

APPENDIX F

Mitigation and Monitoring Plan

File No. 2002-000 7

Laurel Marina and Yacht Club Inc.

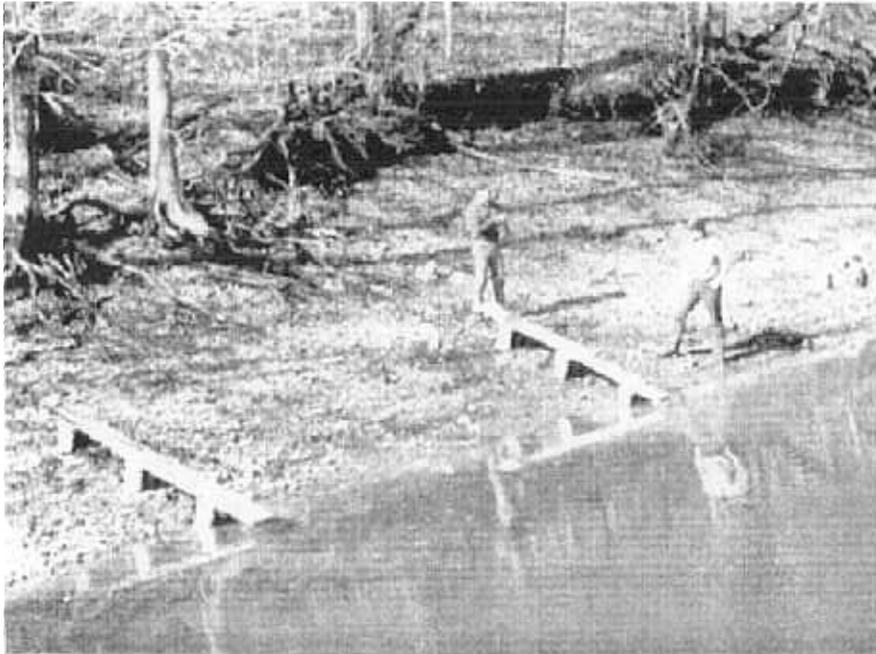
South Fork Holston River Mile 56.5 Sullivan County TN

LAUREL MARINA & YACHT CLUB

KING'S COVE II

SPAWNING BENCH DESIGN

Each spawning bench will consist of an 8 - 10 ft (2.4 - 3.0 m) slab of oak or other appropriate wood attached to three 8" or 12" (20.3 - 30.4 cm) cinder blocks laid on the shoreline. Benches will be placed at various elevations and grades parallel or perpendicular to the shoreline as show below. Spawning benches will provide cover under which fish can spawn. This will provide both short and long term habitat.



