IOWA DEPARTMENT OF NATURAL RESOURCES

CONSTRUCTION DOCUMENTS FOR SUGEMA WILDLIFE UNIT HAYESVILLE BEND & HWY 21 ACCESS FLOOD DAMAGE REPAIRS

KEOKUK COUNTY, IOWA

PROJECT # 21-05-54-01

LICENSED PROFESSIONAL ENGINEER
MANDI L. ALDRICH PETERS
14439
IOWA

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED UNDER MY SUPERVISION AND THAT ENGINEERING DECISIONS WITH REGARD TO THE DESIGN WERE MADE BY ME UNDER THE LAWS OF THE STATE OF IOWA.

Mandi Lu Aldrich Peters — Digitally signed by Mandi Lu Aldrich Peters Date: 2021.02.15 13:11:05 -06'00'
SIGNATURE — DATE

MANDI L. ALDRICH PETERS
PRINTED OR TYPED NAME

MY LICENCE RENEWAL DATE IS DECEMBER 31, 20 ____
PAGES COVERED BY THIS SEAL: _____

DIRECTORY

PROJECT MANAGER		CONSTRUCTION INSPECTOR	
COMPANY	IOWA DEPARTMENT OF NATURAL RESOURCES	COMPANY	IOWA DEPARTMENT OF NATURAL RESOURCES
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PROJECT DESCRIPTION

This project involves removal of silt, placement of fill, placement of revetment and construction of a new spillway at Hayesville Bend & Hwy 21 Access in the Sugema Wildlife Unit in Keokuk County.

AUTHORIZATION TO BID

Monica Thelen — Digitally signed by Monica Thelen Date: 2021.02.16 11:23:47 -06'00'

AUTHORIZATION - PARKS | WILDLIFE | FISHERIES | LAW ENFORCEMENT | FORESTRY — DATE

Travis Bahr — 2/16/21

ENGINEERING BUREAU CHIEF — DATE

SHEET INDEX

A.01	Cover Sheet
A.02	Project Location Maps
B.01-B.04	Detail Sheets
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CONSULTANT:

IOWA DEPARTMENT OF NATURAL RESOURCES
ENGINEERING SERVICES - WALLACE BUILING
502 E. 9TH ST., DES MOINES, IA 50319-0034

COVER SHEET

FEMA PROJECTS FOR:
SUGEMA WILDLIFE UNIT
KEOKUK COUNTY

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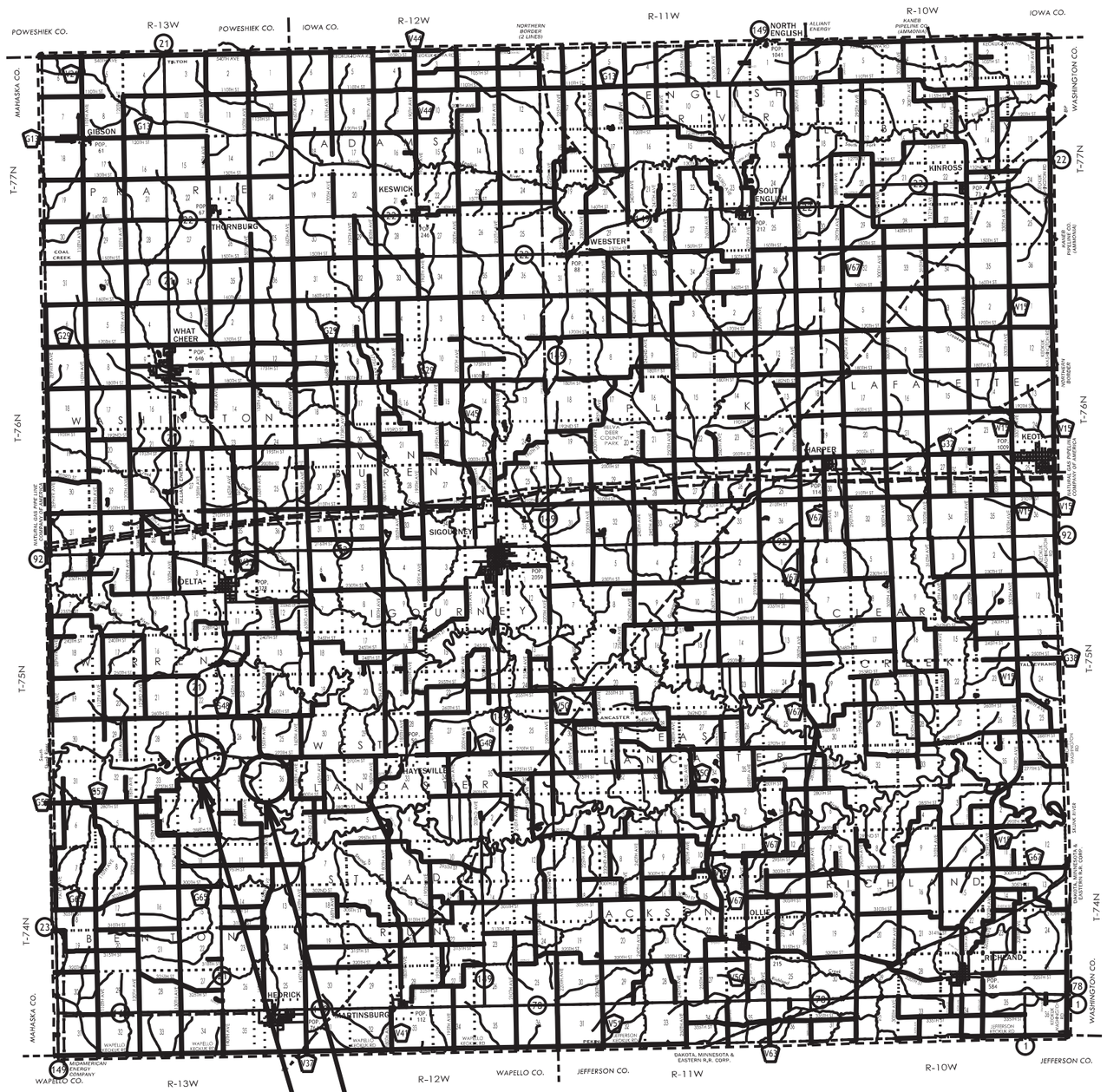
SHEET No: A.01



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PROJECT LOCATION MAP

FEMA PROJECTS FOR:

SUGEMA WILDLIFE UNIT

KEOKUK COUNTY

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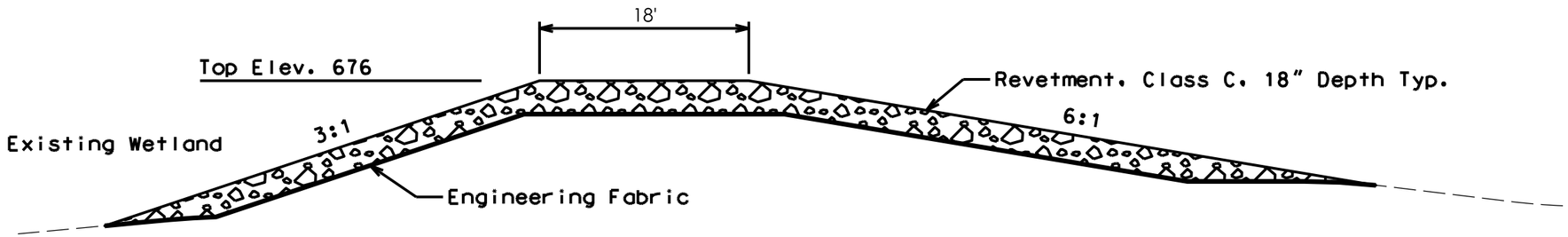
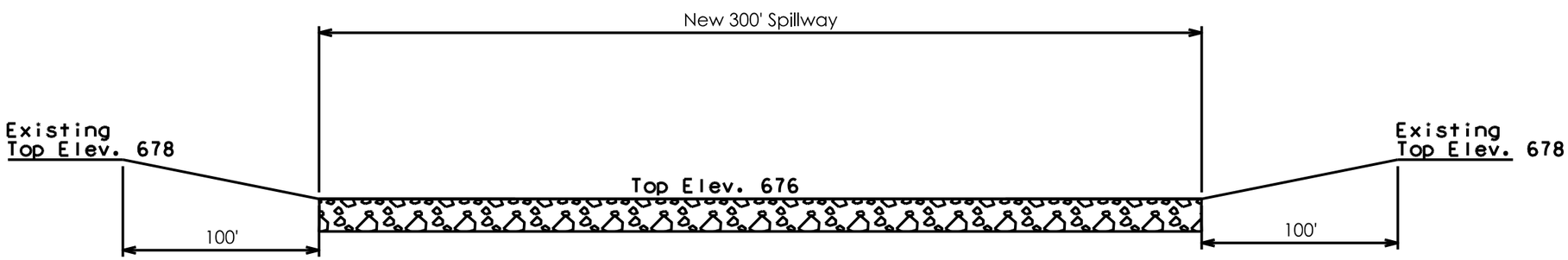


