ADDENDUM No. 3

RFP No. 26-02

E. Huron River Drive Retaining Wall Replacement and Road Reconstruction

Due Date: January 22, 2026 by 2:00 p.m. (local time)

The information contained herein shall take precedence over the original documents and all previous addenda (if any) and is appended thereto. **This Addendum includes a total of 13 pages.**

The Proposer is to acknowledge **receipt of this Addendum No. 3 by signing and submitting attachment B,** including all attachments in its Proposal by so indicating in the proposal that the addendum has been received. Proposals submitted without acknowledgement of receipt of this addendum may be considered non-conforming.

The following forms provided within the RFP Document should be included in submitted proposal:

- **Attachment B - General Declarations**
- **Attachment D - Prevailing Wage Declaration of Compliance**
- **Attachment E - Living Wage Declaration of Compliance**
- **Attachment G - Vendor Conflict of Interest Disclosure Form**
- **Attachment H - Non-Discrimination Declaration of Compliance**

Proposals that fail to provide these completed forms listed above upon proposal opening may be rejected as non-responsive and may not be considered for award.

CORRECTIONS/ADDITIONS/DELETIONS

Changes to the RFP documents which are outlined below are referenced to a page or Section in which they appear conspicuously. Offerors are to take note in their review of the documents and include these changes as they may affect work or details in other areas not specifically referenced here.

Section/Page(s)	Change
Replace Detailed Specification for Mechanically Stabilized Earth Welded Wire Form Wall (dated 1/14/26) with Revised Detailed Specification for Mechanically Stabilized Earth Welded Wire Form Wall (dated 1/15/26)	SSL to the list of approved MSE Wall Systems listed in Table 1

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
MECHANICALLY STABILIZED EARTH WELDED WIRE FORM WALL

Description

This work consists of the design, manufacture, furnishing and installing of mechanically stabilized earth (MSE) walls in accordance with the plans, plans per the requirements of the City of Ann Arbor (CAA) 2025 Standard Specifications for Construction and the Michigan Department of Transportation (MDOT) 2020 Standard Specifications for Construction, as directed by the Engineer, and as specified herein.

The following definitions apply when used herein and on the plans:

MSE WWF Wall System. A soil-retaining system employing either strip or grid-type metallic tensile (inextensible) soil reinforcement, or geosynthetic grid-type (extensible) soil reinforcement in the soil mass and a facing that is vertical or nearly vertical (battered). The system includes wire facing units, steel or geosynthetic soil reinforcement, connecting hardware, leveling pad, special corner components and any other materials necessary to complete the work.

Manufacturer. The individual or legal entity that performs part of the work through a contract agreement with the Contractor. This includes an individual or legal entity that owns the patent, product trademark, product copyright or product name for the approved MSE wall system. This includes an individual or legal entity that supplies materials for construction of the MSE wall system. This includes an individual or legal entity that fabricates components of the MSE wall system through a licensing agreement with the owner of the patent, product trademark, product copyright or product name.

Designer. An individual who is a Professional Engineer licensed in the State of Michigan, is employed by the manufacturer or a company that is a subcontractor to the Contractor and is responsible for the design and working drawings required herein.

Checker. A Professional Engineer licensed in the State of Michigan who is employed by the same company as the Designer and is responsible for verifying and checking the design and working drawings developed by or under supervision of the Designer.

Load and Resistance Factor Design (LFRD). The *AASHTO LRFD Bridge Design Specifications*, which the design must satisfy unless otherwise specified herein.

Table 1: Approved MSE Wall Systems

Manufacturer	Wire Faced Form Systems
Hilfiker Retaining Walls 1902 Hilfiker Lane Eureka, California 95503-5711 (800) 762-8962 www.hilfiker.com	Welded Wire Wall
Reinforced Earth Company 1444 North Farnsworth Ave., Suite 505 Aurora, Illinois 60505 (630) 898-3334 www.reinforcedearth.com	TerraTrel®
Strata Systems 1831 North Park Avenue Burlington, NC 27217-1100 USA 800.680.7750 https://www.geogrid.com	StrataWall® System
Tensar Earth Retention Systems 2500 Northwinds Parkway, Suite 500 Alpharetta, GA 30009 (800) TENSAR-1 https://www.tensarcorp.com	SierraScape®
Earth Retention LLC Rope Mill Parkway Woodstock, GA 30188 678.903.3614 www.earthretention.com	Welded Wire Form System
SSL 4740 Scotts Valley Drive, Suite E Scotts Valley, California 95066 (831) 430-9300 www.mseplus.com	SSL welded wire-faced MSE system

