USDA NRCS

RUSLE2 Profile Erosion Calculation Record

Info:

File: profiles\Gilbert Clark continuous hayland 2

Inputs:
Location: North Carolina\Chatham County
Soil: 205B Georgeville silt loam, 2 to 6 percent slopes\Georgeville silt loam 95%
Slope length (horiz): 200 ft
Avg. slope steepness: 5.0 %

Management	*Vegetation*	*Yield units*	*Yield (# of units)*
CMZ 66\a.Single Year/Single Crop Templates\Forages, Hay\Grass,coolseason,established;HAY,66	Orchardgrass, y3 regrowth after cut	tons	2.0
CMZ 66\a.Single Year/Single Crop Templates\Forages, Hay\Grass,coolseason,established;HAY,66	Orchardgrass, y3 regrowth after cut	tons	2.0
CMZ 66\a.Single Year/Single Crop Templates\Forages, Hay\Grass,coolseason,established;HAY,66	Orchardgrass, y3 senesc to 1st cut yr4	tons	2.0

Contouring: a. rows up-and-down hill
Strips/barriers: (none)
Diversion/terrace, sediment basin: (none)
Subsurface drainage: 100 percent drained
Adjust res. burial level: Normal res. burial

Outputs:
Soil loss erod. portion: 0.24 t/ac/yr
Detachment on slope: 0.24 t/ac/yr
Soil loss for cons. plan: 0.24 t/ac/yr
Sediment delivery: 0.24 t/ac/yr

Crit. slope length: --
Surf. cover after planting: --

Date	*Operation*	*Vegetation*	*Surf. res. cov. after op, %*
3/15/0	Fert applic. surface broadcast		42
5/10/0	Harvest, hay, grass	Orchardgrass, y3 regrowth after cut	45
7/10/0	Harvest, hay, grass	Orchardgrass, y3 regrowth after cut	42
9/10/0	Harvest, hay, grass	Orchardgrass, y3 senesc to 1st cut yr4	40
10/1/0	Fert applic. surface broadcast		32

Phosphorus Loss Assessment Tool Completion

Name of Facility: Clark Farm Facility Number: 19-05

Owner(s) Name: Gilbert Clark Phone No: 919-742-7463

Mailing Address: 690 Oakley Church Rd Bear Creek, NC 27344

Check the appropriate box below:

☑ No fields received a high or very high rating.

☐ The following fields received a high or very high rating and are listed below:

Field Number	Size (Acres)	Rating (High or Very High)

By completing the above section and signing this form, the facility owner and Technical Specialist acknowledge all application fields were evaluated using the Phosphorus Loss Assessment Tool. All necessary calculations were completed to conduct the Assessment. A copy will be kept on site with the Certified Animal Waste Management Plan. Any future modifications must be approved by a technical specialist and filed with the Soil and Water Conservation District prior to implementation. Waste plans with fields having a high or very high rating will have to be modified to address phosphorus loss by the next permit cycle beginning July, 2007.

Owner Name: Gilbert Clark

Owner Signature: Gilbert Clark Date: 7/22/05

Technical Specialist Name: Carl Henry Outz Jr.

Technical Specialist Signature: Carl Henry Outz Jr. Date: 7/22/05

Affiliation: Chatham Soil + Water Conservation Phone No: 919-545-8353

Submit this form to:
Attn: Keith Larick
NC Division of Water Quality
Non-Discharge Compliance and Enforcement Unit
1617 Mail Service Center
Raleigh, NC 27699-1617

NCANAT version: 1.95

PLAT Results For: Chatham 11/22/2006 10:16:30 AM

INPUTS

Calendar Year:	2005
County:	Chatham
Producer Identifier:	Gilbert Clark
Tract Number:	30730
Field Number:	1
Soil Series:	GeB2: Georgeville silty clay loam, 2 to 6 percent slopes, moderately eroded
Crop:	Fescue (Hay) :
BMPs:	Tree/Shrub Buffer Width = 50 ft.
Fertilizers:	Beef-scrapped unpaved surface
	Yearly Applied Amount: 8.36 ton
	Lb P2O5: 19.3 lb
	Application Method: All other surface applications
Soil Loss:	1 t/ac/yr
Receiving Slope Distance	20-29 ft
Soil Test 0" - 4"	116
WV_Factor (USER)	0.96
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	4
SOLUBLE P	=	2
LEACHATE P	=	0
SOURCE P	=	23
TOTAL P RATING	=	29 (MEDIUM)

NCANAT Version: 1.95

PLAT Results For: Chatham 11/22/2006 9:58:31 AM

INPUTS

Calendar Year:	2005
County:	Chatham
Producer Identifier:	Gilbert Clark
Tract Number:	418
Field Number:	1
Soil Series:	GeB2: Georgeville silty clay loam, 2 to 6 percent slopes, moderately eroded
Crop:	Fescue (Hay) :
BMPs:	Vegetative Buffer Width = 10 ft. Tree/Shrub Buffer Width = 100 ft.
Fertilizers:	Beef-scrapped unpaved surface Yearly Applied Amount: 8.36 ton Lb P2O5: 19.3 lb Application Method: All other surface
applications	
Soil Loss:	1 t/ac/yr
Receiving Slope Distance	10-19 ft
Soil Test 0" - 4"	18
WV_Factor (USER)	1.27
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	0
LEACHATE P	=	0
SOURCE P	=	23
TOTAL P RATING	=	23 (LOW)

NCANAT Version: 1.95

PLAT Results For: Chatham 11/22/2006 9:59:05 AM

INPUTS

Calendar Year:	2005
County:	Chatham
Producer Identifier:	Gilbert Clark
Tract Number:	418
Field Number:	2
Soil Series:	GeB2: Georgeville silty clay loam, 2 to 6 percent slopes, moderately eroded
Crop:	Fescue (Hay) :
BMPs:	Tree/Shrub Buffer Width = 100 ft.
Fertilizers:	Beef-scrapped unpaved surface
	Yearly Applied Amount: 8.36 ton
	Lb P2O5: 19.3 lb
	Application Method: All other surface applications
Soil Loss:	1 t/ac/yr
Receiving Slope Distance	20-29 ft
Soil Test 0" - 4"	124
WV_Factor (USER)	0.93
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	4
SOLUBLE P	=	2
LEACHATE P	=	0
SOURCE P	=	23
TOTAL P RATING	=	29 (MEDIUM)

NCANAT Version: 1.95

PLAT Results For: Chatham 11/22/2006 9:59:38 AM

INPUTS

Calendar Year:	2005
County:	Chatham
Producer Identifier:	Gilbert Clark
Tract Number:	418
Field Number:	3
Soil Series:	GeC2: Georgeville silty clay loam, 6 to 10 percent slopes, moderately eroded
Crop:	Fescue (Hay) :
BMPs:	Tree/Shrub Buffer Width = 100 ft.
Fertilizers:	Beef-scrapped unpaved surface Yearly Applied Amount: 8.36 ton Lb P2O5: 19.3 lb Application Method: All other surface applications
Soil Loss:	1 t/ac/yr
Receiving Slope Distance	20-29 ft
Soil Test 0" - 4"	18
WV Factor (USER)	1.27
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	0
LEACHATE P	=	0
SOURCE P	=	23
TOTAL P RATING	=	23 (LOW)

ICANAT Version: 1.95

PLAT Results For: Chatham 11/22/2006 10:13:49 AM

INPUTS

Calendar Year:	2005
County:	Chatham
Producer Identifier:	Gilbert Clark
Tract Number:	418
Field Number:	5
Soil Series:	GaC: Georgeville silt loam, 6 to 10 percent slopes
Crop:	Fescue (Hay) :
BMPs:	Vegetative Buffer Width = 100 ft.
Fertilizers:	Beef-scrapped unpaved surface
	Yearly Applied Amount: 8.36 ton
	Lb P2O5: 19.3 lb
	Application Method: All other surface
applications	
Soil Loss:	1 t/ac/yr
Receiving Slope Distance	20-29 ft
Soil Test 0" - 4"	30
WV_Factor (USER)	1.05
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	0
LEACHATE P	=	0
SOURCE P	=	23
TOTAL P RATING	=	23 (LOW)

NCANAT Version: 1.95

PLAT Results For: Chatham 11/22/2006 10:14:24 AM

INPUTS

Calendar Year:	2005
County:	Chatham
Producer Identifier:	Gilbert Clark
Tract Number:	418
Field Number:	6
Soil Series:	GaC: Georgeville silt loam, 6 to 10 percent slopes
Crop:	Fescue (Hay) :
BMPs:	Tree/Shrub Buffer Width = 100 ft.
Fertilizers:	Beef-scrapped unpaved surface
	Yearly Applied Amount: 8.36 ton
	Lb P2O5: 19.3 lb
	Application Method: All other surface
applications	
Soil Loss:	1 t/ac/yr
Receiving Slope Distance	10-19 ft
Soil Test 0" - 4"	30
WV_Factor (USER)	1.05
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	0
LEACHATE P	=	0
SOURCE P	=	23
TOTAL P RATING	=	23 (LOW)

CANAT Version: 1.95

LAT Results For: Chatham 11/22/2006 10:14:46 AM

INPUTS

Calendar Year:	2005
County:	Chatham
Producer Identifier:	Gilbert Clark
Tract Number:	418
Field Number:	7
Soil Series:	GaC: Georgeville silt loam, 6 to 10 percent slopes
Crop:	Fescue (Hay) :
BMPs:	Tree/Shrub Buffer Width = 100 ft.
Fertilizers:	Beef-scrapped unpaved surface
	Yearly Applied Amount: 8.36 ton
	Lb P2O5: 19.3 lb
	Application Method: All other surface
Applications	
Soil Loss:	1 t/ac/yr
Receiving Slope Distance	20-29 ft
Soil Test 0" - 4"	30
WV_Factor (USER)	1.05
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	0
LEACHATE P	=	0
SOURCE P	=	23
TOTAL P RATING	=	23 (LOW)

NCANAT Version: 1.95

PLAT Results For: Chatham 11/22/2006 10:15:15 AM

INPUTS

Calendar Year:	2005
County:	Chatham
Producer Identifier:	Gilbert Clark
Tract Number:	418
Field Number:	8
Soil Series:	GaB: Georgeville silt loam, 2 to 6 percent slopes
Crop:	Fescue (Hay) :
BMPs:	Tree/Shrub Buffer Width = 100 ft.
Fertilizers:	Beef-scrapped unpaved surface
	Yearly Applied Amount: 8.36 ton
	Lb P2O5: 19.3 lb
	Application Method: All other surface
applications	
Soil Loss:	1 t/ac/yr
Receiving Slope Distance	10-19 ft
Soil Test 0" - 4"	30
WV_Factor (USER)	1.05
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	0
LEACHATE P	=	0
SOURCE P	=	23
TOTAL P RATING	=	23 (LOW)

CANAT Version: 1.95

LAT Results For: Chatham 11/22/2006 10:15:39 AM

INPUTS

Calendar Year:	2005
County:	Chatham
Producer Identifier:	Gilbert Clark
Tract Number:	418
Field Number:	9
Soil Series:	GeB2: Georgeville silty clay loam, 2 to 6 percent slopes, moderately eroded
Crop:	Fescue (Hay) :
BMPs:	Tree/Shrub Buffer Width = 100 ft.
Fertilizers:	Beef-scrapped unpaved surface
	Yearly Applied Amount: 8.36 ton
	Lb P2O5: 19.3 lb
	Application Method: All other surface
applications	
Soil Loss:	1 t/ac/yr
Receiving Slope Distance	20-29 ft
Soil Test 0" - 4"	30
WV Factor (USER)	1.05
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	0
LEACHATE P	=	0
SOURCE P	=	23
TOTAL P RATING	=	24 (LOW)

NCANAT Version: 1.95

PLAT Results For: Chatham 11/22/2006 9:50:34 AM

INPUTS

Calendar Year:	2005
County:	Chatham
Producer Identifier:	Gilbert Clark
Tract Number:	724
Field Number:	1
Soil Series:	GaB: Georgeville silt loam, 2 to 6 percent slopes
Crop:	Fescue (Hay) :
BMPs:	Vegetative Buffer Width = 25 ft.
Fertilizers:	Beef-scrapped unpaved surface
	Yearly Applied Amount: 8.36 ton
	Lb P2O5: 19.3 lb
	Application Method: All other surface
applications	
Soil Loss:	1 t/ac/yr
Receiving Slope Distance	30-49 ft
Soil Test 0" - 4"	125
WV_Factor (USER)	1.19
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	2
SOLUBLE P	=	1
LEACHATE P	=	0
SOURCE P	=	23
TOTAL P RATING	=	26 (MEDIUM)

ICANAT Version: 1.95

PLAT Results For: Chatham 11/22/2006 9:49:50 AM

INPUTS

Calendar Year:	2005
County:	Chatham
Producer Identifier:	Gilbert Clark
Tract Number:	724
Field Number:	2
Soil Series:	GaB: Georgeville silt loam, 2 to 6 percent slopes
Crop:	Fescue (Hay) :
BMPs:	Vegetative Buffer Width = 30 ft.
Fertilizers:	Beef-scrapped unpaved surface
	Yearly Applied Amount: 8.36 ton
	Lb P2O5: 19.3 lb
	Application Method: All other surface
applications	
Soil Loss:	1 t/ac/yr
Receiving Slope Distance	10-19 ft
Soil Test 0" - 4"	59
WV_Factor (USER)	1.05
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	1
LEACHATE P	=	0
SOURCE P	=	23
TOTAL P RATING	=	25 (LOW)

NCANAT Version: 1.95

PLAT Results For: Chatham 11/22/2006 9:52:26 AM

INPUTS

Calendar Year:	2005
County:	Chatham
Producer Identifier:	Gilbert Clark
Tract Number:	724
Field Number:	3
Soil Series:	GaB: Georgeville silt loam, 2 to 6 percent slopes
Crop:	Fescue (Hay) :
BMPs:	Vegetative Buffer Width = 50 ft.
Fertilizers:	Beef-scrapped unpaved surface
	Yearly Applied Amount: 8.36 ton
	Lb P2O5: 19.3 lb
	Application Method: All other surface
applications	
Soil Loss:	1 t/ac/yr
Receiving Slope Distance	30-49 ft
Soil Test 0" - 4"	131
WV_Factor (USER)	1.1
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	1
LEACHATE P	=	0
SOURCE P	=	23
TOTAL P RATING	=	25 (LOW)

ICANAT Version: 1.95

'LAT Results For: Chatham 11/22/2006 9:53:21 AM

INPUTS

Calendar Year:	2005
County:	Chatham
Producer Identifier:	Gilbert Clark
Tract Number:	724
Field Number:	4
Soil Series:	GaB: Georgeville silt loam, 2 to 6 percent slopes
Crop:	Fescue (Hay) :
BMPs:	Vegetative Buffer Width = 100 ft.
Fertilizers:	Beef-scrapped unpaved surface
	Yearly Applied Amount: 8.36 ton
	Lb P2O5: 19.2 lb
	Application Method: All other surface
applications	
Soil Loss:	1 t/ac/yr
Receiving Slope Distance	10-19 ft
Soil Test 0" - 4"	59
WV_Factor (USER)	1.05
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	1
LEACHATE P	=	0
SOURCE P	=	23
TOTAL P RATING	=	25 (LOW)