TYPICAL SPILLWAY SECTION
(Site 6)



TYPICAL SPILLWAY PROFILE
(Site 6)

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GENERAL DETAILS

FEMA PROJEC TS FOR:

SUGEMA WILDLIFE UNIT

KEOKUK COUNTY

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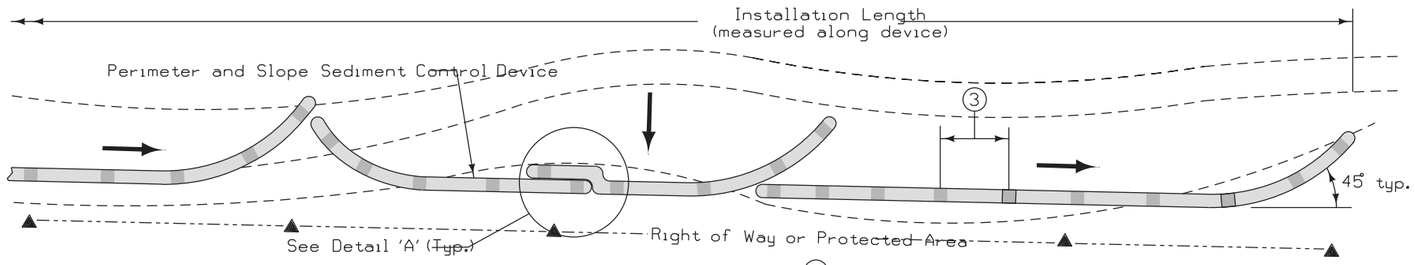
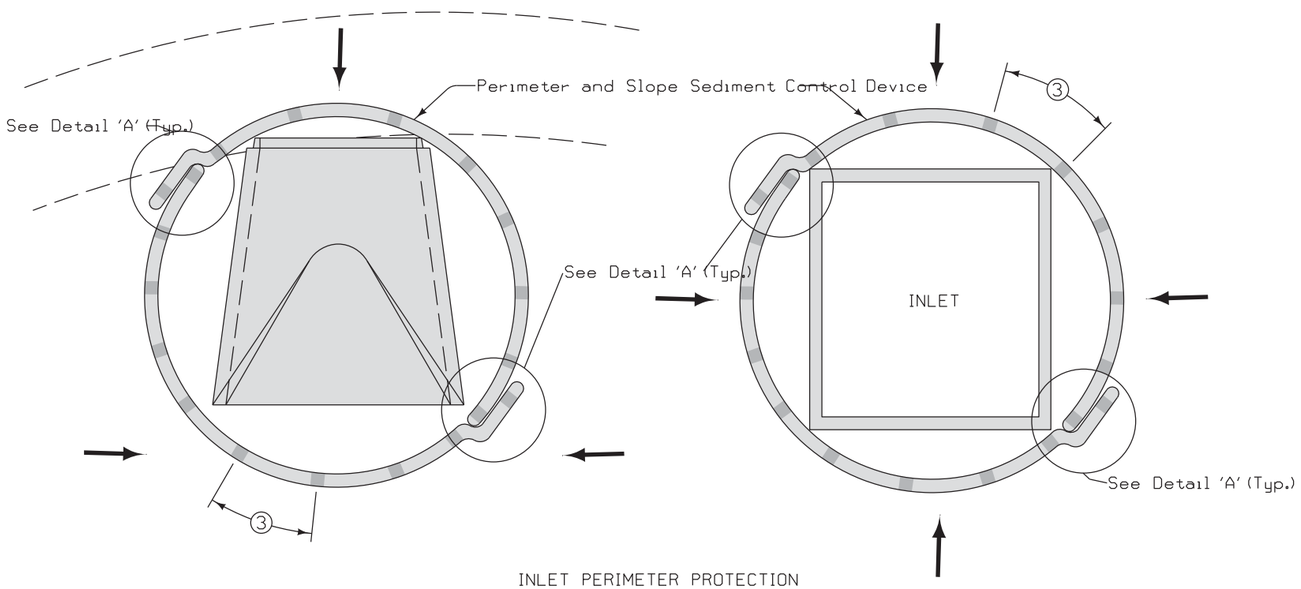


