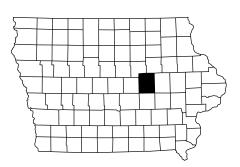
IOWA DEPARTMENT OF NATURAL RESOURCES

FOR UNION GROVE STATE PARK TRAIL BRIDGE

TAMA COUNTY, IOWA

PROJECT # 18-05-86-01

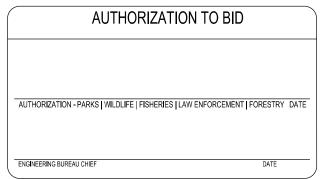


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| ONE CALL |

| DIRECTORY | | | |
|----------------|--------------------------------------|------------------------|--------------------------------------|
| PROJECT | MANAGER | CONSTRUCTION INSPECTOR | |
| COMPANY | IOWA DEPARTMENT OF NATURAL RESOURCES | COMPANY | IOWA DEPARTMENT OF NATURAL RESOURCES |
| ADDRESS | 502 EAST 9TH STREET | ADDRESS | |
| CITY,STATE,ZIP | DES MOINES, IA, 50319 | CITY,STATE,ZIP | |
| CONTACT | HEATH DELZELL | CONTACT | JASON KRUSE |
| TELEPHONE | 515-979-0104 | TELEPHONE | 515-250-3707 |
| FAX | 515-281-8685 | FAX | |
| EMAIL | heath.delzel@dnr.iowa.gov | EMAIL | jason.kruse@dnr.iowa.gov |

PROJECT DESCRIPTION

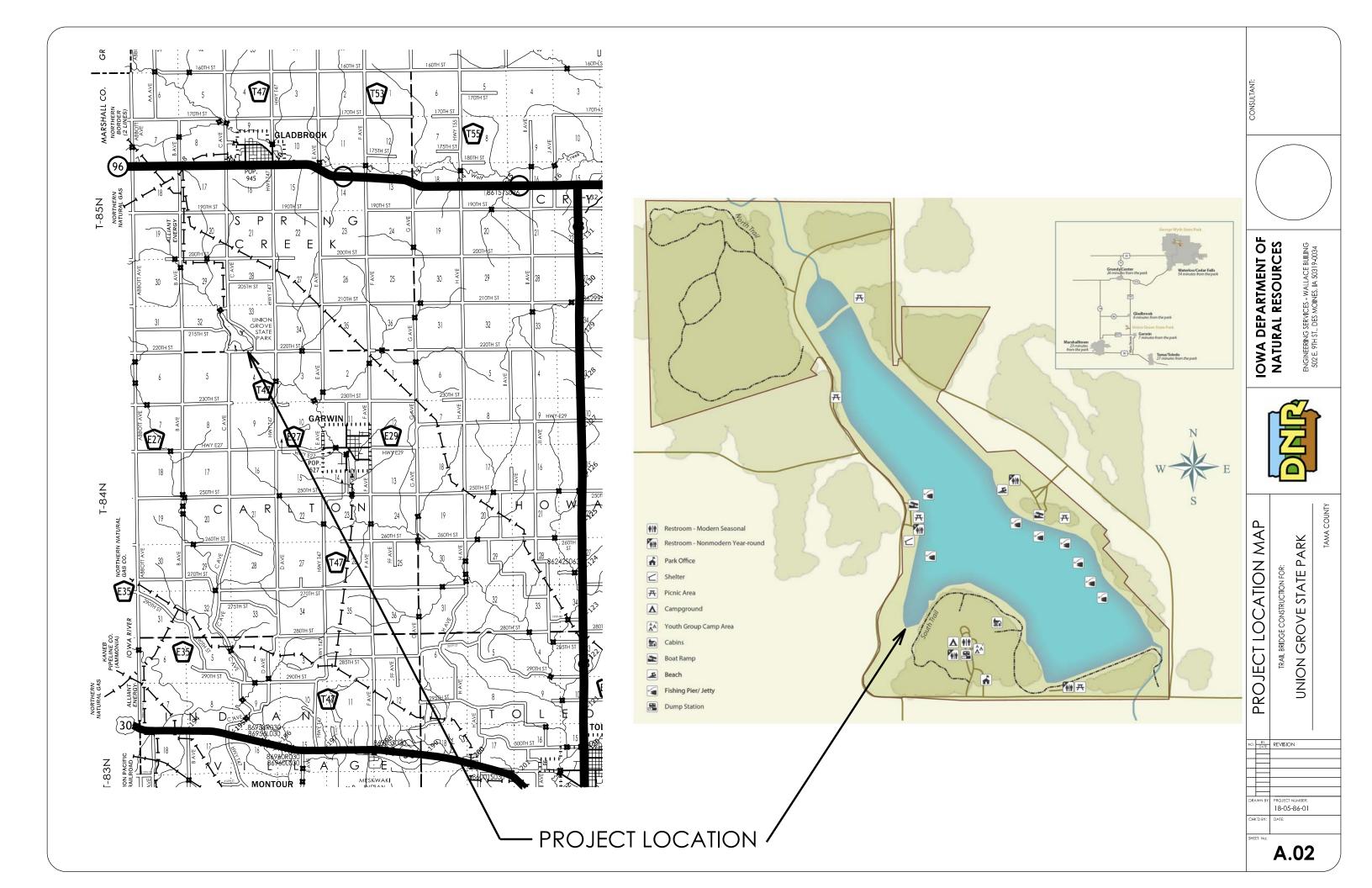
This project consists of constructing approximately 1,500 feet of granular surfaced trail and installing a 40' x 6 pre-fabricated trail bridge.

