THE CITY OF WALTHAM
MASSACHUSETTS

PURCHASING DEPARTMENT

JAMES FALZONE MEMORIAL PARK 3 AND NIPPER MAHER PARK, PHASE 6 - IMPROVEMENTS

A D D E N D U M N O. 3 Nov. 27, 2011

CHANGES, CORRECTIONS AND CLARIFICATIONS

The attention of bidders submitting proposals for the above subject project is called to the following addendum to the specifications. The items set forth herein, whether of omission, addition, substitution or clarification are all to be included in and form a part of the proposal submitted.

THE NUMBER OF THIS ADDENDUM (NO. 3) MUST BE ENTERED IN THE APPROPRIATE SPACE PROVIDED IN SECTION 00300 – FORM FOR GENERAL BID – PAGE 14 OF THE BID DOCUMENT.

ITEM NO.: 1 ANSWERS TO POSED QUESTIONS

1. **Question:** Section 2.02 Synthetic Grass Infill System Material B.1. states that the fiber must be manufactured by Bonar or TC Thialon. Please know that Shaw Sports Turf, one of the approved vendors cited in the specifications, extrudes its own monofilament fiber. Is that acceptable?
   Answer: It is acceptable as long as the specified requirements are met.

2. **Question:** Section 1.02 Qualifications B. 1 Sample states that a 1' x 1' sample of turf and infill must be supplied to each General Contractor that bids on this project. Would it be acceptable to provide said sample to the architect, Weston and Sampson, only?
   Answer: A sample will not be required at the time of bidding. However, you must submit with your bid the manufacturer's name and product information. The award of the contract is subject to the Architect's approval of this product. No other submittal information will be required at the time of bid. Awarded contractor must meet all requirements outlined in Section 1.02.

3. **Question:** Section 3.02 Synthetic Grass Infill System .states that the gauge must be 3/8". Would a monofilament product on 1/2" gauge be acceptable?
   Answer: Yes

4. **Question:** Section 1.02 B10 states that "the warranty cover 100% of the replacement value of total square footage installed. Minimum $9.00/SF. Does the $9/SF cost cited include the base work, as well as the turf?
   Answer: This cost does not include the base work.

5. **Question:** Section 2.05 Turf Groomer Field Spec Groom-All product. This is a very aggressive machine, used to decompact an infill system that has not been properly groomed. Would a Groomer used for routine, day-to-day maintenance be acceptable?
   Answer: Bid as indicated in the specification. The City may entertain alternate groomers after bid award if acceptable and a credit is provided.

6. **Question:** Detail 4 on DT.5 - Can we construct a conventional nailer with the shelf built into the concrete nailer?
   Answer: Yes, however curb shall be widened to accommodate the shelf so that a 6" wide top of curb is showing at finished grade.

7. **Question:** Please clarify the detail 4 on DT.5. It calls out a clay perimeter area. What is the material for the clay perimeter area?
   Answer: Clay perimeter area shall be "infield mix", SECTION 02360 INFIELD MIX, attached. This section shall also be used for the infield reconstruction at Nipper Maher Park.

8. **Question:** Please clarify the type of geotextile fabric to be used for the synthetic turf field.
   Answer: The required fabric is shown on the details

9. **Question:** A detail has been provided for the segmental retaining walls (4/DT.7) referencing specifications. Those specifications have not been provided in the bid documents. Please provide.
   Answer: See attached SECTION 02830 SEGMENTAL RETAINING WALL SYSTEM

10. **Question:** What size is the sewer service to the building pad at Falzone?
    Answer: Sewer pipe shall be 6" SDR 35

11. **Question:** Detail 4/DT.5 has a 2' depth drainage stone layer, while detail 7/DT.5 has a 10" depth drainage stone layer. Please verify the depth required.
    Answer: The drainage stone layer depth required is 10" (ten inches), correct Detail 4/DT.5 to indicate a 10" drainage stone layer depth.

