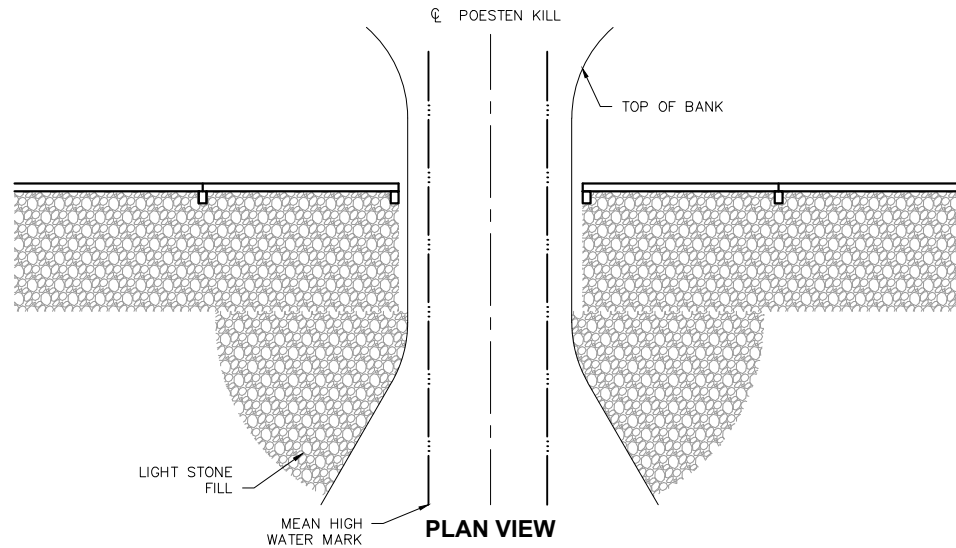
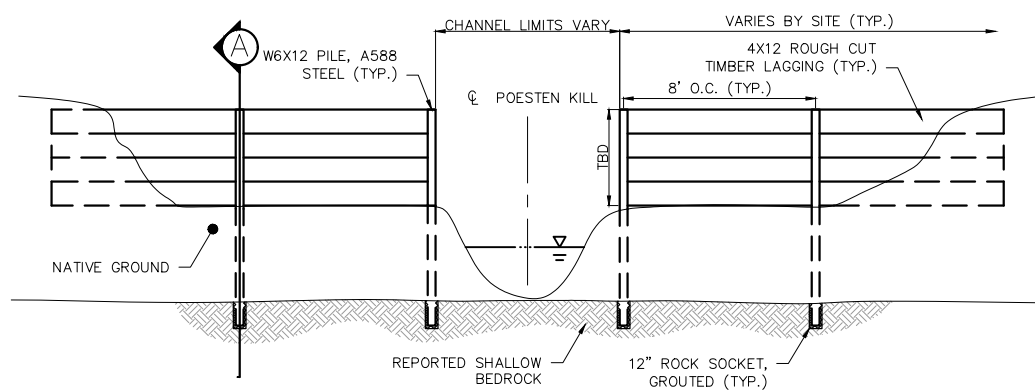


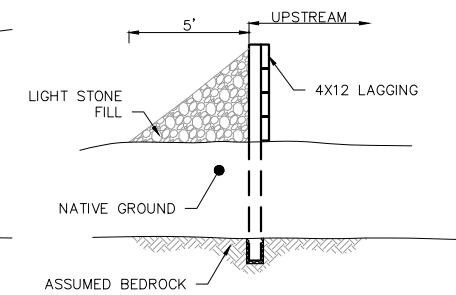
Appendix 2:
Conceptual
Wetland
Detention
Structure Designs
and Budgets



