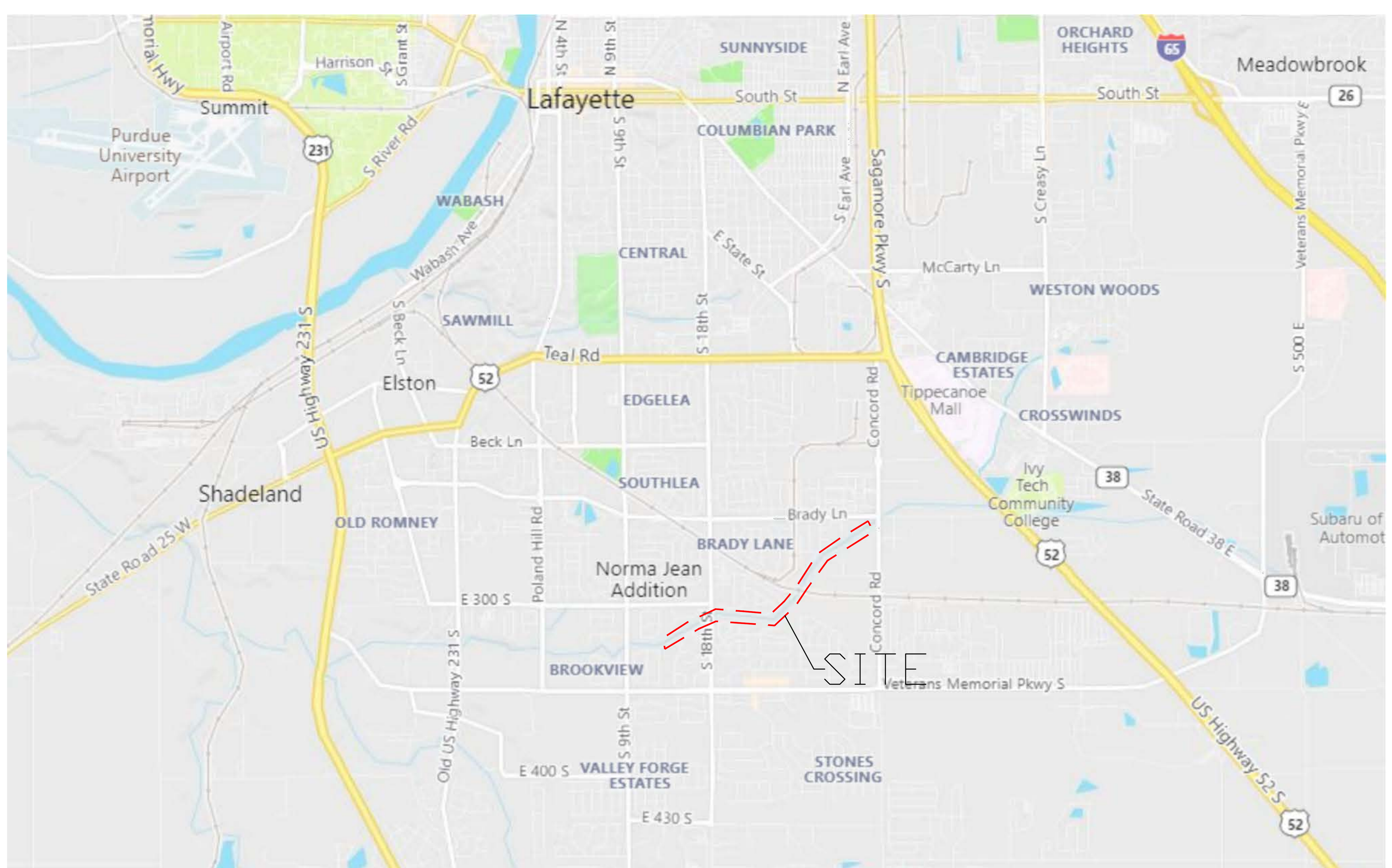
ARCONIC LAFAYETTE OPERATIONS
ELLIOTT DITCH REACHES 1-3
SEDIMENT AND SOIL REMEDIATION

STORMWATER POLLUTION PREVENTION PLAN

PREPARED FOR:
ARCONIC LAFAYETTE OPERATIONS
3131 EAST MAIN STREET
LAFAYETTE, INDIANA 47905

PREPARED BY:
CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
2704 CHEROKEE FARM WAY, SUITE 101
KNOXVILLE, TENNESSEE 37920
DECEMBER 2020

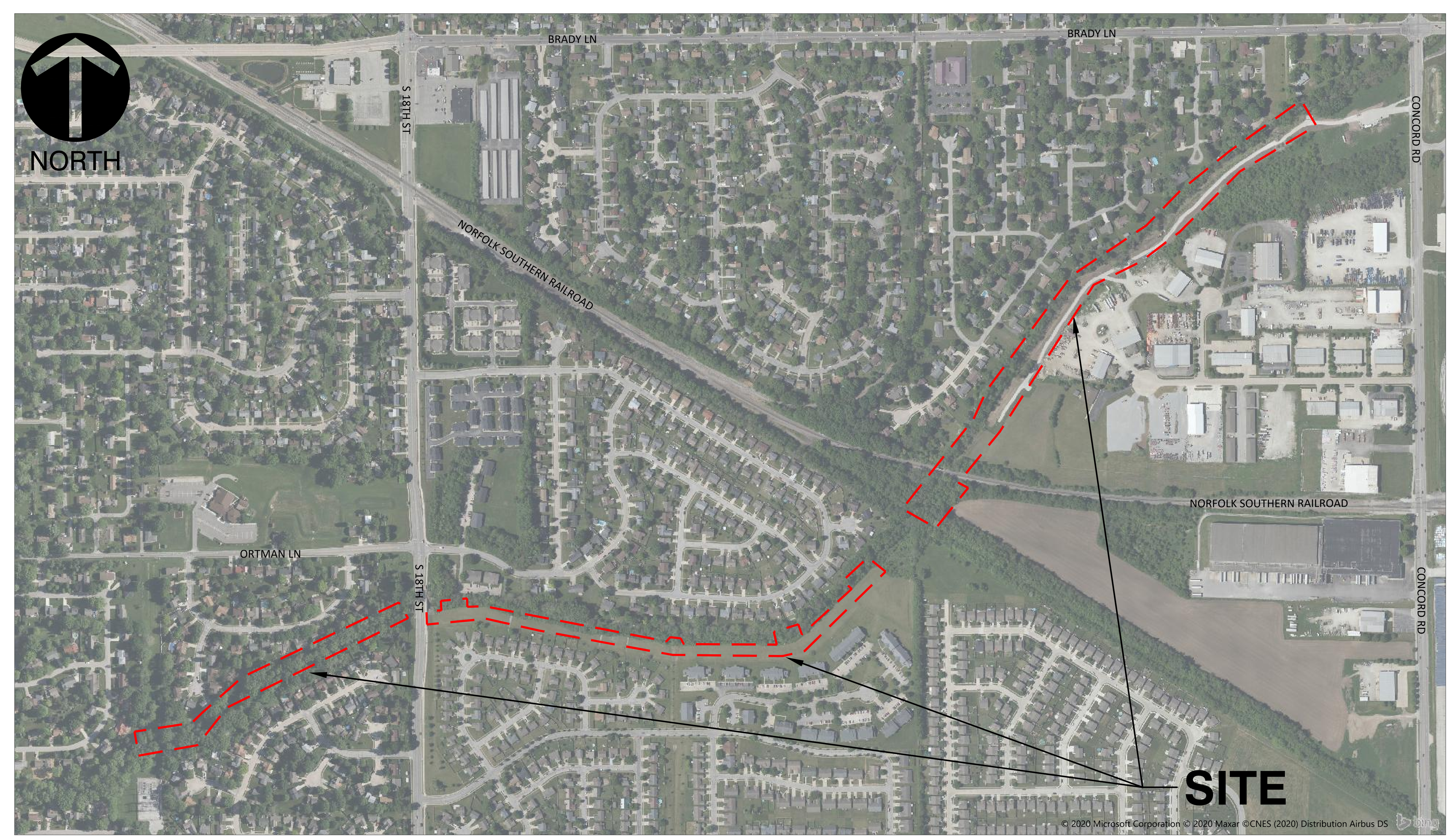
VICINITY MAP



LATITUDE: 40° 23' 47.00" N
LONGITUDE: 86° 51' 33.03" W

SCALE IN FEET
0 3000 6000

LOCATION MAP



SCALE IN FEET
0 500 1000

REVISION RECORD

NO	DATE	DESCRIPTION

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Ph: 865.977.9997 · Fax: 865.977.9919
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ARCONIC LAFAYETTE LLC
LAFAYETTE OPERATIONS
ELLIOTT DITCH REACHES 1-3
SEDIMENT AND SOIL REMEDIATION
LAFAYETTE, INDIANA

COVER SHEET

DATE:	12/21/2020	DRAWN BY:	KAM
DWG SCALE:	NOT TO SCALE	CHECKED BY:	GAW
PROJECT NO:	172-367.0043	APPROVED BY:	JMB

DRAWING NO.: C900
SHEET 1 OF 13

DRAWING INDEX

SHEET NUMBER	DESCRIPTION
C900	COVER SHEET
C901	DRAWING INDEX, PROJECT DESCRIPTION, AND SOILS MAP
C902	REACH 1 EXISTING CONDITIONS AND REMEDIATION OVERVIEW
C903	REACH 2 EXISTING CONDITIONS AND REMEDIATION OVERVIEW
C904	REACH 3 EXISTING CONDITIONS AND REMEDIATION OVERVIEW
C905	REACH 1 EROSION AND SEDIMENT CONTROL PLAN
C906	REACH 2 EROSION AND SEDIMENT CONTROL PLAN
C907	REACH 3 EROSION AND SEDIMENT CONTROL PLAN
C908	SWPPP NARRATIVE (1 OF 3)
C909	SWPPP NARRATIVE (2 OF 3)
C910	SWPPP NARRATIVE (3 OF 3)
C911	EROSION CONTROL DETAILS
C912	EROSION CONTROL DETAILS

*SEE SHEETS C000 THROUGH C801 FOR CONSTRUCTION DRAWINGS.

PROJECT DESCRIPTION

IN ACCORDANCE WITH THE INTERIM MEASURES WORK PLAN (IMWP) DATED DECEMBER 2020, THE PROJECT CONSISTS OF THE EXCAVATION, REMOVAL, AND OFF-SITE DISPOSAL OF PCB IMPACTED SEDIMENTS AND SOILS TO A REMEDIAL GOAL OF 1.0 MILLIGRAM PER KILOGRAM (MG/KG) WITHIN REACH 1 THROUGH 3 OF ELLIOTT DITCH, WHICH INCLUDES FROM OUTFALL 001 TO JUST UPSTREAM OF THE 9TH STREET CROSSING. THE EXCAVATION PROCESS WILL BE DRIVEN BY THE PRESENCE OF GEOMORPHOLOGIC FEATURES AS MAPPED BY TETRA TECH. SOIL REMEDIATION OF THE LEVEE SITUATED ON THE SOUTHEAST SIDE OF THE ELLIOTT DITCH IN REACH 1 WAS PERFORMED UNDER THE LEVEE SOIL IMWP IN SPRING AND SUMMER OF 2020. PCB IMPACTS TO SOIL AND SEDIMENT OF ELLIOTT DITCH ARE BELIEVED TO BE ASSOCIATED WITH HISTORIC DISCHARGES FROM FACILITY OUTFALL 001.

FLOW IN ELLIOTT DITCH WILL NEED TO BE MANAGED IN SUPPORT OF SEDIMENT REMOVAL ACTIVITIES. IN REACH 1, THIS WILL REQUIRE THE INSTALLATION OF A DAM, BYPASS PUMPS, AND PIPING TO REROUTE DITCH FLOW AROUND THE ACTIVE EXCAVATION AREA. SEDIMENT REMEDIATION DOWNSTREAM OF REACH 1 RAILROAD BRIDGE IS TARGETED TO DEPOSITIONAL FEATURES THAT WILL NOT REQUIRE FULL DAMMING OF THE DITCH AND REROUTING OF THE FLOW. COFFERDAMS OR ANOTHER CAPABLE STRUCTURE WILL BE INSTALLED AROUND THESE DEPOSITIONAL FEATURES TO ISOLATE THE AREAS FROM FLOW.

SOIL EXCAVATION AREAS (I.E. DEPOSITIONAL SOIL ABOVE THE ORDINARY HIGH WATER MARK) WILL BE RESTORED TO APPROXIMATE PRE-PROJECT ELEVATIONS AND DRAINAGE PATTERNS WITH OFFSITE BORROW MATERIAL CERTIFIED TO BE FREE OF CONTAMINATION. SEDIMENT REMOVAL AREAS WILL BE BACKFILLED USING B-BORROW MATERIAL PER INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) SPEC 211.03. SEDIMENT EXCAVATIONS WILL BE RESTORED TO AN ELEVATION THAT IS CONSISTENT WITH EXISTING CONDITIONS OF THE REACH WHERE THE REMEDIATION OCCURS.

OTHER ASSOCIATED WORK INCLUDES VEGETATION CLEARING, THE INSTALLATION OF SEDIMENT AND EROSION CONTROLS, THE CONSTRUCTION OF ACCESS ROADS AND DECONTAMINATION STATIONS, LOCALIZED GRADING, AND VEGETATIVE PLANTING AT DISTURBED LOCATIONS.

DATUM

INDIANA STATE PLAN GRID – NORTH AMERICAN DATUM OF 1983 (NAD83).

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

USGS SOILS MAP

SCALE IN FEET
0 500 1000

ACCORDING TO THE USGS SOIL SURVEY DATABASE, SOIL IN REACH 1 OF THE PROJECT SITE MAINLY CONSISTS OF MAHALASVILLE SILTY CLAY LOAM, GRAVELLY SUBSTRATUM (Mb). THIS SOIL CLASS IS POORLY DRAINED WITH A MODERATELY HIGH TO HIGH CAPACITY TO TRANSMIT WATER (Ksat = 0.60 TO 2.0 IN/HR).

SOIL IN REACHES 2 AND 3 OF THE PROJECT SITE MAINLY CONSISTS OF OCCASIONALLY FLOODED SLOAN CLAY LOAM (Sn). THIS SOIL CLASS IS VERY POORLY DRAINED WITH A MODERATELY HIGH TO HIGH CAPACITY TO TRANSMIT WATER (Ksat = 0.60 TO 2.0 IN/HR).

UPLAND SOIL ON THE NORTH BANK OF REACH 3 IN THE PROJECT SITE INCLUDES ERODED MIAMA SILT LOAM (MsC2). THIS SOIL CLASS IS MODERATELY WELL DRAINED WITH A LOW TO MODERATELY HIGH CAPACITY TO TRANSMIT WATER (Ksat = 0.01 TO 0.2 IN/HR).

REVISION RECORD

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LAFAYETTE OPERATIONS
ELLIOTT DITCH REACHES 1-3
SEDIMENT AND SOIL REMEDIATION
LAFAYETTE, INDIANA

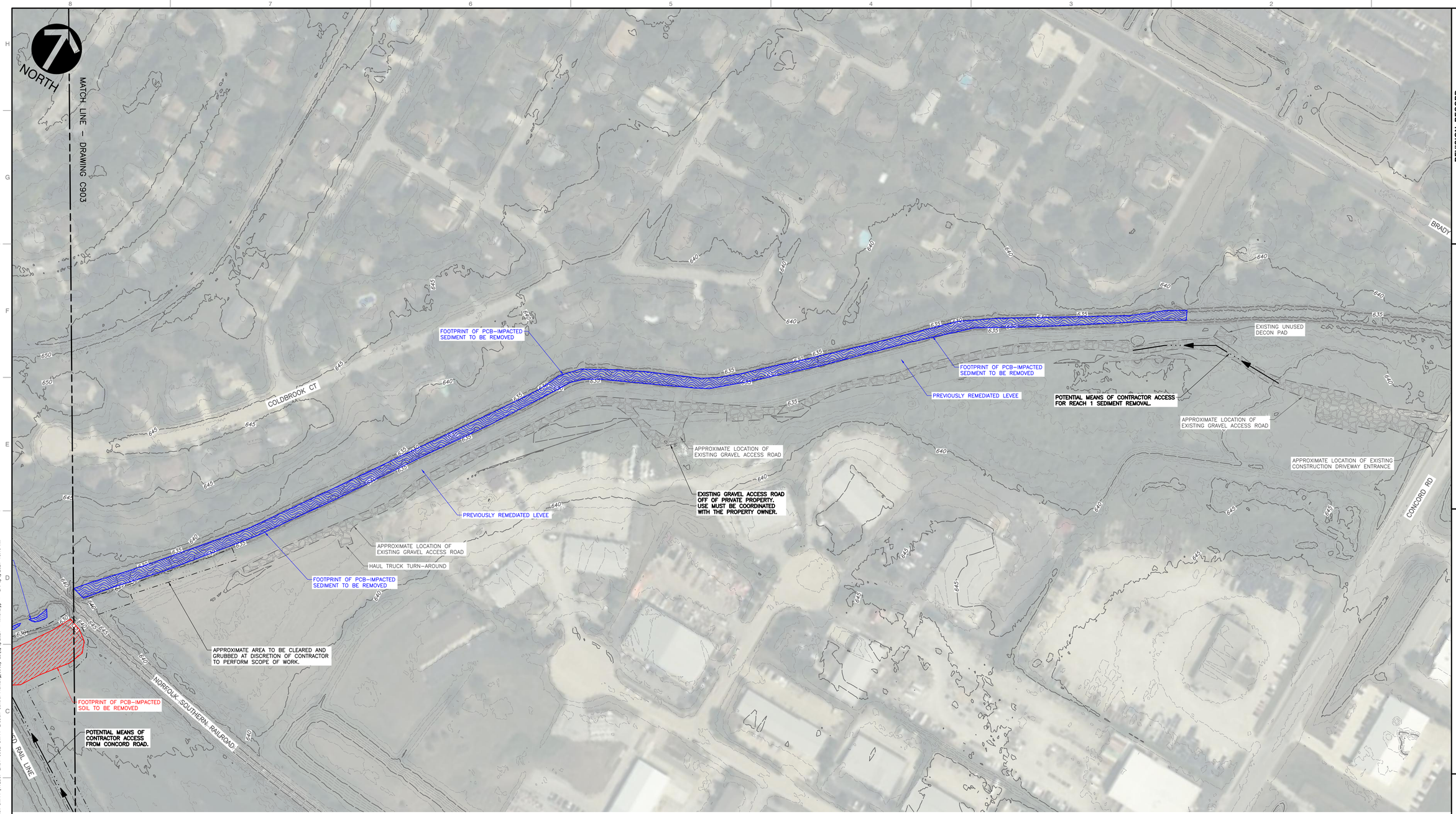
DRAWING INDEX, PROJECT DESCRIPTION, AND SOILS MAP

DATE: 12/21/2020 DRAWN BY: KAM
DWG SCALE: NOT TO SCALE CHECKED BY: GAW
PROJECT NO: 172-367.0043 APPROVED BY: JMB

JOHN MATTHEW BRUCK REGISTERED No. PE11700141 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWING NO.: C901

SHEET 2 OF 13



REFERENCE

1. EXISTING CONDITIONS TOPOGRAPHY GENERATED FROM DATA PROVIDED BY INDIANA'S STATEWIDE IMAGERY AND LIDAR PROGRAM AND AVAILABLE AT WWW.OPENTOPO.SDSC.EDU. AIRBORNE LIDAR SURVEY PERFORMED BETWEEN 3/13/2011 AND 4/30/2012.
2. AS–BUILT TOPOGRAPHIC CONDITIONS OF THE ELLIOTT DITCH LEVEE BASED ON FIELD SURVEY PERFORMED BY FISHER ENGINEERING ON 8/24/2020 HAVE BEEN INCORPORATED INTO THE PROVIDED CONTOURS.

LEGEND

- SEDIMENT REMEDIATION FOOTPRINT
- SOIL REMEDIATION FOOTPRINT
- TEMPORARY CONSTRUCTION ENTRANCE
- POTENTIAL PROJECT CONSTRUCTION ENTRANCE
- LIMITS OF CLEARING
- EXISTING RAILROAD TRACKS
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR

SCALE IN FEET
0 100 200

Indiana 811 Know what's below. 811 before you dig.

JOHN MATTHEW BRICK REGISTERED No. PE11700141 STATE OF INDIANA PROFESSIONAL ENGINEER

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ELLIOTT DITCH REACHES 1-3
SEDIMENT AND SOIL REMEDIATION
LAFAYETTE, INDIANA

REACH 1
EXISTING CONDITIONS AND REMEDIATION OVERVIEW

DATE:	12/21/2020
DRAWN BY:	KAM
DWG SCALE:	1"=100'
CHECKED BY:	GAW
PROJECT NO.	172-367.0043
APPROVED BY:	JMB

DRAWING NO.: C902
SHEET 3 OF 13

P:\2017\172-367\-CADD\Dwg\DXD4 - Reach 1-3 Remediation Drawings\Sediment Remediation SWPPP\172367-DXD4-C902-SWPPP Erosion Control Plan.dwg[C902] LS(2/8/2021 - xmcnally) - LP: 3/8/2021 10:48 AM

REFERENCE

1. EXISTING CONDITIONS TOPOGRAPHY GENERATED FROM DATA PROVIDED BY INDIANA'S STATEWIDE IMAGERY AND LIDAR PROGRAM AND AVAILABLE AT WWW.OPENTOPO.SDSC.EDU. AIRBORNE LIDAR SURVEY PERFORMED BETWEEN 3/13/2011 AND 4/30/2012.