NCANAT Version: 1.95

PLAT Results For: Chatham 11/22/2006 9:54:02 AM

INPUTS

Calendar Year:	2005
County:	Chatham
Producer Identifier:	Gilbert Clark
Tract Number:	724
Field Number:	5
Soil Series:	GaB: Georgeville silt loam, 2 to 6 percent slopes
Crop:	Fescue (Pasture) :
BMPs:	Vegetative Buffer Width = 100 ft.
Fertilizers:	Beef-scrapped unpaved surface
	Yearly Applied Amount: 8.36 ton
	Lb P2O5: 19.3 lb
	Application Method: All other surface
applications	
Soil Loss:	1 t/ac/yr
Receiving Slope Distance	30-49 ft
Soil Test 0" - 4"	131
WV_Factor (USER)	131
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	0
LEACHATE P	=	0
SOURCE P	=	27
TOTAL P RATING	=	27 (MEDIUM)

CANAT Version: 1.95

LAT Results For: Chatham 11/22/2006 9:55:25 AM

INPUTS

alendar Year:	2005
ounty:	Chatham
roducer Identifier:	Gilbert Clark
ract Number:	724
ield Number:	6
oil Series:	GaC: Georgeville silt loam, 6 to 10 percent slopes
rop:	Fescue (Hay) :
MPs:	Vegetative Buffer Width = 100 ft.
ertilizers:	Beef-scrapped unpaved surface
	Yearly Applied Amount: 8.36 ton
	Lb P2O5: 19.3 lb
	Application Method: All other surface
pplications	
oil Loss:	1 t/ac/yr
eceiving Slope Distance	10-19 ft
oil Test 0" - 4"	0
WV_Factor (USER)	1.03
ydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	0
LEACHATE P	=	0
SOURCE P	=	23
TOTAL P RATING	=	23 (LOW)

NCANAT Version: 1.95

PLAT Results For: Chatham 11/22/2006 9:57:13 AM

INPUTS

Calendar Year:	2005
County:	Chatham
Producer Identifier:	Gilbert Clark
Tract Number:	724
Field Number:	7
Soil Series:	GaC: Georgeville silt loam, 6 to 10 percent slopes
Crop:	Fescue (Pasture) :
BMPs:	Vegetative Buffer Width = 100 ft.
Fertilizers:	Beef-scrapped unpaved surface
	Yearly Applied Amount: 8.36 ton
	Lb P2O5: 19.3 lb
	Application Method: All other surface
applications	
Soil Loss:	1 t/ac/yr
Receiving Slope Distance	10-19 ft
Soil Test 0" - 4"	19
WV_Factor (USER)	0.92
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	0
LEACHATE P	=	0
SOURCE P	=	27
TOTAL P RATING	=	27 (MEDIUM)

ICANAT Version: 1.95

PLAT Results For: Chatham 11/22/2006 9:57:48 AM

INPUTS

Calendar Year:	2005
County:	Chatham
Producer Identifier:	Gilbert Clark
Tract Number:	724
Field Number:	8
Soil Series:	GaC: Georgeville silt loam, 6 to 10 percent slopes
Crop:	Fescue (Hay) :
BMPs:	Vegetative Buffer Width = 100 ft.
Fertilizers:	Beef-scrapped unpaved surface
	Yearly Applied Amount: 8.36 ton
	Lb P2O5: 19.3 lb
	Application Method: All other surface
Applications	
Soil Loss:	1 t/ac/yr
Receiving Slope Distance	10-19 ft
Soil Test 0" - 4"	125
WV Factor (USER)	1.19
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	1
LEACHATE P	=	0
SOURCE P	=	23
TOTAL P RATING	=	25 (LOW)

NCANAT Version: 1.95

PLAT Results For: Chatham 11/22/2006 10:22:20 AM

INPUTS

Calendar Year:	2005
County:	Chatham
Producer Identifier:	Gilbert Clark
Tract Number:	734
Field Number:	1
Soil Series:	GeB2: Georgeville silty clay loam, 2 to 6 percent slopes, moderately eroded
Crop:	Fescue (Hay) :
BMPs:	Vegetative Buffer Width = 25 ft.
Fertilizers:	Beef-scrapped unpaved surface
	Yearly Applied Amount: 8.36 ton
	Lb P2O5: 19.3 lb
	Application Method: All other surface applications
Soil Loss:	1 t/ac/yr
Receiving Slope Distance	20-29 ft
Soil Test 0" - 4"	2
WV_Factor (USER)	1.16
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	0
LEACHATE P	=	0
SOURCE P	=	23
TOTAL P RATING	=	23 (LOW)

NCANAT Version: 1.95

PLAT Results For: Chatham 11/22/2006 10:22:50 AM

INPUTS

Calendar Year:	2005
County:	Chatham
Producer Identifier:	Gilbert Clark
Tract Number:	99999
Field Number:	1
Soil Series:	GeB2: Georgeville silty clay loam, 2 to 6 percent slopes, moderately eroded
Crop:	Fescue (Hay) :
BMPs:	Vegetative Buffer Width = 50 ft. Tree/Shrub Buffer Width = 50 ft.
Fertilizers:	Beef-scrapped unpaved surface Yearly Applied Amount: 8.36 ton Lb P2O5: 19.3 lb Application Method: All other surface
applications	
Soil Loss:	1 t/ac/yr
Receiving Slope Distance	20-29 ft
Soil Test 0" - 4"	2
WV_Factor (USER)	1.16
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	0
LEACHATE P	=	0
SOURCE P	=	23
TOTAL P RATING	=	23 (LOW)

NCANAT Version: 1.95

PLAT Results For: Chatham 11/22/2006 10:23:57 AM

INPUTS

Calendar Year:	2005
County:	Chatham
Producer Identifier:	Gilbert Clark
Tract Number:	99999
Field Number:	2
Soil Series:	GeC2: Georgeville silty clay loam, 6 to 10 percent slopes, moderately eroded
Crop:	Fescue (Pasture) :
BMPs:	Vegetative Buffer Width = 15 ft. Tree/Shrub Buffer Width = 50 ft.
Fertilizers:	Beef-scrapped unpaved surface Yearly Applied Amount: 8.36 ton Lb P2O5: 19.3 lb Application Method: All other surface applications
Soil Loss:	1 t/ac/yr
Receiving Slope Distance	10-19 ft
Soil Test 0" - 4"	2
WV_Factor (USER)	1.16
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	0
LEACHATE P	=	0
SOURCE P	=	27
TOTAL P RATING	=	27 (MEDIUM)

Gilbert [illegible]
Bent [illegible]
Estimated Quantities

Storage [illegible]:

Diversion	#1	[illegible],123 Cu.ft.
	#2	12,992 Cu.ft.
	#3	12,[illegible] Cu.ft.
	#4	36,[illegible] Cu.ft.
		77,856 Cu.ft. = 2584 Cu.Yds.
		[illegible]

Level [illegible]:

Terrace	#1	300 L.ft.
	#2	200 L.ft.
	#3	200 L.ft.
	#4	500 L.ft.
		1200 L. Feet

[illegible]:

4 - [illegible] [illegible]
2 - [illegible] [illegible]
4 - [illegible] [illegible]

[illegible] - [illegible] Tile

J. Evans
C.E.T.
6-4-98

Hank Evans
C.E.T.
6-4-98

Frank Evans
C.E.T.
6-4-98

Diversion 1 (West) CUT = 160.4 SQ Ft

" 2 (East CUT = 82.4 SQ Ft

$\frac{242.80}{2}$ = 121.4 SQ Ft average

121.4 SQ Ft x 515' L = 62,521 cu. Ft.

÷ 27 cu Ft/cu yd = 2316 cu yards CUT

Diversion 3 CUT = 187.6 SQ Ft

187.6 SQ Ft x 247' L = 46,337 cu. Ft.

÷ 27 cu Ft/cu yd = 1767 cu. yards CUT

Diversion 4 CUT = 53.2 SQ. Ft.

53.2 SQ. Ft. x 463' L = 24,632 cu. Ft.

÷ 27 cu Ft/cu yd = 912 cu. yds.

Use

Fill = 98.0 SQ. Ft. x 463' L = 45,374 cu. Ft.

= 1681 cubic yards

material from field + cut in div used to construct Berm

Level Spreader #3

FILL = 29.6 SQ. Ft.

#1 = 29.6 SQ Ft x 274' L = 8,110 cu. Ft.

÷ 27 = 300 cu. Ft.

#1 29.6 x 325 = 9,620 cu. Ft.

#2 29.6 x 328 = 3,7[illegible] cu. Ft.

#4 29.6 x 345 = 10,212 cu. Ft.

23,621 cu. Ft.

31,721 cu. Ft.

