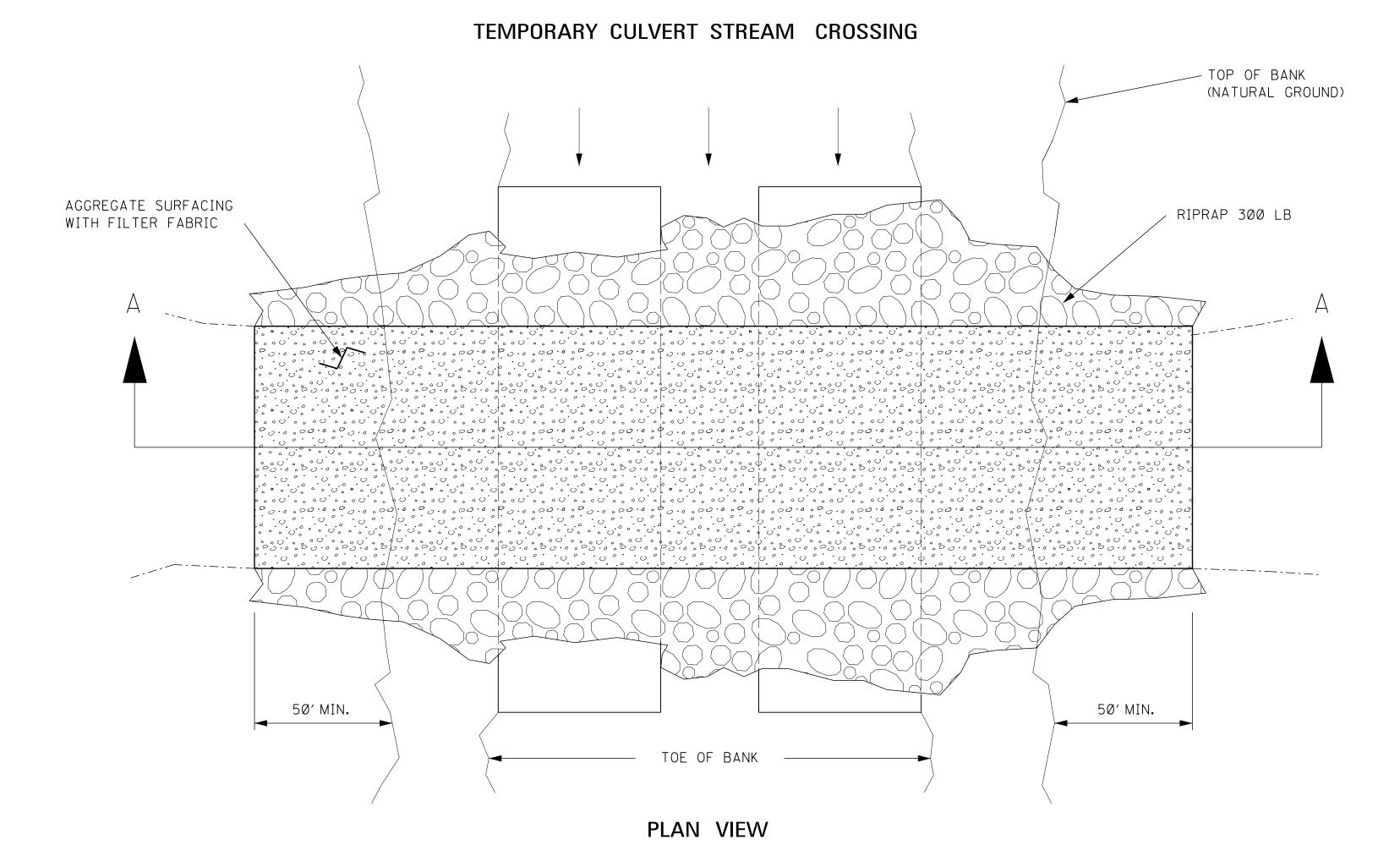
STABILIZED CONSTRUCTION ENTRANCE SINDOT

SSUE DATE:_

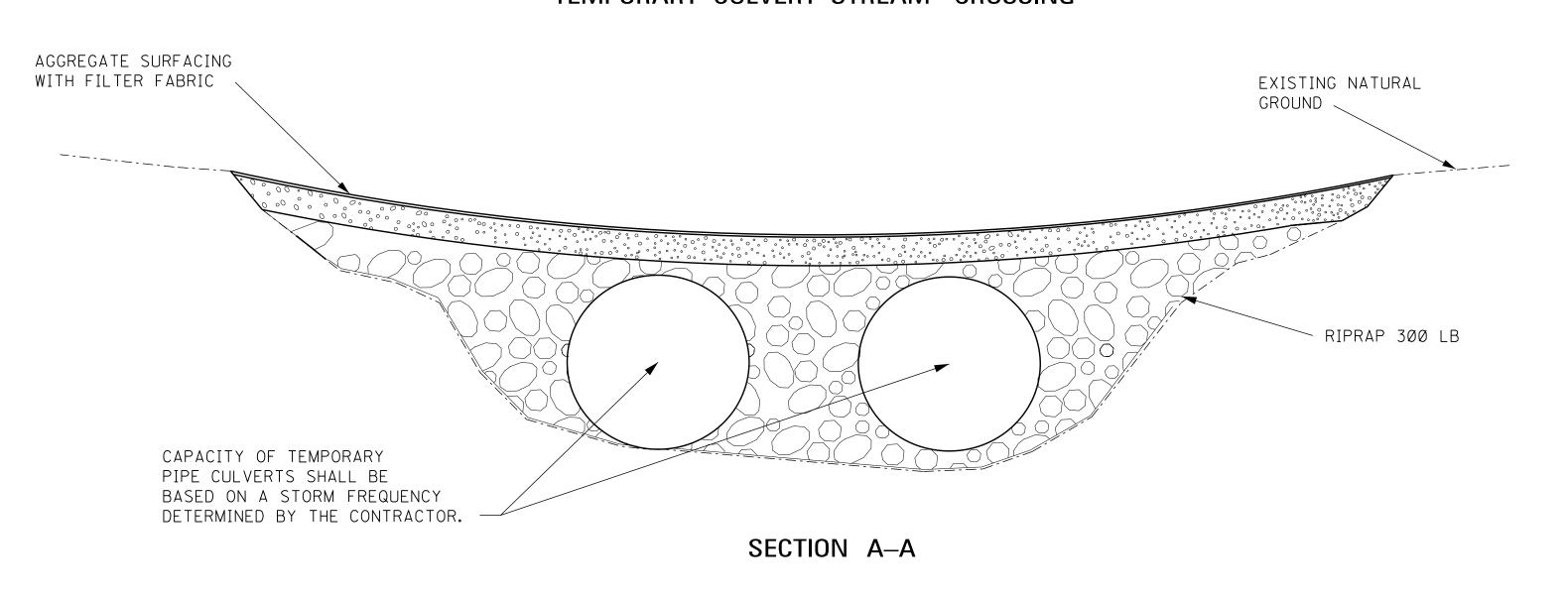
AUGUST Ø1,2017

WORKING NUMBER ECD-16 SHEET NUMBER 6116

STATE PROJECT NO.
MISS.



TEMPORARY CULVERT STREAM CROSSING



GENERAL NOTES:

- 1. TEMPORARY CULVERT STREAM CROSSINGS PROVIDE A MEANS FOR VEHICLES AND EQUIPMENT TO SAFELY CROSS A WATERCOURSE WHILE MINIMIZING DAMAGE TO THE CHANNEL AND/OR BANKS.
- 2. TEMPORARY CULVERT STREAM CROSSINGS, WHEN PERMITTED BY THE ENGINEER, SHALL BE CONSTRUCTED TO SAFELY PASS EXPECTED MEAN WATER FLOW OF THE STREAM FOR THE TIME OF YEAR AND LENGTH OF TIME THAT THEY ARE INSTALLED.
- 3. TEMPORARY STREAM CROSSINGS SHALL BE DESIGNED TO ENSURE STRUCTURAL INTEGRITY AND STABILITY, AND MAINTAIN NORMAL DOWNSTREAM FLOWS. THE USE OF INSTREAM CROSSINGS AND INSTREAM AGGREGATE FILL SHOULD BE MINIMIZED TO THE EXTENT PRACTICABLE.