HOLBROOK SURVEYORS

115 SOLAR STREET
BRISTOL, VIRGINIA 24201
(276) 669-6658

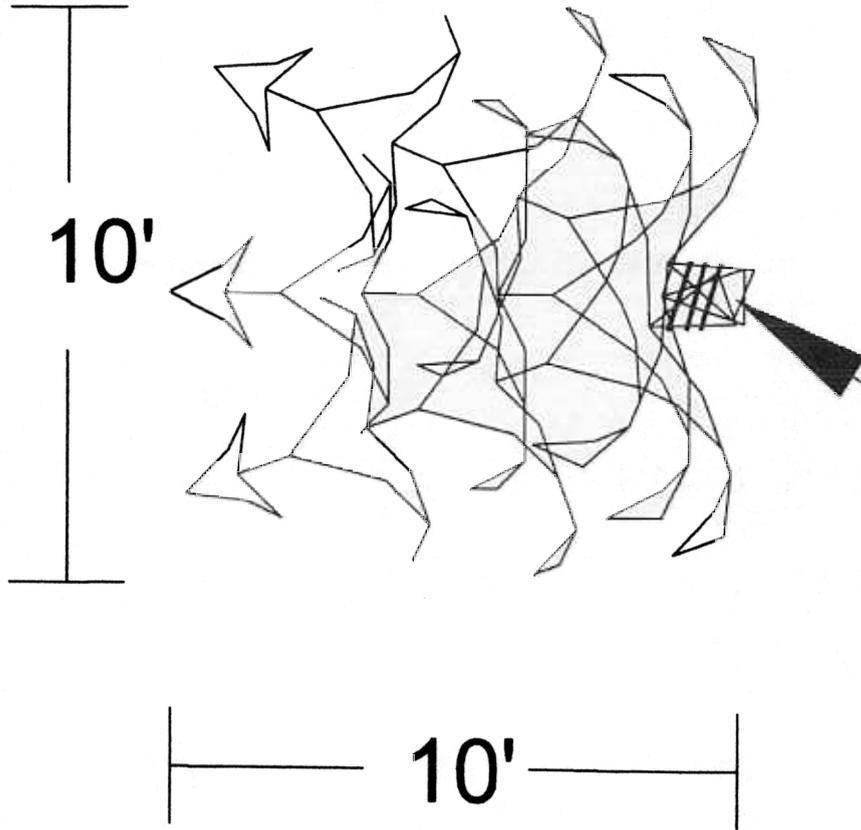
LAUREL MARINA & YACHT CLUB

DRAWN BY: WRD	DATE: 2-15-05	SPAWNING BENCH DESIGN KINGS'S COVE II	
APPROVED BY: TFH	DATE: 2-15-05		
SCALE N.T.S.	SHEET 11 of 12	PROJECT: LM-PLAN2.dwg	

LAUREL MARINA & YACHT CLUB

KING'S COVE II

BRUSH PILE DESIGN



Brush piles will be installed at the location shown on the attached maps of the area. these brush piles will be made up of multiple trees that will be anchored to the bottom to prevent dispersal. Each brush pile will be a minimum of 10' by 10' in size.

The trees will anchored from the trunk or the most durable location of each piece.

HOLBROOK SURVEYORS

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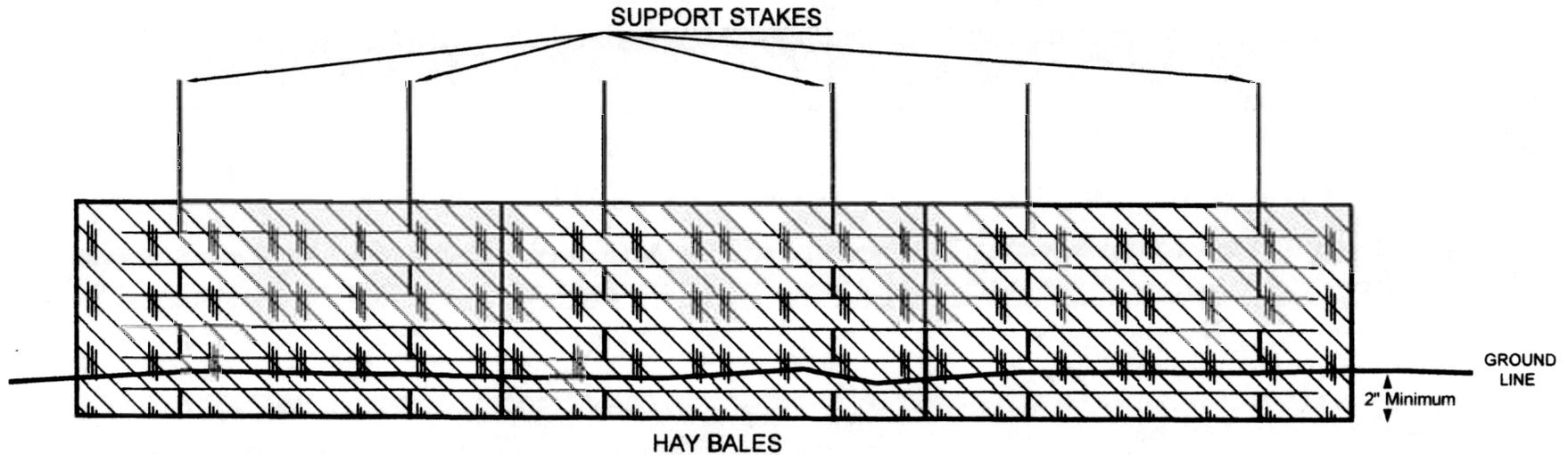
LAUREL MARINA & YACHT CLUB

