DEPARTMENT OF TRANSPORTATION

Planning & Engineering
Office of Project Development
700 E Broadway Avenue
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dot.sd.gov

October 2, 2026

ADDENDUM NO. 1

RE: Item #6, October 21, 2026 Letting - PT 0183(28)2, PCN 09AC, Tripp County - Rip Rap, Erosion Repair

TO WHOM IT MAY CONCERN:

The following addenda to the plans shall be inserted and made a part of your proposal for the referenced project.

SPECIAL PROVISIONS: Please remove the Index of Special Provisions and replace with the attached Index of Special Provisions revised 10/1/26.

Please remove the "Special Provision for Contractor Staking", dated 9/21/26 and replace with the "Special Provision for Contractor Staking", dated 9/28/26.

Please remove the "Special Provision for Articulated Concrete Block Mattress" dated 10/6/20 and replace with the "Special Provision for Articulated Concrete Block Mattress", dated 9/28/26.

SDEBS BID PROPOSAL: NO CHANGE

PLANS: NO CHANGE

Sincerely,

Sam Weisgram
Engineering Supervisor

SW/gp

CC: Jason Humphrey, Pierre Region Engineer
Doug Sherman, Winner Area Engineer

REV 10/1/26

INDEX OF SPECIAL PROVISIONS

PROJECT NUMBER(S): PT 0183(28)2 PCN: 09AC

TYPE OF WORK: RIP RAP, EROSION REPAIR

COUNTY: TRIPP

The following clauses have been prepared subsequent to the Standard Specifications for Roads and Bridges and refer only to the above described improvement, for which the following Proposal is made.

The Contractor's attention is directed to the need for securing from the Department of Environment & Natural Resources, Foss Building, Pierre, South Dakota, permission to remove water from public sources (lakes, rivers, streams, etc.). The Contractor should make his request as early as possible after receiving his contract, and insofar as possible at least 30 days prior to the date that the water is to be used.

Bobbie Country is the official in charge of the Winner Career Center for Tripp County.

THE FOLLOWING ITEMS ARE INCLUDED IN THIS PROPOSAL FORM:

Special Provision Regarding Section 404 of the Clean Water Act, dated 7/17/26.

Fact Sheet #23

Special Provision for Contractor Staking, dated 9/28/26.

Special Provision for Articulated Concrete Block Mattress, dated 9/28/26.

Special Provision for Acknowledgment and Certification Regarding Article 3, Section 12 of the South Dakota Constitution, dated 8/24/23.
Fuel Adjustment Affidavit, DOT form 208 dated 11/25.
Standard Title VI Assurance, dated 3/1/16
Special Provision for Equal Employment Opportunity Requirements for Highway Construction Contracts, dated 10/7/26.
Special Provision for Contract Provisions for Federal-Aid Construction Contracts, Form FHWA 1273 (Rev. June 25, 2026), dated 10/7/26.
Contract Provisions for Federal-Aid Construction Contracts, Form FHWA 1273 (Rev. 6/25/26).
Special Provision Regarding Minimum Wage on Federal-Aid Projects, dated 10/24/19.
Wage and Hour Division US Department of Labor Washington DC. - US Dept. of Labor Decision Number SD20260001, dated 1/30/26.
Special Provision Regarding Stormwater Discharges to Waters of the State, dated 11/5/25.
General Permit Authorizing Stormwater Discharges Associated with Construction Activities, dated 11/1/23.
https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/stormwater/StormWaterConstruction.aspx

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CONTRACTOR STAKING

PROJECT PT 0183(28)2, PCN 09AC
TRIPP COUNTY

SEPTEMBER 28, 2026

Delete Section 5.8 of the specifications and insert the following:

SECTION 5.8
CONSTRUCTION STAKES, LINES AND GRADES
CONTRACTOR GRADE STAKING

A. DESCRIPTION

The Contractor will perform all construction staking. The staking work includes, but is not limited to, establishing or re-establishing the project centerline; establishing control points and benchmarks as needed; setting additional benchmarks as needed; taking original and final cross sections of all Contractor secured borrow sources and State designated borrow sources; taking cross sections of all topsoil stockpiles; and staking right-of-way, easements, and fence.