ITEM NO.: 2 ADD/REPLACE SECTIONS OR DRAWINGS

1. SECTION 01010 SUMMARY OF WORK, Paragraph 1.02 Contract time - DELETE: A. The work of this contract shall be completed by June 15, 2012. The "Time For Completion and Sequence of Work" in SECTION A SPECIAL CONDITIONS shall apply.

2. SECTION 02350 EXCAVATION, BORROW AND BACKFILL – ADD: Falzone Field Test Pit Logs 1 thru 5, attached.

3. SECTION 02790 SYNTHETIC GRASS INFILL SYSTEM – revise as indicated:
   Paragraph 1.01 A. 3) perforations shall be 3/16" to 1/4" holes on 4" centers
   Paragraph 1.02 B – Omit "prior to the bid"
   Omit references to "Millbrook Central School District", replace with "City of Waltham"

4. ADD: The following Technical Specifications, attached:
   SECTION 02830 SEGMENTAL RETAINING WALL SYSTEM
   SECTION 02360 INFIELD MIX

CLARIFICATIONS/CORRECTIONS AND MODIFICATIONS

1. On sheet N-GD.1 delete the callout indicating "SLIP LINE EX 20" PIPE. This work will not be included in the contract.

2. Contractor shall only clean drainage pipes and structures installed as part of this contract, the existing exit sewer line from the new splash pad manhole to Boynton street at Nipper Maher Park, and any existing structures or lines clogged or silted due to improper erosion control practices.

3. At Nipper Maher Park, while relocating the existing play structure, the contractor shall relocate the existing landing pads also.

4. At Nipper Maher Park, four (4) "park signs" shall be provided.

5. At Falzone Park, sheet F-GD.1 and F-GD.2. The perimeter drain along the east side of the field shall be located inside the curb line (to the field side) as indicated in the Perimeter Drainage Trench Detail.

6. At Falzone Park, Sheet F-GD.1 a nailer to accommodate the synthetic turf system shall be installed along the retaining wall located in the southwest corner of the field.

End of Addendum 3

TEST PIT LOG

PROJECT NAME/NO.	Falzone Field - 2100386		TEST PIT NUMBER TP - 1
LOCATION	Waltham, MA		
CLIENT	City of Waltham		GROUND SURFACE ELEVATION ~ 227.8
CONTRACTOR	The City	FOREMAN: Kevin	
OBSERVED BY	A. Peck	DATE 7/6/11	DEPTH TO GROUNDWATER BELOW SURFACE N/A
CHECKED BY		DATE	

DEPTH BELOW GROUND SURFACE (ft.)	TEST PIT DIAGRAM AND SOIL DESCRIPTION
0"	grass
	Urban fill *
60"	- end of exploration -

NOTES:
- No groundwater was observed
* consisted of tires, wood, cinder blocks, metal, rocks, wires

TEST PIT NUMBER TP - 1

WESTON & SAMPSON ENGINEERS, INC.

T:\ESSE\Forms\[Test pit.XLS]TP-1

TEST PIT LOG

PROJECT NAME/NO.	Falzone Field - 2100386		TEST PIT NUMBER TP - 2
LOCATION	Waltham, MA		
CLIENT	City of Waltham		GROUND SURFACE ELEVATION ~ 230.0
CONTRACTOR	The City	FOREMAN: Kevin	
OBSERVED BY	A. Peck	DATE 7/6/11	DEPTH TO GROUNDWATER BELOW SURFACE 43"
CHECKED BY		DATE	

DEPTH BELOW GROUND SURFACE (ft.)	TEST PIT DIAGRAM AND SOIL DESCRIPTION
0"	grass
6"	Dark brown sandy loam
	Dark brown loam
20"	mottling
	Gravelly coarse sand
43"	▽
	- end of exploration -

NOTES:

TEST PIT NUMBER TP - 2

WESTON & SAMPSON ENGINEERS, INC.