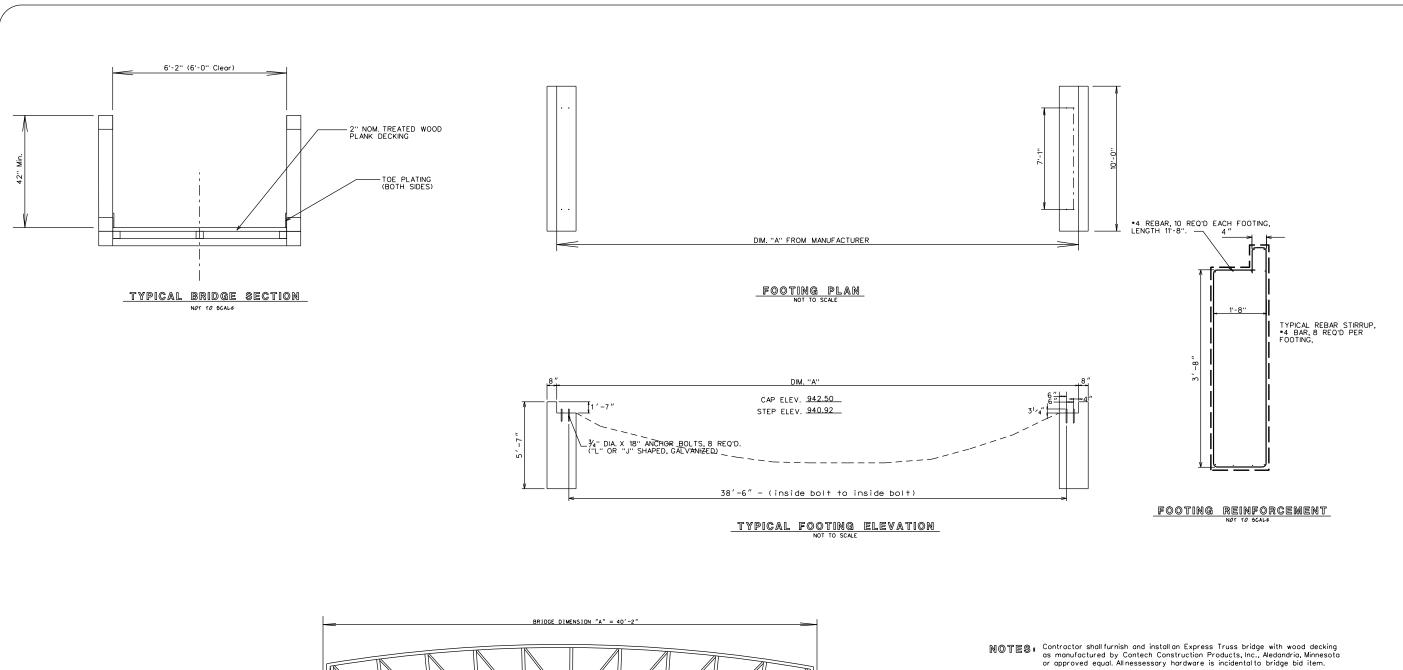


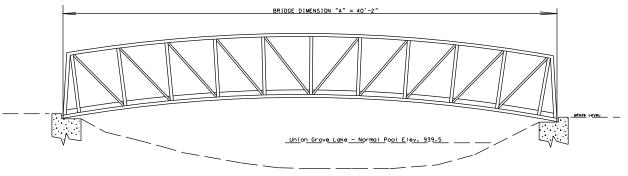
| \neg | SHEET INDEX | A.01 |
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| \dashv | | A.02 |
| \neg | TYPICAL CROSS SECTIONS AND DETAILS | B.01 |
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JNION GROVE STATE PARK **COVER SHEET**

A.01





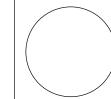


BRIDGE ELEVATION NOT TO SCALE

Contractor shall verify anchor bold spacings with bridge supplier prior to construction of the footings.

Excavation and Fill quantities necessary for construction of footings shall be incidental work.

Concrete shall be class "C" structural, 4,000 PSI © 28 days.



IOWA DEPARTMENT OF NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILING 502 E. 9TH ST., DES MOINES, IA 50319-0034



TRAIL BRIDGE CONSTRUCTION FOR: UNION GROVE STATE PARK

TYPICAL CROSS SECTIONS AND DETAILS

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| NO. | BY DATE | revision |
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| | | 18-05-86-01 |
| CHK'D BY: | | DATE: |

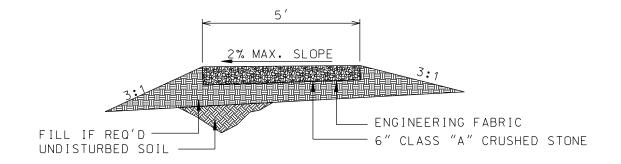
B.01

ENGINEERING SERVICES - WALLACE BUILING 502 E. 9TH ST., DES MOINES, IA 50319-0034





