

MUSCATINE COUNTY INTEGRATED ROADSIDE VEGETATION MANAGEMENT GENERAL PLAN

I. Preface

A. Update/ Version

Integrated Roadside Vegetation Management Program since 1989
Update No. 3 of Muscatine County IRVM Plan

B. Contributors to the Plan

Bruce Bryant – Roadside Manager
Bryan Horesowsky – Assistant Engineer
Keith White – County Engineer

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II. Executive Program

A. Goals

- a. Preserve and provide safe, functional and environmentally improved corridors of travel throughout the county.
- b. Utilize a long-term integrated management program that promotes desirable, self-sustaining plant communities. Encourage those plant communities that are native to Iowa through preservation and re-establish whenever practical.
- c. Make more efficient and effective use of chemicals as a control method of undesirable plants.
- d. Enhance the scenic qualities of the roadsides and their value as roadside habitat.

B. Program History

- a. Muscatine County implemented an IRVM plan in 1989 to better manage our roadside vegetation while providing safe corridors for travel.
- b. The program was started as a joint effort between Secondary Roads and the County Conservation Board, funded through Secondary Roads.
- c. Chris Bass was the first Road side Manager in Muscatine Co. from 1989 to 1991, Bruce Bryant was hired in 1991 and is there presently.
- d. In about 1999 the IRVM program became totally ran be Secondary Roads.

C. IRVM Decision Making Process

- a. County departments participating in the IRVM program continue to use the latest IRVM methodologies to most appropriately fix the problems at hand. Actions that are most consistent with the goals and concepts of roadside vegetation management in this plan are considered first priority.

D. Executive Summary

- a. Muscatine County's vegetation management goals must meet certain safety and functional requirements before aesthetic, recreational, or economic considerations can be addressed. These are to maintain a clear zone recovery area, meet minimal sight distance requirements and provide for erosion control. We are also required by Iowa law to mow or otherwise control noxious weeds. Through the use of IRVM, we should be able to meet the prime purposes, provide a safe corridor for travel, and address other desirable uses for roadside vegetation.

E. Map

- a. Please refer to Figure 1 in the Appendix

F. Program Type

- a. Muscatine County's IRVM program is housed in the Secondary Roads Department. The program is run through Secondary Roads.

III. Jurisdictional Recognition and Approval

A. Management

- a. County Engineer - Makes decisions where road construction projects will take place throughout the county. Reviews IRVM funding and budgetary needs on an annual basis. Aides in deciding IRVM operations.

- b. Assistant County Engineer - Assists County Engineer with the planning and construction of projects. Applies for funding and materials through the LRTF (Living Roadway Trust Fund). Assists in overseeing IRVM operations.
- c. Maintenance Supervisor - Assigns tasks to maintenance employees on a daily basis. Helps to oversee field IRVM operations. Identifies roadway issues that require a corrective action. Utilizes IRVM methodologies and practices to determine plan of action for a variety of erosion and seeding issues.
- d. Roadside Manager and maintenance staff carry out assigned tasks.

B. Board of Supervisors

- a. Board of Supervisors aids in hearing public input in IRVM operations. Supervisors also, review and approve budget for IRVM operations on an annual basis.

C. State Laws and Regulations

- a. Iowa Law Section 314.17 Mowing
- b. Iowa Law Section 314.22 IRVM
- c. Iowa Law Chapter 317 Weeds

D. Permits

- a. Permits are filed in the County Engineer's Office. Permits are filled out by the applicant then submitted to the County Engineer for approval. The County Engineer has the authority to make necessary changes to the proposed application. Applications possibly affecting the IRVM program include and can be found in the Appendix:
 - i. Permit to Perform Work Within the County Right-of-Way
 - ii. Public Utility Construction Within the County Highway Corridor
 - iii. Application for Access
 - iv. Tile Crossing Permit

IV. Program Organizational Structure

A. Staff Organization Chart

- a. The County Engineer works with the Assistant Engineer and Maintenance Supervisor to distribute workload necessary to follow the plan. The hierarchy is as follows:
 - i. County Engineer
 - ii. Assistant Engineer
 - iii. Maintenance Supervisor
 - iv. Roadside Manager
 - v. Maintenance Staff
 - vi. Part-time Staff

B. Staffing Needs

- a. Muscatine County's IRVM plan requires workers to be available for seeding, spraying, erosion control, mowing, and brush cutting. Workers will be utilized when schedules are free from typical road maintenance activities.

V. Inventory and Analysis

A. Natural Resources

- a. Tools

- i. GIS Mapping
- ii. GPS Equipment
- iii. Aerial Photography
- iv. GEOTREE Prairie Seed Mapping
- v. Record Keeping

b. Vegetation

- i. A roadside vegetation survey was done in 1992.
- ii. Inventory of roadside vegetation throughout the county is a continuous practice, mostly due to the ever-changing roadside habitats. This inventory includes both official and unofficial records. The official inventory includes data collection and recording on a county-wide basis to keep track of areas where vegetation has been planted and roadsides improved to minimize erosion and non-desirable plants. Unofficial inventory includes county staff identifying an issue in the road ditches then continuing to monitor the issue and ultimately coming up with a plan to correct the problem or addressing the problem with a solution.