PLAN VIEW



STREAM SECTION - DIKE ELEVATION
SCALE: NOT TO SCALE



SECTION A-A

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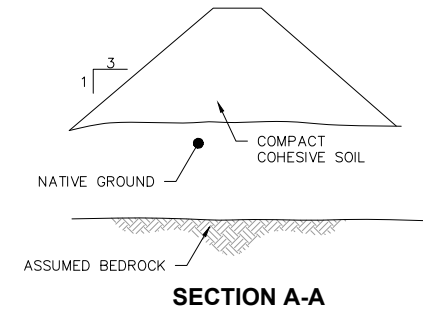
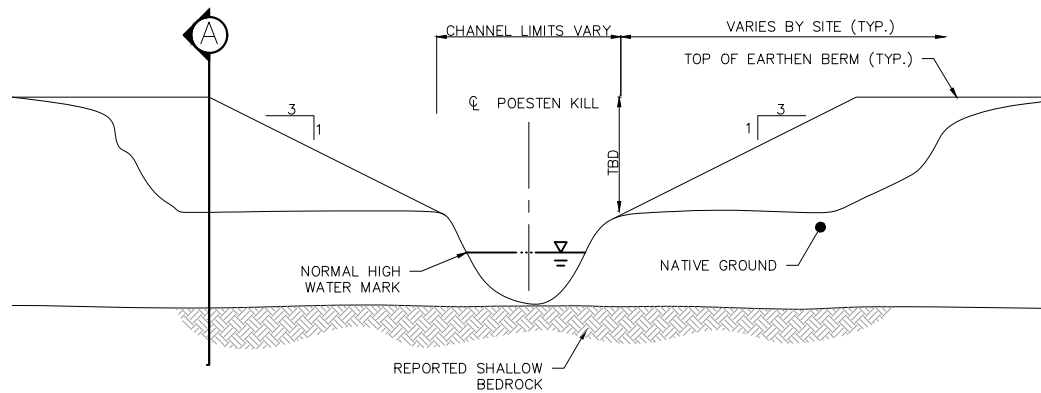
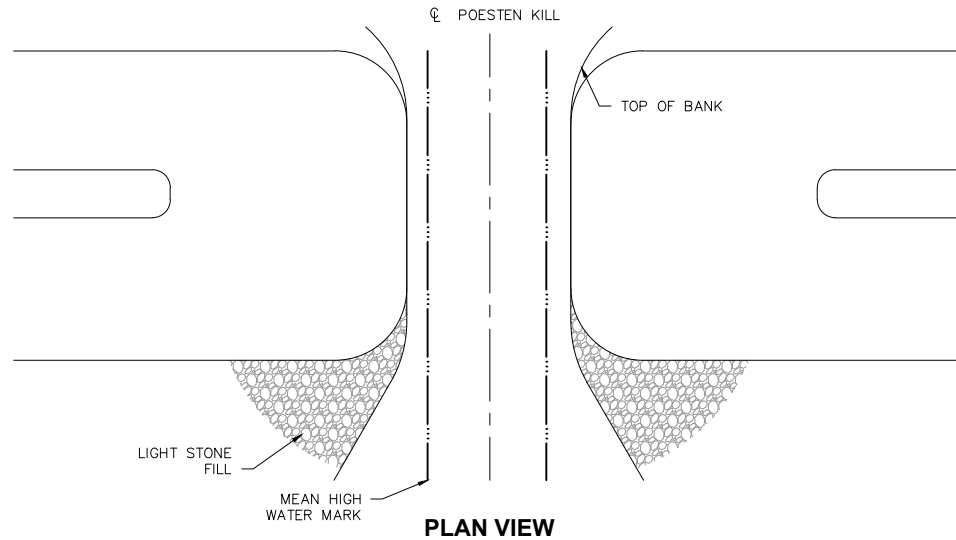
RPA POESTEN KILL FLOOD MITIGATION STUDY

PILE & LAGGING / NO BERM


POESTEN KILL WATERSHED, RENNELAER COUNTY, NEW YORK

design FBM	chked MAC
date 6/21/19	scale N.T.S.
project no. 41822.00	
sheet no. DETAIL A	