Design

The Engineer has performed an external stability analysis of the reinforced soil mass in accordance with LRFD. The external stability consisted of analyzing global stability (deep- seated failures), sliding stability of the reinforced soil mass, overturning of the reinforced soil mass and bearing resistance of the subgrade. The external stability was initially checked using the minimum soil reinforcement length required by LRFD. If additional soil reinforcement length was required, the plans indicate the minimum reinforcement length "L" required to achieve external stability. Seismic forces were not included in the external stability analysis.

Designer Responsibility. The Designer is responsible for the internal stability of the reinforced soil mass and all components of the MSE wall system. Perform the design in accordance with

the specific LRFD articles referenced and to all other applicable LRFD articles, except as specified herein. Specify the facing unit batter necessary to prevent outward rotation of the MSE wall system during loading. Do not apply seismic forces for the internal stability design.

Design MSE walls with welded wire form facing units for a 100-year service life for permanent installations in accordance with *LRFD Article 11.10.6.4.2*.

A. Internal Stability. Satisfy *LRFD Article 11.10.6*. Use only the Simplified Method to compute the internal stability including definition of the failure plane. Use a friction angle of 32 degrees and a unit weight of 120 pcf for soil within the reinforced soil mass. Extend the soil reinforcement sufficiently beyond the failure plane to stabilize the retained backfill material. In the absence of site-specific information, assume the retained backfill material behind the reinforced soil mass to be cohesionless with a friction angle of 30 degrees and a unit weight of 120 pcf.

   Account for external loads which affect the internal stability such as those applied through piling, bridge footings, traffic, slopes, surcharges, differential hydrostatic pressures, lateral loads from parapets, traffic barriers, guardrail posts, soundwalls, light poles and sign supports.

   Account for vehicle collision force. Design MSE wall for vehicular collision force per sections *3.6.5.1 and C3.6.5.1 of the LRFD*. The vehicular collision force is to be assumed to act in a direction of 15 degrees with the edge of the pavement in a horizontal plane and to be distributed over an area 5 feet long by 2 feet high.

B. Live Load Surcharge. Use a unit weight of 120 pcf for surcharges.

   1. Traffic Loading. Apply live load surcharges in accordance with *LRFD Article 3.11.6.4*. Do not use a surcharge less than 3 feet in height.

   2. Loading other than Traffic. Apply surcharges in accordance with *LRFD Articles 3.11.6.1 through 3.11.6.3*.

C. Traffic Loads on Barriers. Apply impacts to barriers in accordance with *LRFD Article 11.10.10.2*.

D. Hydrostatic Pressures. Satisfy *LRFD Article 11.10.10.3*. Consider the high-water level to be the 100-year event shown on the plans.

E. Obstructions in the Reinforced Soil Mass. Satisfy *LRFD Article 11.10.10.4*. Account for all obstructions/appurtenances behind, in front of, under, mounted upon, or passing through the wall such as drainage structures, traffic barrier, utilities, abutments, piers, piles, guardrail posts or other items shown on the plans in the stability design of the wall and in details of all connections and soil reinforcement. Accurately show all obstructions/appurtenances on the working drawings. Notify the Engineer of any potential irresolvable conflicts prior to fabrication. The splay angle of soil reinforcement is limited to a maximum of 15 degrees per *LRFD C11.10.10.4*.

F. MSE Abutments. Satisfy *LRFD Article 11.10.11* for MSE walls interfacing with bridge abutments, piers, and other structures as necessary.

G. Wall Embedment and Leveling Pad. Embed facing units not less than 24 inches (measured to the top of the leveling pad), unless otherwise specified on the plans. For sloping ground (1V:4H or steeper) in front of the wall the MSE wall embedment must be per *LRFD Articles 11.10.2.2* and *C11.10.2.2* and a minimum 4-foot-wide bench in front of the wall provided. Leveling pad elevations are the responsibility of the Designer unless otherwise shown on the plans. Provide a leveling pad extending 6 inches beyond the front face and embedment limits of the facing units to the depth shown on the plans. Leveling pads may need to be wider for curved wall alignments. Do not use a leveling pad less than 12 inches wide nor less than 8 inches in thickness. Facing units overhanging leveling pads are prohibited.