T:\ESSE\Forms\[Test pit.XLS]TP-1

TEST PIT LOG

PROJECT NAME/NO.	Falzone Field - 2100386		TEST PIT NUMBER TP - 3
LOCATION	Waltham, MA		
CLIENT	City of Waltham		GROUND SURFACE ELEVATION ~228.0
CONTRACTOR	The City	FOREMAN: Kevin	
OBSERVED BY	A. Peck	DATE 7/6/11	DEPTH TO GROUNDWATER BELOW SURFACE 27"
CHECKED BY		DATE	

DEPTH BELOW GROUND SURFACE (ft.)	TEST PIT DIAGRAM AND SOIL DESCRIPTION
0"	grass
14"	Dark brown sandy loam
23"	Medium brown very fine sandy loam
36"	Gravelly coarse sand 27" ▽
	-end of exploration-

NOTES:
- groundwater was initially observed @ 36", but equalized @ 27" after the test pit remained open approx. 30 minutes.

TEST PIT NUMBER TP - 3

WESTON & SAMPSON ENGINEERS, INC.

T:\ESSE\Forms\[Test pit.XLS]TP-1

TEST PIT LOG

PROJECT NAME/NO.	Falzone Field - 2100386		TEST PIT NUMBER TP - 4
LOCATION	Waltham, MA		
CLIENT	City of Waltham		GROUND SURFACE ELEVATION ~233.0
CONTRACTOR	The City	FOREMAN: Kevin	
OBSERVED BY	A. Peck	DATE 7/6/11	DEPTH TO GROUNDWATER BELOW SURFACE 52"
CHECKED BY		DATE	

DEPTH BELOW GROUND SURFACE (ft.)	TEST PIT DIAGRAM AND SOIL DESCRIPTION
0"	grass
10"	Dark brown sandy loam
22"	Medium brown very fine sandy loam
32"	mottling
	very gravelly coarse sand
52"	▽
	-end of exploration-

NOTES:

TEST PIT NUMBER TP - 4

WESTON & SAMPSON ENGINEERS, INC.

T:\ESSE\Forms\[Test pit.XLS]TP-1

TEST PIT LOG

PROJECT NAME/NO.	Falzone Field - 2100386		TEST PIT NUMBER TP - 5
LOCATION	Waltham, MA		
CLIENT	City of Waltham		GROUND SURFACE ELEVATION ~ 235.5
CONTRACTOR	The City	FOREMAN: Kevin	
OBSERVED BY	A. Peck	DATE 7/6/11	DEPTH TO GROUNDWATER BELOW SURFACE N/A
CHECKED BY		DATE	

DEPTH BELOW GROUND SURFACE (ft.)	TEST PIT DIAGRAM AND SOIL DESCRIPTION
0"	grass
6"	Dark brown sandy loam
15"	Lt./med. brown gravelly fine sandy loam
32"	mottling
	Medium brown stony loamy sand pockets of coarse sand throughout
60"	
	- end of exploration -

NOTES:
- No groundwater was observed

TEST PIT NUMBER TP - 5

WESTON & SAMPSON ENGINEERS, INC.

T:\ESSE\Forms\[Test pit.XLS]TP-1

SECTION 02360

INFIELD MIX

PART I - GENERAL

1.01 SCOPE OF WORK

a. The Contractor shall furnish and construct infield mix surfaces to the lines and grades shown on the plans as specified in this Section, including the provision of all materials, labor, tools, equipment and transportation necessary to complete the work.

1.02 SUBMITTALS

a. Two (2) weeks prior to ordering the material, the Contractor shall submit to the Landscape Architect, at the Contractor's expense, a representative sample of the material to be used, and a copy of a soils analysis from an accredited laboratory classifying the mixture and tabulating the sieve analysis.

b. If the mixture is disapproved by the Landscape Architect, the Contractor shall continue to obtain other sources of material and have them tested, at his own cost, until the Landscape Architect approves the mixture to be utilized for the clay infield mix surface.