B.02



NOTES:

BLADING AND SHAPING OF ROUTES TO BE APPROVED BY THE ENGINEER, AND ARE TO BE INCIDENTAL TO THE GRANULAR SURFACING BID ITEM.

Type 1 Trail NOT TO SCALE

2% MAX. SLOPE ENGINEERING FABRIC FILL IF REQ'D UNDISTURBED SOIL 6" CLASS "A" CRUSHED STONE 8" MACADAM STONE

NOTES:

BLADING AND SHAPING OF ROUTES TO BE APPROVED BY THE ENGINEER, AND ARE TO BE INCIDENTAL TO THE GRANULAR SURFACING BID ITEM.

Type 2 Trail

NOT TO SCALE

ESTIMATED PROJECT QUANTITIES

| ITELANIO | TTE (| LINUT | TOTAL |
|----------|------------------------------------|----------|-------|
| ITEM NO. | ПЕМ | UNIT | TOTAL |
| 1 | Mobilization | Lump Sum | 1 |
| 2 | Site Restoration | Lump Sum | 1 |
| 3 | 6" Dual Wall HDPE W/ Rodent Guards | LF | 12 |
| 4 | Engineering Fabric | SY | 834 |
| 5 | Macadam Stone Base | Tons | 51 |
| 6 | Class A Crushed Stone | Tons | 263 |
| 7 | Erosion Stone | Tons | 20 |
| 8 | 40'x6' Bridge | Each | 1 |
| 9 | Bridge Abutments | Lump Sum | 1 |
| 10 | Relocate Bench | Lump Sum | 1 |
| 11 | Dig Ditch | Lump Sum | 1 |
| 12 | 18" CMP | LF | 20 |
| 13 | Grading, Shaping, and Clearing | Lump Sum | 1 |
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ESTIMATE REFERENCE INFORMATION