B. Equipment

- a. Muscatine County has a variety of pieces of equipment that are used on a regular basis as part of our roadside management program. Our current equipment usually allows for having successful plantings and performing proper maintenance of the roadsides. Muscatine County's current IRVM equipment includes but is not limited to:

b.	<u>Equipment</u>	<u>Year</u>	<u>Condition</u>
i.	2500 Chevrolet Pickup	2016	Excellent
ii.	F-550 Super Duty	2012	Good
iii.	Hydro-seeder Finn T90	2002	Good
iv.	Wood Chipper Vermeer BC 1800 XL	2012	Good
v.	UTV side by side John Deere	2015	Excellent
vi.	Forestry Head Diamond	2013	Fair
vii.	Tractors John Deere 6200, 7210	1995, 2000	Fair
viii.	Mowers Tiger T-4552, TRR-120C	1995, 2000	Fair
ix.	Chainsaws Stihl 1-460 3-310 8-251	5 years old or newer	Fair to Excellent
x.	Brush Cutters Stihl 240, 200, 250	5 to 10 years old	Fair
xi.	Skid Sprayer Dultmeier	2001	Fair
xii.	Flex Tine Harrow	1999	Good
xiii.	Broadcast Seeders		Good
xiv.	Straw Blower Pro Chopper	1996	Fair

- c. As other equipment is identified that can assist in our abilities to successfully and economically carry out our IRVM plan, they will be considered for additions to our fleet.

VI. Program Operations

A. Annual Operations

- a. January through April - Operations include but are not limited to: cutting trees and brush, repairing equipment, planning upcoming year's operations, ordering equipment and supplies.
- b. April through October - Operations include but are not limited to: seeding, erosion control projects, mowing, and spraying.

- c. October through December - Operations include but are not limited to: cutting trees and brush, equipment maintenance, dormant seeding, monitoring sites, and reviewing previous year's work.

B. Vegetation Types for Specific Uses

- a. Selection of vegetation types will be based on the general use of the area to be seeded. A prairie seed mix will usually be used if the area will be undisturbed. Areas that are mowed periodically will be seeded to a waterway mix and yards will be seed with a lawn mix.

VII. Methods

A. Vegetation Establishment and Maintenance

- a. Procedures - As much as possible, procedures are used as prescribed by the Iowa DOT and the IRVM Technical Manual.
- b. Site Preparation - Equipment is used to level the soil surface by breaking up dirt clods and removing debris. .
- c. Seed Mixtures and Rates - Seed mixtures for prairie plantings differ from year to year due to specific seed availability. Prairie seed is planted at the rate suggested by University of Northern Iowa's IRVM program. At steep slope locations the seeding rate is typically doubled.
- d. Seeding Techniques - Is determines on a site-by-site basis, what type of seeding method to use. A hydro seeder is used in most cases.
- e. Erosion and Sediment Control - Multiple erosion control devices and practices are sometimes used in unison with each other. These include the following:
 - i. Permanent Native Seeding
 - ii. Straw Wattles
 - iii. Hydro mulch
 - iv. Straw Mulch
 - v. Erosion Control Blankets
 - vi. Slit Fence
 - vii. Rock Check Dams
 - viii. Channel Slope Protection With Revetment
 - ix. Sediment Basins
 - x. Cover Crop Seeding
- f. Vegetation Establishment Maintenance - New and established seedings are actively monitored for further maintenance. Maintenance includes: mowing, planting of temporary cover crops, burning, and selective spot spraying.
- g. Planting Evaluation and Documentation - Paper copies and GEOTREE electronic copies are kept to record seeding dates, seed mixtures used, seeding rates, cover crop used, and planting conditions. These records are used to evaluate previous plantings and to better prepare future plantings.
- h. Mowing - Shoulder mowing along all county roads occurs twice a year and is performed by an independent contractor
- i. Chemical Control for Noxious Weeds and Brush – Muscatine County utilizes in house spraying and contract spraying to control noxious weeds and brush. Chemicals are used according to label.
- j. Tree and Brush Control – Chainsaws, mowers and forestry heads are used to control trees and brush. The stumps are treated with chemicals.

VIII. Material Procurement

A. Sourcing

- a. Seed, fertilizer, mulch, and other materials needed for IRVM practices are purchased at fair market value through reliable vendors. A local vender is used for most materials when possible.

B. Material Handling and Storage

- a. Materials are to be stored in a sheltered area. Seed is stored in a dry, rodent proof room. Pesticides are stored in a heated room with spill containment.

This is a flexible plan requiring common sense interpretations, with changes as necessary to fit the ever-changing complex circumstances realized in roadside vegetation management.