The Contractor will perform all construction layout and reference staking necessary for the accurate control and completion of all grading; paving; drainage; median crossovers; signing; pavement marking; permanent benchmarks; detours; fence; placement of the articulated concrete block mattress in accordance with the special provision, the manufacturer's design, and the plans; and all other appurtenances required for the complete construction and acceptance of the work. The layout will include, but is not limited to, staking easement line, staking clearing line, and performing the miscellaneous staking as described in the plans and in this specification.

Horizontal and vertical control has been established as shown on the plans. Each horizontal and vertical control point will be preserved or reset out of the work limits and available during and after construction is complete. Prior to the Department's final acceptance of the project, the Contractor will replace or reset any control that is disturbed during the construction of the project. The Contractor will provide the Department a list of the in-place control points, including coordinates and elevations relevant to the project control, at the end of the project.

The Contractor will perform the staking work in accordance with the Department's Survey Manual, except as modified by this specification.

B. MATERIALS

The Contractor will furnish all staking materials of adequate quality for the purpose intended including all stakes, stake chasers, paint, field note books, and all other materials and equipment necessary to perform the required work.

C. CONSTRUCTION REQUIREMENTS

1. **General:** The Contractor will perform all staking work under the supervision of a qualified surveyor or engineer who is experienced and competent in road and bridge construction surveying and staking. The surveyor or engineer will be available to review work, resolve problems, and make decisions in a timely manner. A crew chief, competent to perform all required surveying duties, will supervise the staking in the absence of the surveyor or engineer from the project. The Contractor will submit the qualifications and work experience history of the surveyor or engineer who will supervise the construction survey work to the Engineer for review at least 14 calendar days prior to beginning the staking work.

   The Contractor will also submit the proposed starting date of the staking and the anticipated surveying work schedule.

   The Contractor will furnish, set, and properly reference all stakes, references, lines, grades, and batter boards required. Minimum reference notations will be for type, location, and alignment (when there are multiple alignments in the same area). The Contractor will perform the survey and staking work in a manner consistent with standard engineering practices and approved by the Engineer.

   The Contractor is solely responsible for the accuracy of the survey and staking work. The Contractor will notify the Engineer of any errors and discrepancies found in previous surveys, plans, specifications, or special provisions prior to proceeding with the survey work.

The Contractor will be responsible for the supervision of the construction staking personnel. The Contractor will correct any deficient survey or staking work that results in construction errors at no additional cost to the Department.

The Contractor will keep field notes in conventional handwritten notebooks or in a computerized form acceptable to the Engineer in a clear, orderly, and neat manner. The notebooks will become the property of the Department upon completion of the project. The notebooks will provide enough information such that quantity measurements are verifiable by the Department. Field notes are subject to inspection by the Engineer at any time.

The Contractor is required to submit any remaining required quantity calculations and notes to the Engineer no later than 60 calendar days after completion of the survey and staking work.

The Department will set reference control points. The Contractor is responsible for the preservation of ties and references to all control points necessary for the accurate re-establishment of all base lines and centerlines shown in the plans, whether established by the Contractor or found on or adjacent to the project. The Department will also establish benchmark elevations. It is the responsibility of the Contractor to verify the accuracy of the benchmark elevations prior to use on the project.

The Contractor will furnish stakes of sufficient length to provide a solid set in the ground. Stakes set not meeting these requirements will be reset at the Contractors expense. The Contractor will replace stakes damaged, destroyed, illegible, or made unusable at no additional expense to the Department.

