

SECTION 067
SPECIFICATIONS – EROSION CONTROL PRODUCTS

Other than the construction of landscaping measures such as seeding, erosion control products provided shall be in accordance with this Section, the recommendations of the manufacturers of erosion control products specified below and the Specifications of the Illinois Department of Transportation (IDOT) except those sections of the IDOT Specifications relating to methods of measurements and basis of payment. If conflicting, these Specifications shall take precedence. Where conflicting, the recommendations of the manufacturers of erosion control products shall take precedence over those of IDOT.

Erosion control measures shall be as directed by the Engineer and approved by the District. The erosion control products specified below shall be utilized as part of approved erosion control measures.

1.0 Gabions

Gabions shall be either Midwest Welded Wire Gabions or Midwest PVC Coated Welded Wire Gabions as provided by Midwest Construction Products or an equal approved by the Engineer prior to the receipt of proposals. Gabions materials and construction shall be in accordance with the latest version of the IDOT Specifications.

2.0 Welded Wire Mattresses

Welded wire mattresses shall be either Midwest Galvanized Welded Wire Mattresses or Midwest PVC Coated Welded Wire Mattresses as provided by Midwest Construction Products or an equal approved by the Engineer prior to the receipt of proposals. Welded wire mattresses materials and construction shall be in accordance with the latest version of the IDOT Specifications.

3.0 Riprap

For erosion control measures where riprap materials are to be utilized, the size of riprap materials to be used shall be as approved by the Engineer. Riprap materials shall have a quality designation A or B. Unless specified otherwise, at locations where sewers cross waterways, streams, and/or creeks, riprap and filter fabric shall be installed from ten (10) feet upstream of the crossing to twenty (20) feet downstream of the crossing along both banks from top of bank to top of bank.

4.0 Turf Reinforcement Matting Erosion Control

Where specified by the Engineer, the Contractor shall provide, construct and maintain turf reinforcement matting (TRM) erosion control. Constructed TRM shall be in accordance with the Natural Resource Conservation Service (NRCS), Illinois Urban Manual (IUM) Standard Code 831, dated February, 2011. Information about Standard Code 831 can be accessed by using the following link <http://www.aiswcd.org/wp-content/uploads/2013/06/831-ECB-Turf-Reinforcement-Mat.pdf>. Construction and maintenance of TRM shall also be in accordance with the directions of the TRM manufacturer; however, when in conflict with NRCS Standard Code 831, the directions of the manufacturer shall govern.

5.0 Silt Fence

Silt fencing shall be required when construction activities disturb land such that sediment might escape from the site(s) of construction. Sediment from land disturbed by work towards the completion of the Project shall not be allowed to escape from the site(s) of construction. Towards this end, the Constructor shall be responsible for the design, construction, maintenance, operation and deconstruction of silt fencing. If the

design, construction and operation of measures to prevent sediment escape are proven to be inadequate relative to site conditions, immediately after observation of failure, the Contractor shall design and construct alternate measures to prevent sediment escape. Constructed silt fencing shall remain until disturbed land is stabilized after construction and no sediment escapes from the site(s).

Silt fencing shall be placed in accordance with directions provided by governing agencies. If directions are not provided through a mechanism such as a permit, silt fence shall be placed in accordance with the recommendations provided in the latest version of the United States Environmental Protection Agency (USEPA) document EPA 833-F-11-008 titled "Stormwater Best Management Practice: Silt Fences".

Construction of silt fencing shall be in accordance with the most recent versions of both Code 920 of the Illinois Urban Manual (IUM), including IUM Standard Drawing IUM-620, and the drawings referenced as File No. IL-ENG-49 and IL-ENG-50 as provided by the USDA NRCS.

Silt fencing shall be inspected routinely and after runoff events to determine whether maintenance is necessary. When the level of a deposit of sediment reaches one-half the height of the capturing silt fence, the Contractor shall either, if site conditions permit, construct another, new silt fence above or below the existing silt fence to restore sediment capture capacity or, alternatively, within the limits of the deposits, replace the existing fence including the removal and disposal of the entrapped deposits.

6.0 Stabilized Construction Entrance

Stabilized construction entrances shall be constructed in accordance with the Natural Resource Conservation Service (NRCS), Illinois Urban Manual (IUM) Standard Code 930, dated August, 1994. Information about Standard Code 930 can be accessed by using the following link: <http://www.aiswcd.org/wp-content/uploads/2013/06/urbst9301.pdf>. NRCS Standard Drawing IL-630 shall also govern the construction of stabilized construction entrances; however, if in conflict with NRCS Standard Code 930, Standard Code 930 shall govern.

7.0 Ditch Checks

Ditch checks shall be constructed both where specified by the Engineer and where necessary to stabilize disturbed areas. As specified by the Engineer, constructed ditch checks shall be either gabion ditch checks or select manufactured types as referenced within the NRCS, IUM, Standard Code 814, dated December, 2011. Information about Standard Code 814 can be accessed by using the following link: <http://www.aiswcd.org/wp-content/uploads/2013/06/814-Ditch-Check.pdf>. Gabion ditch checks shall be constructed in accordance with Page 095-23 of these Specifications.

Allowable manufactured types include urethane foam geotextile, rolled erosion control products or plastic permeable. Manufactured ditch checks shall be constructed, maintained and deconstructed in accordance with both recommendations of the manufacturer(s) and the following standard drawings from the IUM: IUM-514PC for plastic permeable checks; IUM-514RC for rolled erosion control products; and IUM-514UF for urethane foam geotextiles. If and when conflicting, the recommendations of the manufacturer(s) shall govern. Manufactured ditch checks shall be deconstructed only after disturbed areas are stabilized to the satisfaction of the Engineer.