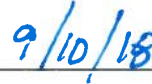
Scott Sauer, County Supervisor Chairperson



Date



Keith White, County Engineer



Date



Bruce Bryant, Roadside Manager



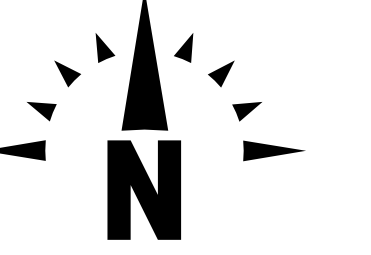
Date

MUSCATINE COUNTY

IOWA

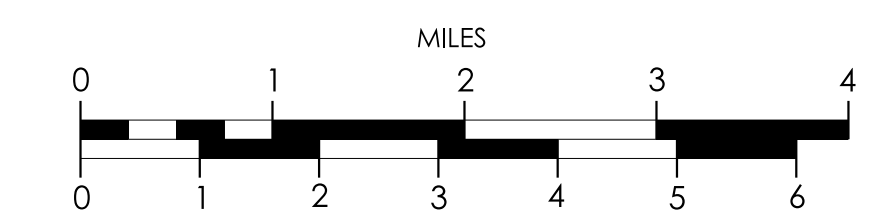


Office of Systems Planning
Phone: (515) 239-1664
WWW.IOWADOT.GOV/MAPS



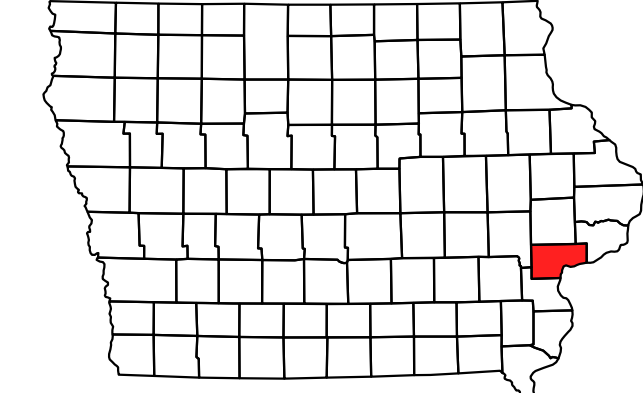
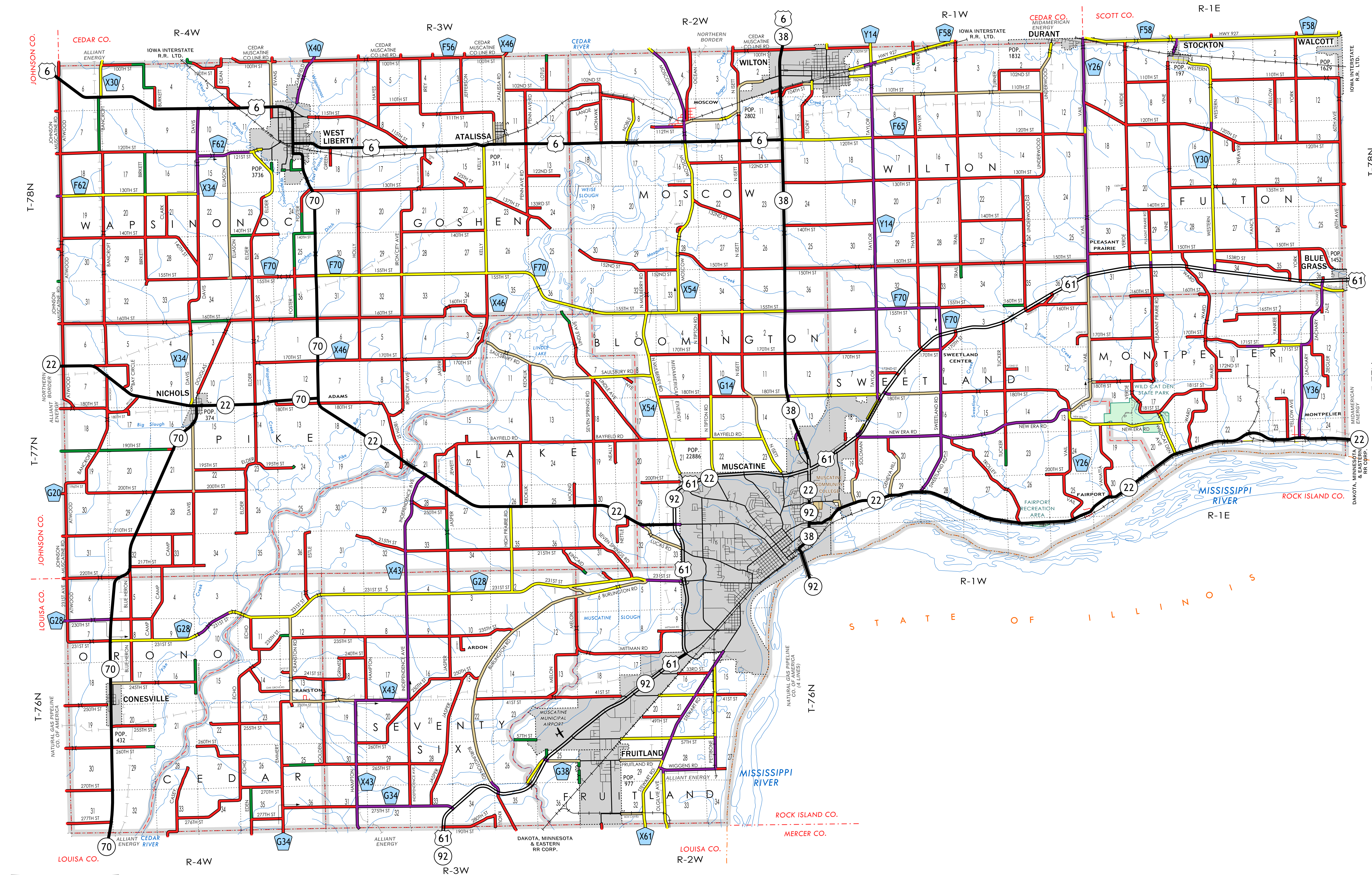
In Cooperation With
United States
Department of Transportation