LEGEND

- SEDIMENT REMEDIATION FOOTPRINT
- SOIL REMEDIATION FOOTPRINT
- TEMPORARY CONSTRUCTION ENTRANCE
- POTENTIAL PROJECT CONSTRUCTION ENTRANCE
- LIMITS OF CLEARING
- EXISTING RAILROAD TRACKS
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR

SCALE IN FEET: 0 100 200

REVISION RECORD

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ELLIOTT DITCH REACHES 1-3
SEDIMENT AND SOIL REMEDIATION
LAFAYETTE, INDIANA

REACH 2
EXISTING CONDITIONS AND REMEDIATION OVERVIEW

DATE:	12/21/2020	DRAWN BY:	KAM
DWG SCALE:	1"=100'	CHECKED BY:	GAW
PROJECT NO:	172-367.0043	APPROVED BY:	JMB

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JOHN MATTHEW BRUCK, REGISTERED No. PE11700141, STATE OF INDIANA, PROFESSIONAL ENGINEER

DRAWING NO.: **C903**
SHEET 5 OF 13

NORTH

MATCH LINE – DRAWING C903

POTENTIAL MEANS OF CONTRACTOR ACCESS FOR SEDIMENT REMOVAL IN REACH 3

POTENTIAL MEANS OF CONTRACTOR ACCESS FOR SOIL REMOVAL IN REACH 3

APPROXIMATE AREA TO BE CLEARED AND GRUBBED AT DISCRETION OF CONTRACTOR TO PERFORM SCOPE OF WORK.

FOOTPRINT OF PCB-IMPACTED SEDIMENT TO BE REMOVED

A LIMITED SOIL TERRACE LOCATED ADJACENT TO THE SEDIMENT DEPOSIT HAS BEEN INCLUDED IN THIS FOOTPRINT AND WILL BE EXCAVATED DURING SEDIMENT REMOVAL ACTIVITIES.

FOOTPRINT OF PCB-IMPACTED SOIL TO BE REMOVED

APPROXIMATE AREA TO BE CLEARED AND GRUBBED AT DISCRETION OF CONTRACTOR TO PERFORM SCOPE OF WORK.

MEANS OF CONTRACTOR ACCESS FOR SEDIMENT AND SOIL REMOVAL IN REACH 2

S 9TH ST
CANTERBURY DR
SOUTHERNVIEW DR
N SOUTHERNVIEW DR
MEADOWVIEW DR
DUKE SUBSTATION
SUNNYVIEW DR
THOMAS CT
WINDMILL CT
WINDMILL DR
ORTMAN LN
S 18TH ST
THOMAS DR
STARKS CIR
NEWSOM DR
WAVERLY DR

REFERENCE

1. EXISTING CONDITIONS TOPOGRAPHY GENERATED FROM DATA PROVIDED BY INDIANA'S STATEWIDE IMAGERY AND LIDAR PROGRAM AND AVAILABLE AT WWW.OPENTOPO.SDSC.EDU. AIRBORNE LIDAR SURVEY PERFORMED BETWEEN 3/13/2011 AND 4/30/2012.

LEGEND

- SEDIMENT REMEDIATION FOOTPRINT
- SOIL REMEDIATION FOOTPRINT
- TEMPORARY CONSTRUCTION ENTRANCE
- POTENTIAL PROJECT CONSTRUCTION ENTRANCE
- LIMITS OF CLEARING
- EXISTING RAILROAD TRACKS
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR

SCALE IN FEET
0 100 200

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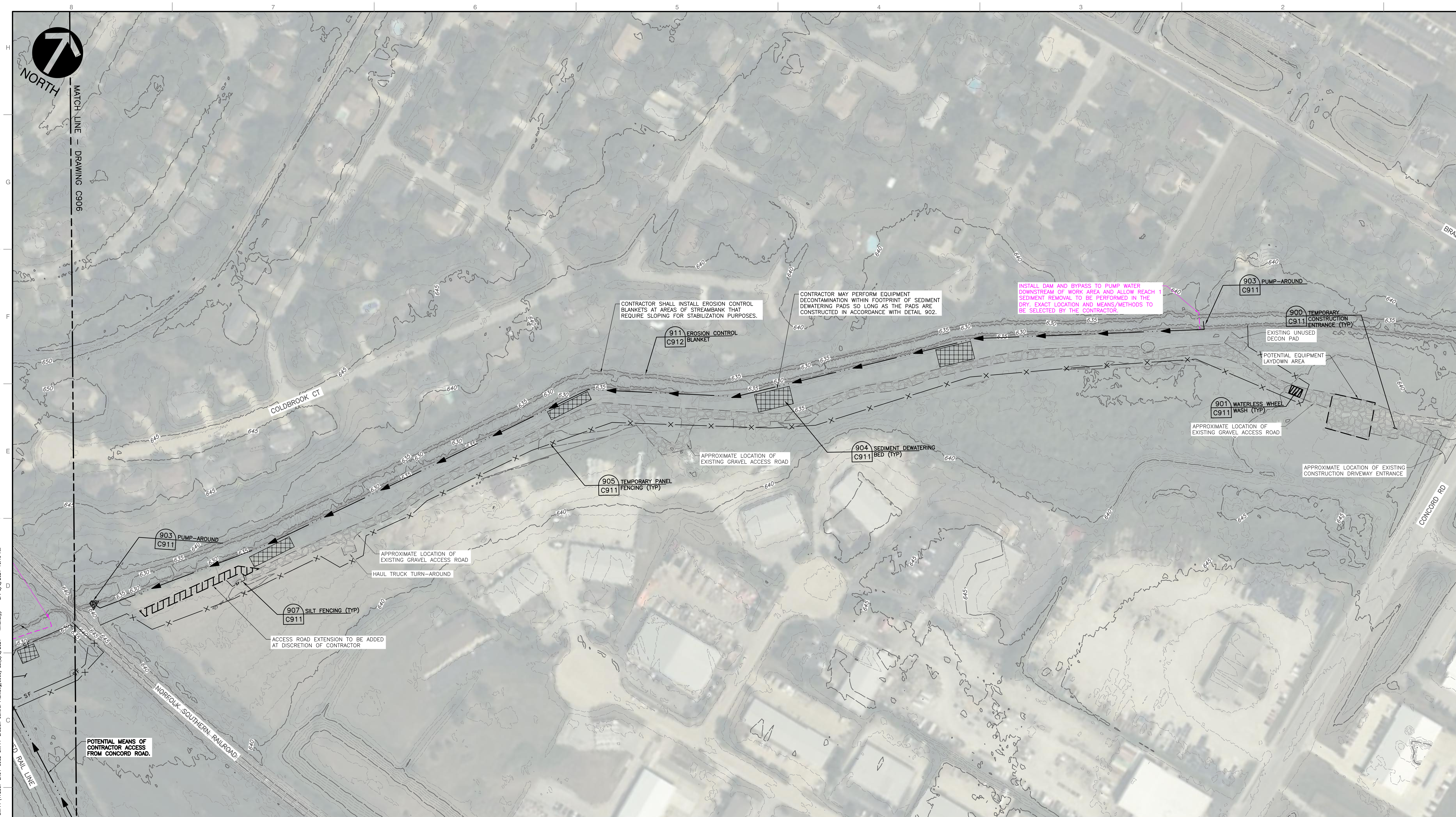
ELLIOTT DITCH REACHES 1-3
SEDIMENT AND SOIL REMEDIATION
LAFAYETTE, INDIANA

REACH 3
EXISTING CONDITIONS AND REMEDIATION OVERVIEW

DATE:	12/21/2020
DWG SCALE:	1" = 100'
PROJECT NO:	172-367.0043
DRAWN BY:	KAM
CHECKED BY:	GAW
APPROVED BY:	JMB

DRAWING NO.: C904
SHEET 6 OF 13

P:\2017\172-367\C4D\Dwg\C904 - Reach 1-3 Remediation Drawings\Sediment Remediation SWPPP\172367-C904-C902-SWPPP Erosion Control Plan.dwg[C904] 12/12/2021 - smcnally - LP: 3/9/2021 10:46 AM



REFERENCE

1. EXISTING CONDITIONS TOPOGRAPHY GENERATED FROM DATA PROVIDED BY INDIANA'S STATEWIDE IMAGERY AND LIDAR PROGRAM AND AVAILABLE AT WWW.OPENTOPO.SDSC.EDU. AIRBORNE LIDAR SURVEY PERFORMED BETWEEN 3/13/2011 AND 4/30/2012.
2. AS–BUILT TOPOGRAPHIC CONDITIONS OF THE ELLIOTT DITCH LEVEE BASED ON FIELD SURVEY PERFORMED BY FISHER ENGINEERING ON 8/24/2020 HAVE BEEN INCORPORATED INTO THE PROVIDED CONTOURS.

NOTES

1. SEE SHEET C908 THROUGH C910 FOR CONSTRUCTION AND SEDIMENT CONTROL NOTES. SEE SHEETS C911 AND C912 FOR EROSION CONTROL DETAILS.
2. LOCATION OF TEMPORARY SITE INFRASTRUCTURE (CONSTRUCTION ENTRANCE, DECONTAMINATION PADS, LAYDOWN AREA, ETC.) TO BE PROPOSED BY CONTRACTOR PRIOR TO START OF WORK FOR APPROVAL BY ARCONIC PERSONNEL.
3. EROSION CONTROL MEASURES FOR THE PROJECT BOUNDARY ARE IDENTIFIED AS SILT FENCING. ALTERNATIVE MEASURES (I.E. STRAW WATTLES OR HAY BALES) MAY BE IMPLEMENTED AT THE DISCRETION OF THE CONTRACTOR BASED ON FIELD CONDITIONS.
4. IN THE EVENT THAT AREAS BETWEEN ELLIOTT DITCH AND THE ACCESS ROAD BECOME DISTURBED DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MANAGEMENT OF ADDITIONAL EROSION AND SEDIMENT CONTROLS, AS NECESSARY, TO MINIMIZE THE POTENTIAL FOR SOIL TRANSPORT. ACCEPTABLE CONTROLS MAY INCLUDE, BUT ARE NOT LIMITED TO, SILT FENCING, STRAW WATTLES/HAY BALES, EROSION CONTROL MATTING, AND/OR TEMPORARY MULCHING AND SEEDING. PERMANENT VEGETATION SHALL BE INSTALLED UPON PROJECT COMPLETION.

LEGEND

- SF — SILT FENCING
- —x—x— PERIMETER TEMPORARY FENCING
- TEMPORARY COFFERDAM
- EXISTING RAILROAD TRACKS
- WATERLESS WHEEL WASH
- SEDIMENT DEWATERING BED
- FB — DEWATERING FILTER BAG
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR

SCALE IN FEET
0 100 200

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JOHN MATTHEW BRUCK — REGISTERED — No. PE11700141 — STATE OF INDIANA — PROFESSIONAL ENGINEER

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ELLIOTT DITCH REACHES 1-3
SEDIMENT AND SOIL REMEDIATION
LAFAYETTE, INDIANA

REACH 1
EROSION AND SEDIMENT CONTROL PLAN

DATE:	12/21/2020	DRAWN BY:	KAM
DWG SCALE:	1"=100'	CHECKED BY:	GAW
PROJECT NO:	172-367.0043		
APPROVED BY:	JMB		

DRAWING NO.: **C905**
SHEET 6 OF 13

REFERENCE

1. EXISTING CONDITIONS TOPOGRAPHY GENERATED FROM DATA PROVIDED BY INDIANA'S STATEWIDE IMAGERY AND LIDAR PROGRAM AND AVAILABLE AT WWW.OPENTOPO.SDSC.EDU. AIRBORNE LIDAR SURVEY PERFORMED BETWEEN 3/13/2011 AND 4/30/2012.

NOTES

1. SEE SHEET C908 THROUGH C910 FOR CONSTRUCTION AND SEDIMENT CONTROL NOTES. SEE SHEETS C911 AND C912 FOR EROSION CONTROL DETAILS.
2. LOCATION OF TEMPORARY SITE INFRASTRUCTURE (CONSTRUCTION ENTRANCE, DECONTAMINATION PADS, LAYDOWN AREA, ETC.) TO BE PROPOSED BY CONTRACTOR PRIOR TO START OF WORK FOR APPROVAL BY ARCONIC PERSONNEL.
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LEGEND

- SF — SILT FENCING
- —×— PERIMETER TEMPORARY FENCING
- TEMPORARY COFFERDAM
- EXISTING RAILROAD TRACKS
- WATERLESS WHEEL WASH
- SEDIMENT DEWATERING BED
- FB DEWATERING FILTER BAG
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR

SCALE IN FEET 0 100 200

Indiana811 Know what's below. 811 before you dig.

JOHN MATTHEW BRUCK REGISTERED No. PE11700141 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISION RECORD

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LAFAYETTE OPERATIONS
ELLIOTT DITCH REACHES 1-3
SEDIMENT AND SOIL REMEDIATION
LAFAYETTE, INDIANA

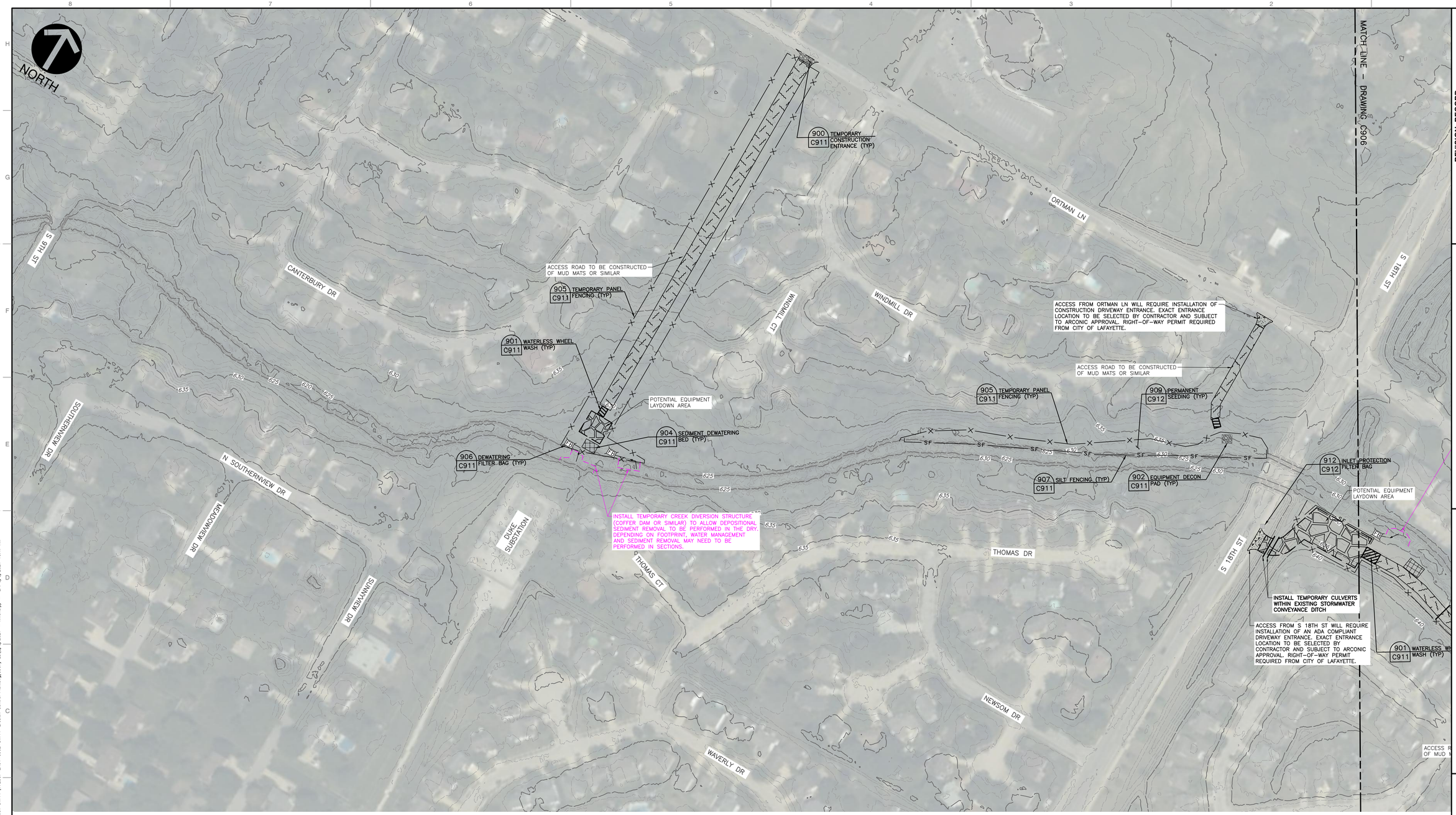
REACH 2
EROSION AND SEDIMENT CONTROL PLAN

DATE:	12/21/2020	DRAWN BY:	KAM
DWG SCALE:	1"=100'	CHECKED BY:	GAW
PROJECT NO:	172-367.0043		
APPROVED BY:			JMB

DRAWING NO.: C906

SHEET 7 OF 13

P:\2017\172-367\-CADD\Dwg\EN04 – Reach 1-3 Remediation Drawings\Sediment Remediation SWPPP\172367-EN04-C902-SWPPP Erosion Control Plan.dwg{C906} LS:(2/9/2021 – kmcnally) – LP: 3/5/2021 10:47 AM



REFERENCE

1. EXISTING CONDITIONS TOPOGRAPHY GENERATED FROM DATA PROVIDED BY INDIANA'S STATEWIDE IMAGERY AND LIDAR PROGRAM AND AVAILABLE AT WWW.OPENTOPO.SDSC.EDU. AIRBORNE LIDAR SURVEY PERFORMED BETWEEN 3/13/2011 AND 4/30/2012.

NOTES

1. SEE SHEET C908 THROUGH C910 FOR CONSTRUCTION AND SEDIMENT CONTROL NOTES. SEE SHEETS C911 AND C912 FOR EROSION CONTROL DETAILS.
2. LOCATION OF TEMPORARY SITE INFRASTRUCTURE (CONSTRUCTION ENTRANCE, DECONTAMINATION PADS, LAYDOWN AREA, ETC.) TO BE PROPOSED BY CONTRACTOR PRIOR TO START OF WORK FOR APPROVAL BY ARCONIC PERSONNEL.
3. EROSION CONTROL MEASURES FOR THE PROJECT BOUNDARY ARE IDENTIFIED AS SILT FENCING. ALTERNATIVE MEASURES (I.E. STRAW WATTLES OR HAY BALES) MAY BE IMPLEMENTED AT THE DISCRETION OF THE CONTRACTOR BASED ON FIELD CONDITIONS.

LEGEND

- SF —— SILT FENCING
- —x——x— PERIMETER TEMPORARY FENCING
- – – – – – TEMPORARY COFFERDAM
- ++++++++ EXISTING RAILROAD TRACKS
- WATERLESS WHEEL WASH
- SEDIMENT DEWATERING BED
- FB DEWATERING FILTER BAG
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR

SCALE IN FEET
0 100 200

Indiana 811 Know what's below. 811 before you dig.

JOHN MATTHEW BRICK REGISTERED No. PE11700141 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION

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LAFAYETTE, INDIANA

REACH 3
EROSION AND SEDIMENT CONTROL PLAN

DATE:	12/21/2020
DWG SCALE:	1" = 100'
PROJECT NO:	172-367.0043
DRAWN BY:	KAM
CHECKED BY:	GAW
APPROVED BY:	JMB

DRAWING NO.:
C907
SHEET 8 OF 13

P:\2017\172-367\C4D\Dwg\0104 - Reach 1-3 Remediation Drawings\Sediment Remediation SWPPP\172367-0104-C902-SWPPP Erosion Control Plan.dwg[C907] 12/2/2021 - xmccully - LP: 3/8/2021 10:47 AM

1. INTRODUCTION

This Stormwater Pollution and Prevention Plan (SWPPP) describes measures to be taken by Arconic Corp. (Company) and its contractors (Contractor) to control and reduce soil erosion and resulting sedimentation during and after the excavation and restoration of impacted sediment and isolated soil within Reaches 1 through 3 of Elliott Ditch, which includes from Outfall 001 to just upstream of the 9th Street crossing based on geomorphologic mapping. This plan includes, but is not limited to, using sound remediation planning and practices to reduce potential sources of sediment, encourage revegetation, restoration, and stabilization of disturbed streambed and soils on the project to reduce pathways for erosion, and remediation scheduling to quickly and efficiently excavate and restore designated remediation areas and to reduce the duration that bare soils and sediments are left exposed. Measures identified in this plan apply to work within the defined project site limits, access roads, all work and storage areas, and other areas used during remediation of the project. This plan was prepared as part of the Storm Water Pollution Prevention Plan as required under Title 40, Code of Federal Regulations (CFR), Parts 122–124. (National Pollution Discharge Elimination System Permit for Storm Water Discharges.)

1.1 OBJECTIVES

Short–term objectives of this plan are to control erosion and sedimentation, to protect water quality and aquatic resources, to encourage remediation/revegetation success, and to reduce impacts to adjacent land uses and ecological resources. Properly executed remediation practices, and ongoing evaluation by environmental and remediation inspectors, and Contractor personnel, will ensure the continued functioning of erosion and sediment control measures.

Long–term objectives include control of erosion and sedimentation, as well as restoration of topography, water resources, soils, and vegetation to a condition similar to that, which existed prior to remediation. Monitoring activities during the remediation, operations, and maintenance phases will evaluate the success of the erosion control and revegetation efforts.

1.2 RESPONSIBILITIES

1.2.1 Company

Arconic will appoint a representative to provide Contractor oversight throughout the duration of the project. This representative will confirm that the Contractor is compliant with the standards for sediment and erosion control measures defined within this plan.

Arconic will be responsible for meeting the long–term restoration and soil stabilization standards after the project is completed. Oversight Personnel will observe for compliance by the Contractor during the installation and maintenance of erosion control measures. Installation of most erosion control measures will be performed prior to sediment and soil remediation actions. Erosion control measures implemented throughout the duration of the remediation field effort may include: silt fence sediment barriers, straw bale sediment barriers, straw waddles, interim mulching, tackifier application, construction entrance/exits, wheel wash, dewatering bags, scour protection pads, filter berms, floating filter curtains, and decontamination pads.

Work related to permanent erosion control measures implemented during restoration may include topsoil replacement, seedbed preparation, seeding, planting, permanent mulching, and erosion control matting.

