

IOWA DEPARTMENT OF NATURAL RESOURCES
LAND & WATERS BUREAU
WALLACE STATE OFFICE BUILDING

ADDENDUM No. 1

VIKING LAKE STATE PARK
SEDIMENT PONDS
MONTGOMERY COUNTY, IOWA
PROJECT NUMBER: 18-04-69-02

July 9, 2019

This Addendum is issued to modify, explain or correct the original Drawings and Specifications, and is hereby made a part of the Contract Documents. Please attach this Addendum to the Project Manual in your possession. Insert the number and issue date of this Addendum in the blank space provided on the Proposal Form.

SPECIFICATIONS:

- A. 02930 Lawn and Grasses - the specification has been updated. Please discard the previous specification and use the attached revised version.
- B. Project Manuals downloaded from the Beeline and Blue website prior to July 4, 2019 may have been incomplete. The following technical specifications may be missing:
 - a. IA-1 Site Preparation
 - b. IA-5 Pollution Control
 - c. IA-11 Removal of Water
 - d. IA-21 Excavation
 - e. IA-23 Earthfill
 - f. IA-26 Topsoiling
 - g. IA-52 Steel Pipe Conduits
 - h. IA-81 Metal Fabrication and Installation

Copies of these specifications are attached. Project Manuals downloaded from the Beeline and Blue website after July 4, downloaded from the DNR's website anytime, or hard copies provided by Beeline and Blue are complete.

PLANS:

- A. Plans downloaded from the Beeline and Blue website may be missing sheet 15. Plans downloaded from the DNR's website or hard copies provided by Beeline and Blue are correct. Attached is sheet 15.

PART 1 - GENERAL

1.01 SUMMARY:

- A. Section Includes: Seedbed preparation and application of seed mixtures and fertilizer to all areas designated on the Drawings or all areas within the boundaries of this project having been disturbed by works of this project and not receiving finished surfacing, as determined by the DNR Construction Inspector and as specified herein.
- B. Related Sections: Drawings and General Provisions of the Contract, including the General Covenants and Provisions, Supplementary Covenants and Provisions and General Requirements as well as, but not necessarily limited to, the following:

Section 02200

1.02 REFERENCES:

- A. Standards of materials and construction shall conform with the Standard Specifications for Highway and Bridge Construction, 2015 Series of the Iowa Department of Transportation.

1.03 QUALITY ASSURANCE:

- A. Codes and Standards: Perform all work of this section in accordance with the requirements of the "Standard Specifications" 2015 I.D.O.T.

1.04 PROJECT/SITE CONDITIONS:

- A. Environmental Requirement:
 - 1. Weather conditions shall be observed. Seeding shall be performed only during normal application periods, optimum temperature, moisture and climatic condition to promote germination and plan growth. Normal application periods are between March 1 and May 31 and between August 10 and September 30.
- B. Existing Conditions: Survey job conditions prior to commencing work. Bring any discrepancies between existing work and the Drawings and Specifications to the attention of the Project Engineer/DNR Construction Inspector.

1.05 SEQUENCING AND SCHEDULING:

- A. Properly coordinate the work of this section with all other trades.
- B. Do not start the work of this section until the work of all other trades has been completed unless otherwise approved by the DNR Construction Inspector.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. All topsoil used for seedbed shall be in accordance with Section 02200.
- B. All seeds shall be from the latest available crop, free of noxious weed seed and supplied in the following varieties and percentages of weight.
- C. Provide mixture of types and quantities as specified herein for seeding of areas designated by the Project Engineer, the DNR Construction Inspector as indicated on the Drawings, and as specified herein.
 - 1. Mixture "12": For all disturbed areas.
 - 25# Brome/acre
 - 1.5 Bu. Oats/acre
- D. Seed is to be delivered on site in separate packaging for each individual type of seed within each mixture and mixed in the presence of the DNR Construction Inspector if required. Commercial mixture in the quantities as specified will be acceptable at the discretion of the DNR Construction Inspector, if these quantities are verifiable.

2.02 FUNGICIDE:

- A. All seeds for permanent seeding shall be treated with a non-mercurial fungicide (75% concentration or equivalent) at the rate of 5-1/2 ounces per 100 pounds of seed.