JANUARY 1, 2017



LEGEND

- INTERSTATE HIGHWAY
- PRIMARY HIGHWAY-DIVIDED
- PRIMARY HIGHWAY
- PORTLAND CEMENT CONCRETE ROAD
- ASPHALT ROAD
- BITUMINOUS ROAD
- GRAVEL ROAD
- EARTHEN ROAD
- INTERSTATE HIGHWAY
- UNITED STATES HIGHWAY
- STATE HIGHWAY
- COUNTY HIGHWAY
- RAILROAD
- PIPELINE
- AIRPORT
- HYDROLOGY
- BRIDGE
- STATE BOUNDARY
- COUNTY BOUNDARY
- CORPORATE BOUNDARY
- TOWNSHIP LINE
- SECTION LINE
- ROAD NAMES
- UNINCORPORATED PLACE
- STATE PARKS
- STATE INSTITUTIONS
- FEDERAL LAND



DATE _____

PERMIT NO: ALT-_____**MUSCATINE COUNTY ALTERATION OF PUBLIC RIGHT OF WAY PERMIT**

APPLICANT _____
 (Owner or Owners of Record)

ADDRESS _____ PHONE _____

911 Address of alteration work site (if available) _____

Township Name _____, Sec _____, Twp _____, Range _____

Road Name _____, N S E W side of road. Location Flagged: Yes No

Description of work to be completed: _____

The applicant agrees that if granted a permit to alter public right of way, the following stipulations shall govern:

1. The County Engineer may halt the installation at any time if the applicant's work does not meet the requirements set forth in this permit.
2. Areas within the roadway right of way damaged by the installation shall be repaired and restored to at least its former condition by the applicant, or the cost of the repair work caused to be performed by the County will be assessed against the applicant.
3. The applicant shall be responsible for seeding all of the areas disturbed. The applicant shall also repair and re-seed, if necessary, all eroded areas until the seeding is well established.
4. The applicant shall save this County harmless from any damages resulting from the negligence of the applicant.
5. Necessary permits from other entities (Cities, Railroads, other counties, etc.) must be obtained separately.
6. Work shall not interfere with traffic at any time during the performance of work, unless the County Engineer is informed of such interference 24 hours in advance and during normal working hours, and has adequate time to evaluate and approve or disapprove the performance of the work.
7. Drainage must be maintained throughout the performance of the alteration and no changes in the routing of drainage will be allowed that will alter the flow from its natural drainage way.
8. No obstructions will be allowed in the right of way.
9. Only minor ditch filling will be allowed and shall not cause or induce a negative impact on the roadway as determined by the County Engineer.
10. Special provisions as stated below or on attached sheet.
11. **The applicant shall have 180 days from the date the permit is granted to complete the work as stipulated in this permit. If the work is not completed within the 180 days, the applicant will have to re-apply for a new permit.**

APPLICANT SIGNATURE _____

DATE _____

*** FOR COUNTY OFFICE USE ONLY ***

Special Provisions: _____

PERMIT GRANTED BY _____

DATE _____

Muscatine County Engineer

Latitude: _____

Longitude: _____

**MUSCATINE COUNTY HIGHWAY DEPARTMENT
UTILITY PERMIT APPLICATION**

This is a utility permit application for telecommunications, electric, gas, water and sewer utilities. The applicant agrees to comply with the following permit requirements. The County reserves the right to inspect and approve any construction work performed within its right-of-way as it relates to the condition of the highway; compliance shall be determined by the sole discretion of the County Engineer. These requirements shall apply unless waived in writing, due to unique local conditions, by the County Engineer prior to installation; any such waiver shall be attached to the permit. This permit is not intended to conflict with any utility owner's rights or duties mandated in Chapters 388, 390, 474, 476A, 477, 478, 479, 479A, and 480 or by the Iowa Utility Board or other State or Federal regulations.

