



**KEOKUK COUNTY**

**Integrated Roadside Vegetation Management Plan**

**FY2022**

**Keokuk County Secondary Roads  
1301 East Jackson St.  
Sigourney, Iowa 52591  
P 641.622.2610**

**I. Preface**

- A. Update/ Version 2
- B. Contributors to the Plan
  - a. Andrew McGuire - County Engineer
  - b. Casey Clarahan - Assistant to the Engineer
  - c. Doug Klett - Maintenance Superintendent
  - d. Jared Hammen - General Working Foreman
  - e. Steven Seeley - Roadside Manager
  - f. Michael Hadley - Board of Supervisor’s Chairperson

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## II. Executive Program

### A. Goals

#### Short Range Goals (0-5 years)

- a. Expand erosion and sediment control efforts, particularly during ditch cleaning operations.
- b. Utilize available top soil more effectively during ditch cleaning operations to promote proper vegetative cover.
- c. Acquire seedbed preparation equipment such as a gill, harrow, soil conditioner, etc. to prepare for seed application.
- d. Acquire dedicated sprayer truck for control of roadside noxious weeds and brush.
- e. Convert turf grass areas on certain facilities owned by Keokuk County to native planting areas
- f. Promote more efficient use of herbicide by educating staff on plant species identification and appropriate management techniques.
- g. Establish GIS database to manage IRVM sites.
- h. Establish a Roadside Inventory either by Keokuk County or contracted services.
- i. Consider acquiring seeding equipment such as hydro-seeder, broadcast seeder, etc. to perform seeding operations in house.

#### Medium Range Goals (5-10 years)

- a. Expand knowledge base on prescribed burning and potentially train staff

#### Long Range Goals (0-20 years plus)

- 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. Enhance the scenic qualities of the roadsides and their value as roadside habitat.

### B. Program History

- a. Keokuk County implemented an IRVM plan in the early 2000's to better manage our roadside vegetation, while providing safe corridors for travel. Around 2008 the formal program was suspended in part due to budget cuts. Informally, vegetation management has been performed annually and primarily consists of brush removal and herbicide application to prohibit regrowth as well as roadside mowing. While the Roadside Management position was no longer active that didn't mean that Keokuk County discontinued their roadside management efforts. In FY2017 we applied for a Power Box Rake through the DOT's LRTF grant and were approved. We also applied for seeding through UNI's Tallgrass Prairie Center for a project on 300<sup>th</sup> Ave from state highway 92 to 240<sup>th</sup> Ave. In FY2018 we applied for another LRTF Grant and were approved to acquire a refurbished Truax no-till drill that was removed from the Iowa DOT's inventory. Recently there has been a renewed interest in revitalizing the formal program. In December of 2020 Keokuk County re-established the Roadside Manager position and began the process of acquiring the equipment and knowledge to provide safe, functional and environmentally improved corridors throughout the county.

### 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. Keokuk 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. 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. Keokuk County's IRVM program is housed in the Secondary Roads Department. The program is run through a joint effort from the Secondary Roads Department, Board of Supervisors, and the general public.

## 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 to the County Engineer** - Assists County Engineer with the planning and construction of projects. May submit application for funding and materials through the LRTF (Living Roadway Trust Fund). Assists in overseeing IRVM operations.
- c. **Maintenance Superintendent** - Oversees the day-to-day operations of the Secondary Roads Department. Assists in overseeing IRVM operations. Identifies roadway issues that require a corrective action.
- d. **Shop Foreman** – Oversees and manages maintenance and/or repairs of any roadside equipment or vehicles.
- e. **Working Foreman** - Assigns tasks to maintenance employees on a daily basis. Helps to oversee field IRVM operations. Identifies roadway issues that require a corrective action.
- f. **Roadside Manager** - Utilizes IRVM methodologies and practices to determine plan of action for a variety of erosion and seeding issues. Submits applications for funding and materials through the LRTF (Living Roadway Trust Fund) as well as managing day to day roadside projects throughout the year.

### B. Board of Supervisors

- a. Please refer to program type and executive summary. Board of Supervisors aids in hearing public input in IRVM operations. Supervisors also, review and approve budget for IRVM operations on an annual basis. The Chairman of the Board is the acting weed commissioner.

### 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 Entrances/Driveways
  - iv. Tile Crossing Permit
- b. Obstructions, nuisance and enforcement
  - i. Please refer to [Iowa Code Chapter 318.3](#)

## IV. Program Organizational Structure

### A. Staff Organization Chart

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

### B. Staffing Needs

- a. The Roadside Manager will plan and oversee all IRVM projects with the assistance of the Engineer, Maintenance Superintendent and the General Working Foreman.
- b. Keokuk County's IRVM plan requires maintenance employees to be available for seeding, erosion control, mowing, and brush cutting. Employees will be utilized when schedules are free from typical road maintenance activities (ex. hauling gravel, blading, plowing snow, etc.).
- c. Currently the Roadside Manager, Maintenance Superintendent, General Working Foreman, and 3 additional Maintenance Staff employees are certified pesticide applicators. Additional training would be beneficial to the remaining employees for a basic understanding of product application, usage, and safety.
- d. The Roadside Manager, Assistant to the Engineer and Engineering Technician are certified Erosion and Sediment Control Technicians. At a minimum, two additional road maintenance staff members should become certified Erosion and Sediment Control Technicians.

## 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. Inventory of roadside vegetation throughout the county is a practice that should be continued in Keokuk County. This inventory could include both official and unofficial records. The official inventory could include 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 could include 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/Facilities

- a. Keokuk 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. The age of our equipment covers a wide range and will need to be replaced as repairs become uneconomical. In addition to sprayers, chainsaws and other small miscellaneous tools, Keokuk County's current IRVM equipment includes:

| Keokuk County Equipment No. | Model Year | Make        | Description                                    | Condition |
|-----------------------------|------------|-------------|--|-----------|
| 9                           | 2007       | Chevrolet   | 3500 Ext. Cab 4WD Flatbed Truck                | Fair      |
| 9T                          | 2017       | Big Tex     | 25' Gooseneck Trailer                          | Good      |
|                             |            |             |  |           |
| 4                           | 2015       | Caterpillar | M-320-F Wheel Excavator                        | Fair      |
| 54                          | 2007       | Caterpillar | 318C Track Excavator                           | Fair      |
| 56                          | 2017       | Caterpillar | M-320-F Wheel Excavator                        | Good      |
|                             |            |             |  |           |
| 24                          | 2014       | John Deere  | 6140R Tractor                                  | Good      |
| 34                          | 2007       | John Deere  | 7220 Tractor                                   | Fair      |
|                             |            |             |  |           |
| 31                          | 2014       | John Deere  | 930M Z-Trac Mower                              | Good      |
|                             |            |             |  |           |
| 22                          | 2015       | Caterpillar | 299D2 XHP Compact Track Loader                 | Good      |
| 22C                         | 2016       | Fecon       | Bull Hog Mulching Attachment – BH74SSS FGT     | Good      |
| 22R                         | 2016       | Caterpillar | PR190 - Power Box Rake                         | Good      |
| N/A                         | 1995       | Truax       | Flexii88 Seeder, Drill                         | Fair      |
|                             |            |             |  |           |
| 24M                         | 2017       | John Deere  | X-15 Batwing Mower                             | Fair      |
| 34M                         | 2019       | John Deere  | R280 Rotary Disc Mower - PC12486               | Good      |
|                             |            |             |  |           |
| 55C                         | 2005       | Pro Mac     | 52CMP II Rotary Brush Cutter - Excavator Mount | Poor      |
| 4C                          | 2012       | Pro Mac     | 52CMP II Rotary Brush Cutter - Excavator Mount | Fair      |
| 56C                         | 2017       | Pro Mac     | 48HFT ProMac Brush Cutter - Excavator Mount    | Fair      |

- b. 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.
- c. Keokuk County received a LRTF grant during the initial IRVM program for the construction of a climate-controlled seed storage facility. This facility is still available for use of seed storage.

