

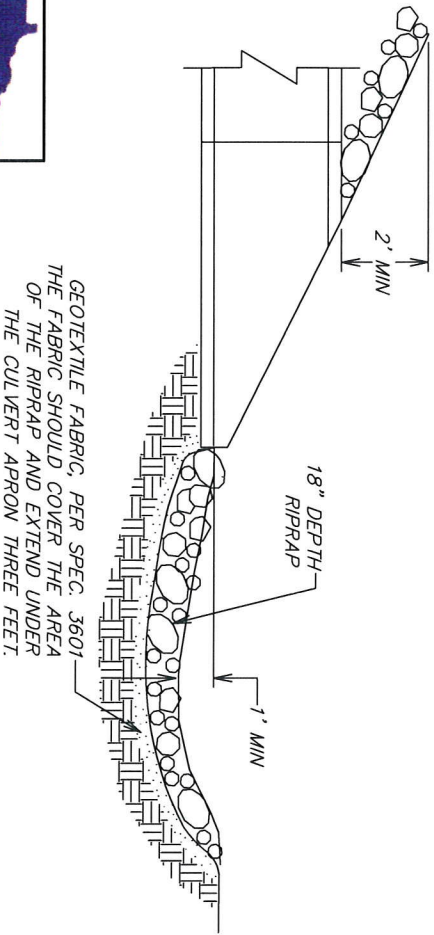
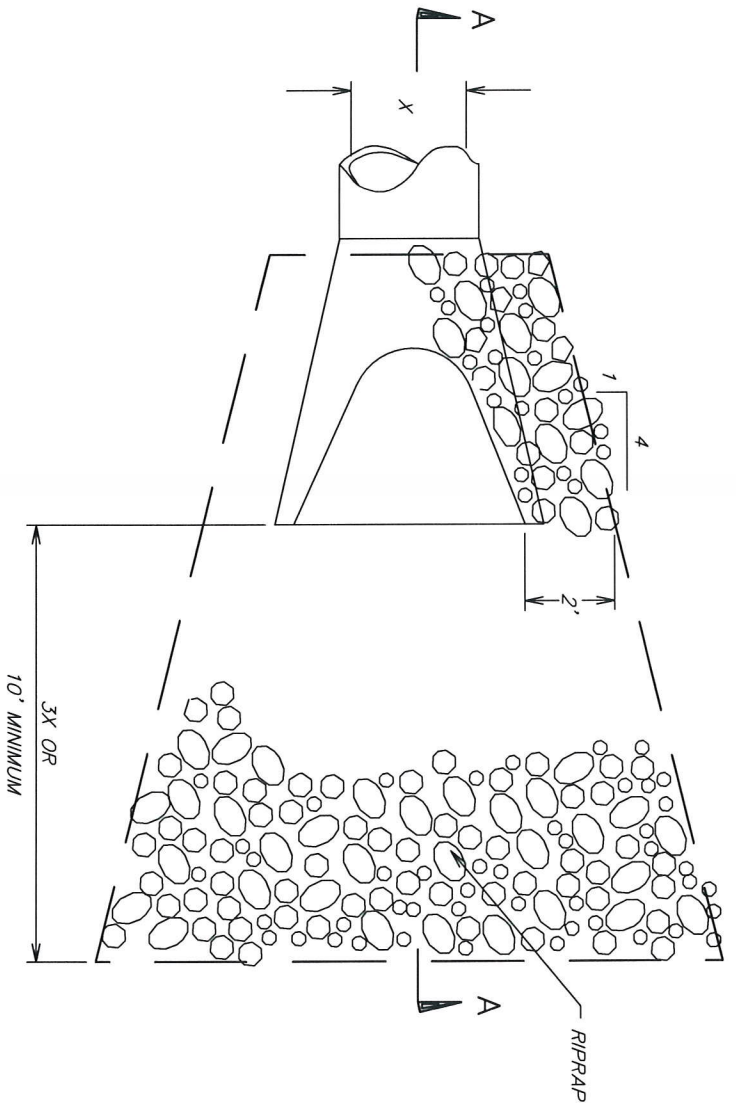
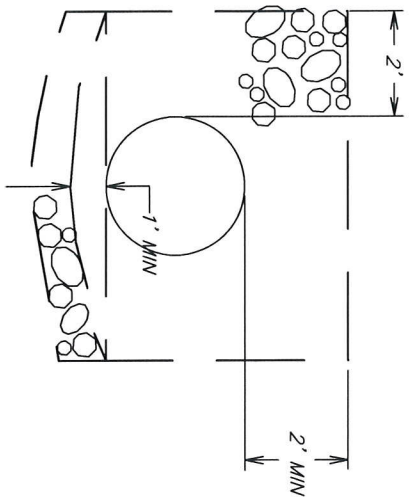
DITCH CROSSING POLICY