÷ 27

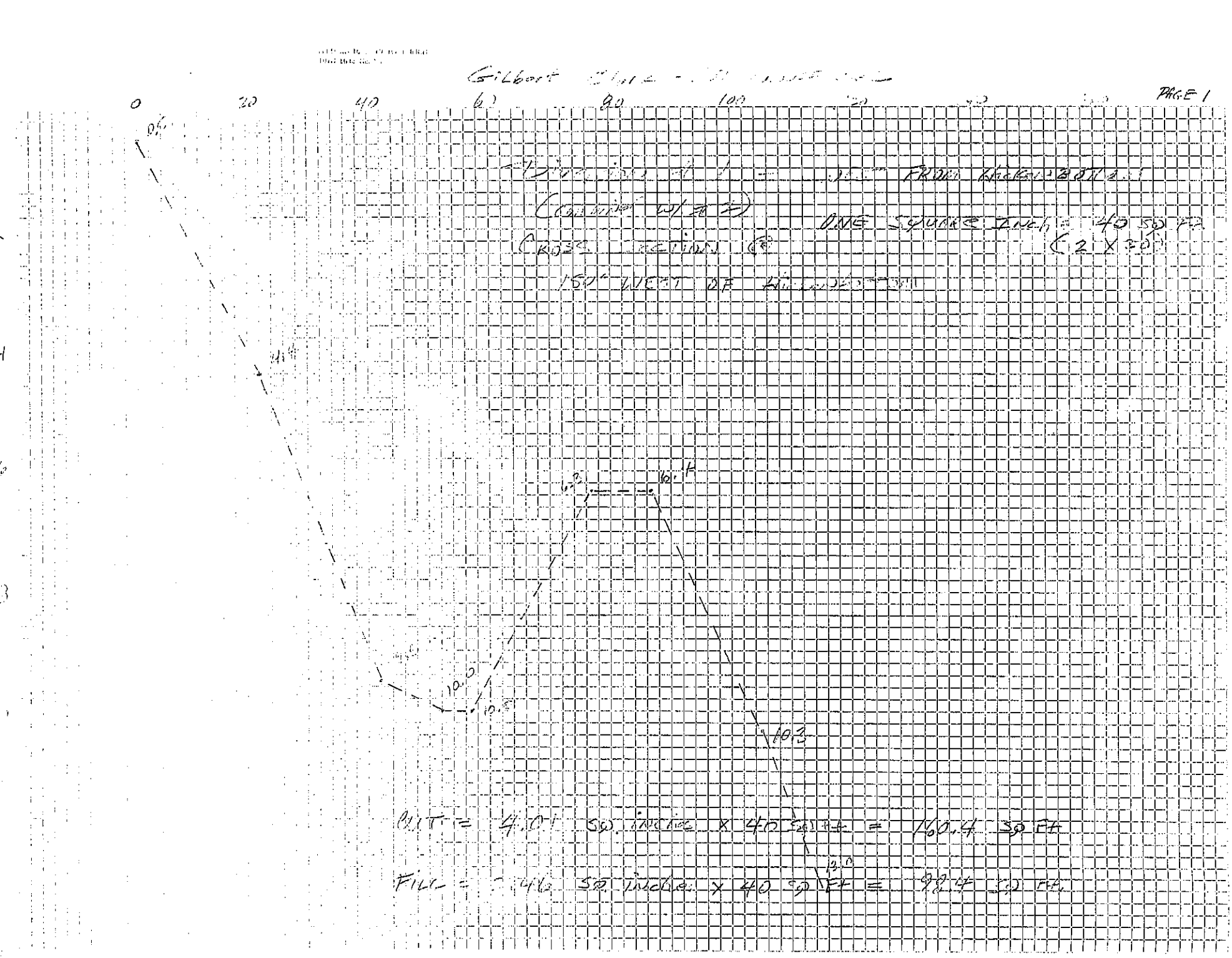
1175

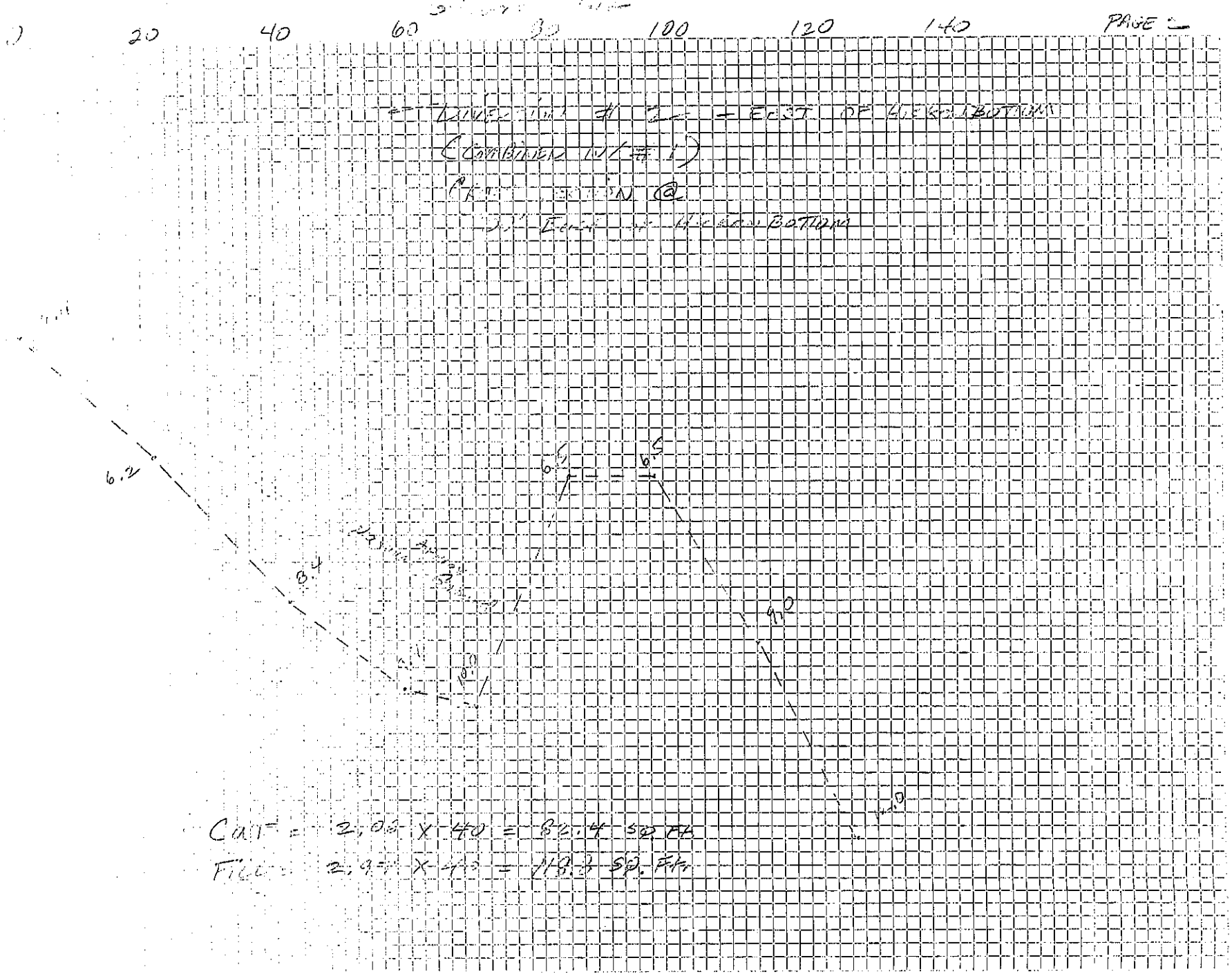
Diversions

5,764 cubic yds

Level Spreaders

1175

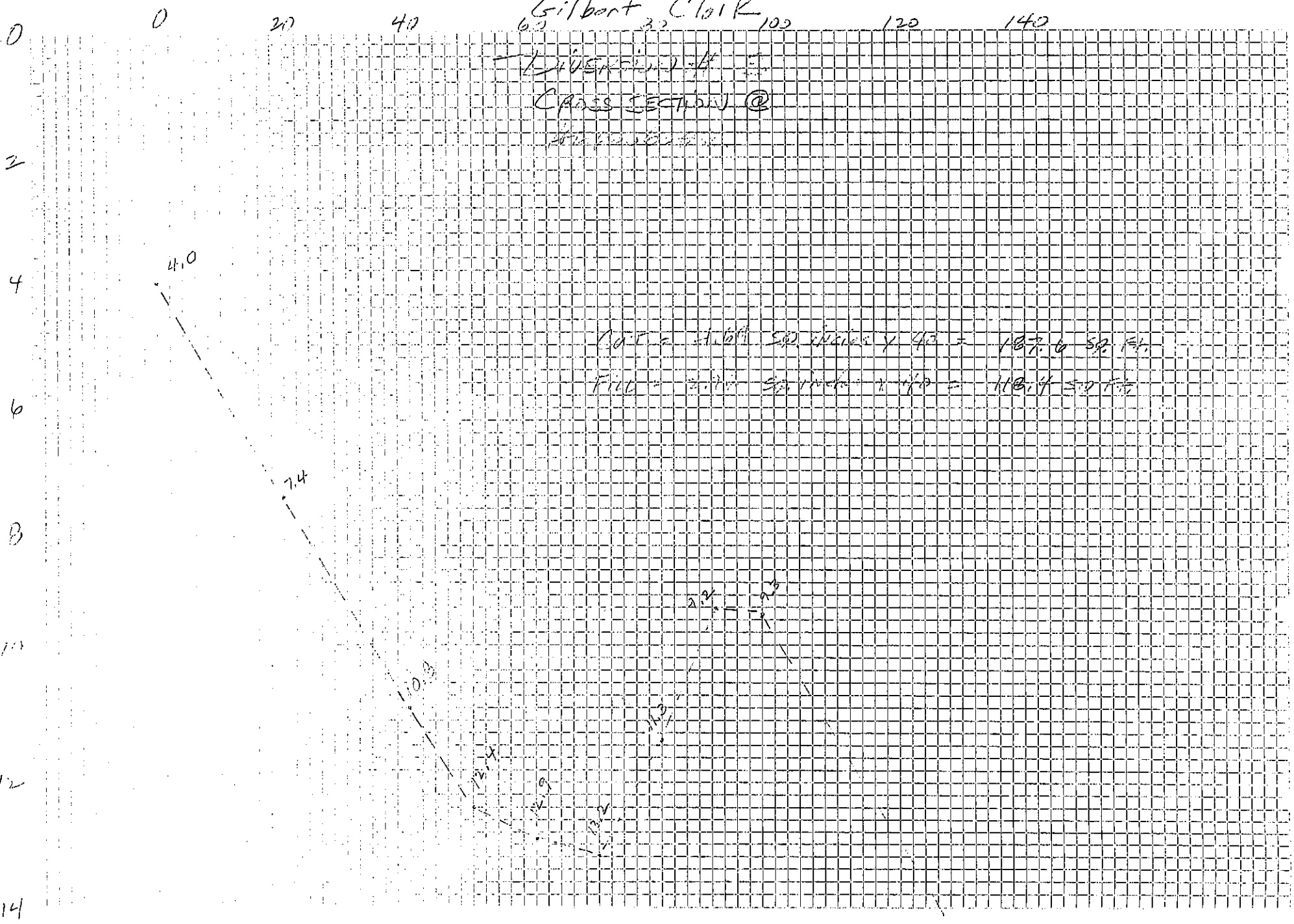




CUT = 2.0 X 40 = 82.4 SQ FT

FILL = 2.9 X 40 = 119.3 SQ FT

Gilbert Clark

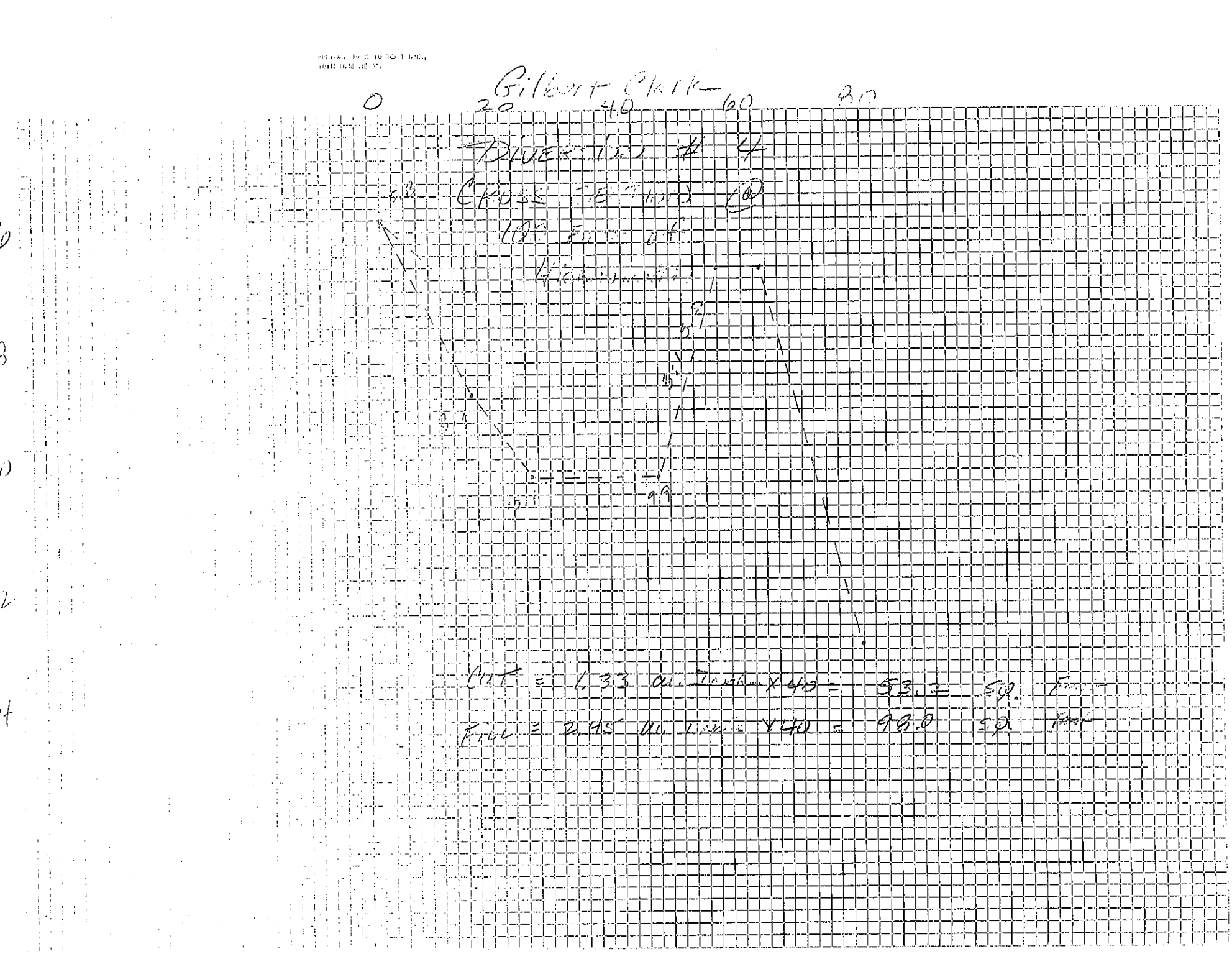


Diversion #

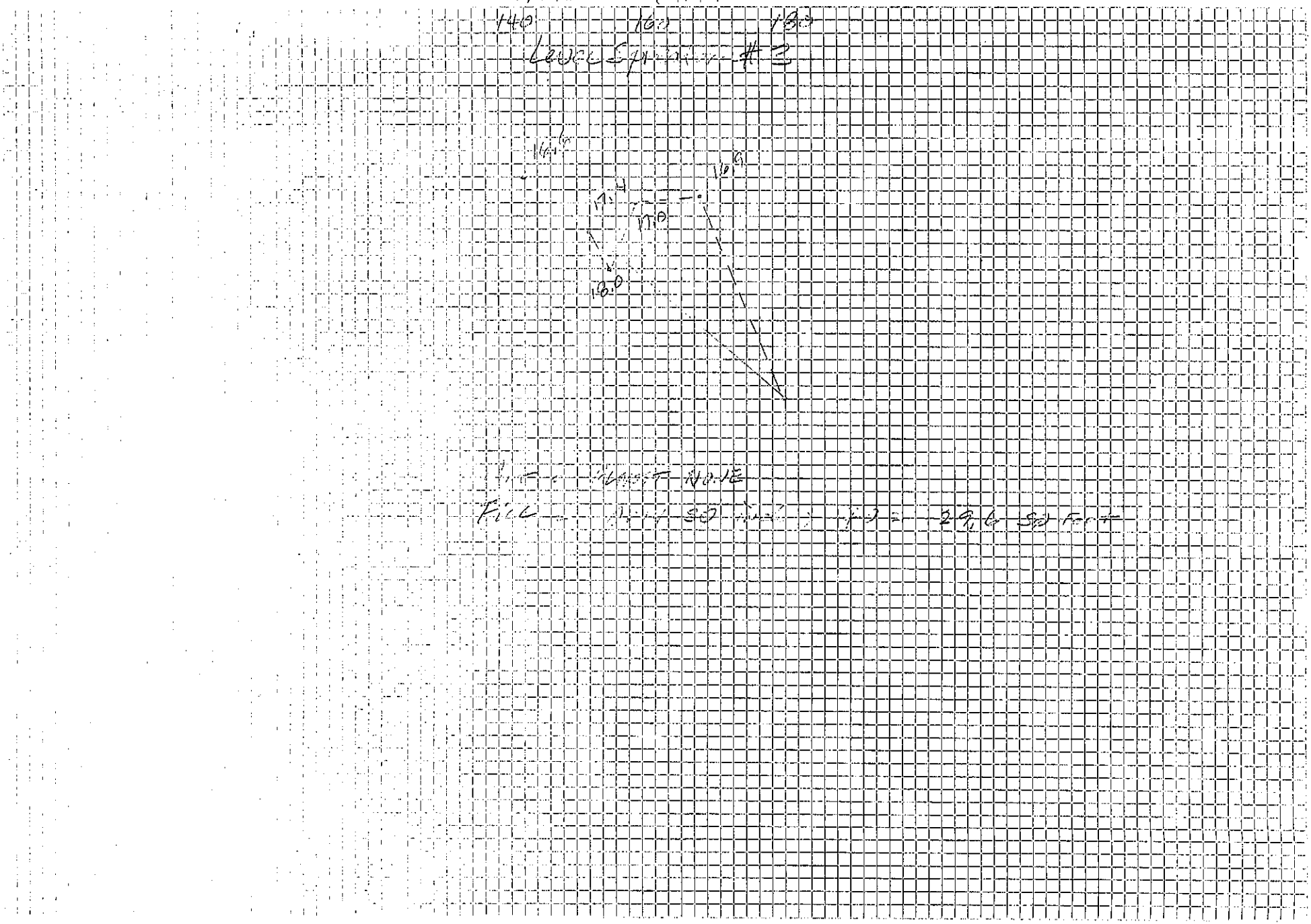
Cross Section @

Cut = [illegible] sq. inches x 40 = 187.6 sq. ft.

Fill = [illegible] sq. inches x 40 = 118.4 sq. ft.


Gilbert Clark
0
20
40
60
80
99

Gilbert Clark



		Units	Total Change	Fill	Length
Div	1	100.4		99.2	
Div	2	82.4		118.8	
Div	3	187.6		118.4	
Div	4	53.2		98.0	
Lev Sp	1	[illegible]		30	325' x 30□'
	2			30	128' x 30□'
	3			30	274' x 30□'
	4			30	345' x 30□'
		483.6		553.6	
Total		~~518.4~~		~~439.6~~	

pretty close

Note: I talked w/ Frank EVANS 5/3/99 in regard to items Bel. ↓

April 27, 28, 1999

Greg Walker Contr.
(H) 919-742-5538
(Shop) 742-5122

Gilbert Clark (Questions for Frank EVANS) — V.M. 3525

phone conversation while he was at the Louisburg F.O.

1 Slope - Div - front + BACK 4:1 Design Minimum ???
This is Combined 8:1 — CAN this be reduced??
Frank: 4:1 front 3:1 BACK ✓ ok → reduce to 3:1 if slope coming in from filter strip is 5:1 etc.

2 Outlet end of tile (from div. to level spreader)
Design shows coming out 1½' below nat ground — pipe grade 2% — CAN we vary from this And how much?? YES Frank Maybe Mound up outlet end
Min. grade on pipe 1%

3 Top width 10' — Any flexibility on this — 5' ??? Frank - 5'-6' top

4 (A) Div 1 + Div 2 on design are shown seperate — CAN they be connected??
Would work out better. Frank YES
(B) If permissable to be connected could we just use 1 higher bottom? Frank yes 1 Hicks.
D.A. Div 1 = .83 Ac
D.A. Div 2 = .74 Ac

5 Emergency Spillway on ~~level Spreader~~ Diversion? — yes
6 Length of Level Spreaders?
7 Div. 4 - 2.0 Ac dia. Cramped because of Creek + fence.
8 [illegible]

Frank YES - Carr Parks Blake - Harnett Co.

↑ YES

GENERAL INFORMATION FOR INSTALLATION PRACTICES:

Installation of all Hickenbottom Inlets should be in accordance with specs. for corrugated P.E. piping, such as ASTM F-405 and AASHTO Hwy. specs. M-252. These can be found in the "Soil Conservation Service Engineering Field Manual for Conservation Practices" in book 2 of 2, section 8-82 and 8-83.