1.2.2 Contractor

The Contractor will be responsible for conducting grading, excavation, fill placement, and stockpiling activities, installing and maintaining temporary and permanent erosion control measures, and establishing final contours on the Elliott Ditch levee site according to the standards detailed in this plan and related plans listed in Bullet 1.4. The Contractor is responsible for monitoring the effectiveness of the installed devices and correcting any conditions that do not meet the specifications of this plan.

1.3 COORDINATION

This plan has been prepared through consultation and coordination with Arconic, and in accordance with the standards of state and local regulatory agencies. Arconic will be responsible for distributing copies of this plan to all appropriate agencies and remediation personnel. It will be the responsibility of Arconic to maintain coordination and communication with the various recipients.

1.4 RELATED PLANS AND DRAWINGS

This plan is related to other project plans (Resource Conservation and Recovery Act [RCRA] Corrective Action Interim Measures Work Plan, Transportation Plan, Waste Analysis and Management Plan, etc.), technical specifications, and the plan and detail drawing set. The Contractor will be responsible for complying with the requirements of all associated project plans and drawings.

2. SOIL CONSERVATION MEASURES

2.1 GENERAL CONSIDERATIONS

2.1.1 Flagging

The Contractor will demarcate the boundaries of the work area prior to remediation. The Contractor will install demarcation tools, as determined by Oversight Personnel, to protect sensitive resources located near the Elliott Ditch sediment and soil excavation limits, as necessary.

2.1.2 Clearing

Current surface conditions along the banks of Elliott Ditch generally consist of overgrown and unkempt vegetation including mature trees, plants, grasses, and shrubs. Surface conditions also include areas of grassed lawn. Cleared materials within the construction area will be cut off at approximately 2 inches above ground surface and either chipped for onsite use or transported off the property for appropriate disposal. Within designated remediation areas, stumps and roots at or below ground surface will be removed during excavation work. Any grubbed vegetation that is in contact with impacted material will be transported offsite for disposal along with the sediment and soil removed from the area.

2.2 RESTORATION

After completion of soil remediation work at Reaches 1 through 3 of Elliott Ditch, disturbed upland areas will be restored with clean borrow soils in accordance with the construction drawings and receive a 3–inch lift of loose topsoil. The topsoil will be pH of 5.5 to 7.0 and contain at least 3–percent organic matter and no stones larger than 1–inch in any dimension. Phosphorus free fertilizer (12 – 0 – 12) will be applied at a rate of 23 pounds per 1,000 square feet to assist in germination and growth. The selected seed mixture and application rate will be determined based on the completion date of the project and soil conditions. Revegetation will be the primary method to stabilize soils and establish long term erosion control.

All disturbed streambanks that are steeper than 3H:1V shall be restored in accordance with the requirements of the Permit for Construction in a Floodway issued by the Indiana Department of Natural Resources. Such streambanks shall be seeded and protected with erosion control blankets that are heavy–duty, biodegradable, and net free or that use loose–woven/Leno–woven netting to minimize the entrapment and snaring of small–bodied wildlife such as snakes and turtles.

After completion of in–stream sediment remediation work at Reach 1 through 3 of Elliott Ditch, the sediment excavation areas shall be backfilled with B–Borrow material per INDOT specification 211.03. Restoration shall be completed to match the natural stream gradient and existing conditions upgradient and downgradient of the excavation area.

Final cleanup and installation of permanent erosion control measures must be completed within 15 days after final backfilling in accordance with 327 Indiana Administrative Code (IAC) 15–5–7–16. Mulch or fiber matting will be applied to disturbed surfaces as directed by Oversight Personnel. Should this be unattainable due to extenuating circumstances (i.e., extreme weather conditions), temporary erosion control measures will be installed in the interim.

3. EROSION AND SEDIMENTATION CONTROL

3.1 GENERAL CONSIDERATIONS

The following general environmental protection measures will be implemented to reduce environmental impacts during remediation and operation of the project.

- Personnel, vehicles, and equipment will stay in the designated remediation area. Site–specific access roads outside of the remediation area will be established by the Contractor and Oversight Personnel.
- Temporary erosion/sediment control devices will be installed prior to initial soil disturbance and will be maintained throughout remediation and restoration, as necessary, until replaced by permanent erosion control measures.
- Erosion and sedimentation controls will not be removed until adequate vegetative coverage has been established and the Notice of Termination for the National Pollution Discharge Elimination System (NPDES) General Permit has been submitted.
- Oversight Personnel will be employed by Arconic in the field during remediation to verify compliance with the environmental protection measures.
- Disturbance during remediation will be limited and based upon what is required to safely and efficiently complete remediation activities.
- Remediation, clean up, and restoration will be completed in an efficient manner such that the time period between grading, excavation, backfilling, and final restoration/remediation is kept to a minimum.
- Erosion control materials including straw bales, silt fences, erosion control matting and geotextile fabric will be stored onsite during the entire period that remediation disturbances are taking place. Materials will be stored for planned use during remediation, and additional quantities will be maintained for maintenance and emergency use.

3.2 EROSION CONTROL METHODS

Temporary erosion control measures are designed to effectively reduce erosion and sedimentation located near sensitive resources during remediation. These temporary control measures will be installed prior to remediation activities and will be maintained throughout the course of remediation. When necessary, these measures may be left in place along with permanent measures during the post remediation period until effective vegetation has been reestablished. Sediment barriers (as described below) will be the primary measures for temporary erosion control used on the project. Temporary erosion control measures will also assist with stabilizing portions of the disturbed remediation area located near sensitive resources if remediation is delayed for significant periods following disturbance.

Permanent erosion control measures are designed to reduce erosion and sedimentation after remediation until revegetation efforts have effectively stabilized the remediation area. Erosion and sedimentation controls will not be removed until adequate vegetative coverage has been established and the Notice of Termination for the NPDES General Permit has been submitted.

The following sections review materials, installation requirements, and performance criteria for temporary, interim and permanent erosion and sediment control measures.

3.2.1 Sediment Barriers

Straw bale sediment barriers and silt fence sediment barriers are temporary sediment barriers designed to slow down water flow and to intercept suspended sediment conveyed by sheet slow, while allowing runoff to continue down gradient. These installations are used to reduce sediment transport off of the remediation area as well as to divert water off the remediation area. Temporary sediment barriers will be installed at locations as indicated in drawings C905 through C907 and at other locations as directed by Site personnel.

While typically used only during remediation, silt fences and straw bale sediment barriers may be left in place following seeding until adequate vegetative cover is developed.

3.2.1.1 General Requirements

Sediment barriers will be installed on contour wherever possible and curve up slope at ending points to trap any residual sediment. Sediment barriers will be placed so as not to hinder remediation activities.

If sediment barriers are placed across the remediation area where remediation traffic is allowed to cross, provisions will be made such that the sediment barrier remains effective within the traffic flow area.

If sediment loading is noted during regular inspections of temporary sediment barriers to be at least half the height of the barrier, the sediment will be managed with waste materials or a second barrier will be installed. Loose stakes, loosely abutted bales, damaged bales, or damaged or undermined sections of silt fence will be repaired or replaced as necessary.

3.2.1.2 Straw Bales

Straw bale sediment barriers consist of tightly abutted straw bales placed perpendicular to the runoff direction with the ends turned upslope. The barriers are typically one bale high, placed on the fiber–cut edge in a 4–inch trench (tie not in contact with the ground), and anchored securely with two wooden stakes driven through each bale. A small amount of soil is then piled across the upslope side of the straw bale barrier.

3.2.1.3 Silt Fences

Commercial filter fabrics, with sufficient strength to prevent failure will be provided by the Contractor. The height of a silt fence will not exceed 36 inches and the fabric will be cut from a continuous roll of fabric with splices only at support posts, with a minimum 6–inch overlap and both ends of fabric securely attached to the post. Support posts will be a maximum of 10 feet apart. The bottom edge of silt fences will be installed in a trench excavated approximately 4 inches wide by 8 inches deep and refilled with compacted soil, unless on–site constraints dictate otherwise (e.g., rock). Silt fences will be attached to supporting posts by staples or wire.

If additional support is needed to contain soil, or to provide added protection near a sensitive resource (as determined by Oversight Personnel), either wire mesh or straw bales may be placed immediately behind the silt fence on the down–gradient side. If wire mesh is used, the wire will be attached to the support posts, prior to installation of the fabric, with heavy duty wire staples at least 1 inch long, wire ties, or hog rings. The wire will be keyed into the trench at least 2 inches, and extended up the posts to the top of the filter fabric.

3.2.2 Mulching

Mulching is the application of straw or wood fiber to disturbed soils to reduce impacts from wind or rain on exposed soils. During rainy conditions, mulch reduces the impact of rainfall and slows the flow of water down the slope. Mulch (as opposed to erosion control mats described in Section 3.2.3) would typically be used across large sections of the Elliott Ditch levee limits of disturbance to reduce wind erosion and raindrop impact.

3.2.2.1 Mulch as Temporary Erosion Control

Application of mulch for temporary erosion control is based on slope surface type and condition (i.e., sand, clay, rock, etc.), slope steepness, and the amount of exposed surface area not covered by vegetation. Mulch will be applied to exposed soils within the project limits of disturbance if soils remain exposed and inactive for more than 15 days. Interim seeding may be performed as determined by Oversight Personnel. Seedbed preparation, including thinning or removal of the mulch, will be repeated as necessary prior to application of the final seed mix.

3.2.2.2 Mulch as Permanent Erosion Control

After final restoration and seeding, permanent mulch applications will be applied to control erosion and prevent the runoff of grass seed during heavy rainfall.

3.2.2.3 Straw Mulch

Straw will be anchored into the seedbed using a mechanical crimper specifically designed to crimp mulch to a depth of 2 to 3 inches. Acceptable straw mulch crimpers include:

Mechanical crimper,

Backhoe with crimper forks,

Tracked equipment tracking across slopes (restricted to areas where other methods will not work),

Hand–punching with round–pointed shovel, or

Equivalent approved by Oversight Personnel.

Organic liquid mulch binders may be used in accordance with manufacturer's recommendations. If a straw mulch blower is used, strands of the mulching material will be at least 8 inches long to allow anchoring.

3.2.2.4 Wood Fiber Mulch

Wood fiber mulches will be made of 100 percent wood fiber or equivalent approved by Oversight Personnel. These will be applied by a hydro seeder with non–toxic, organic tackifier such as a guar–based tackifier, or equivalent approved by Oversight Personnel.

3.2.3 Water Management for In–Stream Work

Bypass of surface water flow in Reach 1 of Elliott Ditch will be performed to allow for sediment activities to be completed in non–flowing conditions. Sediment remediation downstream of the first railroad crossing in Reach 1 will not require full damming of Elliott Ditch and rerouting of the flow. Contractor may install cofferdams or other capable structures to isolate these areas from flow.

3.2.3.1 Pump–Around

A temporary creek diversion structure shall be constructed at the upstream limits of the Reach 1 sediment remediation. The pump–around will be equipped with a fully redundant dewatering system with a rated capacity of 28 cubic feet per second, which is estimated to be over two times the measured average episodic flow in Elliott Ditch based upon 2019 and 2020 in–stream flow monitoring.

3.2.3.2 Cofferdams

Sediment remediation downstream of the first railroad crossing in Reach 1 is targeted to depositional features that will not require full damming of Elliott Ditch and rerouting of the flow. Contractor shall design and install cofferdams, or another capable structure(s), to isolate these areas from flow. The design must take into consideration streambed conditions and access restrictions.

3.2.3.3 Pump–Around Discharge

Water that is diverted by the pump–around shall be discharged in a controlled manner onto a stable velocity dissipator, such as a riprap scour pad, on the downstream banks, or an acceptable alternative. The discharge outlet shall be inspected daily and stabilized if bank erosion is noticed.

3.2.3.4 Dewatering Discharge

Dewatering discharge from remediation areas shall be filtered before being returned to Elliott Ditch to capture impacted sediment and reduce sediment transportation. Dewatering discharge should initially be passed through a filter bag and a secondary containment BMP such as a rock filter berm or sediment trap shall be constructed near the waterway.

3.2.4 Erosion Control Matting

Erosion control matting will be installed after final grade restoration to reduce rain impacts on soils, to control erosion, stabilize the remediation area, on all disturbed streambanks steeper than 3H:1V, and where determined by Oversight Personnel. On all installations, mat will be furnished in continuous rolls of 30 feet or greater with a minimum width of 4 feet. Staples will be made of wire, 0.091 inch in diameter or greater, and have a "U" shape with legs 8 inches in length and a 2– inch width. Wire staples will be driven into the ground for the full length of the staple legs.

Alternately, wood pegs (1/2–inch diameter) may be used to secure the erosion control fabric. Installation and stapling of erosion control matting will follow procedures as approved by Oversight Personnel.

During regular erosion control monitoring, erosion control matting will be inspected to ensure proper function. Damaged or undermined matting will be repaired or replaced as necessary.

On all disturbed streambanks steeper than 3H:1V, erosion control blankets shall be heavy–duty, biodegradable, and net free or use loose–woven/Leno–woven netting to minimize the entrapment and snaring of small–bodied wildlife such as snakes and turtles.

3.3 DUST CONTROL

Dust control will be implemented by the Contractor in areas of active remediation within 500 feet of highways and residences as necessary. Dust control will also be implemented on access roads or as required by the Contractor for the health and safety of employees. Dust control will be achieved primarily through application of water or an approved dust palliative. Application rates for the dust palliative will follow the manufacturer's recommendations. All dust palliatives used should be biodegradable unless the only way to achieve adequate dust control is by using a non–biodegradable palliative such as magnesium chloride (MC70).

4. MONITORING AND MAINTENANCE

The Contractor will be responsible for ensuring that erosion control measures are fully functional. The Contractor is also responsible for continually monitoring erosion control measures along the project limits and completing timely repairs of erosion control structures as needed. The Contractor must have staff onsite qualified to perform the required inspections.

4.1 REMEDIATION MONITORING

Throughout remediation, temporary erosion control structures will be inspected at minimum of one time per week, or by the end of the next business day following a measurable storm event (i.e., a precipitation event that results in a total measured precipitation accumulation equal to, or greater than, one–half inch of rainfall within a 24–hour time period). Inspections are the responsibility of the Contractor and will be made by qualified staff. In the event of impending heavy precipitation (e.g., the U.S. Weather Bureau issues a storm advisory for the work area), the Contractor will reinforce temporary erosion control devices where needed (e.g., areas considered to have greater potential for erosion, and areas of active remediation) to ensure that erosion control measures have not been damaged since the last inspection.

Temporary erosion control devices found needing repair or requiring new installation will be repaired within 24 hours after problem(s) have been identified, weather and soil conditions permitting.

Inspection will be documented in writing and will contain the name of the individual performing the evaluation, the date of the evaluation, problems/observations identified at the project site related to the inspection, and details of corrective actions recommended and completed. Evaluation reports for the project site will be made available to to the inspecting authority within 48 hours of a request.

4.2 POST–REMEDIATION MONITORING

Prior to the completion of remediation, the Contractor and Oversight Personnel will confirm that erosion control devices are in place and functioning as intended. The Contractor will be responsible for inspecting and making erosion control repairs until project termination. The inspections will be completed as described previously and to evaluate revegetation success and the presence of erosion indicators such as rills, gullies, etc. If erosion control structures fail or require maintenance, or if accelerated erosion is observed, the Contractor will conduct remedial actions as soon as possible, recognizing weather and soil conditions, and site accessibility. Remedial actions could include supplemental seeding, installation of additional erosion/sediment control materials, maintenance of existing erosion control measures, additional mulching or use of matting.

Indiana 811 — Know what's below. 811 before you dig.

JOHN MATTHEW BRUCK — REGISTERED — No. PE11700141 — STATE OF INDIANA — PROFESSIONAL ENGINEER

REVISION RECORD		
NO	DATE	DESCRIPTION

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**ARCONIC LAFAYETTE LLC
LAFAYETTE OPERATIONS
ELLIOTT DITCH REACHES 1-3
SEDIMENT AND SOIL REMEDIATION
LAFAYETTE, INDIANA**

SWPPP NARRATIVE (1 OF 3)

DATE:	12/21/2020	DRAWN BY:	KAM
DWG SCALE:	NOT TO SCALE	CHECKED BY:	GAW
PROJECT NO:	172-367.0043		
APPROVED BY:	JMB		

DRAWING NO.: C908

SHEET 9 OF 13

P:\2017\172-367\-CADD\Dwg\EN04 - Reach 1-3 Remediation Drawings\Sediment Remediation SWPPP\172367-EN04-C908-SWPPP Narrative.dwg{C908} LS:(1/6/2021 - kmcnally) - LP: 3/8/2021 10:47 AM

ASSESSMENT OF CONSTRUCTION PLAN ELEMENTS (SECTION A)

(A1) PLAN INDEX

THE PROPOSED EROSION CONTROL MEASURES CAN BE FOUND ON SHEETS C905 THROUGH C907. THE CORRESPONDING EROSION CONTROL DETAILS ARE SHOWN ON SHEETS C911 AND C912. THE REQUIRED EROSION CONTROL CHECKLIST ITEMS ARE LISTED ON THIS SHEET. A SUMMARY OF EROSION AND SEDIMENT CONTROL GUIDANCE AND REQUIREMENTS IS LOCATED ON SHEET C908.

(A2) PLAN/PLAT SHOWING BOUNDARIES AND LOT NAMES

PLEASE REFER TO SHEET C900, WHICH SHOWS THE PROJECT BOUNDARIES.

(A3) PROJECT DESCRIPTION

IN ACCORDANCE WITH THE INTERIM MEASURES WORK PLAN (IMWP) DATED DECEMBER 2020, THE PROJECT CONSISTS OF THE EXCAVATION, REMOVAL, AND OFF-SITE DISPOSAL OF PCB IMPACTED SEDIMENTS AND SOILS TO A REMEDIAL GOAL OF 1.0 MILLIGRAM PER KILOGRAM (MG/KG) WITHIN REACH 1 THROUGH 3 OF ELLIOTT DITCH, WHICH INCLUDES FROM OUTFALL 001 TO JUST UPSTREAM OF THE 9TH STREET CROSSING BASED ON GEOMORPHOLOGIC MAPPING. SOIL REMEDIATION OF THE LEVEE SITUATED ON THE SOUTHEAST SIDE OF THE ELLIOTT DITCH IN REACH 1 WAS PERFORMED UNDER THE LEVEE SOIL IMWP IN SPRING AND SUMMER OF 2020. PCB IMPACTS TO SOIL AND SEDIMENT OF ELLIOTT DITCH ARE BELIEVED TO BE ASSOCIATED WITH HISTORIC DISCHARGES FROM FACILITY OUTFALL 001.

FLOW IN ELLIOTT DITCH WILL NEED TO BE MANAGED IN SUPPORT OF SEDIMENT REMOVAL ACTIVITIES. IN REACH 1, THIS WILL REQUIRE THE INSTALLATION OF A DAM, ELECTRIC OR DIESEL POWERED BYPASS PUMPS, AND PIPING TO REROUTE DITCH FLOW AROUND THE ACTIVE EXCAVATION AREA. SEDIMENT REMEDIATION DOWNSTREAM OF REACH 1 RAILROAD BRIDGE IS TARGETED TO DEPOSITIONAL FEATURES THAT WILL NOT REQUIRE FULL DAMMING OF THE DITCH AND REROUTING OF THE FLOW. COFFERDAMS OR ANOTHER CAPABLE STRUCTURE WILL BE INSTALLED AROUND THESE DEPOSITIONAL FEATURES TO ISOLATE THE AREAS FROM FLOW.

SOIL EXCAVATION AREAS WILL BE RESTORED TO APPROXIMATE PRE-PROJECT ELEVATIONS AND DRAINAGE PATTERNS WITH OFFSITE BORROW MATERIAL CERTIFIED TO BE FREE OF CONTAMINATION. SEDIMENT REMOVAL AREAS WILL BE BACKFILLED USING B-BORROW MATERIAL PER INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) SPEC 211.03. SEDIMENT EXCAVATIONS WILL BE RESTORED TO AN ELEVATION THAT IS CONSISTENT WITH EXISTING CONDITIONS OF THE REACH WHERE THE REMEDIATION OCCURS.

OTHER ASSOCIATED WORK INCLUDES VEGETATION CLEARING, THE INSTALLATION OF SEDIMENT AND EROSION CONTROLS, THE CONSTRUCTION OF ACCESS ROADS AND DECONTAMINATION STATIONS, LOCALIZED GRADING, AND VEGETATIVE PLANTING AT DISTURBED LOCATIONS.

(A4) VICINITY MAP

THE VICINITY MAP SHOWING THE PROJECT LOCATION CAN BE SEEN ON COVER SHEET.

(A5) LEGAL DESCRIPTION

TOWNSHIP: 22 RANGE: 4 SECTION: 3

LATITUDE: 86° 51' 34.2" W

LONGITUDE: 40° 22' 50.1" N

(A6) LOT LOCATION AND SITE IMPROVEMENTS

ELLIOTT DITCH IS IDENTIFIED AS A REGULATED DRAIN AND IS MAINTAINED BY THE TIPPECANOE COUNTY DRAINAGE BOARD. LAND USE WITHIN REACH 1 IS GENERALLY CLASSIFIED AS COMMERCIAL. LAND USE WITIHIN REACHES 2 AND 3 IS GENERALLY RESIDENTIAL. FOR REFERENCE, THE PROPOSED CONSTRUCTION ENTRANCE FOR REACH 1 IS LOCATED WEST OF CONCORD ROAD ONTO PARCEL ID: 79-11-03-326-001.000-033. THE PROPOSED LAYDOWN AREA FOR REACH 2 AND 3 IS LOCATED EAST OF S 18TH STREET ONTO PARCEL ID: 79-11-09-202-038.000-032. THE PROPOSED CONSTRUCITON ENTRANCE FOR REACH 3 SOIL WORK IS FROM ORTMAN LANE ONTO PARCEL ID: 79-11-09-126-027.000-0.32. THE PROPOSED CONSTRUCTION ENTRANCE FOR REACH 3 SEDIMENT WORK IS FROM ORTMAN LANE ONTO PARCEL ID: 79-11-09-101-001-032.