The Engineer may check the accuracy and control of the Contractor's survey and staking work at any time. The checks performed by the Engineer will not relieve the Contractor of the responsibility for the accuracy of the survey layout or the construction work. If the random checks show the grade is out of tolerance, the Engineer may require the Contractor to set additional stakes, at the discretion of the Engineer, at no additional cost to the Department. If the Engineer orders additional stakes, the Contractor will perform the additional staking until the Contractor can show the staking operations achieve the specified grade tolerances.

Prior to any project staking, the Contractor will run a level circuit to check the plan benchmarks the full length of the project.

2. **Construction Staking:** Construction staking will consist of all staking for miscellaneous stakes in accordance with the following:

a. Miscellaneous Staking: Miscellaneous staking includes the following work:

1) Easement line for items including, but not limited to, setting temporary fence, utility relocation, and landowner reference and property use;
2) Clearing line for items identified by the clearing contract unit item when provided in the plans;
3) Approach road staking and all tie-in checks. The Contractor will submit profiles and elevations of all approach roads and other tie-ins throughout the project to the Engineer at least 3 business days prior to staking;
4) Topsoil measurement and computation of quantities;
5) Special ditch staking;
6) Staking of signs, delineators, pavement markings, guardrail, curb & gutter, light poles, conduit, junction boxes, and related items (Staking is for all aspects, i.e. detours, temporary and permanent);
7) Right-of-way staking including fence post panels;
8) Pipe and storm sewer staking including drop inlets, manholes, cattle passes, and related items. If additional pipe, storm sewer, drop inlets, manholes, or cattle passes are required which are not shown on the plans, the staking will be paid for at the contract unit price per hour for Engineer Directed Surveying/Staking;
9) Mark limits of removal items (trees, foundations, curb & gutter, sidewalk, etc.);
10) Detours, roadway diversions, and crossovers. (This work includes all design and staking notes required to design and stake the detour, roadway diversion, or crossover in accordance with the plan requirements. The Contractor will submit the completed design including profile and alignment and staking notes to the Engineer at least 3 business days prior to staking.);
11) Final and original cross sections of Contractor and State furnished borrow pits and computations. The Contractor will perform earthwork computations by the average end area method, surface-to-surface method, or alternate computation method approved by the Engineer;
12) Resetting horizontal and vertical control, if disturbed;
13) Approach slab and sleeper slab staking;
14) Staking of sidewalks and curb ramps; and,
15) Staking of steps and wheel chair ramps.

The Contractor will perform the pipe staking so the pipe will fit the field conditions. The plans show only approximate pipe locations and grades. The Contractor will not install pipe prior to gaining the Engineer's approval of minor location and grade adjustments necessary for proper staking of the pipe.

The Contractor will stake the slope catch points to determine the inlet and outlet locations, set reference stakes for the inlet and outlet locations, and stake ditches and special inlet and outlet grades to ensure proper drainage. The staking of manholes and drop inlets will be included in pipe and storm sewer staking. The Contractor will stake precast cattle passes similar to drainage pipes.

The horizontal tolerance for the pipe and storm sewer staking is ±0.05 foot and the vertical tolerance is ±0.03 foot.

The Contractor will keep pipe staking notes on a DOT Form 214.

3. **Engineer Directed Surveying/Staking:** The use of the engineer directed surveying/staking contract item is intended for surveying/staking not included in the plan notes and this special provision. The Contractor may use a survey crew to perform additional survey/staking work caused or required by the Department. The Engineer will use a written order to authorize the hourly engineer directed surveying/staking item and describe the surveying/staking work required of the Contractor.

D. METHOD OF MEASUREMENT

Refer to the Table of Contractor Staking in the plans for more detail on how quantities were calculated.

1. **Construction Staking:** The Department will not measure construction staking.

2. **Engineer Directed Surveying/Staking:** The Department will measure engineer directed surveying/staking to the nearest 0.1 hour with the following restrictions:

   The use of engineer directed surveying/staking will be for the work ordered by the Engineer. The measured quantity will be the actual time the survey crew is working on the project, physically performing the field survey/staking work and office time dedicated to the work specific to engineer directed surveying/staking. The Department will not include travel time for the survey crew in the measurement.