In general terms of back filling the inlet, we would recommend at very shallow depths of less than 24" to bed tee and under ground portion of inlet with an aggregate of 1/2" up to 1 1/2" stone or (limey chips). In all normal conditions of depths over 24" and up to 72" of depth, the spoil from the trench can be used if the size of material is smaller then 2" in diameter. It is moist and pliable so as to be able to compact the soil properly around the pipe.

In conditions deeper than 72", the inlet should be backfilled with the above described aggregate and should be filled around the vertical portion of the inlet with approximately 12" of aggregate around the pipe to the surface.

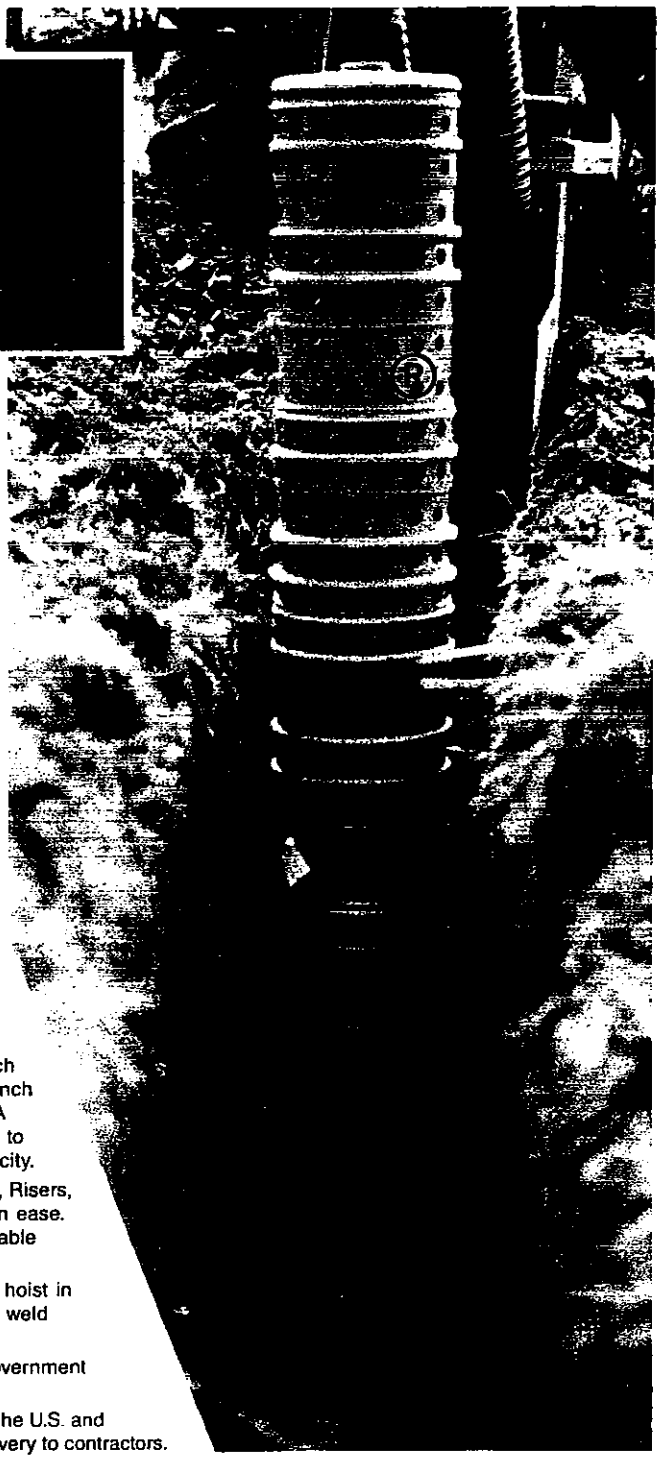
To help alleviate the problem of the vertical portion of the inlet being tipped over during the backfilling process, we recommend to fill around the inlet and tamp soil in a mounding fashion then tapering the slope down away from the inlet to the bottom of the trench.

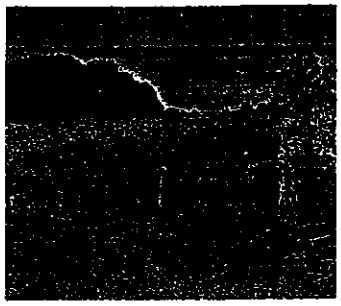
If you have any further questions about installation please call the general office at 800-443-7879.

Hickenbottom Surface Inlets

"Look for the Bright Orange Inlet, Hickenbottom's Trademark®"

Parallel Terrace Outlets





Surface Inlet at Fence-row

Inlets for Ponds and Sediment Traps

Catchbasin Inlets for Road Culverts

Grassed-Waterway Intakes

Hickenbottom's heavy duty plastic drain inlets have many uses and advantages:

- **Parallel Terrace Outlets:** As a bright orange, free-standing inlet it is durable, easy to see and easily maintained.
- **Low-spot Surface Inlets:** The need for gravel fill over tile is eliminated; silt stays on the surface and does not seal up as with gravel inlets.
- **Catch Basins:** A silt trap is not needed: first the water ponds to deposit silt, then runs into the inlet. The inlet area is much greater than the restricted outlet. This eliminates suction and trash plug-ups.
- **Infiltration Inlet Riser:** A special inner riser can be inserted to maintain ponding at a certain level to improve water infiltration in semi-arid regions.
- **Large or Small:** 5, 6, 8, 10, and 12 inch diameter inlets with 1-inch holes or 1-inch wide slots suit all inlet requirements. A plastic orifice plate can quickly be cut to size to provide the required inlet capacity.
- **Snap together:** All parts, Tees, Offsets, Risers, and Inlets snap together for installation ease. Rises and Inlets can be cut off to suitable lengths.
- **Lightweight and Simple:** No need to hoist in concrete catch basins and no need to weld aluminum or steel pipe inlets.
- **Approved:** Hickenbottom inlets are government approved.
- **Availability:** Authorized distributors in the U.S. and Canada have stocks handy for fast delivery to contractors.

Available through most US drainage companies

HICKENBOTTOM INC.
RR #2
Fairfield, Iowa 52556
(515) 472-4786, 472-5710, 472-2009 or
1-800-443-7879 (outside Iowa), 1-800-247-1723 (In Iowa)

Now available in Canada at:
Maaskant Bros. and Prod.
RR #2, Clinton, Ontario N0M 1L0
Hugo Maaskant (519) 524-6828
John Maaskant (519) 524-9081

Hickenbottom, Inc. 5" Inlet-Intake Products

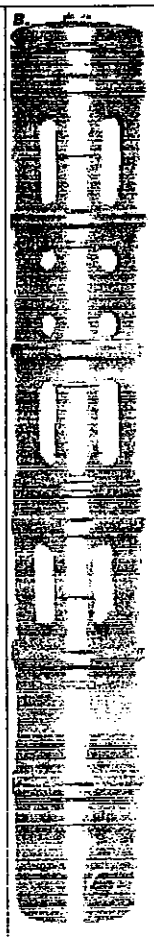
Look for the Bright Orange Inlet - The Hickenbottom Trademark®

A.

HBI-5510 This section contains 24 ea. 1" holes per ft. and is used in standard conditions with 4", 5", and sometimes 6" tile where the flow of a 6" intake is not needed.
Refer to CFS chart for flow capacities and tile drainage chart or contact your local Soil Conservation Office.

HBI-5121 same as above but in 1/2 section.

B.

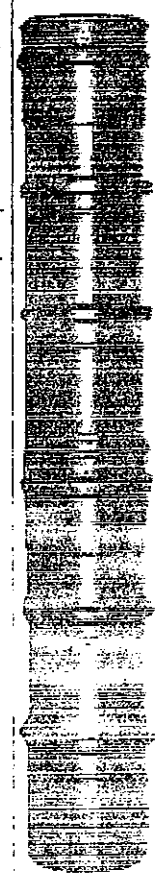


HBI-55SL This is a 5"x1" holed section with 3 ea. 1"x4" slots per ft. It is used to provide more flow than a 5"x1" section can provide and where a 6"x1" section is too much. It can also be used in conjunction with a 5" restrictor to help eliminate trash buildup due to possible restriction of the 1" holes.

C.

HBI-5FSL This is a 5" x 1" holed section with the top half fully slotted. This was designed to provide maximum flow for the upper half of the inlet without having to use a Wire Trash Rack or Coated Steel Bar Guard. The lower half has 1" holes to provide the standard flow release for remaining water.

D.

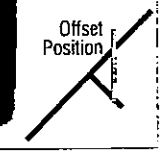


HBI-5516 This is a 5"x5/16" holed orange section used underground from the tee as a riser extention. It can be cut at different locations (as marked on section) to adjust the height of intake.

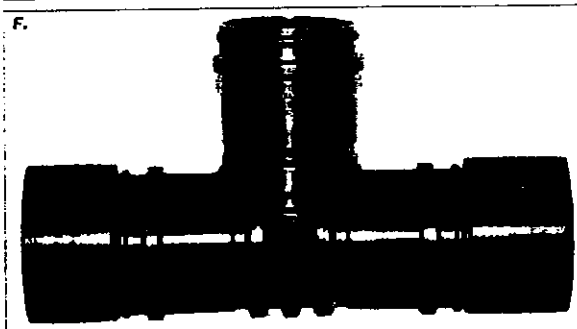
HBI-5125 same as above but in half section.

E.

HBI-55BL This section is listed as a black section but is currently made in the color orange. It is used for offsetting the intake from the main line. It can also be used in place of HBI-5516 where no small holes are wanted below ground.

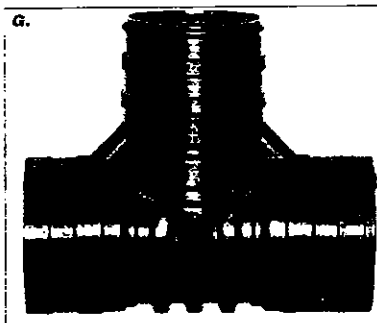


F.



HBI-5BTL 5" Intake TEE is a longer style tee which will accept field tile in the first bell, then you can cut behind the first bell to fit a 5" offset section (HBI-55BL), for use in an offset intake mode.

G.



HBI-5BTS 5" Intake TEE is a shorter, less expensive model. It accepts 5" field tile into the bell only or a 5"x4" reducer.

H.

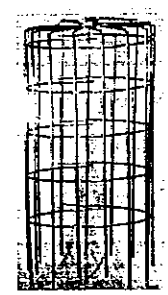
HBI-65BT 6"x5" TEE This part is a 6"x5" New Style Tee to be used to connect directly to 6" corrugated tile and has a 5" inlet bell so that a 5" intake section can be snapped directly into the tee without the use of an adapter.

I.

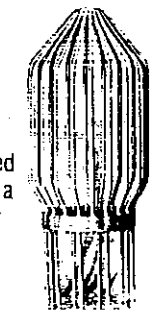
HBI-50RO is a restrictor used to adjust the flow of water from the intake to the main line.
Contact your local SCS office for proper hole size in restrictor.

HBI-5SB01 Has a built in restrictor that can be easily changed by cutting to desired size.

J.



Trash Guards: to increase intake flow... May be inserted into the top of a open ended or cut off inlet.



Coated Steel Trash Guard

Hickenbottom, Inc. RR2, Box 161 • Fairfield, IA 52556
National Toll Free: **1-800-443-7879** Iowa Toll Free: **1-800-247-1723** Fax: 1-515-472-4419

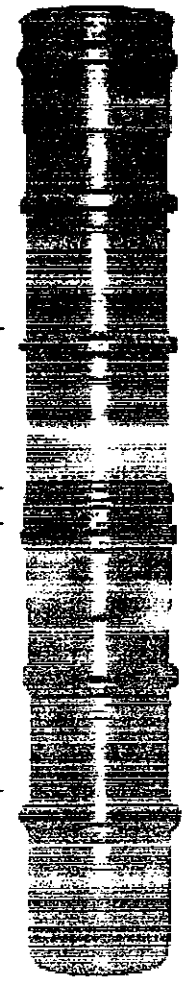
Hickenbottom 5" Inlet-Intake System Options*

*Many other system configurations are possible. Call Hickenbottom , Inc. for more information.

K.

Cutting and Sizing Options:

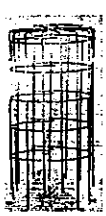
Intakes may be cut at various points to allow for variations in depth of soil to tile lines.



L.

Intakes may be cut at top for insertion of trash guards to increase intake flow.

Coated Steel Trash Guard

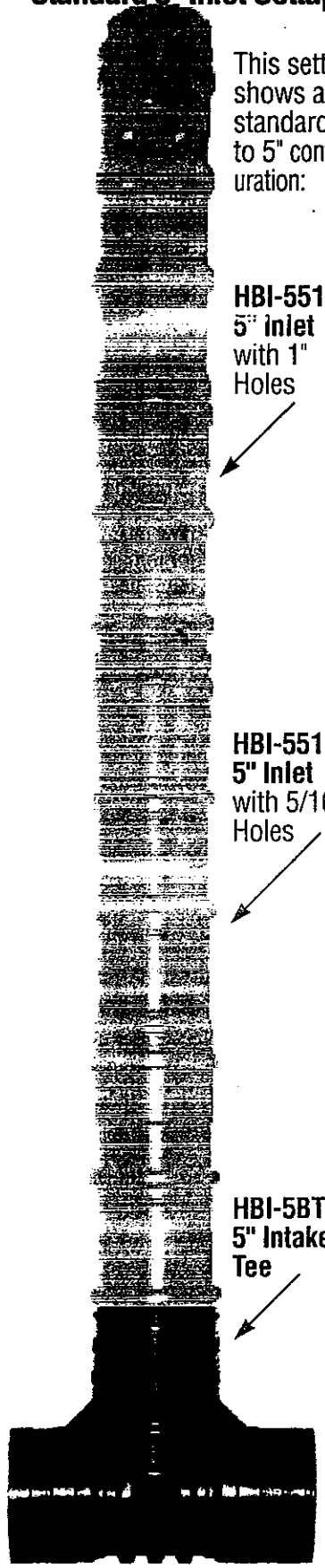


Wire Trash Guard

M.