H. Soil Reinforcement. Satisfy *LRFD Articles 11.10.2.1*. and *11.10.6*. Limit vertical spacing of soil reinforcement for wire faced walls to 2 feet maximum. Connect all designed soil reinforcements placed in the reinforced soil mass to the facing units. Do not design for a yield strength of more than 65 Kips per square inch (ksi).

Determine the required length of the soil reinforcement by design, but do not use a length less than all of the following for walls without a sloping backslope:

- 0.7 times the wall height (H) as depicted in *LRFD Figure 11.10.2-1*;
- 8 feet or;
- As noted on the plans.

Determine the required length of the soil reinforcement by design, but do not use a length less than all of the following for walls with a sloping backslope:

- 0.8 times the wall height (H) as depicted in *LRFD Figure 11.10.2-1*;
- 8 feet or;
- As noted on the plans.

Use a uniform soil reinforcement length throughout the entire height of the wall for each design wall section.

I. Welded Wire Facing Units. Satisfy *LRFD Articles 11.10.2.3 and 11.10.6*.

J. Special Corner Units. Satisfy *LRFD Articles 11.10.2.3 and 11.10.6*. Design special corner units for walls where a change of direction from a straight line creates an included angle of 120 degrees or less. Ensure corner elements are separated from the adjacent wire facing units and secured by means of separate soil reinforcement. Include isolation joints that function similar to corner units in the design and working drawings to increase tolerance for differential settlement when necessary. When two intersecting walls form an enclosed angle of 70 degrees or less, ensure the affected portion of the walls is designed as an internally tied bin structure with at-rest earth pressure coefficients.

K. Reinforcement and Connections. Ensure reinforcement is PE, polypropylene or high-tenacity polyester resistant to UV oxidation and has been evaluated by *AASHTO NTPEP*. Ensure reinforcement is shown to retain a minimum of 70 percent strength after 500 hours in a weatherometer when tested in accordance with *ASTM D4355/D4355M.* Furnish a test data certification in accordance with the *MQAP Manual.*

L. Part-Width Construction. Provide all required MSE wall details necessary for construction when bridge substructure is built using part-width construction techniques.

Submittals

Submit complete design calculations, working drawings, notes, and material specifications for the proposed wall system to the Engineer for review prior to fabrication. Do not start fabrication until approval has been received from the Engineer. The Engineer will require up to 21 calendar days for each review cycle and revisions may be required following each review. No extension of time or additional compensation will be granted due to delays in preparing the final working drawings, calculations and material specifications or securing approval from the Engineer.

Include detailed design calculations, working drawings, notes, and material specifications in every submittal. Ensure all submittals are in PDF files submitted to the Engineer. Hard copies of submittals will not be accepted. A submittal set, indicating revisions to be made, will be returned following each review. Revise and furnish the final detailed design calculations, working drawings, notes, and material properties sealed by the Designer for distribution. Ensure the Designer's seal is clearly visible on the calculations and working drawings.

Submittal requirements contained herein apply to both permanent and temporary MSE walls.

A. Calculations. Provide detailed design calculations, notes, and material specifications on 8.5 by 11-inch sheets and include the City's project designations (project name and job number), wall designations, page number, date of preparation and initials of the Designer and Checker.

Provide design calculations and explanatory notes that are legible and that demonstrate the design criteria have been met. Include example hand calculations for the tallest wall and most severe external loading conditions for project specific sections which illustrate conformance of the computer programs with the design criteria. Clearly indicate the factored loads and factored resistance in the calculation of sliding, pullout, overturning and the applied bearing pressure. At a minimum, include the design of the facing units, connections, and soil reinforcement in the calculations.

B. Working Drawings. Prepare working drawings on 11 by 17-inch sheets including borders. Provide a title block in the lower right-hand corner of each sheet. Include the sheet number, wall name or designation and the City's project designations (project name and job number) within all title blocks.