PART II - MATERIALS

2.01 INFIELD MIX

a. The clay infield mixture shall be the “Native Infield Mix-Light Brown Blend” grade as manufactured by ACCUSOILS of Hooksett, NH, Read Custom Soils of Canton, MA, Holliston Sand Company of Slatersville, RI, or an approved equal product. In general, Native Infield Mix-Light Brown Blend is a combination of New England clays and sands.

b. The sieve analysis (% by weight passing) of the material shall be as follows:

Sieve Size	Result
#4	100
10	98.9
18	4.5
35	5.5
60	8.8
140	12.3
270	16.8

c. Hydrometer results shall be as follows:

Silt =	48.7%
Clay =	6.3%
Sand =	45.0%

PART III - EXECUTION

3.01 Upon removal of existing surfaces and installation satisfactory preparation of the subsurface elevations, the Contractor shall install, roll and compact the infield mix specified to a compacted finished depth of three (3) inches. Complete installation of clay infield surfaces in conformance with the manufacturer's recommendations or as otherwise directed.

3.02 The edges of the infield mix shall meet the grades of adjacent turf areas. No ridges or depressions will be permitted at edges.

3.03 Existing on site infield mix can be used if it meets this specifications for infield mix or is deemed suitable by owners representative.

- - - END OF SECTION - - -

SECTION 02830

SEGMENTAL RETAINING WALL SYSTEM

PART 1 - GENERAL

1.01 WORK INCLUDED:

A. Work shall consist of designing, furnishing all materials, labor, equipment, and installation of the segmental retaining wall system in accordance with these specifications and to the lines, grades, and dimensions shown on the plans.

1.02 RELATED WORK:

A. Section 01330, SUBMITTALS

B. Section 02350, EXCAVATION, BORROW AND BACKFILL

1.03 REFERENCE STANDARDS

A. The Massachusetts Highway Department Standard Specifications for Highways and Bridges Construction.

B. Segmental Retaining Wall Units
1. ASTM C 1372- Standard Specification for Segmental Retaining Wall Units
2. ASTM C 140 - Standard Test Methods of Sampling and Testing Concrete Masonry Units

C. Geosynthetic Reinforcement
1. ASTM D 4595 - Tensile Properties of Geotextiles by the Wide-Width Strip Method
2. ASTM D 5262 - Test Method for Evaluating the Unconfined Creep Behavior of Geosynthetics
3. GRI:GG1 - Single Rib Geogrid Tensile Strength
4. GRI:GG5 - Geogrid Pullout

D. Soils
1. ASTM D 698 - Moisture Density Relationship for Soils, Standard Method
2. ASTM D 422 - Gradation of Soils
3. ASTM D 424 - Atterberg Limits of Soil

E. Drainage Pipe
1. ASTM D 3034 - Specification for Polyvinyl Chloride (PVC) Plastic

Pipe
2. ASTM D 1248 - Specification for Corrugated Plastic Pipe

F. Engineering Design
1. "NCMA Design Manual for Segmental Retaining Walls", Second Edition

G. Where specifications and reference documents conflict, the Engineer shall make the final determination of applicable document.

1.04 DESIGN CRITERIA

A. The following soil parameters shall be assumed for the final design unless otherwise shown on the plans or specified by the Engineer:

	Unit Weight, pcf	Internal Friction Angle, degrees	Cohesion
Reinforced Fill	120	30	0
Retained Soil	120	30	0
Foundation Soil	120	30	0

B. Should the actual soil conditions observed during construction differ from those assumed for the design, design shall be reviewed by the Wall Design Engineer at the Engineer's direction.