Standard 5" Inlet Settup

This settup shows a standard 5" to 5" configuration:



HBI-5510 5" Inlet with 1" Holes

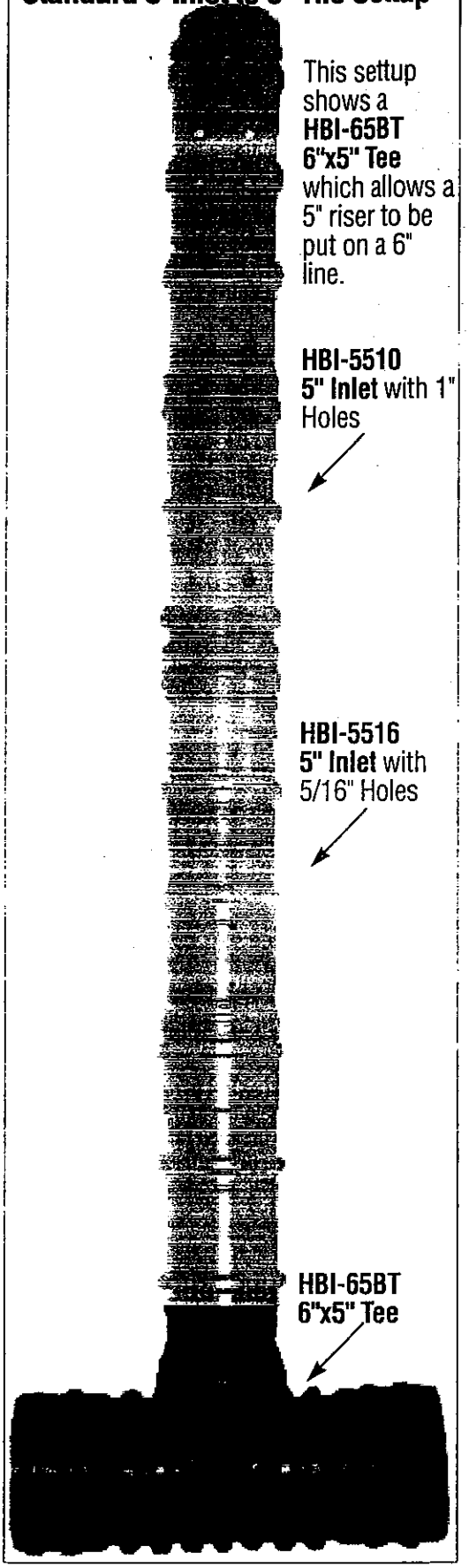
HBI-5516 5" Inlet with 5/16" Holes

HBI-5BTS 5" Intake Tee

N.

Standard 5"Inlet to 6" Tile Settup

This settup shows a **HBI-65BT 6"x5" Tee** which allows a 5" riser to be put on a 6" line.



HBI-5510 5" Inlet with 1" Holes

HBI-5516 5" Inlet with 5/16" Holes

HBI-65BT 6"x5" Tee

Hickenbottom, Inc. RR2, Box 161 • Fairfield, IA 52556 National Toll Free: 1-800-443-7879
Iowa Toll Free: 1-800-247-1723 Fax: 1-515-472-4419

Hickenbottom, Inc.

Look for the Bright Orange Inlet - The Hickenbottom Trademark®

Hickenbottom, Inc
Inlet - Intake
Price List

Product Number	Description	Price
HBI-5510	5"x1" Orange Intake	$9.25
HBI-5516	5"x5/16" Orange Intake	$9.25
HBI-55SL	5" Slotted Intake	$13.75
HBI-5BTS	5" Tee - short	$9.25
HBI-55BL	5" Black section	$9.25
HBI-50R0	5" Restrictor	$1.50
HBI-65BT	6"x5" Tee	$10.25
HBI-6610	6"x1" Orange Intake	$12.50
HBI-6516	6"x5/16" Orange Intake	$12.50
HBI-65160	6"x5/16" Orange Intake o/s	$14.00 DISCONTINUED
HBI-66SL	6" Slotted Intake	$18.50
HBI-6125	6"x5/16" One half sections	$7.50
HBI-66BL	6" Blank section	$12.50
HBI-6BTN	6" Tee new style	$10.25
HBI-BT0	6" Tee old style	$11.00 DISCONTINUED
HBI-6540	6"x5"x4" Reducer	$2.50
HBI-6550	6"x5" Reducer	$2.25
HBI-60R0	6" Restrictor	$2.25
HBI-8810	8"x1" Orange Intake	$18.75
HBI-8516	8"x5/16" Orange Intake	$18.75
HBI-88SL	8" Slotted Intake	$26.60
HBI-88BL	8" Blank section	$18.75
HBI-8BT0	8" Tee old style	$23.50
HBI-8BTN	8" Tee new style	$18.75
HBI-888Y	8" Wye	$16.75
HBI-8125	8" x 5/16" 1/2 Section	$11.75
HBI-80R0	8" Restrictor	$3.00
HBI-1010	10" x 1" Orange Intake	$27.50
HBI-10516	10"x5/16" Orange Intake	$27.50
HBI-10SL	10" Slotted Intake	$37.60
HBI-10BL	10" Blank section	$29.00
HBI-10BT0	10" Tee old style	$27.00
HBI-10BTN	10" Tee new style	$27.50
HBI-10R0	10" Restrictor	$8.00
HBI-10125	10" x 5/16" 1/2 Section	$17.00
HBI-0810I	8"x10" Increaser	$9.00 Discontinued

Prices subject to change without notice.....

10/25/96

Hickenbottom Price List

Product Number	Description	Price
HBI-1210	12" x 1" Orange Intake	$83.75
HBI-12516	12"x5/16" Orange Intake	$83.75
HBI-12SL	12" Slotted intake	$96.12
HBI-12RO	12" Restrictor	$13.75
HBI-12BT	12" Tee	$83.75
HBI-5FSL	5"x1" Orange Intake 1/2 Fully Slotted	$18.25
HBI-6FSL	6"x1" Orange Intake 1/2 Fully Slotted	$23.75
HBI-8FSL	8"x1" Orange Intake 1/2 Fully Slotted	$34.50
HBI-10FSL	10"x1" Orange Intake 1/2 Fully Slotted	$48.00
HBI-12FSL	12"x1" Orange Intake 1/2 Fully Slotted	$108.49
HBI-66BLN	6" Black Section New Style Dual Wall	$8.75
HBI-88BLN	8" Black Section New Style Dual Wall	$11.75
HBI-10BLN	10"Black Section New Style Dual Wall	$17.75
HBI-12BLN	12" Black Section New Style Dual Wall	$23.75
INBSKT-6	6" Wire Basket for Intakes	$13.25
INBSKT-8	8" Wire Basket for Intakes	$20.90
INBSKT-10"	10" Wire Basket for Intakes	$26.50
BRGD-6	6" Bar Guard	$20.83 NET
BRGD-8	8" Bar Guard	$23.28 NET
BRGD-10	10" Bar Guard	$30.98 NET
BRGD-12	12" Bar Guard	$38.85 NET

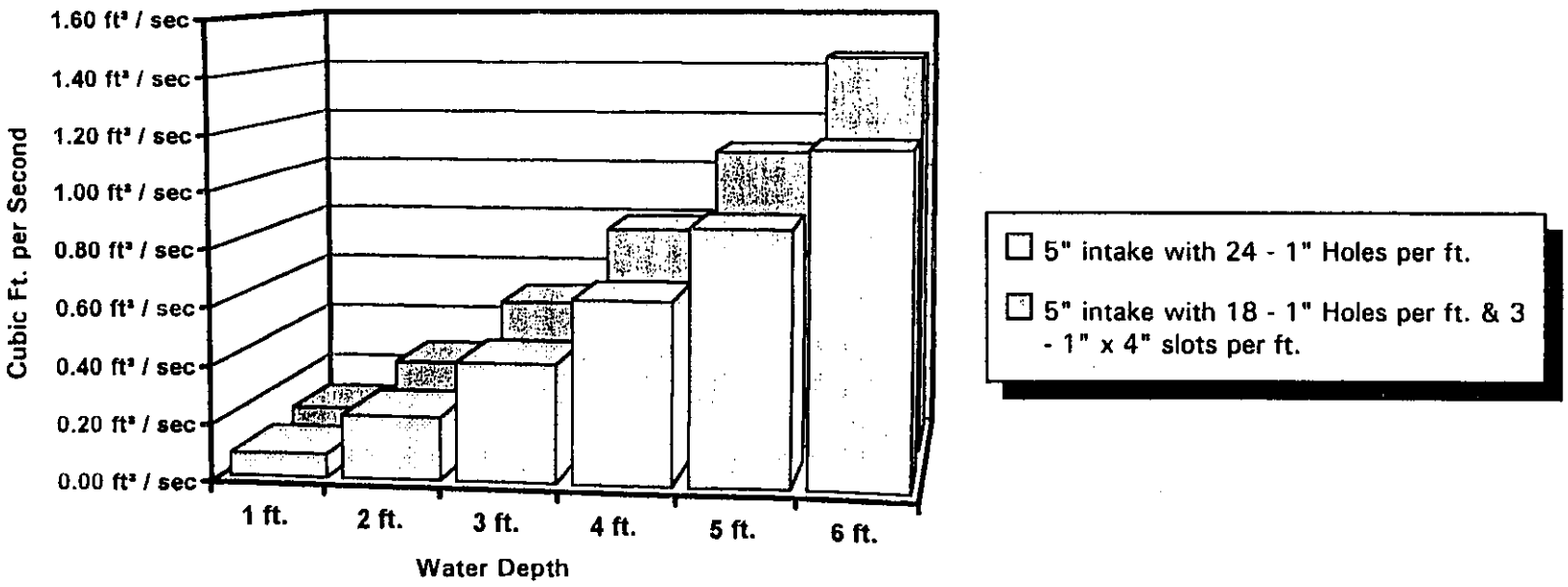
*** Prices are subject to change without notice.*

*** NOTICE - We will soon be discontinuing the Hickenbottom HBI- 6BTO, 6" old style tee.*

Capacity of Hickenbottom 5" Intakes

Water Depth	5" intake with 24 - 1" Holes per ft.	5" intake with 18 - 1" Holes per ft. & 3 - 1" x 4" slots per ft.
1 ft.	0.08 ft³ / sec	0.10 ft³ / sec
2 ft.	0.22 ft³ / sec	0.28 ft³ / sec
3 ft.	0.41 ft³ / sec	0.51 ft³ / sec
4 ft.	0.63 ft³ / sec	0.79 ft³ / sec
5 ft.	0.88 ft³ / sec	1.09 ft³ / sec
6 ft.	1.16 ft³ / sec	1.45 ft³ / sec

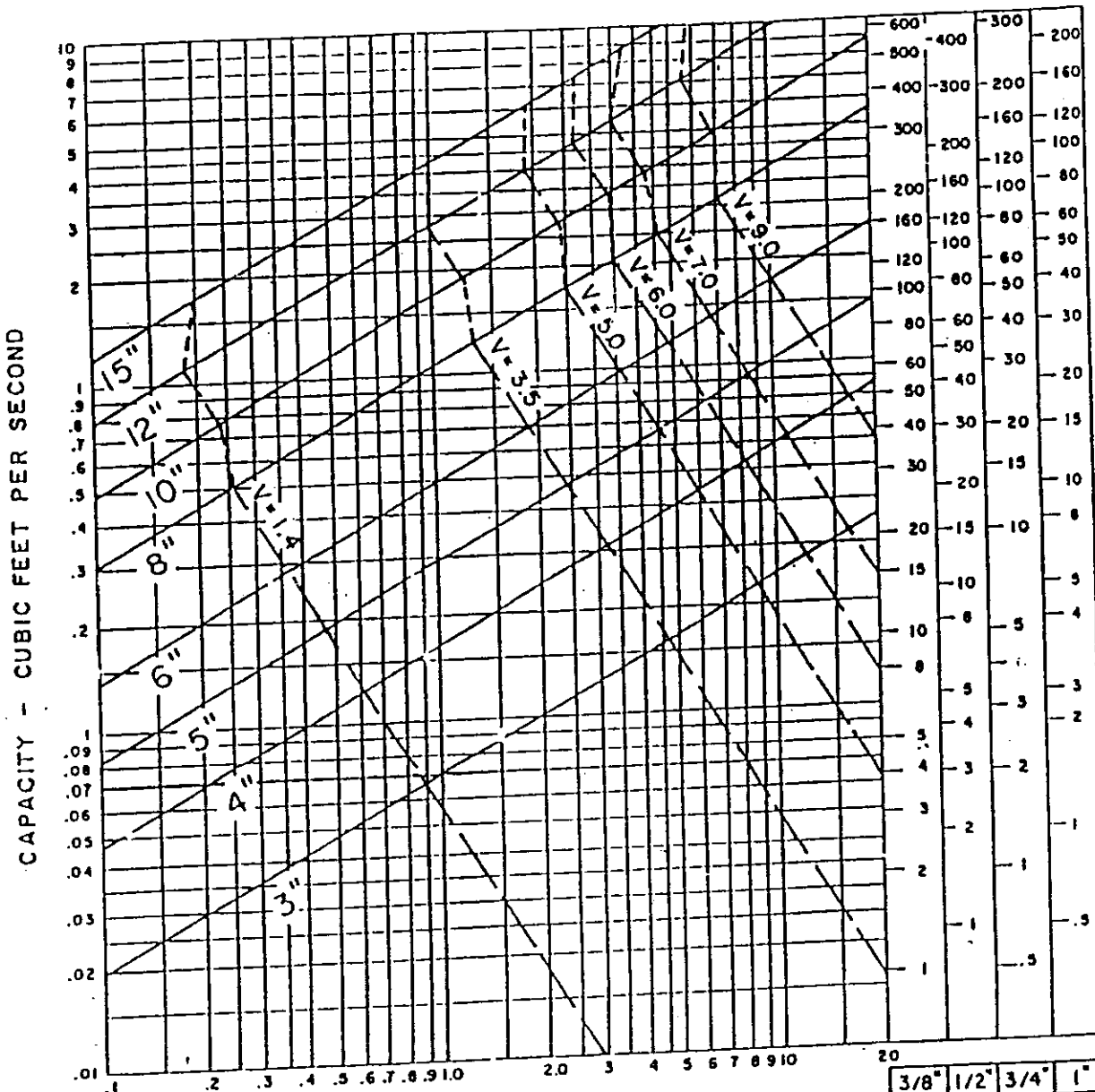
* The intake capacities listed in the chart above are based upon the assumption that one half of the holes and/or slots are plugged.



Note: Basis for the capacities listed above are taken from chart SCS E.F.M., Amend IA 30, Aug. 1986, Page 1A 8-103 (48)

Soils Mechanic Note #3 Page A-4 (1971)

CORRUGATED PLASTIC TUBING
DRAINAGE CHART



3/8"	1/2"	3/4"	1"
DRAINAGE COEFFICIENT			

SIZE (DIA.)	"n"
3" - 8"	0.015
10" - 12"	0.017
> 12"	0.020

Space between lines is the range of drain capacity for the size shown between lines

V = velocity in feet per second

* NOTE - This graph is taken from the Iowa specifications for subsurface drainage 606-15.