PART 3 - EXECUTION

3.01 EXAMINATION:

- A. Examine the areas and conditions under which work of this section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.

3.02 SEEDBED PREPARATION:

- A. The area to be seeded shall be raked or graded to fill washes or gullies. Pick up and dispose of all debris, including stones, boulders, logs, stumps, or other foreign material that will interfere with the seeding operation.

3.03 FERTILIZER APPLICATION:

- A. Spread fertilizer over the area at the rate of 750 pounds per acre of 15-15-15 (or equivalent).
- B. Unless otherwise indicated, spread all fertilizer with a mechanical spreader, which will secure a uniform rate of application.
- C. Spread fertilizer after the preliminary preparation of seedbed and prior to the sowing of any seeds.
- D. Disk the fertilizer and roll the area prior to seeding.
- E. On area inaccessible to field machinery, spread fertilizer after preparation of the seedbed and thoroughly rake into the soil.
- F. Application of fertilizer in combination with seeding by hydraulic seeder as specified in I.D.O.T. Section 2601.03A(7) will be acceptable at the discretion of the DNR Construction Inspector.

3.04 SEED APPLICATION:

- A. Preparation: Mix all seeds specified for this project thoroughly at the project site prior to placing in spreading equipment.
- B. On all areas accessible to field machinery, all grass seeds may be sown with a gravity, cyclone or hydraulic seeder as specified herein. On areas inaccessible to field machinery, the use of hand-cyclone seeder will be permitted.

3.05 MULCHING:

- A. All seeded areas are to be mulched unless otherwise designated in the contract documents.
- B. All areas requiring mulch are to be mulched as soon as seed is sown and final rolling is completed.
- C. Mulch is to be evenly and uniformly distributed and anchored into the soil. The application rate for reasonably dry material shall be approximately 1-1/2 tons of dry cereal straw, 2 tons of wood excelsior, or 2 tons of prairie hay per acre, or other approved material, depending on the type of material furnished.
 - 1. All accessible mulched areas are to have mulch consolidated into the soil with a mulch stabilizer, and slope areas are to be tacked on the contour.
 - 2. Crawler type or dual wheel tractors are to be used for the mulching operation. Equipment is to be operated in a manner to minimize displacement of the soil and disturbances of the design cross section.

END OF SECTION 02930

**NATURAL RESOURCES CONSERVATION SERVICE
CONSTRUCTION SPECIFICATION**

IA-1 SITE PREPARATION

1. SCOPE

Site preparation work shall consist of clearing, grubbing, stripping, refuse removal, bank sloping and structure removal on the site as necessary to rid the site of all undesirable materials on or near the surface and prepare the site for the structure. All woody growth within the construction area shall be cleared and all stumps and roots one inch in diameter or larger shall be grubbed from the site. In addition, all areas within 25 feet of the footprint of the structure shall be cleared and grubbed except as directed by NRCS. The work shall also consist of the removal and disposal of structures (including fences) that must be removed to perform other items of work.

For wetland restoration, enhancement, or creation projects, the wetland area shall be disturbed as little as possible and existing naturally vegetated spillway areas shall not be disturbed.

2. FOUNDATION PREPARATION

The construction areas shall be stripped a minimum of 6 inches to remove all unsuitable materials such as organic matter, grasses, weeds, sod, debris, and stones larger than 6 inches in diameter.

In an earth embankment foundation area, all channel banks and sharp breaks shall be sloped to no steeper than 1.5 horizontal to 1 vertical.

The foundation area shall be thoroughly scarified before placement of fill material. The surface shall have moisture added or shall be compacted if necessary so that the first layer of fill material can be compacted and bonded to the foundation.

3. STRIPPED MATERIAL DISPOSAL

Suitable soil material shall be stockpiled for use as topsoil. The other stripped materials shall be buried, removed from the site, or disposed of as directed by the owner or NRCS. Whenever possible, material shall not be disposed of in the pool area created by the structure.

Stockpiled materials around a construction site should be placed so as not to hinder subsequent construction operations.

4. DISPOSAL OF REFUSE MATERIALS

Waste materials from clearing and structure removal shall be burned or buried at locations approved by the owner. Buried materials shall be covered with a minimum of 2 feet of earthfill. Whenever possible, material shall not be disposed of in any pool area created by the structure.