Include all details, dimensions, quantities, and cross sections on the working drawings necessary to construct the wall for full or part-width construction including, but not limited to the following items:

1. Plan and elevation sheets for each wall showing the following:

    a. Elevation views of the walls must note top of wall elevations (defined as where the finished grade intersects the back of the wall face) at all horizontal and vertical break points and at least every 50 feet along the wall face; top of leveling pad elevations at all steps and at least every 50 feet along the wall face; length, type and size of soil reinforcement; location of changes in soil reinforcement embedment length and type;

original and final ground lines; and applied bearing pressure.

b. Plan views of the walls must note the offsets from the construction centerline to the wall reference line at all changes in horizontal alignments and beginning and ending stations of the wall. The location and size of any obstructions/appurtenances that are behind, in front of, under, mounted upon, or passing through the wall (i.e. drainage structures, traffic barrier, utilities, abutments, piers, piles, or guardrail posts or other items shown on the plans) must also be clearly shown.

c. Typical cross sections showing the relationship between existing ground elevations and proposed grades, construction limits, excavation limits and fill requirements. Include obstructions/appurtenances that are behind, in front of, under, mounted upon, or passing through the wall such as drainage structures, traffic barrier, utilities, abutments, piers, piles, guardrail posts or other plan items.

d. Construction and material specification notes.

e. Horizontal and vertical curve data for laying out and constructing the walls.

f. Summary of material quantities on the elevation sheet of each wall.

2. Detail sheets for each wall showing the following:

a. Leveling pad details showing elevations and dimensions at all steps for the full length of the wall.

b. Details showing all dimensions necessary to construct the welded wire forms and the location of soil reinforcement connection elements. Include position tolerances for connection elements in the details.

c. Parapet barriers, curbs, sidewalks, etc. to be placed on top of the wall.

d. Construction around obstructions/appurtenances that are behind, in front of, under, mounted upon, or passing through the wall such as drainage structures, traffic barrier, utilities, abutments, piers, piles, guardrail posts or other items shown on the plans. Show details for diverting reinforcement elements around obstructions for each specific occurrence.

e. Foundation underdrains and impervious membrane details as required.

Materials

The basis of acceptance for all materials not addressed by the CAA 2025 or MDOT 2020 Standard Specifications nor specified herein will be a Test Data Certification in accordance with the MDOT *Materials Quality Assurance Procedures (MQAP) Manual*. Provide all test data certifications to the Engineer prior to material use.

1. Wire Facing Unit. Fabricate from cold drawn steel wire in accordance with *AASHTO M32* and welded into the finished configuration in accordance with *AASHTO M55*. Galvanize after

wire mesh is fabricated in accordance with *AASHTO M111*. The wire facing unit does not need to be galvanized if it is part of a completely independent temporary wall in service for 7 months or less (and not through the Seasonal Suspension).

2. Inextensible Soil Reinforcement. Galvanize steel inextensible soil reinforcement for permanent walls in accordance with *AASHTO M111* for strip-type or *ASTM A641* for grid-type. Galvanize soil reinforcement for temporary walls in accordance with *AASHTO M111* for strip-type or *ASTM A641* for grid-type where the reinforced soil mass for the temporary wall overlaps the reinforced soil mass for a permanent wall or when specified by the Designer.

   A. Strip-Type. Ensure steel strip reinforcement is hot rolled to the required shape and dimensions. The steel must conform to *ASTM A572*, Grade 65.

   B. Grid-Type. Fabricate soil reinforcement and connectors from cold drawn steel wire in accordance with *AASHTO M32* and welded into the finished configuration in accordance with *AASHTO M55*. Perform galvanization after grid is fabricated.

   C. Provide a General Certification in accordance with the *MQAP Manual* that all soil reinforcement components have been inspected to ensure they are true to size and free from defects that may impair their strength and durability.

3. Bolts, Nuts, and Washers. Use galvanized high strength bolts and hardware in accordance with subsection 906.07 of the MDOT 2020 Standard Specification for Construction. *ASTM A449* bolts galvanized in accordance with subsection 906.07 are also acceptable.

4. Geosynthetic (Extensible) Soil Reinforcement. Furnish uniaxial geogrids (higher strength in the reinforcing direction) for primary extensible reinforcement. Geosynthetic Reinforcement shall be manufactured with high-tenacity polyester (PET) or high-density polyethylene (HDPE) in a grid structure. No high strength geotextiles are allowed. The geosynthetic reinforcement must meet the long-term design strength, soil interaction, and connection capacity requirements as required by the design of the MSE slope.