Applicant Name: _____
 Street Address _____
 City, State & Zip Code _____
 Telephone Number: _____ FAX _____
 Contact Person: _____
 Brief Description (type facility, location) _____

1. **LOCATION PLAN.** An applicant shall file a completed location plan as an attachment to this Utility Permit Application. The location plan shall set forth the location of the proposed line on the secondary road system and include a description of the proposed installation.
2. **NOTICE TO PROCEED.** At least two (2) working days prior to the proposed installation, an applicant shall file with the County Engineer a notice stating the time, date, location, and nature of the proposed installation.
3. **INSPECTION.** The County Engineer may provide an inspector during the installation of all lines to insure compliance with this Utility Permit. The inspection shall be limited to any construction work performed within the right-of-way as it relates to the condition of the right-of-way. The utility facility owner shall provide reasonable cooperation.
4. **INSPECTION FEE.** Upon approval of the application by the Board of Supervisors, the Utility Permit will be issued by the County Engineer contingent upon the applicant's agreement to pay the actual costs directly attributable to the installation inspection, if any, conducted by the County Engineer. Prepayment of such costs is not required if the applicant posts a surety bond or other applicant posts a surety bond or other proof of financial responsibility, which posting or showing may be made on an annual basis. Otherwise, a prepaid inspection fee made payable to the County Treasurer's office may be assessed as follows:

Telecommunications... \$1,000	Electric.....\$1,000
Gas..... 1,000	Water..... 1,000
Sewer..... 1,000	

Upon completion of the installation, the County Engineer shall provide a statement for services rendered to the applicant. Such statement shall be paid within thirty (30) days of receipt. In the event of a prepaid inspection fee, the County Engineer shall provide a statement for services rendered and refund any excess payment to the applicant within forty-five (45) days.

5. **REQUIREMENTS.** The applicant shall meet the following requirements:

A. Construction signing shall comply with the Manual on Uniform Traffic Control Devices.

B. The minimum cover of utility facilities in the right-of-way shall be:

- (1) 48 inches for electrical cables
- (2) 30 inches for communication cables
- (3) 36 inches for all other underground facilities

In critical situations where necessary cover cannot be obtained, other protective measures may be approved. The County reserves the right to waive the minimum depth of installation where rocky terrain and/or other circumstances makes it difficult to obtain the desired depth. The County shall determine the minimum depth in these situations. The County Engineer may require additional depth in areas identified being silted or scheduled for future excavation.

C. The applicant shall use reference markers in the right-of-way (R.O.W.) boundary to locate line and changes in alignment.

D. All tile line locations encountered during construction shall be protected in accordance with I.A.C. 199-9.2(479).

E. No underground utility lines shall cross over a driveway or crossroad drainage structure.

F. Residents along the utility route shall have uninterrupted access to the public roads. An all-weather access shall be maintained for residents adjacent to the project.

G. A joint assessment of the road surfacing may be made by the applicant and the County Engineer both before and after construction. After construction, granular surfacing shall be added to the road at the applicant's costs, if necessary, to restore the road to its original condition. After surfacing has been applied, the road surface may be jointly reviewed by the County Engineer and the applicant once the road has been saturated, to determine if additional surfacing on the roadway by the applicant is necessary.

H. Areas within the R.O.W. damaged by the installation shall be repaired and restored to at least its former condition by the applicant or the cost of the repair work caused to be performed by the County will be assessed against the applicant.

I. Areas disturbed during construction which create an erosion problem shall be solved by the applicant in a manner approved by the County Engineer.

J. All trenches, excavations, and utilities that are knifed shall be properly tamped.

K. Road crossings shall be bored. The depth below the road surface shall be a minimum depth of 48 inches for all utility facilities.

6. Non-conforming Work. The County Engineer may halt the installation at any time if the applicant's work does not meet the requirements set forth in this Utility Permit.

7. Emergency Work. In emergency situations, work may be initiated by the applicant without first obtaining a Utility Permit. However, the County Engineer shall be notified via telephone or FAX as soon as possible and a Utility Permit must be requested within five (5) days of initiation of the work.

8. County Infraction. Violation of this permit is a county infraction under Iowa Code Section 331.307, punishable by a civil penalty for each violation.

9. Hold Harmless. The utility company shall save this County harmless from any damages resulting from the negligence of the applicant. A copy of a certificate of insurance naming this County as an additional insured for the permit work of proof of self insurance shall be provided to the County Engineer prior to installation. The minimum limits of liability under the insurance policy or proof of self insurance shall be \$1,000,000.

10. Permit Required. No applicant shall install any lines unless such applicant has obtained a Utility Permit from the County Engineer. Applicants agree to hold the County free from liability for all damage to applicant's property which occurs proximately as a result of the applicant's failure to comply with said ordinances or requirements.

11. Relocation. The applicant shall, at any time subsequent to installation of utility lines, at the applicant's own expense, relocate or remove such lines as may become necessary to conform to new grades, alignment or widening of R.O.W. resulting from maintenance or construction operations for highway improvements.

12. Term of Permit. In accordance with Section 320.5 of the Code of Iowa, applicable gas mains and water mains described in Section 320.4 shall be granted a permit for a period not to exceed twenty (20) years. At the end of the twenty years, if neither of the parties object in writing, the permit will automatically renew itself.