All refuse shall be disposed of in a manner which complies with all local and state regulations.

5. SALVAGE

Items to be salvaged shall be as shown on the drawings. Structures and fencing materials that are designated to be salvaged shall be carefully removed and neatly placed in the specified storage areas.

6. SPECIAL SPECIFICATIONS

**NATURAL RESOURCES CONSERVATION SERVICE
CONSTRUCTION SPECIFICATION**

IA-5 POLLUTION CONTROL

1. SCOPE

The work shall consist of installing measures or performing work to control erosion and minimize the production of sediment and other pollutants to water and air during construction operations.

2. MATERIALS

All materials furnished shall meet the requirements shown on the drawings or in the specifications.

3. EROSION AND SEDIMENT CONTROL MEASURES AND WORKS

The measures and works shall include, but are not limited to, the following:

Staging of Earthwork Activities: The excavation and moving of soil materials shall be scheduled so that areas unprotected from erosion will be minimized. These areas will be unprotected for the shortest time feasible.

Seeding: Structures and disturbed areas shall be seeded as soon as possible after construction is completed.

Temporary seedings may be used as an alternative to other stabilization measures as approved by NRCS.

Mulching: Construction areas that have been disturbed but have no construction activity scheduled for 21 days or more shall have erosion protection measures applied by the 14th day. This erosion protection may be mulching or other approved temporary measures. Construction areas shall not be left open during a winter shutdown period and shall be protected by mulching.

All seeding and mulching shall be completed in accordance with the seeding plan and Iowa Construction Specification IA-6, Seeding and Mulching for Protective Cover.

The following works may be temporary. If they are installed as a temporary measure, they shall be removed and the area restored to its original state when they are no longer needed or when permanent measures are installed.

Diversions: Diversions may be required to divert clean runoff water away from work areas and to collect runoff from work areas for treatment and safe disposition.

Stream Crossings: Culverts or bridges may be required where construction equipment must cross streams.

Sediment Basins: Sediment basins may be required to settle and filter out sediment from eroding areas to protect properties and streams below the construction site.

Sediment Filters: Straw bale filters, geotextile sediment fences, or other equivalent methods may be used to trap sediment from areas of limited runoff. Sediment filters shall be properly anchored to prevent erosion under them.

Waterways: Waterways may be required for the safe removal of runoff from fields, diversions, and other structures or measures.

4. CHEMICAL POLLUTION

The Contractor shall provide watertight tanks or barrels or construct a sump sealed with plastic sheets to be used to dispose of chemical pollutants, such as drained lubricating or transmission oils, greases, soaps, concrete mixer wash water, asphalt, etc., produced as a by-product of the construction work. At the completion of the construction work, sumps shall be removed and the area restored without causing pollution.

Sanitary facilities such as chemical toilets or septic tanks shall not be placed adjacent to live streams, wells, or springs. They shall be located at a distance sufficient to prevent contamination of any water sources. At the completion of construction work, facilities shall be disposed of without causing pollution.

5. AIR POLLUTION

The burning of brush or trash or disposal of other materials shall adhere to local and state regulations.

Fire prevention measures shall be taken to prevent the start or the spreading of wild fires, which result from project work. Fire breaks or guards shall be constructed at locations shown on the drawings.

All public access or haul roads used by the contractor during construction of the project shall be sprinkled or otherwise treated to fully suppress dust. All dust control methods shall insure safe operations at all times. If chemical dust suppressants are used, the material shall be a commercially available product specifically designed for dust suppression and the application shall follow manufacturer's requirements and recommendations. A copy of the product data sheet and manufacturer's recommended application procedures shall be provided to the Engineer five working days before use.

6. MAINTENANCE, REMOVAL, AND RESTORATION

All pollution control measures and works shall be adequately maintained in a functional condition as long as needed during the construction operation. All temporary measures shall be removed and the site restored to as near original conditions as practical.

7. SPECIAL SPECIFICATIONS

**NATURAL RESOURCES CONSERVATION SERVICE
CONSTRUCTION SPECIFICATION**

IA-11 REMOVAL OF WATER

1. SCOPE

The work shall consist of the removal of surface water and ground water as needed to perform the required construction in accordance with the plans and specifications.