### C. Soils

- a. Keokuk County utilizes NRCS Soil Mapping Index for a variety of tasks.

## VI. Program Operations

### A. Annual Operations

- a. January through March - Operations include but are not limited to: cutting trees and brush, repairing equipment, planning upcoming year's operations, ordering equipment and supplies, evaluate equipment needs for upcoming LRTF Grant cycle, review IRVM plan to ensure we are meeting our short-term goals and are heading in the right direction for our long-term goals, attend annual roadside conferences.
- b. April through September - 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. Work Area Types

- a. Rural – Brush cutting, spraying, mowing and seeding.
- b. Urban – Keokuk County does not manage roadside vegetation within city limits.

### C. Vegetation Types for Specific Uses

- a. Selection of vegetation types will be based upon plant performance, cost, availability, ease of use, and distinct benefits of each type of plant. Generally, we utilize prairie seed mixture in areas that have steep slopes and are difficult to maintain. In relatively shallow slopes we will use Iowa DOT rural seed mixtures. Typically, in front of households and areas mown regularly, Iowa DOT urban mixture is planted.

### D. Special Projects

- a. Wetland Determination - Completed for construction projects to determine if any sort of mitigation is needed.
- b. Wetland Mitigation Seeding and Enhancement - Projects that address possible loss of habitat through construction by adding additional habitat area.

### E. Training/Safety

- a. Keokuk County has an annual safety meeting where staff are trained in chainsaw safety, working in the right-of-way, first-aid, CPR, and many other safety topics.

## VII. Methods

### A. Vegetation Establishment and Maintenance

- a. Procedures - As much as practicable, procedures to be used are 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. This is typically done on the more major construction projects through contract labor forces and equipment. Keokuk County hopes to acquire equipment to expand our efforts to local maintenance and construction projects. Specifically, equipment for our tracked skid loader could be utilized to achieve our IRVM goals.
- c. Seed Mixtures and Rates - Seed mixtures for prairie plantings would differ from year to year due to specific seed availability. Prairie seed would be planted at the rate suggested by University of Northern Iowa's IRVM program. At steep slope locations the seeding rate could be increased.
- d. Seeding Techniques - Keokuk County would determine locations on a site-by-site basis, what type of seeding method to use. Our goal would be to implement three methods: hydroseeding, broadcast seeding, and drilling.
- 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. Hydromulch
  - 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 could be actively monitored for further maintenance. Maintenance includes: mowing, planting of temporary cover crops, and selective spot spraying.
- g. Planting Evaluation and Documentation - Paper copies and GEOTREE electronic copies could be 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 – It is the goal of the Keokuk County Highway Department to perform shoulder mowing operations along all paved and Class A granular surface county roads twice a year. Paved roads are the first priority for mowing operations. Class A granular surface roads performed by the Secondary Roads Department.
- i. Noxious Weeds – The Chairman of the Board of Supervisors is the acting Weed Commissioner. Chemicals are used on a limited basis when noxious weeds are found to be present. This work will be performed by the Roadside Manager or certified chemical applicators on staff.
- j. Tree and Brush Control - Keokuk County highly relies on mechanical methods, brush cutters and excavators, for tree and brush control. Stumps are treated following brush removal by Keokuk County forces utilizing existing spray equipment.
- k. Prescribed Burning - Burning is typically done by adjacent landowners. Keokuk County does not possess the required burning equipment and tools currently, nor are staff members trained for this operation.

**VIII. Material Procurement**

A. Sourcing

- a. Seed, fertilizer, mulch, and other materials needed for IRVM practices would be purchased at fair market value through reliable vendors. Material procurement would be conducted according to the most recent Procurement Policy approved by the Keokuk County Board of Supervisors.

B. Material Handling and Storage

- a. Materials are stored in a sheltered area when possible. When availability is present, sensitive materials, such as seed, should be stored in an enclosed building at a minimum, with climate control being preferred.