PERIMETER CONTROL 1

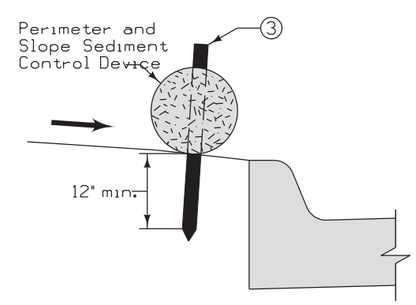
Not intended for use in perennial or intermittent streams.

Fill and compact rills and gullies (see Detail 'B') prior to placing Perimeter and Slope Sediment Control Device. Ensure ground surface is smooth in order to provide continuous contact with Perimeter and Slope Sediment Control Device. Minor ground shaping may be required. Filling and compacting rills and gullies, and minor ground shaping, is incidental to Perimeter and Slope Sediment Control Device.

1. Overlap joints per Detail 'A'. Turn the lower 10 feet of each run up the slope to help contain runoff. When placed such that runoff is conveyed along the device, additional run-ups and/or means may be required to reduce erosion along the device. Run-ups will be included in the installation length.
2. Extra material required to install overlaps will not be included in the installation length.
3. Space stakes at 4 foot maximum spacing. Use minimum actual stakes 3/4"x2 3/4" wood stakes.



INLET PERIMETER PROTECTION



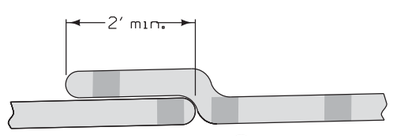
PERIMETER CONTROL ALONG CURB

Possible Contract Item:
Perimeter and Slope Sediment Control De

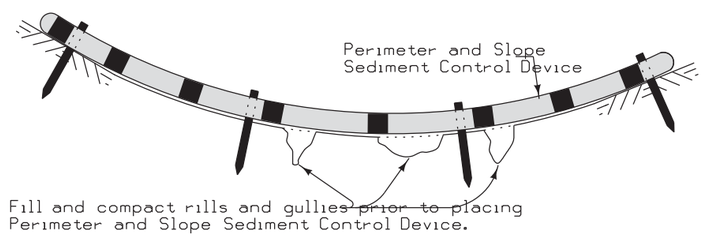
Possible Tabulation:
100-19

LEGEND

- Contour Lines
- Flow
- Wood Stake 3



DETAIL 'A' 2
(Overlap Joint)



DETAIL 'B'

REVISION	
4	04-21-20

STANDARD ROAD PLAN

EC-204

SHEET 1 of 3

REVISIONS: Modified circle notes 3 and 5.

