

BENCH MARK

Elevation _____

Description _____

IOWA STANDARD DRAWING

WATERWAY PLAN

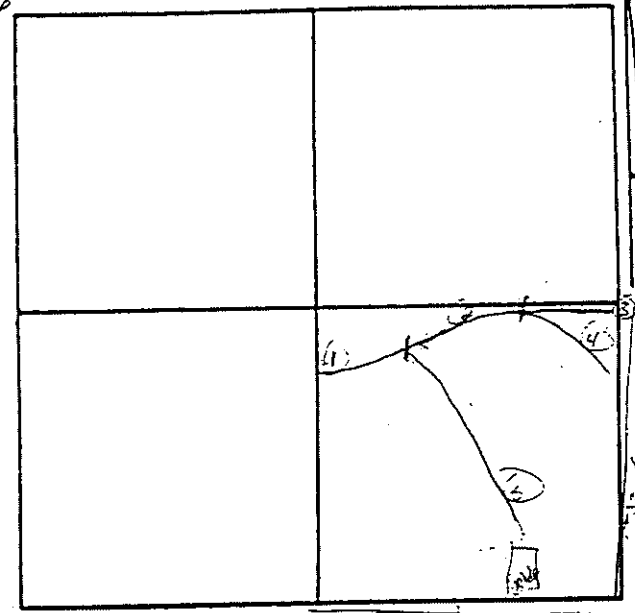
STANDARD DRAWING NO. 653

DATE 3-87

SHEET 1 of 2

Location Map
(Show Section center or corner)

North



Description of Underground Utilities Present:

Owner Mary Lou Hall

Location Spring Creek Sec 36 T 25 N, R 16 W
County, Iowa

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed <u>C.R.F.</u>	Date _____	Approved By _____
Drawn <u>C.R.F.</u>	Title _____	_____
Stated _____	_____	_____
Checked _____	_____	_____

WATERWAY CONSTRUCTION SPECIFICATIONS

All trees, brush, stumps, debris, and other objectionable foreign material shall be removed from the site and disposed of so that they will not interfere with construction or proper functioning of the waterway. In fill sections, trees and stumps may be sawed off at a height not exceeding 12 inches above natural ground, provided that the final grade is four feet or more above the top of the stumps.

Where infertile subsoils will be exposed by construction operations, topsoil should be stripped, stockpiled, and spread on infertile areas when excavation is completed. Areas to be topsoiled should be undercut so that the finished surface is at design grade after topsoiling is complete.

The waterway shall be constructed to specified width, depth and grade. The quarter points of a parabolic waterway shall be constructed to the required depth plus or minus 0.2 feet. The center shall be the lowest point. For trapezoidal waterways, the bottom of the waterway shall be constructed to required depth plus or minus 0.2 feet for the full bottom width.

All fills shall be placed in layers of 9 inches or less and each layer compacted by the wheels and/or tracks of the construction equipment or by equivalent methods. All excavation not needed for construction shall be spread or disposed of in a manner which will not interfere with the functioning of the waterway.

The area adjacent to the upper end of the waterway shall be graded to divert upper watershed flows into the newly constructed waterway. The outlet end of the waterway shall be left in a stable condition after construction is complete. Temporary diversions may be constructed around the top and sides of the waterway to divert runoff water from the new grass seeding until the grass is well established. The diversions must be thoroughly removed as soon as vegetation is established.

Seedbed preparation and seeding, liming, fertilizing and mulching rates shall comply with the attached seeding plan.

The Soil Conservation Service is not responsible for locating existing tile lines. The landuser and/or contractor have responsibility for locating and properly connecting lines cut during installation of this practice. The landuser and/or contractor is responsible for notifying underground utilities of planned construction. Utilities will be adequately located before construction begins.

I certify that this practice has been constructed in accordance with this plan and specifications and the attached checkout notes.

Contractor _____

Date _____

IOWA STD DWG NO. 653

Sheet 2 of 2

[illegible]

CONSTRUCTED CROSS SECTIONS

Cross Section at Station _____
Rod Reading on Bench Mark or Hub at Sta _____ : _____
CL

[illegible]

Cross Section at Station _____
Rod Reading on Bench Mark or Hub at Sta _____ : _____
CL _____

[illegible]

Cross Section at Station _____
Rod Reading on Bench Mark of Hub at Sta _____ : _____

[illegible]

Cross Section at Station _____
Rod Reading on Bench Mark or Hub at Sta _____ : _____

[illegible]

Take "As Built" cross sections at 400 ft. intervals or as otherwise designated.

Tract # T1020Landowner Mary Lou Hall

Design and Construction Record Sheet

Small Grassed Waterways (Drainage Area 30 acres or less)

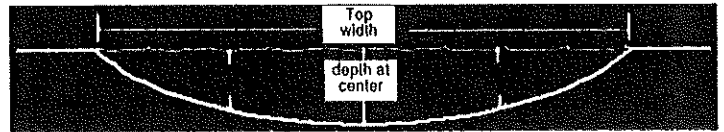
Instructions:

Design

- 1** Record landowner and tract number on upper right corner. Record field numbers for the proposed waterways from the conservation plan in the first column on the left below.
- 2** Record the waterway number assigned on the conservation plan map.
- 3** Record drainage area in acres for the waterway. See determination method in SCS job sheet.
- 4** Record slope of waterway.
- 5** Record needed top width in feet (obtain from design chart in Small Grassed Waterways Job Sheet) for drainage area and zone applicable.
- 6** Record needed waterway depth in feet from small waterway design chart.