C. The design for the final retaining wall plans shall be prepared and sealed by a professional Civil Engineer licensed in the Commonwealth of Massachusetts. The design analysis shall consider the external stability against sliding and overturning, internal stability, facial stability of the reinforced soil mass, and external global stability and shall be in accordance with acceptable engineering practice and these specifications. The internal and external stability analysis shall be performed in accordance with the "NCMA Design Manual for Segmental Retaining Walls", using the recommended minimum factors of safety in this manual.

D. The design of the geosynthetic reinforcement shall take into consideration the effects from obstructions.

E. Minimum embedment: the minimum wall embedment shall be the greater of 0.5 feet or the following:

Level Slope in Front	H'/20
3H:1V Slope in Front	H'/10
2H:1V Slope in Front	H'/10

where H' is the exposed height of the wall.

F. While vertical spacing between geosynthetic reinforcement layers may vary, it shall not exceed 2.0 feet maximum in the wall design.

G. The geosynthetic reinforcement placement in the wall design shall have 100 percent continuous coverage parallel to the wall face. Gapping between horizontally adjacent layers of geosynthetic (partial coverage) will not be allowed.

1.05 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF GENERAL SPECIFICATIONS, SUBMIT THE FOLLOWING:

A. Material Submittals: The Contractor shall submit sets of manufacturers' literature and certifications two weeks prior to start of work stating that the SRW units and geosynthetic reinforcement meet the requirements of Section 2 of this specification.

B. Design Submittal: The Contractor shall submit sets of detailed design calculations and final retaining wall plans for approval at least two weeks prior to the beginning of wall construction. All calculations and drawings shall be prepared and sealed by a professional Civil Engineer licensed in the Commonwealth of Massachusetts.

1.06 DELIVERY AND STORAGE:

A. Contractor shall check materials upon delivery to assure that specified type and grade of materials have been received and proper color and texture of SRW units have been received.

B. Contractor shall store and handle materials in accordance with manufacturer's recommendations and in a manner to prevent deterioration or damage due to moisture, temperature changes, contaminants, corrosion, breaking, chipping or other causes.

C. Contractor shall protect materials from damage. Damaged materials shall not be incorporated into the retaining wall.

PART 2 - PRODUCTS

2.01 CONCRETE SEGMENTAL RETAINING WALL UNITS

A. SRW units shall be:
'Brussels Dimensional System' units as manufactured by Unilock®,
Olde Boston Wall Stone as manufactured by Ideal Block,
Weston Wall by Belgard,
or an approved equal.

B. Texture on the face of the block shall be Tumbled Concrete or Weathered Split Face, or approved equal. All edges shall be rounded.

C. SRW units shall provide a minimum weight of 110 psf of wall face area.

D. If connectors are used by the SRW supplier to interconnect the SRW units, they shall meet the requirements of the manufacturer.

E. SRW units shall be sound and free of cracks or other defects that would interfere with the proper placing of the unit or significantly impair the strength or permanence of the structure. Cracking or excessive chipping may be grounds for rejection. Units showing cracks longer than 1/2" shall not be used within the wall. Units showing chips visible at a distance of 30 feet from the wall shall not be used within the wall.

F. Concrete used to manufacture SRW units shall have a minimum 28 days compressive strength of 4,000 psi and a maximum moisture absorption rate, by weight, of 8% as determined in accordance with ASTM C1372. Compressive strength test specimens shall conform to the saw-cut coupon provisions of ASTM C140.

G. SRW units' molded dimensions shall not differ more than + 1/8 inch from that specified, in accordance with ASTM C1372.

2.02 GEOSYNTHETIC REINFORCEMENT

A. Geosynthetic reinforcement shall consist of geogrids or geotextiles manufactured as a soil reinforcement element. The type, strength, and placement location of the reinforcing goesynthetic shall be determined by the Engineer providing the wall design and as shown on the approved segmental retaining wall plans.

B. Detailed test data shall be submitted to the Engineer for approval and shall include the following:
1. Tensile strength in accordance with ASTM D 4595 or GRI GG-1.
2. Creep in accordance with ASTM D 5262.