   The Contractor will provide the Engineer documentation, such as an invoice, showing the actual days/hours worked.

E. BASIS OF PAYMENT

Payment for all of the survey items will be considered full compensation for furnishing all necessary personnel, vehicles, surveying equipment, supplies,

materials, recording fees, transportation, and incidentals to accurately and satisfactory complete the work.

The Department reserves the right to omit any of these bid items without providing compensation to the contractor if the Department deems the bid prices are unreasonable.

1. **Construction Staking:** The Department will pay construction staking at the lump sum price. The Department will make partial payment as follows:

   a. Upon submission of the name, experience, and qualifications of the surveyor or engineer who will supervise the staking, the proposed starting date, and the staking schedule, the Department will pay the Contractor 25 percent of the plan quantity for the construction staking.

   b. The Department will make intermediate payments based on the amount of the staking work completed.

   c. The Department will make full payment at the plan quantity for construction staking upon completion of all surveying and staking and when the Contractor has furnished all field notebooks and records to the Engineer.

   The Department will not adjust the contract unit price or plan quantity for construction staking due to overruns or under runs in the other contract items.

2. **Engineer Directed Surveying/Staking:** The Department will pay engineer directed surveying/staking on an hourly basis as per the Price Schedule for Miscellaneous Items. The value listed in the Price Schedule for Miscellaneous Items includes salaries, travel time, equipment, staking supplies, payroll additive, and all incidental expenses related to providing the survey crew.

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STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
ARTICULATED CONRETE BLOCK MATTRESS

PROJECT PT 0183(28)2, PCN 09AC
TRIPP COUNTY

SEPTEMBER 28, 2026

I. DESCRIPTION

This work consists of furnishing and installing the Articulated Concrete Block (ACB) mattress system for general erosion control, slope stabilization, armoring, and protection of channel side slopes and inverts in accordance with the lines, grades, design, and dimensions indicated on the plans and described herein. The minimum thickness specified in the plans is suitable for infrequent and light-duty vehicular loading.

II. MATERIALS

Materials used to create the concrete ACB units, and the units themselves, will conform to the following ASTM specifications. Submittals will be required and approved by the Engineer prior to delivery to the project site for all materials specified in this section providing evidence the materials have met all testing standards and characteristics indicated in this section.

A. Portland Cements: C-150, for Portland Cement

B. Blended Cements: C-595, for Blended Hydraulic Cements.

C. Hydrated Lime Types : C-207, for Hydrated Lime Types.

D. Pozzolans: C-618, for Fly Ash and Raw or Calcined Natural Pozzolans for use in Portland Cement Concrete

E. Aggregates: C-33, for Concrete Aggregates, except that grading requirements will not necessarily apply

F. ACB Units:

1. **Physical Properties:** ACB units will be open cell units with the dimensions in the table below. At the time of delivery to the work site, the ACB units will conform to the physical requirements in the table below and be sampled and tested in accordance with ASTM D-6684, Standard Specification for Materials and Manufacture of Articulating Concrete Block (ACB) Revetment Systems. All units will be sound and free of defects which would interfere with the proper placement of the unit, or which would impair the performance of the system. Surface cracks incidental to the usual methods of manufacture, or surface chipping resulting from customary methods of handling in shipment and delivery, will not be deemed grounds for rejection.

   Cracks exceeding 0.25 inches in width and/or 1.0 inches in depth will be deemed grounds for rejection. Chipping resulting in a weight loss exceeding 10% of the average weight of a concrete unit will be deemed grounds for rejection.

   Blocks rejected prior to delivery from the point of manufacture will be replaced at the manufacturer's expense. Blocks rejected at the job site will be repaired with structural grout or replaced upon request at the expense of the contractor.