**Plan Review**

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

  
 \_\_\_\_\_  
 Michael C. Hadley, County Supervisor Chairperson

6-2-2021  
 \_\_\_\_\_  
 Date

  
 \_\_\_\_\_  
 Andrew McGuire, P.E., County Engineer  
 X. Appendix

JUNE 2, 2021  
 \_\_\_\_\_  
 Date

## X. Appendix

HIGHWAY AND TRANSPORTATION MAP

# KEOKUK COUNTY IOWA

Prepared By



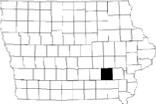
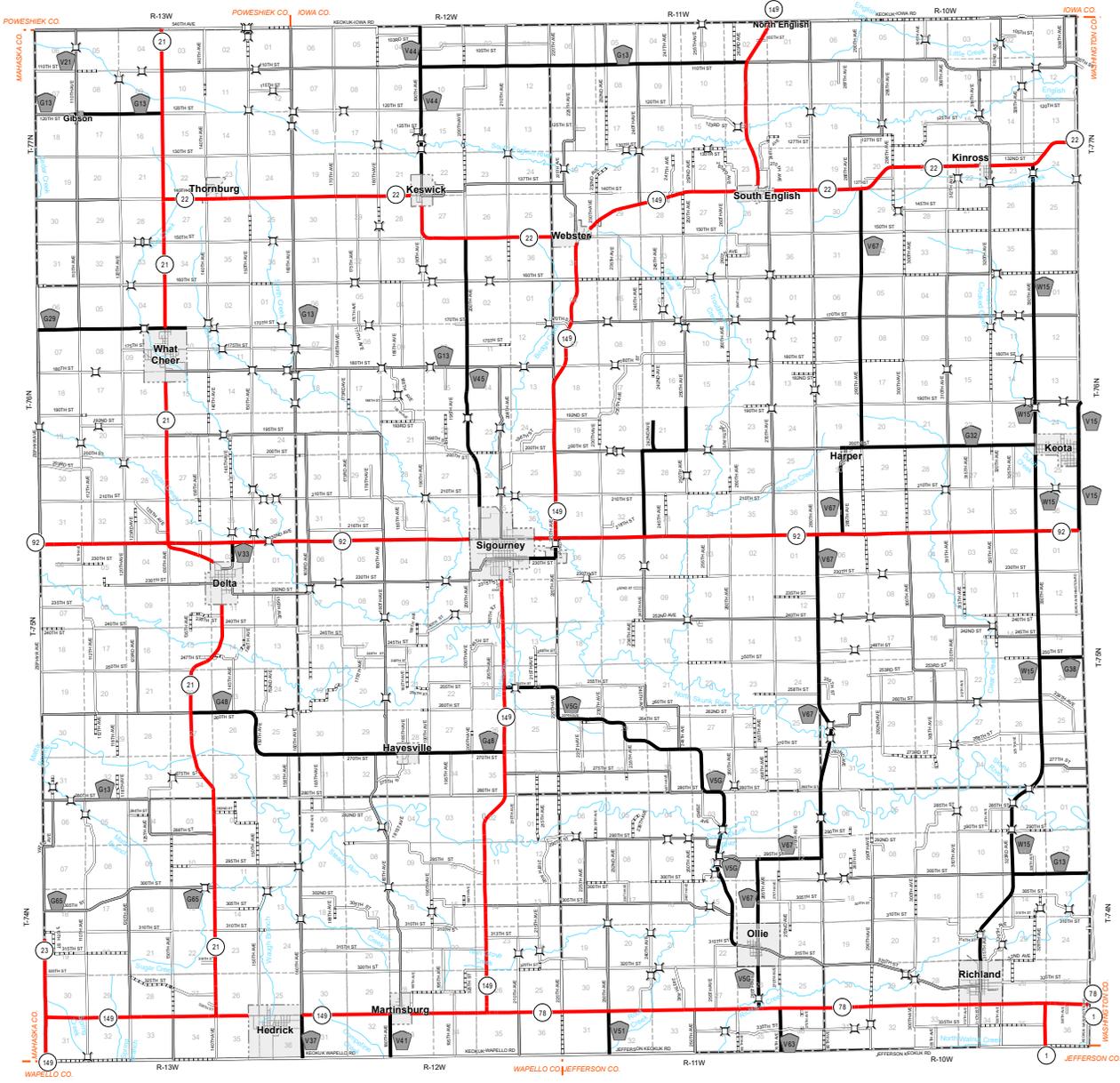
PHONE: (641) 622-2610  
www.keokukcountyia.com

January 22, 2021



### LEGEND

- PRIMARY HIGHWAY
- FARM TO MARKET ROAD
- CLASS B DIRT ROAD
- CLASS A GRAVEL ROAD
- RIVERS
- CITY STREETS
- STATE HIGHWAY
- COUNTY HIGHWAY
- BRIDGES
- CITY LIMITS
- TOWNSHIP LINE
- SECTION LINE



DATE PLOTTED: 1/22/21 10:58 AM BY: JEFFREY B. HARRIS

**Keokuk County Highway Department  
Work in County Right of Way Permit**

Permit # \_\_\_\_\_

**Applicant/Landowner Information**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip Code \_\_\_\_\_

Phone # \_\_\_\_\_

Cell # \_\_\_\_\_

**Work Location**

E911 Address \_\_\_\_\_

Township Name: \_\_\_\_\_ Section \_\_\_\_\_ Township \_\_\_\_\_ Range \_\_\_\_\_

Location map with sufficient detail attached?     Pink flags provided?

Additional directions: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Description of Proposed Work: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Contractor Information**

Name: \_\_\_\_\_ Phone # \_\_\_\_\_

Insurance certificate on file?

**Signature**

The undersigned requests a permit for the work described above and agrees to comply with the requirements of the Keokuk County Work in County Right of Way Policy and terms of the permit.

By: \_\_\_\_\_

Date: \_\_\_\_\_

**Keokuk County Highway Department  
Work in County Right-of-Way Worksheet**

**Permit Review (pre-construction)**

Review date: \_\_\_\_\_

Location- general comments (layout, location, proximity to GPS monumentation, signs, etc.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Roadside obstructions \_\_\_\_\_

\_\_\_\_\_

Drainage \_\_\_\_\_

\_\_\_\_\_

Snow storage/drifted \_\_\_\_\_

\_\_\_\_\_

Visibility/sight distance \_\_\_\_\_

\_\_\_\_\_

PERMIT RECOMMENDATION:  Approved  Denied

Comments \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_ Title: \_\_\_\_\_

Work start:                      Date county notified by contractor: \_\_\_\_\_

Work completion:              Date county notified by contractor: \_\_\_\_\_

**Field Review (post-construction)**

Review date: \_\_\_\_\_

Comments (permit compliance) \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

RECOMMENDATION:  Approved  Denied

By: \_\_\_\_\_ Title: \_\_\_\_\_

**UTILITY PERMIT APPLICATION  
KEOKUK COUNTY, IOWA**

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 solo 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. The permit is not intended to conflict with any utility owner's rights or duties mandated in Chapters 388, 390, 474, 476, 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, and Zip Code: \_\_\_\_\_

Telephone Number: \_\_\_\_\_ FAX: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Brief Description (type of facility, location): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

DATE: \_\_\_\_\_

Name of Company

BY: \_\_\_\_\_

APPROVAL:

DATE: \_\_\_\_\_

KEOKUK COUNTY ENGINEER

NOTES/COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**UTILITY PERMIT REGULATIONS FOR  
KEOKUK COUNTY, IOWA**

1. Location Plan. An applicant shall file a complete location plan as an attachment to this Utility Permit Application. The location plan shall be a plat or drawing showing the location of the proposed line or lines on the secondary road system. This drawing shall become a part of this agreement. The description of the proposed installation shall include type, height of line, height and spacing of poles, maximum voltage, lengths of crossarms, minimum clearance and number of wires; type, size, depth, and capacity of underground cables, conduits, tile lines, and pipelines; maximum working pressures for pipe lines carrying gas or flammable petroleum products; type, size and depth of sewage lines; and other relevant information. The location plan shall reference the location of the utility facility by section, township, and range, show highway centerline and right-of-way limits, and note changes in alignment as measured from the right-of-line and center of highway.
2. Notice to Proceed. At least two (2) working days prior to the proposed installation the applicant shall file with the county engineer's office a notice (either in writing or by calling (641)622-2610 Monday - Friday 7:00 a.m. - 3:30 p.m.) stating the start time, date, location, and nature of the actual installation.
3. Inspection. The county engineer may, at his or her discretion, provide an inspector who will be available or on site during all installation and clean up on the right-of-way to insure compliance with this utility permit. The inspection shall be limited to any construction or installation work performed within the right-of-way as it relates to the condition of the right-of-way; the utility owner/installer shall provide reasonable cooperation.
4. Inspection Fee. Upon approval of the application by the County Engineer, the utility permit will be issued r contingent upon the applicant's agreement to pay the actual costs directly attributable to the installation, inspection, if any, for inspection conducted by the county engineer's office. Prepayment of such costs is not required if the applicant posts a surety bond covering the prepaid amount on January 1 of each calendar year. Otherwise, a prepaid inspection fee made payable to the Keokuk County Treasurer 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 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) 30" for telecommunication cables.
    - (2) 48" for gas and electrical cables.
    - (3) 60" for water and sewer lines.

