SUPPLEMENTAL CONSTRUCTION SPECIFICATIONS

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VANDER VEER AML RECLAMATION PROJECT

EXPLANATION

A. The purpose of this Section of the Specifications is to provide supplemental information which is required to complete the Standard Construction Specifications and to set forth supplementary requirements, modifications and/or deletions which are required to make the whole of the Construction Specifications project specific.

B. References to Section, Paragraph and Sub-paragraph numbers used in these Supplemental Construction Specifications are intended to coincide with reference numbers for corresponding Sections, Paragraphs and Sub-paragraphs in the Standard Construction Specifications.

C. Where there is any variance between the Standard Construction Specifications and these Supplemental Construction Specifications, the Supplemental Construction Specifications shall take precedence.

D. Where any section of the Standard Construction Specifications is modified or any Paragraph, Sub-paragraph or Clause thereof is changed or deleted by these Supplemental Construction Specifications, the unaltered provisions of that Section, Paragraph, Sub-paragraph or Clause in the Standard Construction Specifications shall remain in effect. Unless these Supplemental Construction Specifications make specific reference to the modification or deletion of a Paragraph, Sub-paragraph or Clause in the Standard Construction Specifications, no changes are intended and paragraphs contained in these Supplemental Construction Specifications are intended only to supplement, amplify, or clarify said Standard Construction Specifications.

E. The following set of standard specifications (updated August 2025), is used for this project:

02010 FIELD ENGINEERING
02100 MOBILIZATION, CLEEARING AND SITE PREPARATION
02110 IMPOUNDMENTS
02120 SEDIMENT AND EROSION CONTROL
02200 EARTHWORK, ROUGH GRADING
02220 EARTHWORK, DAMS
02300 DRAINAGE SYSTEMS, GENERAL
02310 DRAINAGE SYSTEMS, DAMS AND STRUCTURES
02400 SUBGRADE PREPARATION
02700 PERMANENT SEEDING

F. **Engineer:** (per General Conditions 1-04)

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SECTION 02010 – FIELD ENGINEERING

1.3 QUALITY ASSURANCE

E. (New Paragraph) GPS machine control is highly recommended for this project but not expressly required.

3.2 DIMENSIONS AND ELEVATIONS

B. (New Paragraph) Horizontal measurements are in U.S. Survey feet and are based upon the NAD 83 Iowa State Plane Coordinate system, South Zone.

C. (New Paragraph) Elevation measurements are based upon the NAVD 1988 and are in U.S. Survey feet.

D. (New paragraph) Existing topography shown on this drawing was developed from Lidar information for Marion County, Iowa, which is publicly available through the USGS at: https://apps.nationalmap.gov/downloader/#/elevation

SECTION 02100 - MOBILIZATION, SITE CLEARING & PREPARATION

3.1 SITE ACCESS

B.

1. (added sub-paragraph) If existing entrance within the Right-Of-Way must be widened to facilitate access. Approval from the Iowa DOT must be obtained prior to performing the improvements. Contractor will be required to submit Form 810028: Application and Agreement to Perform Work Within State Highway Right-of-Way.
2. (added sub-paragraph) Labor and other work required for the improvement of the entrance shall be considered incidental to Mobilization.

E. Traffic Control (added section)

1. (added sub-paragraph) Traffic control measures and signage for the construction site entrance shall be installed and maintained throughout the entirety of the project duration according to the Iowa DOT Standard Road Plan TC-273: Construction Site Entrance. The engineer will submit Form 810028: Application and Agreement to Perform Work Within State Highway Right-of-Way.
2. (added sub-paragraph) Temporary flaggers may be needed for deliveries and turning trucks during the project and are the responsibility and at the cost of the contractor.
3. (added sub-paragraph) If the contractor intends to burn trees and other vegetation during clearing and site preparation efforts, the contractor shall provide warning signage and other necessary traffic control according to the Iowa Department of Natural Resources Fire Policy Manual – Attachment D – Smoke Management and Traffic Control Guidelines for Prescribed Burns. At a minimum, a standard 48” x 48” diamond shaped orange warning sign with black writing that reads “Caution Smoke Ahead” shall be placed 1,000 feet in advance of the northern and southern construction limits of the site along IA HWY-5 during times of active burning. The engineer will submit Form 810028: Application and Agreement to Perform Work Within State Highway Right-of-Way.
4. (added sub-paragraph) Measurement and payment shall be by lump sum.