Physical Requirements

Compressive Strength Net Area Min. (psi)		**Water Absorption Max. (lb/ft^3)**	
Avg. of 3 units	Individual Unit	Avg. of 3 units	Individual Unit
4,000	3,500	9.1	11.7

ACB Unit Dimensions

Min Weight (lbs)	Length (in)	Width (in)	Height (in)	Open Area (%)
174	17.4	23.6	8.5	20

2. **Testing:** Full-scale laboratory hydraulic testing will have been completed in accordance with ASTM D-7277, Standard Test Method for Performance Testing of Articulating Concrete Block (ACB) Revetment Systems for Hydraulic Stability in Open Channel Flow. Testing will have been performed on a qualifying test flume of sufficient length for the test flows to achieve normal depth in all cases, and associated engineered calculations quantifying the factor of safety of the proposed ACB system under design conditions representative of the specific project, stamped and signed by a registered Professional Engineer residing in and licensed to practice in South Dakota.

3. **Assembly:** ACB mats will be prefabricated as an assembly of concrete blocks having specific hydraulic capacities and laced with revetment cables. The ACB system may also be assembled on-site by hand-placing the individual units with subsequent insertion of cables.

   Individual units in the system will be staggered and interlocked for enhanced stability. The mats will be constructed of open and/or closed cell units as shown on the plans. The open cell units have 2 vertical openings of rectangular cross section with sufficient wall thickness to resist cracking during shipping and installation. Parallel strands of cable will extend through 2 cable ducts in each block allowing for longitudinal binding of the units within a mat. Each row of units will be laterally offset by one-half of a block width from the adjacent row so that any given block is cabled to four other blocks (2 in the row above and 2 in the row below). Half-blocks, if used, are always closed-cell units and need not be specified separately as such.

   Each block will incorporate interlocking surfaces that minimize lateral displacement of the blocks within the mats when they are lifted by the longitudinal revetment cables. The interlocking surfaces must not protrude beyond the perimeter of the blocks to such an extent that they reduce the flexibility or articulation capability of the ACB mats or become damaged or broken when the mats are lifted during shipment or placement. Once the mats are in place, the interlocking surfaces will minimize the lateral displacement of the blocks even if the cables should become damaged or removed. The mats must be able to flex a minimum of 18 inches between any given row or column of blocks in the uplift direction and 45 inches in the downward direction.

   The cables inserted into the mats will form lifting loops at one end of the mat with the corresponding cable ends spliced together to form a lifting loop at the other end of the mat. The Engineer will approve appropriate sleeves for use to splice the lifting loop. The cables will be inserted after sufficient time has been allowed for the concrete to complete the curing process.

   The ACB mats will be placed on a filter fabric as specified herein. Under no circumstances will the filter fabric be permanently affixed or otherwise adhered to the blocks or mats. The filter fabric will be independent of the block system.

G. Geotextile: Geotextile filter fabric placed under the ACB mat will conform to Section 831 (Drainage Fabric Type B).

H. Cable and Cable Fittings: Selection of cable and fittings will be made in a manner that ensures a safe design factor for mats being lifted from both ends, thereby forming a catenary. Consideration will be taken for the bending of the cables around hooks or pins during lifting.

1. **Option 1. Polyester Revetment Cable and Fittings:** Revetment cable will be constructed of high tenacity, low elongating, and continuous filament polyester fibers. Cable will consist of a core construction comprised of parallel fibers contained within an outer jacket or cover. The size of the revetment cable will be selected such that the minimum acceptable strength is at least 5 times that required for lifting of the mats, in accordance with ASTM D-6684 paragraph 5.5.2.

   Elongation requirements specified below are based upon stabilized new, dry cable. Stabilization refers to a process in which the cable is cycled 50 times between a load corresponding to 200D2 and a load equal to 10%, 20% or 30% of the cable's approximate average breaking strength. Relevant elongation values are as shown in the table below. The tolerance on these values is + 5%.

Elastic Elongation at Percentage Of Break Strength

10%	20%	30%
0.6	1.4	2.2

   The revetment cable will exhibit resistance to most concentrated acids, alkalis, and solvents. Cable will be impervious to rot, mildew and degradation associated with marine organisms. The materials used in the construction of the cable will not be affected by continuous immersion in fresh or salt water.