APPROVED BY DESIGN METHODS ENGINEER

PERIMETER AND SLOPE SEDIMENT CONTROL DEVICES

CONSULTANT:

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ENGINEERING SERVICES - WALLACE BUILING
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GENERAL DETAILS

FEMA PROJECTS FOR:
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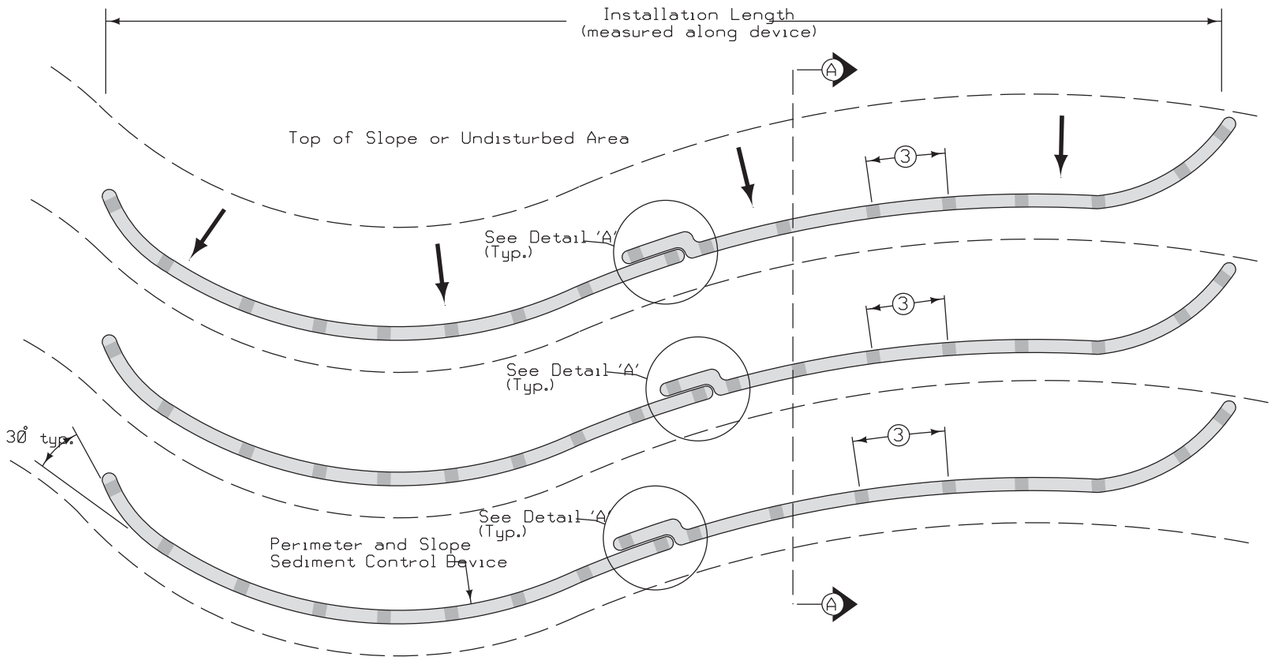
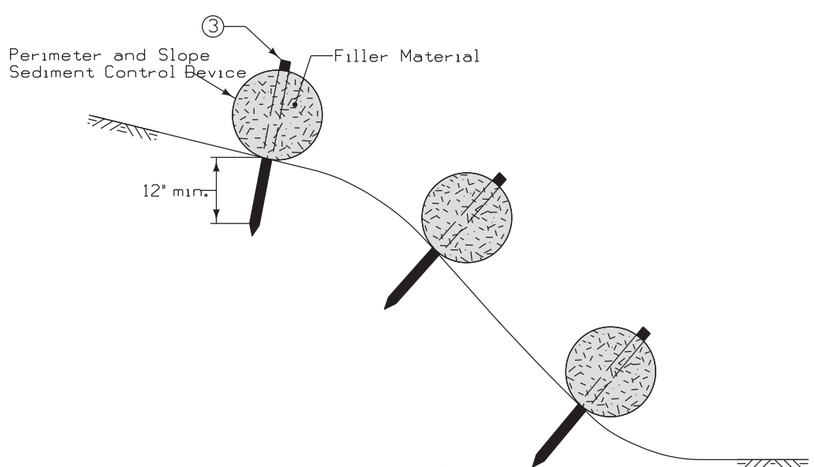


SLOPE PROTECTION 4



SECTION A-A 4
Installation

LEGEND

- - - - Contour Lines

Flow

Wood Stake 3

3 Space stakes at 4 foot maximum spacing. Use minimum actual stakes 3/4"x3/4" wood stakes.

4 Install Slope Protection perpendicular to slope (parallel contours). Overlap joints per Detail 'A'. Run the last 10 feet of each device up the slope to prevent flow runaround. Run-ups will be included in the installation length.