3.4 OFFICE AND LAY-DOWN AREA

B. Contractor’s Field Office

1. **(Revise)** Contractor’s office is not required for this project. The Contractor shall make certain that his representative on site has an operating cellular phone that can be used for communication with Engineer and Division. Provide adequate space for project progress meetings and provide sanitary facilities (toilet).

SECTION 02120 – SEDIMENT & EROSION CONTROL

2.15 (New Section) STONE FILTER

A. (New Paragraph) Material for stone filter shall meet the requirements of IDOT Section 4122.02-A for Macadam Crushed Stone. Gradation shall be Gradation No. 13 of the Aggregate Gradation Table in Article 4109.02.

3.3 O. (New Section) RIPRAP DITCHES AND OTHER RIPRAP WORK

1. (REVISE) Riprap or erosion stone shall be placed over a 6" thick filter stone, where required, in areas shown on the Plans and in a manner which shall produce a reasonably well-graded mass of stone with the minimum practical percentage of voids. All riprap material shall be placed and distributed such that there shall be no objectionable accumulations of either the larger or smaller sizes of stone, and such that the entire mass of stone shall be in accordance with the lines, grades and thickness as shown on the Plans.

2. (New Paragraph) Contractor shall place the stone filter and riprap so as not to disturb the stone filter. Riprap or stone shall not be dropped more than two (2) feet when being placed on filter stone bedding. Contractor shall shape rock according to the detail and grading plans. Contractor shall mechanically tamp riprap with excavator bucket to lock stone together and reduce roughness of surface.

SECTION 02200 – EARTHWORK, ROUGH GRADING

1.4 JOB CONDITIONS

C. Earthwork Balance

1. (added language) The shrinkage factor is assumed to be 12% for the mass balance.

3.9 DEEP FILL PLACEMENT AND COMPACTION

H. Deep fill zones: (added paragraph) zones requiring placement of fill deeper than fifteen feet (15') shall require extra time to allow for settlement of the fill and underlying foundation soils. Once each increment of 15' of fill is placed, at least thirty (30) days shall be allowed to elapse before performing additional fill operations in that zone. The waiting period may be reduced to no less than fifteen (15) days provided Contractor documents with detailed daily survey measurements that the settlement has ceased or that the majority of the settlement has occurred within the first 15-day waiting period. Establishment of benchmark locations for survey measurement shall be subject to Engineer's approval.

3.13 MAINTENANCE

G. (New Paragraph) All maintenance, as described in this section, shall be considered incidental to the project and shall be completed at no additional cost to the Division.

SECTION 02220 – EARTHWORK, DAMS

NO CHANGES

SECTION 02300 – DRAINAGE SYSTEMS, GENERAL

2.5 TERRACE RISERS AND OPEN SIDED AREA INTAKES

A. Terrace Risers

2. (REVISE) The top three feet shall be perforated with a sufficient quantity of holes 1" to 1-1/4" in diameter, depending on diameter of riser, such that flows provided by Hickenbottom Inlets are met or exceeded. Flow rates for Hickenbottom risers can be found at the following web address: https://hickenbottominlets.com/flow/

5. (New Paragraph) Top of terrace risers shall be completely removed by Contractor 3' above terrace flowline elevation. Contractor shall install Yellow Standard Bar Guard by Agridrain, or approved equal, on top of intake.

6. (New Paragraph) Bar guards shall be fastened to riser using stainless steel zip ties or stainless steel self-tapping screws.

3.5 TERRACES

C. (New Paragraph) Terraces shall be maintained according to "Section 02200 – Earthwork, Rough Grading-3.13 Maintenance". Flowlines shall be cleared of accumulated sediment and approved by the Engineer or Construction Observer, prior to application of lime or fertilizer as part of both the subgrade preparation and seeding operations.

3.6 TILING AND PIPE

A. Tiling

10. (New Paragraph) Tile installation over fills greater than 10' must wait a minimum of 30 days after fill is placed to final grades to limit settlement post installation.

B. Pipes

11. (New Paragraph) Pipe installation over fills greater than 10' must wait a minimum of 30 days after fill is placed to final grades to limit settlement post installation.