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B STREAM SECTION - DIKE ELEVATION
SCALE: NOT TO SCALE

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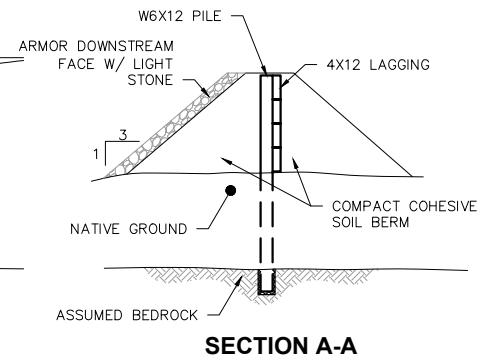
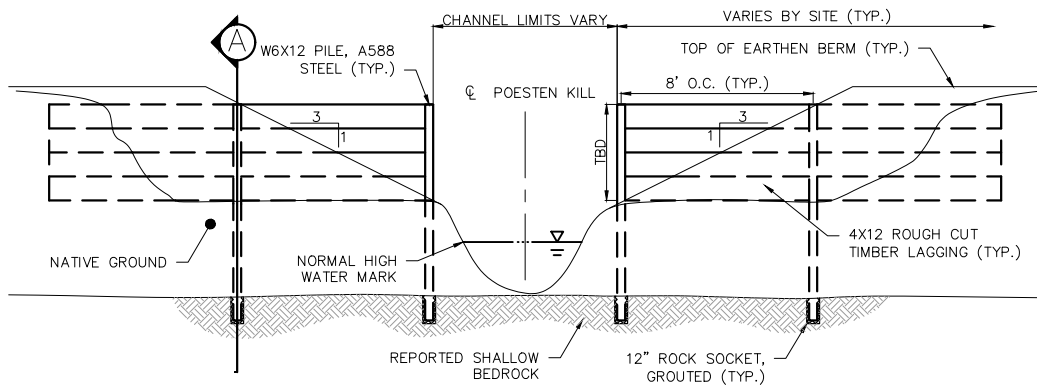
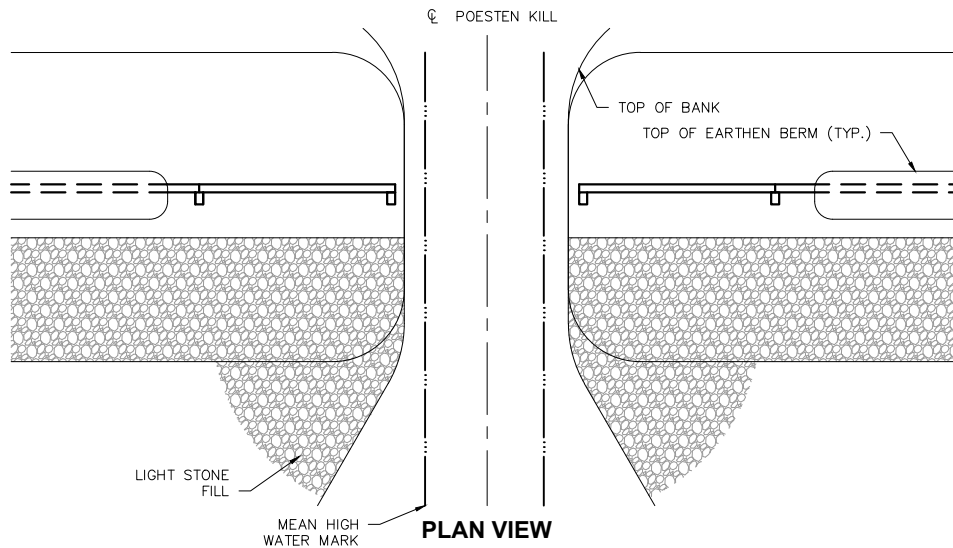
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Phone: (423) 241-6575

RPA POESTEN KILL FLOOD MITIGATION STUDY

EARTHEN BERM (NO CORE)

POESTEN KILL WATERSHED, RENSSELAER COUNTY, NEW YORK

design FBM	chked MAC
date 6/21/19	scale N.T.S.
project no. 41822.00	
sheet no. DETAIL B	



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LANDSCAPE ARCHITECTURE, CO., D.P.C.