2. DIVERTING SURFACE WATER

The Contractor shall build, maintain and operate all cofferdams, channels, diversions, flumes, sumps, and other temporary protective works needed to divert surface water away from the construction site while construction is in progress.

3. DEWATERING THE CONSTRUCTION SITE

Foundations, cutoff trenches, borrow areas and other parts of the construction site shall be dewatered as needed for proper execution of the construction work. The Contractor shall furnish, install, operate and maintain all works and equipment needed to perform the dewatering.

4. EROSION AND POLLUTION CONTROL

Removal of water from the construction site, including the borrow areas shall be accomplished in such a manner that erosion and the transmission of sediment and other pollutants are minimized.

5. REMOVAL OF TEMPORARY WORKS

After temporary works have served their purposes and before the Contractor leaves the site, they shall be removed.

6. SPECIAL SPECIFICATIONS

**NATURAL RESOURCES CONSERVATION SERVICE
CONSTRUCTION SPECIFICATION**

IA-21 EXCAVATION

1. SCOPE

The work shall consist of the excavation required by the drawings and specifications and disposal of the excavated materials. The cutoff trench and any other required excavations shall be dug to the lines and grades shown on the drawings or as staked in the field. Structure or trench excavations will conform to all safety requirements of OSHA.

2. USE OF EXCAVATED MATERIALS

Suitable materials from the specified excavations shall be used in the construction of required permanent earth fill. The suitability of materials for specific purposes shall be determined by the NRCS Inspector.

3. DISPOSAL OF WASTE MATERIAL

All surplus or waste material shall be disposed of in areas shown on the drawings or as approved by the NRCS Inspector. The waste material shall be smoothed and sloped to provide drainage.

4. STRUCTURE AND TRENCH EXCAVATION

Structure or trench excavations will conform to all safety requirements of OSHA.

5. BORROW EXCAVATION

When the quantities of suitable materials obtained from specified excavations are insufficient to construct the specified fills, additional materials shall be obtained from the designated borrow areas as shown on the drawings or as approved by NRCS and the landowner. On wetland projects, borrow shall not be taken from the wetland area within 10 feet of the embankment or as shown on the drawings.

Borrow areas shall be excavated and grading completed in a manner to eliminate steep or unstable side slopes or hazardous or unsightly conditions.

6. OVER-EXCAVATION

Excavation beyond the specified lines and grades shall be corrected by filling the resulting voids with compacted earthfill, except that if the earth is to become the subgrade for riprap, sand or gravel bedding or drainfill, the voids shall be filled with material conforming to the specifications for the riprap, bedding or drainfill, as appropriate.

7. SPECIAL SPECIFICATIONS

**NATURAL RESOURCES CONSERVATION SERVICE
CONSTRUCTION SPECIFICATION**

IA-23 EARTHFILL

1. SCOPE

The work shall consist of the construction of earth fills required by the drawings and specifications. The completed work shall conform to the lines, grades, and elevations shown on the drawings or as staked in the field.

2. MATERIALS

All fill materials shall be obtained from required excavations and designated borrow areas. Fill materials shall contain no sod, brush, roots or other bio-degradable materials. Rocks larger than 6 inches in diameter shall be removed prior to compaction of the fill.

3. FOUNDATION PREPARATION

Foundations for earthfill shall be stripped a minimum of 6 inches to remove vegetation and other unsuitable materials. Foundation surfaces shall be scarified to a minimum depth of 2 inches prior to placing fill material.

Foundation and abutment surfaces shall not be sloped steeper than 1.5 horizontal to 1 vertical unless otherwise shown on the drawings.

4. PLACEMENT

Fill shall not be placed until the required excavation and foundation preparation have been completed and the foundation has been inspected and approved by NRCS. Fill shall not be placed upon a frozen surface, nor shall snow, ice, or frozen material be incorporated in the fill.

Adjacent to structures or pipes, fill shall be placed in a manner which will prevent damage. The height of the fill adjacent to structures or pipes shall be increased at approximately the same rate on all sides.

The materials used throughout the earth fill shall be essentially uniform. Selective placement shall be as shown on the drawings or approved by NRCS.