Construction

- 7** Record the constructed length of the waterway in feet.
- 8** Record the actual top width of the waterway, in feet.
- 9** Record the waterway center depth, in feet.
- 10** Record waterway depth half way to center (see cross section drawing).



Shape a parabolic waterway so that the depth halfway to the center is 3/4 of the depth at the center. (Example - if center depth is 1 foot, depth halfway to center is .75 foot.)

Design Records						Construction Records			
1 Field #	2 Waterway #	3 Drainage Area	4 Slope	5 Top Width	6 Depth	7 Length	8 Top Width	9 Depth at center	10 Depth halfway to center
Example: 1	1	8	2	36	1.2'	600'	36'	1.2'	.9'
3	3	9	4	30	1.0'	400			
3	4	10	3	30	1.0'	900			
2	5	18	3	30	1.1'	900			

Seed and Fertilizer Records

waterway number(s) _____

species / lbs. pure live seed/ac

species 1 _____ / _____

species 2 _____ / _____

species 3 _____ / _____

Nitrogen #/ac _____ Phosphate (P₂O₅) #/ac _____

Potash (K₂O) #/ac _____ Lime #/ac _____

Seed and Fertilizer Records

waterway number(s) _____

species / lbs. pure live seed/ac

species 1 _____ / _____

species 2 _____ / _____

species 3 _____ / _____

Nitrogen #/ac _____ Phosphate (P₂O₅) #/ac _____

Potash (K₂O) #/ac _____ Lime #/ac _____

I certify this/these waterways have been designed and constructed according to the records furnished on this sheet.

Seeding was completed (check one):

_____ 3/1-5/15 _____ 4/1-6/1
 _____ 8/1-9/15 _____ Other Date

Note: If this record form is used for cost-share purposes, make a copy and return with receipts to the SCS office; SCS must certify upon completion.

Signature _____

(check one) _____ Landowner _____ Contractor
 _____ Other _____ Tenant

SCS Signature _____

Design and Construction Record Sheet

Grassed Waterways with Drainage

Areas from 30 to 100 Acres

Tract # 1020

Landowner Mary Smith

Instructions:

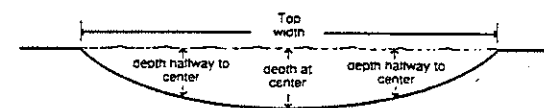
Design

- 1** Record landowner and tract number on upper right corner. Record field numbers for the proposed waterways from the conservation plan in the first column on the left below.
- 2** Record the waterway number assigned on the conservation plan map.
- 3** Record drainage area in acres for the waterway.
- 4** Record average slope of the watershed (drainage area).
- 5** Record slope of the waterway itself.
- 6** Record soil group from map on page 4 of booklet.
- 7** Record rainfall zone from map on page 4.

- 8** Note design column number used from step 6f on page 5 of waterway booklet.
- 9** Record needed top width in feet (obtain from design chart). See step 6, page 5 and appropriate table on page 6, 7 or 8.
- 10** Record needed waterway depth in feet from appropriate design chart.

Construction

- 11** Record constructed length of waterway, in feet.
- 12** Record actual top width of waterway, in feet.
- 13** Record the waterway center depth, in feet.
- 14** Record waterway depth half way to center (see cross section drawing) for both sides of waterway.



Shape a parabolic waterway so that the depth halfway to the center is 3/4 of the depth at the center. (Example - if center depth is 1 foot, depth halfway to center is .75 foot.)

Design Records

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Field #	Waterway Number	Drainage Area	Watershed Slope (%)	Waterway Slope (%)	Soil Group	Rainfall Zone	Design Column #	Top Width	Depth	Length	Top Width	Depth at center	Depth halfway to center (right) (left)
2	1	91	5	2	B	C	2	50	1.5	800			
2	2	35	5	2	B	C	2	36	1.4	1050			

Construction Records

Seed and Fertilizer Records

waterway number(s) _____ species / lbs. pure live seed/ac

species 1 _____ / _____

species 2 _____ / _____

species 3 _____ / _____

Nitrogen #/ac _____ Phosphate (P₂O₅) #/ac _____

Potash (K₂O) #/ac _____ Lime #/ac _____

I certify this/these waterways have been designed and constructed according to the records furnished on this sheet. Seeding was completed (check one):

_____ 3/1-5/15 _____ 4/1-6/1

_____ 8/1-9/15 _____ Other Date

Signature _____ Date _____

(check one) _____ Landowner _____ Contractor

_____ Other _____ Tenant

Note: If this record form is used for cost-share purposes, make a copy and return with receipts to the SCS office; SCS must certify upon completion.

Signature _____ Date _____