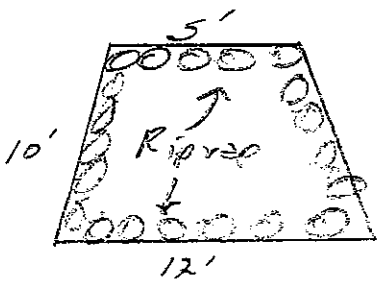
Design of Riprap Outlet Protection

1- Minimum tailwater Condition

2- Max. depth @ Riser = 3.5'
- Hicken bottom table shows 0.79 CFS for 4.0' water depth
- Length Apron, La = 10', d = 12"
- d_{50} = 2.5" = use class B, erosion Stone, d_{50} = 8"

3- up stream apron width; $3D_o$ = (3)(pipe 6") = 1.5'
using upstream width of 5' ok

Downstream apron width, $D_o + L_a$ = 1.5 + 10 = 11.5'
using downstream width of 12' ok



- Riprap depth = 1'
- Apron grade = 0 %
- Top of riprap flush with receiving ground area

4- Maximum Stone Diameter, $d_{max} = 1.5 \times d_{50} = (1.5)(8) = \underline{12"}$

5- Determine the apron thickness = $1.5 \times d_{max} = (1.5)(12") = \underline{18"}$

geotextile to be installed under riprap

Frank Evans
C.E.T.
6-4-98

OH-Ver-3.0

US Department of Agriculture
Soil Conservation Service

RUNOFF COMPUTATION SHEET

prepared for

Gilbert Clark

in

Chatham County, Ohio

Designer : F. Evans
Date : 05/18/98

Checker _____
Date _____

****

Lot Run Off #1

Watershed Slope = 6.0 % Drainage Area = ~~0.8~~ 0.83 acres Curve Number = 86
Watershed Length = 205 ft. Tc = 0.05 hr. Rainfall Type = II

Frequency	24-hr rainfall	Runoff	Peak discharge	Ia/P
1 - yr.	3.0 in.	1.66 in.	3 cfs.	0.11
2 - yr.	3.7 in.	2.28 in.	4 cfs.	0.09
5 - yr.	4.8 in.	3.28 in.	5 cfs.	0.07
10 - yr.	5.5 in.	3.94 in.	6 cfs.	0.06
25 - yr.	6.4 in.	4.79 in.	7 cfs.	0.05
50 - yr.	7.2 in.	5.56 in.	9 cfs.	0.05
100 - yr.	8.0 in.	6.33 in.	10 cfs.	0.04

Drainage curves : Qa = 0.3 cfs. Qc = 0.0 cfs.
Qb = 0.1 cfs. Qd = 0.0 cfs.

Lot No. 1

DA = 0.83 Ac CN 86 & 6.4" 25 yr 24 hr Storm

Run off depth = 4.79 inches 7 cfs

Est. diversion length = 300' slope = .25 %

Pipe @ 180' & 5" intake with 24 - 1" holes per ft.

Run-off Volume:

$$V = (.83\ Ac)(4.79")\left(\frac{27154\ \text{gallon Ac In.}}{7.48\ \text{gal. Cu ft}}\right) = 14{,}433\ \text{Cu ft.}$$

Diversion Volume: 3.5 @ Riser - 3.0 @ upper end

use depth of 2.5 @ Upper end & 3.0' @ Riser = Avg. depth = 2.8

with 0.2' free board

(A = 53.76 □') 2.8 depth, 8' bottom 4:1 Side Slope, 300' Length

Storage Vol. = (53.76 □') (300') = 16,128' Cu ft > 14,433 Cu ft

Ok

J. Evans

2 E.T.

6-4-78

OH-Ver-3.0

US Department of Agriculture
Soil Conservation Service

RUNOFF COMPUTATION SHEET

prepared for

Gilbert Clark

in

Chatham County, Ohio

Designer : F. Evans
Date : 05/18/98

Checker _____
Date _____

****

Lot Run Off #2

0.74

Watershed Slope = 6.0 % Drainage Area = 0.7 acres Curve Number = 86
Watershed Length = 210 ft. Tc = 0.05 hr. Rainfall Type = II

Frequency	24-hr rainfall	Runoff	Peak discharge	Ia/P
1 - yr.	3.0 in.	1.66 in.	2 cfs.	0.11
2 - yr.	3.7 in.	2.28 in.	3 cfs.	0.09
5 - yr.	4.8 in.	3.28 in.	5 cfs.	0.07
10 - yr.	5.5 in.	3.94 in.	5 cfs.	0.06
25 - yr.	6.4 in.	4.79 in.	7 cfs.	0.05
50 - yr.	7.2 in.	5.56 in.	8 cfs.	0.05
100 - yr.	8.0 in.	6.33 in.	9 cfs.	0.04

Drainage curves : Qa = 0.3 cfs. Qc = 0.0 cfs.
Qb = 0.1 cfs. Qd = 0.0 cfs.

Lot No. 2

DA = 0.74 Ac CN 86 & 6.4" 25YR 24HR STORM

Run-off depth = 4.79 inches 7 CFS

Est. Diversion Length = 200' slope = 0.25%

Pipe @ 100' & 5" intake with 24-1" holes per foot.

Run-off Volume:

$$V = (0.74\ Ac)(4.79'')\left(\frac{27{,}154\ gallons/Acre}{7.48\ gal/Cu\ ft}\right) = 12{,}868\ Cu.\ ft$$

Diversion Volume - 3.5 @ Riser & 3.0 @ ends

Use depth of 3.0 @ Riser & 2.5 @ ends = 2.8 Avg. Depth

A = 64.96 ft^2 with 12' bottom, 2.8 depth 4:1 Side Slope, 200' long

Storage Volume = (64.96 ft^2)(200') = 12,992 Cu. ft.

J. Evans

E.I.T.

6-7-22

Gilbert Clark

in

Chatham County, Ohio

Designer : F. Evans
Date : 05/18/98

Checker _____
Date _____

****

Lot Run Off #3

Watershed Slope = 6.0 % Drainage Area = 0.7 acres Curve Number = 86
Watershed Length = 150 ft. Tc = 0.04 hr. Rainfall Type = II

Frequency	24-hr rainfall	Runoff	Peak discharge	Ia/P
1 - yr.	3.0 in.	1.66 in.	2 cfs.	0.11
2 - yr.	3.7 in.	2.28 in.	3 cfs.	0.09
5 - yr.	4.8 in.	3.28 in.	4 cfs.	0.07
10 - yr.	5.5 in.	3.94 in.	5 cfs.	0.06
25 - yr.	6.4 in.	4.79 in.	6 cfs.	0.05
50 - yr.	7.2 in.	5.56 in.	7 cfs.	0.05
100 - yr.	8.0 in.	6.33 in.	9 cfs.	0.04

Drainage curves : Qa = 0.2 cfs. Qc = 0.0 cfs.
Qb = 0.1 cfs. Qd = 0.0 cfs.

Lot No. 3

DA = 0.70 Ac CN 86 & 6.4" 25YR 24 HR STORM

Run-off depth = 4.79" 6 CFS

Est. Diversion Length = 200' Slope = 0.25%

Pipe @ 1+00 & 5" intake with 24-1" holes per ft.

Run off Volume:

$V = (0.70)(4.79")\left(\frac{27{,}154 \text{ gallon/Ac-in}}{7.48 \text{ gal/C.F.}}\right) = \underline{12{,}172}$ C.Ft.

Diversion Volume - 3.5 @ riser & 3.3 @ upper end

use depth of 3.0 @ riser, 2.8 @ end, = 2.9 Avg. Depth

A = 62.68 sq' with 10' bottom, 2.9' depth, 4:1 slopes, 200' length

storage Volume = (62.68 sq')(200') = 12,536 CF > 12,172 CF

Frank Evans

P.E.

6-4-25

OH-Ver-3.0

US Department of Agriculture
Soil Conservation Service

RUNOFF COMPUTATION SHEET

prepared for

Gilbert Clark

in

Chatham County, Ohio

Designer : Evans
Date : 05/07/98

Checker _____
Date _____

****

Lot Run Off #4

Watershed Slope = 6.0 % Drainage Area = 2.0 acres Curve Number = 86
Watershed Length = 300 ft. Tc = 0.07 hr. Rainfall Type = II

Frequency	24-hr rainfall	Runoff	Peak discharge	Ia/P
1 - yr.	3.0 in.	1.66 in.	6 cfs.	0.11
2 - yr.	3.7 in.	2.28 in.	8 cfs.	0.09
5 - yr.	4.8 in.	3.28 in.	12 cfs.	0.07
10 - yr.	5.5 in.	3.94 in.	14 cfs.	0.06
25 - yr.	6.4 in.	4.79 in.	17 cfs.	0.05
50 - yr.	7.2 in.	5.56 in.	20 cfs.	0.05
100 - yr.	8.0 in.	6.33 in.	22 cfs.	0.04

Drainage curves : Qa = 0.7 cfs. Qc = 0.1 cfs.
Qb = 0.2 cfs. Qd = 0.0 cfs.

Lot No. 4

DA = 2.0 Acs. , CN = 86 , 6.4" = 25YR 24HR STORM

Run-off depth = 4.79" 17 CFS

Est. Diversion Length = 500' slope = 0.25 %

Pipe @ 250' & 5" intake with 24 - 1" holes per ft.

Run-off Volume :

$$V = (2.0\ \text{Acs})(4.79")\left(\frac{27{,}154\ \text{gallon/Ac.in}}{7.48\ \text{gallon/C.F.}}\right) = \underline{34{,}777}\ \text{Cu ft}$$

Diversion Volume : 3.5' @ Riser , 2.9' @ ends

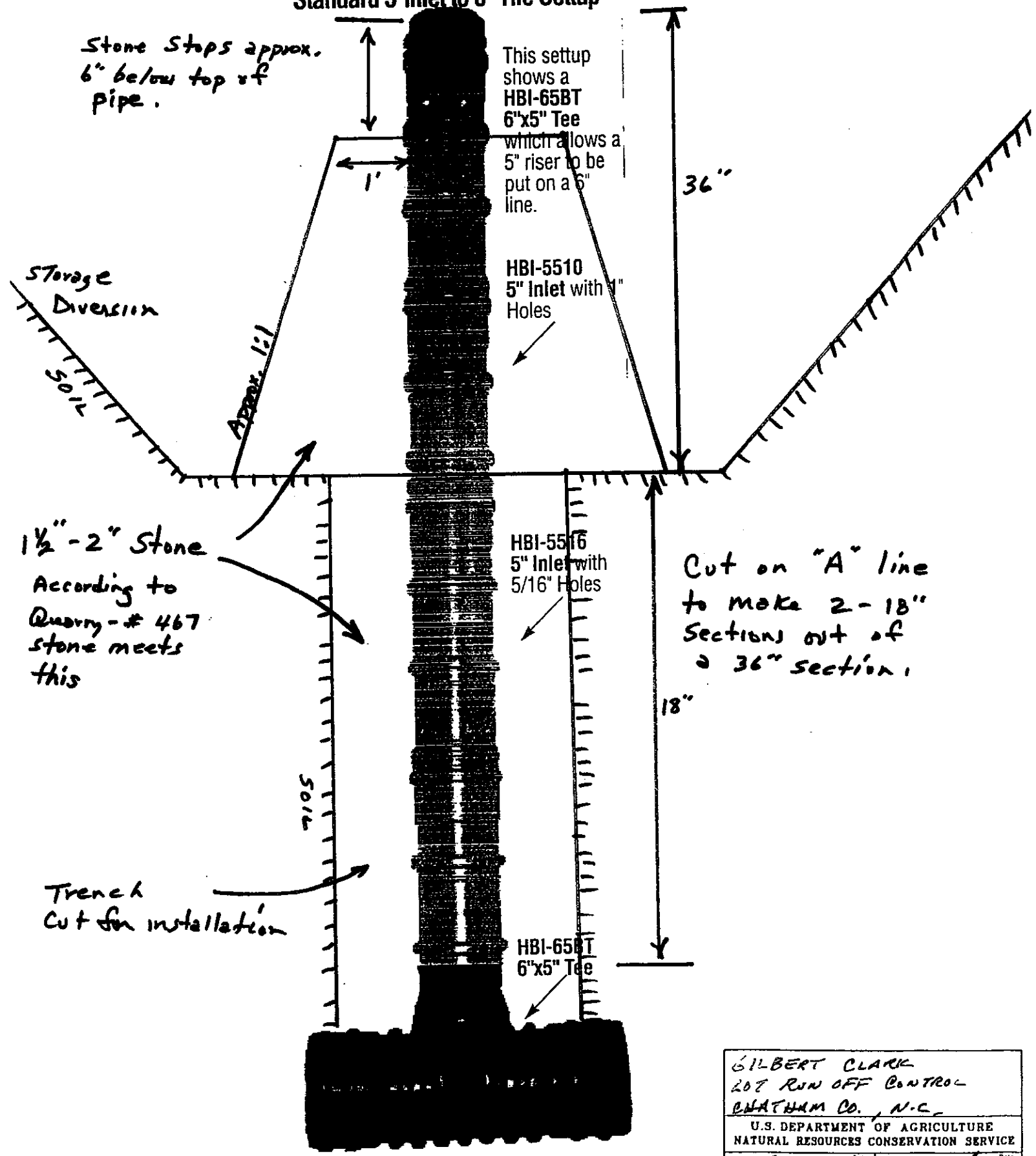
use depth of 3.0 @ Riser , 2.4 @ ends = 2.7' Avg. Depth

A = 72.40 □' , 16' bottom, 2.7' Avg. depth, 4:1 Side Slopes

Storage Volume = (72.40 □') (500') = $\underline{36{,}200\ \text{Cu ft}}$ > 34,777 ft³

Frank Evans
Q.E.T.
6-4-98

Standard 5"Inlet to 6" Tile Settup



GILBERT CLARK
LOT RUN OFF CONTROL
CHATHAM CO., N.C.

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Designed F. EVANS Date 6-98	Approved Frank Date
Drawn	Title Water C.E.T. 6-9-98
Traced	Title
Checked	Sheet No. 4 of 4 Drawing No.