3. Site damage and durability in accordance with GRI GG-4.
4. Pullout in accordance with GRI GG-5 or GRI GT-6
5. Connection test data in accordance with NCMA SRWU-1.

2.03 LEVELING PAD

A. Material for the leveling pad shall consist of crushed stone meeting the requirements of Section M2.01.3 or M2.01.4 of the Massachusetts Highway Department Standard Specifications for Highways and Bridges Construction and shall be a minimum of 6 inches in depth unless otherwise shown on the Contract Drawings. The leveling pad must extend a minimum of 6 inches from both the front and back faces of the block unless otherwise shown on the Contract Drawings. Lean concrete with a strength of 200-300 psi and three inches thick maximum may also be used as a leveling pad material with approval by the Engineer.

2.05 DRAINAGE AGGREGATE

A. Drainage aggregate shall be crushed stone meeting the requirements of Section M2.01.4 of the Massachusetts Highway Department Standard Specifications for Highways and Bridges Construction.

2.06 DRAINAGE PIPE

A. The drainage collection pipe shall be a perforated or slotted PVC, or corrugated HDPE pipe. The drainage pipe may be wrapped with a geotextile to function as a filter.

B. Drainage pipe shall be manufactured in accordance with ASTM D 3034 and/or ASTM D 1248.

2.07 REINFORCED BACKFILL

A. The reinforced backfill shall be free of debris. Unless otherwise noted on the approved segmental retaining wall plans prepared by the Wall Design Engineer, the reinforced material shall consist of Type B Gravel Borrow in accordance with Section M1.03.0 of the Massachusetts Highway Department Standard Specifications for Highways and Bridges Construction.

2.08 GEOTEXTILE FABRIC

A. Geotextile fabric shall meet the requirements of Type II in accordance with Section M9.50.0 of the Massachusetts Highway Department Standard Specifications for Highways and Bridges Construction.

PART 3 - EXECUTION

3.01 INSPECTION

A. Contractor's field construction supervisor shall have demonstrated experience and be qualified to direct all work at the site.

3.02 EXCAVATION

A. Contractor shall excavate to the lines and grades shown on the project grading plans. Contractor shall take precautions to minimize over-excavation. Over-excavation shall be filled with compacted backfill material as directed by the Engineer, at the Contractor's expense.

B. Contractor shall verify location of existing structures and utilities prior to excavation. Contractor shall ensure all surrounding structures are protected from the effects of wall excavation. Excavation support, if required, is the responsibility of the Contractor

3.03 FOUNDATION PREPARATION

A. Following the excavation, the foundation soil shall be examined by the Engineer to assure actual foundation soil strength meets or exceeds the assumed design bearing strength. Soils not meeting the required strength shall be removed and replaced with material, as directed by the Engineer.

B. Foundation soil shall be proofrolled and compacted to 95% standard Proctor density and inspected by the Engineer prior to placement of leveling pad materials.

3.04 LEVELING PAD CONSTRUCTION

A. Leveling pad shall be placed as shown on the final, approved P.E. sealed retaining wall drawings. The leveling pad shall have a minimum thickness of 6 inches. The leveling pad should extend laterally at least a distance of 6 inches from the toe and heel of the lower most SRW unit unless shown otherwise on the Contract Drawings.

3.05 SRW UNIT INSTALLATION

A. All SRW units shall be installed at the proper elevation and orientation as shown on the final, approved P.E. sealed wall drawings or as directed by the Wall Design Engineer. The SRW units and geosynthetic reinforcement shall be installed in accordance with the manufacturer's recommendations.

B. First course of SRW units shall be placed on the leveling pad with the aesthetic surface facing out. The units shall be leveled side-to-side, front-to-rear and with adjacent units, and aligned to ensure intimate contact with the leveling pad.