- C. Ground mounted facilities shall be erected in such a manner to not impede the sight distance of traffic along the roadway and shall be of a design compatible with the visual quality of the roadway being traversed.
- D. The applicant shall place and maintain reference markers in the right-of-way boundaries that will indicate general direction and changes in alignment of the utility line as required by the county engineer. As a minimum, reference markers shall be placed at intersections to denote the direction of lines entering and exiting the intersection. A permanent warning tape should be placed one (1) foot above all underground utility lines.
- E. All tile line locations encountered during construction shall be protected in accordance with I.A.C. 199-9.2(479).
- F. No underground utility lines shall cross over a driveway or cross-road drainage structure.
- G. 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.
- H. Operations in the construction and maintenance of said public utility line shall be carried on in such a way as not to interfere with or interrupt traffic on said highway.
- I. A joint assessment of the road surfacing will be made by the applicant and the county engineer both before and after construction. After construction, granular surfacing, if needed, shall be added to the road by the applicant to restore the road to its original condition.
- J. A joint assessment of the areas within the right-of-way affected will be made by the applicant and the county engineer before and after construction. If needed, a list of items requiring correction will be developed and sent to the applicant. Areas within the right-of-way damaged by the installation shall be repaired and restored to at least its former condition by the applicant within 30 days of the issuance of the correction list. If the corrections are not made within the specified 30 days, the county reserves the right to make said corrections and the cost of the repair work caused to be performed by the county will be assessed against the applicant.
- K. All trenches, excavations, and utilities that are knifed shall be properly tamped. When a carrier, pipe, conduit or cable is placed by open trench construction beneath a dirt roadway or driveway or within five feet of the edge of an existing or proposed pavement or gravel road, the backfill within the roadway or driveway shall be placed and compacted with suitable material free from boulders, frozen clods, roots and excessive sod and other vegetation in more than six inch lifts from the bottom of the installation to the ground line. Compaction of backfill shall be to the satisfaction of the engineer and consistent with good roadway construction methods.
- L. Paved and gravel road crossings shall be bored. The depth below the road surface shall be a minimum depth of 48 inches for all utility facilities.
- M. The utility facility owner shall keep the number of roadway crossings to a minimum. In individual cases the county may require several facilities to cross in a single conduit or structure. Crossings shall be perpendicular to the roadway alignment unless authorized differently by the county engineer.
- N. The vertical clearance for overhead utility facilities and the lateral and vertical clearances from bridges shall conform to generally accepted industry standard, except where greater clearances are required by the state statute or rule. In no event shall the minimum vertical clearance be less than 18 feet above the roadway for service connections and 20 feet above the roadway for other overhead utility facilities.

- O. All above ground utility facilities shall be placed as close to the right-of-way line in all instances and utility access holes shall be placed below the ground line in all locations unless otherwise authorized by the county engineer. New telephone and water utilities shall be placed in the north or east county right-of-way in the backslope or bottom of the foreslope. New gas and electric facilities shall be placed in the south or west county right-of-way in the backslope or bottom of the foreslope. Variances from this requirement will be considered on an individual basis and approved by the engineer.
6. Non-conforming Work. The county engineer may take any or all of the following actions for non-compliance with any provisions or terms of the permit:
- A. Halt utility construction or maintenance activities within the right-of-way.
  - B. Withhold any permit fee reimbursement until compliance is ensured.
  - C. Revoke the permit.
  - D. Remove the non-compliant construction or maintenance work, restore the area to its previous condition, and assess the removal and restoration costs against the utility facility owner.
7. Emergency Work. In emergency situations, work may be initiated by an 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) day of initiation of the work. All emergency work shall be done in conformity with the provisions of this permit and may be inspected for full compliance.
8. County Infraction. Violation of this permit is a county infraction under Iowa Code Section 331.307, punishable by a civil penalty of \$100 for each violation. Each day that a violation occurs or is permitted to exist by the applicant constitutes a separate offense.
9. Hold Harmless. The utility company shall save Keokuk County harmless from any damages resulting from the negligence of the applicant. A copy of a certificate of insurance naming Keokuk County as an additional insured for the permit work or 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 Keokuk 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, roadway changes, or widening of right-of-way 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.



(To Be Completed by the Office)

Field Review By \_\_\_\_\_

\_\_\_\_\_ Date

Ditch Depth: \_\_\_\_\_ feet

Drainage Area: \_\_\_\_\_ Acres

Foreslope Required: 8:1 3:1  
(Circle One)

Separation Requirements  
Intersections  
Adj. Entrances/Driveways  
Bridges/Culverts

Meets Criteria  
Yes No

Culvert Size: \_\_\_\_\_ inches

Culvert Length: \_\_\_\_\_ feet

| Yes | No |
|-----|----|
|     |    |
|     |    |
|     |    |

Permit Issued By \_\_\_\_\_

\_\_\_\_\_ Date

Work Completed: \_\_\_\_\_  
Date

Field Review: \_\_\_\_\_  
Date

Comments:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Final Acceptance By \_\_\_\_\_

\_\_\_\_\_ Date

**Keokuk County Highway Department  
Tile Crossing Permit**

**Applicant/Landowner Information**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip Code \_\_\_\_\_

Permit # \_\_\_\_\_

Permit paid (date) \_\_\_\_\_

Check # \_\_\_\_\_ Cash \_\_\_\_\_

Phone # \_\_\_\_\_

Cell # \_\_\_\_\_

**Crossing Location**

E911 Address \_\_\_\_\_

Township Name: \_\_\_\_\_

Section \_\_\_\_\_ Township \_\_\_\_\_ Range \_\_\_\_\_

Open (trench) crossing

Bored crossing

Location map with sufficient detail attached?     Pink flags provided?

Additional directions: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Contractor Information**

Name: \_\_\_\_\_ Phone # \_\_\_\_\_

Insurance certificate on file?

**NRCS Staff Review**

Is the proposed tile crossing part of an overall drainage improvement project in which your office has been involved in the coordination and design?

Yes

No

What diameter pipe is recommended? \_\_\_\_\_ inch

By: \_\_\_\_\_ Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Signature**

The undersigned requests a permit for the tile crossing described above and agrees to comply with the requirements of the Keokuk County Tile Crossing Policy and terms of the permit.