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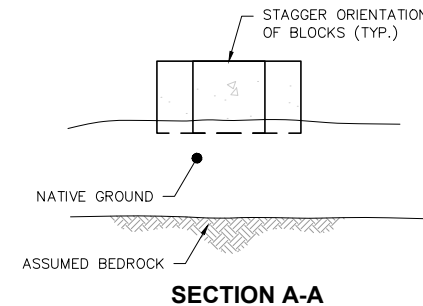
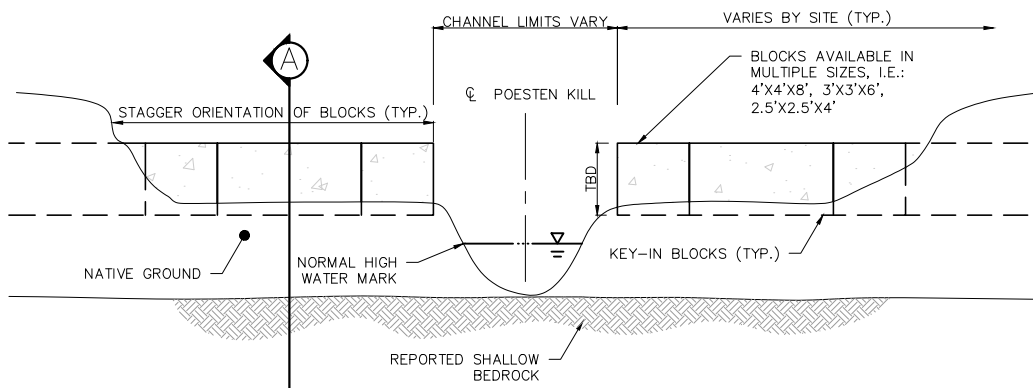
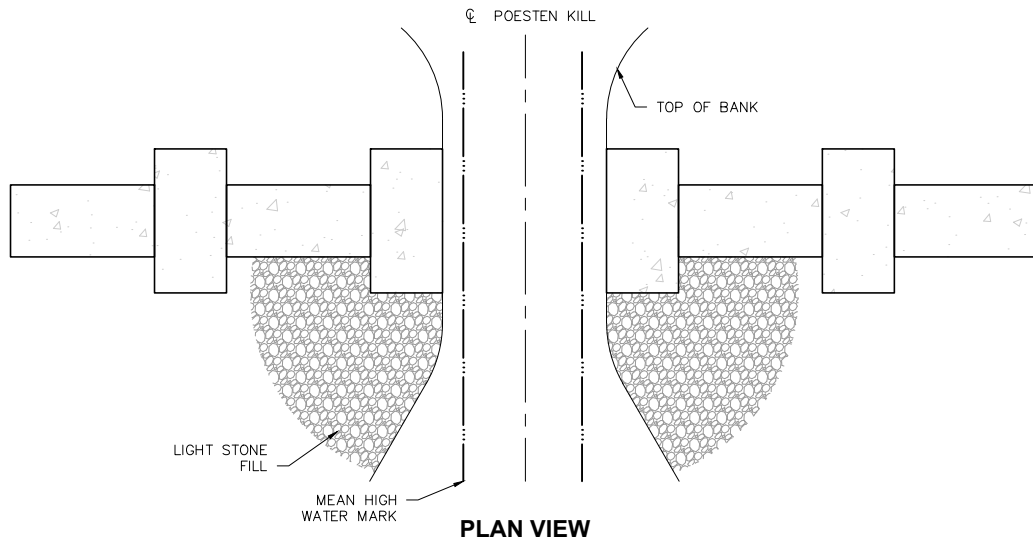
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Phone: (423) 241-6575