8.0 Inlet Protection – Paved Area

Inlet protections in improved roadways (paved areas) shall be constructed both where specified by the Engineer and where necessary to prevent construction-disturbed solids from entering roadway inlets. Inlet protections shall be constructed using either a drop-in type protection or a curb-type protection as defined within NRCS,

IUM, Standard Code 861, dated May, 2011; unless the type of inlet protection is specified by the Engineer, the decision about which type to use shall be the Contractors. Information about Standard Code 861 can be accessed by using the following link: <http://www.aiswcd.org/wp-content/uploads/2013/06/861-Inlet-Protection-Paved-Areas.pdf>. Both types of inlet protections shall be constructed and maintained in accordance with both Standard Code 861 and the recommendations of the manufacturer of the utilized inlet protection; however, when conflicting, the directions of the manufacturer shall govern.

9.0 Erosion Control Blanket

Where specified by the Engineer, the Contractor shall provide, construct and maintain erosion control blankets (ECB). Constructed ECB shall be in accordance with the Natural Resource Conservation Service (NRCS), Illinois Urban Manual (IUM) Standard Code 830, dated June, 2009. Information about Standard Code 830 can be accessed by using the following link <http://www.aiswcd.org/wp-content/uploads/2013/06/830-Erosion-Control-Blanket.pdf>. Construction and maintenance of ECB shall also be in accordance with the directions of the ECB manufacturer; however, when in conflict with NRCS Standard Code 830, the directions of the manufacturer shall govern.

10.0 Stone Inlet Protection for Culverts

Where specified by the Engineer, the Contractor shall construct and maintain stone inlet protections for culverts. Stone inlet protections for culverts shall be constructed in accordance with the Natural Resource Conservation Service (NRCS), Illinois Urban Manual (IUM) Standard Code 808, dated September, 2016. Information about Standard Code 808 can be accessed by using the following link <http://www.aiswcd.org/wp-content/uploads/2016/10/808-Culvert-Inlet-Protection.pdf>. Construction and maintenance of stone inlet protection for culverts shall also be in accordance with the directions of NRCS Standard Drawing IL-508ST; however, when in conflict with NRCS Standard Code 808, Standard Code 808 shall govern.

11.0 Cofferdams

Where specified by the Engineer, the Contractor shall construct, maintain and deconstruct temporary cofferdams. As specified by the Engineer, allowable cofferdams types shall include A-Frame, A-Frame partial, rock, rock partial, bladder or bladder partial. Constructed cofferdams shall be in accordance with the Natural Resource Conservation Service (NRCS), Illinois Urban Manual (IUM) Standard Code 803.

Constructed A-Frame cofferdams shall be in accordance with the Natural Resource Conservation Service (NRCS), Illinois Urban Manual (IUM) Standard Drawings IUM-503AF and IUM-503AP, both dated July, 2012. Standard Drawings IUM-503AF and IUM-503AP can be accessed through the following links: <http://www.aiswcd.org/wp-content/uploads/2013/06/IUM-503AF1.pdf> and <http://www.aiswcd.org/wp-content/uploads/2013/06/IUM-503AP1.pdf>.

Constructed rock cofferdams shall be in accordance with the Natural Resource Conservation Service (NRCS), Illinois Urban Manual (IUM) Standard Drawings IUM-503RF and IUM-503RP, both dated July, 2012. Standard Drawings IUM-503RF and IUM-503RP can be accessed through the following links: <http://www.aiswcd.org/wp-content/uploads/2013/06/IUM-503RF1.pdf> and <http://www.aiswcd.org/wp-content/uploads/2013/06/IUM-503RP1.pdf>.

Constructed bladder cofferdams shall be in accordance with the Natural Resource Conservation Service (NRCS), Illinois Urban Manual (IUM) Standard Drawings IUM-503BF and IUM-503BP, both dated July, 2012. Standard Drawings IUM-503BF and IUM-503BP can be accessed through the following links: <http://www.aiswcd.org/wp-content/uploads/2013/06/IUM-503BF1.pdf> and <http://www.aiswcd.org/wp-content/uploads/2013/06/IUM-503BP1.pdf>.

12.0 Articulated Concrete Block Systems

Where specified by the Engineer, the Contractor shall construct articulated concrete block systems in accordance with both directions provided by the Engineer and recommendations provided by the systems manufacturer. As manufactured by International Erosion Control Systems, Inc. (IECS), articulated concrete block systems shall be Cable Concrete or an equal approved by the Engineer prior to the receipt of proposals. Allowable cable Concrete systems shall be specified by the Engineer.

13.0 Interlocking Concrete Block

Where specified by the Engineer, the Contractor shall construct interlocking concrete blocks in accordance with the Plans and these Specifications. Interlocking concrete blocks shall be those manufactured by LaHood Construction, Inc., Leman Precast or an equal approved by the Engineer prior to the receipt of proposals.

Blocks shall be solid concrete featuring the following: an integral lifting hook capable of safely lifting the block; an interlocking keyway to provide mechanical interlock of stacked blocks; and three-inch (3”) weep holes that are cast into the blocks. Fasteners or supplemental hardware called for in the plans to affix adjacent blocks shall be constructed of galvanized steel.

Blocks shall be cast from freshly mixed concrete meeting the IDOT specifications for Class SI Portland Cement Concrete in accordance with the current edition of the IDOT Standard Specifications for Road and Bridge Construction. Curing of blocks shall be by an IDOT accepted method for Class SI Concrete. Any fasteners or supplemental hardware called for in the plans to affix adjacent blocks shall be considered incidental to the construction and placement of the block and no additional compensation will be provided.

END OF SECTION