By: \_\_\_\_\_

Date: \_\_\_\_\_

**Keokuk County Highway Department  
Tile Crossing Worksheet**

**Permit Review (pre-construction)**

Review date: \_\_\_\_\_

Location (layout, location, proximity to GPS monumentation, signs, etc.) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Outlet (proximity to crossroad pipe, county ROW, etc.) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Material – ROW width: \_\_\_\_\_  
\_\_\_\_\_

PERMIT RECOMMENDATION:  Approved  Denied

Comments \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_ Title: \_\_\_\_\_

Work start:                      Date county notified by contractor: \_\_\_\_\_

Material pickup:              Date: \_\_\_\_\_

Work completion:            Date county notified by contractor: \_\_\_\_\_

**Field Review (post-construction)**

Review date: \_\_\_\_\_

Comments (permit compliance) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

RECOMMENDATION:  Approved  Denied

By: \_\_\_\_\_ Title: \_\_\_\_\_

**LRTF Grant Project Information for Keokuk County    Run Date: 5/21/2021**

| <b>DOT Project Number</b> | <b>Grant Applicant</b>           | <b>Fiscal Year</b> | <b>Awarded Amount</b> | <b>Description</b>                                  | <b>Type</b> |
|---------------------------|----------------------------------|--------------------|-----------------------|---|-------------|
| 90-54-LRTF-601            | Keokuk County Highway Department | 2006               | \$ 15,000.00          | Equipment - Hydro seeder                            | County      |
| 90-54-LRTF-701            | Keokuk County Highway Dep't.     | 2007               | \$ 11,500.00          | IRVM equipment and seed storage building            | County      |
| 90-54-LRTF-801            | Keokuk County Highway Department | 2008               | \$ 11,158.72          | Equipment - Three chemical injectors for spray unit | County      |
| 90-54-LR17(101)           | Keokuk County Highway Department | 2017               | \$ 100.00             | Equipment - Refurbished Truaxii 88 drill            | County      |
| 90-54-LR17(325)           | Keokuk County Highway Department | 2017               | \$ 7,280.00           | Equipment - Power Box Rake PR190                    | County      |

|   |                     |
|---|---------------------|
| <b>Total LRTF Funding Awarded FY1990 - FY2020</b> | <b>\$ 45,038.72</b> |
|---|---------------------|

**Position:** Roadside Manager

**Reports To:** General Working Foreman

**Definition:** Under the general direction of the General Working Foreman, coordinates aspects of managing roadside vegetation and the implementation of the Keokuk County Integrated Roadside Vegetation Management Plan (IVRM). This includes, but is not limited to controlling noxious weeds, performing controlled burning, managing and removal of roadside trees and brush, installation of right-way vegetation, erosion control, maintenance of existing plantings, and public education; installation, maintenance, repair, of signage and traffic control devices within the right-of-way; collection of data, input of data, and maintenance of database(s) for signage and roadside management activities; equipment operation and maintenance for the maintenance of Keokuk County roads; performs related work as directed.

**Essential Duties and Functions:**

Assists in the supervision and scheduling of brush control, control of noxious weeds, mowing, seeding of construction and maintenance projects, and the planting and maintenance of prairie grasses.

Maintains records of weed infestations, herbicides used and cost of destruction.

Recognizes and identifies native prairie plant species and all vegetation defined as noxious by the State of Iowa. Must be able to differentiate between closely related plant species.

Inventories and documents plant communities and trends along county rights-of-way.

Plants and maintains native and introduced grass/forb communities in newly graded, cleaned out, or otherwise disturbed sites on county right-of-way. Maintains cost records of said sites.

Provides public education and outreach regarding the Keokuk County IVRM and on other topics as directed.

Supervises assigned seasonal/part-time help as directed.

Conducts field data collection work, data input and database maintenance involved with roadside management, sign management, and other work as assigned using GPS, computers, tablets and other electronic equipment.

Is responsible for preparing, maintaining accurate notes, records, and sketches of work performed or data collected and verifying accuracy of data of assigned county projects.

Develops plans and layouts for traffic control and implements placement of traffic control for County projects.

Installs, maintains, repairs, and inventories signage and traffic control devices within the right-of-way.

Prepares, updates and tracks grant applications and plans for roadside management and sign maintenance activities.

Safely operates and performs routine maintenance on equipment used in assigned work.

Effectively trains new employees on systems and equipment as directed.

Communicates effectively and logically in writing and verbally

Prepares reports, proposals and presentations as needed.

Independently or as part of a team, operates county equipment including but not limited to medium to heavy duty trucks, motor graders, dozers, end loaders, backhoes, brush cutters, mowers, snow plows and hand tools in maintenance and construction activities. Activities include (but are not limited to):

- Maintenance of county secondary roads and snow removal in winter
- Truck plow operations for snow removal in winter and spreading of salt, sand or other chemicals for snow and ice control
- Operates tractor and implements for roadside mowing and management
- Operates heavy equipment for vegetation management (e.g. excavators equipped with forestry attachments)
- Operates heavy equipment for grading, finish grading, seedbed preparation, seed/mulch/fertilizer application
- Operates hand tools for brush removal
- Operates equipment for vegetation management (i.e. spray equipment)

Is subject to call during off-duty hours for emergencies such as floods, snow removal, or other maintenance functions.

Keeps the General Working Foreman informed on the progress of all assigned projects.

Performs other duties and/or related work as directed.

(**Marginal functions** of positions that are incidental to the performance of fundamental job duties have been excluded.)

**Requirements:**

Possession of a valid Class "B" Commercial Driver License.

Graduation from high school or G.E.D. equivalent. Additional education in botany, horticulture, natural resources or related areas are preferred but not required.

Experience in weed control activities, supervision, public relations, or any combination of training and experience which provides the required knowledge, skills and abilities.

Possession of a valid commercial pesticide applicator license in Category 6 (right-of-way) or ability to obtain within 60 days of hire.

Must maintain a positive, cooperative, team-oriented attitude.

Ability to operate and maintain equipment safely and efficiently.

Ability to use a computer for word processing, record keeping, and data management.

Ability to perform basic GIS functions including map creation and database establishment, input and management.

Ability to understand and implement technical written and oral instructions.

Knowledge of related equipment and safety practices.

Ability to maintain and present operating records and reports.

Ability to effectively carry out oral and written instructions.

Ability to establish and maintain an effective working relationship with fellow employees; other county, municipal, state and federal employees; contractors; and the public.

Willingness to undergo a pre-employment, post offer physical and functional capacity evaluation.

Willingness to comply with drug and alcohol testing procedure required by federal law and county policy.

# PHYSICAL REQUIREMENTS & WORKING CONDITIONS WORKSHEET

R=RARELY, LESS THAN 15% OF TIME  
 O=OCCASIONALLY, 15% - 40% OF TIME  
 F=FREQUENTLY, 40% - 70% OF TIME  
 C=CONSTANTLY, MORE THAN 70% OF TIME