REVISION	
4	04-21-20

STANDARD ROAD PLAN

EC-204

SHEET 2 of 3

REVISIONS: Modified circle notes 3 and 5.

APPROVED BY DESIGN METHODS ENGINEER

PERIMETER AND SLOPE SEDIMENT CONTROL DEVICES

CONSULTANT:

IOWA DEPARTMENT OF NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILING
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GENERAL DETAILS

FEMA PROJECT S FOR:

SUGEMA WILDLIFE UNIT

KEOKUK COUNTY

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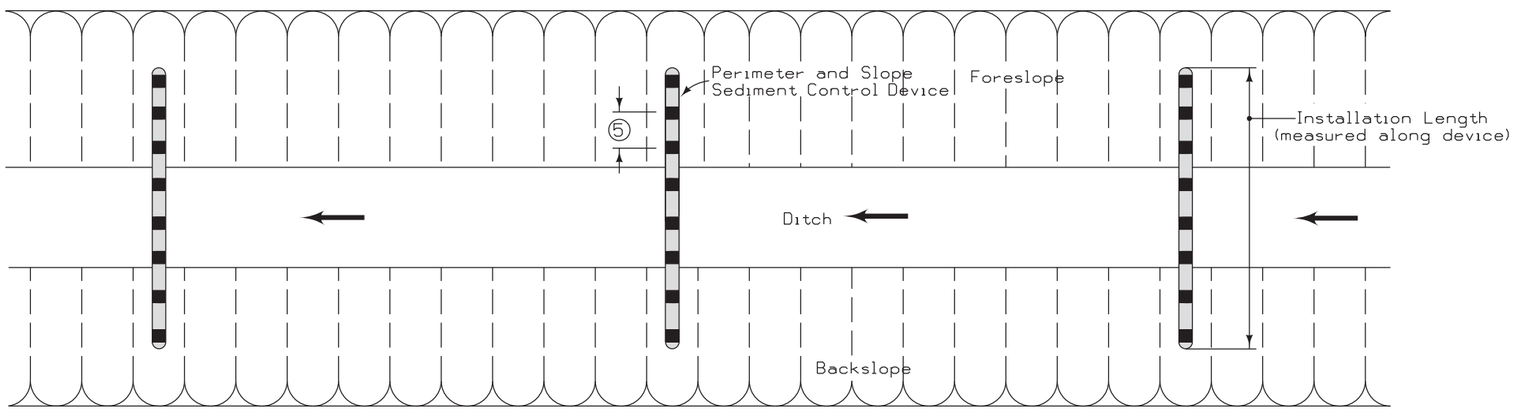
CHK'D BY:

DATE: XXX

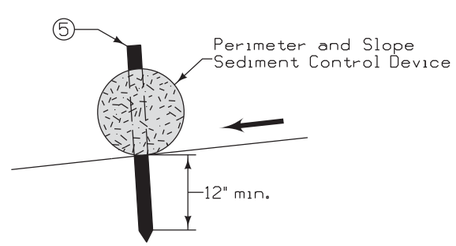
SHEET No: B.03

⑤ Space stakes at 2 foot maximum spacing. Use minimu actual stake ¾"x¾" wood stakes.

⑥ Install Ditch Protection perpendicular to ditch. Over joints per Detail 'A'.



DITCH PROTECTION ⑥



INSTALLATION IN DITCH

LEGEND

- - - - Contour Lines

Flow

■ Wood Stake ⑤

REVISION	
4	04-21-20

STANDARD ROAD PLAN

EC-204

SHEET 3 of 3

REVISIONS: Modified circle notes 3 and 5.