If the surface of any layer becomes too hard and smooth for proper bond with the succeeding layer, it shall be scarified to a minimum depth of 2 inches before the next layer is placed.

The top surfaces of embankments shall be maintained approximately level during construction, except that a cross-slope of approximately 2% shall be maintained to ensure effective drainage.

When moving fill material from the borrow area(s) to the embankment by use of bulldozers only, the following steps shall be followed:

- Immediately after the borrow material is pushed to the embankment, it shall be spread in horizontal lifts placed parallel to the centerline of the embankment.
- Compactive effort will then be applied by operating equipment parallel to the centerline of the fill or embankment.
- Lift thicknesses shall be in strict compliance with Clause 6, below.

Sectional fills are not allowed unless they are shown on the construction drawings.

5. CONTROL OF MOISTURE CONTENT

The moisture content of the fill material shall be adequate for obtaining the required compaction. Material that is too wet shall be dried to meet this requirement, and material that is too dry shall have water added and mixed until the requirement is met.

The moisture content of the fill material shall be such that a ball formed with the hands does not crack or separate when struck sharply with a pencil and will easily ribbon out between the thumb and finger.

Earth foundations under and adjacent to concrete structures shall be prevented from drying and cracking before concrete and backfill are placed.

The application of water to the fill materials shall be accomplished at the borrow areas insofar as possible.

6. COMPACTION

Earth fill shall be compacted by one of the following methods as specified on the plans or in Section 8, Special Specifications. If no method is specified, compaction will be in accordance with Method 1.

- Method 1 - Earthfill shall be placed so that the wheels or tracks of the loaded hauling equipment, traveling in a direction parallel to the centerline of fill, pass over the entire surface of each layer being placed. Low ground pressure vehicles shall not be used for this purpose.
- Method 2 - Two (2) complete passes of a tamping-type roller will be made over each layer. The roller shall be capable of exerting a minimum force of two hundred (200) pounds per square inch.
- Method 3 - Minimum density shall be 90% of the maximum density as determined by ASTM D 698 and as shown on the plans.

The maximum thickness of a lift of fill before compaction shall be 9 inches, unless otherwise indicated on the drawings.

Fill adjacent to structures, pipe conduits, and appurtenances shall be placed in layers not more than 4 inches thick and compacted to a density equivalent to that of the surrounding fill. Methods used to obtain compaction for fine or coarse grained materials are as follows:

- For fine grained materials, hand tamping or manually directed power tampers may be used. Hand compaction only shall be used to compact the earthfill under the bottom half of circular pipes. Manually directed power tampers shall not be used in tight spaces where applying full compactive effort will result in direct contact of the tamper plate with the pipe. Care should be taken so that compaction around the spillway pipe does not cause uplift of the pipe resulting in a void beneath the pipe.
- For coarse grained materials (sands and gravels), vibratory plate compactors shall be used for obtaining compaction. However, hand tamping shall be used to compact the material under the bottom half of circular pipes.

In all cases, follow manufacturer instructions for the specific compaction equipment being used. Heavy equipment shall not be operated within 2 feet of any structure or pipe.

Compacting of fill adjacent to concrete structures shall not be started until the concrete is 7 days old.

7. ISLANDS, MOUNDS, AND LOAFING AREAS ON WETLAND RESTORATION, ENHANCEMENT, OR CREATION PROJECTS

Islands shall be randomly located within the wetland area at locations shown on the drawings or as staked in the field. The orientation of island shorelines shall be random with attention given to prevailing winds to limit wave damage. In general, the side of the island with the longest dimension shall be parallel to the prevailing wind direction. Side slopes of islands shall be as shown on the drawings, but in no case shall be steeper than 6 horizontal to 1 vertical. Island shapes shall be irregular.

Loafing areas shall be constructed in the areas shown on the drawings or as staked in the field and shall be graded to drain runoff water. The elevation of at least one loafing area should be above the maximum water level whenever possible.

Excavated material not suitable for embankments, wetland dikes, or islands can be used to create mounds or blended into surrounding topography to create a natural appearance. Spoil material shall not be spread on existing wetland areas.

Organic soils shall not be used to construct islands, loafing areas, dikes, or embankments.