COMPANY: KEOKUK COUNTY  
 JOB TITLE: ROADSIDE MANAGER  
 DATE: NOVEMBER 2020

| PHYSICAL DEMANDS               | N/A | R | O | F | C |                            | N/A | R | O | F | C |                     | N/A | R | O | F | C |   |
|--------------------------------|-----|---|---|---|---|----------------------------|-----|---|---|---|---|---------------------|-----|---|---|---|---|---|
| Standing                       |     |   |   | x |   | Stooping                   |     |   |   | x |   | Feeling             |     |   |   |   |   | x |
| Walking                        |     |   |   | x |   | Kneeling                   |     |   |   | x |   | Talking             |     |   |   |   |   | x |
| Sitting                        |     |   |   | x |   | Crouching                  |     |   |   | x |   | Hearing: Speech     |     |   |   |   |   | x |
| Lifting-Max. Weight 50#        |     |   | x |   |   | Body Pivoting              |     |   |   |   | x | Hearing: All Ranges |     |   |   |   |   | x |
| Carrying-Max. Weight 50#       |     |   | x |   |   | Repetitive Motions         |     |   |   |   | x | Seeing-Reading      |     |   |   |   |   | x |
| Pushing-Max. Force 50#         |     |   | x |   |   | Crawling                   |     | x |   |   |   | Seeing-Distant      |     |   |   |   |   | x |
| Pulling-Max. Force 50#         |     |   | x |   |   | Reaching, high, low, level |     |   |   |   | x | Depth Perception    |     |   |   |   |   | x |
| Climbing-Stairs                |     |   |   | x |   | Grasping                   |     |   |   |   | x | Color Vision        |     |   |   |   |   | x |
| Climbing-Ladders               |     |   |   | x |   | Finger Dexterity           |     |   |   |   | x | Other               |     |   |   |   |   |   |
| Balancing                      |     |   | x |   |   | Other                      |     |   |   |   |   | Other               |     |   |   |   |   |   |
| Elevator Available             | x   |   |   |   |   |                            |     |   |   |   |   |                     |     |   |   |   |   |   |
|                                |     |   |   |   |   |                            |     |   |   |   |   |                     |     |   |   |   |   |   |
| WORKING CONDITIONS             | N/A | R | O | F | C |                            | N/A | R | O | F | C |                     | N/A | R | O | F | C |   |
| Extreme Cold-Below 32F         |     |   |   | x |   | Vehicle Use-Highway        |     |   |   |   | x | Chemicals           |     |   |   |   |   | x |
| Extreme Heat-Above 100F        |     |   |   | x |   | Vehicle Use-Property       |     |   |   |   | x | List:               |     |   |   |   |   |   |
| Dryness                        |     |   |   | x |   | Working/ people            |     |   |   | x |   |                     |     |   |   |   |   |   |
| Wetness                        |     |   |   | x |   | Working alone              |     |   |   | x |   |                     |     |   |   |   |   |   |
| Humidity-Above 90%             |     |   |   | x |   | Airborne Contaminants      |     |   |   |   | x |                     |     |   |   |   |   |   |
| Confined Spaces                |     | x |   |   |   | (List those normally       |     |   |   |   |   |                     |     |   |   |   |   |   |
| Elevated Heights               |     |   | x |   |   | in work area)              |     |   |   |   |   |                     |     |   |   |   |   |   |
| Noise-Over 85 Decibels         |     |   |   |   | x | Lime dust                  |     |   |   |   |   |                     |     |   |   |   |   |   |
| Moving Equipment               |     |   |   |   | x | Pigeon droppings           |     |   |   |   |   |                     |     |   |   |   |   |   |
| Vibrating Equipment            |     |   |   |   | x |                            |     |   |   |   |   |                     |     |   |   |   |   |   |
|                                |     |   |   |   |   |                            |     |   |   |   |   |                     |     |   |   |   |   |   |
| PROTECTIVE EQUIPT. REQUIRED    | N/A | R | O | F | C |                            | N/A | R | O | F | C |                     | N/A | R | O | F | C |   |
| Respirator-Breathing Apparatus |     | x |   |   |   | Special Clothing:          |     |   |   |   |   |                     |     |   |   |   |   |   |
| Eye Protection                 |     |   |   |   | x | Arms, Hands, Fingers       |     |   |   |   | x |                     |     |   |   |   |   |   |
| Hearing Protection             |     |   |   |   | x | Legs, Feet, Toes           |     |   |   |   | x |                     |     |   |   |   |   |   |
| Head Protection                |     |   |   |   | x | Body Protection            |     |   |   |   | x |                     |     |   |   |   |   |   |
| Safety Vest                    |     |   |   |   | x | Steel Toed Shoes           |     |   |   |   | x |                     |     |   |   |   |   |   |

ADDITIONAL INFORMATION (INCLUDE "PREFERRED" REQUIREMENTS AND ADD COMMENTS WHICH SUPPORT OR DEFINE "ESSENTIAL" REQUIREMENTS.)

- Ability to work under stressful situations frequently.
- Ability to work on uneven terrain may be required frequently.
- Ability to work outdoors in all weather conditions may be required frequently.
- Duties as assigned may require frequent use of hand and arms extended while holding equipment (i.e. chainsaw).
- Lifts above 50 lbs. require assistance.

FEDERAL AND STATE LAW PROHIBIT DISCRIMINATION FOR PHYSICAL OR MENTAL DISABILITY UNLESS THE DISABILITY PRECLUDES PERFORMANCE OF THE ESSENTIAL FUNCTIONS OF THE JOB (WITH OR WITHOUT REASONABLE ACCOMMODATION) OR WOULD BE A HAZARD TO THE EMPLOYEE OR HIS/HER FELLOW WORKERS. ITEMS CHECKED ABOVE APPLY TO THE SPECIFIC JOB SHOWN ABOVE.

**Position:** General Working Foreman

**Reports To:** Maintenance Superintendent

**Description:** Under the general direction of the Maintenance Superintendent, assists in the supervision and coordination of employees, equipment and materials for the construction, maintenance and repair of roads, bridges, culverts and related facilities within the County's Secondary Road System; performs related work as directed.

**Essential Duties and Functions:**

Supervises assigned maintenance staff in maintenance and repair of county roads, bridges, culverts, and related county property. Coordinates the use of equipment, barricades and signs in said work.

Has the ability to operate and perform routine maintenance on equipment used in assigned work including but not limited to trucks, dozers, graders, end loaders, compressors, and backhoes; instructs subordinates in the safe and efficient operation of equipment.

Assists the Maintenance Superintendent in ensuring the proper inventories are maintained and that materials are available for assigned jobs. Prepares detailed reports of hours worked and costs of construction and maintenance projects and operations.

Assists the Maintenance Superintendent in field inspections, investigating citizen's complaints, and coordinating work with adjacent land owners. Maintains an effective working relationship with utility company representative, contractors, landowners, county officials, staff and the general public.

Is subject to call during off-duty hours for emergencies such as floods, snow removal, or other related maintenance functions. May be authorized to call out employees for emergencies if the Maintenance Superintendent is not available.

Supervision of others including the Equipment Operator, Utility Worker and assigned part-time/seasonal help.

Performs related work as directed.

(Marginal functions of positions that are incidental to the performance of fundamental job duties have been excluded.)

**Requirements:**

Possession of a valid Class "B" Commercial Drivers License with air brake endorsement.

Graduation from high school or G.E.D. equivalent and 5 or more years of experience in construction, road maintenance and equipment operation functions.

Considerable knowledge of the methods, techniques and practices of highway construction and maintenance.

Considerable knowledge of related equipment and safety practices.

Ability to understand and implement oral and written instructions.

Ability to maintain and present operating records and reports.

Skill in the application of construction and maintenance methods and practices.

Ability to operate standard construction equipment.