A permit must be obtained from the Drainage Authority prior to constructing, extending or improving all private and public field crossings on a County Drainage System under the jurisdiction of Freeborn County. The following design requirements and conditions shall be met prior to a permit being issued:

1. Culvert size shall be determined by a Licensed Engineer as not to impede flow.
2. The culvert shall be bedded according to manufactures recommendations.
3. Adequate cover over the top of pipe shall be provided as per manufactures recommendations.
4. Side slopes shall be established at a minimum of 2 foot horizontal to 1 foot vertical.
5. Rip rap shall be placed immediately following installation as per the attached drawing (Typical Field Crossing Culvert Rip Rap Detail)
6. Immediately following installation of the culvert all exposed soil shall be seeded and stabilized with straw mulch or erosion control blanket.
7. All repairs and damage to the drainage system resulting from the failure of the crossing shall be the expense of the crossing owner.
8. All Freeborn County Drainage System open ditches have a mandatory permanent one rod (16.5') grass conservation buffer strip from the top edge of the ditch bank out. This buffer strip is not to be built on or destroyed.
9. A minimum of 30 feet shall be maintained between the top of the ditch bank and the edge of any permanent roadway.
10. All engineering, legal, administrative and other fees resulting from the review and/or installation of said culvert including inspection fees are to be born by the crossing owner.
11. See attached examples of Open Ditch Floodwater Inlet Installation, Tile Outlet Pipe Installation, Field Crossing Culvert Rip Rap Detail and Access Road Tile Replacement drawings.
12. Boring under open water shall be a minimum of 4 feet below the original established ditch bottom allowing for future dredging, cleaning or improvement. A minimum of 12 inches of top cover below the "as designed" or "as constructed" depth of a Public Drainage Systems tile is required. A minimum of 12 inches of vertical separation will be maintained between pipeline, underground power lines, or various cables and the Public Drainage Tile, unless adequate measures are taken to protect the present and future integrity of pipe and tile and only with the approval of the Drainage Inspector.
13. Repair of Damaged and Adversely Affected Tile Lines under the Jurisdiction of Minnesota Statute Section 103E. If underground Public Drainage Systems are damaged by construction activity, the Public Drainage System will be repaired in a manner approved by the Drainage Inspector that assures that the Public Drainage System is in proper operating condition at the point of repair.

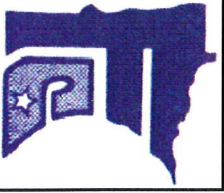
14. For a period of five years following completion of construction it will be presumed that any damage, failure, wet areas, tile breakage or other problems with a Public Drainage System beyond normal expected ordinary problems, was caused by the construction or activities involved with the construction. Unless the company or individual can prove that damages to a Public Drainage System were not caused by the construction and/or activities involving the construction, the company or individual shall repair the Public Drainage System, to the satisfaction of the Drainage Authority.
15. The Freeborn County Land Use Ordinance No. 15 will be the supporting document for the Freeborn County Ditch Crossing Policy.

Freeborn County has a 100 foot construction easement on all open ditches from the center of the ditch and from the centerline of County tile lines.



GEOTEXTILE FABRIC, PER SPEC. 3601
 THE FABRIC SHOULD COVER THE AREA
 OF THE RIPRAP AND EXTEND UNDER
 THE CULVERT APRON THREE FEET.

NOTE:
 RIP RAP SHALL BE PLACED BOTH
 UPSTREAM AND DOWNSTREAM OF THE CULVERT.