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PERIMETER AND SLOPE SEDIMENT CONTROL DEVICES

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GENERAL DETAILS

FEMA PROJECTS FOR:

SUGEMA WILDLIFE UNIT

KEOKUK COUNTY

NO.	BY: DATE:	REVISION

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PROJECT NUMBER: 21-05-54-01

CHK'D BY:

DATE: XXX

SHEET No: B.04

ESTIMATED PROJECT QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL
1	Sediment, Removal and Disposal	CY	607
2	Revetment, Class C	TONS	3049
3	Revetment, Class E	TONS	1848
4	Earthwork, Fill Hauled and Placed	CY	1632
5	Native Prairie Seeding	AC	1.3
6	Engineering Fabric	SY	1867
7	Mobilization	LS	1.0

ESTIMATE REFERENCE INFORMATION

ITEM NO.	DESCRIPTION
1	Sediment, Removal and Disposal A. Disposal location as directed by the DNR Inspector.
2 3	Revetment, Class C Revetment, Class E A. Place revetment as directed by the DNR Inspector. B. Clearing and grubbing is incidental.
4	Earthwork, Fill Hauled and Placed A. Borrow material shall be contractor furnished. B. Place fill as directed by the DNR Inspector. C. Clearing and grubbing is incidental.
5	Native Prairie Seeding A. Seed mixture shall consist of 20 lbs per acre bromegrass and 3.2 lbs per acre red clover

GENERAL NOTES

Verify actual locations and elevations with DNR Engineer.

All work shall conform to and be performed in accordance with all applicable codes and ordinances.

The contractor shall visit the site and inspect the project area and thoroughly familiarize themselves with the actual job conditions prior to bidding and the start of work. Failure to visit the project site shall not relieve the contractor from performing the work in accordance to the plans, specification, special provisions and contract.

The contractor shall verify, at the site, all dimensions and conditions shown on the plans and shall notify the DNR Engineer of any discrepancies, omissions, and/or conflicts prior to proceeding with the work.

It shall be the contractor's responsibility to provide waste areas or disposal sites for excess material (excavated material or broken concrete) which is not desirable to be incorporated into the work involved on this project. No payment for overhaul will be allowed for material hauled to these sites. No material shall be placed within the right-of-way, unless specifically stated in the plans or approved by the DNR Engineer.

The contractor shall not disturb desirable grass areas and desirable trees outside the construction limits. The contractor will not be permitted to park or service vehicles and equipment or use these areas for storage of materials. Storage, parking and service areas will be subject to the approval of the DNR Engineer.

Where utilities and fixtures are shown as Existing on the plans or encountered within the construction area, it shall be the responsibility of the contractor to notify the DNR Engineer of those utilities prior to the beginning of any construction. The contractor shall be afforded access to these facilities for necessary modification of services. Underground facilities, structures and utilities have been plotted from available surveys and records and therefore their locations must be considered approximate only. It is possible there may be others, the existence of which is presently not known or shown. It is the contractor's responsibility to determine their existence and exact location and to avoid damage thereto. No claims for additional compensation will be allowed to the contractor for any interference or delay caused by such work.

The contractor shall shape graded area to maintain surface drainage. All elevations are to finish grade.

The contractor is expected to have materials, equipment, and labor available on a daily basis to install and maintain erosion control features on the project. This may involve seeding, silt fence, rock ditch checks, silt basins or silt dikes.

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QUANTITIES AND GENERAL INFORMATION

FEMA PROJECT TS FOR:

SUGEMA WILDLIFE UNIT

KEOKUK COUNTY

NO.	BY / DATE	REVISION

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DATE: XXX

SHEET No: C.01

CONSULTANT:

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ENGINEERING SERVICES - WALLACE BUILING
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DIKE PLAN

FEMA PROJECTS FOR:

SUGEMA WILDLIFE UNIT

KEOKUK COUNTY

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SHEET No: **D.01**

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DIKE PLAN

FEMA PROJECTS FOR:

SUGEMA WILDLIFE UNIT

KEOKUK COUNTY

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