8. SPECIAL SPECIFICATIONS

**NATURAL RESOURCES CONSERVATION SERVICE
CONSTRUCTION SPECIFICATION**

IA-26 TOPSOILING

1. SCOPE

The work shall consist of salvaging topsoil from borrow areas or required excavations and spreading it on the exposed disturbed areas.

2. QUALITY OF TOPSOIL

Topsoil shall consist of friable surface soil reasonably free of grass, roots, weeds, sticks, stones, or other foreign materials.

3. EXCAVATION

After the site has been cleared and grubbed, the topsoil shall be removed from borrow areas and required excavation areas to the depth as shown on the drawings. Topsoil shall be stockpiled at locations approved by NRCS.

4. SPREADING

Spreading shall not be done when the ground or topsoil is frozen, excessively wet, or otherwise in a condition detrimental to the work. Surfaces designated to be covered shall be lightly scarified just prior to the spreading operation. Where compacted fills are designated to be covered by topsoil, the topsoil shall be placed concurrently with the fill and shall be bonded to the compacted fill with the equipment.

Topsoil shall be placed to the minimum depth shown on the drawings. After the spreading operation is completed, the surface shall be finished to a reasonably smooth surface.

5. SPECIAL SPECIFICATIONS

**NATURAL RESOURCES CONSERVATION SERVICE
CONSTRUCTION SPECIFICATION**

IA-52 STEEL PIPE CONDUITS

1. SCOPE

The work shall consist of furnishing and installing steel pipe complete with appurtenances.

2. MATERIALS

Steel pipe shall be new, new reject or used seamless and welded steel pipe. Reject or used pipe may be accepted if inspected by the Natural Resources Conservation Service before installation and found to be in good condition. All pipe must have the following minimum wall thickness.

<u>Pipe Diameter</u>	<u>Minimum Wall Thickness</u>
4-16"	1/4"
18-26"	9/32"
over 26"	3/8"

Unless otherwise specified, special fittings and appurtenances shall be of the same material as the pipe.

Steel welding electrodes shall conform to the requirements of American Welding Society specifications AWS A5.1. "Specification for Mild Steel Covered Arc-Welding Electrodes," except that they shall be uniformly and heavily coated (not washed) and shall be of such a nature that the coating will not chip or peel while being used with the maximum amperage specified by the manufacturer.

3. LAYING AND BEDDING THE PIPE

Pipe shall be laid to the line and grade shown on the drawings. Unless otherwise specified, the pipe shall be laid so that there are no reversals of grade between joints, and shall also be installed in accordance with the manufacturer's recommendations. The pipe shall be firmly and uniformly bedded to the depth and in the manner specified on the drawings. An ample "bell hole" working area may be left at pipe joints to perform welding, coating, etc., activities. The "bell hole" area shall then be bedded, as specified, prior to backfill operations.

The pipe shall be weighed down sufficiently to prevent its displacement from the bedding during placement of the backfill under the haunches.

4. JOINTS

Pipe joints shall conform to the details shown on the drawings and shall be sound and watertight.

Welded Joints. Welding and welded joints shall conform to the welding procedure details and requirements of AWWA Standard C 206. Field welding shall be done in such a way as to avoid burning the protective coating on the pipe except in the immediate vicinity of the weld.

Welded field joints shall be single welded butt joints or lap welded slip joints, as shown on the drawings.

5. HANDLING THE PIPE

The Contractor shall furnish such equipment as is necessary to place the pipe without damaging the pipe.

6. BACKFILLING

Backfill material shall have sufficient moisture so that optimum compaction can be obtained. Backfill around the pipe shall be placed in layers not more than 4 inches thick before compaction.

Each layer of backfill shall be compacted with power tampers, hand tampers, or plate vibrators to the same density requirements as specified for the adjacent embankment. Backfill over and around the pipe shall be brought up uniformly on all sides. The passage of earth moving equipment will not be allowed over the pipe until backfill has been placed above the top of the pipe surface to a depth of two (2) feet.

7. SPECIAL SPECIFICATIONS

**NATURAL RESOURCES CONSERVATION SERVICE
CONSTRUCTION SPECIFICATION**

IA-81 METAL FABRICATION AND INSTALLATION

1. SCOPE

The work shall consist of furnishing, fabricating, and installing metalwork including metal parts of composite structures.