Ability to plan, organize, assign, supervise and inspect the work of subordinates.

Ability to establish and maintain an effective working relationship with fellow employees and public.

Must be available for work in the event of an emergency.

Willingness to undergo pre-employment, post offer physical and functional capacity evaluation.

Willingness to comply with drug and alcohol testing procedures required by federal law and county policy.

# PHYSICAL REQUIREMENTS & WORKING CONDITIONS WORKSHEET

R=RARELY, LESS THAN 15% OF TIME  
 O=OCCASIONALLY, 15% - 40% OF TIME  
 F=FREQUENTLY, 40% - 70% OF TIME  
 C=CONSTANTLY, MORE THAN 70% OF TIME

**COMPANY:** KEOKUK COUNTY  
**JOB TITLE:** GENERAL WORKING FOREMAN  
**DATE:** OCTOBER 1999

| PHYSICAL DEMANDS               | N/A | R | O | F | C |                                    | N/A | R | O | F | C |                     | N/A | R | O | F | C |   |
|--------------------------------|-----|---|---|---|---|------------------------------------|-----|---|---|---|---|---------------------|-----|---|---|---|---|---|
| Standing                       |     |   |   | x |   | Stooping                           |     |   |   | x |   | Feeling             |     |   |   |   | x |   |
| Walking                        |     |   |   | x |   | Kneeling                           |     |   |   | x |   | Talking             |     |   |   |   |   | x |
| Sitting                        |     |   | x |   |   | Crouching                          |     |   |   | x |   | Hearing: Speech     |     |   |   |   |   | x |
| Lifting-Max. Weight 50#        |     | x |   |   |   | Body Pivoting                      |     |   |   | x |   | Hearing: All Ranges |     |   |   |   |   | x |
| Carrying-Max. Weight 50#       |     | x |   |   |   | Repetitive Motions                 |     | x |   |   |   | Seeing-Reading      |     |   |   |   |   | x |
| Pushing-Max. Force 50#         |     | x |   |   |   | Crawling                           |     | x |   |   |   | Seeing-Distant      |     |   |   |   |   | x |
| Pulling-Max. Force 50#         |     | x |   |   |   | Reaching, high, low, level         |     |   |   | x |   | Depth Perception    |     |   |   |   |   | x |
| Climbing-Stairs                |     | x |   |   |   | Grasping                           |     |   |   | x |   | Color Vision        |     |   |   |   |   | x |
| Climbing-Ladders               |     | x |   |   |   | Finger Dexterity                   |     |   |   | x |   | Other               |     |   |   |   |   |   |
| Balancing                      |     | x |   |   |   | Other                              |     |   |   |   |   | Other               |     |   |   |   |   |   |
| Elevator Available             | x   |   |   |   |   |                                    |     |   |   |   |   |                     |     |   |   |   |   |   |
| WORKING CONDITIONS             | N/A | R | O | F | C |                                    | N/A | R | O | F | C |                     | N/A | R | O | F | C |   |
| Extreme Cold-Below 32F         |     |   |   | x |   | Vehicle Use-Highway                |     |   | x |   |   | Chemicals           |     |   |   |   |   |   |
| Extreme Heat-Above 100F        |     | x |   |   |   | Vehicle Use-Property               |     |   |   |   | x | List:               |     |   |   |   |   |   |
| Dryness                        |     |   |   | x |   | Working/ people                    |     |   |   |   | x | Herbicide           |     | x |   |   |   |   |
| Wetness                        |     |   |   | x |   | Working alone                      |     | x |   |   |   |                     |     |   |   |   |   |   |
| Humidity-Above 90%             |     |   |   |   | x | Airborne Contaminants              |     |   |   |   | x |                     |     |   |   |   |   |   |
| Confined Spaces                |     |   | x |   |   | (List those normally in work area) |     |   |   |   |   |                     |     |   |   |   |   |   |
| Elevated Heights               |     | x |   |   |   |                                    |     |   |   |   |   |                     |     |   |   |   |   |   |
| Noise-Over 85 Decibels         |     |   |   | x |   |                                    |     |   |   |   |   |                     |     |   |   |   |   |   |
| Moving Equipment               |     |   |   | x |   |                                    |     |   |   |   |   |                     |     |   |   |   |   |   |
| Vibrating Equipment            |     |   |   | x |   |                                    |     |   |   |   |   |                     |     |   |   |   |   |   |
| PROTECTIVE EQUIPT. REQUIRED    | N/A | R | O | F | C |                                    | N/A | R | O | F | C |                     | N/A | R | O | F | C |   |
| Respirator-Breathing Apparatus |     | x |   |   |   | Special Clothing:                  |     |   |   |   |   |                     |     |   |   |   |   |   |
| Special Eye Protection         |     |   | x |   |   | Arms, Hands, Fingers               |     | x |   |   |   |                     |     |   |   |   |   |   |
| Hearing Protection             |     |   | x |   |   | Legs, Feet, Toes                   |     |   |   |   |   |                     |     |   |   |   |   |   |
| Head Protection                |     | x |   |   |   | Body Protection                    | x   |   |   |   |   |                     |     |   |   |   |   |   |
|                                |     |   |   |   |   | Steel Toed Shoes                   |     |   |   |   | x |                     |     |   |   |   |   |   |

ADDITIONAL INFORMATION (INCLUDE "PREFERRED" REQUIREMENTS AND ADD COMMENTS WHICH SUPPORT OR DEFINE "ESSENTIAL" REQUIREMENTS.)  
 Lifts above 50 lbs. require assistance.  
 Snow and night vision required.  
 Ability to operate a vehicle at night and during hazardous weather and road conditions may be required.  
 Ability to work outdoors in all weather conditions on county road system in and around heavy equipment and on uneven terrain required frequently.  
 Must work in stressful situations constantly.

FEDERAL AND STATE LAW PROHIBIT DISCRIMINATION FOR PHYSICAL OR MENTAL DISABILITY UNLESS THE DISABILITY PRECLUDES PERFORMANCE OF THE ESSENTIAL FUNCTIONS OF THE JOB (WITH OR WITHOUT REASONABLE ACCOMMODATION) OR WOULD BE A HAZARD TO THE EMPLOYEE OR HIS/HER FELLOW WORKERS. ITEMS CHECKED ABOVE APPLY TO THE SPECIFIC JOB SHOWN ABOVE.