| ITEM NO. | DESCRIPTION | | |
|-------------|---|--|--|
| 2 | A. All disturbed areas shall be seeded, fertilized, and mulched per lowa DOT specifications, Urban Mix. | | |
| 3 | A. Pipe shall be N-12 as manufactured by Advanced Drainage Systems, Inc., Hilliard, Ohio, or approved equal. B. Rodent guards shall be installed on both ends of the pipe, and shall be 12" Rat Guard as manufactured by Agri Drain Corp., Adair, Iowa, or approved equal. | | |
| 4 | A. Material shall meet lowa DOT specifications for Embankment Erosion Control Fabric. | | |
| 5 | A. Material shall meet lowa DOT specifications for Macadam Stone Base. | | |
| 6 | A. Material shall meet lowa DOT specifications for Class A Crushed Stone. | | |
| 7 | A. Material shall meet Iowa DOT specifications for Erosion Stone. | | |
| 8 | A. Bridge shall be an Express Truss bridge as manufactured by Contech Engineered Solutions, LLC, Shakopee, MN, or approved equal. | | |
| 10 | A. Bench shall be relocated to an area immediately adjacent to work site, as directed by the DNR Engineer. | | |
| 11 | A. Ditch shall be one bucket wide. | | |
| 13 | A. The majority of the trail has been cleared and roughly graded. Minor grading, branch trimming, and willow removal is required. | | |
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GENERAL NOTES

Verify actual locations and elevations with DNR Engineer.

All work shall conform to and be performed in accordance with all applicable codes and ordinances.

The contractor shall visit the site and inspect the project area and thoroughly familiarize themselves with the actual job conditions prior to bidding and the start of work. Failure to visit the project site shall not relieve the contractor from performing the work in accordance to the plans, specification, special provisions and contract.

The contractor shall verify, at the site, all dimensions and conditions shown on the plans and shall notify the DNR Engineer of any discrepancies, omissions, and/or conflicts prior to proceeding with the work.

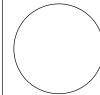
It shall be the contractor's responsibility to provide waste areas or disposal sites for excess material (excavated material or broken concrete) which is not desirable to be incorporated into the work involved on this project. No payment for overhaul will be allowed for material hauled to these sites. No material shall be placed within the right-of-way, unless specifically stated in the plans or approved by the DNR Engineer.

The contractor shall not disturb desirable grass areas and desirable trees outside the construction limits. The contractor will not be permitted to park or service vehicles and equipment or use these areas for storage of materials. Storage, parking and service areas will be subject to the approval of the DNR Engineer.

Where utilities and fixtures are shown as Existing on the plans or encountered within the construction area, it shall be the responsibility of the contractor to notify the DNR Engineer of those utilities prior to the beginning of any construction. The contractor shall be afforded access to these facilities for necessary modification of services. Underground facilities, structures and utilities have been plotted from available surveys and records and therefore their locations must be considered approximate only. It is possible there may be others, the existence of which is presently not known or shown. It is the contractor's responsibility to determine their existence and exact location and to avoid damage thereto. No claims for additional compensation will be allowed to the contractor for any interference or delay caused by such work.

The contractor shall shape graded area to maintain surface drainage. All elevations are to finish grade.

The contractor is expected to have materials, equipment, and labor available on a daily basis to install and maintain erosion control features on the project. This may involve seeding, silt fence, rock ditch checks, silt basins or silt dikes.



IOWA DEPARTMENT OF NATURAL RESOURCES



UNION GROVE STATE PARK

UNANTITIES AND GENERAL INFORMATION

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