RPA POESTEN KILL FLOOD MITIGATION STUDY

PILE & LAGGING / WITH BERM

POESTEN KILL WATERSHED, RENNELAER COUNTY, NEW YORK

design FBM	chkd MAC
date 6/21/19	scale N.T.S.
project no. 41822.00	
sheet no. DETAIL C	



D **STREAM SECTION - DIKE ELEVATION**
SCALE: NOT TO SCALE

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RPA POESTEN KILL FLOOD MITIGATION STUDY

**PRE-CAST CONCRETE
GRAVITY BLOCK**

POESTEN KILL WATERSHED, RENSSELAER COUNTY, NEW YORK

design FBM	chkd MAC
date 6/21/19	scale N.T.S.
project no. 41822.00	
sheet no. DETAIL D	

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North Country Office
Phone: (518) 812-0513

RPA - Poestenkill NEWIPIIC

41822.00

Date: April 24, 2019

REVISED June 28, 2019

WETLAND RESTRICTING DIKES (Each)				
Description	QTY	Unit	Unit Price	Total Cost
Method A - Pile & Lagging/No Berm				
Mobilization	1	LS	\$2,000.00	\$2,000.00
14 - W6x12 Posts @ 6' long = 72 lb ea.	1,008	LB	\$3.00	\$3,024.00
Timber Lagging -	1,400	Bd. Ft	\$5.00	\$7,000.00
Install Piles	2	Day	\$2,500.00	\$5,000.00
Light Stone Fill	80	CY	\$50.00	\$4,000.00
Erosion & Sediment Control	1	LS	\$1,500.00	\$1,500.00
Total Method A				\$22,524.00
Method B - Earthen Berm w/ No Core				
Mobilization	1	LS	\$2,000.00	\$2,000.00
Light Stone Fill	20	CY	\$50.00	\$1,000.00
Earthen Embankment-in-Place	100	CY	\$60.00	\$6,000.00
Seed & Mulch	1	LS	\$250.00	\$250.00
Plantings	8	LS	\$400.00	\$3,200.00
Topsoil	150	SY	\$40.00	\$6,000.00
Erosion & Sediment Control	1	LS	\$1,500.00	\$1,500.00
Total Method B				\$19,950.00
Method C - Pile & Lagging w/ Berm				
Mobilization	1	LS	\$2,000.00	\$2,000.00
14 - W6x12 Posts @ 6' long = 72 lb ea.	1,008	LB	\$3.00	\$3,024.00
Timber Lagging -	1,400	Bd. Ft	\$5.00	\$7,000.00
Install Piles	2	Day	\$2,500.00	\$5,000.00
Light Stone Fill	35	CY	\$50.00	\$1,750.00
Earthen Embankment-in-Place	100	CY	\$60.00	\$6,000.00
Seed & Mulch	1	LS	\$250.00	\$250.00
Plantings	8	LS	\$400.00	\$3,200.00
Topsoil	150	SY	\$40.00	\$6,000.00
Erosion & Sediment Control	1	LS	\$1,500.00	\$1,500.00
Total Method C				\$35,724.00
Method D - Pre-Cast Concrete Gravity Block				
Mobilization	1	LS	\$2,000.00	\$2,000.00
36x36x72 block, In-Place	18	Each	\$300.00	\$5,400.00
Light Stone Fill	20	CY	\$50.00	\$1,000.00
Site Prep	1	LS	\$2,000.00	\$2,000.00
Erosion & Sediment Control	1	LS	\$1,500.00	\$1,500.00
Total Method D				\$11,900.00
Annual Maintenance - All Options (Each) - (2 man-days+time on equipment)				\$1,300.00
Engineering Design & Environmental Permitting (Each Site)				\$18,000.00
AVERAGE PROJECT BUDGET, EACH SITE				\$40,524.50

¹ Estimate is an opinion of probable construction costs based on approximate dimensions from the final design drawings.