DATE _____

NAME OF COMPANY

BY _____

RECOMMENDED FOR APPROVAL:

DATE _____

COUNTY ENGINEER

APPROVAL:

DATE _____

BOARD OF SUPERVISORS

DATE _____

PERMIT NO: ENT- _____

MUSCATINE COUNTY ENTRANCE PERMITAPPLICANT _____
(Owner or Owners of Record)

ADDRESS _____ PHONE _____

A permit is hereby requested to construct an entrance ____ feet in width, from right of way line to road traveled way, including necessary drainage structure.

911 Address of new entrance location (if available) _____
 Proposed entrance is located in _____ Township, Sec _____, Twp _____, Range _____
 Road Name _____, N S E W side of road. Location Flagged: Yes No
 Entrance Surface Type: Granular Seal Coat Paving If paving, what will be placed: HMA PCC
 Other details: _____

The applicant agrees that if granted a permit to construct the above-described entrance, the following stipulations shall govern:

1. Written approval of Muscatine County shall be obtained before any change, including surfacing, is made in the entrance or its location.
2. Entrance location shall not be approved if the sight distance is less than 400 feet on a gravel or seal coat road and 600 feet on a paved road. The actual sight distance at this location is _____ feet.
3. **The entrance, including drainage structure, grading and surfacing, shall be constructed by the applicant at the applicant's expense and shall thereafter be kept in repair and maintained by the applicant at his own expense.** Nothing in this stipulation, however, shall preclude the County from entering upon said entrance on highway right-of-way and performing necessary maintenance for the protection of the highway.
4. Construction, future repair or maintenance of said entrance shall be carried on in such a way as not to interfere with, or interrupt traffic on said highway, and the applicant shall take all reasonable precautions to protect and safeguard the lives and property of any person or persons, and shall save the County harmless of any damage or losses that may be sustained by any person or persons, on account of such construction, repair or maintenance operations.
5. The culvert pipe under the entrance shall be _____ inches in diameter and _____ feet in length, and of quality complying with the Iowa Department of Transportation's Standard specifications. The finished surface elevation of the driveway over the pipe or place where the pipe would normally be, shall be lower than shoulder elevation to prevent water draining onto the pavement or travel way. **The pipe, if required, shall be a new metal, concrete, or double wall plastic pipe. No used pipe or plastic field tile will be allowed. All future maintenance, including replacement, of this pipe shall be the responsibility of the applicant or successors or assigns of the applicant.**
6. All provisions herein relating to future repair or maintenance shall be binding on all successors or assigns of the applicant.
7. Stipulations and requirements contained herein are not intended to waive any greater requirements of local zoning ordinances.
8. Applicant's attention is directed to the fact that private property may not be used so as to obstruct or encumber the public highway right-of-way or interfere with the safety, comfort, and rights of public highway users.
9. Muscatine County reserves the right to alter, relocate or remove said entrance to accommodate future changes in traffic needs or highway design.
10. Entrance shall be constructed as shown on attached detail sheet.
11. Special Provisions as stated below or on attached sheet.
12. The applicant shall be responsible for seeding all of the areas disturbed by the construction of the entrance. The applicant shall also repair and re-seed, if necessary, all eroded areas until the seeding is well established.
13. **The applicant shall have 180 days from the date the location is approved to construct this entrance. If the entrance is not completed within the 180 days, the applicant will have to re-apply for a new permit.**

APPLICANT SIGNATURE _____ DATE _____
*** FOR COUNTY OFFICE USE ONLY ***

Nearest Intersection _____, Distance from _____ Culvert Required: Yes No

Special Provisions: _____

LOCATION APPROVED BY _____ DATE _____

ENTRANCE GRANTED BY _____ DATE _____

Assistant to Muscatine County Engineer

Latitude: _____

Longitude: _____

DATE _____

PERMIT NO: TILE-_____**MUSCATINE COUNTY PRIVATE TILE ROAD CROSSING PERMIT**APPLICANT _____
(Owner or Owners of Record)

ADDRESS _____ PHONE _____

Location of Tile Crossing Site

Township Name _____, Sec _____, Twp _____, Range _____

Road Name _____, Direction of Flow: N S E W Location Flagged: Yes No

Description of work to be completed: _____

The applicant agrees that if granted a permit to install tile crossing, the following stipulations shall govern:

12. The County Engineer may halt the installation at any time if the applicant's work does not meet the requirements set forth in this permit.
13. Areas within the roadway right of way damaged by the installation shall be repaired and restored to at least its former condition by the applicant, or the cost of the repair work caused to be performed by the County will be assessed against the applicant.
14. Necessary permits from other entities (Cities, Railroads, other counties, etc.) must be obtained separately.
15. Drainage must be maintained throughout the performance of the work and no changes in the routing of drainage will be allowed that will alter the flow from its natural drainage way.
16. No obstructions will be allowed in the right of way.
17. Special provisions as stated below and specifications on back of this permit

All owners and contract purchasers of both upstream and downstream lands, and the contractor must sign each application. Applicants hereby grant County temporary right of entry onto lands for construction and maintenance of road crossing installations.