(A7) HYDROLOGIC UNIT CODE

05120106150070

(A8) REQUIRED STATE OR FEDERAL WATER QUALITY PERMITS

WORK WILL BE PERFORMED WITHIN THE 100-YEAR FLOOD PLAIN DURING THE COURSE OF THIS PROJECT. A CONSTRUCTION IN A FLOODWAY PERMIT IS REQUIRED UNDER INDIANA CODE (IC) 14-28-1. CERTIFICATE OF APPROVAL TO BE PROVIDED.

(A9) STORMWATER DISCHARGE POINTS

STORMWATER GENERATED FOR THE SITE WILL BE ALLOWED TO COLLECT WITHIN SLOPED EXCAVATION PITS. STORMWATER THAT HAS NOT EVAPORATED OR INFILTRATED INTO THE SOIL WILL BE PUMPED INTO A TEMPORARY STORAGE CONTAINER FOR EVALUATION AND APPROPRIATE DISPOSAL.

(A10) SITE WETLANDS, LAKES AND WATER COURSES

THERE IS AN AREA OF MAPPED WETLANDS ON THE PROPERTY AT 3304 CONCORD ROAD, LOCATED ADJACENT TO THE SOUTH OF THE REACH 1 ACCESS LOCATION. THERE IS AN AREA OF MAPPED EMERGENT WETLAND WEST OF ELLIOTT DITCH, BETWEEN THE RAILROAD CROSSINGS AT THE SOUTHERN LIMITS OF REACH 1.

(A11) RECEIVING WATERS

THE SITE DRAINS INTO ELLIOTT DITCH.

(A12) POTENTIAL DISCHARGES TO GROUNDWATER

THERE ARE NO KNOWN SINKHOLES OR UNCAPPED ABANDONED WELLS LOCATED ON THE PROJECT SITE. THERE IS A POTENTIAL FOR STORM WATER TO DISCHARGE INTO ELLIOTT DITCH.

(A13) 100 YEAR FLOODPLAIN, FLOODWAYS AND FRINGES

THE PROJECT AREA LIES WITHIN THE 100-YEAR FLOODPLAIN.

(A14) ESTIMATED PEAK DISCHARGE

AFTER CONSTRUCTION AND RESTORATION, UPLAND AREAS ADJACENT TO ELLIOTT DITCH WILL BE RETURNED TO PRE-PROJECT CONDITIONS AND EXPECTATIONS ARE THAT PEAK FLOWS FROM THE 10-YEAR AND 100-YEAR STORMS WILL BE RELATIVELY UNCHANGED. REMEDIATION AREAS WITHIN THE CHANNEL OF ELLIOTT DITCH WILL BE RESTORED TO MATCH THE NATURAL STREAM GRADIENT AND EXISTING CONDITIONS UPGRADIENT AND DOWNGRADIENT OF THE COMPLETED EXCAVATION AREA.

(A15) ADJACENT LANDUSE

THE EXISTING LAND USES ADJACENT TO THE SITE ARE AS FOLLOWS:

NORTH: RESIDENTIAL
WEST: RAILROAD (REACH 1) AND RESIDENTIAL (REACHES 1, 2 AND 3)
SOUTH: COMMERCIAL/LIGHT INDUSTRIAL AND RAILROAD (REACH 1), RESIDENTIAL (REACHES 2 AND 3)
EAST: COMMERCIAL/LIGHT INDUSTRIAL AND STATE ROAD

(A16) CONSTRUCTION LIMITS

THE OVERALL DISTURBED AREA FOR THIS PROJECT IS ±4.5 ACRES.

(A17) EXISTING VEGETATIVE COVER

EXISTING VEGETATIVE COVER ON THE BANKS OF ELLIOTT DITCH AND IMMEDIATELY ADJACENT TO THE WATERWAY CONSISTS OF AREAS OF OVERGROWN AND UNKEMPT VEGETATION INCLUDING MATURE TREES, PLANTS, GRASSES, AND SHRUBS. REMAINING AREAS OF THE SITE GENERALLY CONSIST OF MAINTAINED LAWN AREAS.

(A18) SOIL MAP

REFER TO SHEET C901. ACCORDING TO THE USGS SOIL SURVEY DATABASE, SOIL AT THE PROJECT SITE CONTAINS AREAS OF:

MAHALASVILLE SILTY CLAY LOAM, GRAVELLY SUBSTRATUM (Mb) – POORLY DRAINED WITH A MODERATELY HIGH CAPACITY TO TRANSMIT WATER (Ksat = 0.60 TO 2.0 IN/HR).

OCCASIONALLY FLOODED SLOAN CLAY LOAM (Sn) – VERY POORLY DRAINED WITH A MODERATELY HIGH TO HIGH CAPACITY TO TRANSMIT WATER (Ksat = 0.60 TO 2.0 IN/HR).

ERODED MIAMA SILT LOAM (MsC2) – MODERATELY WELL DRAINED WITH A LOW TO MODERATELY HIGH CAPACITY TO TRANSMIT WATER (Ksat = 0.01 TO 0.2 IN/HR).

(A19) LOCATION OF PROPOSED STORMWATER SYSTEMS

NO NEW STORMWATER SYSTEMS ARE PROPOSED FOR THIS PROJECT.

(A20) OFF-SITE CONSTRUCTION PLAN

THERE IS NO OFF-SITE CONSTRUCTION PLANNED FOR THIS PROJECT.

(A21) SOIL STOCKPILES, BORROW AND/OR DISPOSAL

SEDIMENT EXCAVATED FROM ELLIOTT DITCH IS EXPECTED TO REQUIRE ADDITIONAL DRYING AFTER REMOVAL. LOCATIONS FOR BERMED SEDIMENT STAGING PADS SHALL BE PROPOSED BY THE CONTRACTOR AND ARE SUBJECT TO THE REQUIREMENTS OUTLINED IN THE INTERIM MEASURES WORK PLAN. ON-SITE SOIL STOCKPILES ARE NOT ANTICIPATED DURING THE COURSE OF PROJECT IMPLEMENTATION. OFF-SITE BORROW SOURCES SHALL BE PROPOSED BY THE CONTRACTOR AND SUBJECT TO THE REQUIREMENTS OUTLINED IN THE INTERIM MEASURES WORK PLAN.

(A22 & A23) EXISTING & FINAL SITE TOPOGRAPHY

SITE TOPOGRAPHY WILL BE GRADED AND RESTORED TO BE CONSISTENT WITH EXISTING SITE CONDITIONS UPON PROJECT COMPLETION. SEE REMEDIATION DRAWINGS FOR EXISTING AND RESTORED TOPOGRAPHIC CONDITIONS FOR IN-STREAM AND UPLAND REMEDIATION AREAS.

ASSESSMENT OF STORMWATER POLLUTION PREVENTION PLAN CONSTRUCTION COMPONENT (SECTION B)

(B1) POTENTIAL CONSTRUCTION POLLUTANTS

POTENTIAL POLLUTANT SOURCES RELATIVE TO THIS REMEDIAL CONSTRUCTION SITE MAY INCLUDE, BUT ARE NOT LIMITED TO MATERIAL AND FUEL STORAGE AREAS, FUELING LOCATIONS, EXPOSED SOILS AND LEAKING VEHICLE/EQUIPMENT, AND PCBs. POTENTIAL POLLUTANTS THAT MAY APPEAR AT THE SITE DUE TO CONSTRUCTION ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO DIESEL FUEL, GASOLINE, SOLID WASTE, SEDIMENT, EQUIPMENT REPAIR PRODUCTS, ANTI-FREEZE, AND FERTILIZER.

(B2) STORMWATER QUALITY SEQUENCE

PRE-CONSTRUCTION ACTIVITIES:

1. DESIGNATE A PERSON TO BE RESPONSIBLE FOR THE SITE INSPECTIONS AFTER EACH RAIN EVENT WITH ACCUMULATION OF ½-INCH OR GREATER WITHIN A 24-HOUR PERIOD AND A MINIMUM OF ONCE EACH WEEK.
2. CALL THE INDIANA UNDERGROUND PLANT PROTECTION SYSTEMS, INC. (INDIANA811) AT 1-800-382-5544 TO CHECK LOCATIONS OF ANY EXISTING UTILITIES- MIN, 2 DAYS PRIOR TO BEGINNING CONSTRUCTION ACTIVITY.
3. ESTABLISH ONSITE LOCATION FOR OWNER/OPERATOR/CONTRACTOR PLACEMENT OF APPROVED PLANS AND RULE 5 NOI AND RULE 5 INSPECTION DOCUMENTATION.
4. STAKEOUT IMPROVEMENT FEATURES INCLUDING: CONSTRUCTION ENTRANCE(S), ACCESS ROAD(S), VEGETATION SELECTED FOR REMOVAL, EROSION AND SEDIMENTATION CONTROLS, PROJECT SUPPORT AREA(S), AND EXCAVATION FOOTPRINTS.
5. INSTALL SILT FENCE AND OTHER EROSION CONTROL MEASURES AS INDICATED ON DRAWINGS.
6. INSTALL GRAVEL CONSTRUCTION ENTRANCE AND DECONTAMINATION PAD AS INDICATED ON DRAWINGS OR APPROVED ALTERNATIVE LOCATION- ADD ADDITIONAL STONE AS NEEDED.
7. ESTABLISH CONSTRUCTION STAGING AREA FOR EQUIPMENT AND VEHICLES.
8. APPROPRIATE SIGNAGE SHALL BE POSTED AT ALL SITE ENTRANCES IN ACCORDANCE WITH PROJECT COMMUNITY RELATIONS PLAN AS APPROVED BY IDEM AND EPA REGION 5. REGULATORY PERMIT APPROVALS WILL ALSO BE POSTED AS APPROPRIATE.

CONSTRUCTION ACTIVITY PHASING:

1. CLEAR, GRUB, AND DISPOSE OF VEGETATIVE WASTE. REMOVE ONLY THE TREES, SHRUBS, AND PLANTS MARKED FOR REMOVAL. VEGETATIVE WASTE IS TO BE CHIPPED ONSITE OR TRANSPORTED OFFSITE FOR DISPOSAL.
2. FOR IN-STREAM SEDIMENT REMEDIATION AREAS, ESTABLISH WATER MANAGEMENT STRUCTURES (DAMS, COFFERDAMS, ETC.) AND INITIATE PUMP-AROUND OR DEWATERING.
3. BEGIN EXCAVATION OF THE IMPACTED SEDIMENT OR SOIL AT ELLIOTT DITCH. LOAD EXCAVATED SEDIMENT AND SOILS PER THE INTERIM MEASURES WORK PLAN AND WASTE MANAGEMENT PLAN. ADDITIONAL DRYING OF EXCAVATED SEDIMENT MAY BE NEEDED PRIOR TO TRANSPORTATION AND DISPOSAL.
4. BACKFILL EXCAVATED AREAS IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS AFTER CONFIRMATION SAMPLING INDICATES AREA HAS BEEN REMEDIATED.
5. GRADE ALL DISTURBED AREAS AS SHOWN ON THE CONSTRUCTION DRAWINGS.
6. PLACE TOPSOIL OVER ALL DISTURBED AREAS OUTSIDE OF THE STREAM CHANNEL. BIODEGRADABLE EROSION CONTROL MATTING SHALL BE PLACED ON ALL DISTURBED STREAMBANKS STEEPER THAN 3H:1V.
7. PLACE PERMANENT SEEDING PER THE SPECIFICATIONS IDENTIFIED ON SHEET C912 OF THIS SWPPP.
8. STABILIZE ANY SURROUNDING DISTURBED AREAS PER THE DIRECTION OF ARCONIC CONTRACTED PERSONNEL AND THIS PLAN.
9. REMOVE CONSTRUCTION ENTRANCE.
10. REMOVE SEDIMENT CONTROL MEASURES ONCE THE SITE IS STABILIZED AND A NOTICE OF TERMINATION HAS BEEN FILED.

(B3) CONSTRUCTION ENTRANCE INFORMATION

THE LOCATION OF THE PROPOSED CONSTRUCTION ENTRANCE(S) IS ON SHEETS C905 THROUGH C907. CONNECTIONS TO S 18TH STREET AND ORTMAN LANE WOULD REQUIRE A RIGHT-OF-WAY PERMIT TO BE ISSUED BY THE CITY OF LAFAYETTE. THESE LOCATIONS ARE SUBJECT TO CHANGE BASED UPON FIELD CONDITIONS AND LANDOWNER APPROVAL. PRIOR TO SELECTING A NEW LOCATION FOR THE CONSTRUCTION ENTRANCE MUST RECEIVE APPROVAL FROM ARCONIC AND CONSENT SHALL BE OBTAINED FROM THE LANDOWNER OF THE PROPERTY.

(B4) SHEET FLOW SEDIMENT CONTROL

SILT FENCE, EROSION CONTROL MATTING, AND HAY BALES WILL BE USED AS EROSION CONTROL MEASURES FOR SHEET FLOWS DURING CONSTRUCTION ACTIVITIES. THE LOCATION, DETAILS, AND SPECIFICATIONS FOR EACH STATED SEDIMENT CONTROL MEASURE ARE ON SHEETS C905 THROUGH C907 AND C911 AND C912.

(B5) CONCENTRATED FLOW SEDIMENT CONTROL

CONCENTRATED FLOWS ARE ANTICIPATED AT THE PUMP-AROUND AND DEWATERING LOCATION DISCHARGES. PUMP-AROUND WATER SHALL BE DISCHARGED IN A CONTROLLED MANNER ONTO A STABLE VELOCITY DISSIPATOR, SUCH AS A RIPRAP SCOUR PAD, ON THE DOWNSTREAM BANKS, OR AN ACCEPTABLE ALTERNATIVE. DEWATERING DISCHARGE FROM REMEDIATION AREAS SHALL BE PASSED THROUGH A FILTER BAG AND A SECONDARY CONTAINMENT BMP SUCH AS A ROCK FILTER BERM OR SEDIMENT TRAP BEFORE RETURNING TO ELLIOTT DITCH.

(B6) INLET PROTECTION AND (B8) OUTLET PROTECTION LOCATION SPECS

A STORM INLET NEAR THE PROPOSED CONSTRUCTION ENTRANCE ON S 18TH ST WILL BE PROTECTED WITH A FILTER BAG. IF OTHER INLETS ARE IDENTIFIED IN CLOSE PROXIMITY TO THE LIMITS OF DISTURBANCE, APPRORPIATE CONTROLS WILL BE INSTALLED. GENERALLY, EXISTING STORMWATER OUTLETS INTO ELLIOTT DITCH WILL NOT BE ALTERED DURING THE COURSE OF CONSTRUCTION AND OUTLET PROTECTIONS ARE NOT PROPOSED. SCOUR PROTECTION (A RIPRAP ENERGY DISSIPATOR OR APPROVED SIMILAR) WILL BE ESTABLISHED FOR THE STORMWATER DISCHARGE THAT MUST BE REROUTED AROUND REACH 2 SOIL REMEDIATION AREA.

(B7) RUNOFF CONTROL MEASURES

SILT FENCE, EROSION CONTROL MATTING, AND HAY BALES WILL BE USED TO CONTROL RUN OFF. THE LOCATION, DETAILS, AND SPECIFICATIONS FOR EACH STATED SEDIMENT CONTROL MEASURE ARE ON SHEETS C905 THROUGH C907 AND C911 AND C912.

(B9) GRADE STABILIZATION MEASURES

DISTURBED STREAMBANKS STEEPER THAN 3H:1V SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS THAT ARE HEAVY-DUTY, BIODEGRADABLE, AND NET FREE OR LOOSE-WOVEN/LENO-WOVEN NETTING.

(B10) STORMWATER QUALITY DETAILS

REFER TO CONSTRUCTION PLANS FOR LOCATION, DIMENSIONS, SPECIFICATIONS AND CONSTRUCTION DETAILS FOR EACH STORMWATER QUALITY MEASURE.

(B11) TEMPORARY SURFACE STABILIZATION

TEMPORARY STABILIZATION CONTROLS SHALL BE IMPLEMENTED AT AREAS OF THE SITE WHERE ACTIVITIES ARE NOT PLANNED FOR MORE THAN 14 DAYS. EROSION CONTROL MATTING OR TEMPORARY SEEDING WILL BE USED AS TEMPORARY SURFACE STABILIZATION MEASURES. CONTRACTOR SHALL SEQUENCE EARTHWORK TO MINIMIZE THE DURATION OF EXPOSURE OF UNPROTECTED SOILS.

(B12) PERMANENT SURFACE STABILIZATION

PERMANENT SEEDING WILL BE USED AS THE PERMANENT SURFACE STABILIZATION MEASURES. ALL DISTURBED AREAS SHOWN ON SHEETS C902 THROUGH C904 ARE TO RECEIVE SEED. REFER TO SEEDING TABLES ON SHEET C912.

1. SELECT APPROPRIATE SEED MIXTURE AND APPLICATION RATE FROM TABLE ON SHEET C912. APPLY SEED UNIFORMLY.
2. INSPECT 24 HOURS AFTER EACH MEASURABLE STORM EVENT, OR AT LEAST ONCE EVERY SEVEN CALENDAR DAYS IN ACCORDANCE WITH SHEET C908, SECTION 4.1, REMEDIATION MONITORING.
3. FINAL STABILIZATION IS ACHIEVED WHEN ALL LAND DISTURBING ACTIVITIES HAVE BEEN COMPLETED AND A UNIFORM VEGETATIVE COVER WITH DENSITY OF 70% HAS BEEN ESTABLISHED ON SEEDED AREAS WITHIN THE PROJECT FOOTPRINT.
4. REMEDIATION MONITORING WILL CONTINUE UNTIL FINAL STABILIZATION CRITERIA HAS BEEN ACHIEVED.
5. USE PHOSPHOROUS FREE FERTILIZER (12-0-12) UNLESS SOIL TESTING SHOWS A NEED.

(B13) MATERIAL HANDLING AND SPILL PREVENTION

SPILL PREVENTION, CLEANUP, AND REPORTING SHALL CONFORM TO IDEM FORM 327 IAC 2-6 AND THE CITY OF LAFAYETTE FIRE DEPARTMENT SHALL BE CONTACTED IN THE CASE OF A MATERIAL SPILL OCCURRING.

- CITY OF LAFAYETTE FIRE DEPARTMENT: (765) 775-5175
- CITY OF LAFAYETTE POLICE DEPARTMENT: (765) 807-1000
- TIPPECANOE COUNTY SOIL & WATER DISTRICT: (765) 474-9992
- IDEM EMERGENCY SPILL REPORTING: (317) 233-7745 OR (888) 233-7745

ALL ONSITE PERSONNEL SHALL ADHERE TO THE MATERIAL HANDLING AND SPILL PREVENTION PROCEDURES IDENTIFIED BELOW.

MATERIAL HANDLING

EXPECTED MATERIALS THAT MAY APPEAR AT THE SITE DUE TO CONSTRUCTION ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO PETROLEUM PRODUCTS, FERTILIZERS, PAINT (FOR MARKING) AND SOLVENTS, AND IMPACTED SOIL AND SEDIMENT. MATERIALS SHALL BE STORED IN THE DESIGNATED MATERIAL STORAGE AREA.

VEHICLE AND EQUIPMENT FUELING

SPILL PREVENTION FOR VEHICLE AND EQUIPMENT FUELING SHALL CONFORM TO THE FOLLOWING PRACTICES: VEHICLE EQUIPMENT FUELING PROCEDURES AND PRACTICES ARE DESIGNED TO PREVENT FUEL SPILLS AND LEAKS, AND REDUCE OR ELIMINATE CONTAMINATION OF STORMWATER. THIS CAN BE ACCOMPLISHED BY USING OFFSITE FACILITIES, FUELING IN DESIGNATED AREAS ONLY, ENCLOSING OR COVERING STORED FUEL, IMPLEMENTING SPILL CONTROLS, AND TRAINING EMPLOYEES AND SUBCONTRACTORS IN PROPER FUELING PROCEDURES.

LIMITATIONS: ONSITE VEHICLE AND EQUIPMENT FUELING SHOULD ONLY BE USED WHERE IT IS IMPRACTICAL TO SEND VEHICLES AND EQUIPMENT OFFSITE FOR FUELING. SENDING VEHICLES AND EQUIPMENT OFFSITE SHOULD BE DONE IN CONJUNCTION WITH A STABILIZED CONSTRUCTION ENTRANCE/EXIT.

IMPLEMENTATION: USE OFFSITE FUELING STATIONS AS MUCH AS POSSIBLE. DISCOURAGE "TOPPING-OFF" OF FUEL TANKS. ABSORBENT SPILL CLEANUP MATERIALS AND SPILL KITS SHOULD BE AVAILABLE IN FUELING AREAS, AND ON FUELING TRUCKS, AND SHOULD BE DISPOSED OF PROPERLY AFTER USE. DRIP PANS OR ABSORBENT PADS SHOULD BE USED DURING VEHICLE AND EQUIPMENT FUELING, UNLESS THE FUELING IS PERFORMED OVER AN IMPERMEABLE SURFACE IN A DEDICATED FUELING AREA. USE ABSORBENT MATERIALS ON SMALL SPILLS. DO NOT HOSE DOWN OR BURY THE SPILL. REMOVE THE ABSORBENT MATERIALS PROMPTLY AND DISPOSE OF PROPERLY. AVOID MOBILE FUELING OF MOBILE CONSTRUCTION EQUIPMENT AROUND THE SITE; RATHER, TRANSPORT THE EQUIPMENT TO DESIGNATED FUELING AREAS. TRAIN EMPLOYEES AND SUBCONTRACTORS IN PROPER FUELING AND CLEANUP PROCEDURES. DEDICATED FUELING AREAS SHOULD BE PROTECTED FROM STORMWATER RUNON AND RUNOFF, AND SHOULD BE LOCATED AT LEAST 50 FT AWAY FROM DOWNSTREAM DRAINAGE FACILITIES AND WATERCOURSES. FUELING MUST BE PERFORMED ON LEVEL-GRADE AREA. NOZZLES USED IN VEHICLE AND EQUIPMENT FUELING SHOULD BE EQUIPPED WITH AN AUTOMATIC SHUTOFF TO CONTROL DRIPS. FUELING OPERATIONS SHOULD NOT BE LEFT UNATTENDED. FEDERAL, STATE, AND LOCAL REQUIREMENTS SHOULD BE OBSERVED FOR ANY STATIONARY ABOVE GROUND STORAGE TANKS.