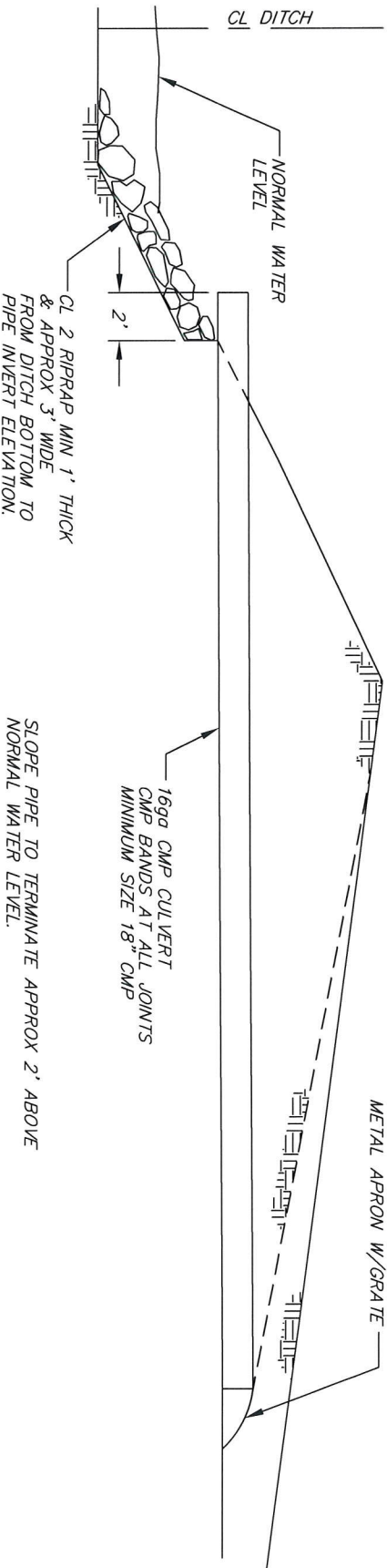
NOT TO SCALE

JHS
 JONES, HAUGH & SMITH, INC.
 CONSULTING ENGINEERS & LAND SURVEYORS
 515 SOUTH WASHINGTON AVENUE
 PH. 507-373-4876
 ALBERT LEA, MINNESOTA 56007

DESIGNED: _____
 DRAWN: SAP
 CHECKED: _____
 DATE: OCTOBER 2009
 FILE NO.: FrederickCounty
Drainage

FREERORN COUNTY, MN
TYPICAL
FIELD CROSSING CULVERT
RIP RAP DETAIL

SHEET
 1
 OF
 1

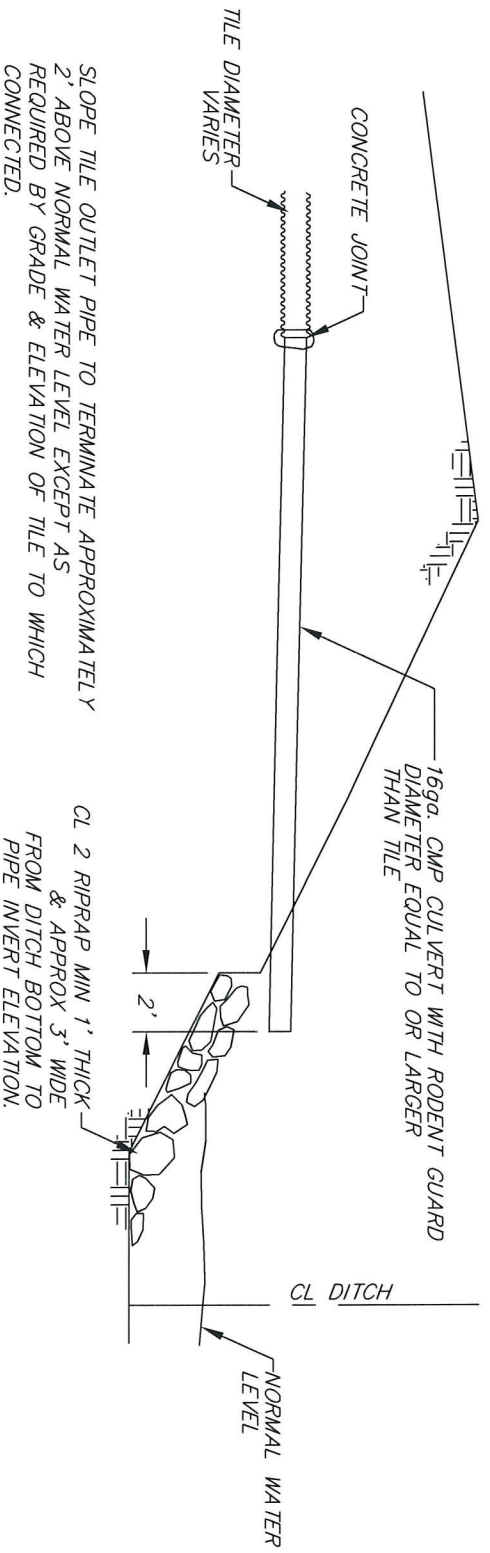


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DESIGNED: _____
 DRAWN: SJP
 CHECKED: _____
 DATE: OCTOBER 2009
 FILE NO: Frederick County