2. MATERIALS

Steel shall be of structural quality. Finished surfaces shall be smooth and true to assure proper fit.

Bolts, nuts, washers, rods, rivets, etc., shall be of a material equal to the steel being fastened.

3. PROTECTIVE COATINGS

Protective coatings will consist of either galvanizing or painting and shall be applied by the fabricator.

Galvanizing shall consist of a zinc coating by the hot dip process, except that bolts, nuts, and washers may have a electrodeposited zinc coating.

Paint System for this specification shall consist of the application of one coat of Epoxy Polyamide Primer (lead and chromate free) and one or more coats of Epoxy Polyamide (intermediate or finish), lead free. When finished, it will have a minimum dry film thickness of 8.0 mils.

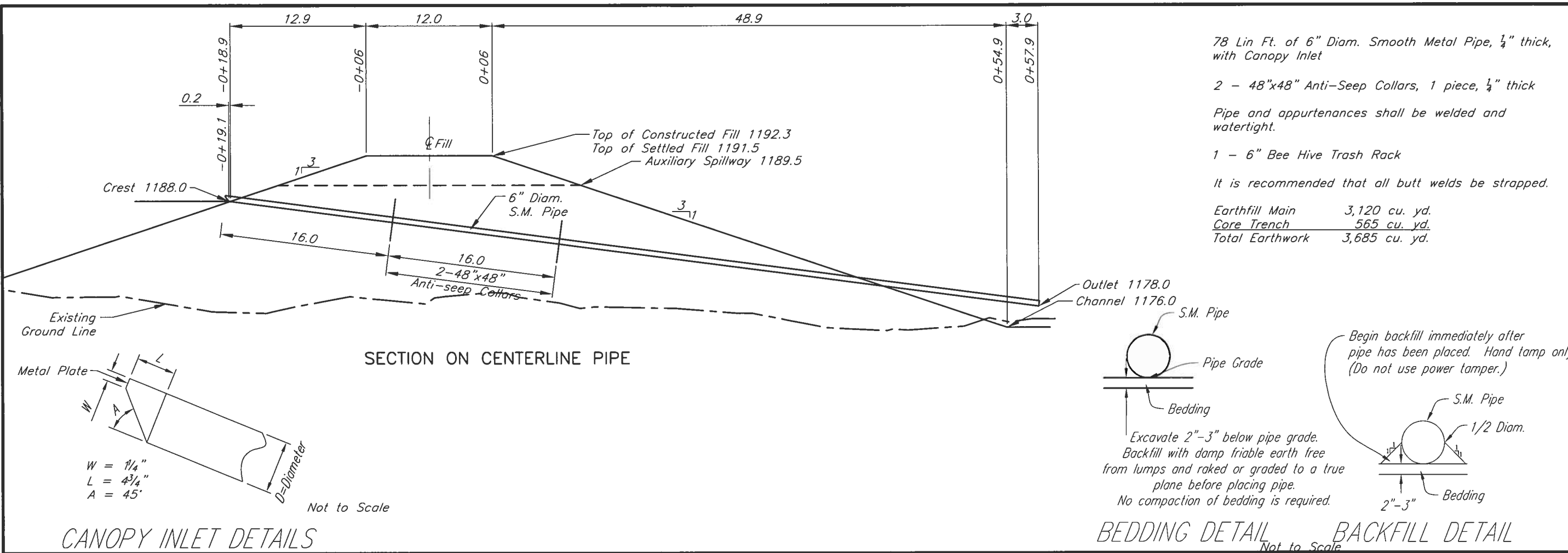
4. FABRICATION

Materials shall be carefully fabricated as shown on the drawings. The fabrication shall be smooth and true to assure proper fit. Galvanized items shall not be cut, welded, or drilled after the zinc coating is applied.