   A. Geosynthetic Reinforcement – The geosynthetic strength used in the design shall follow FHWA NHI-00-043 where:

$$T_{Allowable} = \frac{T_{Ultimate}}{RF \times FS} = \frac{T_{Ultimate}}{RF_{CR} \times RF_{ID} \times RF_{D} \times FS}$$

   B. T_{ult} shall be the minimum average roll value (MARV) ultimate tensile strength per ASTM D4595.

   C. RF_{cr}, Creep Reduction Factor shall be extrapolated to a 100-year design life using ASTM D 6992, accelerated tensile creep and creep rupture of geosynthetic materials based on time temperature superposition using the stepped isothermal method.

   D. RF_{id}, Installation Damage reduction factor, shall be obtained from construction damage tests for each product proposed for use with project specific, representative or more severe backfill and construction techniques. The backfill soil used, if other than project specific, shall have a D50>0.6mm (No. 30 sieve). Testing shall be consistent with ASTM

D5818. Default RF_{id} value of 3.0 shall be used if such testing has not been conducted. The minimum RF_{id} allowed shall be 1.10.

E. RF_d, Durability reduction factor, is the combined partial factor for potential biological and chemical degradation. A default RF_d of 2.0 shall be used if durability testing has not been conducted. The minimum RF_d allowed shall be as follows:

1) PET 1.1
2) HDPE 1.1

F. Direct Sliding Coefficient, C_{ds} value shall be determined from pullout tests per GRI:GS-6. The maximum pullout force used to determine C_{ds} shall be limited to the lesser of Ta or the force that yields 1.5 inches displacement. The minimum C_{ds} value shall not be greater than 0.8 where the C_{ds} value is determined as follows:

$$C_{ds} = \frac{F}{L\sigma_N \tan\Phi}$$ Where

Φ = Effective Soil Friction Angle, Degrees

σ_N = Effective Normal Stress (psf) at range from 500 to 1000 psf

F = Maximum shear resistance from direct shear test (lb/ft), per GRI:GS-6

L = Geosynthetic Embedment Length in Test (ft)

G. Soil/Geosynthetic Interaction Coefficient, C_i value shall be obtained from pullout tests per GRI:GG-5. The maximum pullout force used to determine C_i shall be limited to the lesser of Ta or the force that yields 1.5 inches displacement. The minimum C_i value in silty sand shall be 0.8 where the C_i value is determined as follows:

$$C_i = \frac{F}{2Le\sigma_N \tan\Phi}$$ Where

σ_N = Effective Normal Stress (psf) at range from 500 to 1000 psf

F = Pullout force (lb/ft), per GRI:GG-5

Le = Geosynthetic Embedment Length in the Anchorage Zone in Test (ft)

Φ = Effective Soil Friction Angle, Degrees

H. Geogrid shall have minimum junction strength of 40 pounds per foot per GRI:GG2. If this minimum value is not met, then the geogrid shall have a minimum mass of 8 oz/sy and meet the strength requirements of AASHTO M-288-96 Class 1 geotextile.

I. All reinforcement shall have a minimum stiffness (flexural rigidity) of 30,000 mg-cm per ASTM D1388.

J. Polymer reinforcement shall be coated with a suitable coating providing impregnation into the bundles.

K. PET geosynthetics shall possess a Molecular Weight greater than or equal to 25,000 grams/mole as per GRI:GG8 and a carboxyl end group number less than or equal to 30 as per GRI:GG7. Otherwise, a minimum value of RF_d=2.0 shall be used.

L. HDPE geogrids shall possess a melt flow index value greater than or equal to 0.88. Otherwise, HDPE geogrids shall use a minimum RF_d=2.0 value.

5. Geotextile Behind Wall Face Stone Fill. Furnish a non-woven geotextile that meets the physical requirements for a geotextile liner in accordance with Table 910-1 in the MDOT 2020 Standard Specification for Construction.

6. Welded Wire Form Unit Lining. Furnish HDPE or PET biaxial geogrids according to the Manufacturer design for face stone retention within the welded wire form units.

7. Wall Face Stone. Furnish hard, durable 100 percent crushed limestone rock that is resistant to weathering and free of organic and spoil material. Wall face stone material shall conform to the following properties.

	Minimum	**Maximum**
Unit mass of a filled basket	95 pcf	105 pcf
Gradation dimension	1 inch	4 inches

The Contractor shall supply a written Certificate of Compliance that the wall face stone material meets the properties specified above and section 916 of the MDOT 2020 Standard Specifications for Construction.