C. Prior to placement of next course, the level and alignment of the units shall be checked and corrected, where needed.

D. Layout of curves and corners shall be installed in accordance with the wall plan details or in general accordance with SRW manufacturer's installation guidelines. Walls meeting at corners shall be interlocked by overlapping successive courses.

E. Broken, chipped, stained or otherwise damaged units shall not be placed in the wall unless they are repaired and the repair method and results are approved by the Engineer.

3.06 GEOSYNTHETIC REINFORCEMENT PLACEMENT

A. All geosynthetic reinforcement shall be installed at the proper elevation and orientation as shown on the final, approved P.E. sealed retaining wall drawings, or as directed by the Wall Design Engineer.

B. At the elevations shown on the final plans, (after the units, drainage material, and backfill have been placed to this elevation) the geosynthetic reinforcement shall be laid horizontally on compacted infill.

C. Geosynthetic reinforcement layers shall be one continuous piece for their entire embedment length. Overlapping of the geosynthetic in the design strength direction (perpendicular to the wall face) shall not be permitted. Along the length of the wall, horizontally adjacent sections of geosynthetic reinforcement shall be butted in a manner to assure 100 percent coverage parallel to the wall face.

D. Tracked construction equipment shall not be operated directly on the geosynthetic reinforcement. A minimum of 6 inches of backfill is required prior to operation of tracked vehicles over the geosynthetic. Turning should be kept to a minimum. Rubber-tired equipment may pass over the geosynthetic reinforcement at slow speeds (less than 5 mph).

E. The geosynthetic reinforcement should be installed under tension. The nominal tension shall be applied to the reinforcement and secured in place with staples, stakes or by hand tensioning until reinforcement is covered by six inches of fill.

3.07 DRAINAGE MATERIALS

A. Drainage aggregate shall be installed to the line, grades, and sections shown on the final P.E. sealed retaining wall drawings. Drainage aggregate shall be placed

to the minimum thickness shown on the Contract Drawings between and behind units.

B. Drainage collection pipes shall be installed to maintain gravity flow of water outside the reinforced soil zone. The drainage collection pipe shall daylight at an elevation lower than the lowest point of the pipe within the aggregate drain.

C. The main collection drain pipe, just behind the block facing, shall be a minimum of 3 inches in diameter. The secondary collection drain pipes should be sloped a minimum of 2% to provide gravity flow into the main collection drain pipe. Drainage laterals shall be spaced at a maximum 50 feet spacing along the wall.

3.08 BACKFILL PLACEMENT

A. The reinforced backfill shall be placed as shown in the final, approved wall drawings in the maximum compacted lift thickness of 10 inches and shall be compacted to a minimum of 95% of standard Proctor density (ASTM D 698) at a moisture content within 2% of optimum. The backfill shall be placed and spread in such a manner as to eliminate wrinkles or movement of the geosynthetic reinforcement and the SRW units.

B. Only hand-operated compaction equipment shall be allowed within 3 feet of the back of the wall units. Compaction within the 3 feet behind the wall units shall be achieved by at least three (3) passes of a lightweight mechanical tamper, plate, or roller.

C. At the end of each day's operation, the Contractor shall slope the last level of backfill away from the wall facing and reinforced backfill to direct water runoff away from the wall face.

D. At completion of wall construction, backfill shall be placed level with final top of wall elevation. If final grading, paving, landscaping, and/or storm drainage installation adjacent to the wall is not placed immediately after wall completion, temporary grading and drainage shall be provided to ensure water runoff is not directed at the wall nor allowed to collect or pond behind the wall until final construction adjacent to the wall is completed.

3.09 CONSTRUCTION ADJACENT TO COMPLETED WALL

A. The Contractor is responsible for ensuring that construction adjacent to the wall does not disturb the wall or place temporary construction loads on the wall that exceed design loads, including loads such as water pressure, temporary grades, or equipment loading. Care should be taken by the Contractor to ensure water runoff is directed away from the wall structure until final grading and surface drainage collection systems are completed.

END OF SECTION