VEHICLES AND EQUIPMENT SHOULD BE INSPECTED EACH DAY OF USE FOR LEAKS. LEAKS SHOULD BE REPAIRED IMMEDIATELY OR PROBLEM VEHICLES OR EQUIPMENT SHOULD BE REMOVED FROM THE PROJECT SITE. KEEP AMPLE SUPPLIES OF SPILL CLEANUP MATERIALS ONSITE. IMMEDIATELY CLEAN UP SPILLS AND PROPERLY DISPOSE OF CONTAMINATED SOILS.

MAINTENANCE ACTIVITIES

MAINTENANCE ACTIVITIES THAT CAN CONTAMINATE STORMWATER INCLUDE ENGINE REPAIR AND SERVICE, CHANGING OR REPLACING FLUIDS, AND OUTDOOR EQUIPMENT STORAGE AND PARKING (ENGINE FLUID LEAKS). IF MAINTENANCE MUST OCCUR ONSITE, USE DESIGNATED AREAS, LOCATED AWAY FROM DRAINAGE COURSES. DEDICATED MAINTENANCE AREAS SHOULD BE PROTECTED FROM STORMWATER RUNON AND RUNOFF, AND SHOULD BE LOCATED AT LEAST 50 FT FROM DOWNSTREAM DRAINAGE FACILITIES AND WATER COURSES. DRIP PANS OR ABSORBENT PADS SHOULD BE USED DURING VEHICLE AND EQUIPMENT MAINTENANCE WORK THAT INVOLVES FLUIDS, UNLESS THE MAINTENANCE WORK IS PERFORMED OVER AN IMPERMEABLE SURFACE IN A DEDICATED MAINTENANCE AREA. PLACE A STOCKPILE OF SPILL CLEANUP MATERIALS WHERE READILY ACCESSIBLE. FUELING TRUCKS AND FUELING AREAS ARE REQUIRED TO HAVE SPILL KITS AND/OR USE OTHER SPILL PROTECTION DEVICES. USE ABSORBENT MATERIALS ON SMALL SPILLS. REMOVE THE ABSORBENT MATERIALS PROMPTLY AND DISPOSE OF PROPERLY. INSPECT ONSITE VEHICLES AND EQUIPMENT DAILY AT STARTUP FOR LEAKS, AND REPAIR IMMEDIATELY. KEEP VEHICLES AND EQUIPMENT CLEAN; DO NOT ALLOW EXCESSIVE BUILDUP OF OIL AND GREASE. SEGREGATE AND RECYCLE WASTES, SUCH AS GREASES, USED OIL OR OIL FILTERS, ANTIFREEZE, CLEANING SOLUTIONS, AUTOMOTIVE BATTERIES, HYDRAULIC AND TRANSMISSION FLUIDS. PROVIDE SECONDARY CONTAINMENT AND COVERS FOR THESE MATERIALS IF STORED ONSITE. PROPERLY DISPOSE OF USED OILS, FLUIDS, LUBRICANTS, AND SPILL CLEANUP MATERIALS. PROPERLY DISPOSE OF OR RECYCLE USED BATTERIES. DO NOT PLACE USED OIL IN A DUMPSTER OR POUR INTO A STORM DRAIN OR WATER COURSE. DO NOT BURY TIRES. REPAIR LEAKS OF FLUIDS AND OIL IMMEDIATELY. TRAIN EMPLOYEES AND SUBCONTRACTORS IN PROPER MAINTENANCE AND SPILL CLEANUP PROCEDURES.

MANAGEMENT OF GENERATED SOLID WASTE

SOLID WASTE MANAGEMENT PROCEDURES AND PRACTICES ARE DESIGNED TO PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORMWATER FROM SOLID OR CONSTRUCTION WASTE BY PROVIDING DESIGNATED WASTE COLLECTION AREAS AND CONTAINERS, ARRANGING FOR REGULAR DISPOSAL, AND TRAINING EMPLOYEES AND SUBCONTRACTORS. SOLID WASTE STREAMS MAY INCLUDE:

- SOLID WASTE GENERATED FROM TREES AND SHRUBS REMOVED DURING LAND CLEARING.
- PACKAGING MATERIALS INCLUDING WOOD, PAPER, AND PLASTIC.
- DOMESTIC WASTES INCLUDING FOOD CONTAINERS SUCH AS BEVERAGE CANS, COFFEE CUPS, PAPER BAGS, PLASTIC WRAPPERS, AND CIGARETTES.
- REMEDIATION-RELATED WASTE INCLUDING SPENT OR USED, DISPOSABLE PERSONAL PROTECTION EQUIPMENT.

SELECT DESIGNATED WASTE COLLECTION AREAS ONSITE. INFORM TRASH-HAULING CONTRACTORS THAT YOU WILL ACCEPT ONLY WATERTIGHT DUMPSTERS FOR ONSITE USE. INSPECT DUMPSTERS FOR LEAKS AND REPAIR ANY DUMPSTER THAT IS NOT WATERTIGHT. PROVIDE AN ADEQUATE NUMBER OF CONTAINERS WITH LIDS OR COVERS THAT CAN BE PLACED OVER THE CONTAINER TO KEEP RAIN OUT OR TO PREVENT LOSS OF WASTES WHEN IT IS WINDY. COLLECT SITE TRASH DAILY, ESPECIALLY DURING RAINY AND WINDY CONDITIONS. REMOVE THIS SOLID WASTE PROMPTLY SINCE EROSION AND SEDIMENT CONTROL DEVICES TEND TO COLLECT LITTER. MAKE SURE THAT TOXIC LIQUID WASTES (USED OILS, SOLVENTS AND PAINTS) ARE NOT DISPOSED OF IN DUMPSTERS DESIGNED FOR CONSTRUCTION DEBRIS. DO NOT HOSE OUT DUMPSTERS ON THE CONSTRUCTION SITE. LEAVE DUMPSTER CLEANING TO THE TRASH HAULING CONTRACTOR. ARRANGE FOR REGULAR WASTE COLLECTION BEFORE CONTAINERS OVERFLOW. CLEAN UP IMMEDIATELY IF A CONTAINER DOES SPILL. MAKE SURE THAT CONSTRUCTION WASTE IS COLLECTED, REMOVED, AND DISPOSED OF ONLY AT AUTHORIZED DISPOSAL AREAS. SOLID WASTE STORAGE AREAS SHOULD BE LOCATED AT LEAST 50 FT FROM DRAINAGE FACILITIES AND WATERCOURSES AND SHOULD NOT BE LOCATED IN AREAS PRONE TO FLOODING OR PONDING. INSPECT CONSTRUCTION WASTE AREA REGULARLY. ARRANGE FOR REGULAR WASTE COLLECTION.

FERTILIZERS

FERTILIZERS USED ONSITE WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, THE FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED INTO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

PAINT AND SOLVENTS

CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE GROUND AND WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURERS' INSTRUCTIONS OR STATE OR LOCAL REGULATIONS.

SPILL CLEANUP

THE CONTRACTOR SHALL HAVE A WORKING KNOWLEDGE OF, AND SHALL IMPLEMENT SPILL CLEANUP PROCEDURES IN ACCORDANCE WITH IAC 327 2-6 AND ALL APPLICABLE STATE AND FEDERAL REGULATIONS.

A SPILL KIT SHALL BE STORED ONSITE IN AN EASILY ACCESSIBLE LOCATION(S) AND MAY INCLUDE ITEMS SUCH AS ABSORBENT MATERIALS, SPILL CONTAINMENT MATERIALS, TEMPORARY DISPOSABLE BAGS, AND AN APPROPRIATE CONTAINER FOR STORING SPENT MATERIALS ASSOCIATED WITH SPILL CLEANUP.

ADDITIONAL DECONTAMINATION AND SPILL PREVENTION REQUIREMENTS

IN ADDITION TO TRADITIONAL MATERIAL HANDLING AND SPILL PREVENTION FOR CONSTRUCTION SITES THIS PROJECT ALSO REQUIRES ADDITIONAL SPILL PREVENTION DUE TO IMPACTED SEDIMENT AND SOIL REMOVAL. SEE SHEETS C905 THROUGH C907 FOR LOCATIONS OF THE REQUIREMENTS LISTED BELOW.

1. INSTALLATION – INSTALL AN EQUIPMENT DECONTAMINATION PAD(S) AS DESCRIBED ON SHEET C911. EXCAVATION WILL PROGRESS BY AREA, AS SHOWN ON THE CONSTRUCTION DRAWINGS. PRIOR TO MOVING EARTH FROM ANY AREA, INSTALL A DECONTAMINATION PAD AT THE AREA'S ENTRANCE.
2. COLLECTION SWALE/BERM – IN CONJUNCTION WITH INSTALLATION OF EQUIPMENT DECON PAD(S), INSTALL A COLLECTION SWALE AND BERM AS DETAILED ON SHEET C911. THE EQUIPMENT DECON PAD MUST BE GRADED TO DRAIN TOWARDS THE COLLECTION SWALE, AND THE COLLECTION SWALE SHALL BE GRADED TO PROMOTE POSITIVE DRAINAGE TOWARDS THE COLLECTION SUMP DISCUSSED BELOW.
3. COLLECTION SUMP – AT THE DOWNGRADIENT END OF THE COLLECTION SWALE DISCUSSED ABOVE, INSTALL A COLLECTION SUMP AS SHOWN ON SHEET C911. COLLECTED RUNOFF WITHIN THE SUMP MUST BE APPROPRIATELY CHARACTERIZED AND CONTAINERIZED FOR PROPER DISPOSAL. THE CONTRACTOR IS RESPONSIBLE FOR TRANSPORTING THE CONTAINERIZED WATER IN ACCORDANCE WITH ALL APPLICABLE FEDERAL AND STATE REGULATIONS.
4. DRY WASH WHEEL – INSTALL A WATERLESS WHEEL WASH (RUMBLE GRID) AT THE CONSTRUCTION EXITS AS DESCRIBED ON SHEET C911, SUCH THAT VEHICLES LEAVING THE SITE WILL PASS OVER IT AND REDUCE THE POTENTIAL FOR TRACKING MUD AND SEDIMENT ONTO PUBLIC ROADS.
5. GENERAL MANAGEMENT – THE EQUIPMENT DECONTAMINATION AREA(S) AND ASSOCIATED COLLECTION METHODS AND DRY WASH WHEEL ARE TO REMAIN IN PLACE FOR THE DURATION OF THE PROJECT. AT THE CONCLUSION OF THE PROJECT, ALL MATERIALS ASSOCIATED WITH THE DECONTAMINATION PRACTICES (SOIL, SEDIMENT, STONE, LINER, ETC.) WILL BE MANAGED IN ACCORDANCE WITH THE APPROVED WASTE STREAMS.

(B14) MONITORING AND MAINTENANCE GUIDELINES

EROSION CONTROL MEASURE	*MAINTENANCE	INSTALLATION SEQUENCE
STONE ENTRANCE	AS NEEDED	PRIOR TO GROUND DISTURBANCE
SILT FENCE/OTHER CONTROLS	WEEKLY, AFTER STORM EVENTS, AS NEEDED	PRIOR TO GROUND DISTURBANCE
PERMANENT SEEDING	WATER AS NEEDED	AFTER FINISH GRADING
DUST CONTROL	AS NEEDED	ALONG WITH ALL EARTHWORK ACTIVITIES
REMOVAL OF SILT FENCE	N/A	AFTER ALL AREAS DRAINING TO THESE AREAS ARE STABILIZED AND NOTICE OF TERMINATION FILED

– SEE CHART FOR MAINTENANCE REQUIREMENTS

EROSION CONTROL MEASURES MAINTENANCE REQUIREMENTS

SILT FENCE MAINTENANCE REQUIREMENTS:

1. INSPECT THE SILT FENCE IN ACCORDANCE WITH (B14).
2. IF FENCE FABRIC TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY.
3. REMOVE DEPOSITED SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT OR IS CAUSING THE FABRIC TO BULGE.
4. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEAN OUT.
5. AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE FENCE AND SEDIMENT DEPOSITS, BRING THE DISTURBED AREA TO GRADE, AND STABILIZE.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE MAINTENANCE REQUIREMENTS:

1. INSPECT ENTRANCE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER STORM EVENTS.
2. RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.
3. TOPDRESS WITH CLEAN STONE, AS NEEDED.
4. INSTALL AND MAINTAIN A WATERLESS WHEEL WASH AS DESCRIBED IN SHEET C911.
5. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING.

(B15) EROSION CONTROL SPECIFICATIONS FOR INDIVIDUAL LOTS

NO ADDITIONAL EROSION CONTROL SPECIFICATIONS ARE NEEDED FOR THIS PROJECT.

Indiana811
Know what's below. 811 before you dig.

JOHN MATTHEW BRUCK
REGISTERED
No. PE11700141
STATE OF INDIANA
PROFESSIONAL ENGINEER

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REVISION RECORD

NO	DATE	DESCRIPTION

ARCONIC LAFAYETTE LLC
LAFAYETTE OPERATIONS
ELLIOTT DITCH REACHES 1-3
SEDIMENT AND SOIL REMEDIATION
LAFAYETTE, INDIANA

SWPPP NARRATIVE (2 OF 3)

DATE: 12/21/2020 | DRAWN BY: KAM
DWG SCALE: NOT TO SCALE | CHECKED BY: GAW
PROJECT NO: 172-367.0043
APPROVED BY: JMB

DRAWING NO.: C909

ASSESSMENT OF STORMWATER POLLUTION PREVENTION PLAN COMPONENT (SECTION C)

(C1) POTENTIAL LANDUSE POLLUTANTS

POTENTIAL POLLUTANT SOURCES THAT MAY APPEAR AT THE SITE DUE TO PROPOSED LAND USE ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO, VEHICLES, EQUIPMENT, EXPOSED SOIL AND TRASH. POTENTIAL POLLUTANTS INCLUDE, BUT ARE NOT LIMITED TO OIL, GREASE, DIESEL FUEL, GASOLINE, ANTI–FREEZE, AND FERTILIZER. ADDITIONALLY, PCB CONTAMINATED SOILS WILL BE EXCAVATED AND PREPARED FOR OFFSITE DISPOSAL.

(C2) STORMWATER QUALITY IMPLEMENTATION

THE STORMWATER QUALITY MEASURE IMPLEMENTATION SHALL BEGIN AFTER SUBSTANTIAL COMPLETION OF THE CONSTRUCTION ACTIVITIES FOR THE PROPOSED PROJECT. ADDITIONAL STORMWATER QUALITY MEASURES WILL BE IMPLEMENTED AT THE DEVELOPMENT OF SUBSEQUENT CONSTRUCTION PHASES. FOLLOWING CONSTRUCTION, ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED UNTIL ALL PERMANENT MEASURES, WATER QUALITY PLANTINGS AND VEGETATION HAS BEEN ESTABLISHED.

INSPECTION AND MAINTENANCE OF DISTURBED AREAS ARE THE RESPONSIBILITY OF ARCONIC AND/OR LOCAL AGENCIES TAKING JURISDICTION OVER THE LEVEE.

(C3) POST CONSTRUCTION STORMWATER QUALITY DESCRIPTION MEASURES:

POST CONSTRUCTION STORMWATER QUALITY MEASURES TO AID IN REDUCING THE AMOUNT OF POLLUTANTS:

1. POST CONSTRUCTION STORMWATER QUALITY MEASURES WILL CONSIST OF VEGETATIVE COVER ON THE PERMANENT GRASS AREAS INTENDED TO STABILIZE THE DISTURBED AREAS AND TO SERVE AS A SEDIMENT TRAP FOR FINER PARTICLES WITHIN THE ELLIOTT DITCH WATERSHED.

EROSION CONTROL RESPONSIBLE PERSON

THE PERSON RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF THE EROSION CONTROL IS LISTED BELOW.

OWNER:
ARCONIC CORP.
ROBERT PREZBINDOWSKI
2300 NORTH WRIGHT ROAD
ALCOA, TENNESSEE
PHONE: 865–977–3811

CONTRACTOR:
TO BE DETERMINED

NO	DATE	REVISION RECORD DESCRIPTION

Civil & Environmental Consultants, Inc.
2704 Cherokee Farm Way · Suite 101 · Knoxville, TN 37920
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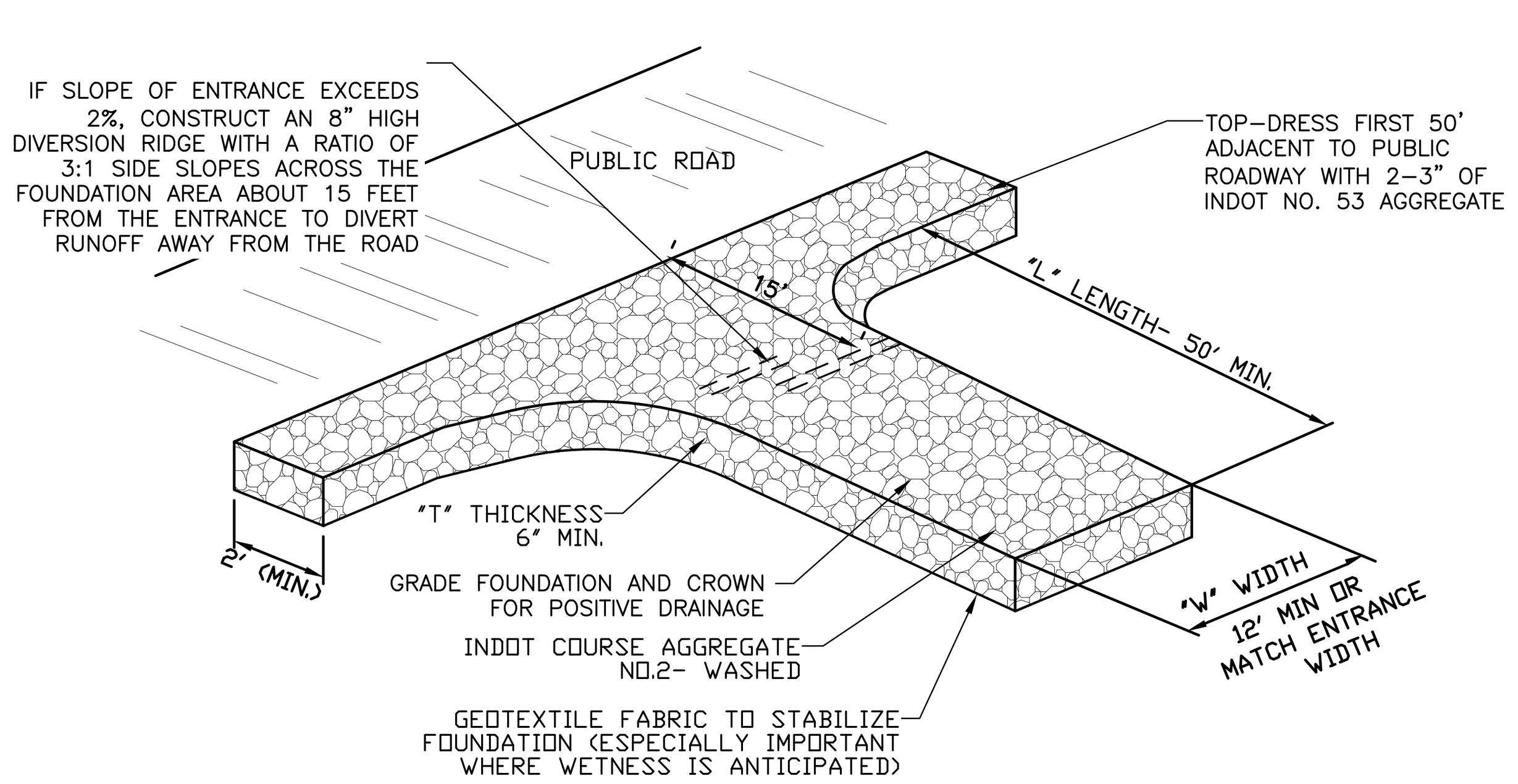
ARCONIC LAFAYETTE LLC
LAFAYETTE OPERATIONS
ELLIOTT DITCH REACHES 1-3
SEDIMENT AND SOIL REMEDIATION
LAFAYETTE, INDIANA

SWPPP NARRATIVE (3 OF 3)