DRAWN BY: WRD	DATE: 2-15-05	BRUSH PILE DESIGN KINGS'S COVE II
APPROVED BY: TFH	DATE: 2-15-05	
SCALE N.T.S.	SHEET 7 of 12	PROJECT: LM-PLAN2.dwg

LAUREL MARINA & YACHT CLUB

KING'S COVE II

HAY BALE SEDIMENT CONTROL DESIGN



Hay bales will be used to control all run-off from the cut areas as shown on the plan view drawing. The hay bales will be installed and maintained until the area is excavated down to durable rock and chances for sedimentation and erosion have subsided.

Hay Bale dikes will be set in trenches at least 2" deep, stakes will be set at an angle so bales are drawn together and supported in the uphill direction.

HOLBROOK SURVEYORS

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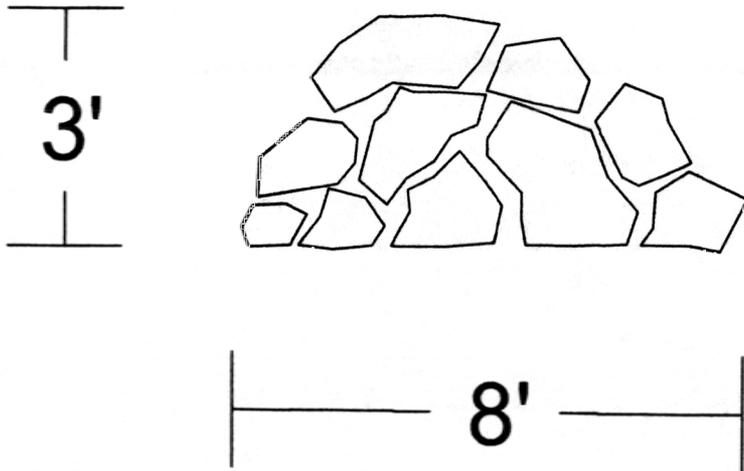
LAUREL MARINA & YACHT CLUB

DRAWN BY: WRD	DATE: 2-15-05	SEDIMENT CONTROL DESIGN HAY BALES KING'S COVE II
APPROVED BY: TFH	DATE: 2-15-05	
SCALE N.T.S.	SHEET 9 OF 12	PROJECT: LM-PLAN2.dwg

LAUREL MARINA & YACHT CLUB

KING'S COVE II

BOLDER PILE DESIGN



Bolder piles will be installed at the location shown on the attached maps of the area. these bolder piles will be made up of multiple rocks that will be piled together to make crevices for fish habitat. Each bolder pile will be a minimum of 8' long by 3' in height.

HOLBROOK SURVEYORS

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DATE:
2-15-05

BOLDER PILE DESIGN
KINGS'S COVE II

APPROVED BY:
TFH

DATE:
2-15-05

SCALE
N.T.S.

SHEET
6 of 12

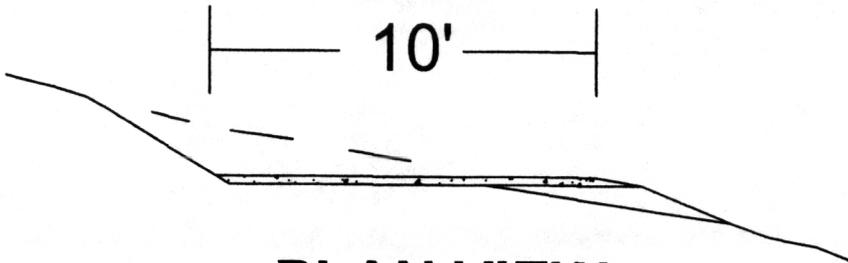
PROJECT:
LM-PLAN2.dwg

LAUREL MARINA & YACHT CLUB

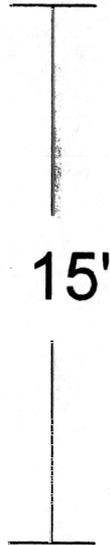
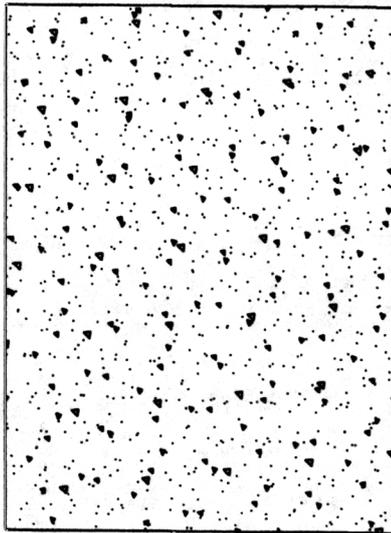
KING'S COVE II