   Fittings such as sleeves and stops will be aluminum and washers will be plastic unless otherwise shown on the plans.

2. **Option 2. Galvanized Steel Revetment Cable and Fittings:** Revetment cable will be constructed of preformed galvanized aircraft cable (GAC). The cables will be made from individual wires and strands that have been formed during the manufacture into the shape they have in finished cable.

   Cable will consist of a core construction comprised of 7 wires wrapped within 7 or 19 wire strands. The size of the revetment cable will be selected such that the minimum acceptable strength is at least 5 times that required for lifting of the mats.

   The revetment cable will exhibit resistance to mild concentrations of acids, alkalis, and solvents. Fittings such as sleeves and stops will be aluminum, and the washers will be galvanized steel or plastic. Furthermore, depending on material availability, the cable type (7x7 or 7x19) can be interchanged while always ensuring the required factor of safety for the cable.

Revetment cable splicing fittings will be selected so that the resultant splice will provide a minimum of 75% of the minimum rated cable strength.

III. CONSTRUCTION REQUIREMENTS

A. Casting: The ACB units will be produced using a dry cast method

B. Subgrade Preparation: All subgrade preparation will be performed in accordance with ASTM D-6884, Standard Practice for Installation of Articulating Concrete Block (ACB) Revetment Systems, as updated and amended.

C. Grading: The slope will be graded to a smooth plane surface to ensure that intimate contact is achieved between the slope face and the geotextile (drainage fabric), and between the geotextile and the entire bottom surface of the individual ACBs. All slope deformities, roots, grade stakes, and stones which project normal to the local slope face must be re-graded or removed. No holes, "pockmarks", slope board teeth marks, footprints, or other voids greater than 0.5 inches in depth normal to the local slope face will be permitted. No grooves or depressions greater than 0.5 inches in depth normal to the local slope face with a dimension exceeding 1.0 feet in any direction will be permitted. Where such areas are evident, they will be brought to grade by placing compacted homogeneous material. The slope and slope face will be uniformly compacted, and the depth of layers, homogeneity of soil, and amount of compaction will be as required by the Engineer.

D. Termination Trenches: Excavation and preparation for all termination trenches or aprons will be done in accordance to the lines, grades and dimensions shown in the plans. The termination trench hinge-point at the top of the slope will be uniformly graded so that no dips or bumps greater than 0.5 inches over or under the local grade occur. The width of the termination trench hinge-point will also be graded uniformly to assure intimate contact between all ACBs and the underlying grade at the hinge-point.

E. Inspection: Immediately prior to placing the filter fabric and ACB mats, the prepared subgrade will be inspected by the Engineer. No fabric or blocks will be placed thereon until that area has been approved.

F. Geotextile Placement: All placement and preparation should be performed in accordance with ASTM D-6884, Standard Practice for Installation of Articulating Concrete Block (ACB) Revetment Systems, as updated and amended. Geotextile, as specified elsewhere, will be placed within the limits of ACBs shown on the plans.

The geotextile (drainage fabric) will be placed directly on the prepared area, in intimate contact with the subgrade, and free of folds or wrinkles. The geotextile

will not be walked on or disturbed when the result is a loss of intimate contact between the ACB and the geotextile or between the geotextile and the subgrade. The geotextile filter fabric will be placed so that the upstream strip of fabric overlaps the downstream strip. The longitudinal and transverse joints will be overlapped at least 1.5 feet for dry installations and at least 3.0 feet for below-water installations. The geotextile will extend at least 1.0 feet beyond the top and bottom revetment termination points, or as required by the Engineer. If ACBs are assembled and placed as large mattresses, the top lap edge of the geotextile should not occur in the same location as a space between ACB mats unless the space is concrete filled.