DATE:	12/21/2020	DRAWN BY:	KAM
DWG SCALE:	NOT TO SCALE	CHECKED BY:	GAW
PROJECT NO:	172-367.0043	APPROVED BY:	JMB

DRAWING NO.: C910

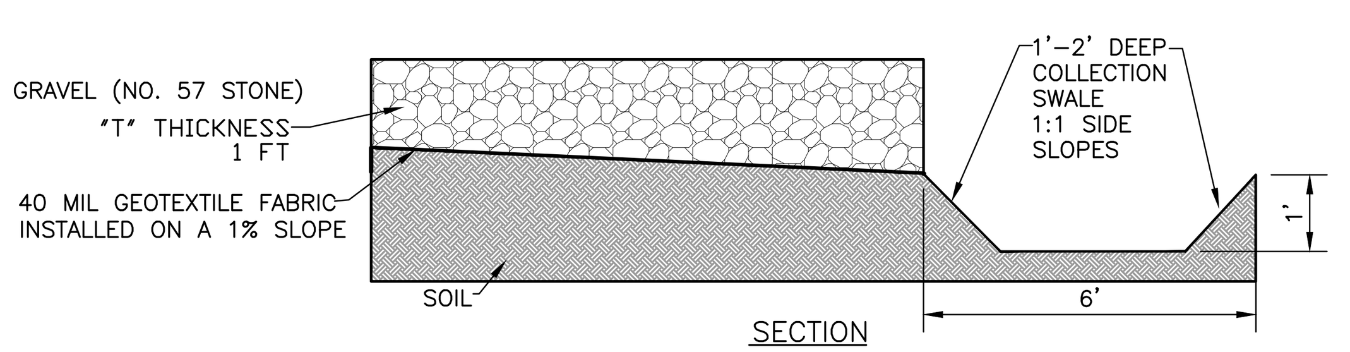
SHEET 11 OF 13

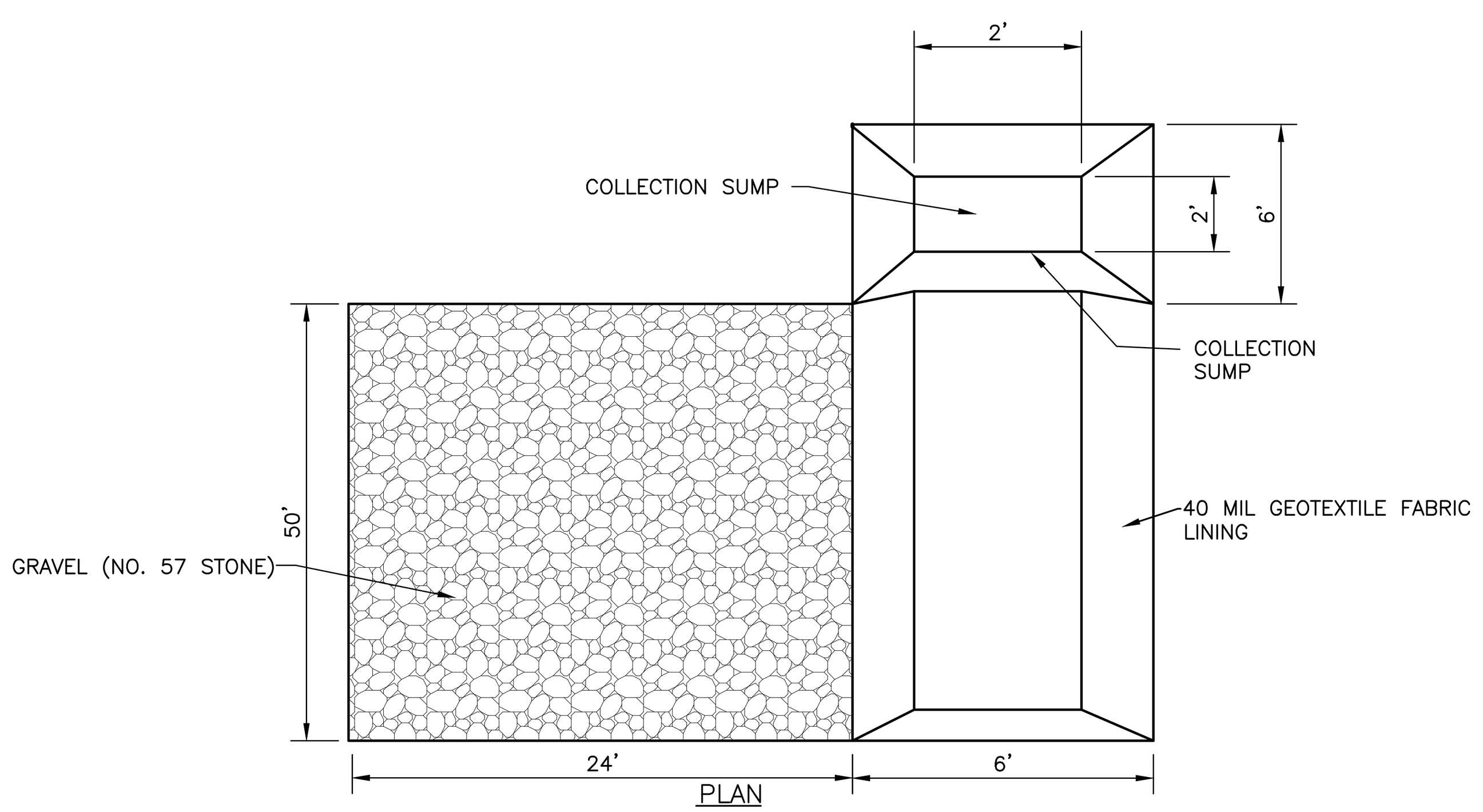


DETAIL 900
TEMPORARY CONSTRUCTION ENTRANCE
N.T.S.

TRACINATOR DRY WHEEL WASH SYSTEM BY INNOVATIVE EQUIPMENT SOLUTIONS (PICTURED) OR APPROVED ALTERNATIVE TO BE IMPLEMENTED AT SITE EXIT

DETAIL 901
WATERLESS WHEEL WASH
N.T.S.

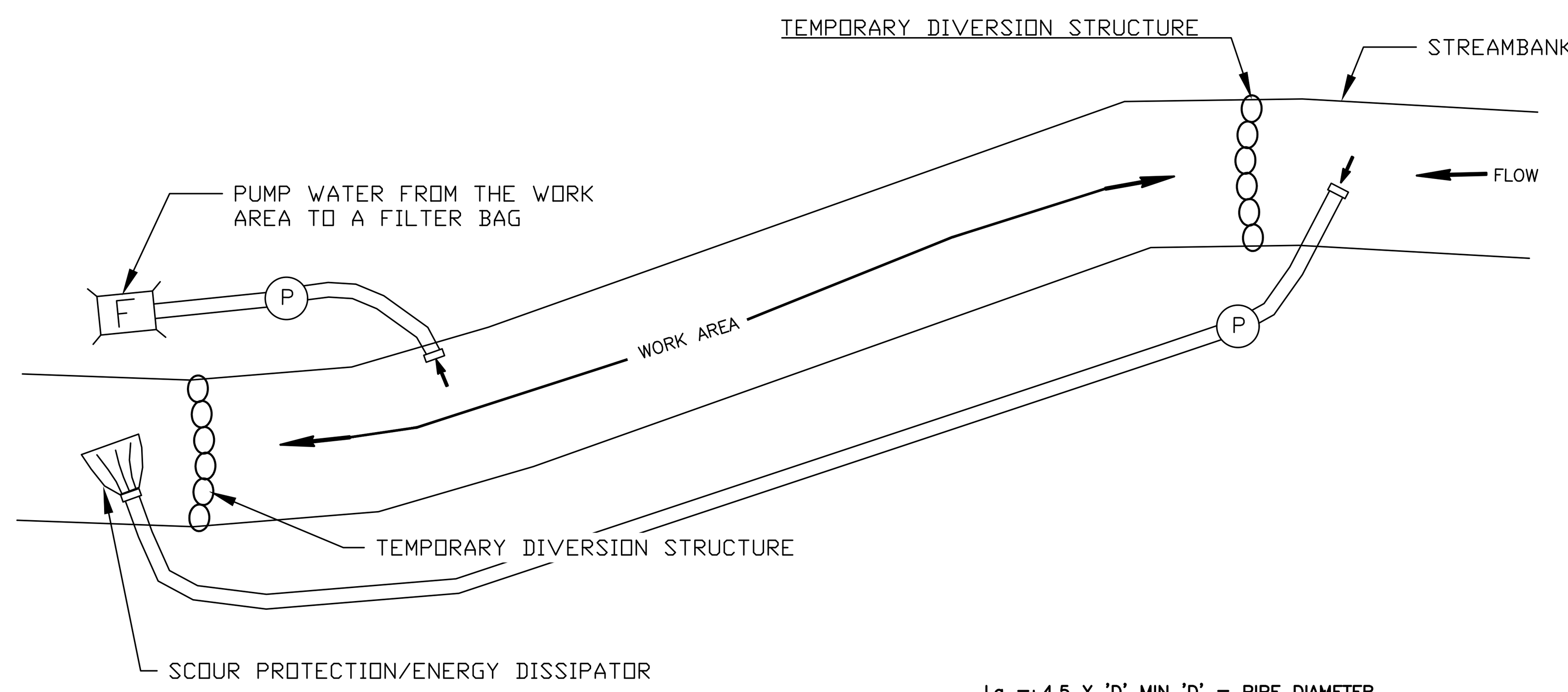


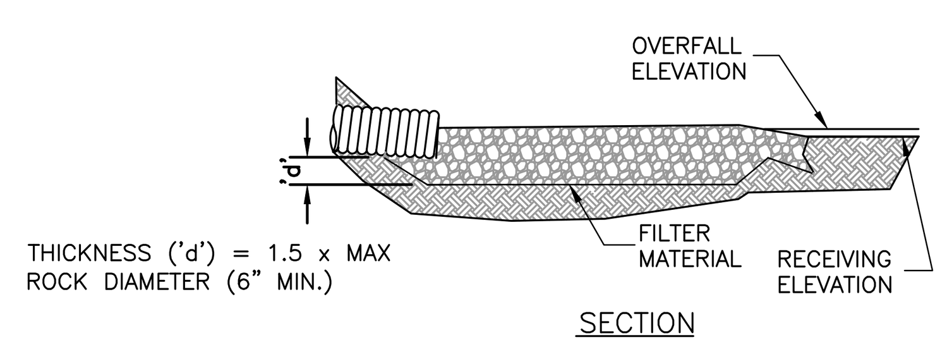


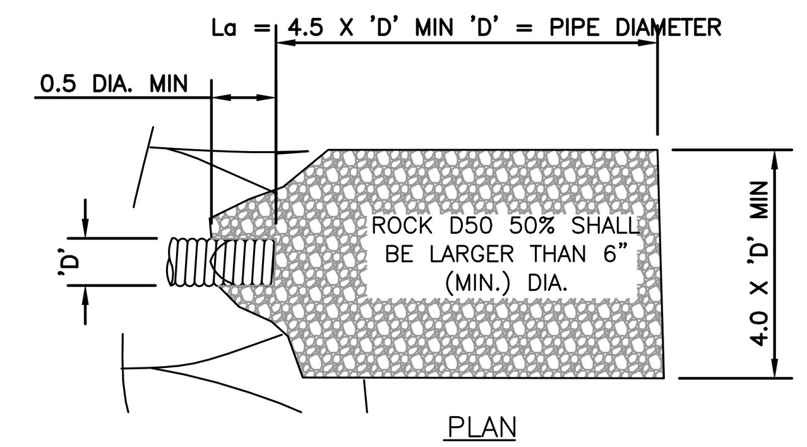
NOTES:

1. THE PAD SHOULD BE CONSTRUCTED IN AN AREA KNOWN OR BELIEVED TO BE FREE OF SURFACE CONTAMINATION

DETAIL 902
EQUIPMENT DECONTAMINATION PAD
N.T.S.







NOTES:

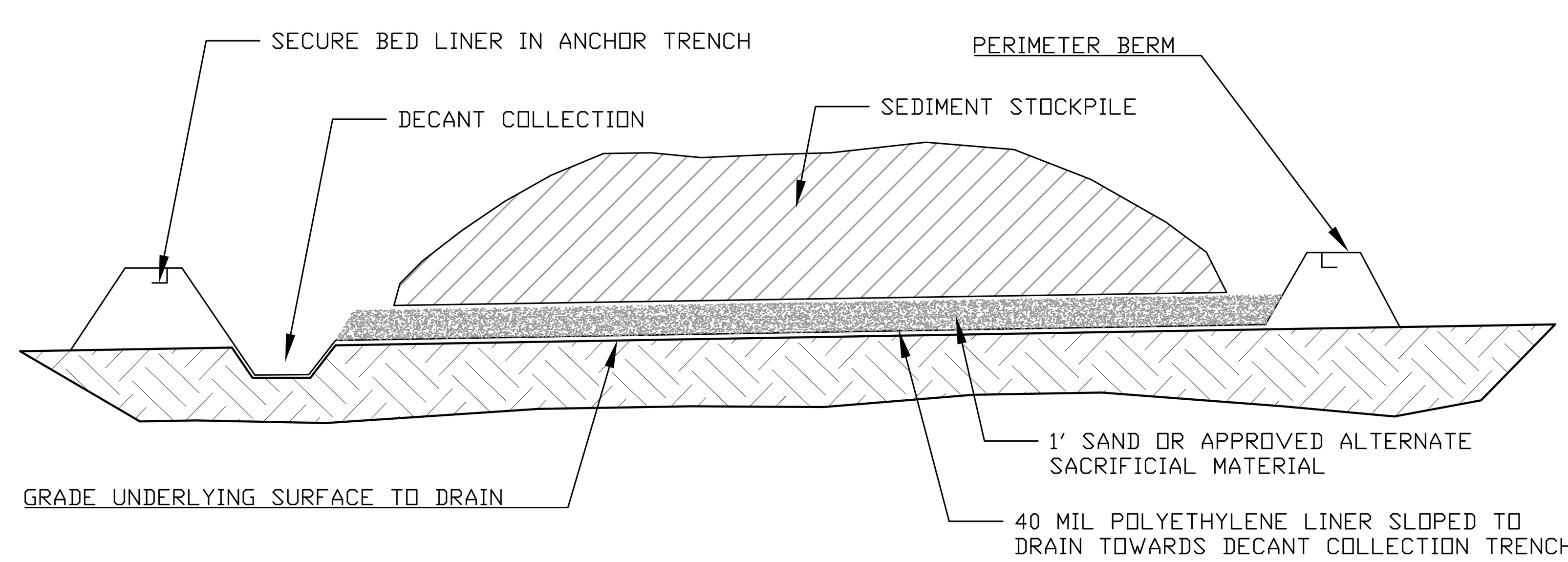
1. 'La' = LENGTH OF APRON. DISTANCE 'La' SHALL BE OF SUFFICIENT LENGTH TO DISSIPATE ENERGY.
2. APRON SHALL BE SET AT A ZERO GRADE AND ALIGNED STRAIGHT.
3. FILTER MATERIAL SHALL BE FILTER FABRIC OR 6" THICK (MIN.) GRADED GRAVEL LAYER.

ENERGY DISSIPATOR

NOTES:

GENERAL DAM AND BYPASS DETAILS ARE PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF TEMPORARY DIVERSION STRUCTURE AND A FULLY REDUNDANT DEWATERING SYSTEM SEDIMENT REMEDIATION IN REACH 1 CAN BE COMPLETED. SEE CONSTRUCTION SPECIFICATION SECTION 31 23 19 FOR COMPLETE REQUIREMENTS. ENERGY DISSIPATOR SHALL BE APPROPRIATELY SIZED TO PREVENT EROSION AT THE DISCHARGE OF THE BYPASS. GENERAL ENERGY DISSIPATOR DESIGN IS PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY. CONTRACTOR TO PROVIDE DISSIPATOR DESIGN AND DETAILS TO ARCONIC FOR APPROVAL PRIOR TO CONSTRUCTION.

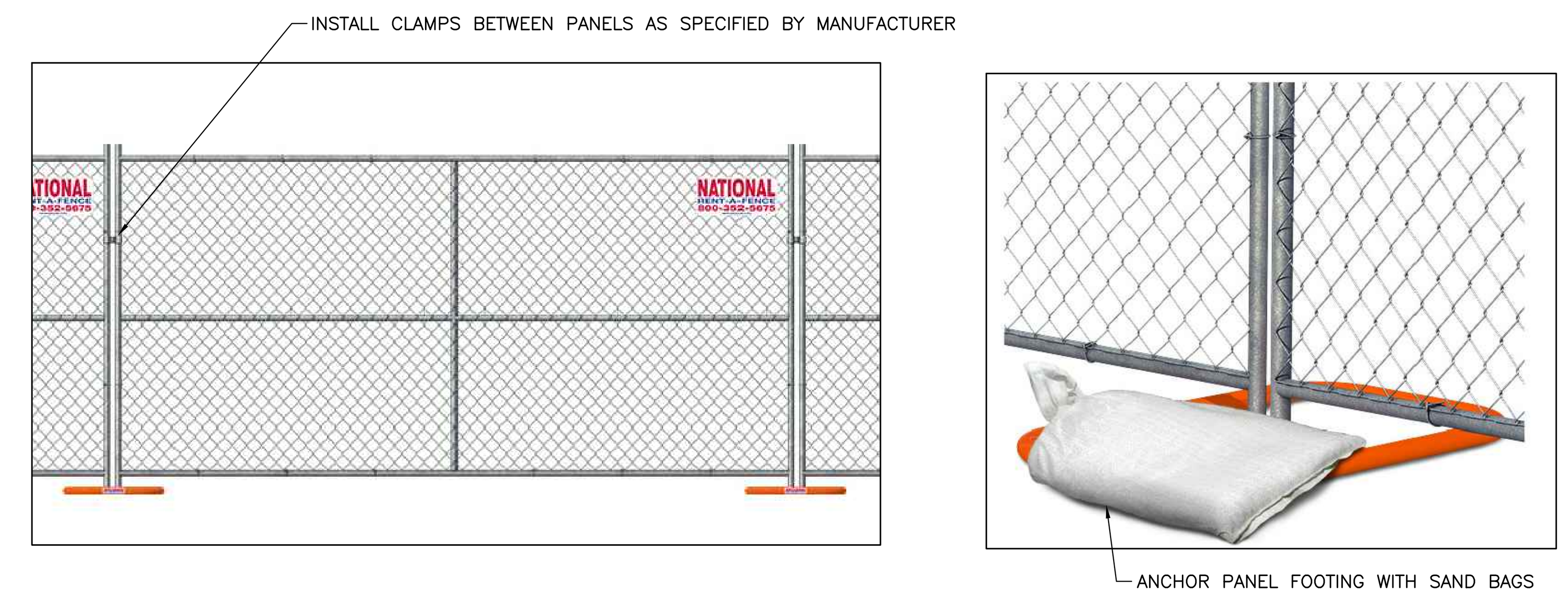
DETAIL 903
GENERAL DAM AND BYPASS DETAIL
N.T.S.



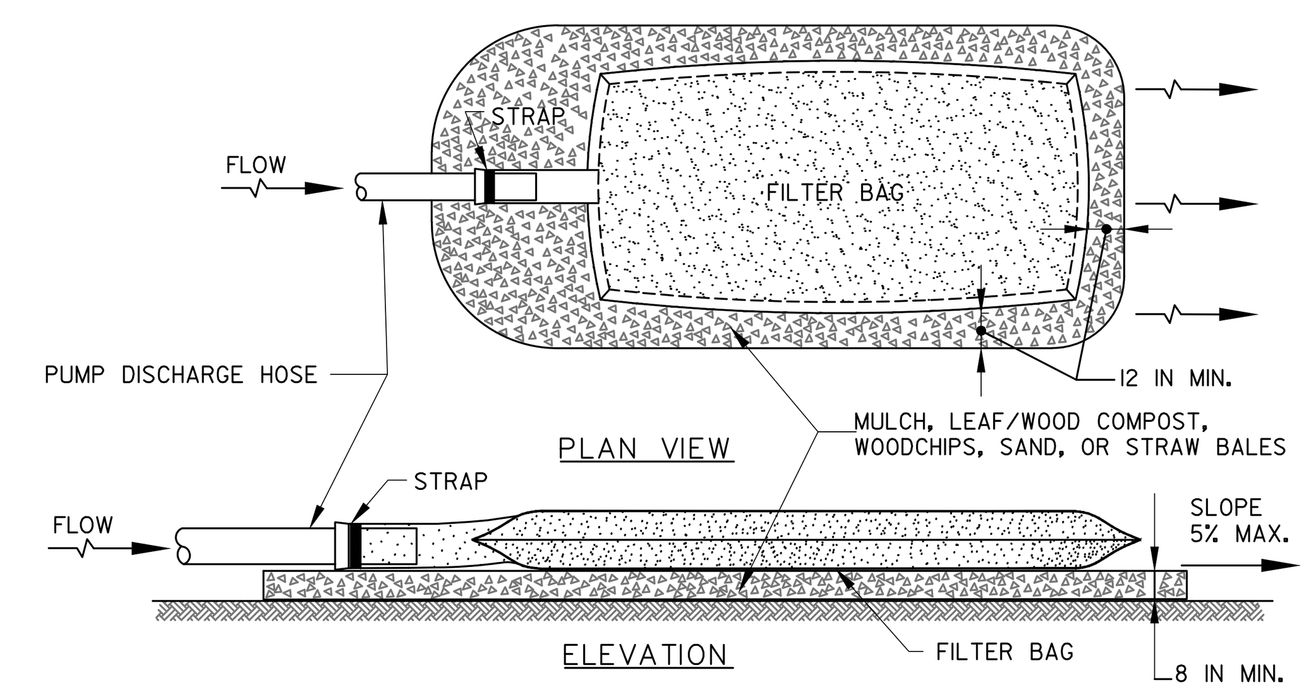
NOTES:

1. WATER CONTROL DEVICES WILL PROMOTE SEDIMENT DRYING IN THE ELLIOTT DITCH; HOWEVER, ADDITIONAL DRYING MAY BE NEEDED IN AN IMPOUNDMENT ONCE THE SEDIMENT IS REMOVED.
2. BERMED SEDIMENT STAGING PAD(S) MUST BE CONSTRUCTED WITH A 40-MIL POLYETHYLENE LINER OVERLAIN WITH 1-FOOT OF SAND OR APPROVED ALTERNATE, SACRIFICIAL MATERIAL.
3. PADS MUST BE SLOPED TO DRAIN SUCH THAT DECANT WATER CAN BE REMOVED AND MANAGED IN ACCORDANCE WITH THE IMWP.
4. STOCKPILED SEDIMENT WITHIN THE IMPOUNDMENTS MUST BE COVERED WITH POLY-SHEETING AT THE END OF EACH WORKING DAY TO PROTECT FROM EXPOSURE TO WIN AND PRECIPITATION, AS NECESSARY. THE POLY-SHEETING SHOULD BE WEIGHTED DOWN WITH SANDBAGS TO SECURE WHEN SEDIMENT IS NOT BEING ACTIVELY LOADED/UNLOADED.
5. THE CONTRACTOR MUST MONITOR IMPOUNDEMTN AREAS WHEN IN USE TO ASSURE PROPER FUNCTIONALITY.
6. EROSION CONTROL MEASURES SHOULD BE DEPLOYED TO REDUCE THE POTENTIAL FOR SEDIMENTATION FROM THE IMPOUNDMENT AREAS.