8. Backfill for the Reinforced Soil Mass. Provide granular material Class II meeting the requirements of section 902 of the MDOT 2020 Standard Specifications for Construction and the requirements contained in Table 2 for Granular Backfill. Acceptance will be based on testing by the Engineer. Do not use slag materials, recycled PCC, or lightweight cellular concrete.

Prior to sampling and testing by the Engineer, provide current test results from an *AASHTO* accredited independent testing laboratory (valid for 2 years from completion of testing) for the granular material that is proposed to be used as backfill for the reinforced soil mass.

Use Granular Backfill for permanent and temporary walls. Use only natural mineral aggregate for backfill within the reinforced soil mass that is free from organic materials and is substantially free of shale or other soft, poor durability particles and that has a magnesium sulfate soundness loss of less than 30 percent after 4 cycles.

Granular Backfill will be sampled and tested by the Engineer in accordance with the requirements for granular material Class II specified in the *MQAP Manual.*

9. Leveling Pad. Use 21AA gradation aggregate according to section 902 of the MDOT 2020 Standard Specifications for Construction.

Table 2: Granular Backfill Requirements

Property	Test Method	Requirement
Organic Content	*AASHTO T267*	1 percent (maximum)
Resistivity (c)	*AASHTO T288*	30 ohm-m (minimum)
pH	*AASHTO T289*	5-10
Sulfates (a)(c)	*AASHTO T290*	200 ppm (maximum)
Chlorides (a)(c)	*AASHTO T291*	100 ppm (maximum)
Plasticity Index	*AASHTO T90*	6 (maximum)
Angle of Internal Friction (b, d, e)	*AASHTO T236 (Direct Shear Test)*	32 degrees (minimum)

a. If the resistivity is greater than or equal to 50 ohm-m, the chloride and sulfate requirements are waived. Alternate test method *ASTM D4327* may be used to determine sulfate and chloride concentrations.
b. Use material passing the #4 sieve compacted to 95 percent of the maximum unit weight of material passing the #4 sieve as determined by the *One-Point Michigan Cone Test* at optimum moisture content. No testing is required for backfills where 80 percent of sizes are greater than 0.75 inches.
c. If Granular Backfill is used for a completely independent temporary wall then this property does not need to be tested.
d. Determine the angle of internal friction by fitting the best fit line through the points. Do not force line through a cohesion of 0 psf. Do not use a negative cohesion in the best fit line.
e. The confining pressures should be representative of the range of anticipated vertical pressures.

Construction

Construct in accordance with the approved working drawings and as specified below:

A. Subgrade Preparation. Excavate a level grade to the necessary elevation for a width equal to the reinforced soil mass plus 3 feet. Inspect the subgrade and compact, if necessary, prior to wall construction in accordance with subsection 205.03.I.1 of the MDOT 2020 Standard Specifications for Construction. Undercut unsuitable material as directed by the Engineer and replace 21AA aggregate compacted to 95 percent of its maximum unit weight in accordance with section 205 of the MDOT 2020 Standard Specification for Construction unless otherwise directed by the Engineer. Ensure frost susceptible foundation soils within 5 feet of the wall face are removed and replaced in the same manner as undercut soils. Sound earth is not permitted as an alternate material for backfilling undercut soils within the region of influence below the reinforced soil mass.

B. Leveling Pad. Construct the leveling pad in accordance with the working drawings and section 206 of the MDOT 2020 Standard Specification for Construction.

C. Wall Erection. Provide an on-site technical representative from the Manufacturer, as necessary or as requested by the Engineer, during the wall erection to assist the Contractor and Engineer. Provide the Engineer with a copy of the Manufacturer's construction manual prior to erection.

1. Place facing units so that their final position is vertical or battered as shown on the working drawings. Handle welded wire facing units during erection by means of lifting devices connected to the upper edges of the unit. Place units in successive horizontal lifts in the sequence shown on the working drawings as backfill placement proceeds.

Place a strip of geotextile behind wall face stone. Lap fabric joints a minimum of 4 inches. Use temporary wedges or bracing to maintain the position of units as backfill is placed in accordance with the Manufacturer's recommendations. Do not exceed 0.75 inch per 10 feet of vertical and/or horizontal wall misalignment. Do not exceed 0.75 inches of offset in any unit joint during construction. Do not exceed 0.2 inch per foot for the overall vertical tolerance of the wall (top to bottom). Correct any misalignment or distortion of the facing units in excess of the tolerances specified herein at no cost to the City of Ann Arbor.