FREEBORN COUNTY, MN
TYPICAL
OPEN DITCH FLOODWATER
INLET INSTALLATION



SLOPE TILE OUTLET PIPE TO TERMINATE APPROXIMATELY 2' ABOVE NORMAL WATER LEVEL EXCEPT AS REQUIRED BY GRADE & ELEVATION OF TILE TO WHICH CONNECTED.

CL 2 RIPRAP MIN 1' THICK & APPROX 3' WIDE FROM DITCH BOTTOM TO PIPE INVERT ELEVATION.



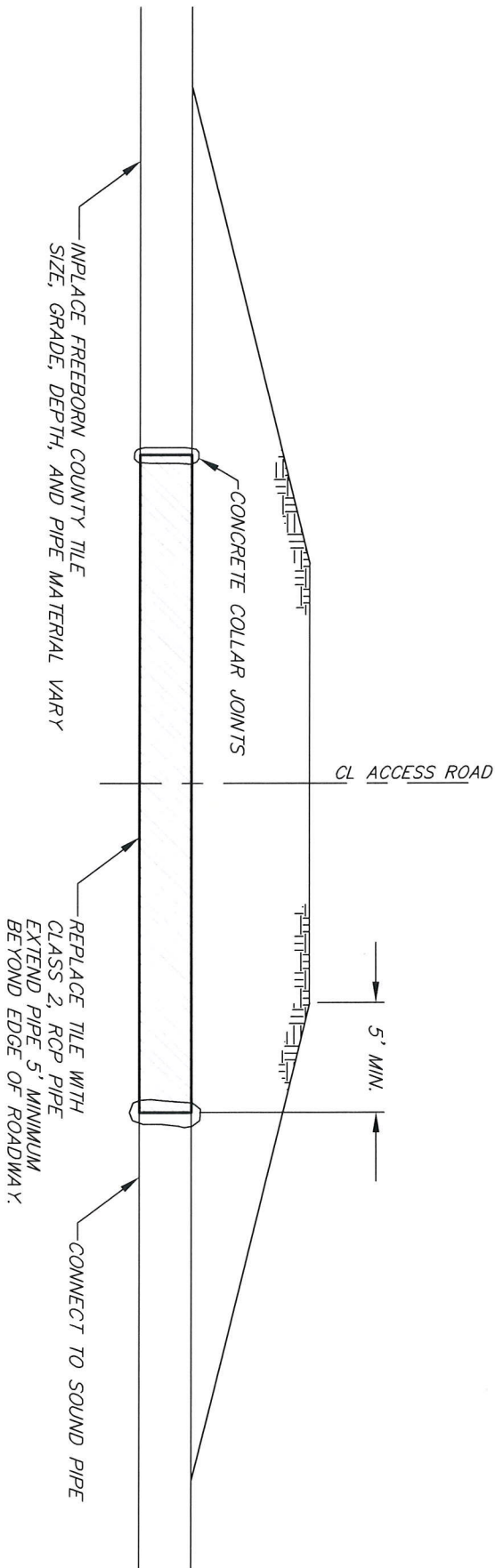
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 CONSULTING ENGINEERS & LAND SURVEYORS
 PH. 507-373-4876
 515 SOUTH WASHINGTON AVENUE
 ALBERT LEA, MINNESOTA 56007

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FREEBORN COUNTY, MN
 TYPICAL
 TILE OUTLET PIPE
 INSTALLATION

SHEET 1 OF 1



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DRAWN: *S.P.*
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DATE: OCTOBER 2009
FILE NO. *FreebornCounty*
090108.dwg

FREEBORN COUNTY, MN
TYPICAL
ACCESS ROAD
TILE REPLACEMENT

SHEET
1
OF
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