DETAIL 904
SEDIMENT DEWATERING BED
N.T.S.



DETAIL 905
TEMPORARY PANEL FENCING
N.T.S.



NOTES

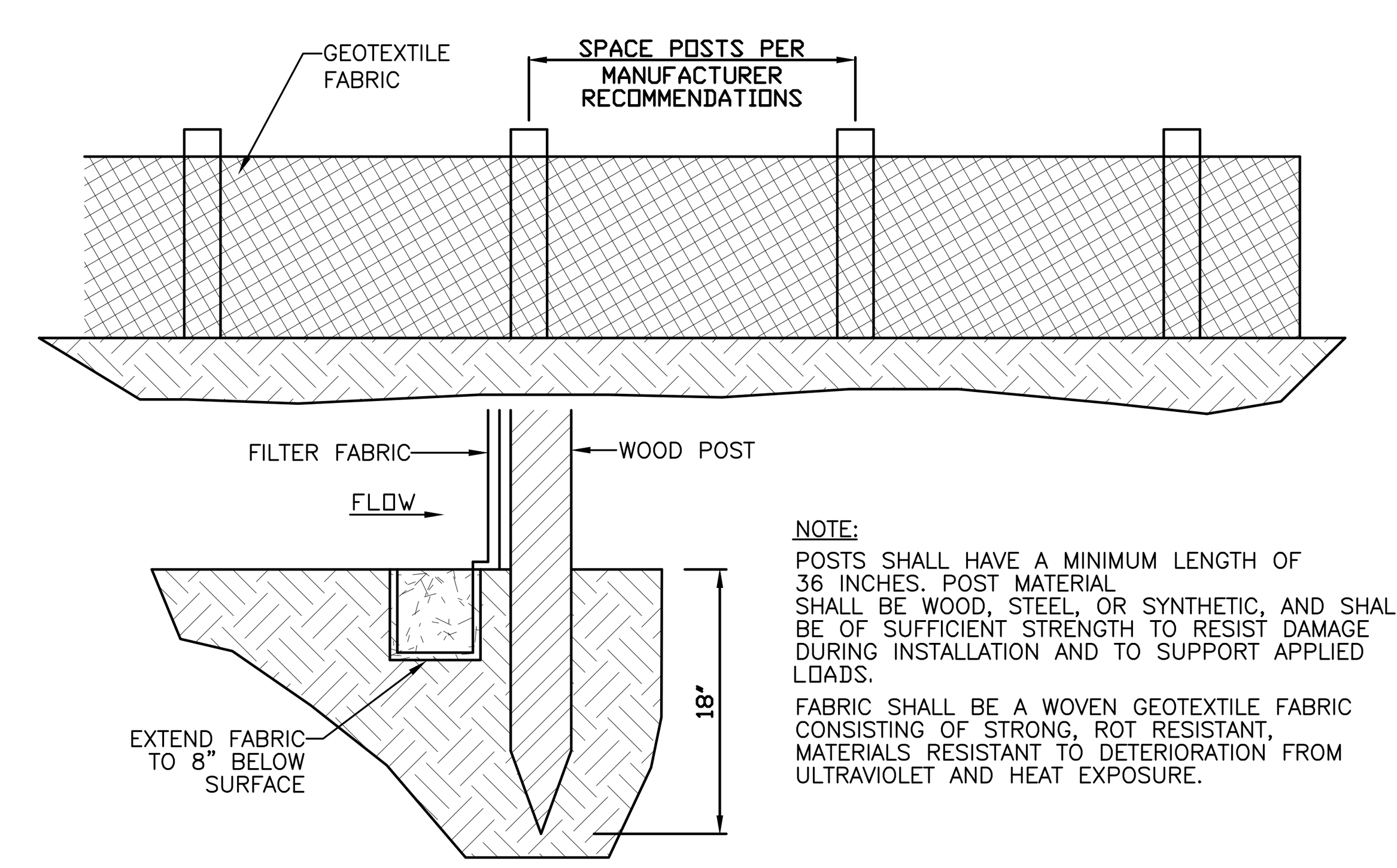
1. TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
2. PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
3. CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
4. REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
5. USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MARV) FOR THE FOLLOWING:

GRAB TENSILE	250 LB	ASTM D-4632
PUNCTURE	150 LB	ASTM D-4833
FLOW RATE	70 GAL/MIN/FT²	ASTM D-4491
PERMITTIVITY (SEC⁻¹)	1.2 SEC⁻¹	ASTM D-4491
UV RESISTANCE	70% STRENGTH @ 500 HOURS	ASTM D-4355
APPARENT OPENING SIZE (AOS)	0.15-0.18 MM	ASTM D-4751
SEAM STRENGTH	90%	ASTM D-4632

6. REPLACE FILTER BAG IF BAG CLOGS OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.

SOURCE: MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 906
DEWATERING FILTER BAG
N.T.S.



NOTE:

POSTS SHALL HAVE A MINIMUM LENGTH OF 36 INCHES. POST MATERIAL SHALL BE WOOD, STEEL, OR SYNTHETIC, AND SHALL BE OF SUFFICIENT STRENGTH TO RESIST DAMAGE DURING INSTALLATION AND TO SUPPORT APPLIED LOADS.

FABRIC SHALL BE A WOVEN GEOTEXTILE FABRIC CONSISTING OF STRONG, ROT RESISTANT, MATERIALS RESISTANT TO DETERIORATION FROM ULTRAVIOLET AND HEAT EXPOSURE.

DETAIL 907
SILT FENCE
N.T.S.

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
2704 Cherokee Farm Way · Suite 101 · Knoxville, TN 37920
Ph: 865.977.9997 · Fax: 865.977.9919
www.cecinc.com

ARCONIC LAFAYETTE LLC
LAFAYETTE OPERATIONS
ELLIOTT DITCH REACHES 1-3
SEDIMENT AND SOIL REMEDIATION
LAFAYETTE, INDIANA

EROSION CONTROL DETAILS

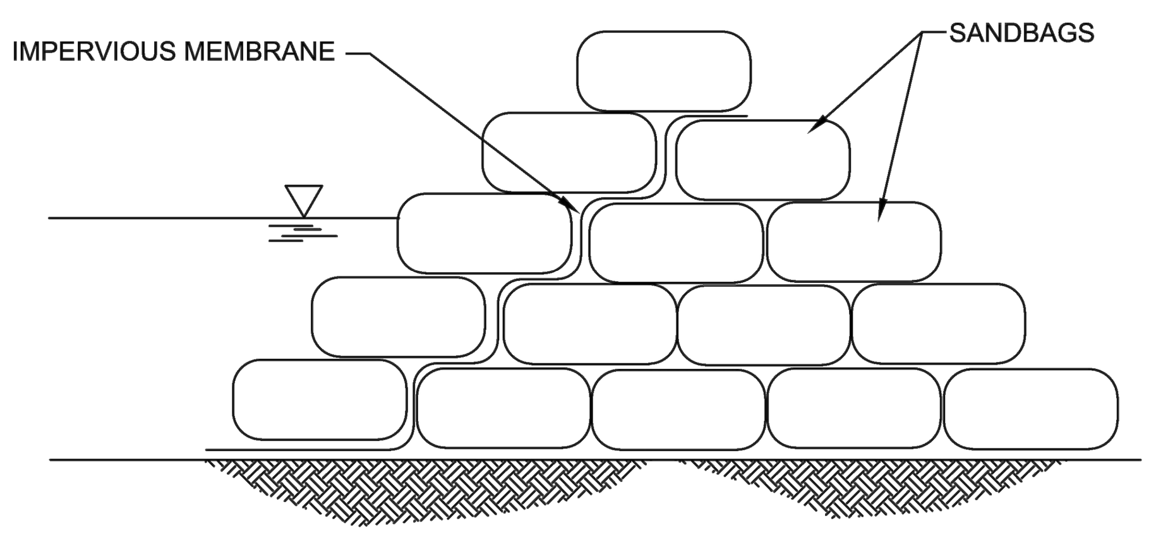
DATE:	12/21/2020	DRAWN BY:	KAM
DWG SCALE:	NOT TO SCALE	CHECKED BY:	GAW
PROJECT NO:	172-367.0043	APPROVED BY:	JMB

Indiana 811 Know what's below. 811 before you dig.

JOHN MATTHEW BRUCK REGISTERED No. PE11700141 STATE OF INDIANA PROFESSIONAL ENGINEER

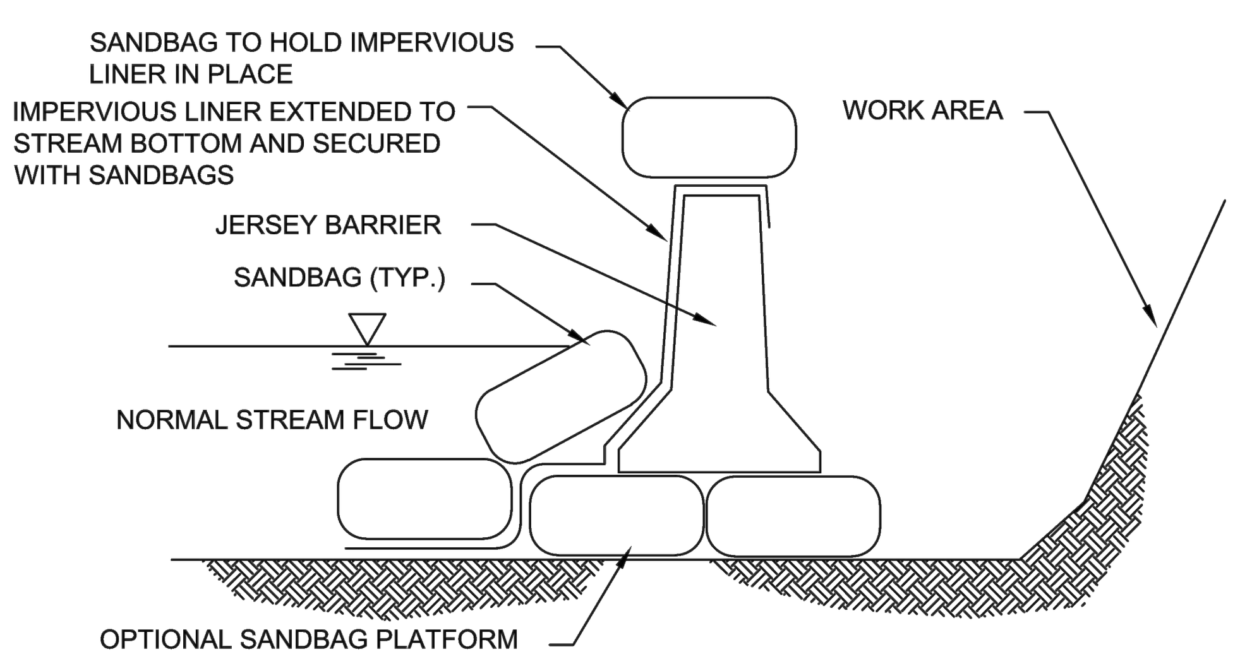
DRAWING NO.: C911
SHEET 12 OF 13

P:\2017\172-367\-2420\Dwg\C904 - Reach 1-3 Remediation Drawings\Sediment Remediation SWPPP\172367-C904-C912-SWPPP Details.dwg{C911} LS:(3/5/2021 - kmcnolly) - LP: 3/8/2021 10:47 AM



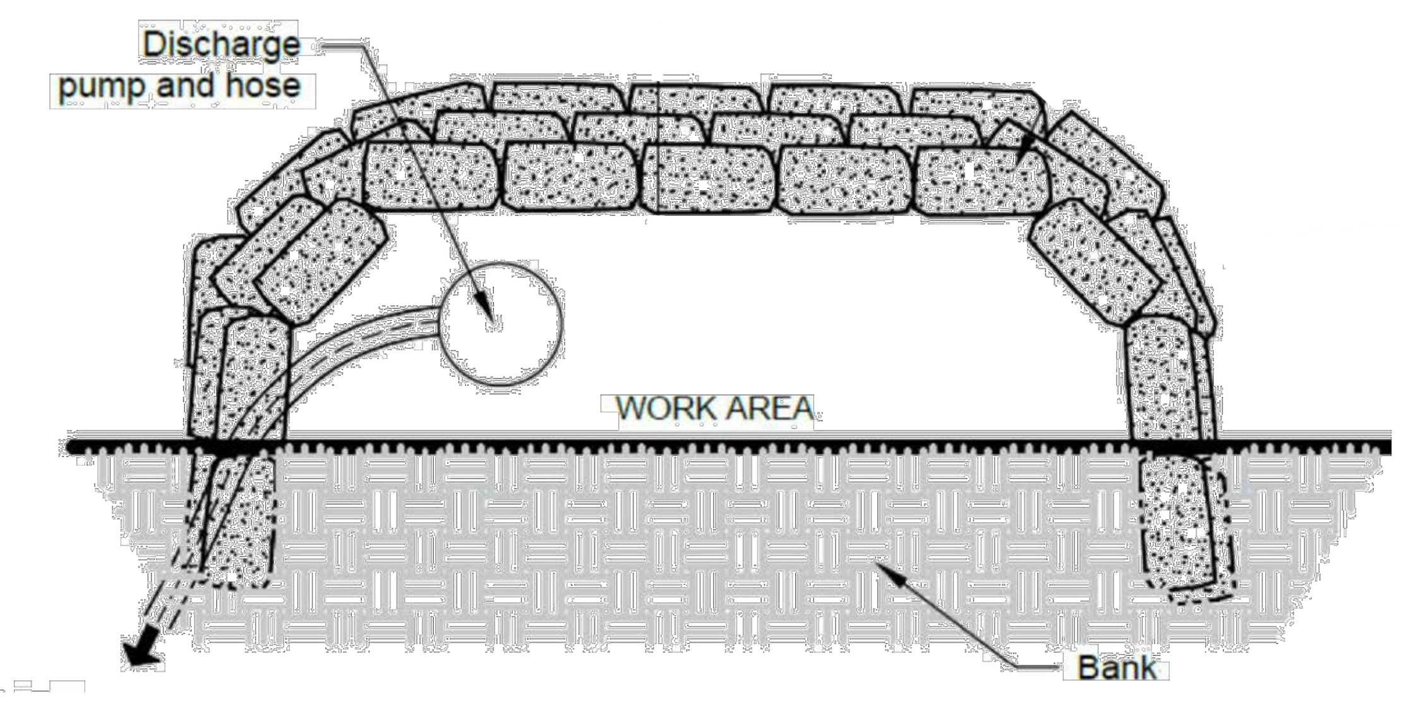
2 BAG MIN. HEIGHT ABOVE NORMAL BASE FLOW

STACKED SANDBAGS OPTION



JERSEY BARRIER OPTION

FLOW



COFFERDAM PLAN VIEW

NOTES:

GENERAL TEMPORARY COFFERDAM CONSTRUCTION METHODS ARE PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF COFFERDAMS OR OTHER CAPABLE STRUCTURES TO ISOLATE DEPOSITIONAL FEATURES IN REACH 1 DOWNSTREAM OF THE FIRST RAILROAD CROSSING AND REACHES 2 AND 3 SUCH THAT SEDIMENT REMEDIATION CAN BE COMPLETED. SEE CONSTRUCTION SPECIFICATION SECTION 31 23 19 FOR COMPLETE REQUIREMENTS.

DETAIL 908
GENERAL TEMPORARY COFFERDAM DETAIL

N.T.S.

SEEDBED PREPARATION

1. APPLY LIME TO RAISE THE pH TO THE LEVEL AS NEEDED FOR SPECIES BEING SEEDED.
2. APPLY 23 POUNDS OF PHOSPHOROUS FREE FERTILIZER: 12–0–12 ANALYSIS (OR EQUIVALENT) PER 1000 SQ. FT. (APPROXIMATELY 1000 POUNDS PER ACRE) OR FERTILIZE ACCORDING TO TEST. APPLICATION OF 150 LBS. OF AMMONIUM NITRATE ON AREAS LOW IN ORGANIC MATTER AND FERTILITY WILL GREATLY ENHANCE VEGETATIVE GROWTH.
3. WORK THE FERTILIZER AND LIME INTO THE SOIL TO A DEPTH OF 2–4 INCHES WITH A HARROW, DISK OR RAKE OPERATED ACROSS THE SLOPE AS MUCH AS POSSIBLE.

SEEDING

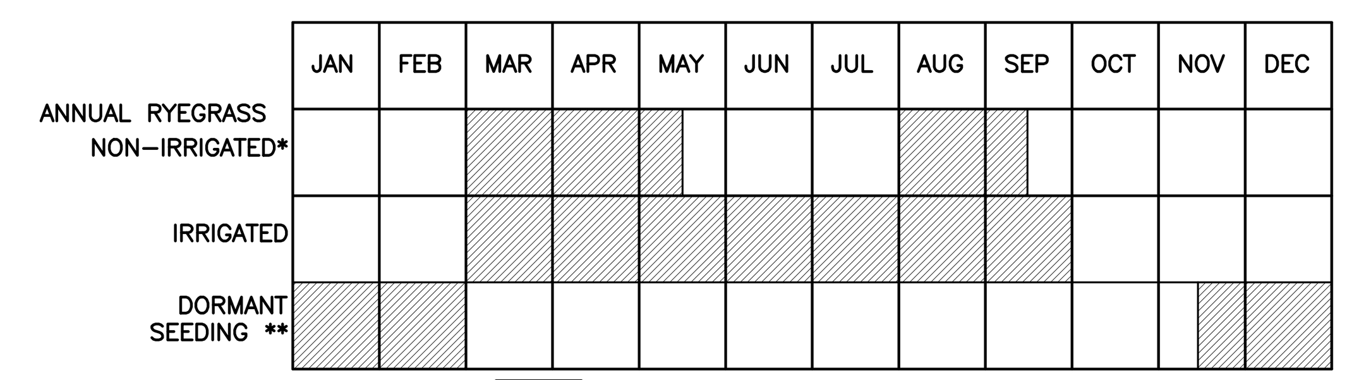
SELECT A SEED MIXTURE BASED ON PROJECTED USE OF THE AREA (SEE PERMANENT SEED MIXTURE CHART). WHILE CONSIDERING BEST SEEDING DATES. IF PERMANENT SEEDING IS NOT PERMITTED USE TEMPORARY SEEDING UNTIL PERMANENT SEEDING CAN BE APPLIED. IF TOLERANCES ARE A PROBLEM, SUCH AS SALT TOLERANCE OF SEEDINGS ADJACENT TO STREETS AND HIGHWAYS, SEE SEED TOLERANCE CHART.

	SOIL CONDITION			SHADE TOLERANCE	CLOSE MOWING TO 2–3 1/2 INCHES	TRAMPING TOLERANCE	FERTILITY NEEDS	WINTER HARDINESS	FLOODING TOLERANCE (DAYS)	MATURE HEIGHT (INCHES)	EMERGENCE TIME (DAYS)	SOIL TOLERANCE		
	WET	NORM	DRY									GEN.	SOIL	SPRAY
CREEPING RED FESCUE FESTUCA RUBRA	2	1	2	1	1	1	MED.	1	20–25	12–18	7–21			S
KENTUCKY BLUEGRASS POA PROTINSIS	2	1	2	1	1	1	MED.	1	20–35	12–18	10–20			MT
TALL FESCUE FESTUCA L. ARUNDINACEA	2	1	1	1	1	1	LOW	1	24–35	24–36	5–14		T	
PERENNIAL RYEGRASS LOLLUM PERENNE	2	1	2	–	1	2	MED. HIGH	2	15–20	12–18	5–10		MT	
CROWNVETCH CORONILLA VARLA	–	1	1	2	–	–	LOW	1	5–10	24	14–21	T		
RED CLOVER TRIFOLIUM PROTENSE	–	1	–	2	–	–	MED.	1	7–10	18	5–10	S	S	

RANKING:
1 GOOD
2 MEDIUM
– NOT TOLERANT

SALT TOLERANCE (TO BOTH SOIL SALTS & SPRAY)
T TOLERANCE
MT MEDIUM TOLERANCE
S SLIGHT TOLERANCE

PERMANENT SEEDING DATES



IRRIGATION NEEDED DURING THIS PERIOD. TO CONTROL EROSION AT TIMES OTHER THAN IN THE SHADED AREAS. USE MULCH.

* LATE SUMMER SEEDING DATES MAY BE EXTENDED 5 DAYS IF MULCH IS APPLIED.

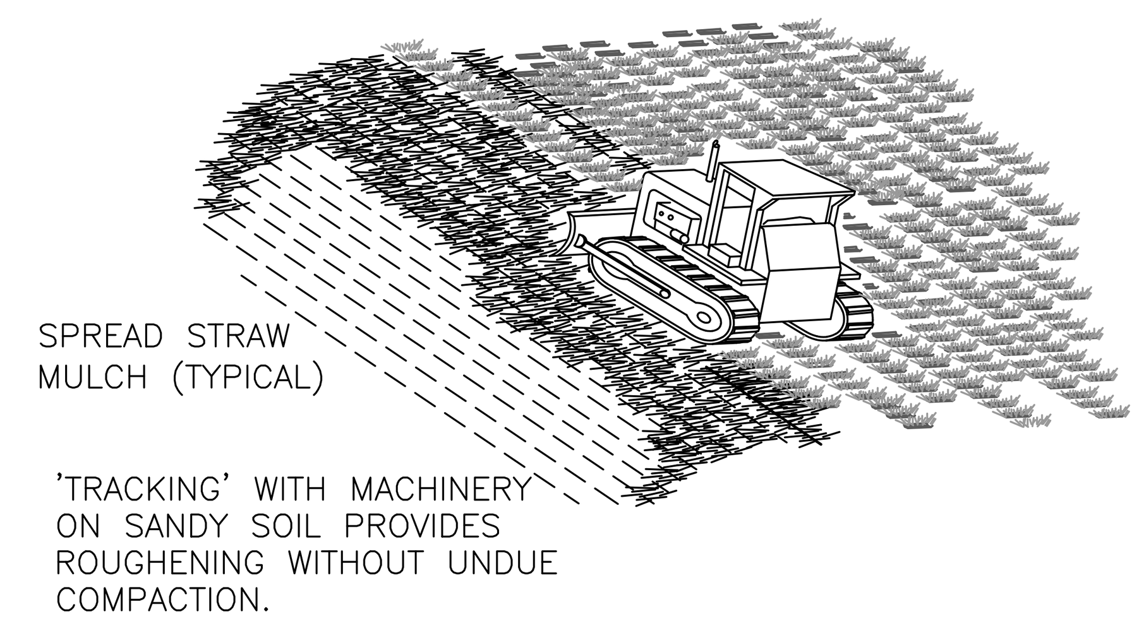
** INCREASE SEEDING APPLICATION BY 50%.