Do not exceed 3 inches of vertical and/or horizontal wall misalignment for wire face walls. Remove and re-erect wire facing units, at no cost to the City of Ann Arbor and no additional time, if the wire face wall exceeds 3 inches of vertical and/or horizontal wall misalignment.

2. Place soil reinforcement in accordance with the details on the working drawings and around any obstruction. If the obstruction conflicts with placement of the soil reinforcement perpendicular to the wall face, follow the alternatives listed in *LRFD 11.10.10.4*. Reinforcement may be splayed a maximum of 15 degrees horizontally and/or vertically to avoid and provide adequate clear space around obstructions. The splay angle is measured from a perpendicular line to the wall face.

3. Uniformly tension soil reinforcement to remove any slack in the connection or material. Compact backfill beneath each layer of soil reinforcement prior to placement of soil reinforcement.

D. Granular Backfill Placement for Reinforced Soil Mass.

1. Follow erection of each course of wire facing units closely with backfill. Place backfill near the rear and middle of the reinforced soil mass first and work toward the facing units. Carefully place backfill to avoid damaging or disturbing the wall materials or soil reinforcement. Remove and replace, at no cost to the City of Ann Arbor, any damaged or misaligned wall materials and soil reinforcement as a result of the backfill placement. Place backfill at each soil reinforcement level to an elevation 1 inch above the level of the connection to eliminate voids beneath the soil reinforcement.

2. Prior to completing backfill, place biaxial geogrid along the wire form facing. Place wall face stone within the geogrid wrapped wire form. Place a geotextile liner strip completely covering the wall facing stone, separating the open graded aggregate from the granular backfill. Lap fabric joints 12 inches minimum.

3. Compact backfill to 95 percent of its maximum unit weight. For applications where spread footings are used to support bridge or other structures, compact backfill to 100 percent of its maximum unit weight within the limits of 1V:1H slopes spreading outward in all directions from the bottom edge of the structure footings for a depth of 5 feet below the footing elevation.

4. Ensure uniform moisture content throughout each layer of the backfill prior to and during compaction. Place backfill with a moisture content less than or equal to the optimum moisture content. Remove and rework backfill placed with moisture content in excess of the optimum moisture content until the moisture content is uniformly acceptable to the

Engineer throughout the entire lift.

5. Place backfill in lifts measuring not more than 12 inches in thickness. Decrease the maximum lift thickness as required to obtain the specified density.

6. Perform compaction within 3 feet of the face of the wall by making at least three passes with a lightweight mechanical tamper, roller, or vibratory system. Density testing will not be performed within this 3-foot zone.

7. Slope the last lift of backfill away from the wall facing at the end of each day's operation to rapidly direct runoff away from the wall face. Do not allow surface runoff from adjacent areas to enter the wall construction site. Control/redirect surface runoff away from the top of wall, bottom of wall, Granular Backfill, wall face and sides of the wall.

8. Do not use sheep's foot or grid-type rollers for compaction within the reinforced soil mass.

Measurement and Payment

Measure and pay for the completed work, as described, at the contract unit price using the following pay item:

Pay Item	**Pay Unit**
DS_Mechanically Stabilized Earth Wall, Welded Wire Form, Furn and Install	Square Foot
DS_Granular Backfill	Cubic Yard

1. **DS_Mechanically Stabilized Earth Wall, Welded Wire Form, Furn and Install** will be measured in place as the area from the top of the wall to the bottom of the wall (top of leveling pad) along the wall. **DS_Mechanically Stabilized Earth Wall, Welded Wire Form, Furn and Install** includes the design, furnishing all wall components including, but not limited to leveling pad, wire facing units, special corner units, soil reinforcement, connection devices and hardware, geotextiles, geogrids, and face stone (welded wire form unit fill).

2. **DS_Granular Backfill** includes furnishing, placing, and compacting the backfill. The Engineer will not measure material placed outside the maximum pay limits shown on the approved working drawings.

Underdrains will be paid for separately in accordance with the CAA 2025 Standard Specification for Construction.

Earth Excavation and **Embankment** required for undercutting unsuitable subgrade soils will be paid for separately in accordance with the CAA 2025 Standard Specification for Construction. The bottom of the reinforced soil mass and the bottom of the leveling pad will be considered the bottom of footing for measurement purposes.