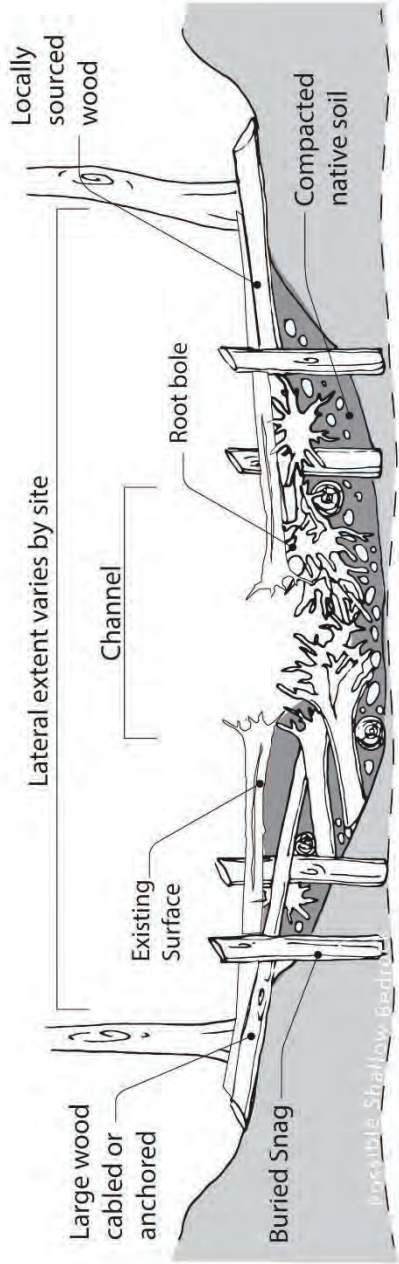
² Assumes a mean length of dyke = 100'

³ Assumes that the work of each site will not require a publicly bid contract

⁴ Assumes that the average height of the dyke is 3.5'



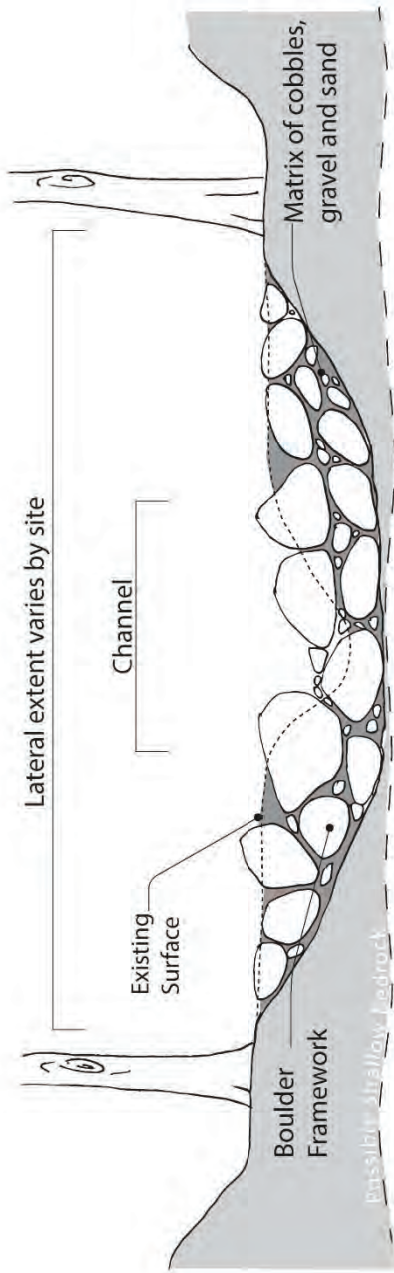
Interfluvial Design 1



2a- Large Wood Cross-Sections N.T.S.
Replace native bed and bank material with large wood and root boles within a matrix of native soil

Concept 2. Option a: Measure to increase flood retention within wetlands on Bonesteel Creek using large wood

Interfluve Design 2



2b- Boulder Cross-section N.T.S.
Replace native bed and bank material with well-graded mixture of river rock, boulder and sand

Concept 3. Option b: Measure to increase flood retention within wetlands on Bonesteel Creek using rock