5. ERECTION

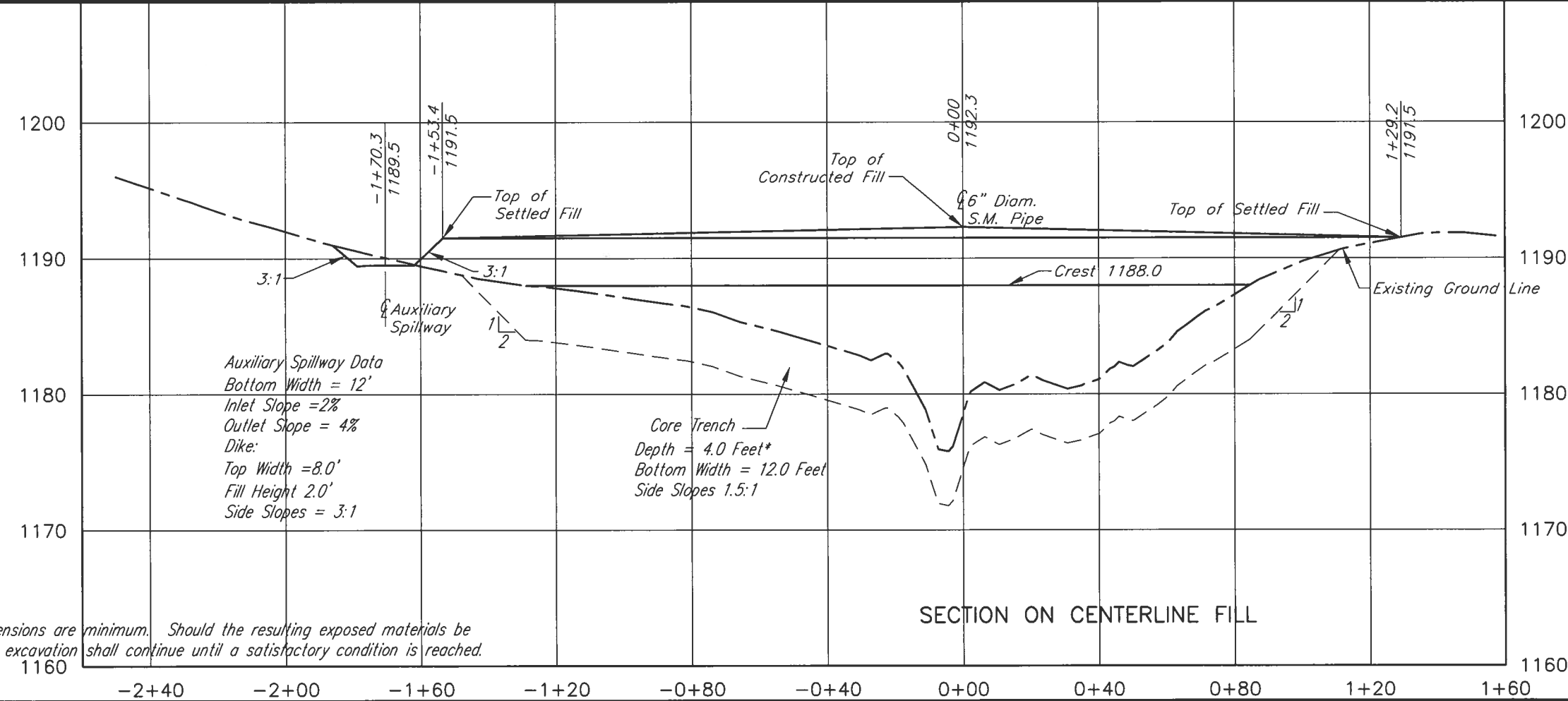
The metal shall be erected true and plumb, closely conforming to the drawings.

6. SPECIAL SPECIFICATIONS



Date	8/2018
Designed	Kay Steffes
Drawn	Kay Steffes
Checked	Bruce Dake
Approved	

SECTION ON CENTERLINE OF FILL &
 CENTERLINE OF PIPE
 Viking Lake Site 4
 SW1/4, SE1/4, Sec. 12, Scott Twp., T71N, R 37W
 Montgomery County, IA



* Core trench dimensions are minimum. Should the resulting exposed materials be unfit to build upon, excavation shall continue until a satisfactory condition is reached.

United States Department of Agriculture
 Natural Resources Conservation Service
 File No. Viking Lake 4.dwg
 Drawing No. 4/2/19 4:03 PM
 Sheet 15 of 26