PERMANENT SEEDING						
SPECIES	SEEDING RATE		SUITABLE pH	SITE SUITABILITY *		
	LBS/ACRE	LBS/1000 SQ. FT.		DROUGHTY	WELL DRAINED	WET
LEVEL AND SLOPING, OPEN AREAS						
1. TALL FESCUE	35	.8	5.5–8.3	2	1	2
2. TALL FESCUE	25	.6	5.5–8.3		1	
RED CLOVER	5	.12				
3. KENTUCKY BLUEGRASS	15	.4	5.8–7.5	2	1	
CREEPING RED FESCUE	15	.4				
STEEP BANKS AND CUTS						
4. TALL FESCUE	15	.4	5.8–7.5	2	1	2
KENTUCKY BLUEGRASS	25	.6				
5. TALL FESCUE	35	.8	5.5–8.3	2	1	
EMERALD CROWNVETCH**	10	.25				
LAWNS AND HIGH MAINTENANCE AREAS						
6. KENTUCKY BLUEGRASS	40	.9	5.8–7.5	2	1	
CREEPING RED FESCUE	40	.9				
7. PERENNIAL RYEGRASS	170	4.0	5.0–7.5		1	
(TURF TYPE)						
8. TALL FESCUE	170	4.0	5.5–8.3	2	1	2

* 1 – PREFERRED 2 – WILL TOLERATE ** INOCULATE WITH SPECIFIC INOCULANT.

DETAIL 909
PERMANENT SEEDING

N.T.S.



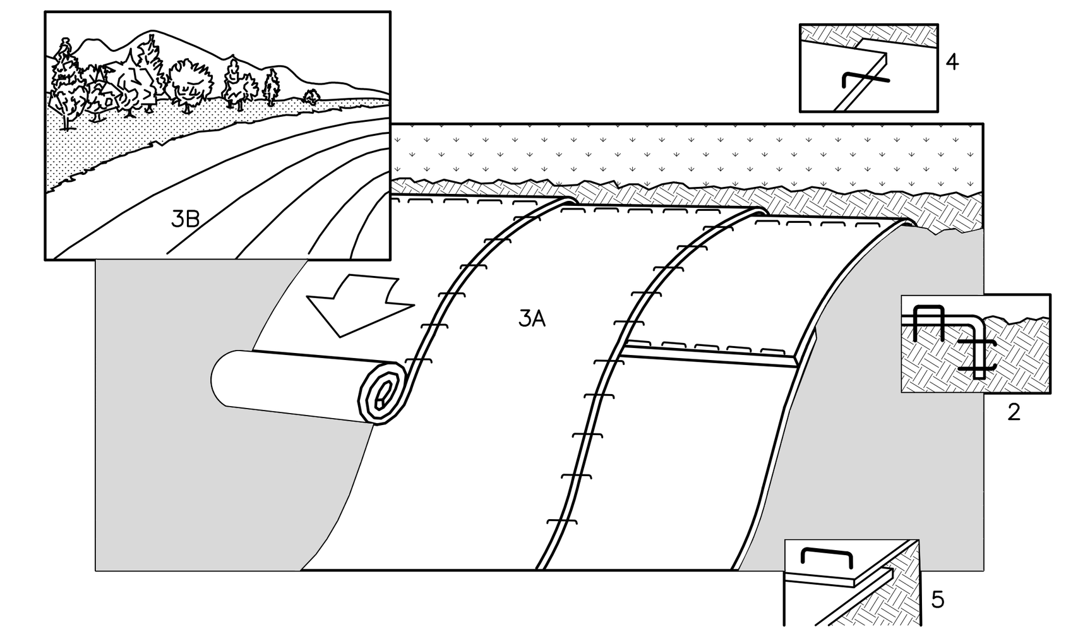
STRAW ANCHORING

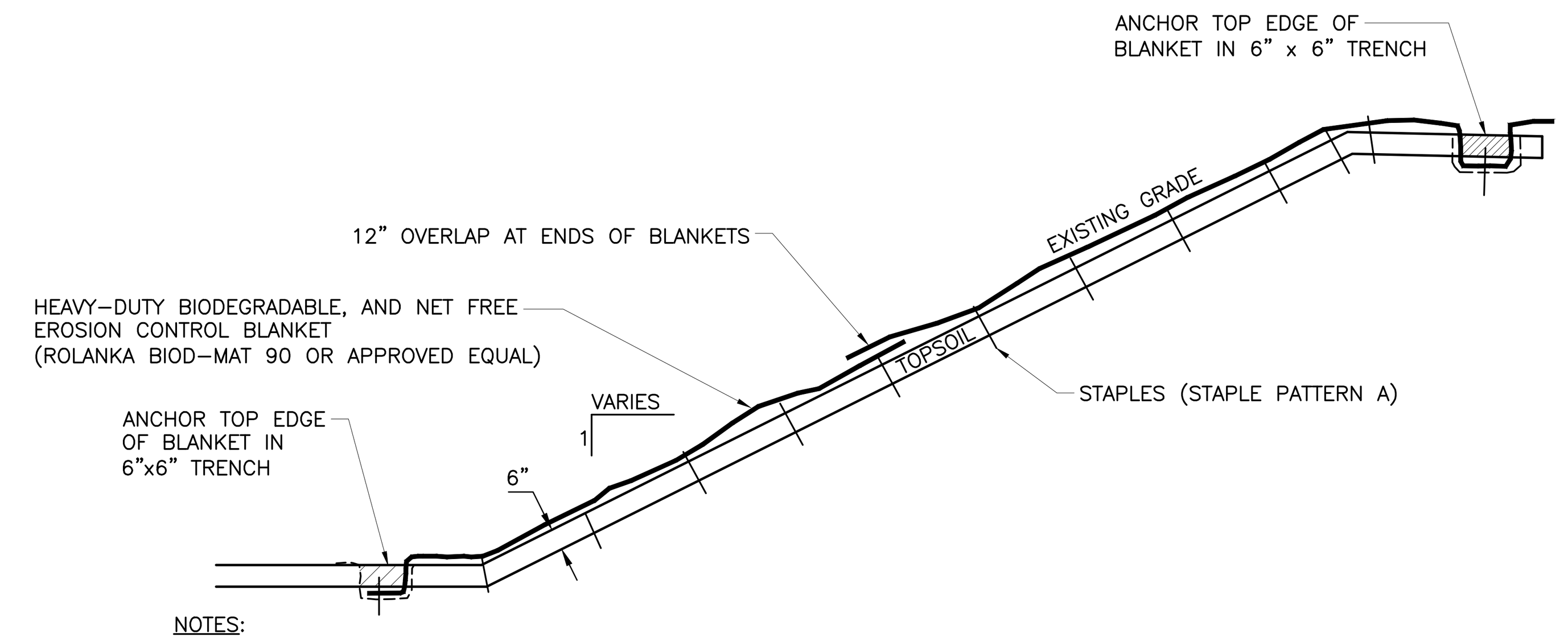
NOTES:

1. ROUGHEN SLOPE WITH BULLDOZER
2. BROADCAST SEED AND FERTILIZER.
3. SPREAD STRAW MULCH 3" THICK. (2 1/2 TONS PER ACRE)
4. PUNCH STRAW MULCH INTO SLOPE BY RUNNING BULLDOZER UP AND AND DOWN SLOPE.

DETAIL 910
STRAW ANCHORING

N.T.S.



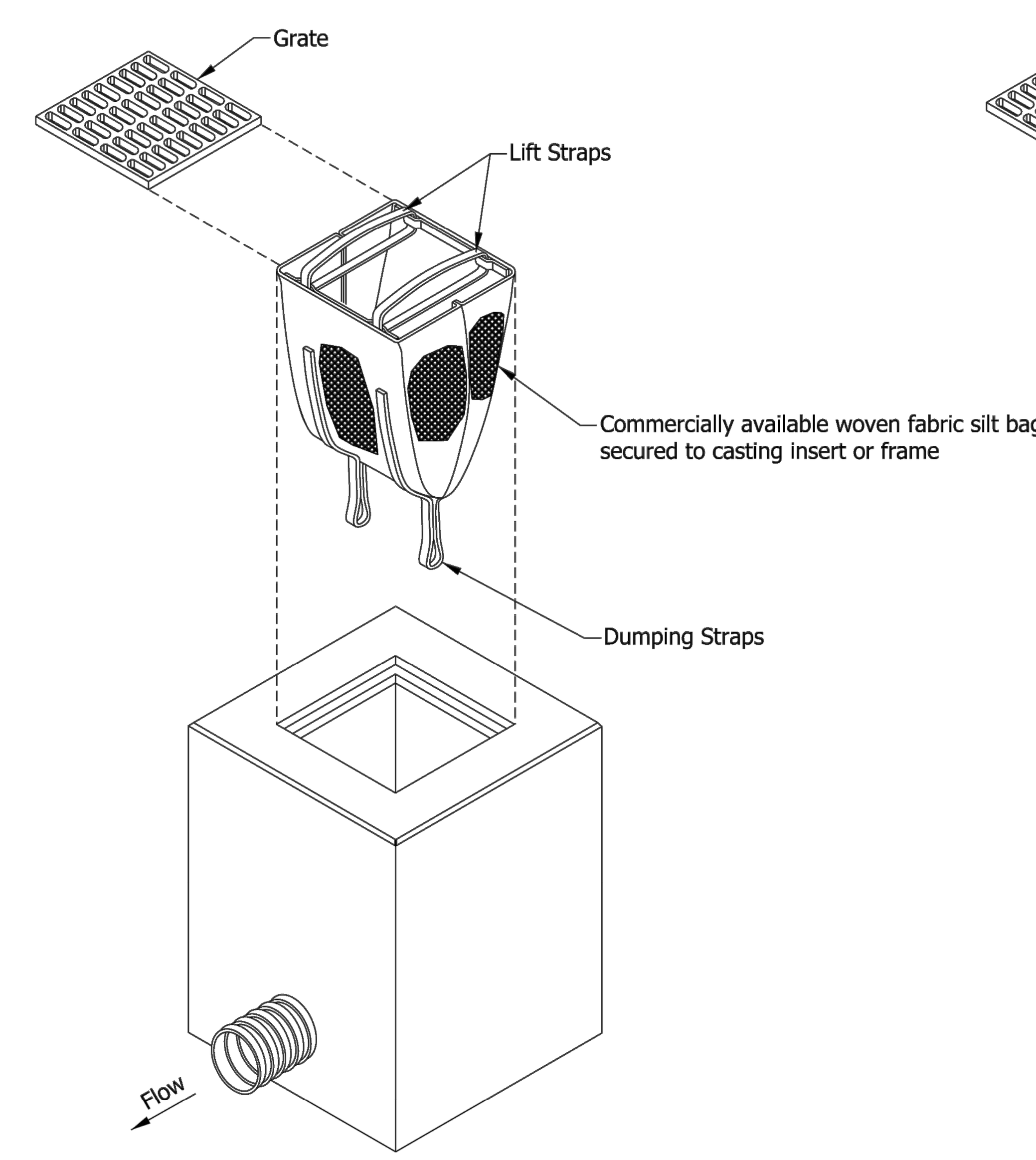


NOTES:

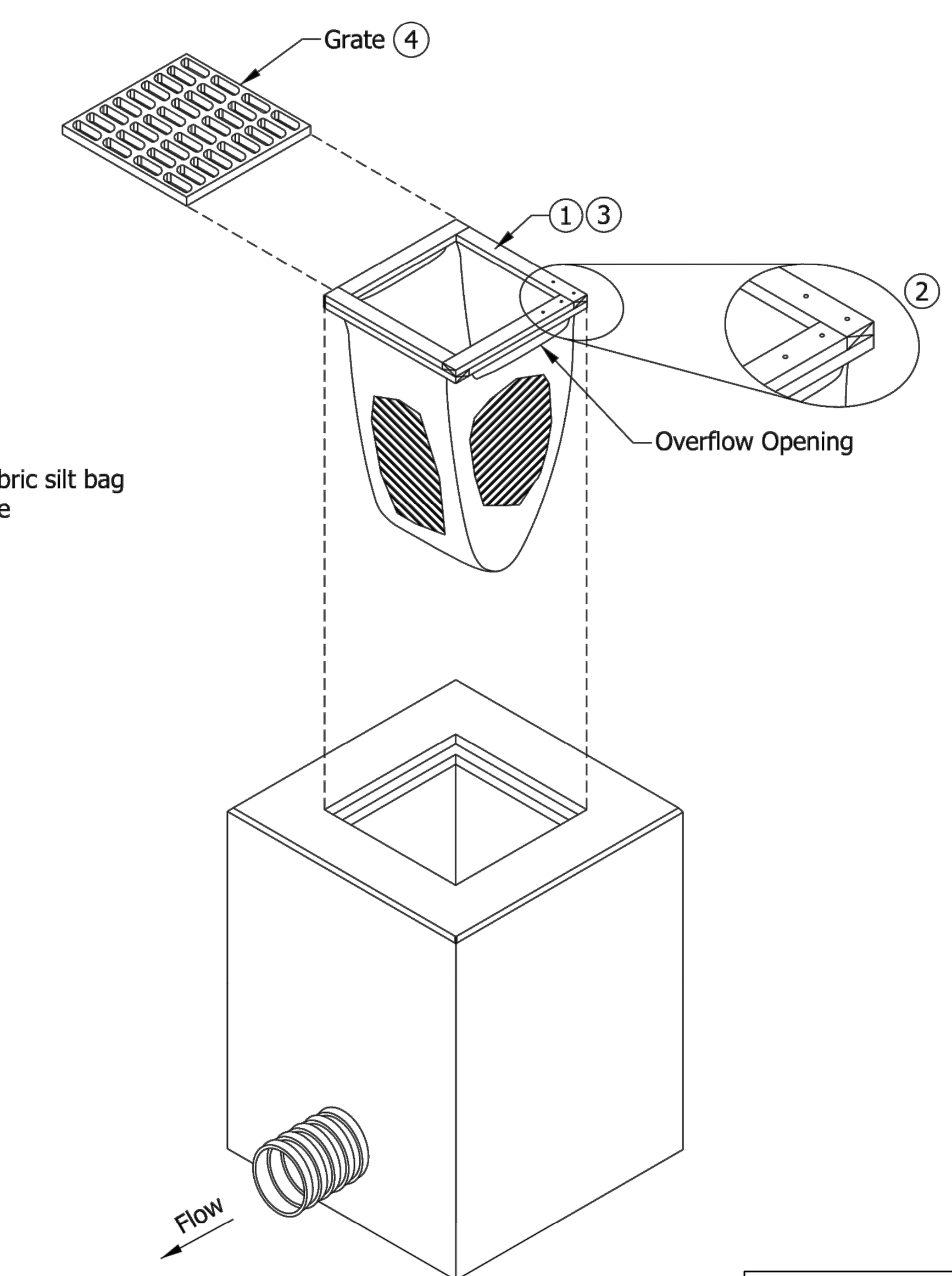
1. PREPARE SOIL BEFORE INSTALLING BLANKETS.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 12" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.
6. EROSION CONTROL BLANKETS SHALL BE INSTALLED ON ALL 3:1 OR STEEPER SLOPES DISTURBED AS A RESULT OF THE REMEDIATION PROCESS. A HEAVY–DUTY, BIODEGRADABLE, AND NET FREE EROSION CONTROL BLANKET (ROLANKA BIOD–MAT 90 OR APPROVED EQUAL) MUST BY USED.

DETAIL 911
EROSION CONTROL BLANKET

NOT TO SCALE



MANUFACTURED



BUILT IN FIELD

NOTES:

1. FRAME OPENING SIZE TO MATCH INLET OPENING.
2. GEOTEXTILE BAG SHALL BE FABRICATED FROM A PIECE OF GEOTEXTILE 2 TIMES THE OPENING SIZE PUSHED THROUGH THE OPENING TO FORM AN OVERFLOW OPENING. SECURE BY NAILS.
3. FRAME WITH BAG TO BE PLACED OVER INLET OPENING.
4. BAG FRAME SHALL BE SECURED IN PLACE BY WEIGHT OF INLET GRATE. GRATE MAY BE ROTATED 45 DEGREES TO THE BAG'S FRAME.

SOURCE: INDIANA DEPARTMENT OF TRANSPORATION

DETAIL 912
INLET PROTECTION FILTER BAG

N.T.S.

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
2704 Cherokee Farm Way · Suite 101 · Knoxville, TN 37920
Ph: 865.977.9997 · Fax: 865.977.9919
www.cecinc.com

ARCONIC LAFAYETTE LLC
LAFAYETTE OPERATIONS
ELLIOTT DITCH REACHES 1-3
SEDIMENT AND SOIL REMEDIATION
LAFAYETTE, INDIANA

EROSION CONTROL DETAILS

DATE:	12/21/2020	DRAWN BY:	KAM
DWG SCALE:	NOT TO SCALE	CHECKED BY:	GAW
PROJECT NO:	172-367.0043		
APPROVED BY:			JMB

Indiana811 Know what's below. 811 before you dig.

JOHN MATTHEW BRUCK REGISTERED No. PE11700141 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWING NO.: C912

SHEET 13 OF 13

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

April 15, 2021

65-42 WQS/RJB
Kirk Gribben, Arconic Lafayette, Inc
201 Isabella St
Pittsburgh, PA 15212

Dear Mr. Kirk Gribben, Arconic Lafayette, Inc:

Re: **Notice of Sufficiency (NOS)**
Notice of Intent Submittal
Construction Site Stormwater Run-off
327 IAC 15-5
Elliott Ditch Reaches 1-3 Sediment and Soil Remediation
Tippecanoe County
Permit #: INRA07330

The Notice of Intent (NOI) submitted for the project referenced above has been reviewed by staff of the Indiana Department of Environmental Management (IDEM). The items contained in the NOI are sufficient and meet the requirements of the National Pollutant Discharge Elimination System (NPDES) General Permit Rule for stormwater discharges associated with construction activity (327 IAC 15-5). This letter is notification of permit coverage for 327 IAC 15-5 and does not constitute approval to conduct activities that are related to other local, state, or federal permits.

A permit number is assigned to each project for which an NOI has been submitted to obtain coverage under 327 IAC 15-5. This number is used for identification and should be included with any future correspondence submitted to IDEM. The general permit number assigned to this facility is: INRA07330.

Construction site stormwater run-off general permit coverage is automatically limited to a maximum term length of five (5) years (327 IAC 15-5-12). The general permit issued for the project referenced above will expire on April 11, 2026. If this project requires coverage beyond this date, the applicant must reapply for a new permit 90 days prior to the expiration date.

It is important that all activities associated with your site are in compliance with the requirements of 327 IAC 15-5 and all local stormwater permits. In accordance with 327 IAC 15-5-10, you are required, at a minimum to implement your construction /stormwater pollution prevention plan, implement and maintain all stormwater quality measures, and monitor the effectiveness of the measures until the project is complete and terminated.

Upon completion of the project, you are required to terminate the permit. Information for termination can be found in 327 IAC 15-5-8. If this project is also within and/or permitted through a Municipal Separate Storm Sewer System (MS4), there may be local requirements (established through a local ordinance) for approval to terminate a project. If an MS4 has adopted a requirement for termination, you are responsible to comply with all local provisions prior to submitting the Notice of Termination to IDEM.

For more information related to the Stormwater Program and permit requirements, please visit: http://www.idem.IN.gov/2331.htm. Program forms are also available at this website or at http://www.IN.gov/idem/5157.htm.

Permittees can now manage their construction site stormwater run-off permit activities on-line, including renewals, amendments, and terminations through the IDEM Regulatory ePortal. All permittees are required/encouraged to utilize this new service. The service may be accessed at https://stormwater.idem.in.gov .

Any questions regarding this letter may be directed to the Stormwater Permit Coordinator at 317-233-1864 or 800-451-6027, extension 1864. Questions may also be emailed to the program email account of Stormwat@idem.IN.gov.

Sincerely,

Randy J. Braun, CPESC, CMS4S
Stormwater and Wetlands Section
Surface Water, Operations, & Enforcement Branch
Office of Water Quality

CITY OF
LAFAYETTE

Office of the City Engineer

20 North 6th Street • Lafayette, Indiana 47901-1412
Phone 765-807-1050 • FAX 765-807-1049

February 25, 2021

Mr. Kevin A. McNally, PE
Civil & Environmental Consultants, Inc.
2704 Cherokee Farm Way, Suite 101
Knoxville, TN 37920

Re: Elliott Ditch Reach 1-3 Remediation SWPPP

Dear Mr. McNally:

The Construction Plans for the proposed project referenced above have been reviewed and have been found to be in compliance with the City of Lafayette Stormwater Code.

Please submit a Rule 5 Notice of Intent to the Indiana Department of Environmental Management, Office of Water Quality; include this letter as verification of our acceptance of the Construction Plans.

No error or omission in the plans, calculations or applications (whether said plans, calculations or applications have been reviewed by the Office of the City Engineer or not) shall permit or release the applicant and designer from constructing this work in any other manner than that provided for in the City Code.

Sincerely,

David M. Griffee, PE
Public Works Assistant Director