# PHYSICAL REQUIREMENTS & WORKING CONDITIONS WORKSHEET

R=RARELY, LESS THAN 15% OF TIME  
 O=OCCASIONALLY, 15% - 40% OF TIME  
 F=FREQUENTLY, 40% - 70% OF TIME  
 C=CONSTANTLY, MORE THAN 70% OF TIME

**COMPANY: KEOKUK COUNTY**  
**JOB TITLE: MAINTENANCE SUPERINTENDANT**  
**DATE: OCTOBER 1999**

|                                       |   |  |   |   |                         |  |   |  |   |                    |  |   |  |   |
|---------------------------------------|---|--|---|---|-------------------------|--|---|--|---|--------------------|--|---|--|---|
| Standing                              |   |  |   | x | Stooping                |  |   |  | x | Feeling            |  |   |  | x |
| Walking                               |   |  |   | x | Kneeling                |  |   |  | x | Talking            |  |   |  | x |
| Sitting                               |   |  | x |   | Crouching               |  |   |  | x | Hearing: Speech    |  |   |  | x |
| Lifting-Max. Weight 50#               |   |  | x |   | Body Pivoting           |  |   |  | x | Hearing:All Ranges |  |   |  | x |
| Carrying-Max. Weight 50#              |   |  | x |   | Repetitive Motions      |  | x |  |   | Seeing-Reading     |  |   |  | x |
| Pushing-Max. Force 50#                |   |  | x |   | Crawling                |  | x |  |   | Seeing-Distant     |  |   |  | x |
| Pulling-Max. Force 50#                |   |  | x |   | Reaching,high,low,level |  |   |  | x | Depth Perception   |  |   |  | x |
| Climbing-Stairs                       |   |  | x |   | Grasping                |  |   |  | x | Color Vision       |  |   |  | x |
| Climbing-Ladders                      |   |  | x |   | Finger Dexterity        |  |   |  | x | Snow               |  |   |  | x |
| Balancing                             |   |  | x |   | Other                   |  |   |  |   | Night Vision       |  |   |  | x |
| Elevator Available                    | x |  |   |   |                         |  |   |  |   | Other              |  |   |  |   |
| Extreme Cold-Below 32F                |   |  |   | x | Vehicle Use-Highway     |  |   |  | x | Chemicals          |  |   |  |   |
| Extreme Heat-Above 100F               |   |  |   | x | Vehicle Use-Property    |  |   |  | x | List:              |  |   |  |   |
| Dryness                               |   |  |   | x | Working/ people         |  |   |  | x | Herbicide          |  | x |  |   |
| Wetness                               |   |  |   | x | Working alone           |  |   |  | X |                    |  |   |  |   |
| Humidity-Above 90%                    |   |  |   | x | Airborne Contaminants   |  |   |  | x |                    |  |   |  |   |
| Confined Spaces                       |   |  | x |   | (List those normally    |  |   |  |   |                    |  |   |  |   |
| Elevated Heights                      |   |  | x |   | in work area)           |  |   |  |   |                    |  |   |  |   |
| Noise-Over 85 Decibels                |   |  |   | x | Dust                    |  |   |  |   |                    |  |   |  |   |
| Moving Equipment                      |   |  |   | x | Diesel                  |  |   |  |   |                    |  |   |  |   |
| Vibrating Equipment                   |   |  |   | x | Petroleum Products      |  |   |  |   |                    |  |   |  |   |
| Respirator-Breathing Apparatus (Mask) |   |  | x |   | Special Clothing:       |  |   |  |   |                    |  |   |  |   |
| Special Eye Protection                |   |  | x |   | Arms, Hands, Fingers    |  |   |  | x |                    |  |   |  |   |
| Hearing Protection                    |   |  | x |   | Legs, Feet, Toes        |  |   |  |   |                    |  |   |  |   |
| Head Protection                       |   |  | x |   | Body Protection         |  | x |  |   |                    |  |   |  |   |
|                                       |   |  |   |   | Steel Toed Shoes        |  |   |  | x |                    |  |   |  |   |

**ADDITIONAL INFORMATION (INCLUDE "PREFERRED" REQUIREMENTS AND ADD COMMENTS WHICH SUPPORT OR DEFINE "ESSENTIAL" REQUIREMENTS.)**

Must work in stressful situations constantly.  
 Must have the ability to walk frequently on uneven terrain.  
 Ability to work outdoors in all weather conditions.  
 Ability to operate vehicle at night and in hazardous weather/road conditions may be required.  
 Lifts above 50 lbs. require assistance.

FEDERAL AND STATE LAW PROHIBIT DISCRIMINATION FOR PHYSICAL OR MENTAL DISABILITY UNLESS THE DISABILITY PRECLUDES PERFORMANCE OF THE ESSENTIAL FUNCTIONS OF THE JOB (WITH OR WITHOUT REASONABLE ACCOMMODATION) OR WOULD BE A HAZARD TO THE EMPLOYEE OR HIS/HER FELLOW WORKERS. ITEMS CHECKED ABOVE APPLY TO THE SPECIFIC JOB SHOWN ABOVE.

**Position: Maintenance Superintendent**

**Reports To:** County Engineer

**Description:** Under the general direction of the County Engineer, supervises and coordinates the assignment of employees, equipment and materials for the construction, maintenance and repair of roads, bridges, culverts, traffic signs, right-of-way and related facilities within the County's Secondary Road System; performs related work as directed. May assist the Assistant to the Engineer in supervision of employees under the Assistant's scope of supervision.

**Essential Duties and Functions:**

Supervises foreman and maintenance staff in maintenance and repair of county roads, bridges, and right-of-ways such as blading, drainage, culverts, ditching, signs, weed control, resurfacing, patching, mowing. Coordinates the use of equipment in said work.

Supervises foreman, maintenance staff, and seasonal/part-time help. Recommends new hires; trains employees; maintains log or personnel assignments and equipment; approves and processes leave requests; assigns projects and checks results; approves overtime hours; monitors time and work records; handles grievances and complaints; administers disciplinary actions.

Supervises snow removal, sanding, salting, and plowing; maintains inventory of materials such as sand, salt and blades for snow removal; calls out and assigns/checks work of maintenance crews in emergencies such as floods, snow removal, signs and other related maintenance functions.

Supervises foreman and mechanics in maintenance of county equipment. Diagnoses equipment problems and evaluates cost/benefit of repair, new purchase, or contracting out; supervises maintenance of department buildings and grounds.

Maintains an effective working relation ship with utility company representative, contractors, landowners, county officials, staff and the general public; advises county engineer of problems and handles numerous complaints.

Provides for and handles 24 hour on-call services such as from the sheriff for county road and/or accident problems.

Develops and presents recommendations to the county engineer regarding new equipment and supply purchases.

Performs general labor and skilled equipment operations in any seasonal road maintenance function of the department.

Issues purchase orders and has authority to purchase items for shop and maintenance operations.

Performs related work as directed.

**Requirements:**

Possession of valid Class "B" Commercial Drivers License with air brake endorsement.

Graduation from high school or GED equivalent and 5 or more years of experience in construction, road maintenance and equipment operation functions.

Considerable knowledge of the methods, techniques, and practices of highway construction and maintenance.

Considerable knowledge of related equipment and safety practices.

Ability to understand and implement oral and written instructions.

Ability to maintain and present operating records and reports.

Skill in the application of construction and maintenance methods and practices.

Ability to operate standard construction equipment.

Ability to plan, organize, assign, supervise and inspect the work of subordinates.

Ability to establish and maintain an effective working relationship with fellow employees and public.

Must be subject to call 24 hours/day.

Willingness to undergo a pre-employment, post offer physical and functional capacity evaluation.

Willingness to comply with drug and alcohol testing procedures required by federal law and county policy.