Applicant – Upstream Owner	Date	Applicant – Upstream Contract Purchaser	Date
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Applicant – Downstream Owner	Date	Applicant – Downstream Contract Purchaser	Date
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Contractor Name: _____	Company Name	Contractor Representative	Date
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***** FOR COUNTY OFFICE USE ONLY *****

Nearest Intersection _____, Distance from _____

Size, length, and type of tile crossing placed _____

Special Provisions: _____

LOCATION APPROVED BY _____ DATE _____

CONSTRUCTION APPROVED BY _____ DATE _____

CROSSING GRANTED BY _____ DATE _____

Muscatine County Engineer

Inlet

Outlet

Latitude: _____

Latitude: _____

Longitude: _____

Longitude: _____

**MUSCATINE COUNTY
PRIVATE TILE ROAD CROSSING SPECIFICATIONS**

1. These specifications shall govern the construction and future maintenance of approved subsurface conduit, which carry strictly private agricultural field tile waters from right-of-way line to right-of-way line on all secondary roads within Muscatine County.
2. Road crossing requests for tile with only intermittent flow and a suitable surface outlet will be at the expense of the applicant.
3. The cost of any connections at the right-of-way line is the responsibility of the applicant.
4. Before a road crossing installation will be made, abutting property owners, plus any contract purchasers of record (not tenants, etc.) must all agree to allow upstream waters to be connected and discharged into existing downstream field tiles by a contiguous connection at said crossing location. Upon written consent by all parties, Muscatine County will consider approval of the installation of a road crossing tile from right-of-way line to right-of-way line when field tile exist both at the upper and lower right-of-way lines.
5. Road crossing installations may be performed prior to the existence of both tile lines if in the opinion of the Engineer the remaining work will be completed in a reasonable time. Road crossings of tile lines will be nearly perpendicular to centerline of roadway to result in shortest crossing length possible. County will provide road crossing only to the extent of achieving a suitable outlet. Additional road crossings within same watershed shall be full responsibility of applicants.
6. Crossings on all hard-surfaced roads shall be bored underneath the traveled portion of the roadway. The Engineer shall at his discretion have the option of requiring boring of granular surfaced roads.
7. Intake installations, which are not necessary to drain the roadway, shall be installed outside the right-of-way line.
8. When downstream field tile do not exist, upstream field tile may be outletted at the upstream right-of-way line. Said outlet shall not materially extend beyond said right-of-way line. Necessary excavation to provide drainage from said right-of-way line to the nearest roadway culvert or bridge shall be the responsibility of the applicant and so shall all future maintenance of said outlet. County authorization must be obtained from the County Engineer prior to outletting any field tile waters into public right-of-way.
9. Tile shall have a minimum of 2.0 feet of cover in road ditches and tile outletting in the road ditch shall have at least 1.0 feet of outfall.
- 10. Iowa One Call must be contacted in advance of any excavation within public right-of-way.**
11. All work activities within public right-of-way shall be identified by proper traffic control devices. All traffic control devices, procedures, and layouts shall be as per Part VI of the Manual of Uniform Traffic Control Devices (MUTCD) Revision 3, Dated September 3, 1993. Both the Applicant and his Contractor shall be responsible for the traffic control.
12. The County shall not be responsible for crop or fence damages associated with any private field tile crossing installation. Applicants shall provide necessary fence openings and adequate work area to accomplish said installation.
13. Private contractors working within public right-of-way must first obtain authorization from the County Engineer and provide the County with a current Certificate of Insurance, naming Muscatine County as the insured party.
14. Muscatine County, not the applicant, shall have the option of doing said work or making arrangements for a private contractor to do the work.
15. Crossings or outlets requested on joint city, county, or state roadways must be handled as a special request between all parties involved.
16. Tiling applications must be fully completed by the applicant and filed with the County Engineer at least 2 weeks in advance of any planned crossing activity.
17. Muscatine County shall be given 48 hours advance notice of any proposed excavation activity within public right-of-way by private contractors when so approved by the County Engineer.
18. The applicant and/or private contractor shall indemnify and save harmless Muscatine County from any and all liability arising out of the actual tile line crossing installation.
19. **Granular Surfaced Road (open trench installation):** Before digging the trench, the contractor shall salvage as much road surfacing as possible. After installation of the tile crossing. The contractor shall compact the backfill as it is replaced and place the salvaged road surfacing on the road. The finished road surface shall be left in a smooth, safe condition for the traveling public.
20. **Paved Roads (bored, jacked or drilled installation):** A rigid conduit meeting the County Engineer's requirements shall be placed from toe to toe of the foreslopes on the roadway.
21. The crossing pipe shall be a Schedule 80 PVC Pipe or approved equivalent, a minimum of 8 inch diameter or larger, adequate to handle the tiling capacity of the entire watershed above the road crossing. Muscatine County will not pay for additional crossings if requested in the same watershed.

**MUSCATINE COUNTY
CLASS SPECIFICATION**

Date: Rev. 07/01/2018

JOB TITLE: ROADSIDE MANAGER

GRADE: UNION GRADE 2

REPORTS TO: MAINTENANCE FOREMAN

DEPARTMENT: SECONDARY ROADS

FLSA STATUS: NON-EXEMPT

JOB SUMMARY:

Operates heavy equipment including dozer, motor grader, scraper, loader, excavator and backhoe in the maintenance and construction of County roads. Also drives and operates a variety of trucks and performs general semi-skilled manual work in the maintenance and construction of roads. Manages the production of subordinates.