PAGE 1 OF [illegible]

Station	B.S.	H.I.	F.S. or grade rod	Elev. or planned elev.	
			BK	[illegible]	
	DIV.	#	1 + 2		
	(Going West)		Channel	Ridge	Depth
[illegible]	[illegible]		10.[illegible]	6.2	[illegible]
0+50			[illegible]	6.2	3.8'
1+00			[illegible]	6.2	3.8'
1+50	0.56' / 2.25'		[illegible]	[illegible]	3.8'
2+00	= 0.25%		9.75	[illegible]	[illegible]
2+25			9.55	[illegible]	3.1
2+50			5.6		
Top of Hidden Bottom				7.2	
[illegible]				[illegible]	[illegible]
	(West [illegible])				
	10.1 − 3.5 =		[illegible]	[illegible]	[illegible]
	(Going East)				
[illegible]	Hidden [illegible]		[illegible]	[illegible]	[illegible]
[illegible]			10.04	6.2	3.8
[illegible]	[illegible]		[illegible]	6.5	3.5
[illegible]			9.79	6.4	3.4'
	= 0.25%				
2+00			9.60	5.7	3.9
2+40			9.80	[illegible]	
[illegible]			5.50	[illegible]	

Stone Around Hidden Bottom [illegible]

[illegible]

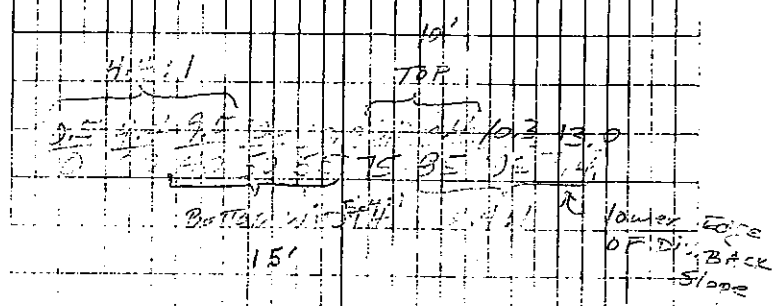
I Woods

[illegible] CHECK [illegible] LASER [illegible]

5-29-99

Note: Div. 1 & 2 [illegible]

Cross Sections

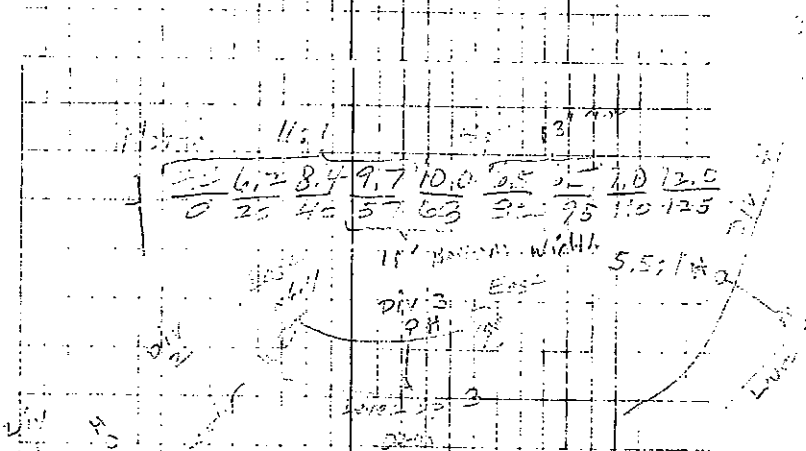


Lot to 6.3 ok

[illegible] 6" [illegible] – 56' Long

Bottom width – 15'

Top width – 10'



[illegible]

Gilbert Clark
[illegible]
CONSTRUCTION [illegible]

[illegible]

PAGE 2 5

Station	B.S.	H.I.	F.S. or grade rod	Elev. or planned elev.	
			[illegible]	[illegible]	
	LEVEL Spreader			# 1+2	
	(Going WEST)		Channel	Ridge	Depth
0+00	Outlet pipe		12.80	12.14	0.7'
0+50			12.88	12.20	0.7'
1+00			12.98	12.15	0.8'
1+50			13.00	12.14	0.9'
2+00	0.70' / 325'		13.30	12.24	1.1'
2+50	= 0.22%		13.38	12.17	1.2'
3+00			13.50	12.18	1.3'
3+25			13.50	12.20	1.3'
				SR	
Outlet pipe invert (From Div # 1+2)				11.8	
	(Going East)				
0+00	Outlet pipe		12.80	12.14	
0+50		14%	12.91	12.21	
1+00			12.94	12.20	
1+28				12.01	

Note: 1+2 combined
CROSS SECTION

Rock Apron
Length = 10'
Width at pipe = 12' ±
Width at lower end = 5' ±
Depth of Rip Rap 18"
Class B Erosion Stone
Geotextile used

PAGE 3

Gilbert [illegible]
LOT RUNOFF [illegible]
CONSTRUCT [illegible]

WORKS

Station	B.S.	H.I.	F.S. or grade rod	Elev. or planned elev.	
	Div	#			
	(Going West)		Channel	Ridge	Depth
0+00	Hickenbottom		13.13	9.5	3.6'
0+50			13.03	9.5	3.5'
	0.21%				
1+00			12.92	9.6	3.3'
1+29			12.57	9.6	3.0'
1+57			9.5		
Top of Hickenbottom				9.62	
Emergency Spillway				GB 9.9	RR 10.1
(Going East)					
0+00	Hickenbottom		13.13	9.5	3.6'
0+50			13.05	9.6	3.5'
0+70			12.74	10.1	2.6
0+90	Top of Berm end		10.14	ESW [illegible]	
	LEVEL SPREADER			#	3
	(Going West)				
0+00	Outlet Pipe approx 30'		17.67	17.10	
0+50			17.95	17.04	
1+00			18.15	16.99	
1+50			17.95	17.05	
1+63				16.71	
	(Going East)				
0+00	Outlet Pipe		17.67	17.10	
0+50			17.87	17.09	
1+00			[illegible]	17.10	
		0.31%			
1+24			18.05	17.10	
Outlet Pipe Invert				[illegible]	

Too

[illegible] — Done / 9.9 RR

Top [illegible] 6" [illegible] 50' long

[illegible]

(3.13 − 3.5 = 9.6 + 0.3 = 9.9)

10' [illegible] 6' [illegible]

4.0 5.8 7.4 8.9 10.8 12.4 12.9 13.2 11.3 9.2 9.3
0' 10' 20 30 40 50 60 70 80 90 96

6:1 8:1

11.8 14.3 15.9
[illegible] 120 130

Continue [illegible]

16.6 17.4 18.0 17.0 16.9 20.0
140 150 153 157 167 180

Back of [illegible]

Rock Area
[illegible] 10'
Width of pipe 6'
Width of [illegible] 12'
Depth of [illegible] 18"
Class [illegible]
Geotextile [illegible]

Gilbert Clark
LOT RUNOFF [illegible]
CONSTRUCTION [illegible]

WOODS

PAGE OF 5

Station	B.S.	H.I.	F.S. or grade rod	Elev. or planned elev.	
	DIV	#	4 RR	RR	
	(Going West)		Channel	Ridge	Depth
0+00	Hickenbottom		10.12	6.5	3.6'
0+50			10.00	6.3	3.7'
1+00	0.31%		9.8[illegible]	[illegible]	3.3'
1+50			9.35	[illegible]	3.2
1+93			3.9	Berm - end	
Top of Hickenbottom				7.0	GR
EMERGENCY Spillway				6.7	6.9 cut 0.2'
↳ 10.14 - 3.2 = 6.9 GR for ESW					
	(Going East)				
0+00	Hickenbottom		10.14	6.5	3.6
0+50			9.95	6.7	3.3'
1+00	.74 / 25		9.90	6.6	3.3'
1+50		3.0	9.72	6.7	3.0'
2+00			9.55	6.3	3.3
2+50			9.40	6.5	2.9'
2+[illegible]				6.7	ESW [illegible]

CROSS SECTION

[illegible] 6.9 ✓ ok

Tile line [illegible] 50' long
Bottom width - 21'
Exceed [illegible] width [illegible]

5.3:1

5.3	3.7	10.1	9.9	6.5	6.6	12.9
0	15	25	46	56	[illegible]	[illegible]

[illegible] 21' [illegible]

Gilbert Clark
LOT RUNOFF CONTROL
CONSTRUCTION CHECK

WOODS

PAGE 5 of 5

Station	B.S.	H.I.	F.S. or grade rod	Elev. or planned elev.	
	LEVEL [illegible] # 4				
	(Going West)		RR Channel	RR Ridge	Depth
0+00	Outlet Pipe		12.63	12.04	0.6'
0+50			12.05	12.05	0.6'
1+00	0.32 / 150'		12.83	12.03	0.8'
1+50	= 0.21%		12.95	12.00	1.0'
1+70			12.45	11.80	0.7'

Outlet Pipe Invert (From Div. 4) 12.1

(Going East)

0+00			12.03	12.04	0.6'
1+50			12.77	11.97	1.3'
1+00	0.57 / 175'		12.91	12.00	0.9'
1+50	= 0.33%		13.15	12.02	1.2
1+75			13.20	12.04	

Filter Strips	Width
[illegible]	25'
Div 3	25'
Div 4	25'

CROSS SECTION

Rock Apron
Length = 9' +
Width at pipe = 6' +
Width at lower end = 12'
Depth of Rip Rap 18"
Class B [illegible] Stone ✓
Geotextile used ✓

[illegible] and [illegible] Outlets Are [illegible] except [illegible] From [illegible] (Designer) as shown on sheet [illegible] Phone conversation 5-3-99. Most of [illegible] pertain to Division # 4 and was [illegible] between Fencing and Branch

[illegible] 6/1/99

Additions to Construction Check
for Gilbert Clark T-724 June 1, 1999

Heavy Use Area Dimensions:

Lot #2 = L = 125' = 1875 sq ft = 208 sq yd
W = 15'

medium grading performed; Geotextile cloth placed; crusher run stone used

Lot #3 = L = 147' = 2205 sq ft = 245 sq yd
W = 15'

medium grading performed; Geotextile cloth placed; crusher run stone used

Fencing Lengths:

Lot #2 = 837'
Lot #3 = 450'
Lot #4 = 732'

This fencing is 5 strands of high tensile electric wire.

Additional fencing for walkway = 205'

Hickenbottom pipe:

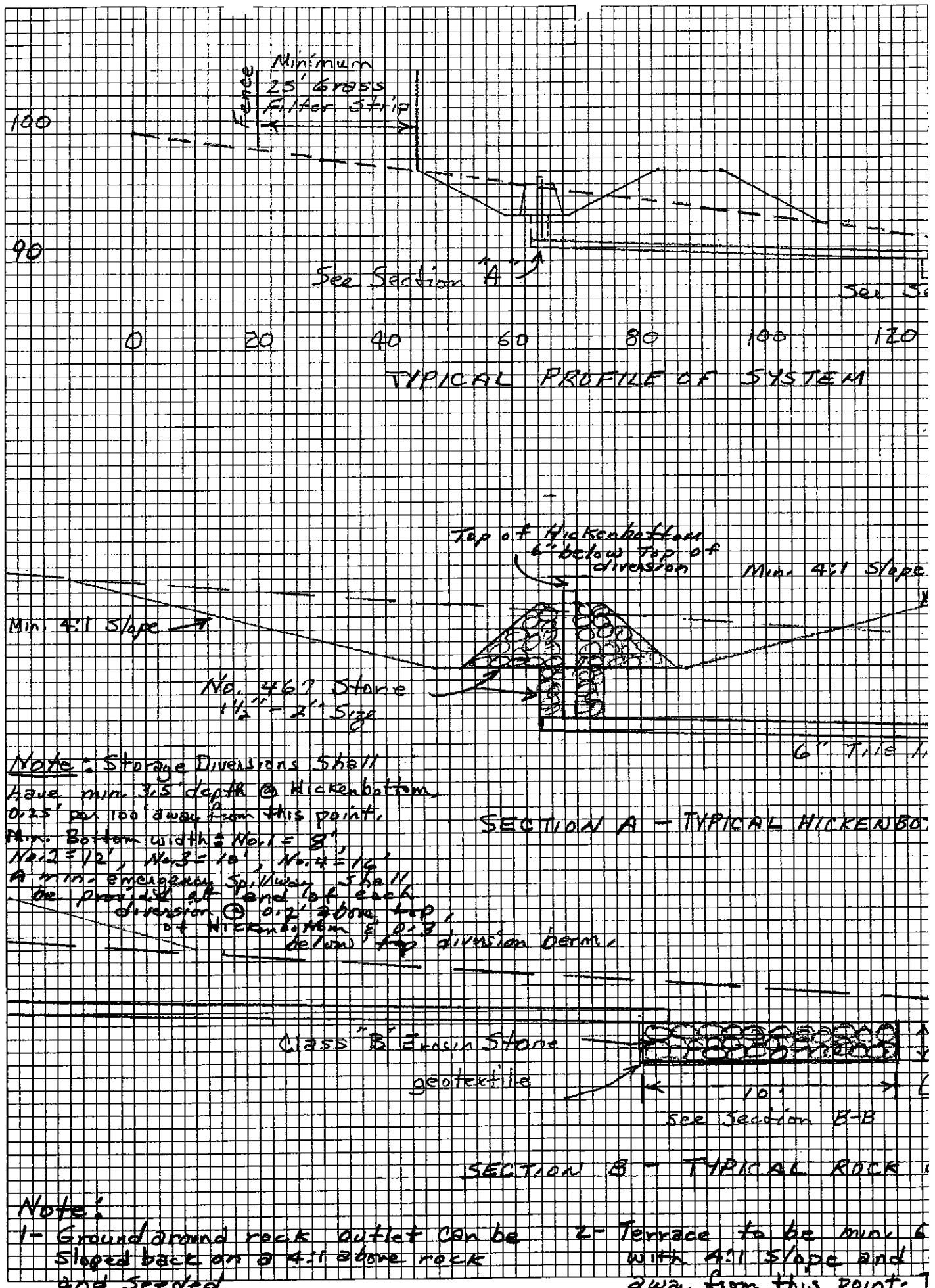
Pipe from diversion's Hickenbottom to level spreader @ lower elevation; Lengths:

Diversion 1+2 = 56 Lft
Diversion 3 = 50 Lft
Diversion 4 = 50 Lft

This pipe is 6" corrugated PVC with a PVC fitting (tee) connecting it to each Hickenbo

All disturbed areas were limed and fertilized. Seeded with blend of fescue, pearl millet and oats; then mulched with straw

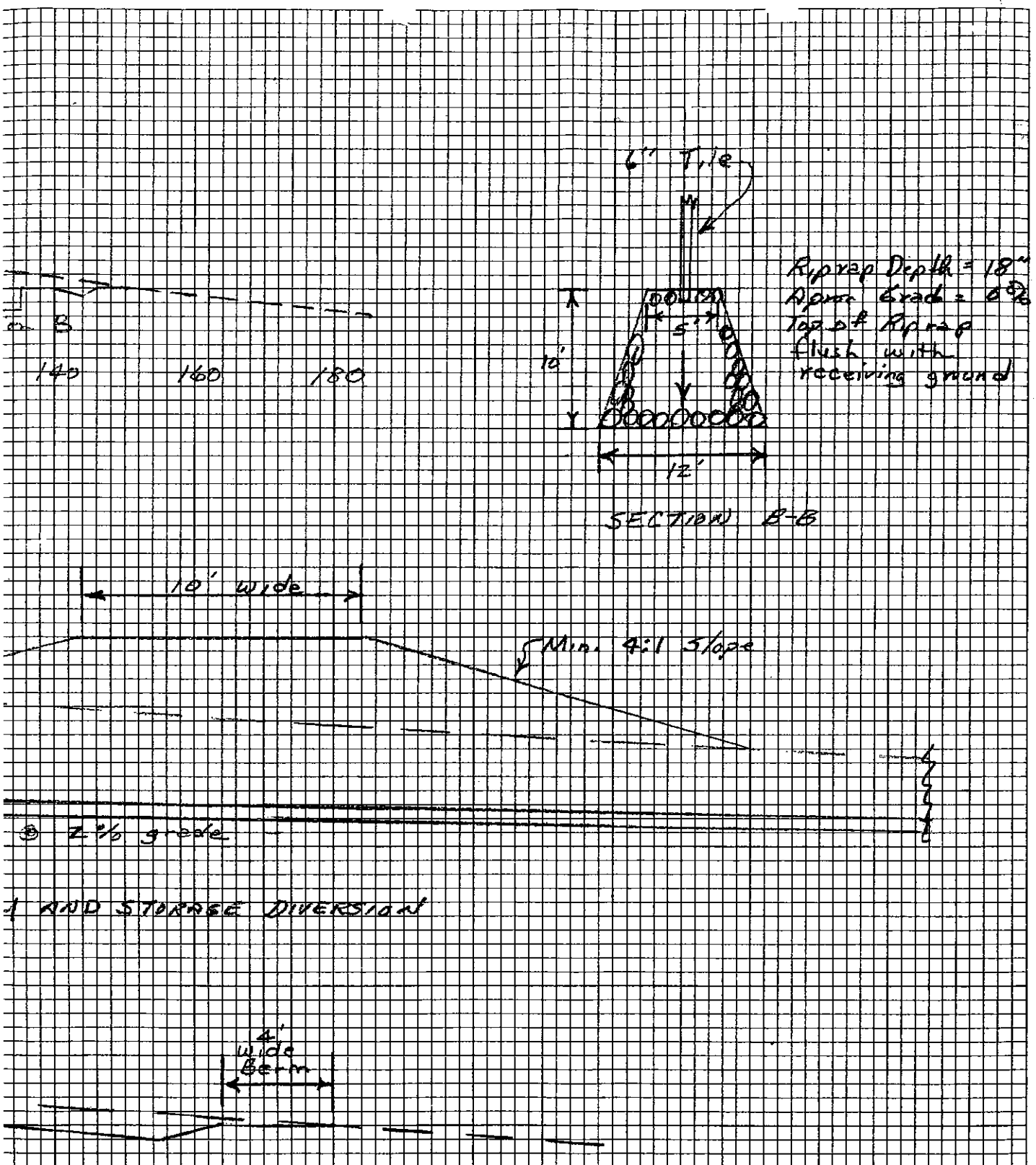
DIETZGEN CORPORATION
MADE IN U.S.A.
NO. 3410-10 DIETZGEN GRAPH PAPER
10 X 10 PER INCH



Note: Storage Diversions Shall have min. 3.5' depth @ Hickenbottom, 0.25' per 100' away from this point. Min. Bottom width = No. 1 = 8', No. 2 = 12', No. 3 = 16', No. 4 = 16'. A min. emergency spillway shall be provided at end of each diversion @ 0.2' above top of Hickenbottom & 0.3' below top of diversion berm.

