



Mr. Joe Parman
VAN BUREN COUNTY DRAIN COMMISSIONER
219 East Paw Paw Street, Suite 3A
Paw Paw, MI 49079-1432

PERMIT TO CONNECT _____ COUNTY DRAIN

The undersigned being owner of _____
 (Description of Property)

does hereby make application to the Van Buren County Drain Commissioner for the privilege of tapping and connecting with the _____ Drain in the Township of _____ Van Buren County, Michigan.

This connection is for the purpose of connecting Storm Drainage only.

It is understood that the applicant will leave the connecting trench open until inspection has been made by the Van Buren County Drain Commissioner or his agent.

Date: _____ 20 ____

 Signed

 Address

Permission granted _____ 20 ____

 Van Buren County Drain Commissioner

Inspection of this connection has been made and found to be satisfactory, this _____ day of _____ A.D., 20 ____

 Inspector

The Wye or opening for this connection is located, _____

 (To be filled in by Drain Commissioner if Known, Otherwise by the Inspector after Installation).

Inspection fee for this connection is \$75.00 to be paid prior to the inspection.

OFFICE HOURS: MONDAY THROUGH FRIDAY 8:30 A.M. TO 5 P.M.

SUMMARY OF REQUIREMENTS FOR CONNECTION TO A COUNTY DRAIN

1. Completed permit application.
2. Permit fee.
3. Adequate outlet evaluation in accordance with "General Requirements for Storm Water Discharge" in Part 3, Section IV of the Van Buren County Drain Commissioner Subdivision Drainage Rules and Storm Water Design Criteria.
4. Discharge requirements:
 - a. Storm water connection:
 - Pre-treatment (trash and sediment removal, spill containment for "hot-spots")
 - Treatment (water quality and stream protection volumes met)
 - Flood control (detention requirements met)
 - b. Floor drain connection:
 - Pre-treatment (spill containment)
5. Type of connection:
 - a. Ditch outlet to an open channel county drain
 - b. Pipe outlet to an open channel county drain
 - c. Ditch inlet to an enclosed county drain
 - d. Pipe connection to an enclosed county drain
6. Layout and design in accordance with "Design Standards" in Part 4, of the Van Buren County Drain Commissioner Subdivision Drainage Rules and Storm Water Design Criteria. Applicable paragraphs are repeated here:

Ditch Outlet to an Open Channel County Drain

1. Grassed waterway flow velocities shall be neither siltative nor erosive. The minimum velocity for vegetated channels shall be 1.5 ft/s. The maximum velocity shall be 4 ft/s. Riprap protection or equivalent erosion control measures shall be used where the velocity exceeds 4 ft/s, up to maximum allowable design velocity of 8 ft/s.
2. Where maximum velocities are exceeded due to channel slope, rock check dams or grade control structures shall be used to reduce overall flow velocities.
3. Erosion control blankets shall be used to protect bare channels.
4. Permanent erosion protection will be placed at bends, drain inlets and outlets, and other locations, as needed, in all open ditches.
5. Outlets into the grassed waterway shall enter an angle of 90 degrees or less with the direction of flow.

Pipe Outlet to an Open Channel County Drain

1. Outlet protection shall be provided, as necessary, to prevent erosion, based on the maximum velocities given in Section IV: Grassed Waterways.
2. All outlets will be provided with flared end sections.
3. Outlet protection shall employ engineered riprap design. Median riprap size, dimensions, and total quantity in square yards shall be determined based on pipe size, design velocity, and discharge. All riprap shall be underlain with approved geotextile fabric. Other materials used to prevent scour will be reviewed and approved, as necessary.
4. The soils above and around the outlet shall be compacted and stabilized to prevent piping around the structure. Riprap protection shall extend a minimum of 1-foot above the top of the pipe.
5. Outlets into the grassed waterway shall enter at an angle of 90 degrees or less with the direction of flow.
6. Outlets to ditches will be placed within two feet of the average low water elevation of the water course.

Ditch Inlet to an Enclosed County Drain

1. Grassed waterway flow velocities shall be neither siltative nor erosive. The minimum velocity for vegetated channels shall be 1.5 ft/s. The maximum velocity shall be 4 ft/s.

Riprap protection or equivalent erosion control measures shall be used where the velocity exceeds 4 ft/s, up to a maximum allowable design velocity of 8 ft/s.

2. Where maximum velocities are exceeded due to channel slope, rock check dams or grade control structures shall be used to reduce overall flow velocities.
3. Erosion control blankets shall be used to protect bare channels.

Pipe Connection to an Enclosed County Drain

1. Connections to manholes shall be made with a resilient connector for pipe diameters 24 inches or less.
2. Special details will be required for manholes placed on pipe 48 inches in diameter and larger.