ESSENTIAL FUNCTIONS - ROADSIDE MANAGER:

Plans, schedules and assigns work of personnel performing maintenance of the highway right-of-way; instructs and trains personnel in work methods and procedures; reviews and evaluates employee performance.

Plans and conducts reseeding projects along County roadways; operates machinery to till and seed.

Conducts chemical and hand control of vegetation, weeds and brush on County roadways; sprays problem areas with appropriate chemicals; removes brush that impairs motorists' visibility; creates roadside areas for drifting snow.

Performs administrative duties: develops long-range plans for roadside management; reviews and revises annual plan; orders seed, chemicals and other supplies; prepares daily and annual reports; composes correspondence as needed.

Communicates and works with landowners and utility companies to encourage proper management of roadsides; explains to proper use of chemicals, mowing, burning, etc. within County roadsides.

Coordinates and conducts prescribed roadside burnings; operates and maintains burning equipment; notifies landowners and local authorities of burning.

Updates roadside inventory recording brush, weed, erosion and native prairie grass stands contained in County roadsides.

Serves as the Weed Commissioner: enforces the noxious weed law throughout the County; receives and responds to noxious weed complaints; writes and sends official notices to landowners; destroys noxious weeds on private property and assesses costs to landowner's property tax.

Makes presentations to various groups concerning roadside management.

Supervises and coordinates mowing along County roadways; supervises workers on special projects.

Performs other related duties as required.

MATERIALS AND EQUIPMENT USED:

Pick Up Truck	Two-Way Radio	Seeding & Spraying Equipment
Tractor	Hand Tools	General Office Equipment
Computer	Chain Saw	Weed Eater

MINIMUM QUALIFICATIONS REQUIRED:

Education and Experience:

High School Diploma or equivalent.

Eight years of related work experience or equivalent combination of education and experience.

Licenses and Certifications:

Valid Commercial Driver's License and insurable under the Muscatine County insurance policy.

Commercial Pesticide Applicator License.

Knowledge, Skills, and Abilities:

Knowledge of:

- materials, methods, equipment and techniques commonly used in roadside maintenance and repair work.
- hazards of highway maintenance work and safety precautions necessary to minimize these hazards.
- traffic laws.
- construction materials and ability to specify materials for maintenance and construction projects.

Skill in:

The operation of spraying and seeding equipment, tractors, chain saws and mowers.

Ability to:

- plan, assign and direct the work of subordinates.
- interpret and comprehend engineering plans.
- perform heavy physical labor.
- follow oral and written instructions.
- make minor repairs and adjustments to equipment.
- establish and maintain an effective working relationship with department personnel and the public.
- work without close supervision and to plan work schedule.

Physical and Mental Abilities:

Ability to:

- concentrate and pay close attention to detail.
- perform strenuous, heavy work involving lifting and carrying heavy objects; also continued walking, stooping, standing and climbing.

Substantial amount of physical effort and manual dexterity required to climb/descend ladders, constant standing and walking, often on ungraded terrain.

Heavy mobility; duties are usually performed by frequent walking and/or standing, kneeling, or squatting relieved by lessor periods of sitting or operating a vehicle.

Good vision is required, either uncorrected or corrected through the use of lens.

Working Conditions:

Frequent exposure to dirt, dust, extremes of temperature, and noxious fumes and odors and may require use of protective devices such as gloves, masks, etc.

Exposure to moderate work hazards when operating heavy equipment, plows, or using power tools.

Some exposure to hazardous situations that involve exposure to heavy machinery, hazardous chemicals, or power tools.

Exposure to hazards associated with equipment, machinery and ungraded terrain at construction sites, and moving vehicles on roadways.

Frequent exposure to dirt, outdoor temperatures, traffic noise and dust when performing outdoor repairs.

Work time may require irregular hours and shift times. Regular attendance is required.

This class specification should not be interpreted as all-inclusive. It is intended to identify the major responsibilities and requirements of this job. The incumbents may be requested to perform job-related responsibilities and tasks other than those stated in this specification.

Muscatine County LRTF Funding History through FY 2018

DOTProjectNumber	Applicant	Award	FiscalYear Description	Type
90-70-LRTF-201	Muscatine County	\$ 2,240.00	1992 Inventory	County
90-70-LRTF-202	Muscatine County	\$ 1,959.00	1992 Equipment - Seeder	County
90-70-LRTF-301	Muscatine County	\$ 12,236.00	1993 Equipment - Truax drill; seed	County
90-70-LRTF-601	Muscatine County	\$ 7,700.00	1996 Equipment - Straw mulcher, crimper	County
90-70-LRTF-901	Muscatine County	\$ 3,500.00	1999 Equipment - Cultipacker, harrow	County
90-70-LRTF-201	Muscatine County	\$ 15,000.00	2002 Equipment - Hydro seeder	County

Total LRTF Funding Awarded FY1990 - FY2018	\$ 42,635.00
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