Note:
1- Ground around rock outlet can be sloped back on a 4:1 above rock and seeded

2- Terrace to be min. 6 with 4:1 slope and away from this point. level from end to end



AND STORAGE DIVERSION

LET AND TERRACE LEVEL SPREADER

epth 2' rock outlet
feet Slope per 100'
ee berm to be perfectly

GILBERT CLARK
LOT RUN OFF CONTROL
CHATHAM CO. NC

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Designed F. Evans 6-98	Date	Approved	Date
Drawn		Title	
Traced		Title 6-4-98	
Checked		Sheet No. 1 of 4	Drawing No.

90
90
90
TERRACE LEVEL SPREADER
Pipe No.1
DIVERSION No.1
100
LOT No.1
100' Temp.
100
DIV
LOT No.2
100' temp.
190' x 170' = 32,300 sq.ft. 0.74 Ac.
265' x 175' = 35,875 sq.ft. 0.83 Ac.
1" = 60'

1" = 60'

$\frac{220' \times 240'}{2} = 26400\ \square'$

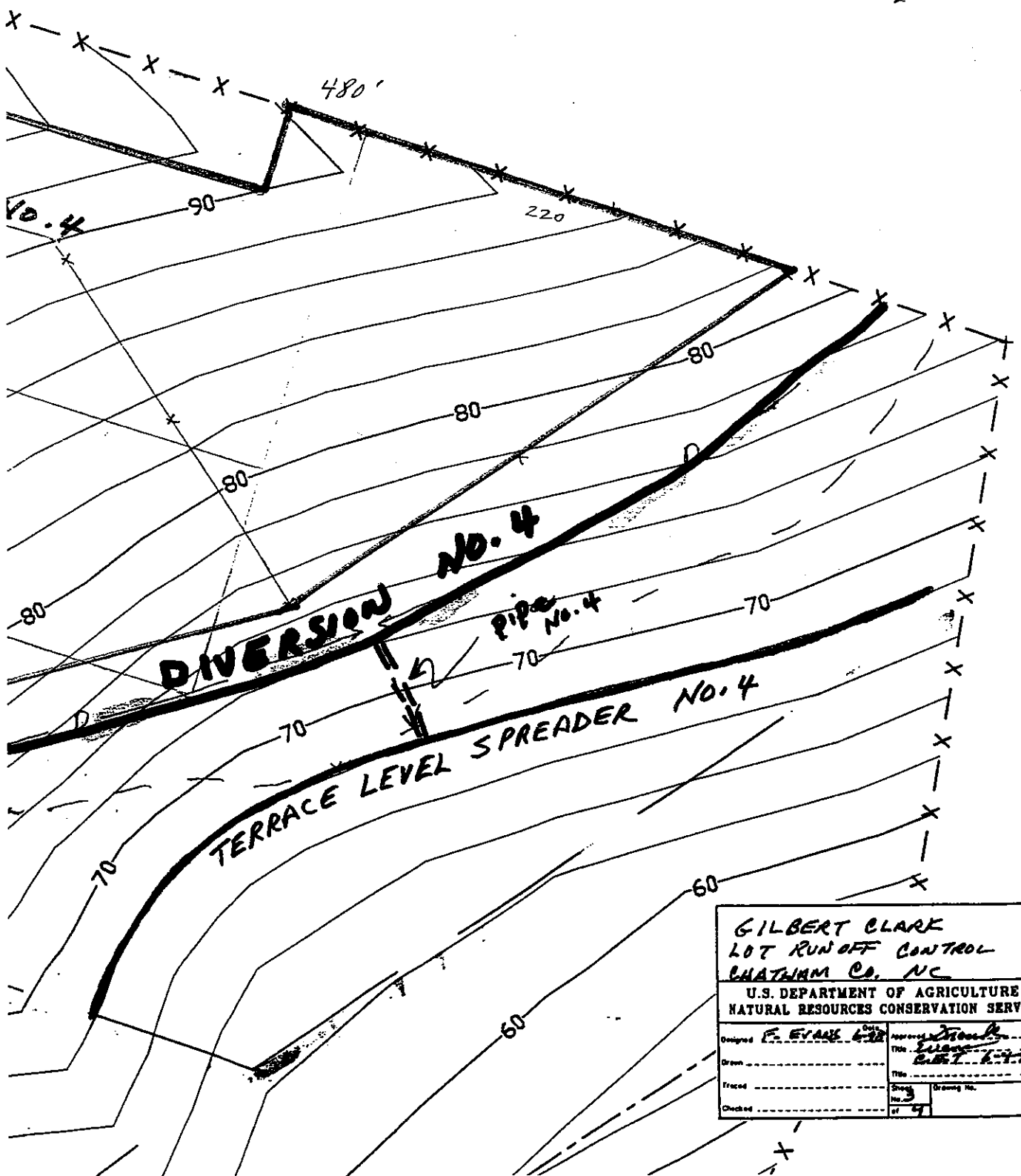
$250' \times 145' = 36250\ \square'$

$\frac{240+200}{2} \times 100 = 22,000\ \square'$

$\frac{160 \times 90}{2} = 7200\ \square'$

$91,850 =$

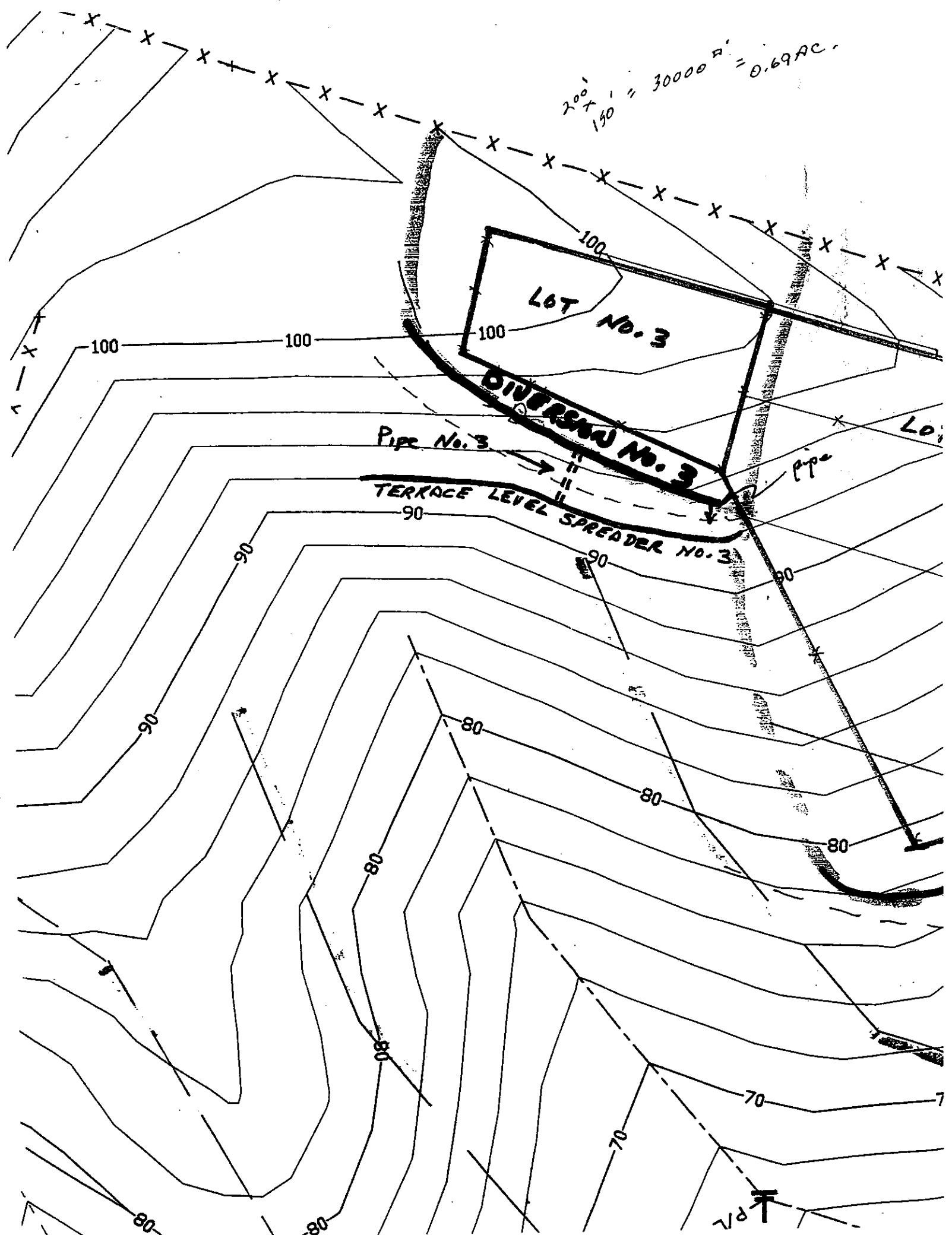
2.1 Acs.

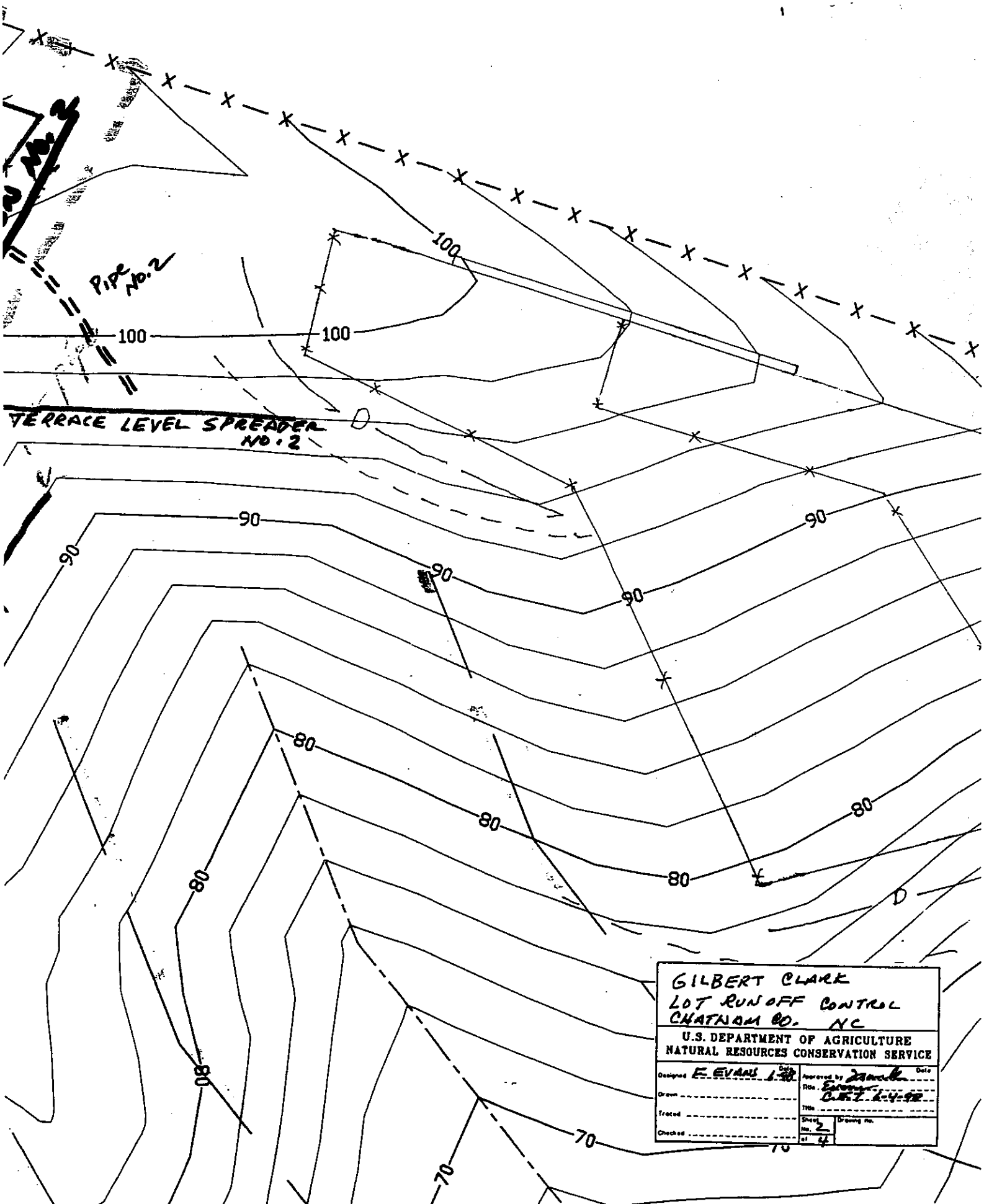


GILBERT CLARK
LOT RUNOFF CONTROL
CHATHAM CO. NC

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Designed F. EVANS 6-98 Date
Drawn
Traced
Checked
Approved Date
Title
Title
Sheet No. 3 of 4
Drawing No.


200' x 150' = 30000 ft² = 0.69 AC.
LOT No. 3
DIVERSION No. 3
Pipe No. 3
TERRACE LEVEL SPREADER No. 3
Pipe
100
90
80
70


PIPE NO. 2
100
100
TERRACE LEVEL SPREADER NO. 2
90
90
90
90
80
80
80
80
70
70
GILBERT CLARK
LOT RUNOFF CONTROL
CHATHAM CO. NC
U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
Designed E. EVANS 1-92
Drawn
Traced
Checked
Approved by
Title
Date 2-4-92
Sheet No. 2 of 4
Drawing no.