FLAT AREA DESIGN

PROFILE



PLAN VIEW



Flat areas will be constructed at the location shown on the attached maps of the area. these flat area will be a minimum of 10' x 15'. Sand or suitable bedding material will be placed on each area.

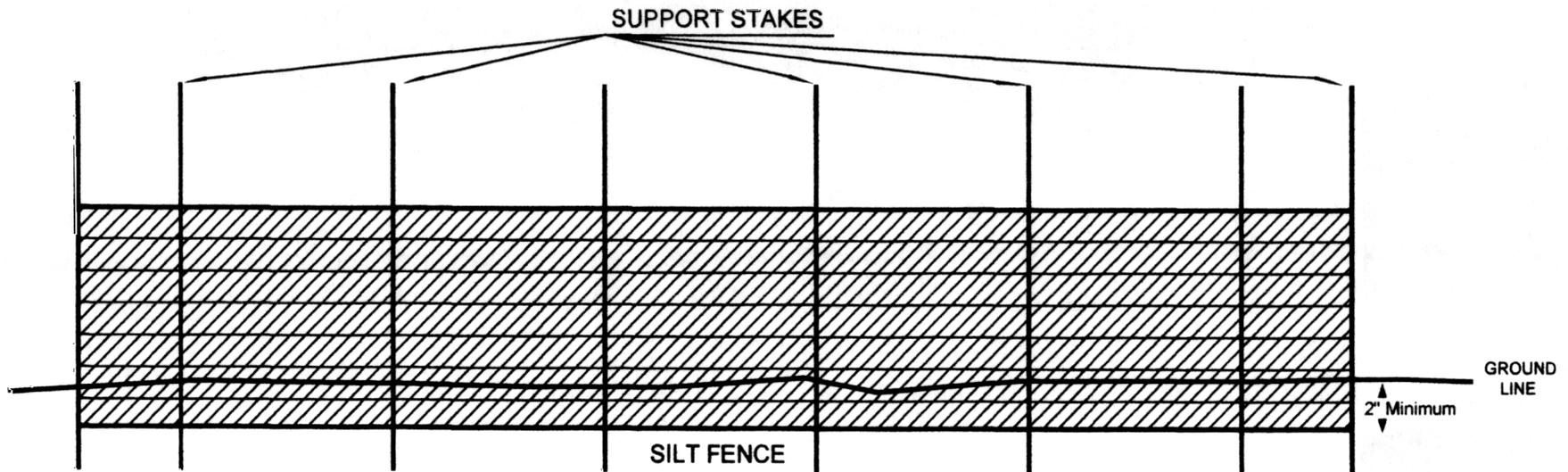
HOLBROOK SURVEYORS

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APPROVED BY: TFH	DATE: 2-15-05	
SCALE N.T.S.	SHEET 8 of 12	PROJECT: LM-PLAN2.dwg

LAUREL MARINA & YACHT CLUB
KING'S COVE II
SILT FENCE SEDIMENT CONTROL DESIGN



Silt Fence will be used where necessary, as field conditions dictate. In areas where hay bales would not adequately control the area of disturbance or areas where hay bales could not be placed in a stable manner.

The silt fence will be buried at least 2" deep, the stakes are shown and will fully support the silt fence.

HOLBROOK SURVEYORS		
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LAUREL MARINA & YACHT CLUB		
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WRD	2-15-05	
APPROVED BY:	DATE:	
TFH	2-15-05	
SCALE	SHEET	PROJECT:
N.T.S.	10 of 12	LM-PLAN2.dwg