SECTION 02310 – DRAINAGE SYSTEMS, DAMS AND STRUCTURES

2.3 ANTI-SEEP COLLARS AND FILTER DIAPHRAGMS

C. (New Paragraph) Anti-seep collars shall be Scheib Drainage HDPE collars, or approved equivalent. Collars shall match the dimensions listed on the plans. Collars shall be installed according to the manufacturer's recommendations. The cost of the anti-seep collar and any additional measures required in order to achieve a water-tight seal shall be considered incidental to the cost of the outlet pipe, as discussed in Section 02310-3.10C. Anti-seep collars shall not be installed unless the Engineer or Construction Observer is present.

SECTION 02400 – SUBGRADE PREPARATION, WITHOUT COVER MATERIAL

3.6 LIME-MULCH APPLICATION

A. APPLICATION RATES

4. (New Paragraph) For bidding purposes, assume the application rate of "Agricultural Lime, for Subgrade Preparation" is twenty-five (25) tons ECCE/acre.

SECTION 02700 – PERMANENT SEEDING

2.4 SEED

D. **(New Paragraph)** The following seed mixes shall be used:

1. Upland Seed Mix		**Seeding**
Common Name	**Scientific Name**	**Rate (Lb. PLS/ac)**
Partridge pea	*cassia fasciculate*	4.0
Alsike clover	***t*rifolium hybridum**	4.0
Purple prairie clover	*dalea purpurea*	0.7
Red clover	*trifolium pratense L.*	2.0
Red fescue	*festuca rubra*	8.0
Redtop	*agrostis gigantea*	2.7
Timothy	*phleum pratense L.*	6.7
Virginia wild rye	**elymus virginicus**	**6.7**
Big bluestem	**andropogon gerardii**	**5.3**
Little bluestem	**schizachyrium scoparium**	**4.0**
Indian grass	**sorgastrum nutans**	**4.0**
Total		**48.1**
Spring Cover (April 1 – May 30)		
Oats	*avena sativa*	32
Dormant Cover (Soil Temperature <50° F – Freeze Up)		
Winter wheat	*triticum aestivum*	45

2. Wetland Fringe Seed Mix		
Common Name	**Scientific Name**	**Rate (Lb. PLS/ac)**
Virginia wildrye	*elymus virginicus*	10.60
Fowl manna grass	*glyceria striata*	0.70
Blue joint grass	*calamagrostis canadensis*	0.70
Prairie cordgrass	*spartina pectinata*	4.00
Fox sedge	*carex vulpinoden*	0.03
Bebb's sedge	*carex bebbii*	0.04
Spike rush	*eleocharis palustris*	0.05
Rice cut grass	*leersia oryzoides*	0.04
Shortawn foxtail	alopercurus acqualis	10.60
Cup plant	*silphium prefoliatum*	0.70
Total		**27.46**
Spring Cover (April 1 – May 30)		
Oats	*avena sativa*	32
Dormant Cover (Soil Temperature <50° F – Freeze Up)		
Winter wheat	*triticum aestivum*	45

3.5 SEEDING

D. SEED PLACEMENT

1. (REVISE) Seed all areas to be seeded with the appropriate seed mix as shown on the Plans and in the Supplemental Specifications. Seed species shall be applied at the rates provided in the Supplemental Specifications. Sow seed along the contour using a grassland or rangeland drill. The drill shall be equipped with double coulter furrow openers. The drill shall be subject to acceptance by Engineer. Drill seeding shall be accomplished with rows set no more than eight (8) inches apart. Set drill for half of the specified seeding rate, and drill entire area to be seeded two (2) times. Overlap each successive seeding pass at least one (1) row width and avoid drilling in previously created furrows to ensure complete coverage. Upon a show of green, non-acidic bare areas will be reseeded at no additional cost to Division.

3.4 LIMING AND FERTILIZING

E. (New Paragraph) For bidding purposes, assume the application rate of "Agricultural Lime, for Seeding" is five (5) tons ECCE/acre.

F. (New Paragraph) For bidding purposes, assume the application rate of Nitrogen is fifty (50) pounds per acre, Phosphorus is one hundred (100) pounds per acre, and Potassium is one hundred and sixty (160) pounds per acre.

END OF SUPPLEMENTAL SPECIFICATION