At the time of installation, the filter fabric will be rejected if it has been removed from its protective cover for over 72 hours or has defects, tears, punctures, flow deterioration, or damage incurred during manufacture, transportation, or storage. With the acceptance by the Engineer, placing a filter fabric patch over the damaged area prior to placing the mats will repair a torn or punctured section of fabric. The patch will be large enough to overlap a minimum of 3.0 feet in all directions

G. ACB Mat Placement: ACB placement will be performed in accordance with ASTM D-6884, Standard Practice for Installation of Articulating Concrete Block (ACB) Revetment Systems, as amended and updated. Field installation will be consistent with the way the system was installed in preparation for hydraulic testing pursuant to ASTM D-7277, Standard Test Method for Performance Testing of Articulating Concrete Block (ACB) Revetment Systems for Hydraulic Stability in Open Channel Flow for the design conditions representative of the specific project. Any external restraints, anchors, or other ancillary components (such as synthetic drainage mediums) will be employed as they were during testing; If the hydraulic testing installation utilized a drainage layer, then the field installation must also utilize a drainage layer. This does not preclude the use of other section components for other purposes, such as a geogrid for strengthening the subgrade for vehicular loading, or an intermediate filter layer of sand to protect very fine-grained native soils.

1. **Placement:** The subgrade will be prepared in such a manner as to produce a smooth plane surface prior to placement of the ACBs or mats. No individual block within the plane of placed ACBs will protrude more than 0.5 inches or as otherwise specified by the Engineer. ACBs should be flush and develop intimate contact with the subgrade section, as approved by the Engineer. Proposed hand placing is only to be used in limited areas, specifically identified by the Engineer or manufacturers' mat layout drawings, as approved by the Engineer.

   If assembled and placed as large mattresses, the ACB mats will be attached to a spreader bar or other approved device to aid in the lifting and placing of the mats in their proper position by the use of a crane or other approved

equipment. The equipment used should have adequate capacity to place the mats without bumping, dragging, tearing or otherwise damaging the underlying fabric. The mats will be placed side-by-side, so that the mats abut each other, and/or end-to-end. Mat seams or openings between mats greater than 2 inches will be backfilled with 4000 psi non-shrink grout, concrete or other material approved by the Engineer. Whether placed by hand or in large mattresses, distinct changes in grade that results in a discontinuous revetment surface in the direction of flow will require backfill at the grade change location to produce a continuous surface.

Termination trenches will be backfilled and compacted flush with the top of the blocks. The integrity of the trench backfill must be maintained to ensure a surface that is flush with the top surface of the ACBs for its entire service life. Termination trenches will be backfilled as shown on the plans. Backfilling and compaction of trenches will be completed in a timely fashion. No more than 500 linear feet of placed ACBs with non-completed termination trenches will be permitted at any time.

2. **Finishing:** The cells or openings in the ACBs will be backfilled and compacted with suitable material, as specified by the Engineer. Backfilling and compaction will be completed in a timely manner so that no more than 500 feet of exposed mats exist at any time. Finishing requirements are explicitly at the discretion of the Engineer.

3. **Consultation:** The manufacturer of the ACBs/mats will provide design and construction advice during the design and installation. The technical representative will be knowledgeable in the correct procedures for the preparation and installation of the articulated concrete block mattress to ensure the Contractor installs the mattress to the manufacturer's design and recommendations.

IV. METHOD OF MEASUREMENT

Articulated Concrete Mattress: Articulated concrete mattress will be measured to the nearest 0.1 square yard of installed and accepted ACB mattress.

V. BASIS OF PAYMENT

Articulated Concrete Mattress: Articulated concrete mattress will be paid for at the contract unit price per square yard of ACB mattress furnished and installed. Payment will be full compensation for testing, furnishing, assembling, placing, connecting, fastening, and finishing the ACB mattress, grout, and geotextile, and for labor, and equipment required for shaping and grading the area to receive the ACB mattress, including grouted termination trenches. Payment will also be full compensation for cabling, testing, dewatering, and disposing of excess excavated material.

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