- 4. A CONTINUOUS PROGRAM OF EFFECTIVE EROSION AND SEDIMENT CONTROL MEASURES SHOULD BE IMPLEMENTED PRIOR TO AND CONCURRENT WITH ANY TYPE OF CONSTRUCTION ACTIVITY WITHIN THE BANKS OF A STREAM. WHEN A CROSSING IS NO LONGER NEEDED, THE STREAMBED AND STREAM BANKS SHALL BE RESTORED TO PRE-DISTURBANCE CONDITIONS, OR SUCH A CONDITION THAT PROVIDES SUBSTANTIALLY EQUIVALENT PROTECTION OF WATER QUALITY.
- 5. LOCATIONS OR TYPES OF TEMPORARY CULVERT STREAM CROSSINGS WILL NOT BE SHOWN ON THE PLANS AS REQUIRED ITEMS.
- 6. THE CONTRACTOR MAY PROPOSE OTHER OPTIONS FOR TEMPORARY CROSSINGS SUCH AS STEEL/TIMBER BRIDGE OR MATS.
- 7. THE DETAILS PROVIDED DEPICT A TYPICAL TEMPORARY CULVERT STREAM CROSSING.
- 8. ALL COSTS FOR MATERIALS, LABOR, EQUIPEMENT, CONSTRUCTION, REMOVAL, AND MAINTENANCE SHALL BE INCLUDED IN OTHER ITEMS BID.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION STANDARD PLAN

AUGUST Ø1,2017

TEMPORARY CULVERT STREAM CROSSING

| ISSUE DATE: __

WORKING NUMBER
ECD-17

SHEET NUMBER
6117

